

VIRGINIA'S METROS: RUNNING TO STAND STILL?

*We can do lots better, but we're going to have
to get used to doing it together.*

– A Virginia legislator



The Virginia economy we see is the product of the economic activities of citizens and businesses across the Commonwealth. However, each metropolitan area is distinctive and therefore does not always perform in sync with Virginia as a whole. Nevertheless, from an economic standpoint, the state is the sum of its regional parts, however different from each other they may be. Hence, understanding the economic performance of specific metropolitan areas can provide us with insight into the challenge of generating consistent, broad-based economic growth across the entire Commonwealth.

Unfortunately, measuring economic vitality at the metropolitan area level (MSA) often can be a perplexing task. As we have noted in previous State of the Commonwealth reports, the Bureau of Economic Analysis (BEA) generates the national, state and MSA gross domestic product (GDP) estimates that we and nearly all other analysts use. A problem is that the BEA's GDP estimates for states and regions have long lag times. Even though we are nearly through 2017, the BEA's current advance estimates for MSAs only include economic activity through 2016.

This is not the only challenge. The BEA's MSA estimates are updated annually and often those updates produce significantly revised, almost head-scratching estimates. For Virginia's MSAs, these revisions can change economic growth from negative to positive. This is one of the reasons why we caution Virginians from drawing conclusions based on BEA data alone.

BEA estimates provide us with only one glimpse of an economic picture that may be much more complicated. These estimates should be used only as one piece of information.

With these caveats in mind, Table 1 presents real (inflation-adjusted) GDP growth rates for Virginia’s metropolitan areas between 2010 and 2016. **In 2016, Virginia continued to struggle to produce economic growth across all its metropolitan regions. The Commonwealth’s largest economic region, Northern Virginia, grew at a tepid pace. Only one region, Richmond, stood out in terms of economic performance. Blacksburg, Harrisonburg, Hampton Roads, Staunton and Winchester each recorded significant contractions in 2016. Charlottesville, Lynchburg and Roanoke contracted as well, though only moderately.**

Virginia grew only 0.6 percent in 2016, so the poor regional numbers are not entirely surprising.

Unfortunately, even if we do take a perspective longer than a single year, things do not improve. While the United States’ real GDP growth rate between 2010 and 2016 was 2.1 percent, only Richmond approached the national average. Three regions – Harrisonburg, Lynchburg and Staunton – contracted over the period and real GDP growth was anemic in the remaining metro areas. Another startling fact is that Richmond was the only metro area in Virginia to post positive GDP growth annually since 2010.

TABLE 1

REAL GROSS DOMESTIC PRODUCT GROWTH RATES, 2010-2016

	2010	2011	2012	2013	2014	2015	2016	2010-2016 CAGR ¹
United States	2.5%	1.6%	2.2%	1.7%	2.6%	2.9%	1.5%	2.1%
Virginia	2.4%	0.7%	0.6%	0.0%	0.1%	2.4%	0.6%	0.7%
Blacksburg	1.2%	1.4%	7.6%	-1.0%	2.2%	2.8%	-2.1%	1.8%
Charlottesville	3.3%	1.0%	2.7%	-0.5%	3.8%	4.5%	-0.7%	1.8%
Hampton Roads	-1.6%	0.3%	-0.8%	-0.6%	-0.3%	2.8%	-1.1%	0.0%
Harrisonburg	3.6%	-0.9%	-0.9%	-0.4%	-0.3%	2.5%	-2.2%	-0.4%
Lynchburg	2.5%	-1.8%	-0.9%	0.0%	-0.2%	-0.3%	-0.5%	-0.6%
Northern Virginia	3.8%	1.5%	0.5%	-0.8%	0.5%	2.4%	1.1%	1.2%
Richmond	1.7%	0.8%	2.8%	1.3%	1.0%	3.7%	2.6%	2.0%
Roanoke	-1.5%	-1.0%	0.4%	-0.1%	-0.2%	2.3%	-0.4%	0.1%
Staunton	3.0%	-6.8%	-7.6%	1.7%	0.8%	3.0%	-2.1%	-1.9%
Winchester	3.0%	1.9%	1.4%	1.4%	1.0%	2.9%	-1.6%	1.2%

Sources: U.S. Bureau of Economic Analysis and the Old Dominion University Center for Economic Analysis and Policy

¹ The Compound Annual Growth Rate (CAGR) is a measure of growth over multiple periods. While annual averages ignore the effects of compounding and can overestimate growth, CAGR captures the one consistent rate at which real GDP would have grown over time.

Making sense of the MSA-level GDP data can be akin to taking a Rorschach test. The picture may be blurry and different individuals will draw very different conclusions. Because this is true, we introduce three additional measures to help us analyze the performance of each metropolitan area: (1) employment, (2) wages and (3) taxable sales. A major advantage of these additional variables is that each is measured more frequently. Employment and taxable sales are measured monthly, while wages are measured quarterly. Hence, they provide a better “real-time” picture of the economic conditions in a metro area. Also, one can argue that these three measures are more tightly linked to metro area economic health than GDP.

Metropolitan Area Employment

Examining metropolitan area jobs and employment data provides conflicting signals about the state of the metro economies. While the employment data suggest robust growth in 2017, jobs data indicate a slowdown.² To understand these different signals, let’s first discuss how employment and jobs are measured.

Employment data come from a monthly survey of households and are more sensitive to recent changes in employment, as individuals tend to disclose immediately whether they are employed or not. Employment data also capture whether individuals are self-employed or engaged in short-term employment, such as driving for Uber, working through Thumbtack or laboring in other parts of the emerging “gig economy.”

On the other hand, the jobs data come from a monthly survey of employers. Unlike the employment data (which count people), the jobs data count, as one might suspect, jobs. Therefore, if a person holds multiple jobs with multiple employers, each employer will report the

individual is working for them. The jobs data can thus significantly outpace the employment data if people are working multiple jobs.³ Both measures provide valuable information about the state of the economy. Thus, while the terms “jobs” and “employment” might mean the same thing to a noneconomist, to the Bureau of Labor Statistics (and therefore to economists) they have different meanings. They are measured in different ways and thus yield different information.

Are more people employed in Virginia’s metropolitan areas? Graph 1 shows that employment growth was higher in each of the Commonwealth’s metro areas between January and August 2017 when compared to 2016. This is good news, as more people are reporting that they are gainfully employed compared to the previous year.

In Virginia’s three largest metropolitan areas, employment growth was highest in Northern Virginia, followed by Richmond and then Hampton Roads. Hampton Roads experienced positive employment growth in 2016 despite the BEA reporting that real GDP growth in that region was negative. As a consequence, it should not surprise us if the BEA revises its GDP estimate for Hampton Roads upward (more on this later).

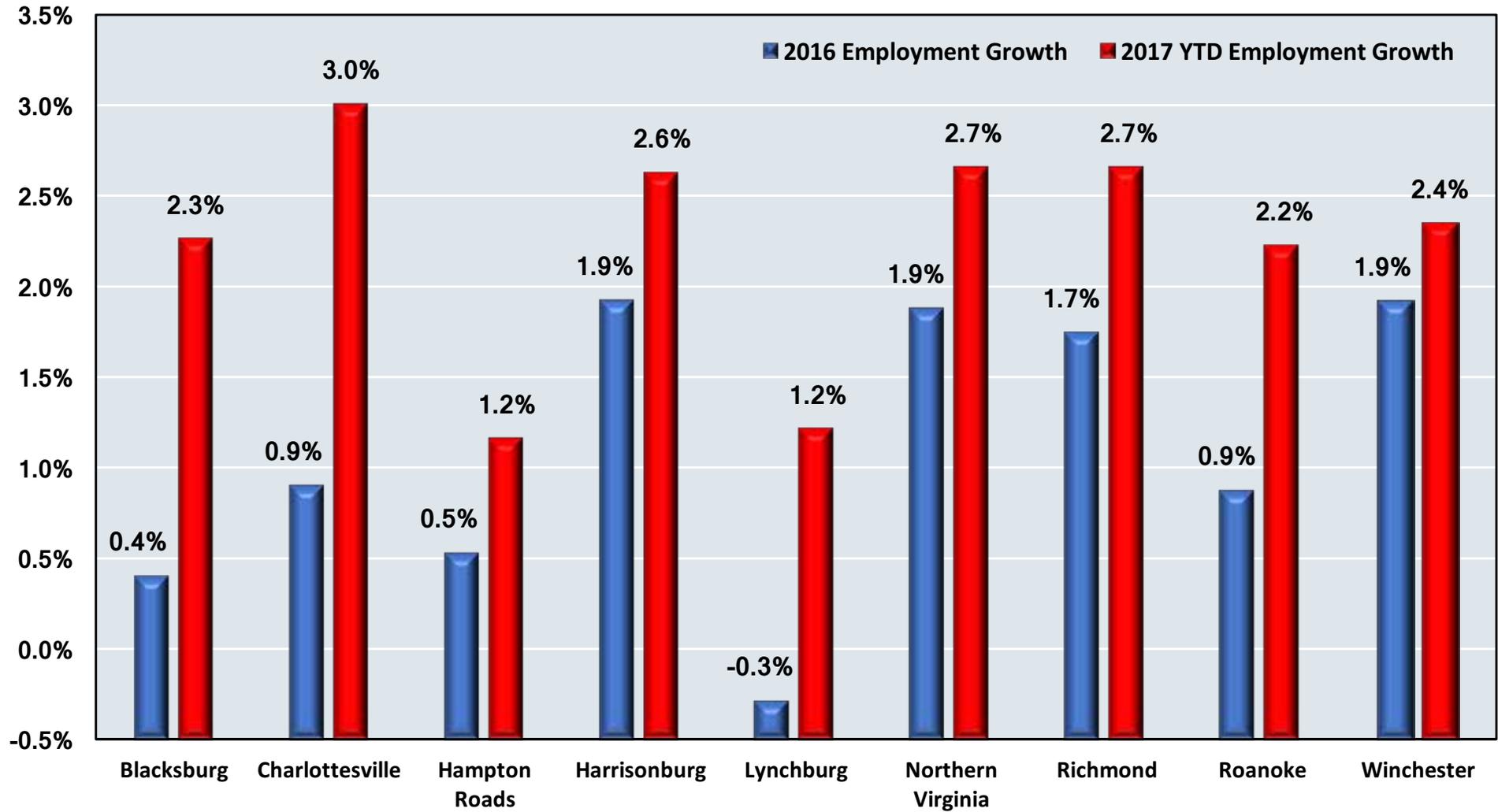
Other metropolitan areas showed strong employment growth, with Charlottesville reporting 3 percent growth in 2017. The positive, and in some cases strong, employment growth suggests that economic activity picked up in 2017 inside several of Virginia’s metro areas.

² The Current Population Survey (CPS) covers households and asks whether an individual was employed or actively seeking employment. The Current Employment Survey (CES) covers businesses and reports the number of jobs. An individual who is employed with two jobs would be counted once in the CPS and twice in the CES. The U.S. Census Bureau conducts the CPS for the Bureau of Labor Statistics. The BLS conducts the CES.

³ This occurs because the jobs data would count each of the jobs separately, while the employment data would only count the same individual once.

GRAPH 1

EMPLOYMENT GROWTH IN VIRGINIA'S METROPOLITAN AREAS, 2016 AND 2017 YEAR-TO-DATE



Source: Bureau of Labor Statistics, Current Population Survey (not seasonally adjusted data), 2017

Are there more jobs in Virginia's metropolitan areas? The data here paint a different picture. Recall from chapter 1 that job growth for the Commonwealth slowed from 2 percent in 2015 to 1.6 percent in 2016 to 1.5 percent in 2017. Graph 2 compares 2016 metro area job growth with 2017 year-to-date job growth.

Year-to-date job growth in 2017 has slowed in each of Virginia's large metropolitan areas when compared to 2016. While Northern Virginia and Richmond continued to add jobs, albeit at a slower pace, job growth stalled in Hampton Roads. **Because these three metro areas contain 73 percent of all jobs in the Commonwealth, slow job growth regionally translated into slow growth for the state.**

There is, however, some good news. Job growth in 2017 for Harrisonburg has remained well above the state average even though it slowed from 2016. Blacksburg, Charlottesville, Lynchburg and Roanoke all saw signs of stronger job growth in 2017.

Graph 3 presents employment and jobs growth in Virginia's metro areas between January and September 2017. One can immediately see that depending on one source of labor market data could result in strikingly different conclusions. In Hampton Roads, for example, employment is up 1.2 percent, yet the number of jobs is stagnant.

The Richmond and Northern Virginia metropolitan areas also exhibit large differences in the employment and jobs data. Employment in Northern Virginia increased by 2.7 percent while jobs grew by 1.7 percent. Richmond also reported employment growth of 2.7 percent, and jobs there increased 1.6 percent. Charlottesville saw robust employment and job growth with 3 percent and 2.3 percent, respectively. In Harrisonburg, the employment and job growth were the same at 2.6 percent. We can conclude that jobs and employment are growing in many of Virginia's metro areas but nevertheless one should avoid relying solely upon one measure of the labor market over another.

Nevertheless, can we explain why there are such large differences between jobs and employment data in several of Virginia's metropolitan areas? One possible explanation is the impact of the Great Recession. In the immediate aftermath of the Great Recession, the number of part-time jobs soared as individuals took on additional jobs. Nationally, part-time employment peaked in January 2010 at 20.1 percent of all jobs. The ratio of part-time to full-time jobs in September 2017 was 17.9 percent, still above the average ratio prior to the recession.⁴ In areas with a larger federal government presence (Hampton Roads and Northern Virginia), sequestration also undoubtedly played a role. As these two metro economies continue to recover, it seems likely that they have experienced slower part-time job growth relative to full-time jobs, and this has caused their job growth to lag their employment growth.

Another explanation is the emergence of the contract or "gig economy." More Americans are employed as contractors than at any previous point in history, with some estimates suggesting that more than 40 percent of American workers have contingent jobs.⁵ Rapidly increasing levels of self-employment (whether by choice or not) would be reflected in the employment data, but not in the jobs data. Large urban metro areas are common locations for freelancers (though there is some recent evidence that more freelancers are choosing smaller metros and rural areas). Driving for Uber or selling your wares on Etsy are two illustrations of these phenomena. Neither of these "gigs" would show up in the jobs data, but the individuals occupying these jobs would consider themselves employed and answer when surveyed.

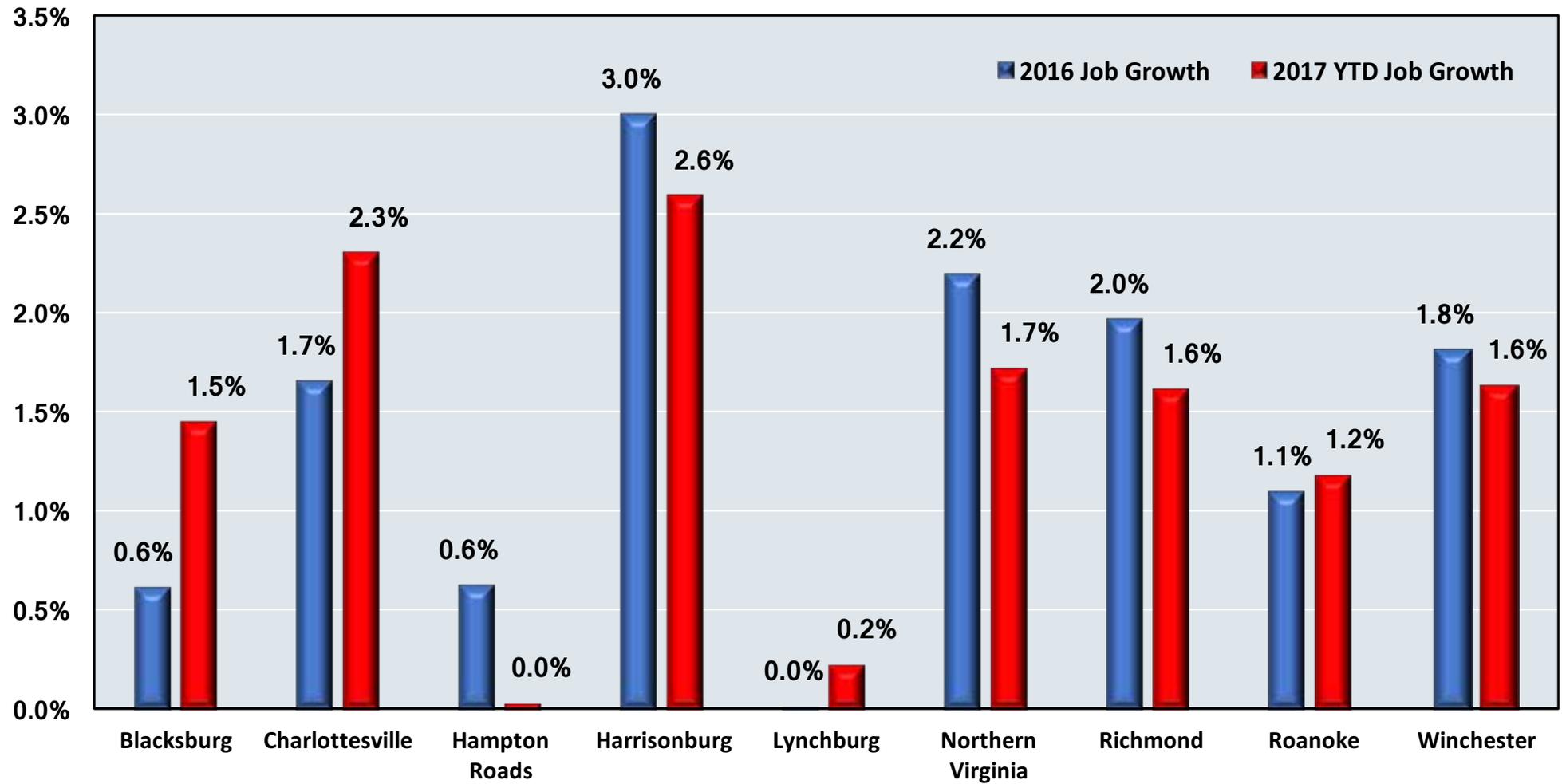
As contract work and freelance work become more prevalent, accurately measuring employment and jobs will become more complicated. These discordant measures do not mean that we should throw our hands up and quit in frustration. If anything, the data illustrate the need to dive deeper into the numbers to understand the underpinnings of economic activity in Virginia. Relying on one measure may be useful for Twitter or cable television, but not for economic policy.

⁴ Bureau of Labor Statistics, Table A-9, Employment Situation Summary.

⁵ Elaine Pofeldt, "Shocker: 40% of workers now have contingent jobs, says U.S. Government," Forbes (May 25, 2015).

GRAPH 2

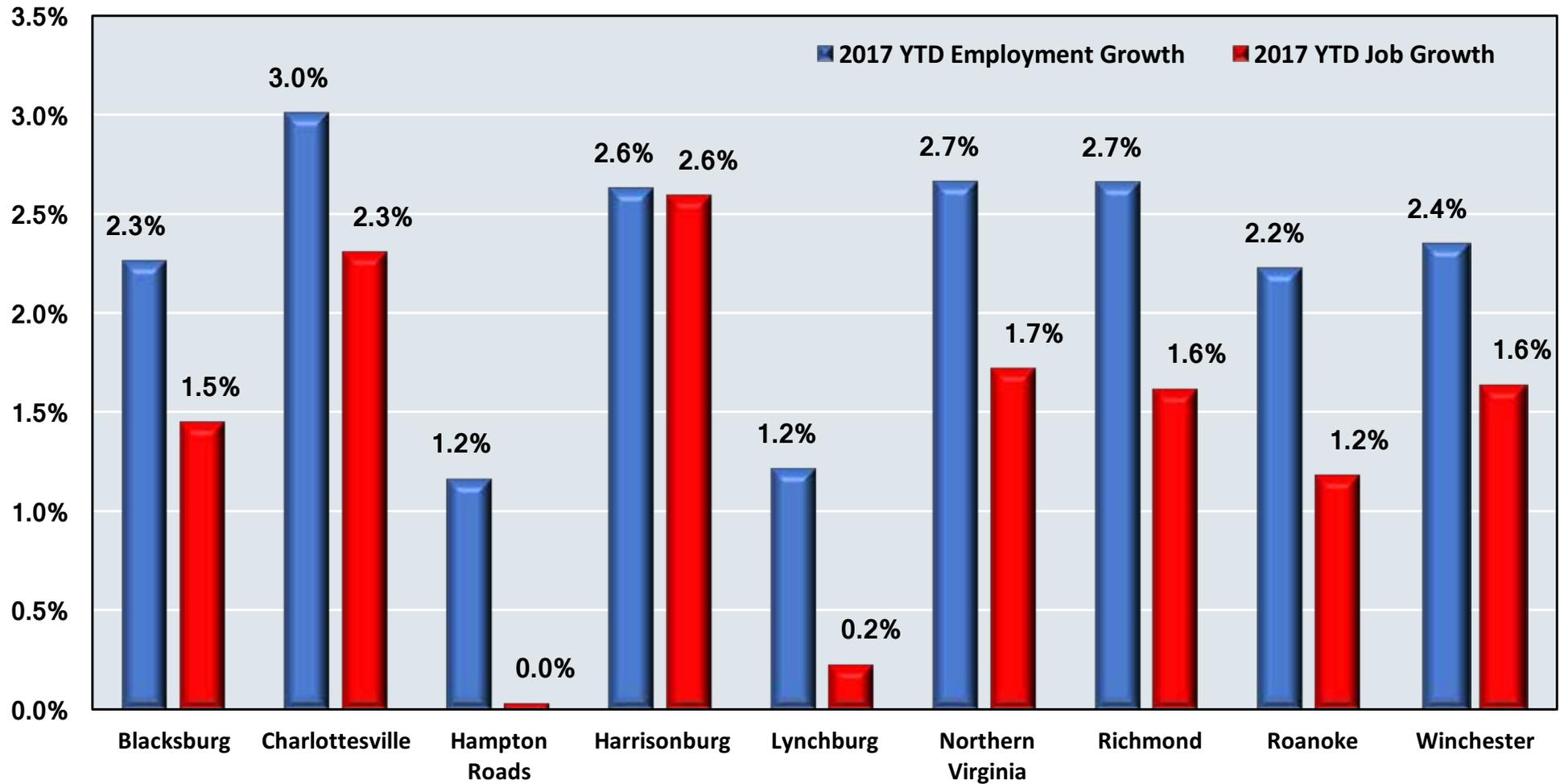
YEAR-TO-DATE JOB GROWTH, 2016 AND 2017



Source: Bureau of Labor Statistics, Current Employment Survey (not seasonally adjusted data), 2017

GRAPH 3

VIRGINIA'S METRO AREAS: EMPLOYMENT AND JOBS, 2017 (YEAR TO DATE)



Sources: Bureau of Labor Statistics, Current Population Survey and Current Employment Survey, 2017, and the Old Dominion University Center for Economic Analysis and Policy

Metro Area Wages

Politicians of all stripes promise that their policies will improve wages. However, one problem is that wage growth can be measured in different ways, and wages, much like metropolitan area GDP, are measured with a considerable time lag. 2017 is almost over and the most recent metropolitan area wage data are for the first quarter of 2017. We present three measures of wage growth for Virginia’s metro areas in Table 2. As with our discussion in the previous section, we dive into the numbers to see if any consistent pattern emerges across Virginia’s metro areas.

Column 1 presents what is commonly referred to as year-over-year wage growth. This measure represents an annual growth rate calculated by comparing wages in the first quarter of 2017 with wages in the first

quarter of 2016. Charlottesville stands out with double-digit wage growth. The other metros also experienced wage growth according to this measure.

Column 2 displays the growth in wages from 2015 to 2016, while column 3 presents the growth rate in wages between 2012 and 2016. The picture here is one of slowing wage growth across most metro areas. Wages, for example, grew only 0.6 percent in 2016 in Hampton Roads, slower than the growth rate from 2012 to 2016. Only Lynchburg and Winchester maintained average wage growth in 2016. The story that emerges is that wages grew faster earlier in the decade and growth slowed in 2016.

The conclusions from this data set are mixed and perhaps a bit confusing. The data in column 1 suggest a labor market that is tightening and wages that are growing above the recent rate, but the other columns suggest something different. Cautious optimism is the order of the day, given the rather disappointing numbers for some metro areas in 2017 Q1 and the slower rate of wage growth in 2016 when compared to 2012-2016.

To further confound, there is an alternative source of wage data – the survey of employers – that provides yet another scenario. These data paint a solid picture of wage growth in the metropolitan areas through August 2017 (see Graph 4). All metro areas, except Blacksburg, experienced wage growth through August 2017 when compared to the same period from 2016. Moreover, the growth rates in all but three metro areas (Blacksburg, Roanoke and Northern Virginia) outpaced existing inflation. The other six metro areas of the state saw real wage growth during the first eight months of 2017. Good news indeed.

How you interpret these data depends on where you stand. A pessimist might argue that wage growth is not only slowing, but has turned negative in some metropolitan areas. An optimist would point to double-digit wage growth and trumpet the progress Virginia is making. The truth lies somewhere in the middle. Wages appear to be rising in most of the metro areas, but wage growth slowed in 2017, which is alarming as wages should be rising as we approach full employment. If wage growth is slowing, this is indeed disconcerting, as many metros are approaching what typically has been considered full employment.

TABLE 2

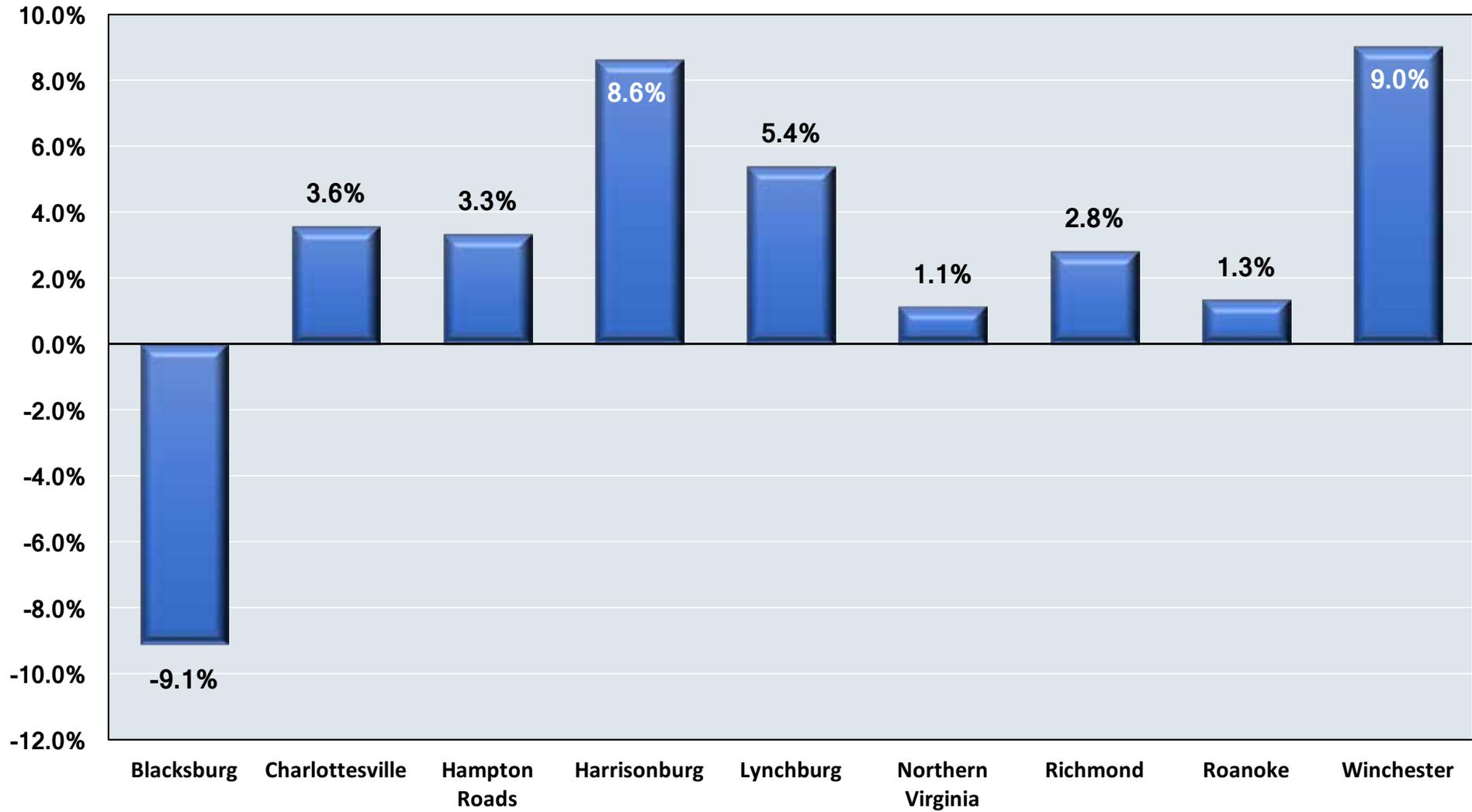
WAGE GROWTH IN VIRGINIA'S METROPOLITAN AREAS

	(1)	(2)	(3)
	2016 Q1-2017 Q1 Growth	2015-2016 Growth	2012-2016 CAGR
United States	6.6%	1.3%	2.1%
Virginia	6.8%	1.1%	1.5%
Blacksburg	6.3%	1.2%	1.4%
Charlottesville	11.6%	0.6%	2.3%
Hampton Roads	5.3%	0.6%	1.8%
Harrisonburg	4.5%	0.0%	1.5%
Lynchburg	7.3%	1.8%	1.8%
Northern Virginia	6.6%	0.8%	1.2%
Richmond	8.6%	1.0%	1.6%
Roanoke	4.5%	1.6%	2.0%
Winchester	7.5%	1.8%	1.8%

Sources: Bureau of Labor Statistics and Virginia Employment Commission, QCEW Wages. CAGR is the Compound Annual Growth Rate.

GRAPH 4

METRO AREA WAGE GROWTH IN 2017 (YEAR TO DATE)



Source: Bureau of Labor Statistics

Taxable Sales

Another viable measure of economic activity is taxable sales. More than two-thirds of the total spending in the U.S. economy comes in the form of consumption. Taxable sales capture most of this activity, though it is important to note that not all conventional sales are taxable and numerous economic exchanges go unrecorded.

Consumption levels in Virginia have increased each year since 2009. Residents of the Commonwealth consumed approximately \$42,000 of goods and services per person in 2016, up from \$40,000 in 2015.⁶ Unfortunately, we do not have recent data on consumption spending within Virginia’s metropolitan areas. Instead, we have data on taxable sales within metros, but as noted, this measure will miss some forms of consumption spending.

Taxable sales growth predictably rises during business cycle expansions and falls during business cycle contractions. However, taxable sales growth at the metropolitan level usually leads the business cycle, and this makes it a valuable leading indicator of future economic conditions.

At the time of publication, data were only available for the metropolitan areas through August 2017. Taxable sales data are highly seasonal and so it is important when comparing across time to ensure that the time periods are consistent. Table 3 presents taxable sales growth rates for data through August of each year. Columns 1 through 4 show growth rates for 2014-2017 through August of each year. Column 5 shows the average annual growth rate for the prerecession period 2004-2007 as a comparison.

Two things stand out. First, taxable sales growth between 2014 and 2017 was positive, suggesting a growing economy. Second, though taxable sales grew each year between 2014 and 2017, the growth rates lagged the average annual taxable sales growth during the prerecession period. So, the metropolitan areas experienced taxable sales growth the past four years, but that growth was slower than they experienced prior to the recession.

⁶ Bureau of Economic Analysis, Personal Consumption Expenditures by States, October 2017.

	(1)	(2)	(3)	(4)	(5)
	2014	2015	2016	2017	2004-2007 Average Annual
Blacksburg	4.2%	1.6%	1.9%	0.9%	5.9%
Charlottesville	6.4%	3.2%	6.3%	2.6%	5.4%
Harrisonburg	4.6%	2.3%	5.7%	4.1%	4.7%
Lynchburg	6.6%	1.8%	3.2%	1.3%	6.4%
Richmond	5.5%	4.4%	0.9%	4.5%	6.4%
Roanoke	4.7%	3.0%	0.2%	1.9%	4.4%
Hampton Roads	1.8%	3.7%	1.8%	2.9%	5.1%
Winchester	3.9%	2.5%	5.2%	4.6%	4.0%
Northern Virginia	-0.5%	4.6%	2.6%	2.9%	4.1%

Source: Center for Economic and Policy Studies, Weldon Cooper Center for Public Service, University of Virginia

Is GO Virginia Going Anywhere?

Lawmakers and other regional leaders have had a marked change in heart with regard to economic development policy in recent years. They have been taking a much more aggressive and proactive stance. Virginia's lawmakers approved two new initiatives during the 2016-17 General Assembly session – GO Virginia and the Virginia Research Investment Fund (VRIF). Both programs aim to create high-wage jobs in industries of strength. Another goal of both programs is collaboration. The lack of regional cooperation and collaboration is frequently mentioned as an inhibiting factor to growth.

GO Virginia incentivizes collaboration by providing state funds for initiatives that have at least two separate localities participating. The program organizes Virginia into nine regions, each with a regional council that scores proposals submitted from business, academia, localities and regional organizations. The first round of proposals was not yet submitted at the time of publication, so we are unable to comment on benefits that may accrue to the regions. However, the process of regional collaboration is likely to stimulate beneficial economic activity with or without funding through GO Virginia.

VRIF is designed to stimulate commercialization of research conducted at universities. The program provides state funds and bonding authority to renovate, purchase or build research labs and research equipment. The final budget bill in the 2017 General Assembly session designated \$4 million for VRIF in FY 2017 and \$8 million in FY 2018 as well as \$29 million in bonding authority.⁷ A small amount for the task at hand.

We believe that both programs address a critical weakness in the Virginia economy at present – innovation. Innovation is at the core of modern-day economic development. Innovation enhances productivity, creates value and increases wages. Innovation is not just about entrepreneurship, however. It is important for existing companies as well. It helps those

firms increase productivity and tap new markets. Innovation is also at the core of establishment creation. We are hopeful but must await further funding and the results of actual projects to make firm statements about the benefits of GO Virginia and VRIF.



⁷ State Council of Higher Education for Virginia, Virginia Research Investment Fund, <http://www.schev.edu/index/institutional/grants/va-research-investment-fund>.

Concluding Remarks

If one were to view the regional metropolitan economies as the pistons that drive the economic growth engine in Virginia, then it is clear from an economic perspective that not all the pistons are firing at the same time and with the same strength. The problem is that we cannot point to one malady for the stops and starts of the regional economies in the Commonwealth. Sequestration and the caps on defense spending have hindered federal spending in Hampton Roads. The declining importance of mining and forestry has hurt southwestern Virginia. The textile industry has almost disappeared in Southside Virginia. Meanwhile, Richmond has accelerated modestly ahead of the Commonwealth's other regions.

There are strands of good news even amid the ping-pong and stalling of the economic engine. Both employment and jobs are up in most of the metropolitan areas, though their growth appears to have tapered off in 2017. Wage data suggest a tightening labor market and this could boost wages throughout 2017. Taxable sales continue to grow in most metro areas but, as with the labor market, growth appears to be declining in 2017. Not only is economic growth in Virginia overall stuck in neutral, there is also a distinct possibility that many metro areas may be shifting into reverse.

GO Virginia is a step in the right direction, but a small step. The amount of funding for GO Virginia is too small relative to the task at hand. Further, rather than spending scarce public funds upon low-likelihood attempts to woo large employers, or heavily subsidizing private development, or investing in large, economically unproductive showcase projects, Virginia should invest in projects that spur innovation and in the commercialization of products and technology coming from its federal laboratories and universities. Attention also should be devoted to providing incentives that might bolster the Commonwealth's below-the-national-average rate of new business formation.

If GO Virginia truly spurs regional cooperation, then the Commonwealth should seriously consider large increases in GO Virginia funding to encourage regional economic growth. This assumes that the regional projects put forward have sound economic bases rather than representing predictable grabs at what some may view as a proverbial Christmas tree full of presents.

What does the future hold? Virginia's regional economies, except for Richmond, appear to be decelerating. While increased federal spending may be on the horizon, political uncertainty may push such increases well into 2018. We believe that concerted political action to alleviate burdensome regulations, promote long-term investment and improve regional cooperation is needed now. This is hardly a new recommendation, but one we need to repeat until the Commonwealth climbs out of its current rut.

