A DEEPER DIVE INTO THE BLACKSBURG-CHRISTIANSBURG METROPOLITAN AREA

People in small towns, much more than in cities, share a destiny.

– Richard Russo, novelist, screenwriter, and teacher

While politicians in Richmond and traffic in Northern Virginia may garner the attention of many, there is a larger story to be told about the Commonwealth of Virginia. Outside the urban crescent formed by Hampton Roads, Richmond, and Northern Virginia lie other metropolitan areas, each of which has its own unique economic character. While some of these metropolitan areas are defined by their proximity to Northern Virginia, others are centered on the relationship with institutions of higher education. The success of these metropolitan areas will determine whether the Commonwealth can attract, educate, and retain sufficient workers to compete and grow in the coming decade.

The Blacksburg-Christiansburg metropolitan statistical area (MSA) is in southwest Virginia and includes the counties of Giles, Montgomery, and Pulaski as well as the independent city of Radford. Virginia Tech, with more than 37,000 full-time equivalent students in the 2021–2022 academic year, is not only the largest employer in the metro area, but it continues to expand its reach within the state. Radford University, the third-largest employer in the metro area, has seen full-time enrollments dip in the aftermath of the pandemic. However, its recent merger with the Jefferson College of Health Sciences, coupled with the growing demand for nurses, may provide the necessary fuel to boost enrollments over the decade.

Like other metropolitan areas in the Commonwealth, there are high and low points to reflect upon. In recent years, the Blacksburg-Christiansburg metropolitan statistical area has seen domestic outmigration increase while international migration into the metro area has fallen. The region appears to have a higher than average proportion of residents below the poverty level; however, we find that the presence of many college students, relative to the population, contributes to this observation.

While the Blacksburg metro area's economic performance lagged that of the nation prior to the pandemic, recently released estimates of real (inflation-adjusted) economic activity suggest that the metro area grew at a faster pace than the state or the nation in 2021. The most recent economic data for 2022 points to a sustained recovery and the possibility of a new expansion, with an unemployment rate below 3% and more jobs in the second half of 2022 than prior to the advent of the pandemic in 2020.

The purpose of this chapter is not to completely detail all the intricacies of the Blacksburg-Christiansburg MSA. The contributions of Virginia Tech are worthy of their own chapter and will be explored in a future *State of the Commonwealth Report*. We seek to inform readers about economic conditions in the region and the prospects for future growth. We identify potential challenges and opportunities and ask how the metro area can continue to contribute to the future of Virginia.

Where Are All The People?

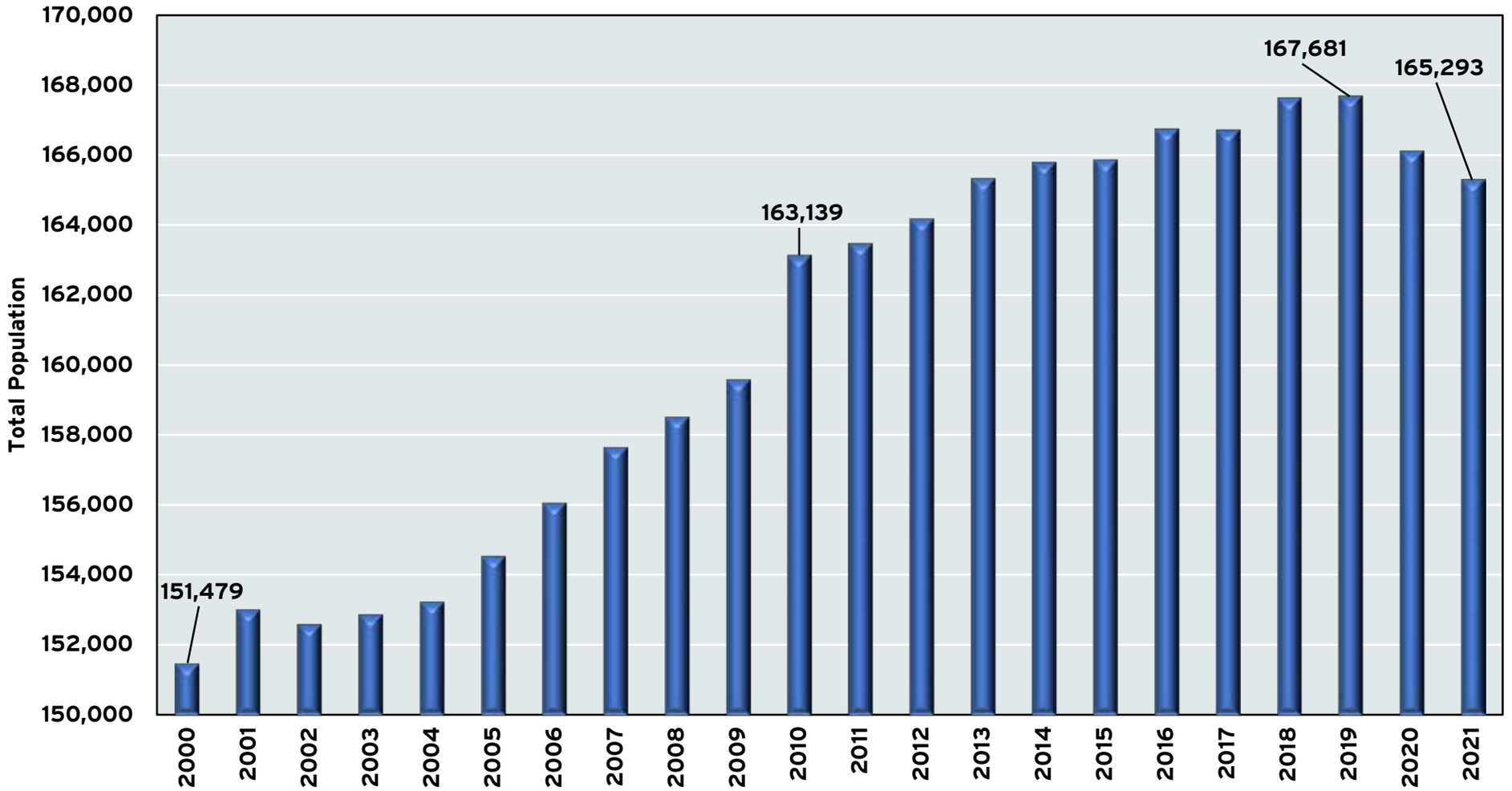
In Graph 1, we present the total population for the Blacksburg-Christiansburg metropolitan statistical area from 2000 to 2021. In 2000, the U.S. Census estimated that there were 151,479 residents in the region. By 2010, total population had increased by 7.6% to 163,139. In 2019, total population peaked at 167,681. In 2020 and 2021, the estimated population of the Blacksburg metro area declined by 1,570 and 818 individuals, respectively. The population decline of 1.4% from 2019 to 2021 is potentially troubling and could be associated with social distancing measures at Virginia Tech and Radford University during the pandemic. If the population continues to decline in the coming years, however, then the metro area will face an increasingly uncertain future.

In Table 1, we examine the components of population change for the Blacksburg metro area from 2011 to 2021. There are three potential sources for the observed changes in the total population: (1) the natural increase in the population, which is equal to births minus deaths; (2) domestic migration, which is equal to the movement of individuals into and away from the metro area to locations within the United States; and (3) international migration, which is equal to the movement of individuals into the metro area from outside the United States and from the metro area to other countries.

Even before the onset of the COVID-19 pandemic, the number of deaths had eclipsed the number of births in the Blacksburg region. In 2019, there were 183 more deaths than births, a gap that grew to 478 more deaths than births in 2021. Over the same period, international migration flows into the metro area declined, likely a combination of more restrictive immigration policies in the latter half of the last decade and increased travel restrictions associated with the pandemic. In 2019, there were 459 more arrivals to Blacksburg from locations overseas than there were departures overseas from the Blacksburg metro area. In 2021, international migration was still positive, but declined to only a net gain of 150 individuals, the lowest observed value over the decade.

GRAPH 1

TOTAL POPULATION:
BLACKSBURG - CHRISTIANSBURG VA METROPOLITAN STATISTICAL AREA, 2000-2021



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; U.S. Census Bureau, Resident Population in Blacksburg-Christiansburg-Radford, VA (MSA) [BCRPOP], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/BCRPOP, October 25, 2022.

TABLE 1

COMPONENTS OF POPULATION CHANGE: BLACKSBURG-CHRISTIANSBURG METROPOLITAN STATISTICAL AREA, 2011-2021

	Natural Increase	International Migration	Domestic Migration	Population Change
2011	125	532	-329	332
2012	220	817	-326	705
2013	155	555	442	1149
2014	129	714	-374	459
2015	126	704	-763	69
2016	101	646	148	893
2017	3	576	-616	-32
2018	-38	274	666	906
2019	-183	459	-219	61
2020	-272	355	-528	-437
2021	-478	150	-494	-818

Sources: Dragas Center for Economic Analysis and Policy; and Metropolitan and Micropolitan Statistical Area Totals: 2011-2021. Components may not equal total population change due to statistical residual.

While it stands to reason that international migration flows will recover in the coming years as the pandemic ebbs into memory, there is more troubling news with regards to domestic migration. From 2011 to 2021, domestic migration was only positive for three years, that is, in only three years from 2011 to 2021 did more people move into the Blacksburg metro area from locations elsewhere in the United States than moved away from the Blacksburg metro area. In 8 of the 11 other years, domestic outmigration was higher than domestic immigration, including 2019, 2020, and 2021. If residents vote with their feet about economic conditions, the outflow of residents from the Blacksburg region to locations elsewhere in the United States is a strong signal of the economic prospects of the metropolitan area.

In Table 2, we compare the population growth rates for the Blacksburg metro area with selected cities and countries in the MSA. Montgomery County grew from a population of 83,752 in 2000 to 98,473 in 2021, an increase of 17.6%. Radford city also grew, from 15,855 in 2000 to 16,499 in 2021 (an increase of about 4.1%). These gains, however, were partly offset by declines in total population in Giles County (-0.9%) and Pulaski County (-4.0%) over the period. However, when we delve into the 2019 to 2021 period, we observe that each of these localities declined in population, suggesting that not one jurisdiction is solely to blame for the decline in metro area population.

In Table 3, we compare the population growth of Virginia's metropolitan statistical areas from 2010 to 2021. The Winchester metro area grew at an annual average rate of 1.2%, followed by the Washington, DC–Arlington–Alexandria metro area. On the other hand, the average annual rate of population growth for the Blacksburg-Christiansburg metro area was 0.1% from 2010 to 2021. Relative to the other metro areas in the Commonwealth, the Blacksburg metro area ranked second from last in terms of average annual population growth from 2010 to 2021.

TABLE 2

POPULATION GROWTH
SELECTED CITIES AND COUNTIES IN THE BLACKSBURG-CHRISTIANSBURG MSA
2000-2021

Area	Population 2000	Population 2010	Population 2019	Population 2021
Giles County	16,715	17,317	16,693	16,562
Montgomery County	83,752	94,560	98,872	98,473
Pulaski County	35,152	34,830	34,009	33,759
City of Radford	15,855	16,432	18,107	16,499
Blacksburg-Christiansburg MSA	151,479	163,139	167,681	165,293

Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; U.S. Census Bureau, Resident Population in Radford city, VA [VARADFOPOP], Pulaski County, VA [VAPULA5POP], Montgomery County, VA [VAMONTOPOP], and Giles County, VA [VAGILE1POP] retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/VARADFOPOP, October 25, 2022.

TABLE 3

POPULATION GROWTH IN VIRGINIA'S METROPOLITAN AREAS
2010 - 2021

Metro Area	Total Population 2010	Total Population 2021	Annual Average Growth
Winchester	128,640	145,155	1.1%
Washington-Arlington-Alexandria	5,678,733	6,356,434	1.0%
Richmond	1,188,423	1,324,062	1.0%
Charlottesville	201,913	222,688	0.9%
Harrisonburg	125,412	135,824	0.7%
Staunton	118,320	125,774	0.6%
Hampton Roads	1,717,110	1,803,328	0.4%
Lynchburg	252,975	262,258	0.3%
Roanoke	308,602	314,496	0.2%
Blacksburg-Christiansburg	163,139	165,293	0.1%
Kingsport-Bristol	309,488	308,661	0.0%

Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; U.S. Census Bureau, Metropolitan and Micropolitan Statistical Area Totals: 2010-2021. .

Who Lives In The Blacksburg-Christiansburg Metro Area?

In Table 4, we present the U.S. Census Bureau's American Community Survey (ACS) 1-year estimates for the Blacksburg-Christiansburg metropolitan statistical area. The 1-year ACS estimates allow us to compare the Blacksburg metro area with Virginia and the United States. At first glance, the Blacksburg metro area has higher proportions of individuals who identify as white, individuals between the ages of 18 and 24, and more individuals who reside below the poverty line when compared to the Commonwealth and the nation. Let's dig into the numbers.

The median (50th percentile) resident in the Blacksburg metro area is younger than the median resident of the Commonwealth and the United States. This is not because the population in Blacksburg under the age of 18 is a higher proportion of the population; in fact, 16.3% of the population in Blacksburg is under the age of 18, compared to 21.8% in Virginia, and 22.1% of the United States. We argue the reason why the median age in Blacksburg is lower is simple: college students.

If we examine the proportion of the population that is 18 to 24 years old, more than 1 in 5 residents of the Blacksburg metro area fell into this category in 2021 (23.0%). Roughly 1 in 11 Virginians and Americans belonged to this age group in 2021. The presence of large institutions of higher education typically attracts younger individuals to study and obtain a bachelor's degree (or higher). This is likely reflected in the fact that almost 94% of residents in Blacksburg have a high school degree (higher than Virginia or the nation), but only about 36% of residents have a bachelor's degree or higher (lower than Virginia or the nation).

Examining Table 4, one might conclude that the Blacksburg metro area is much poorer than Virginia or the United States. The percentage of individuals below the poverty line in 2021, for example, was 22.3% in the Blacksburg metro area compared to 10.2% for Virginia and 12.8% for the nation. Median household income is also substantially lower in the metro area than the state or the nation. However, there appears to be more to this story, a story that is shaped by the presence of Virginia Tech.

Virginia Tech[1] is on a roll. Its headcount enrollment increased by 19.1% between fall 2011 and Fall 2020, even while headcount enrollment in all Virginia colleges and universities was declining by more than 11,000 students and almost 3.0 million students were disappearing nationally. Tech's success extends well beyond its enrollment (which now exceeds 37,000). It has become an institution of choice that can take students away from rival institutions. Tech now is ranked by U.S. News and World Report among the Top 20 public universities in the United States.

Tech's successes reflect an accurate reading of Virginia's needs and a nimbleness that is commendable for an institution its size. Why is Tech dominating the Amazon-related developments in Northern Virginia even though it is a robust 257-mile automobile ride (perhaps five hours when there is traffic) from Blacksburg to Arlington? Because the institution was quicker to the mark than the University of Virginia, flexible in response to requests, and already had programs and people that fit the region's needs.

Tech's successes and increasingly large imprint have not been confined to technology. Its Carilion School of Medicine opened in 2007, and its athletic teams now compete vigorously in the Atlantic Coast Conference. Does Virginia Tech owe much of its rise to the increasingly vital role that innovation and technology now plays in our society? Of course, but credit for its wide-ranging accomplishments must also accrue to its presidential leadership and an impressive number of entrepreneurial administrators and faculty members.

1 While the formal name is Virginia Polytechnic Institute and State University, Virginia Tech is the official nickname of the university.

TABLE 4

POPULATION CHARACTERISTICS
BLACKSBURG-CHRISTIANSBURG MSA, VIRGINIA, AND THE UNITED STATES, 2021

Category	Blacksburg-Christiansburg, VA	Virginia	United States
Age			
Median Age	33.9	38.8	38.8
Under 18	16.3%	21.8%	22.1%
18 to 24	23.0%	9.5%	9.1%
25 to 64	44.3%	52.5%	51.9%
65 and Over	16.3%	16.3%	16.8%
Race/Ethnicity			
White	85.3%	59.2%	58.1%
Black or African American	5.1%	18.0%	11.8%
Asian	3.7%	6.7%	5.7%
Hispanic	3.0%	10.2%	18.8%
Educational Attainment			
High School Degree or Higher	93.8%	91.4%	89.4%
Bachelor's Degree or Higher	36.2%	41.8%	35.0%
Economics			
Median Household Income	$54,737	$74,222	$62,843
Persons Below Poverty Line	22.3%	10.2%	12.8%
Travel Time to Work (minutes)	20.3	26.4	25.6

Sources: Census Reporter and U.S. Census Bureau (2021) American Community Survey 1-year estimates. Hispanic includes respondents of any race. Other race categories are non-Hispanic.

Do College Students Drive The Poverty Rate?

Graph 2 displays the poverty rate in the Blacksburg-Christiansburg metropolitan area, the Commonwealth of Virginia, and the United States from 2010 to 2020. We use the U.S. Census Small Area Income and Poverty Estimates (SAIPE) to compare poverty rates across time. The SAIPE estimates are not direct counts of individuals' poverty; instead, the Census Bureau models income and poverty estimates by combining survey data with population estimates and administrative records. [2]

What is immediately apparent is that the estimated poverty rate in the Blacksburg-Christiansburg metropolitan area has been higher than the state or nation over the period of analysis. The reported poverty rate peaked in 2014 at 22.1%, 6.6 percentage points higher than the nation, and 10.3 percentage points higher than the Commonwealth. We note that the expansion of federal programs in response to the COVID-19 pandemic appears to have reduced the reported poverty rate in the Blacksburg metro, with a reported decline of almost 2 percentage points from 2019 to 2020.

We now turn to the 2020 American Community Survey 5-year estimates to examine whether college students are more likely to fall below the poverty line than in other metropolitan areas in the Commonwealth. To estimate the poverty rate for college students, we obtain estimates for the number of undergraduate and graduate and professional students who reported incomes below, at, and above the poverty line. We estimate the poverty rate as the ratio of college students in poverty to the total number of undergraduate, graduate, and professional students. We then compare this estimate to the ratio of the total number of individuals reported below the poverty line to the overall population for each metro area of interest.

Graph 3 displays the estimated population poverty rate and the estimated poverty rate for undergraduate, graduate, and professional students for several of Virginia's metropolitan areas for 2020. We estimate that approximately 66% of undergraduate, graduate, and professional students in the Blacksburg-Christiansburg metropolitan area had incomes below the poverty level in 2020, followed by approximately 59% of students in Harrisonburg, and 40% of students in Charlottesville. In other words, of the 32,100 individuals who were below the poverty level in the Blacksburg metro area in 2020, 15,994 were undergraduate students, and an additional 1,563 were graduate or professional students.

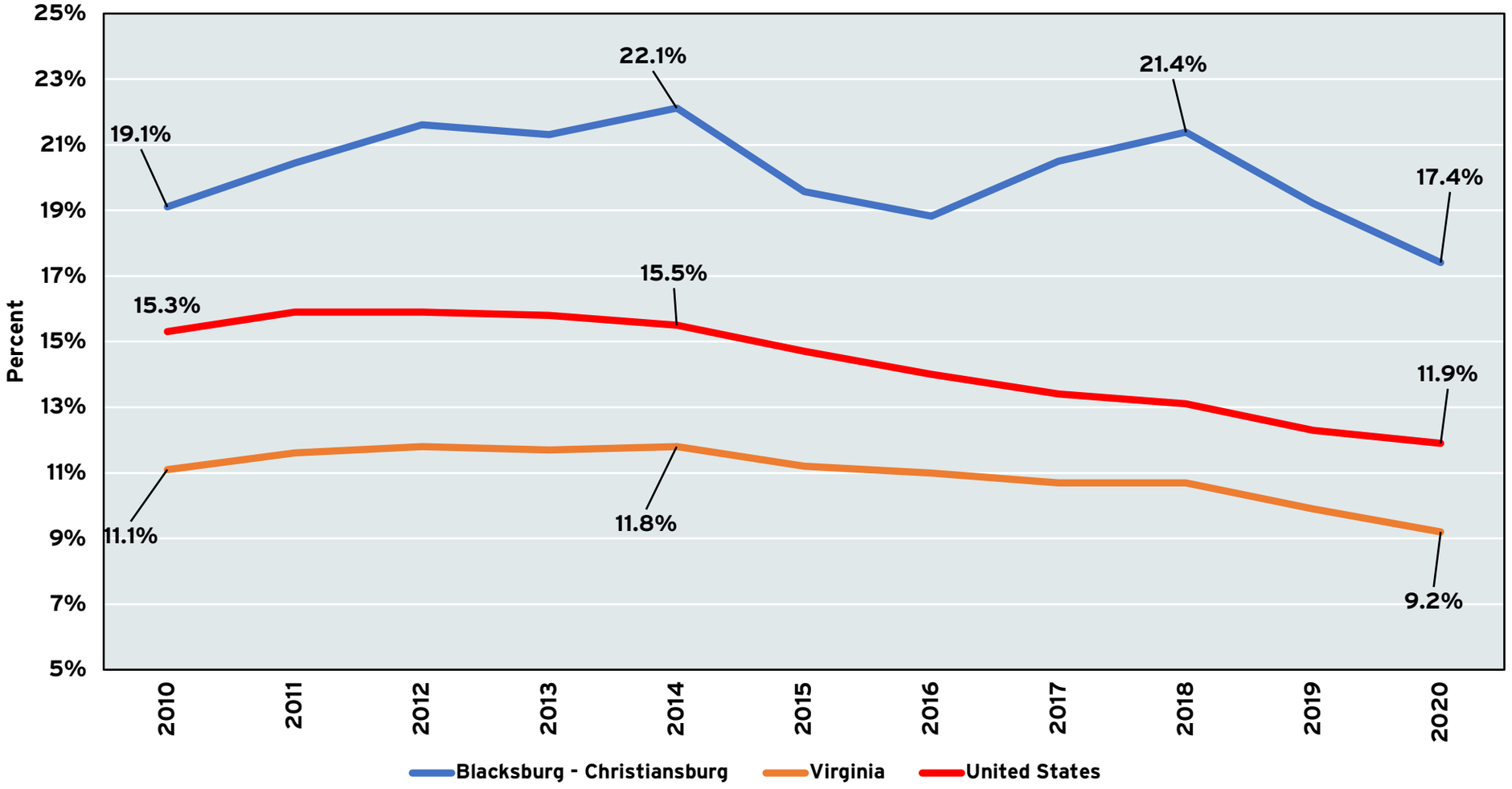
In Table 5, we present the estimated poverty rates for the population and the college and professional student population for 2020 for selected locations in the Blacksburg metropolitan area. As one might suspect, the estimated poverty rates are higher in localities with large college and professional student populations. In 2020, Radford city had an estimated population poverty rate of 39.6% and a college poverty rate of 78.7%, followed by Montgomery County with an estimated population poverty rate of 23.8% and a college poverty rate of 70.0%.

Care must be taken, however, when interpreting the poverty estimates. An undergraduate student with an income below the poverty level is quite different from an individual who is in their 30s or 40s. We can conduct a simple thought experiment to see how the presence of these students impacts the estimated poverty rate. If we remove the reported college and professional student population (above, at, and below the poverty level), then the estimated poverty rate in the Blacksburg metropolitan area would be approximately 13.5% in 2020. While this would still be above the reported poverty rate for the general population in Virginia and the United States, it is significantly less than the estimated 21.6% poverty rate in Graph 3 and the locality-based estimates in Table 5.

2 According to the U.S. Census, "The SAIPE methodology combines the 1-year American Community Survey (ACS) estimates with other data sources to provide more timely, precise, and stable estimates than the 5-year ACS estimates alone." For more information, see: https://www.census.gov/programs-surveys/saipe/about/faq.html

GRAPH 2

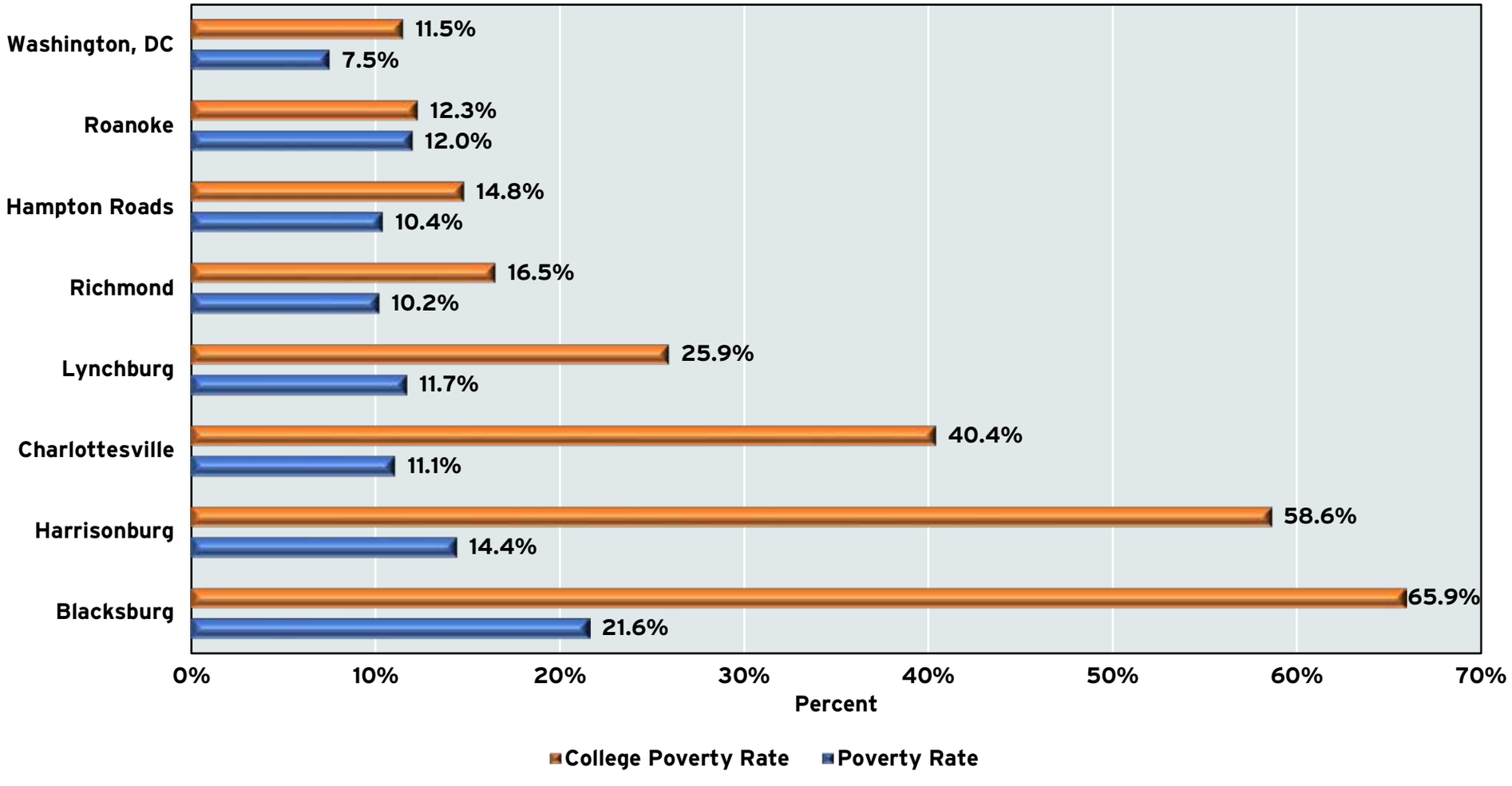
POVERTY RATE
BLACKSBURG-CHRISTIANSBURG MSA, VIRGINIA, AND THE UNITED STATES
2010-2020



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; Small Area Income and Poverty Estimates (SAIPE), U.S. Census Bureau.

GRAPH 3

TOTAL AND COLLEGE POPULATION POVERTY RATE: SELECTED VIRGINIA METROPOLITAN AREAS, 2020



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; U.S. Census Bureau, ACS 5-year estimates. The poverty rate is estimated as the ratio of individuals below the poverty level to the total number of individuals below, at, or above the poverty level.

TABLE 5

ESTIMATED POPULATION AND COLLEGE POVERTY RATES, SELECTED LOCALITIES IN BLACKSBURG-CHRISTIANSBURG METROPOLITAN STATISTICAL AREA, 2020

Location	Total Population	College Student Population	Individuals Below Poverty Level	Students Below Poverty Level	Estimated Poverty Rate	Estimated Student Poverty Rate
Giles County	16,075	658	1,549	149	9.6%	22.6%
Montgomery County	86,136	19,731	20,524	13,409	23.8%	68.0%
Pulaski County	31,895	1,513	4,303	274	13.5%	18.1%
Radford City	14.453	4,731	5,724	3,725	39.6%	78.7%

Sources: Dragas Center for Economic Analysis and Policy; U.S. Census Bureau, ACS 5-year estimates. The poverty rate is estimated as the ratio of individuals below the poverty level to the total number of individuals below, at, or above the poverty level.

Neither Forward Nor Backward: Gross Domestic Product

Recently released data from the Bureau of Economic Analysis suggests that real (inflation-adjusted) economic activity in the Blacksburg-Christiansburg metropolitan area contracted by 3.6% in 2020 and then expanded by 8.5% in 2021 (Table 6) (KEEP FOOTNOTE 3). The rebound in real GDP was the highest among Virginia's metropolitan areas and more recent labor market data for 2022 lend credence to the argument that the Blacksburg-Christiansburg metro area is in the midst of a new economic expansion. We project that annual real GDP growth will moderate in 2022 to 2.0% in 2022 due to inflation and global uncertainty.

The economic recovery in the Blacksburg-Christiansburg metro area is good news but must be tempered by comparison with the Commonwealth and nation. Graph 4 illustrates that the region's economic performance left much to be desired prior to the pandemic, with the regional economy growing by 19.7% from 2001 to 2019, compared to 35.7% and 43.5% for the state and nation, respectively. Examining Graph 4, we note that the Blacksburg metro, the Commonwealth, and the nation followed similar growth profiles prior to the Great Recession but that this story changed dramatically after 2007. From the peak of real GDP in 2007 to 2019, real GDP in the Blacksburg region contracted by 0.2%, that is, the level of economic activity was basically unchanged from 2007 to 2019.

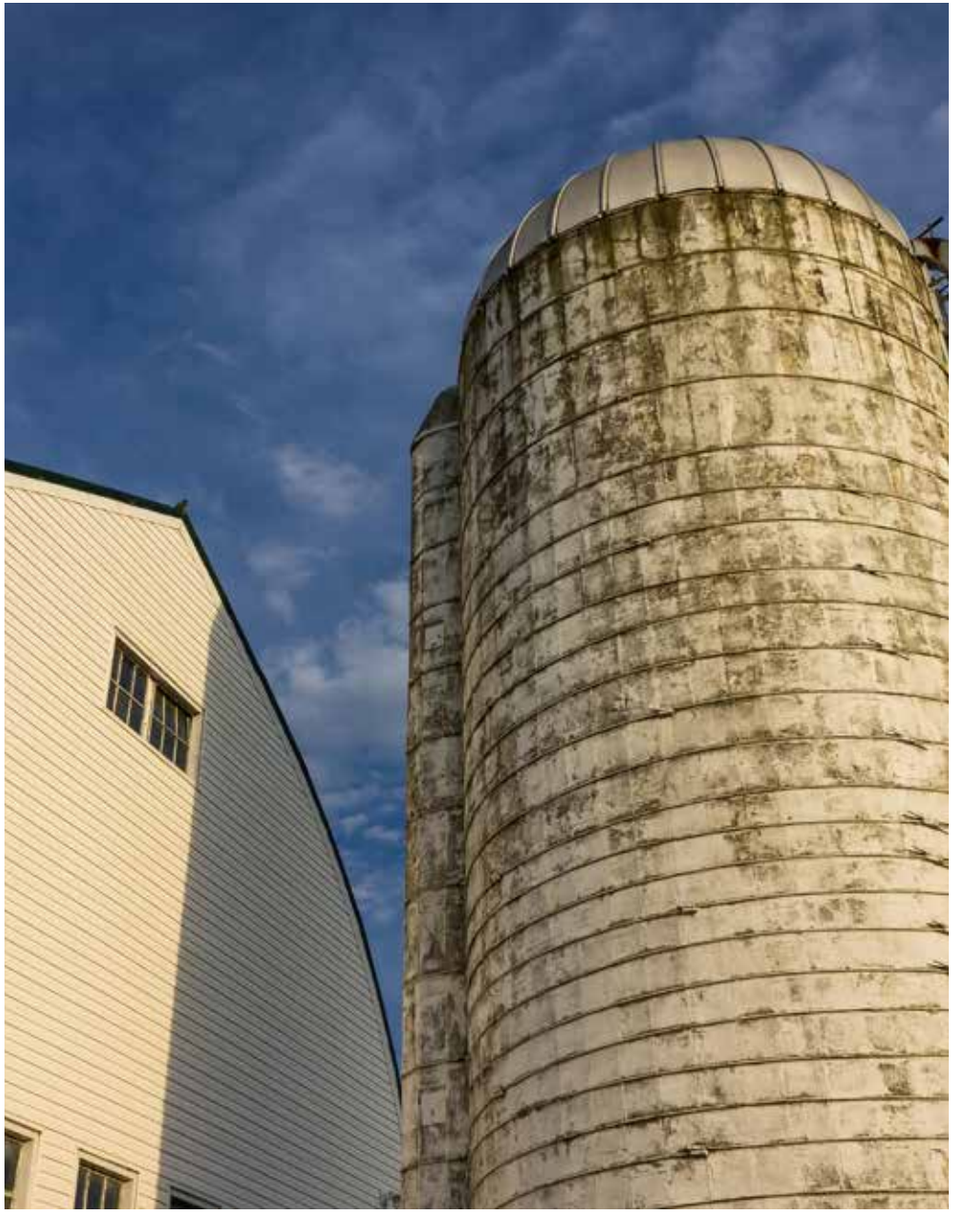
Real GDP in the Blacksburg metro area, the Commonwealth, and the nation all contracted in 2020, but there was a significant recovery of economic activity in 2021. At the end of 2021, real GDP was higher in the Blacksburg-Christiansburg metro area, Virginia, and the United States than 2019, the last full year prior to the COVID-19 pandemic. The economic recovery in the Blacksburg-Christiansburg metro area outpaced that of the state of nation in 2021 and labor market data from 2022 suggest that the recovery has continued (although not at the 8.5% annual rate in 2021). We will have to wait until late 2023, however, for estimates of real GDP for the Blacksburg-Christiansburg metro area for 2022.

TABLE 6

NOMINAL AND REAL GROSS DOMESTIC PRODUCT IN MILLIONS OF DOLLARS BLACKSBURG – CHRISTIANSBURG MSA, 2001-2022*

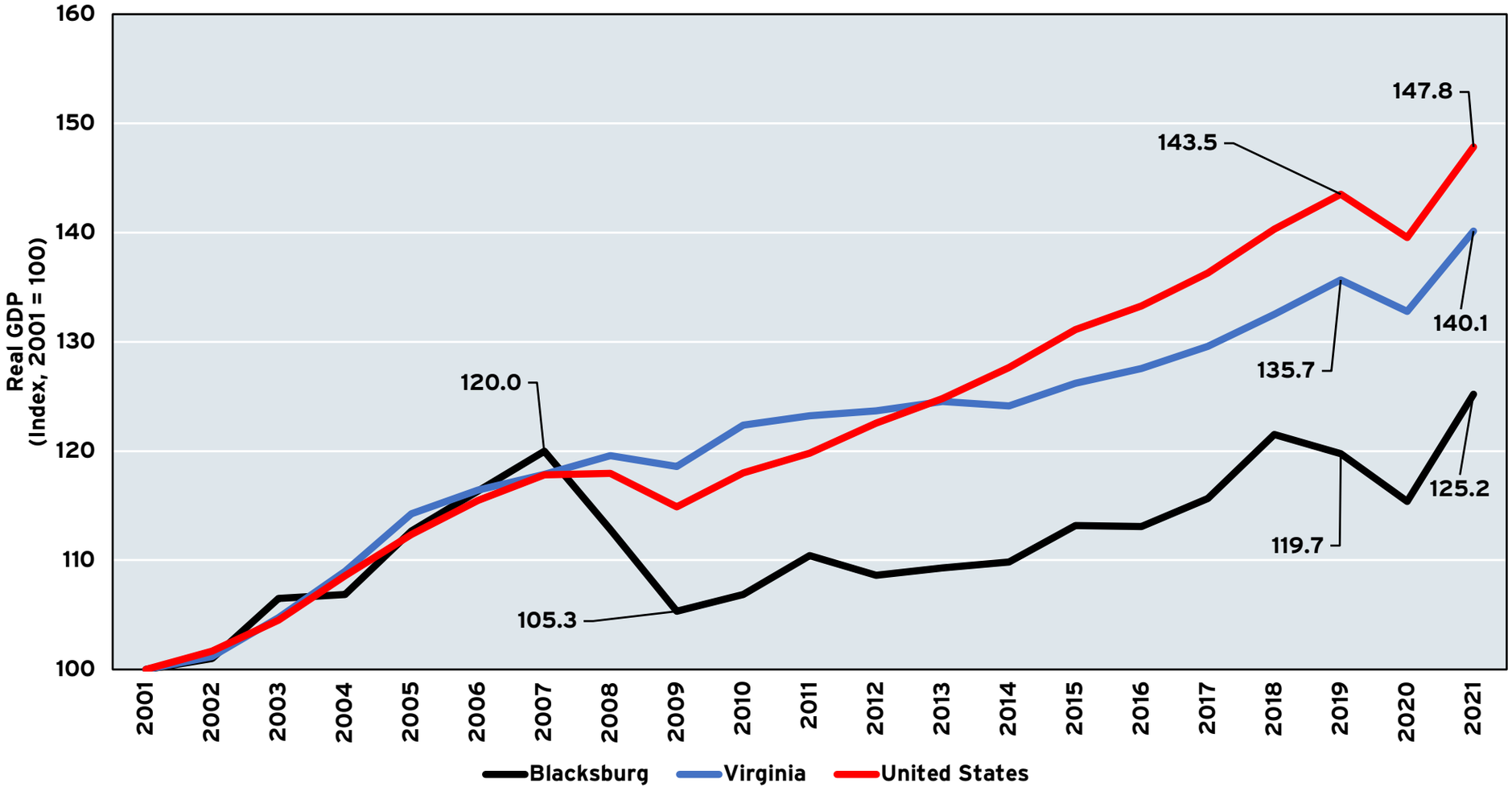
Year	Nominal GDP (Millions)	Real GDP (Millions of 2012 Dollars)
2001	$4,428.3	$5,418.4
2002	$4,529.9	$5,472.9
2003	$4,835.9	$5,771.8
2004	$4,922.4	$5,790.2
2005	$5,276.8	$6,106.0
2006	$5,522.3	$6,303.7
2007	$5,829.8	$6,500.2
2008	$5,585.2	$6,112.1
2009	$5,469.0	$5,707.1
2010	$5,558.8	$5,790.5
2011	$5,809.3	$5,982.3
2012	$5,885.2	$5,885.2
2013	$6,071.9	$5,923.0
2014	$6,248.8	$5,951.0
2015	$6,676.1	$6,132.7
2016	$6,787.0	$6,127.9
2017	$7,020.5	$6,267.1
2018	$7,497.7	$6,584.2
2019	$7,562.8	$6,488.2
2020	$7,497.0	$6,253.0
2021	$8,271.6	$6,783.9
2022	$8,983.0	$6,919.6

Sources: Dragas Center for Economic Analysis and Policy; Bureau of Economic Analysis. *Data for 2020 is the advanced estimate, 2021 represents our estimate, and 2022 is our forecast. 2012 dollars for real GDP.



GRAPH 4

INDEX OF REAL GROSS DOMESTIC PRODUCT
BLACKSBURG-CHRISTIANSBURG, VIRGINIA, AND THE UNITED STATES
2001 – 2021*



Source: U.S. Bureau of Economic Analysis. Real GDP in 2012 chained dollars. *2021 forecast for Blacksburg. Base year of the index is 2001.

Regional Prices And Housing In The Blacksburg Region

Regional price parities (RPPs) are regional price levels expressed as a percentage of the national price level for a given year. The price levels are determined by average prices paid by consumers for the mix of services and goods consumed in a region. Estimated by the U.S. Bureau of Economic Analysis (BEA), the RPPs provide insight into whether a metropolitan area is cheaper or more expensive than the national average. The BEA derives RPP using data from the Consumer Price Index, relative prices for housing rents and utilities from the American Community Survey, and expenditure weights from the Personal Consumption Expenditures by state series.[3]

As illustrated in Graph 5, the average price level in the Blacksburg-Christiansburg metro area was approximately 9.3% cheaper than the national average in 2008, while the average price level in the Washington, D.C., metro area was 14.2% higher than the national average. From 2008 to 2020, the Blacksburg metro area became relatively more expensive when compared to the national average, that is, in 2020, prices were 8.5% lower than the national average, an increase of 0.8 percentage points. The Richmond and Washington, D.C., metropolitan areas saw prices decrease relative to the national average, but this should be construed as prices increasing faster nationally rather than these regions becoming absolutely cheaper to live in over time.

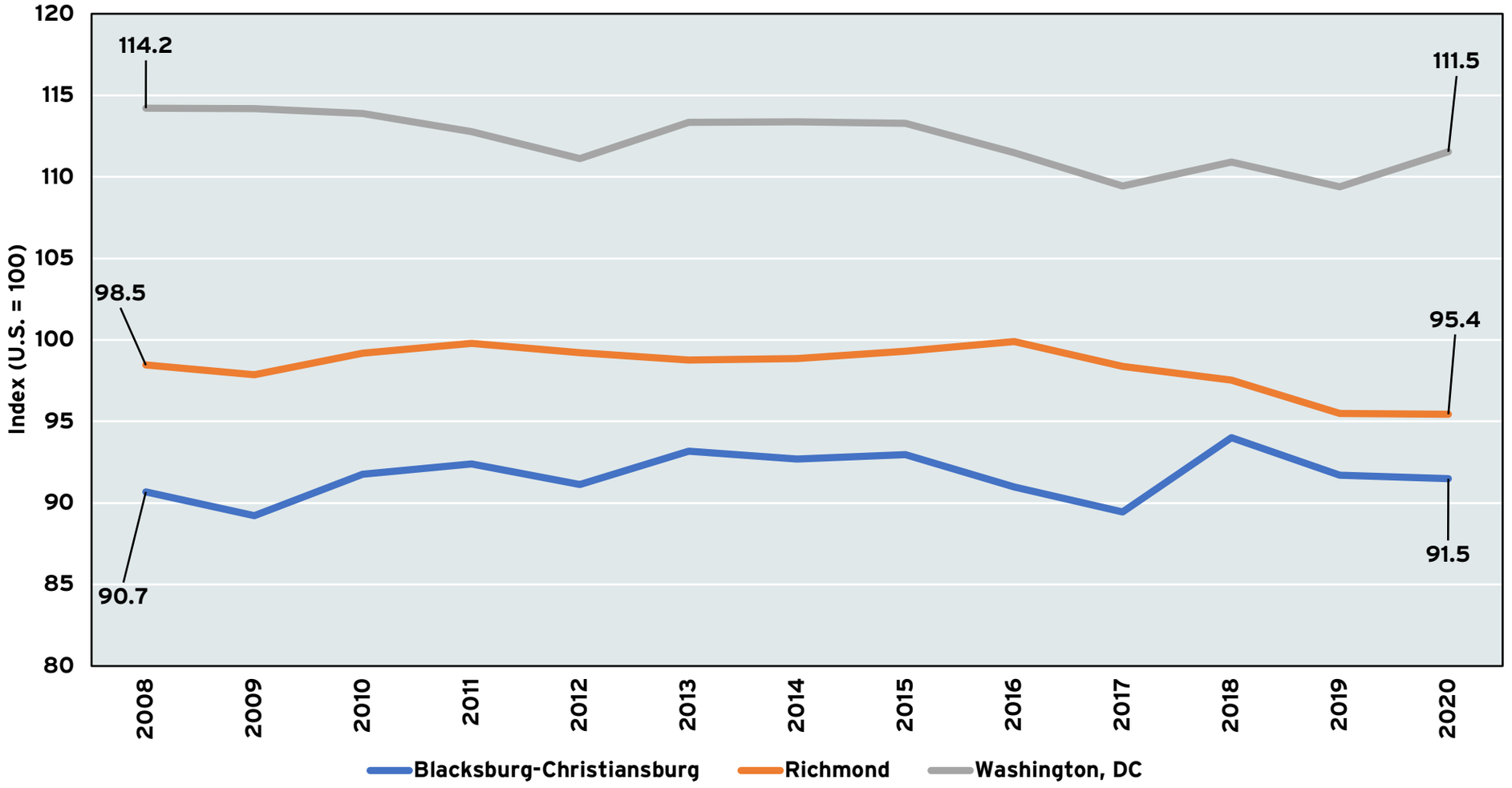
While the cost of living in the Blacksburg metro area was cheaper than the national average in 2020, median housing values have climbed in the region over the last decade. As with many other metropolitan areas across the Commonwealth, median housing values peaked prior to the Great Recession. As illustrated in Graph 6, the estimated median housing value increased from $107,598 in January 2000 to a pre-recessionary peak of $197,192 in December 2006, an increase of 83.3%. The Great Recession of 2007-2009 did not leave the region untouched, with the estimated median housing value falling to $169,250 in November 2011. The 14.2% decline in median housing values soon became a memory, however, as low interest rates and inventory led to a steady climb in median housing values. From the trough in November 2011 to the pre-COVID peak in October 2019, the median housing value in the Blacksburg metro area rose by 25.9% to $213,024. While there was a small dip in housing values in early 2020, median housing values in September 2022 were 27.1% higher than the pre-pandemic peak.

Even though median housing values have appreciated in the Blacksburg metro area, there is a modicum of good news. In Graph 7, we compare the growth in housing values in the Blacksburg region with Virginia and the nation. In the years prior to the pandemic, Blacksburg experienced a higher rate of growth in housing values than the nation, but less than the state. Since the onset of the pandemic, however, median housing values have appreciated more rapidly across the state and nation than in Blacksburg. From a regional competitiveness perspective, this may work to the metro area's advantage. While housing in the region is more expensive than prior to the pandemic, it has been relatively less expensive than many other areas of the Commonwealth and the nation. Brian T. Hamilton, director of Economic Development, Montgomery County, cited a 2021 study of the New River Valley Housing Market by the Virginia Center for Housing Research at Virginia Tech, Housing Forward Virginia, and the New River Valley Regional Commission to describe the latest on local housing needs. Hamilton shared that "at least 5,500 more rental units are needed to be able to house all our residents from all income levels." Several projects are in the housing pipeline to expand affordable housing in the area.

3 For more information see: frehttps://www.bea.gov/system/files/methodologies/Methodology-for-Regional-Price-Parities_0.pdf

GRAPH 5

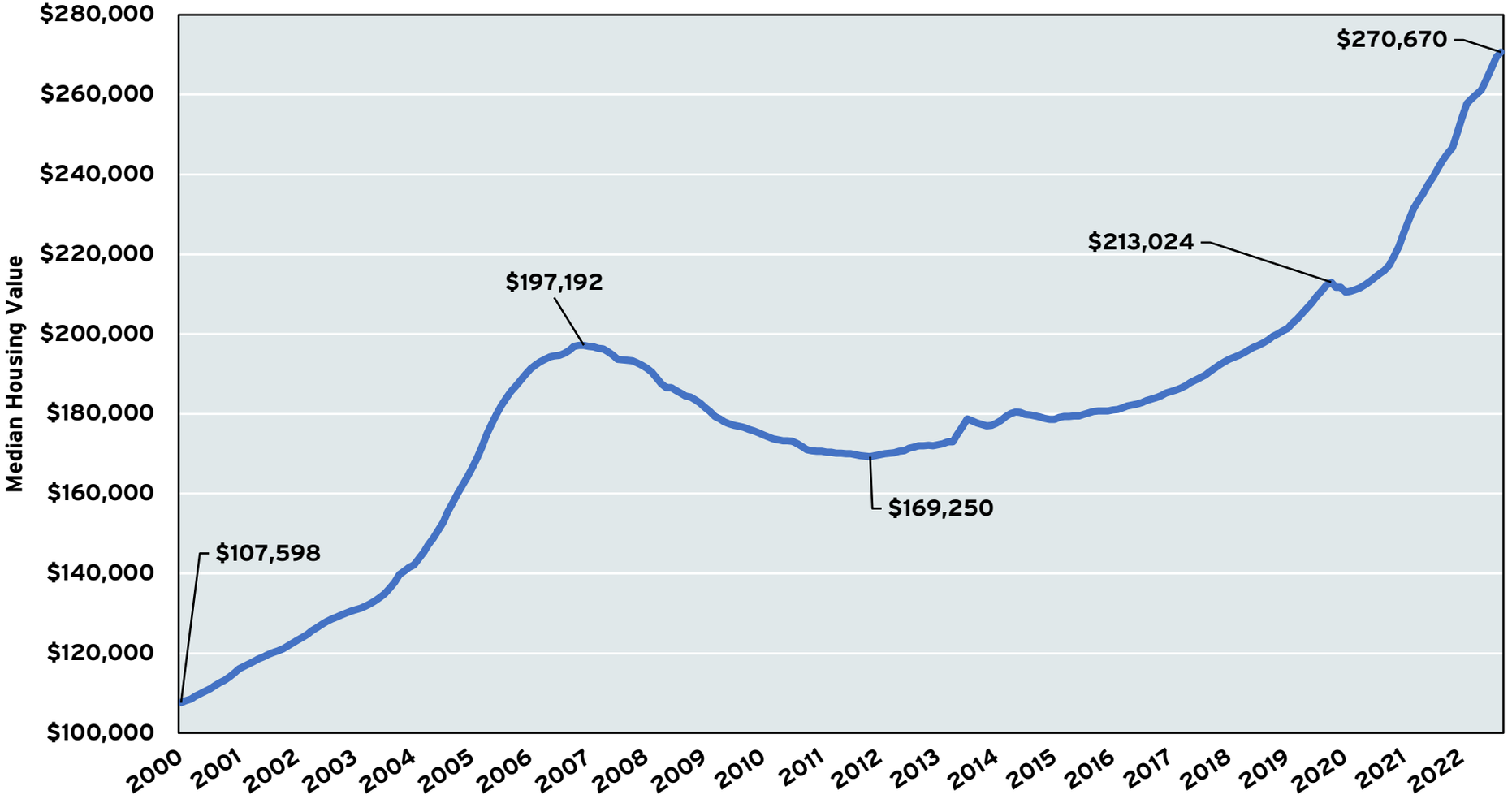
REGIONAL PRICE PARITIES FOR ALL ITEMS: BLACKSBURG-CHRISTIANSBURG, RICHMOND, AND WASHINGTON, D.C., METROPOLITAN STATISTICAL AREAS



Sources: Dragas Center for Economic Analysis and Policy and Bureau of Economic Analysis.

GRAPH 6

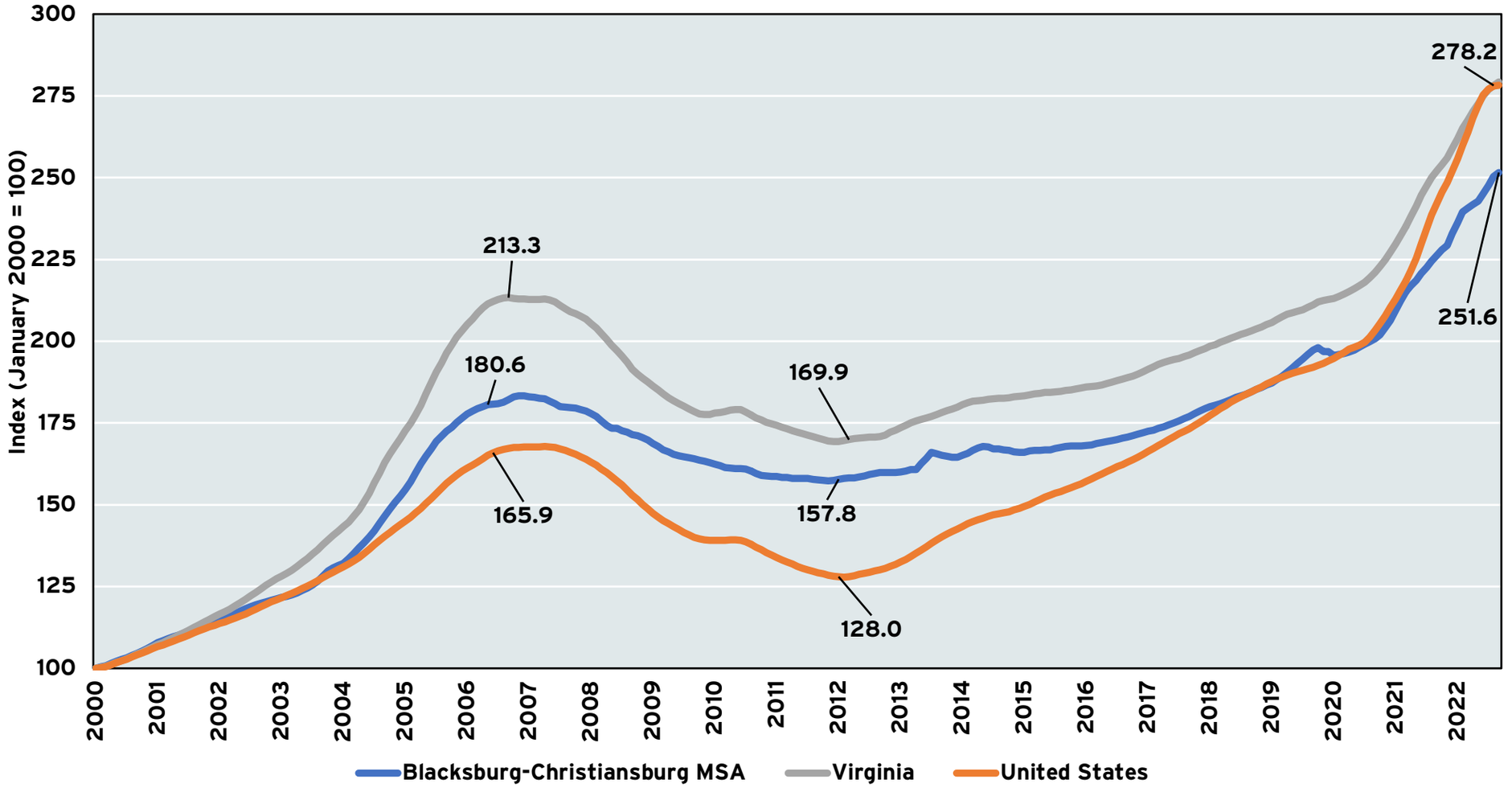
ZILLOW HOME VALUE INDEX OF SINGLE-FAMILY RESIDENTIAL HOMES: BLACKSBURG-CHRISTIANSBURG MSA, JANUARY 2000 - SEPTEMBER 2022



Source: Dragas Center for Economic Analysis and Policy; Zillow Home Value Index. Data are seasonally adjusted and reflect the typical home values in the 35th to 65th percentile range. Data not available for May and August of 2013 and November and December of 2019.

GRAPH 7

INDEX OF ZILLOW MEDIAN HOUSING VALUES FOR SINGLE-FAMILY RESIDENTIAL HOMES: BLACKSBURG-CHRISTIANSBURG MSA, VIRGINIA, AND THE UNITED STATES JANUARY 2000 - SEPTEMBER 2022



Source: Dragas Center for Economic Analysis and Policy; Zillow Home Value Index. Data are seasonally adjusted and reflect the typical home values in the 35th to 65th percentile range. Data not available for May and August of 2013 and November and December of 2019.

A Recovery In Labor Markets

Prior to the onset of the COVID-19 pandemic, the civilian labor force in the Blacksburg-Christiansburg metropolitan area reached a record 93,255 individuals in December 2019 (Graph 8). By May 2020, 6,525 individuals had left the labor force, a decline of 7.0%. At the end of 2020, the civilian labor force remained 4,107 (4.4%) below the pre-pandemic peak. Over the course of 2021, the labor force recovered and at the end of the year, the labor force was only 1,267 individuals (1.4%) below the pre-pandemic peak. The recovery slowed in 2022, and the civilian labor force remained 594 individuals (0.6%) below the pre-pandemic peak in September 2022.

In Graph 9, we examine individual employment in the Blacksburg metro area.[4] Following the Great Recession, individual employment reached a nadir in late 2009, followed by a recovery through most of 2019. The metro area set a record in October 2019 with 90,268 employed individuals. The shock to individual employment from the pandemic was more significant than that experienced by the civilian labor force, with individual employment declining by 11,571 individuals from October 2019 to May 2020, a decline of 12.8%.

As with many other metro areas in the Commonwealth, the reopening in the summer of 2020 led to a recovery in employment. By the end of 2020, there were 4,556 fewer individuals employed (5.0%) than the pre-pandemic peak. The recovery continued apace in 2021, ending the year with 867 fewer employees (1.0%) than October 2019. In 2022, the individual employment increased though March and then declined through September. In September, there were 125 fewer employees (0.1%) than October 2019.

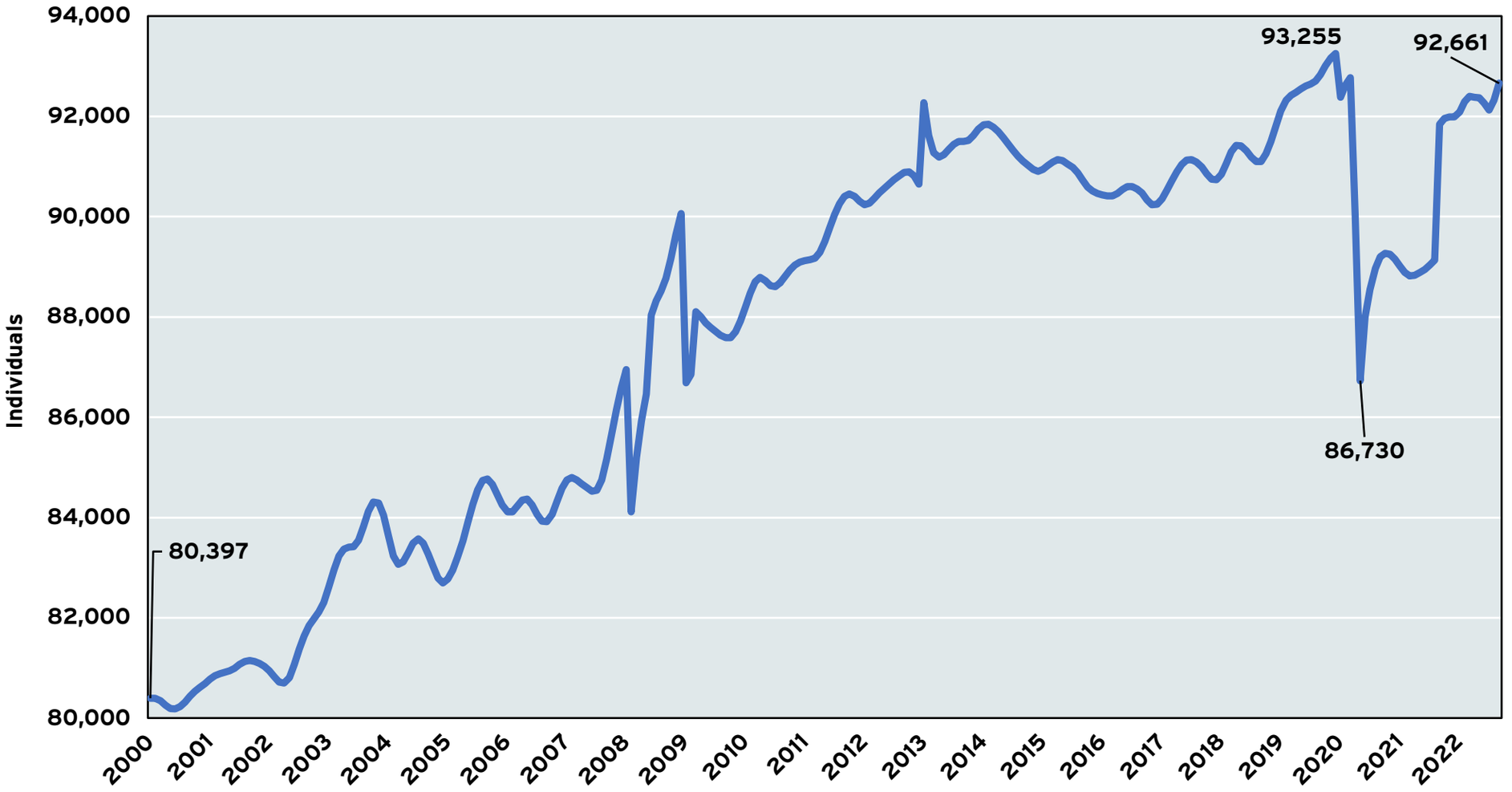
The headline unemployment rate is equal to the ratio of the number of unemployed individuals to individuals in the civilian labor force. As shown in Graph 10, the headline unemployment rate peaked in the Blacksburg region at 9.2% in 2010 following the Great Recession of 2007 – 2009. As individual employment increased faster than the civilian labor force over the following decade, the headline unemployment rate declined, reaching 2.6% in January 2020.

The sharp rise in unemployment during the initial months of the COVID-19 pandemic led the unemployment rate to increase to 12.0% in April 2020. Given the previously discussed departures from the labor force, the actual unemployment rate was likely higher. As the labor force and employment recovered in 2020 and 2021, the headline unemployment rate declined, reaching 3.9% in December 2020 and 2.8% in December 2021. In 2022, the unemployment rate declined to 2.5% in April, but then increased, with the unemployment rate reaching 2.7% in September 2022.

4 According to the BLS, individuals are classified as employed if, during the survey reference week, they meet one of the following criteria: (1) worked at least one hour as a paid employee; (2) worked at least one hour in their own business, profession, trade, or farm; (3) were temporarily absent from the job, business, or farm, regardless of whether they were paid or not; or (4) worked without pay for a minimum of 15 hours in a business or farm owned by a member of their family.

GRAPH 8

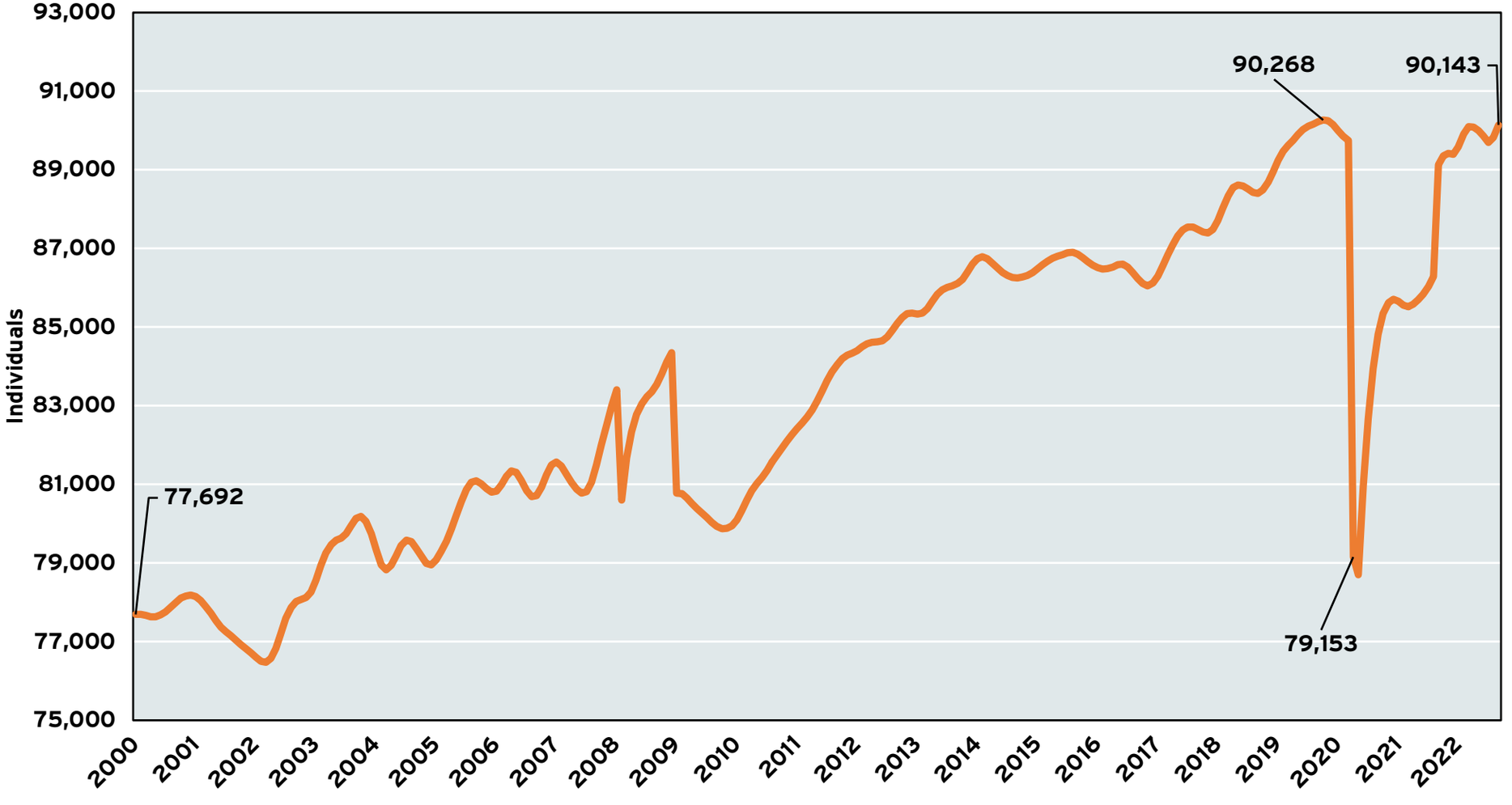
CIVILIAN LABOR FORCE
BLACKSBURG-CHRISTIANSBURG METROPOLITAN STATISTICAL AREA
JANUARY 2000 - SEPTEMBER 2022



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

GRAPH 9

INDIVIDUAL EMPLOYMENT
BLACKSBURG-CHRISTIANSBURG METROPOLITAN STATISTICAL AREA
JANUARY 2000 - SEPTEMBER 2022



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

GRAPH 10

HEADLINE UNEMPLOYMENT RATE
BLACKSBURG-CHRISTIANSBURG METROPOLITAN STATISTICAL AREA
JANUARY 2000 - SEPTEMBER 2022

Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

Where Are The Jobs?

Graph 11 highlights the distribution of covered employment (jobs) in the Blacksburg metro region in 2021. Not surprisingly, 34.0% of all jobs were in education and health services, followed by manufacturing (17.4%), trade, transportation, and utilities (15.7%), and leisure and hospitality (10.0%). In Table 7, we highlight the 10 largest reported employers in the metro area, with Virginia Tech being the largest employer in 2021, followed by Volvo, and then Radford University.

With institutions of higher education among the five largest employers in the Blacksburg-Christiansburg metropolitan area, the question is whether enrollments will continue to climb over the coming decade. Graph 12 displays data from the State Council of Higher Education for Virginia on annual Full-Time Equivalent (FTE) enrollments. Annual FTEs are a standardized measure of enrollment that converts part-time student activity to equivalents of full-time student activity.[5] For example, for Virginia Tech, unduplicated headcount for the 2021–2022 academic year was 39,563 and the full-time equivalent headcount was 37,981. For Radford University, for the same academic year, unduplicated enrollment was 10,028 while annual full-time equivalent headcount was 7,585.

For Virginia Tech, annual FTE enrollments have trended upward this century, peaking with 38,037 FTEs in the 2020–2021 academic year. FTEs were down slightly in the most recent academic year, but this may be due to several factors. On the other hand, annual FTE enrollments at Radford University largely increased from 2000 to 2013, peaking at 9,702 FTEs, a 16.6% increase from the 2000–2001 academic year. Since 2013, however, FTE enrollments have declined, and there were fewer FTEs in the 2021–2022 academic year than there were in the 2000–2001 academic year. Most of this decline is attributable to the 2020–2021 and 2021–2022 academic years, that is, FTE enrollment declined from 9,449 in the 2019–2020 academic year to 7,585 in the 2021–2022 academic year. Now that the pandemic is fading from public discourse, the open question is whether Radford University can recover to pre-pandemic levels?

TABLE 7

TOP 10 LARGEST EMPLOYERS BLACKSBURG-CHRISTIANSBURG METROPOLITAN STATISTICAL AREA, 2022

	Employer	Industry
1	Virginia Polytechnic Institute and State University	Educational Services
2	Volvo Group North America Inc.	Transportation Equipment Manufacturing
3	Radford University	Educational Services
4	Montgomery County School Board	Educational Services
5	Carilion New River Valley Medical Center	Hospitals
6	Moog Inc.	Machinery Manufacturing
7	Walmart	General Merchandising
8	Bae Systems Ordnance Systems	Chemical Manufacturing
9	HCA Virginia Health System	Hospitals
10	Pulaski County School Board	Educational Services

Source: Dragas Center for Economic Analysis and Policy; Virginia's New River Valley, Largest Employers. Data as of August 2022.

5 https://research.schev.edu/info/Reports/Guide-to-the-Enrollment---Annual-FTE-Reports?

Looming ahead for Virginia Tech and Radford University, as well as other institutions of higher education in the Commonwealth, is the "demographic cliff." Beginning in 2025, the number of potential freshmen for higher education institutions is projected to drop significantly, with some estimates suggesting up to a 15% decline in prospective students.[6] On the heels of this cliff is that future COVID demographic cliff, a result of the decline in births in 2020. Simply put, in 2025 the projected number of prospective freshmen will decline, and in 2037 we will observe another similar decline. If there are fewer prospective freshmen, colleges and universities will face the unenviable task of enrolling fewer students and downsizing faculty, administrators, and facilities as a result.

While higher education is anticipating a bleaker enrollment future, the competition for students is only intensifying. Prospective students are increasingly expressing a preference for shorter degree programs and, in some cases, non-degree programs.[7] In a tighter labor market, employers are revamping degree requirements, choosing to prioritize skills over credentials. The rise of online learning during the pandemic, for all its drawbacks, is also appealing to a non-trivial number of students. For many institutions, face-to-face enrollments have stagnated or declined outright, while online enrollments have only continued to increase. In the online environment, competition is not limited to a specific geographic area; students can choose among colleges and universities across the globe.

Change is coming. Higher education may become more like a tournament, where the most nimble and skilled organizations will be able to earn the higher awards (students, research funding, and donations). Smaller colleges and universities are increasingly under pressure and closures are likely looming for some over the coming decade. Virginia Tech's forays into other metro areas across the Commonwealth can be, in this context, viewed as a proactive strategy to boost enrollments in an increasingly competitive environment. This also may slow the growth in the number of students in the Blacksburg area in the coming years due to the availability of students in Northern Virginia, Richmond, and Hampton Roads to attend Virginia Tech but reside close to their homes.

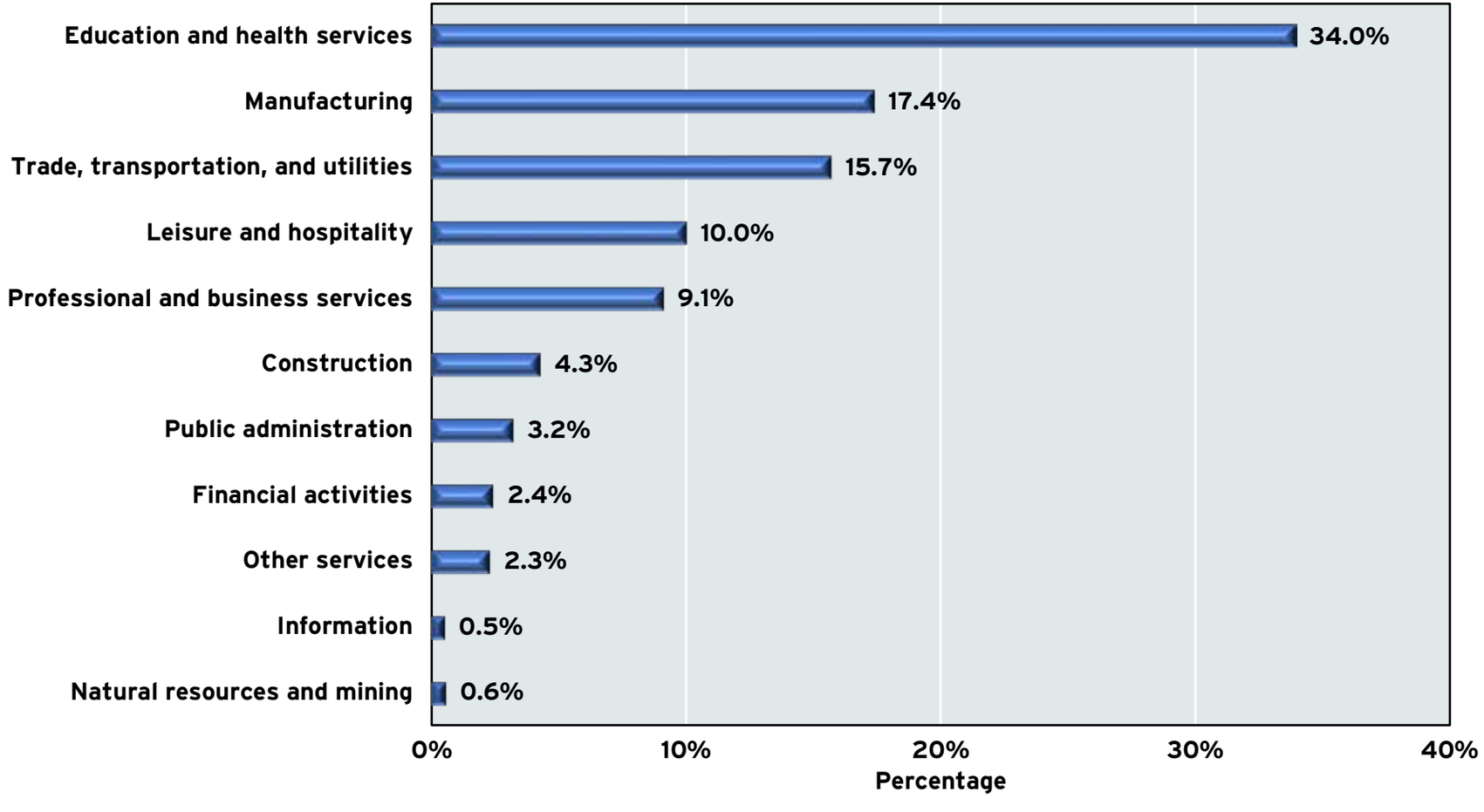
Source: Matt Gentry/The Roanoke Times via AP

Wing Aviation was the first drone delivery company in the U.S. to receive its Air Carrier Certification from the U.S. Federal Aviation Administration. Located in the town of Christiansburg, Wing is a subsidiary of Google's corporate parent Alphabet.

6 https://www.insidehighered.com/digital-learning/blogs/online-trending-now/second-demographic-cliff-adds-urgency-change
7 https://www.stradaeducation.org/wp-content/uploads/2020/06/pv-charts-062420.pdf

GRAPH 11

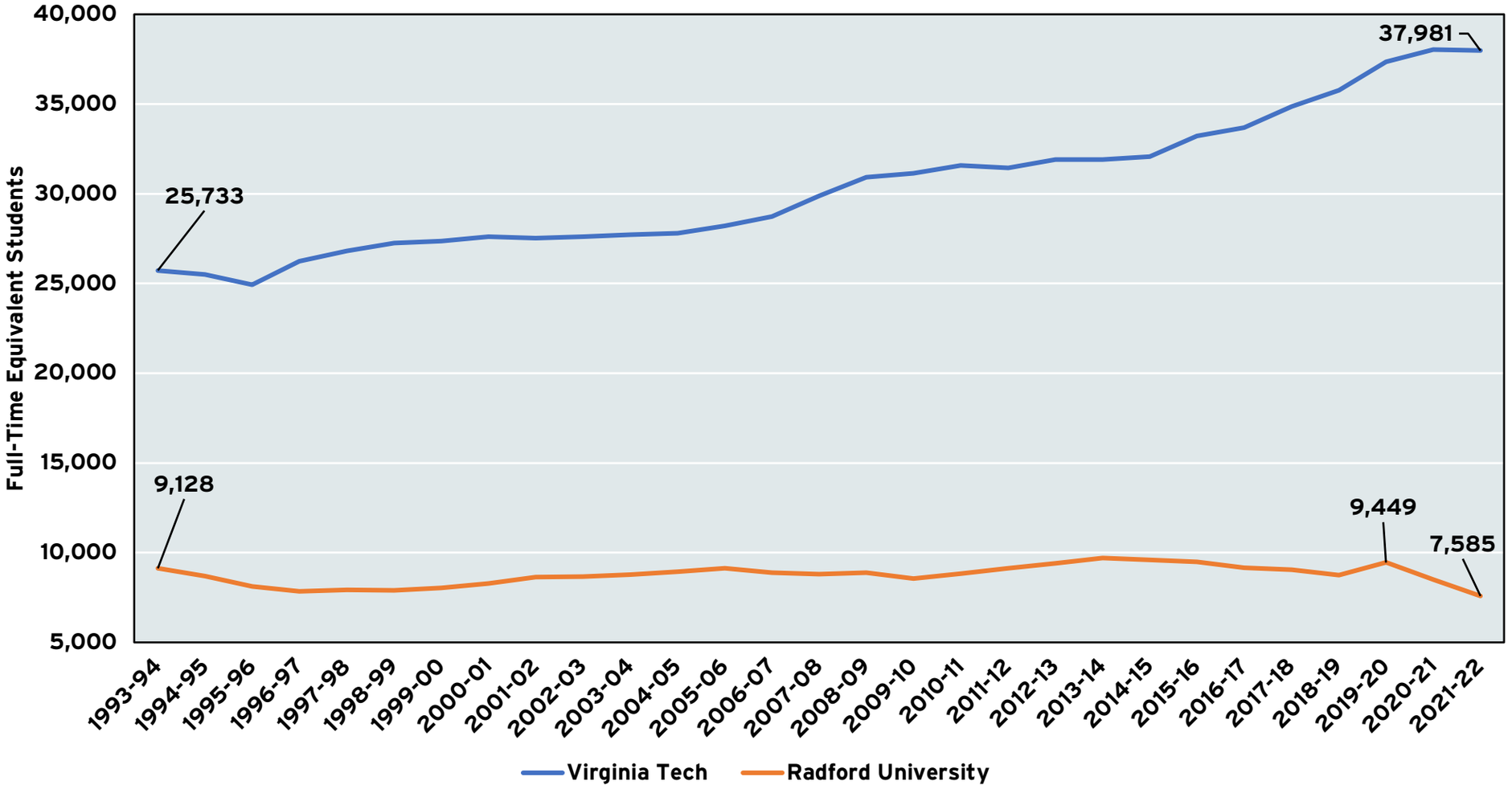
INDUSTRY SHARE OF COVERED EMPLOYMENT (JOBS):
BLACKSBURG - CHRISTIANSBURG METROPOLITAN STATISTICAL AREA, 2021



Sources: Virginia Employment Commission; Bureau of Labor Statistics, Quarterly Census of Employment and Wages; and the Dragas Center for Economic Analysis and Policy.

GRAPH 12

FULL-TIME EQUIVALENT ENROLLMENTS
RADFORD UNIVERSITY AND VIRGINIA TECH
1993-1994 ACADEMIC YEAR TO 2021-2022 ACADEMIC YEAR



Source: State Council of Higher Education for Virginia (2022), Table E05 Annualized Student FTE and Credit Hours.

Final Thoughts

The Blacksburg-Christiansburg metropolitan area may be small when compared to Northern Virginia or Richmond, but one might argue that it "punches above its weight" due to the presence of Virginia Tech and Radford University. These institutions attract large numbers of students to the region, bringing with them hopes, tuition dollars, and other forms of spending. Virginia Tech and Radford University also attract millions of research dollars to the region, significantly more than some larger metropolitan regions such as Hampton Roads.

There is a mixture of good and bad economic news to report. Economic activity, as measured by real Gross Domestic Product, has been relatively flat over the last decade and the poverty rate is higher than the state or the nation. Median household income in the metro region is lower than the state and the region. However, care must be taken to interpret the statistics as the presence of thousands of undergraduate, graduate, and professional students (who typically have lower incomes than the general population) may bias these data in a negative direction.

Labor markets continue to recover from the pandemic economic shock. The civilian labor force and individual employment have not yet reached their pre-pandemic peaks, but these peaks are within sight. Nonfarm payrolls (jobs) exceeded the previous record, and it appears that the Blacksburg metro region is outperforming many other metro areas in the Commonwealth. Higher inflation and economic uncertainty may lead to a recession in 2023, but Blacksburg appears to be better positioned than other metros to weather this potential economic storm.

We would be remiss, however, if we did not note that the region's economic prospects are closely tied to enrollments, research, and donations at its institutions of higher education. While the cost of living is cheaper in the Blacksburg-Christiansburg metropolitan area, it must now compete in a globalized economic system. The rise of distance learning during the COVID-19 pandemic may threaten colleges and universities with small enrollments or poor financial means, neither of which appears to apply to Virginia Tech and Radford University. The coming demographic cliffs, however, will increase competition for prospective freshmen and may lead to slower enrollment growth over the coming decade. Much like Hampton Roads, which is heavily dependent on federal spending, Blacksburg-Christiansburg's economic future is determined, in some part, by forces outside its control. Diversification of the economic base, by continuing to support innovation and entrepreneurship by leaning into its existing strengths, appears to be a wise course of action.