

CHAPTER 6: EDUCATION, DEVICE OWNERSHIP, AND INTERNET ACCESS

Table 6.1: Educational Attainment of Persons Ages 25 and Over in the Appalachian Region, 2020-2024

Education (Highest Level Attained)	Total Population Ages 25 and Over, 2020-2024	Percent of Population Ages 25 and Over					
		Less than High School Diploma	High School Diploma or More				
			Total	H.S. Grad, No Postsecondary Degree	Associate's Degree or More		
					Total	Associate's Degree	Bachelor's Degree or More
United States	230,807,303	10.4	89.6	45.1	44.5	8.8	35.7
Appalachian Region	18,500,140	10.5	89.5	51.9	37.5	9.5	28.0
Subregions							
Northern Appalachia	5,729,389	7.9	92.1	52.8	39.3	10.4	28.9
North Central Appalachia	1,754,799	10.1	89.9	56.9	33.0	8.9	24.0
Central Appalachia	1,307,974	16.3	83.7	58.3	25.4	8.5	16.8
South Central Appalachia	3,757,133	10.5	89.5	51.3	38.2	9.5	28.7
Southern Appalachia	5,950,845	12.0	88.0	48.7	39.4	9.1	30.3
County Types							
Large Metro (metro pop. 1 million +)	4,533,046	8.1	91.9	46.8	45.1	9.4	35.7
Small Metro (metro pop. <1 million)	7,595,762	10.0	90.0	50.9	39.1	9.5	29.6
Nonmetro, Adjacent to Large Metro	1,672,353	11.6	88.4	56.4	32.0	10.1	21.9
Nonmetro, Adjacent to Small Metro	2,942,909	12.5	87.5	57.7	29.8	9.6	20.2
Rural (nonmetro, not adj. to a metro)	1,756,070	14.7	85.3	56.0	29.3	9.2	20.0
Alabama	3,473,706	11.4	88.6	51.1	37.5	9.1	28.4
Appalachian Alabama	2,248,471	11.4	88.6	50.3	38.3	9.1	29.2
Non-Appalachian Alabama	1,225,235	11.3	88.7	52.7	36.0	9.2	26.8
Georgia	7,359,821	10.8	89.2	45.9	43.4	8.4	34.9
Appalachian Georgia	2,338,230	12.3	87.7	47.0	40.7	8.5	32.2
Non-Appalachian Georgia	5,021,591	10.0	90.0	45.3	44.6	8.4	36.2
Kentucky	3,098,758	11.1	88.9	52.3	36.5	9.0	27.6
Appalachian Kentucky	806,549	16.6	83.4	57.1	26.2	8.6	17.7
Non-Appalachian Kentucky	2,292,209	9.2	90.8	50.6	40.2	9.1	31.0
Maryland	4,301,335	8.9	91.1	40.9	50.3	6.8	43.4
Appalachian Maryland	178,456	10.7	89.3	56.9	32.4	8.9	23.5
Non-Appalachian Maryland	4,122,879	8.8	91.2	40.2	51.1	6.8	44.3
Mississippi	1,972,266	12.9	87.1	51.1	36.1	10.9	25.1
Appalachian Mississippi	404,596	15.5	84.5	52.5	32.0	10.3	21.7
Non-Appalachian Mississippi	1,567,670	12.2	87.8	50.7	37.1	11.1	26.0
New York	14,017,184	12.0	88.0	38.9	49.1	8.8	40.2
Appalachian New York	691,849	8.6	91.4	48.8	42.6	12.8	29.8
Non-Appalachian New York	13,325,335	12.2	87.8	38.4	49.4	8.6	40.8
North Carolina	7,380,330	9.9	90.1	44.4	45.8	10.1	35.7
Appalachian North Carolina	1,471,711	10.7	89.3	48.1	41.2	10.5	30.7
Non-Appalachian North Carolina	5,908,619	9.6	90.4	43.4	46.9	10.0	36.9
Ohio	8,162,216	8.2	91.8	51.3	40.5	9.0	31.5
Appalachian Ohio	1,386,119	10.7	89.3	58.7	30.6	9.8	20.8
Non-Appalachian Ohio	6,776,097	7.6	92.4	49.8	42.5	8.9	33.7
Pennsylvania	9,189,697	7.9	92.1	48.1	44.1	8.9	35.2
Appalachian Pennsylvania	4,085,189	7.0	93.0	52.1	40.9	10.2	30.7
Non-Appalachian Pennsylvania	5,104,508	8.5	91.5	44.8	46.7	7.9	38.8
South Carolina	3,677,078	9.9	90.1	48.0	42.1	10.0	32.1
Appalachian South Carolina	959,548	11.0	89.0	47.2	41.8	10.2	31.7
Non-Appalachian South Carolina	2,717,530	9.5	90.5	48.3	42.2	9.9	32.3
Tennessee	4,870,330	10.0	90.0	51.1	38.9	7.9	31.1
Appalachian Tennessee	2,146,281	10.9	89.1	54.0	35.0	8.5	26.6
Non-Appalachian Tennessee	2,724,049	9.2	90.8	48.8	42.0	7.4	34.6
Virginia	6,007,678	8.4	91.6	41.6	49.9	7.8	42.2
Appalachian Virginia	516,819	11.7	88.3	55.3	33.0	10.3	22.7
Non-Appalachian Virginia	5,490,859	8.1	91.9	40.3	51.5	7.5	44.0
West Virginia (entire state)	1,266,322	10.7	89.3	56.8	32.6	8.4	24.1

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

Table 6.2: Educational Attainment of Persons Ages 25 to 64 in the Appalachian Region, 2020-2024

Education (Highest Level Attained)	Total Population Ages 25 to 64, 2020-2024	Percent of Population Ages 25 to 64					
		Less than High School Diploma	High School Diploma or More				
			Total	H.S. Grad, No Postsecondary Degree	Associate's Degree or More		
					Total	Associate's Degree	Bachelor's Degree or More
United States	173,173,675	9.8	90.2	43.7	46.5	9.2	37.3
Appalachian Region	13,382,772	9.8	90.2	50.3	39.9	10.3	29.5
Subregions							
Northern Appalachia	4,023,149	7.4	92.6	49.8	42.8	11.5	31.3
North Central Appalachia	1,250,836	9.0	91.0	55.5	35.5	10.0	25.5
Central Appalachia	942,695	13.8	86.2	58.8	27.4	9.7	17.7
South Central Appalachia	2,665,847	9.7	90.3	50.7	39.7	10.2	29.4
Southern Appalachia	4,500,245	11.4	88.6	47.4	41.2	9.6	31.6
County Types							
Large Metro (metro pop. 1 million +)	3,397,134	7.6	92.4	44.1	48.3	10.0	38.3
Small Metro (metro pop. <1 million)	5,505,739	9.5	90.5	49.3	41.2	10.2	30.9
Nonmetro, Adjacent to Large Metro	1,190,901	10.9	89.1	55.6	33.5	11.0	22.5
Nonmetro, Adjacent to Small Metro	2,049,108	11.4	88.6	57.1	31.5	10.8	20.7
Rural (nonmetro, not adj. to a metro)	1,239,890	13.3	86.7	55.6	31.1	10.5	20.6
Alabama	2,569,447	10.7	89.3	50.2	39.2	9.8	29.4
Appalachian Alabama	1,670,579	10.8	89.2	49.0	40.1	9.7	30.4
Non-Appalachian Alabama	898,868	10.4	89.6	52.2	37.4	9.9	27.4
Georgia	5,723,012	10.0	90.0	44.6	45.3	8.8	36.5
Appalachian Georgia	1,819,877	12.0	88.0	45.7	42.3	8.8	33.5
Non-Appalachian Georgia	3,903,135	9.1	90.9	44.1	46.7	8.8	37.9
Kentucky	2,314,082	10.0	90.0	50.8	39.2	9.9	29.3
Appalachian Kentucky	590,048	14.2	85.8	57.3	28.5	9.7	18.8
Non-Appalachian Kentucky	1,724,034	8.6	91.4	48.6	42.8	10.0	32.9
Maryland	3,267,594	8.3	91.7	39.5	52.2	7.1	45.1
Appalachian Maryland	129,116	10.2	89.8	55.1	34.8	9.9	24.9
Non-Appalachian Maryland	3,138,478	8.3	91.7	38.9	52.9	7.0	45.9
Mississippi	1,466,427	11.6	88.4	50.4	38.1	12.2	25.9
Appalachian Mississippi	296,487	13.7	86.3	51.8	34.5	11.9	22.6
Non-Appalachian Mississippi	1,169,940	11.1	88.9	50.0	39.0	12.3	26.7
New York	10,463,156	10.7	89.3	37.2	52.1	9.1	43.0
Appalachian New York	482,049	8.5	91.5	46.5	45.0	13.5	31.5
Non-Appalachian New York	9,981,107	10.8	89.2	36.7	52.4	8.9	43.5
North Carolina	5,534,767	9.3	90.7	42.9	47.8	10.4	37.3
Appalachian North Carolina	1,031,117	10.3	89.7	47.6	42.1	11.2	31.0
Non-Appalachian North Carolina	4,503,650	9.1	90.9	41.9	49.1	10.3	38.8
Ohio	6,006,639	7.5	92.5	49.1	43.4	9.7	33.7
Appalachian Ohio	986,270	10.1	89.9	56.8	33.0	11.0	22.0
Non-Appalachian Ohio	5,020,369	7.0	93.0	47.5	45.4	9.4	36.0
Pennsylvania	6,654,194	7.1	92.9	45.3	47.6	9.6	38.0
Appalachian Pennsylvania	2,870,013	6.4	93.6	48.8	44.8	11.3	33.5
Non-Appalachian Pennsylvania	3,784,181	7.6	92.4	42.7	49.8	8.3	41.5
South Carolina	2,677,677	9.2	90.8	47.3	43.5	10.4	33.1
Appalachian South Carolina	713,302	10.2	89.8	46.2	43.6	10.6	33.1
Non-Appalachian South Carolina	1,964,375	8.8	91.2	47.7	43.5	10.4	33.1
Tennessee	3,664,383	9.1	90.9	49.8	41.1	8.4	32.7
Appalachian Tennessee	1,546,588	9.9	90.1	53.4	36.7	9.2	27.5
Non-Appalachian Tennessee	2,117,795	8.5	91.5	47.2	44.3	7.7	36.5
Virginia	4,553,935	7.5	92.5	40.2	52.3	8.1	44.2
Appalachian Virginia	355,096	9.2	90.8	55.6	35.3	11.5	23.8
Non-Appalachian Virginia	4,198,839	7.4	92.6	38.9	53.7	7.8	45.9
West Virginia (entire state)	892,230	9.5	90.5	55.4	35.1	9.5	25.6

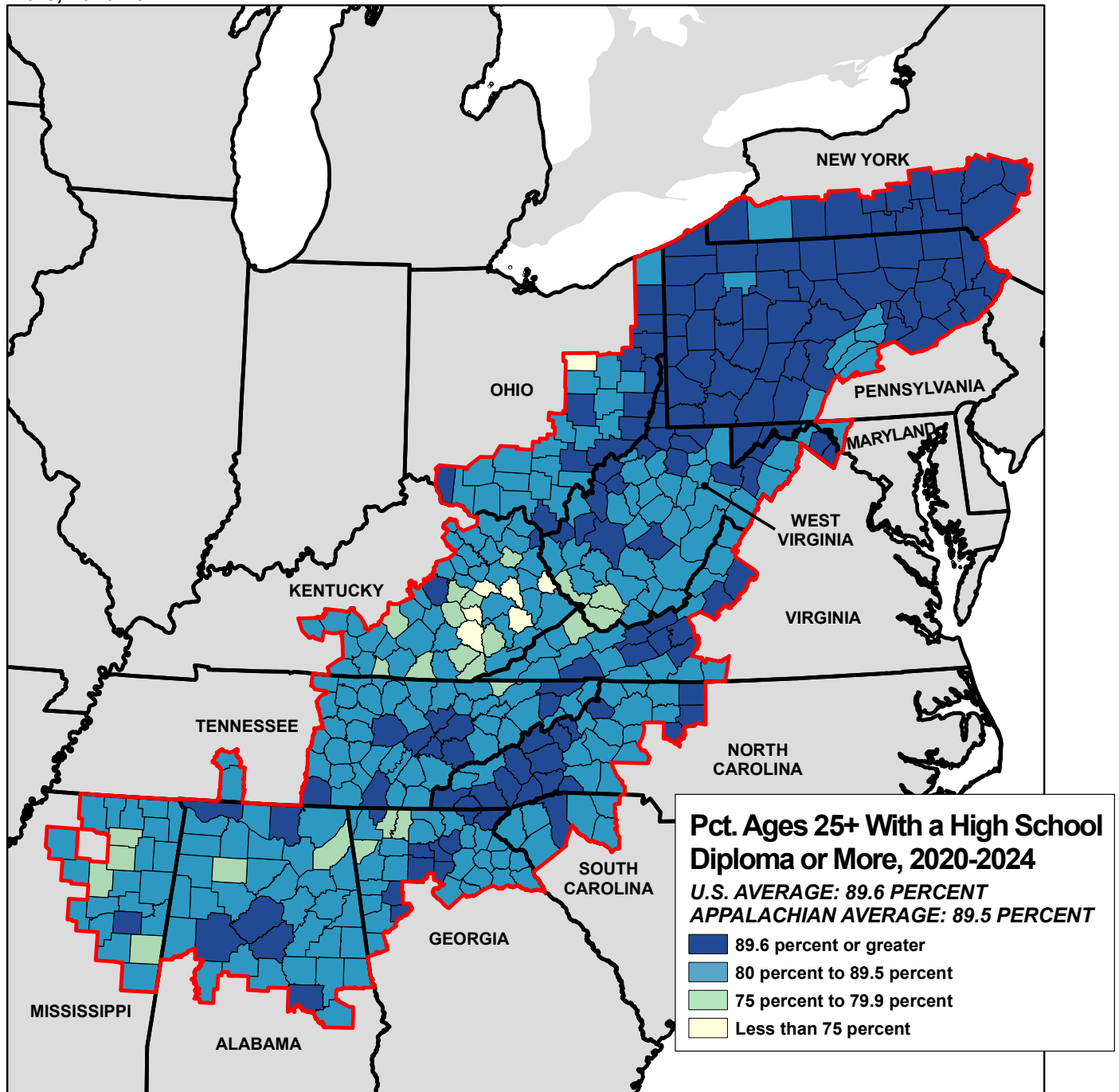
Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

Table 6.3: Educational Attainment of Persons Ages 65 and Over in the Appalachian Region, 2020-2024

Education (Highest Level Attained)	Total Population Ages 65 and Over, 2020-2024	Percent of Population Ages 65 and Over					
		Less than High School Diploma	High School Diploma or More				
			Total	H.S. Grad, No Postsecondary Degree	Associate's Degree or More		
					Total	Associate's Degree	Bachelor's Degree or More
United States	57,633,628	12.1	87.9	49.4	38.5	7.7	30.8
Appalachian Region	5,117,368	12.5	87.5	56.2	31.4	7.4	24.0
Subregions							
Northern Appalachia	1,706,240	9.0	91.0	59.9	31.1	7.9	23.2
North Central Appalachia	503,963	12.8	87.2	60.5	26.6	6.2	20.4
Central Appalachia	365,279	22.6	77.4	57.2	20.2	5.6	14.7
South Central Appalachia	1,091,286	12.6	87.4	52.8	34.6	7.8	26.8
Southern Appalachia	1,450,600	13.8	86.2	52.5	33.7	7.4	26.3
County Types							
Large Metro (metro pop. 1 million +)	1,135,912	9.5	90.5	54.8	35.6	7.9	27.8
Small Metro (metro pop. <1 million)	2,090,023	11.5	88.5	54.9	33.6	7.5	26.1
Nonmetro, Adjacent to Large Metro	481,452	13.1	86.9	58.5	28.3	7.8	20.5
Nonmetro, Adjacent to Small Metro	893,801	14.9	85.1	59.0	26.1	7.1	19.1
Rural (nonmetro, not adj. to a metro)	516,180	18.2	81.8	57.0	24.8	6.2	18.7
Alabama	904,259	13.4	86.6	53.9	32.7	7.2	25.5
Appalachian Alabama	577,892	13.2	86.8	53.9	32.9	7.2	25.7
Non-Appalachian Alabama	326,367	13.7	86.3	53.9	32.4	7.2	25.2
Georgia	1,636,809	13.3	86.7	50.2	36.6	7.2	29.4
Appalachian Georgia	518,353	13.4	86.6	51.6	34.9	7.2	27.7
Non-Appalachian Georgia	1,118,456	13.2	86.8	49.5	37.3	7.2	30.1
Kentucky	784,676	14.4	85.6	56.8	28.7	6.3	22.5
Appalachian Kentucky	216,501	23.2	76.8	56.6	20.2	5.5	14.7
Non-Appalachian Kentucky	568,175	11.1	88.9	56.9	32.0	6.6	25.4
Maryland	1,033,741	10.5	89.5	45.1	44.4	6.1	38.3
Appalachian Maryland	49,340	12.1	87.9	61.6	26.3	6.3	19.9
Non-Appalachian Maryland	984,401	10.4	89.6	44.3	45.3	6.1	39.2
Mississippi	505,839	16.5	83.5	53.2	30.3	7.3	23.0
Appalachian Mississippi	108,109	20.3	79.7	54.4	25.3	6.0	19.3
Non-Appalachian Mississippi	397,730	15.5	84.5	52.9	31.6	7.6	24.0
New York	3,554,028	15.9	84.1	44.0	40.1	8.0	32.2
Appalachian New York	209,800	8.9	91.1	54.0	37.1	11.3	25.8
Non-Appalachian New York	3,344,228	16.3	83.7	43.4	40.3	7.8	32.5
North Carolina	1,845,563	11.5	88.5	48.7	39.8	9.2	30.6
Appalachian North Carolina	440,594	11.5	88.5	49.4	39.1	9.0	30.1
Non-Appalachian North Carolina	1,404,969	11.5	88.5	48.5	40.0	9.2	30.8
Ohio	2,155,577	9.9	90.1	57.6	32.5	7.2	25.3
Appalachian Ohio	399,849	12.1	87.9	63.4	24.5	6.7	17.8
Non-Appalachian Ohio	1,755,728	9.4	90.6	56.3	34.3	7.3	27.0
Pennsylvania	2,535,503	10.0	90.0	55.3	34.8	7.1	27.6
Appalachian Pennsylvania	1,215,176	8.5	91.5	60.0	31.5	7.6	23.9
Non-Appalachian Pennsylvania	1,320,327	11.3	88.7	50.9	37.8	6.7	31.0
South Carolina	999,401	11.8	88.2	49.9	38.3	8.8	29.5
Appalachian South Carolina	246,246	13.3	86.7	50.1	36.6	9.0	27.7
Non-Appalachian South Carolina	753,155	11.3	88.7	49.8	38.9	8.8	30.1
Tennessee	1,205,947	12.5	87.5	55.0	32.5	6.4	26.0
Appalachian Tennessee	599,693	13.7	86.3	55.6	30.6	6.5	24.1
Non-Appalachian Tennessee	606,254	11.4	88.6	54.4	34.3	6.4	27.9
Virginia	1,453,743	11.2	88.8	46.2	42.6	6.8	35.8
Appalachian Virginia	161,723	17.1	82.9	54.7	28.2	7.8	20.3
Non-Appalachian Virginia	1,292,020	10.5	89.5	45.1	44.4	6.7	37.7
West Virginia (entire state)	374,092	13.5	86.5	60.0	26.5	5.9	20.6

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

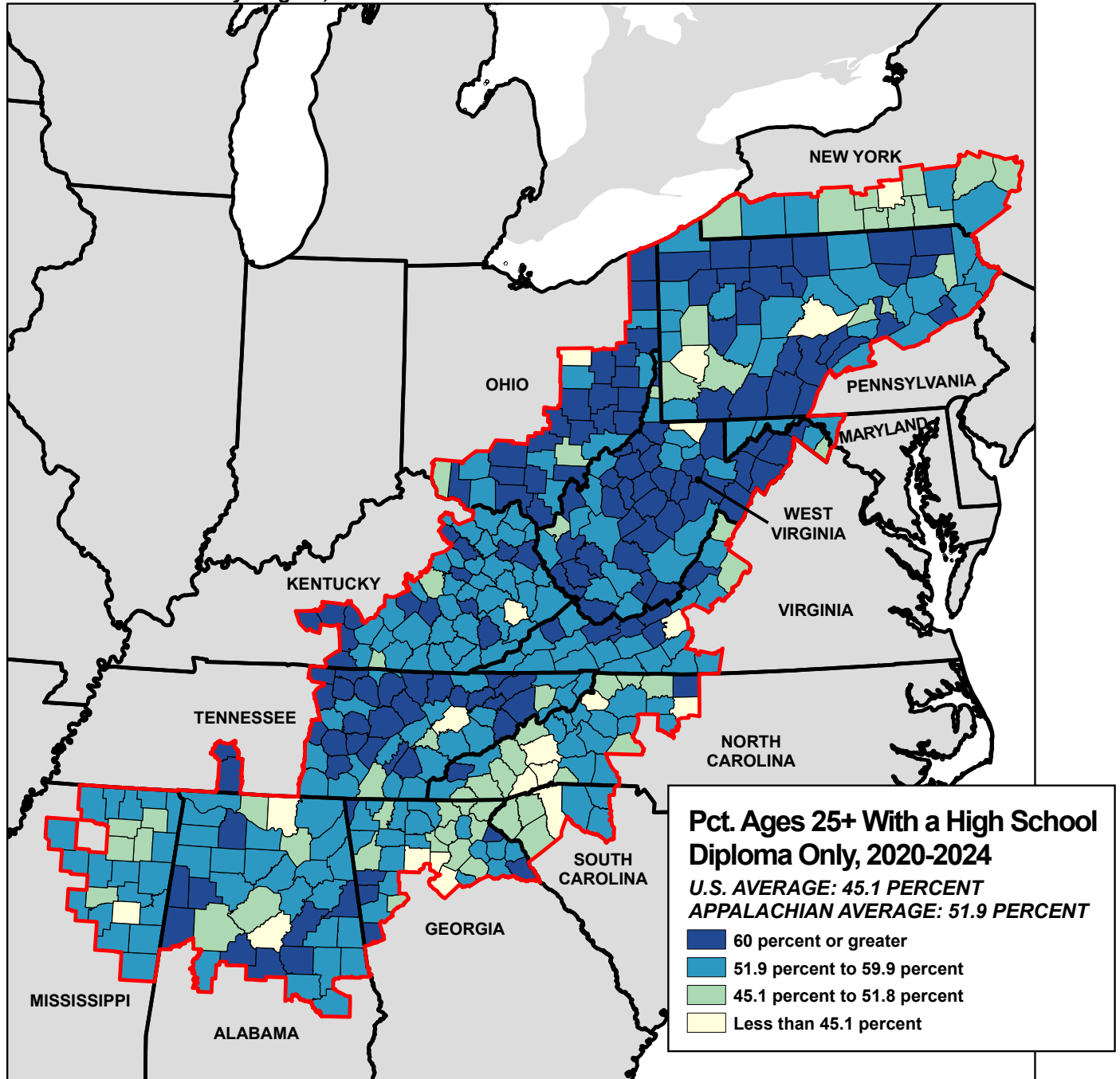
Figure 6.1: Percent of Persons Ages 25 and Over in the Appalachian Region With a High School Diploma or More, 2020-2024



Map Title: Percent of Persons Ages 25 and Over in the Appalachian Region With a High School Diploma or More, 2020-2024
 Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

Although the share of Appalachian adults with at least a high school diploma was just below the national average for the 2020-2024 period, it matched or exceeded the national share in 148 counties in the Appalachian Region, nearly half of which were located in Northern Appalachia. The shares of adults 25 or older with a high school diploma or more were especially high in Appalachian Pennsylvania (93 percent) and New York (91.4 percent), and in large metropolitan areas (91.9 percent). In just seven Appalachian counties, less than three-fourths of adults had at least a high school diploma. Of these seven counties, six were Central Appalachian counties situated within Appalachian Kentucky, and six were in rural areas. Appalachian Kentucky had the lowest share of high school completion among the region's states, at 83.4 percent.

Figure 6.2: Percent of Persons Ages 25 and Over in the Appalachian Region With a High School Diploma but With No Postsecondary Degree, 2020-2024

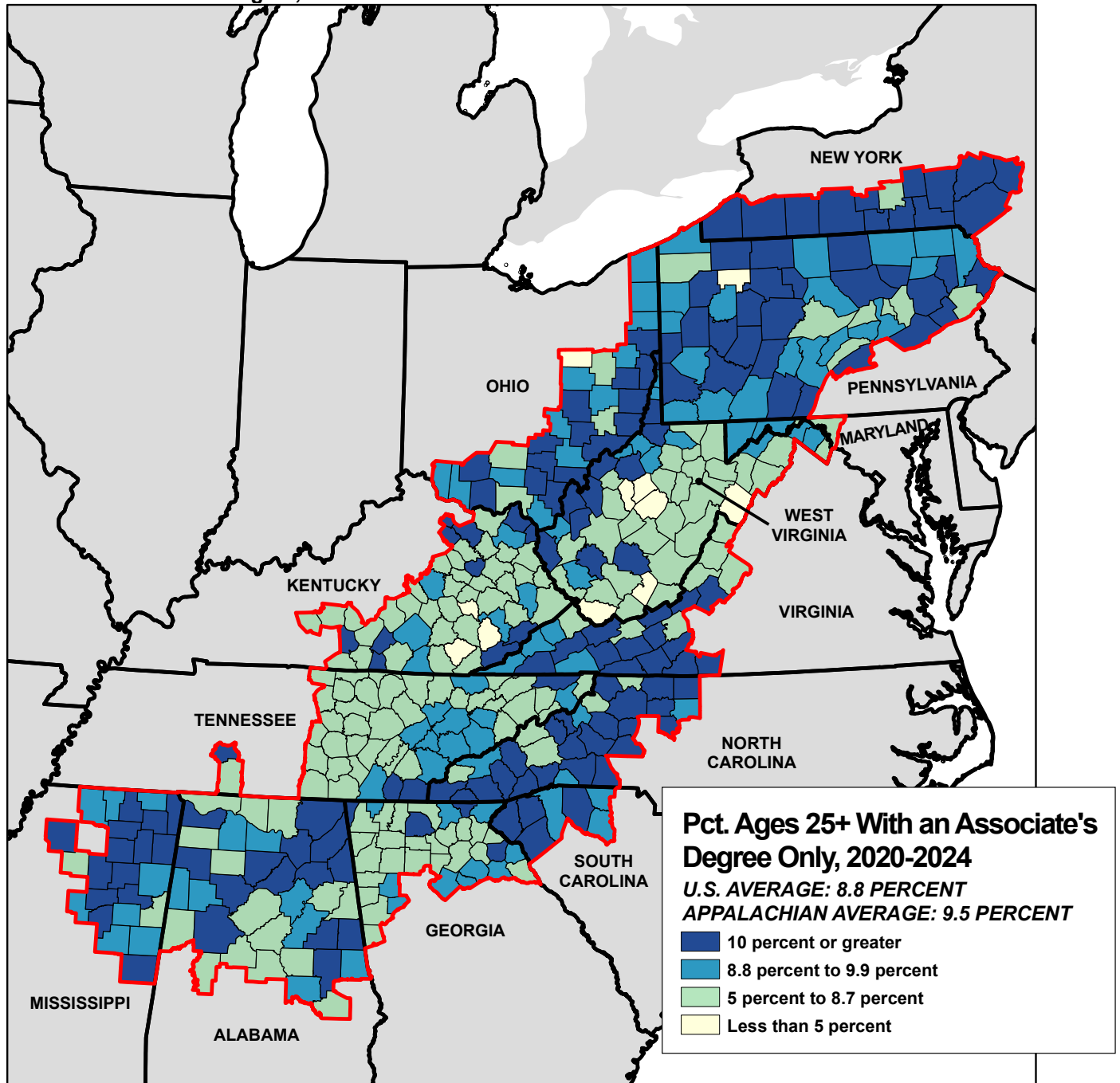


Map Title: Percent of Persons Ages 25 and Over in the Appalachian Region With a High School Diploma but With No Postsecondary Degree, 2020-2024

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

During the 2020-2024 period, 51.9 percent of adults ages 25 and over in the Appalachian Region had a high school diploma, but no postsecondary degree (including an associate's degree). And the share was at least 60 percent in about one-third (143) of the Appalachian Region's 423 counties – mostly in Ohio, Pennsylvania, Tennessee, and West Virginia. And in Northern, North Central, and Central Appalachia as well as non-metropolitan and rural counties throughout the region, the shares exceeded the regional average of 51.9 percent. Many of these adults may have attended some college but did not graduate, while others may have acquired vocational training.

Figure 6.3: Percent of Persons Ages 25 and Over in the Appalachian Region With an Associate's Degree but Without a Bachelor's Degree, 2020-2024

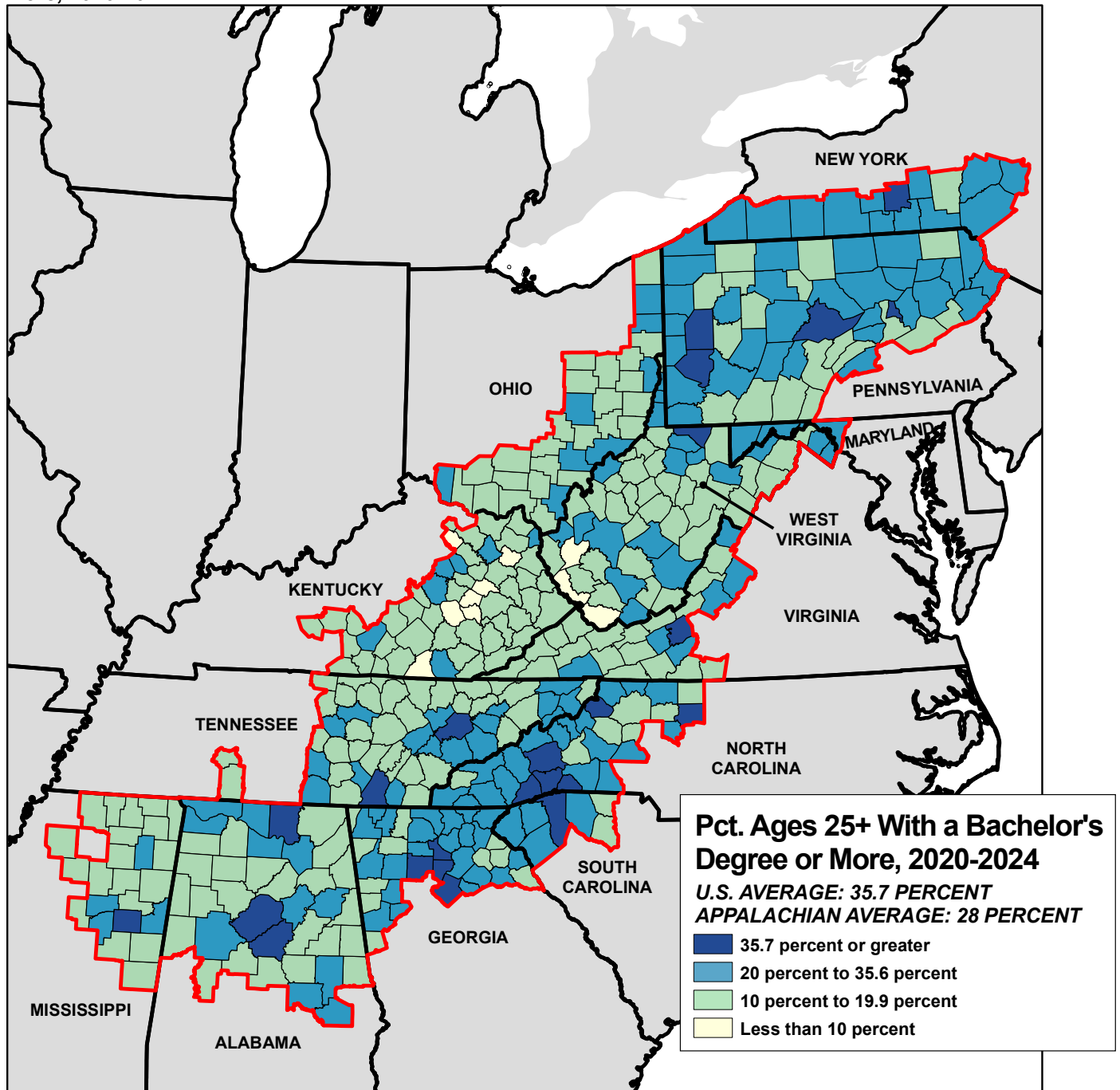


Map Title: Percent of Persons Ages 25 and Over in the Appalachian Region With an Associate's Degree but Without a Bachelor's Degree, 2020-2024

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

In the Appalachian Region, the share of adults ages 25 and over with an associate's degree was 9.5 percent – slightly higher than the national average of 8.8 percent. In parts of the region, the share was even higher – including the Appalachian portion of seven states: Mississippi, New York, Pennsylvania, Ohio, Virginia, and the Carolinas. In contrast, the share was less than five percent in 11 Appalachian counties – six of which were in West Virginia, where the overall share of adults with associate's degrees throughout the state is just 8.4 percent. In all of these counties, the share of adults who had completed high school or more was also below the regional average, indicating that there was lower overall educational attainment in these counties.

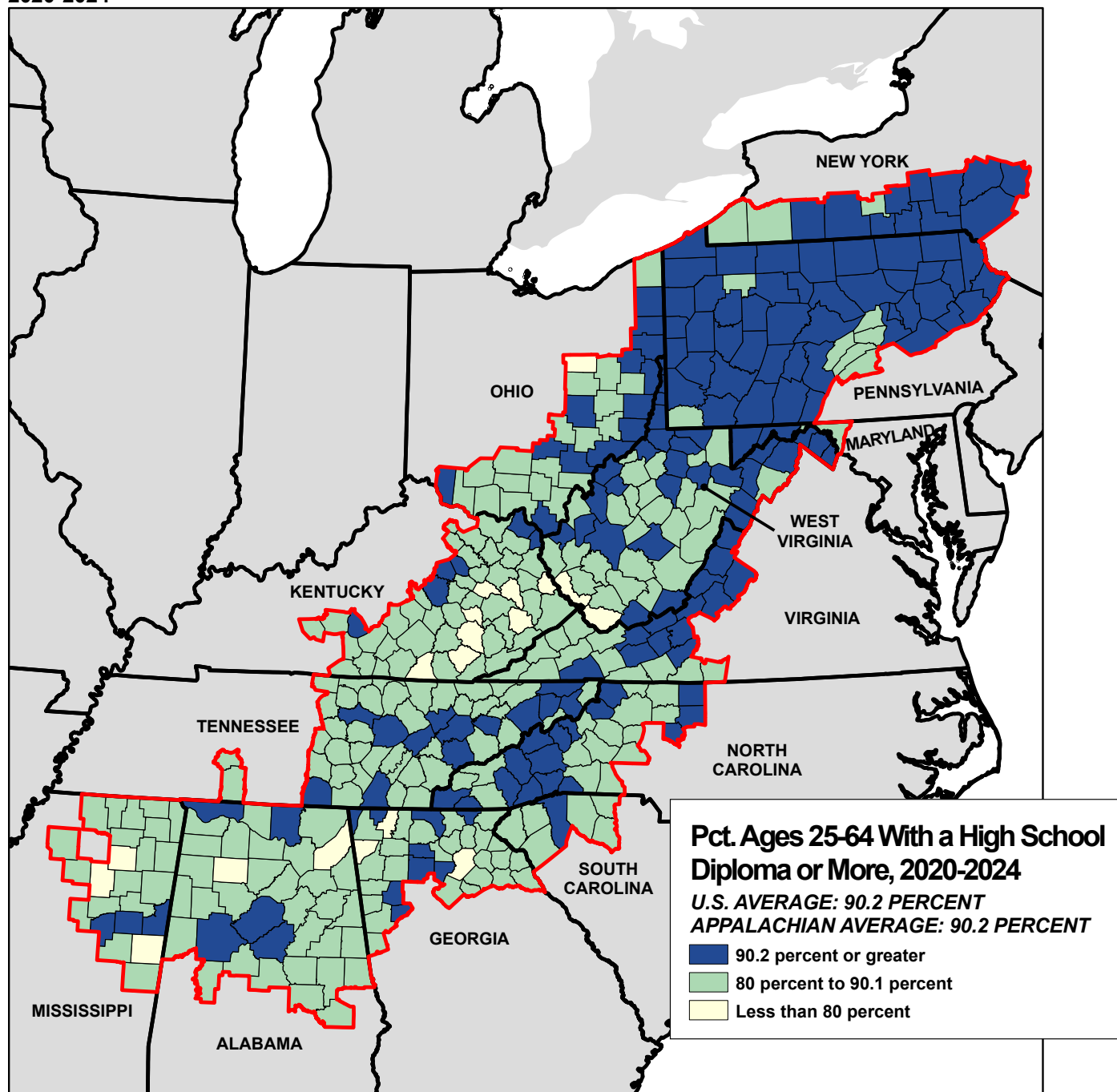
Figure 6.4: Percent of Persons Ages 25 and Over in the Appalachian Region With a Bachelor's Degree or More, 2020-2024



Map Title: Percent of Persons Ages 25 and Over in the Appalachian Region With a Bachelor's Degree or More, 2020-2024
 Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

The share of adults ages 25 and over with a bachelor's degree or more was 7.7 percentage points lower in Appalachia during the 2020-2024 period than in the nation as a whole. This was lower than the national average in 399 of the Appalachian Region's 423 counties, and less than one in five residents ages 25 and over were graduates of a four-year college or university in 239 Appalachian counties. Of these counties, about one-third were rural, while approximately another third of them were nonmetropolitan but adjacent to small metropolitan areas. Conversely, in 24 of Appalachia's counties, the share of adults with a bachelor's degree matched or exceeded the national average of 35.7 percent. These counties were primarily in metropolitan areas and nearly half were home to colleges or universities, such as Tompkins County, New York (Cornell University), and Oktibbeha County, Mississippi (Mississippi State University).

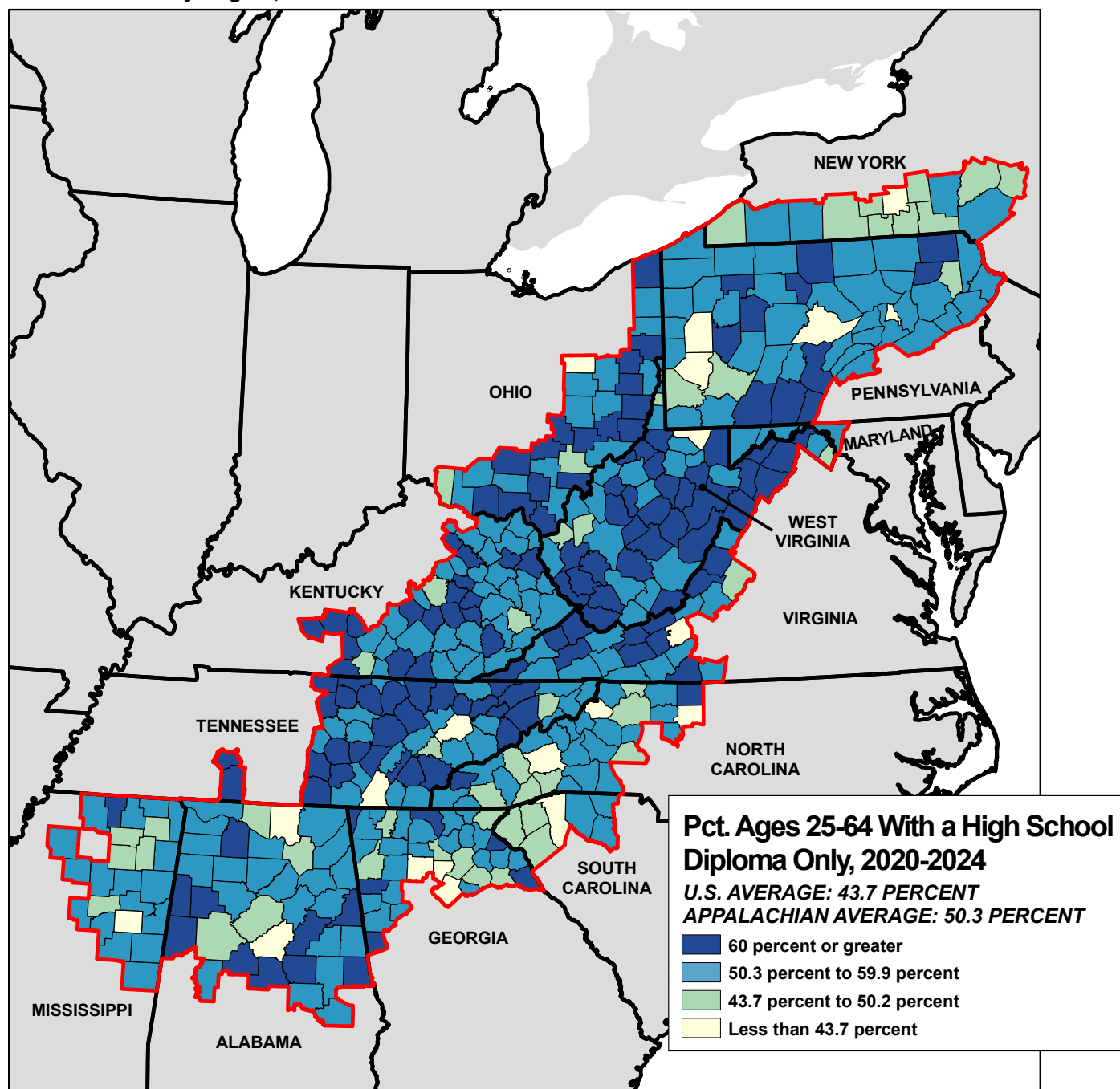
Figure 6.5: Percent of Persons Ages 25 to 64 in the Appalachian Region With a High School Diploma or More, 2020-2024



Map Title: Percent of Persons Ages 25 to 64 in the Appalachian Region With a High School Diploma or More, 2020-2024
 Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

In 2020-2024, the percentage of working-age adults (ages 25 to 64) in the Appalachian Region with at least a high school diploma was equal to the national average of 90.2 percent, and the share exceeded the national rate in 163 counties. Half of these counties were in metropolitan areas and 60 percent of these counties were located in Northern and North Central Appalachia. In the Appalachian portions of New York, Pennsylvania, Tennessee, Virginia, and all of West Virginia, the share of adults in this age group who had completed high school was at least 90 percent. At the other end of the spectrum, less than 80 percent of working-age adults had finished high school in 19 Appalachian counties. Just over half of these counties were in Central Appalachia (10 counties) with the heaviest concentration in Appalachian Kentucky (eight counties).

Figure 6.6: Percent of Persons Ages 25 to 64 in the Appalachian Region With a High School Diploma but With No Postsecondary Degree, 2020-2024

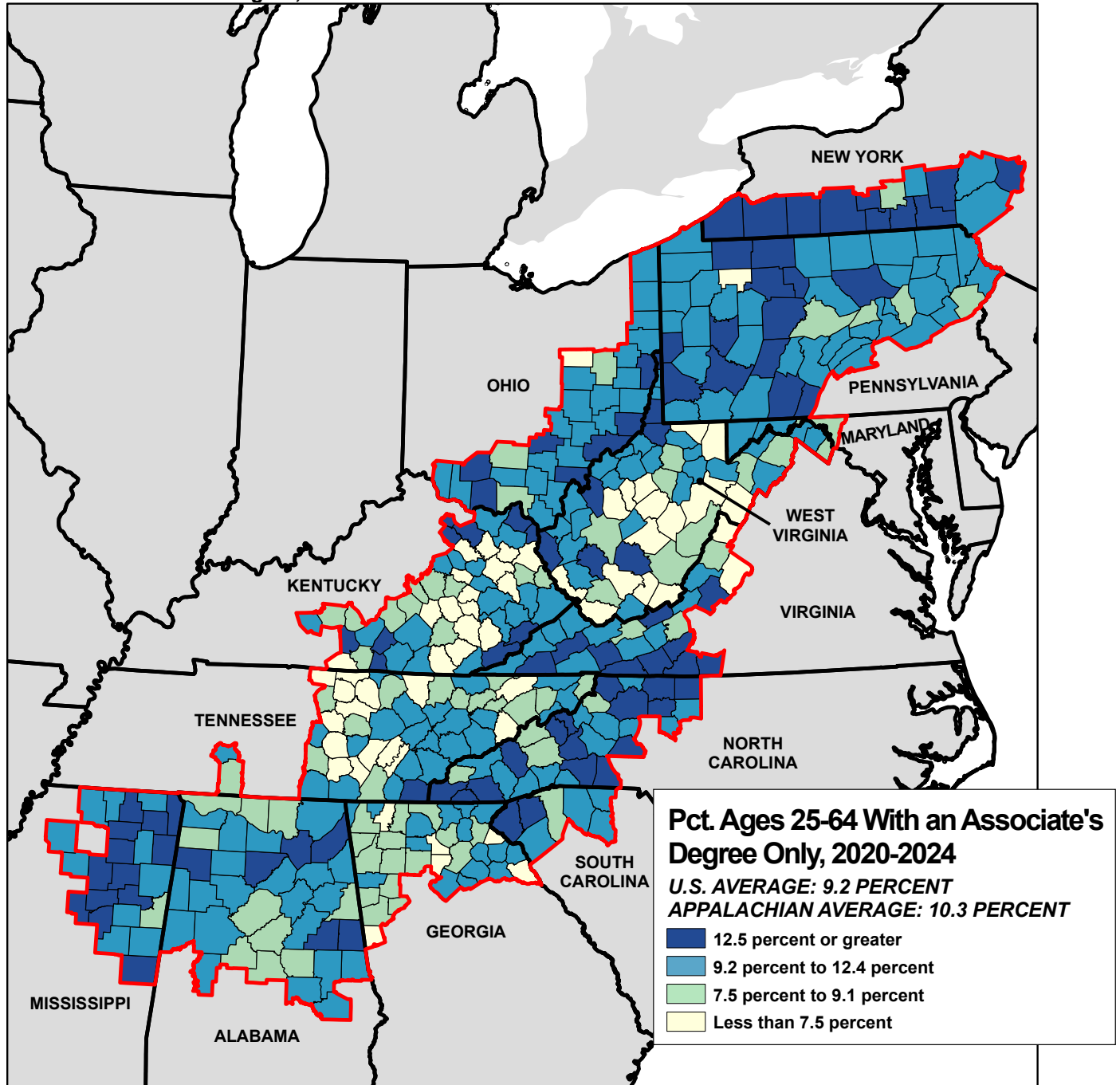


Map Title: Percent of Persons Ages 25 to 64 in the Appalachian Region With a High School Diploma but With No Postsecondary Degree, 2020-2024

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

In 2020-2024, 50.3 percent of working-age adults (ages 25 to 64) in the Appalachian Region had a high school diploma but no postsecondary degree, compared to just 43.7 percent nationally. The share of adults in this age group was at least 60 percent in 135 of Appalachia's 423 counties, with the highest concentrations in Appalachian Tennessee and West Virginia. In Appalachia's non-metropolitan and rural counties, the share with a high school diploma as the highest level of education exceeded 55 percent. In contrast, there were 20 counties in the region where the share of 25-to-64-year-old adults who had a high school diploma, but no secondary degree, was below the national average. Nearly two-thirds of the latter counties were in South Central and Southern Appalachia, and four-fifths were in metropolitan areas. Many working-age adults with this level of attainment may still have continued their education after high school, either by attending college without graduating or by acquiring vocational training.

Figure 6.7: Percent of Persons Ages 25 to 64 in the Appalachian Region With an Associate's Degree but Without a Bachelor's Degree, 2020-2024

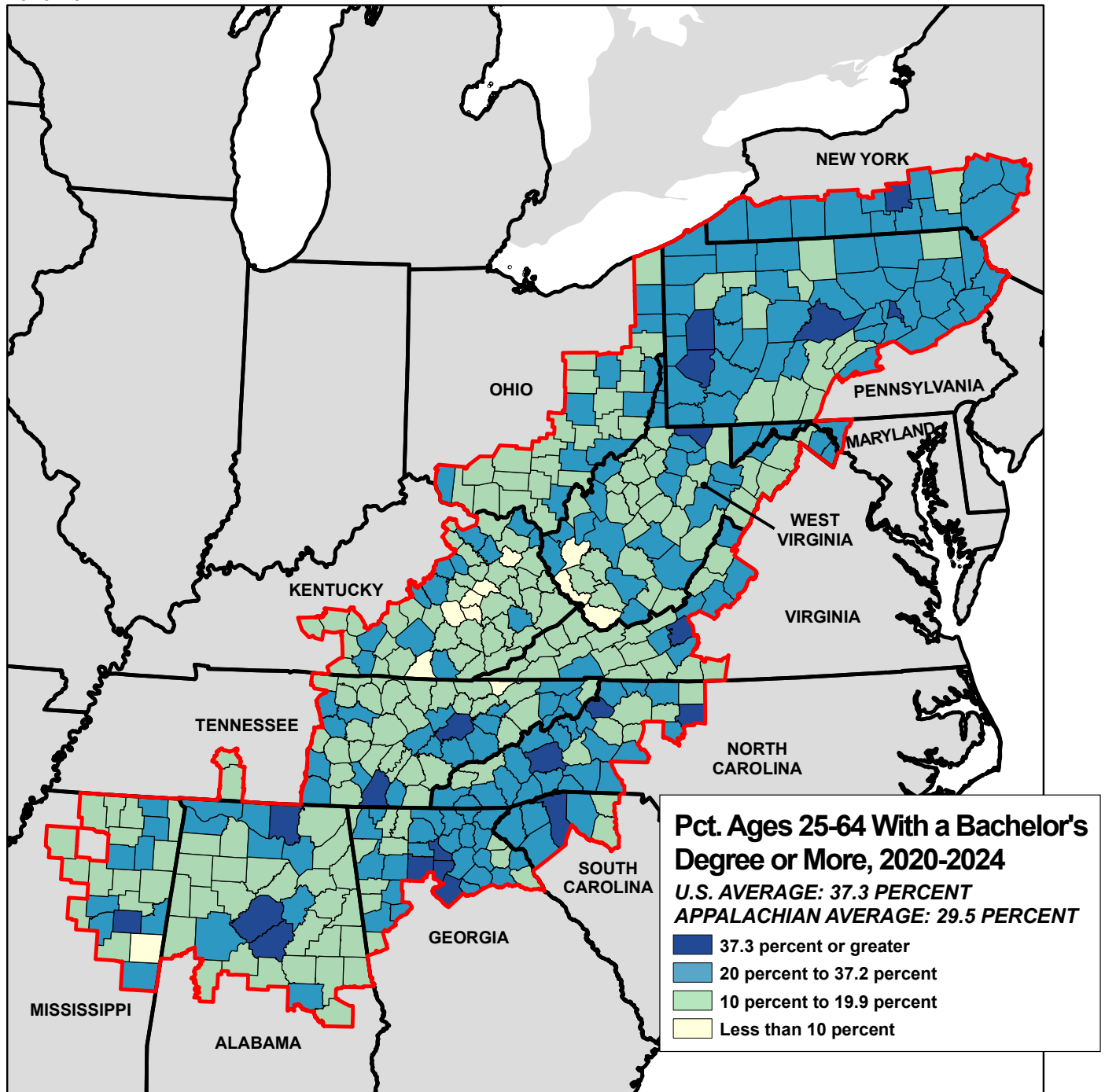


Map Title: Percent of Persons Ages 25 to 64 in the Appalachian Region With an Associate's Degree but Without a Bachelor's Degree, 2020-2024

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

In 2020-2024, 10.3 percent of working-age adults (ages 25 to 64) in Appalachia had attained an associate's degree but not a bachelor's degree, compared with 9.2 percent nationally. And the share was even higher in much of the Appalachian Region: In 94 Appalachian counties, at least one in eight working-age adults had an associate's degree as their highest level of education. In the Appalachian sections of Mississippi, New York, North Carolina, Ohio, Pennsylvania, and Virginia the share was at least 11 percent. On the other hand, there were 56 counties in Appalachia where less than 7.5 percent of 25-to-64-year-olds had attained an associate's degree only. Four in every five of those 56 counties were in the Appalachian portions of three states – Kentucky, Tennessee, and West Virginia.

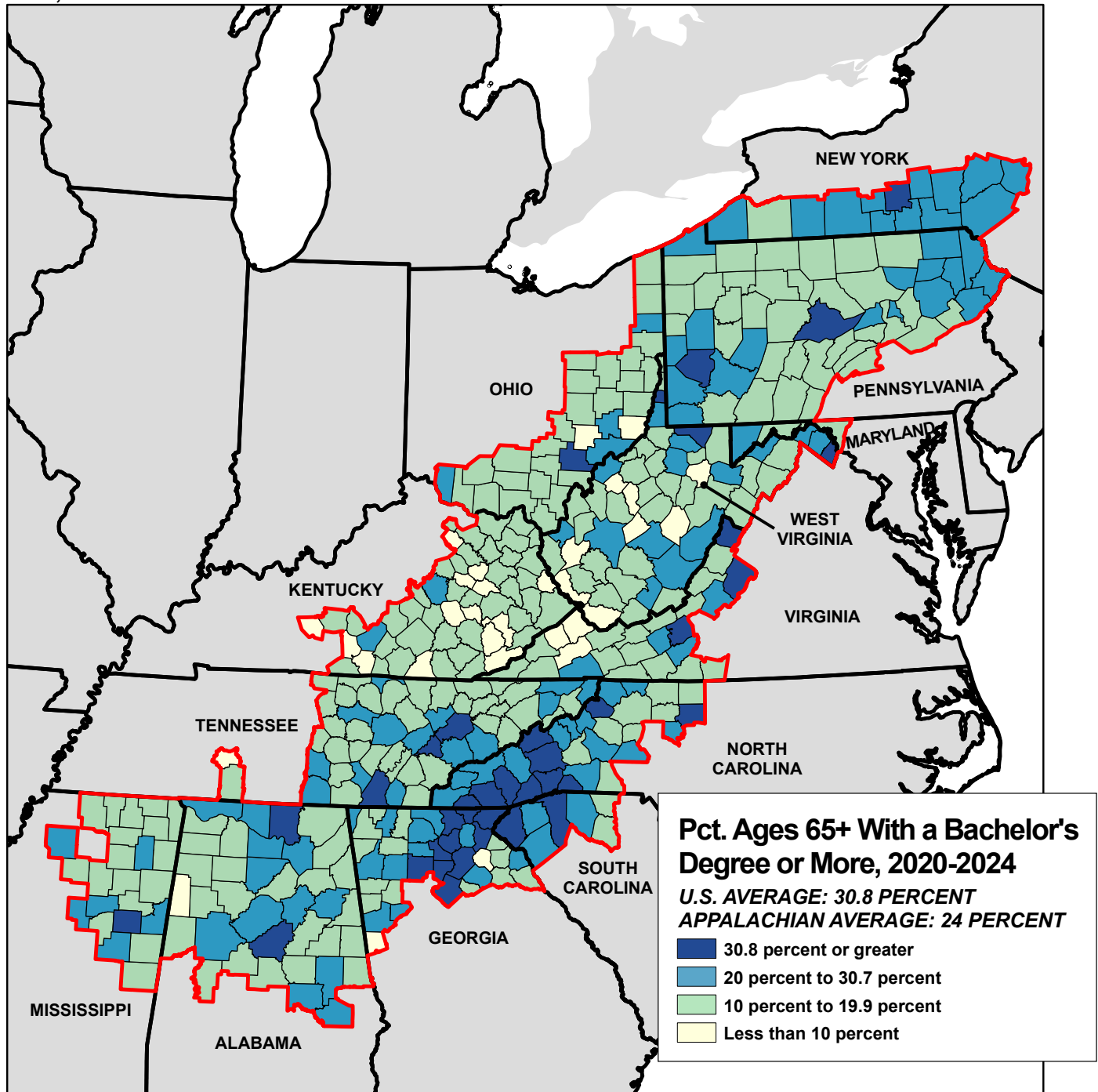
Figure 6.8: Percent of Persons Ages 25 to 64 in the Appalachian Region With a Bachelor's Degree or More, 2020-2024



Map Title: Percent of Persons Ages 25 to 64 in the Appalachian Region With a Bachelor's Degree or More, 2020-2024
 Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

The share of 25-to-64-year-old adults in the Appalachian Region who had attained a bachelor's degree or more in 2020-2024 was 7.8 percentage points lower than the U.S. average of 37.3 percent – highlighting a gap in secondary educational attainment between the Appalachian Region and the rest of the nation. And in some portions of Appalachia, this gap was even more profound – in Central Appalachia just 17.7 percent of residents in this age group had at least a bachelor's degree and in non-metropolitan counties adjacent to small metros and rural areas of the region, about one in every five 25-to-64-year-olds had this level of education. Yet, in the Appalachian Region's large metropolitan areas the share exceeded the national average by 1 percentage point. Scattered throughout the region, the share who had attained at least a bachelor's degree matched or exceeded the national average in 21 counties, all but three of which were in metropolitan areas and about half were home to four-year colleges or universities.

Figure 6.9: Percent of Persons Ages 65 and Over in the Appalachian Region With a Bachelor's Degree or More, 2020-2024



Map Title: Percent of Persons Ages 65 and Over in the Appalachian Region With a Bachelor's Degree or More, 2020-2024
 Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

The share of older Americans in Appalachia (those ages 65 and over) who attained a bachelor's degree or higher was 6.8 percentage points lower than the national average for their age group in 2020-2024. In 31 of Appalachia's 423 counties, less than one in ten older adults had completed at least a bachelor's degree. And in Central Appalachia, non-metro counties adjacent to small metros and rural areas in the region, and the Appalachian sections of Kentucky, Maryland, Mississippi, and Ohio, fewer than one in five older adults had a bachelor's degree or more. In contrast, in 38 of Appalachia's counties, the share of older adults who had a bachelor's degree or higher matched or exceeded the national average of 30.8 percent. These latter counties were primarily in metropolitan areas. Further, nearly half of these counties had a college or university – such as Athens County, Ohio (Ohio University) and Madison County, North Carolina (Mars Hill University).

Table 6.4: Percentage Point Change in Educational Attainment of Persons Ages 25 and Over in the Appalachian Region, 2015-2019 to 2020-2024

Education (Highest Level Attained)	Percentage Point Change in Share of Population Ages 25 and Over					
	Less than High School Diploma	High School Diploma or More				
		Total	H.S. Grad, No Postsecondary Degree	Associate's Degree or More		
				Total	Associate's Degree	Bachelor's Degree or More
United States	- 1.6	+ 1.6	- 2.3	+ 3.9	+ 0.3	+ 3.6
Appalachian Region	- 2.3	+ 2.3	- 1.7	+ 3.9	+ 0.6	+ 3.3
Subregions						
Northern Appalachia	- 1.3	+ 1.3	- 2.3	+ 3.6	+ 0.6	+ 2.9
North Central Appalachia	- 2.2	+ 2.2	- 2.0	+ 4.2	+ 0.8	+ 3.3
Central Appalachia	- 4.5	+ 4.5	+ 0.9	+ 3.6	+ 1.1	+ 2.4
South Central Appalachia	- 2.9	+ 2.9	- 1.4	+ 4.2	+ 0.6	+ 3.6
Southern Appalachia	- 2.5	+ 2.5	- 1.4	+ 4.0	+ 0.5	+ 3.5
County Types						
Large Metro (metro pop. 1 million +)	- 1.4	+ 1.4	- 2.3	+ 3.7	+ 0.3	+ 3.5
Small Metro (metro pop. <1 million)	- 2.2	+ 2.2	- 1.9	+ 4.1	+ 0.6	+ 3.5
Nonmetro, Adjacent to Large Metro	- 2.4	+ 2.4	- 1.3	+ 3.6	+ 0.8	+ 2.8
Nonmetro, Adjacent to Small Metro	- 2.7	+ 2.7	- 0.8	+ 3.5	+ 0.9	+ 2.6
Rural (nonmetro, not adj. to a metro)	- 3.4	+ 3.4	- 0.2	+ 3.7	+ 0.9	+ 2.7
Alabama	- 2.4	+ 2.4	- 1.1	+ 3.5	+ 0.6	+ 2.9
Appalachian Alabama	- 2.4	+ 2.4	- 1.3	+ 3.7	+ 0.6	+ 3.1
Non-Appalachian Alabama	- 2.6	+ 2.6	- 0.6	+ 3.2	+ 0.7	+ 2.5
Georgia	- 2.1	+ 2.1	- 2.1	+ 4.3	+ 0.6	+ 3.6
Appalachian Georgia	- 2.3	+ 2.3	- 1.7	+ 4.1	+ 0.5	+ 3.6
Non-Appalachian Georgia	- 2.1	+ 2.1	- 2.4	+ 4.3	+ 0.7	+ 3.7
Kentucky	- 2.6	+ 2.6	- 1.4	+ 4.0	+ 0.7	+ 3.4
Appalachian Kentucky	- 4.4	+ 4.4	+ 0.8	+ 3.4	+ 1.0	+ 2.5
Non-Appalachian Kentucky	- 1.9	+ 1.9	- 2.2	+ 4.1	+ 0.5	+ 3.5
Maryland	- 0.9	+ 0.9	- 2.4	+ 3.4	+ 0.1	+ 3.2
Appalachian Maryland	- 0.9	+ 0.9	- 1.9	+ 2.8	+ 0.2	+ 2.5
Non-Appalachian Maryland	- 0.9	+ 0.9	- 2.4	+ 3.4	+ 0.2	+ 3.3
Mississippi	- 2.6	+ 2.6	- 1.6	+ 4.3	+ 1.1	+ 3.1
Appalachian Mississippi	- 2.9	+ 2.9	- 1.0	+ 3.9	+ 1.1	+ 2.8
Non-Appalachian Mississippi	- 2.5	+ 2.5	- 1.8	+ 4.3	+ 1.2	+ 3.1
New York	- 1.2	+ 1.2	- 2.6	+ 3.8	+ 0.1	+ 3.6
Appalachian New York	- 1.0	+ 1.0	- 2.3	+ 3.3	+ 0.3	+ 3.0
Non-Appalachian New York	- 1.2	+ 1.2	- 2.6	+ 3.8	+ 0.1	+ 3.7
North Carolina	- 2.3	+ 2.3	- 2.5	+ 4.9	+ 0.4	+ 4.4
Appalachian North Carolina	- 2.8	+ 2.8	- 1.9	+ 4.7	+ 0.3	+ 4.4
Non-Appalachian North Carolina	- 2.3	+ 2.3	- 2.6	+ 4.8	+ 0.5	+ 4.4
Ohio	- 1.4	+ 1.4	- 2.1	+ 3.6	+ 0.3	+ 3.2
Appalachian Ohio	- 1.8	+ 1.8	- 1.9	+ 3.7	+ 1.0	+ 2.7
Non-Appalachian Ohio	- 1.4	+ 1.4	- 2.1	+ 3.4	+ 0.3	+ 3.3
Pennsylvania	- 1.6	+ 1.6	- 2.5	+ 4.2	+ 0.4	+ 3.8
Appalachian Pennsylvania	- 1.4	+ 1.4	- 2.3	+ 3.7	+ 0.6	+ 3.1
Non-Appalachian Pennsylvania	- 1.9	+ 1.9	- 2.7	+ 4.6	+ 0.3	+ 4.2
South Carolina	- 2.6	+ 2.6	- 1.6	+ 4.2	+ 0.2	+ 4.0
Appalachian South Carolina	- 2.9	+ 2.9	- 1.0	+ 3.9	0.0	+ 3.9
Non-Appalachian South Carolina	- 2.5	+ 2.5	- 1.8	+ 4.3	+ 0.2	+ 4.1
Tennessee	- 2.5	+ 2.5	- 1.7	+ 4.3	+ 0.6	+ 3.8
Appalachian Tennessee	- 2.9	+ 2.9	- 1.2	+ 4.0	+ 0.9	+ 3.3
Non-Appalachian Tennessee	- 2.3	+ 2.3	- 2.2	+ 4.5	+ 0.4	+ 4.1
Virginia	- 1.9	+ 1.9	- 1.5	+ 3.4	0.0	+ 3.4
Appalachian Virginia	- 4.2	+ 4.2	+ 1.3	+ 2.9	+ 1.0	+ 1.8
Non-Appalachian Virginia	- 1.6	+ 1.6	- 1.8	+ 3.3	- 0.1	+ 3.4
West Virginia (entire state)	- 2.4	+ 2.4	- 2.1	+ 4.6	+ 1.1	+ 3.5

Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

Table 6.5: Percentage Point Change in Educational Attainment of Persons Ages 25 to 64 in the Appalachian Region, 2015-2019 to 2020-2024

Education (Highest Level Attained)	Percentage Point Change in Share of Population Ages 25 to 64					
	Less than High School Diploma	High School Diploma or More				
		Total	H.S. Grad, No Postsecondary Degree	Associate's Degree or More		
				Total	Associate's Degree	Bachelor's Degree or More
United States	- 1.1	+ 1.1	- 2.7	+ 3.8	+ 0.1	+ 3.8
Appalachian Region	- 1.3	+ 1.3	- 2.4	+ 3.7	+ 0.3	+ 3.3
Subregions						
Northern Appalachia	- 0.3	+ 0.3	- 3.1	+ 3.4	+ 0.3	+ 3.1
North Central Appalachia	- 1.1	+ 1.1	- 3.1	+ 4.1	+ 0.8	+ 3.4
Central Appalachia	- 3.1	+ 3.1	- 0.4	+ 3.5	+ 1.0	+ 2.5
South Central Appalachia	- 1.8	+ 1.8	- 1.9	+ 3.8	+ 0.3	+ 3.4
Southern Appalachia	- 1.8	+ 1.8	- 2.0	+ 3.8	+ 0.2	+ 3.6
County Types						
Large Metro (metro pop. 1 million +)	- 0.8	+ 0.8	- 2.8	+ 3.6	- 0.1	+ 3.7
Small Metro (metro pop. <1 million)	- 1.2	+ 1.2	- 2.6	+ 3.8	+ 0.3	+ 3.4
Nonmetro, Adjacent to Large Metro	- 1.5	+ 1.5	- 1.7	+ 3.1	+ 0.5	+ 2.6
Nonmetro, Adjacent to Small Metro	- 1.6	+ 1.6	- 1.6	+ 3.2	+ 0.7	+ 2.5
Rural (nonmetro, not adj. to a metro)	- 2.2	+ 2.2	- 1.5	+ 3.8	+ 0.9	+ 2.9
Alabama	- 1.7	+ 1.7	- 1.4	+ 3.2	+ 0.4	+ 2.9
Appalachian Alabama	- 1.6	+ 1.6	- 1.8	+ 3.3	+ 0.3	+ 3.0
Non-Appalachian Alabama	- 1.9	+ 1.9	- 1.0	+ 2.9	+ 0.4	+ 2.4
Georgia	- 1.7	+ 1.7	- 2.7	+ 4.2	+ 0.5	+ 3.8
Appalachian Georgia	- 1.7	+ 1.7	- 2.2	+ 3.9	+ 0.2	+ 3.7
Non-Appalachian Georgia	- 1.6	+ 1.6	- 2.9	+ 4.5	+ 0.6	+ 3.9
Kentucky	- 1.5	+ 1.5	- 2.7	+ 4.1	+ 0.5	+ 3.7
Appalachian Kentucky	- 2.9	+ 2.9	- 0.6	+ 3.6	+ 0.8	+ 2.7
Non-Appalachian Kentucky	- 0.9	+ 0.9	- 3.3	+ 4.2	+ 0.4	+ 3.9
Maryland	- 0.4	+ 0.4	- 3.0	+ 3.3	0.0	+ 3.4
Appalachian Maryland	+ 0.2	- 0.2	- 3.2	+ 3.0	0.0	+ 3.0
Non-Appalachian Maryland	- 0.3	+ 0.3	- 2.9	+ 3.3	0.0	+ 3.3
Mississippi	- 2.0	+ 2.0	- 2.5	+ 4.5	+ 1.2	+ 3.4
Appalachian Mississippi	- 2.3	+ 2.3	- 1.9	+ 4.3	+ 1.3	+ 3.0
Non-Appalachian Mississippi	- 1.9	+ 1.9	- 2.6	+ 4.6	+ 1.2	+ 3.4
New York	- 0.7	+ 0.7	- 3.0	+ 3.7	- 0.4	+ 4.1
Appalachian New York	- 0.1	+ 0.1	- 3.3	+ 3.4	- 0.2	+ 3.7
Non-Appalachian New York	- 0.7	+ 0.7	- 3.0	+ 3.7	- 0.3	+ 4.0
North Carolina	- 1.6	+ 1.6	- 2.9	+ 4.5	0.0	+ 4.4
Appalachian North Carolina	- 2.1	+ 2.1	- 2.1	+ 4.2	- 0.2	+ 4.5
Non-Appalachian North Carolina	- 1.5	+ 1.5	- 3.0	+ 4.6	+ 0.2	+ 4.4
Ohio	- 0.7	+ 0.7	- 2.7	+ 3.5	0.0	+ 3.5
Appalachian Ohio	- 0.9	+ 0.9	- 2.8	+ 3.5	+ 0.8	+ 2.7
Non-Appalachian Ohio	- 0.6	+ 0.6	- 2.8	+ 3.3	- 0.2	+ 3.5
Pennsylvania	- 0.8	+ 0.8	- 3.2	+ 4.0	+ 0.1	+ 3.9
Appalachian Pennsylvania	- 0.4	+ 0.4	- 3.0	+ 3.3	+ 0.3	+ 3.1
Non-Appalachian Pennsylvania	- 1.3	+ 1.3	- 3.2	+ 4.5	0.0	+ 4.6
South Carolina	- 1.9	+ 1.9	- 2.3	+ 4.2	- 0.1	+ 4.3
Appalachian South Carolina	- 2.1	+ 2.1	- 1.6	+ 3.7	- 0.3	+ 4.2
Non-Appalachian South Carolina	- 1.9	+ 1.9	- 2.5	+ 4.4	0.0	+ 4.4
Tennessee	- 1.5	+ 1.5	- 2.6	+ 4.2	+ 0.4	+ 3.8
Appalachian Tennessee	- 1.7	+ 1.7	- 2.1	+ 3.8	+ 0.6	+ 3.1
Non-Appalachian Tennessee	- 1.4	+ 1.4	- 3.0	+ 4.4	+ 0.1	+ 4.3
Virginia	- 1.2	+ 1.2	- 2.1	+ 3.3	- 0.2	+ 3.5
Appalachian Virginia	- 2.9	+ 2.9	+ 0.8	+ 2.2	+ 1.0	+ 1.2
Non-Appalachian Virginia	- 1.0	+ 1.0	- 2.2	+ 3.2	- 0.3	+ 3.6
West Virginia (entire state)	- 1.0	+ 1.0	- 3.6	+ 4.7	+ 1.1	+ 3.6

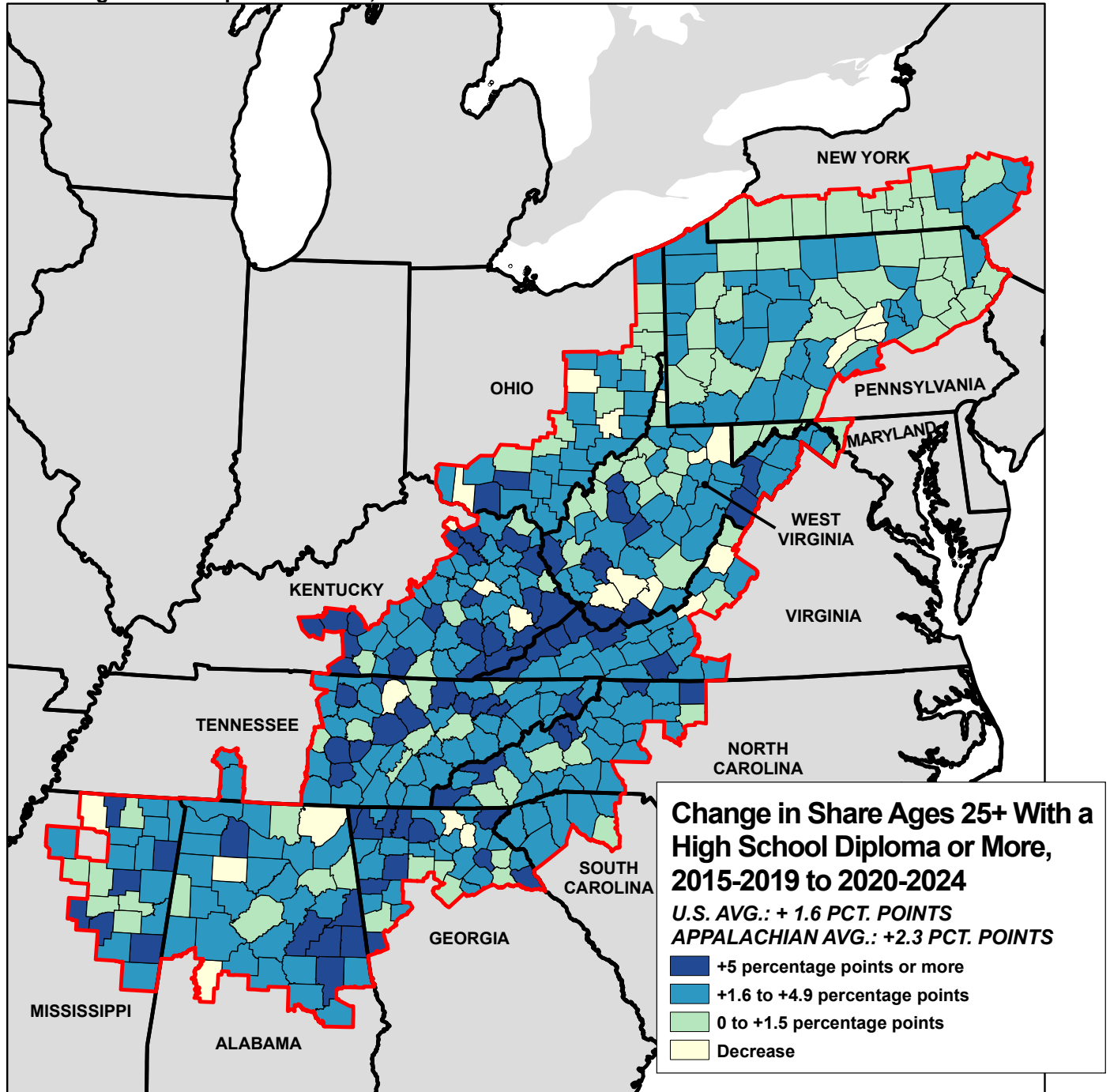
Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

Table 6.6: Percentage Point Change in Educational Attainment of Persons Ages 65 and Over in the Appalachian Region, 2015-2019 to 2020-2024

Education (Highest Level Attained)	Percentage Point Change in Share of Population Ages 65 and Over					
	Less than High School Diploma	High School Diploma or More				
		Total	H.S. Grad, No Postsecondary Degree	Associate's Degree or More		
				Total	Associate's Degree	Bachelor's Degree or More
United States	- 3.5	+ 3.5	- 1.2	+ 4.7	+ 1.4	+ 3.3
Appalachian Region	- 5.2	+ 5.2	0.0	+ 5.2	+ 1.7	+ 3.6
Subregions						
Northern Appalachia	- 4.0	+ 4.0	- 1.2	+ 5.2	+ 1.9	+ 3.3
North Central Appalachia	- 5.8	+ 5.8	+ 0.8	+ 4.9	+ 1.3	+ 3.6
Central Appalachia	- 9.4	+ 9.4	+ 5.1	+ 4.2	+ 1.8	+ 2.5
South Central Appalachia	- 5.6	+ 5.6	0.0	+ 5.6	+ 1.6	+ 4.0
Southern Appalachia	- 5.0	+ 5.0	0.0	+ 5.1	+ 1.5	+ 3.6
County Types						
Large Metro (metro pop. 1 million +)	- 3.9	+ 3.9	- 1.6	+ 5.4	+ 1.9	+ 3.6
Small Metro (metro pop. <1 million)	- 5.0	+ 5.0	- 0.4	+ 5.4	+ 1.5	+ 3.9
Nonmetro, Adjacent to Large Metro	- 5.2	+ 5.2	- 0.2	+ 5.3	+ 1.8	+ 3.4
Nonmetro, Adjacent to Small Metro	- 5.9	+ 5.9	+ 1.1	+ 4.7	+ 1.8	+ 3.1
Rural (nonmetro, not adj. to a metro)	- 6.8	+ 6.8	+ 3.2	+ 3.6	+ 1.3	+ 2.5
Alabama	- 4.9	+ 4.9	- 0.1	+ 5.0	+ 1.7	+ 3.4
Appalachian Alabama	- 4.9	+ 4.9	- 0.3	+ 5.2	+ 1.7	+ 3.5
Non-Appalachian Alabama	- 5.1	+ 5.1	+ 0.2	+ 4.9	+ 1.7	+ 3.2
Georgia	- 4.2	+ 4.2	- 0.6	+ 4.9	+ 1.4	+ 3.6
Appalachian Georgia	- 4.8	+ 4.8	- 0.5	+ 5.2	+ 1.5	+ 3.7
Non-Appalachian Georgia	- 4.0	+ 4.0	- 0.8	+ 4.8	+ 1.3	+ 3.4
Kentucky	- 6.7	+ 6.7	+ 2.2	+ 4.4	+ 1.6	+ 2.9
Appalachian Kentucky	- 9.2	+ 9.2	+ 5.3	+ 3.9	+ 1.7	+ 2.1
Non-Appalachian Kentucky	- 5.5	+ 5.5	+ 1.0	+ 4.5	+ 1.5	+ 3.0
Maryland	- 3.3	+ 3.3	- 1.3	+ 4.6	+ 0.8	+ 3.8
Appalachian Maryland	- 4.3	+ 4.3	+ 1.4	+ 2.9	+ 1.0	+ 1.7
Non-Appalachian Maryland	- 3.3	+ 3.3	- 1.4	+ 4.6	+ 0.8	+ 3.8
Mississippi	- 5.2	+ 5.2	+ 0.9	+ 4.3	+ 1.7	+ 2.6
Appalachian Mississippi	- 5.4	+ 5.4	+ 1.7	+ 3.7	+ 1.2	+ 2.5
Non-Appalachian Mississippi	- 5.1	+ 5.1	+ 0.7	+ 4.3	+ 1.8	+ 2.6
New York	- 3.2	+ 3.2	- 1.8	+ 5.1	+ 1.7	+ 3.5
Appalachian New York	- 3.2	+ 3.2	- 0.5	+ 3.8	+ 2.0	+ 1.7
Non-Appalachian New York	- 3.3	+ 3.3	- 1.9	+ 5.1	+ 1.7	+ 3.5
North Carolina	- 5.0	+ 5.0	- 1.6	+ 6.5	+ 1.8	+ 4.7
Appalachian North Carolina	- 4.9	+ 4.9	- 1.4	+ 6.3	+ 1.8	+ 4.5
Non-Appalachian North Carolina	- 5.0	+ 5.0	- 1.6	+ 6.6	+ 1.8	+ 4.8
Ohio	- 4.1	+ 4.1	- 0.8	+ 4.9	+ 1.8	+ 3.1
Appalachian Ohio	- 4.6	+ 4.6	- 0.1	+ 4.6	+ 1.9	+ 2.8
Non-Appalachian Ohio	- 4.0	+ 4.0	- 0.9	+ 4.9	+ 1.8	+ 3.1
Pennsylvania	- 4.0	+ 4.0	- 1.6	+ 5.7	+ 1.7	+ 3.9
Appalachian Pennsylvania	- 4.0	+ 4.0	- 1.5	+ 5.5	+ 1.9	+ 3.6
Non-Appalachian Pennsylvania	- 4.0	+ 4.0	- 1.6	+ 5.6	+ 1.6	+ 3.9
South Carolina	- 4.8	+ 4.8	+ 0.2	+ 4.6	+ 1.3	+ 3.3
Appalachian South Carolina	- 5.4	+ 5.4	+ 0.7	+ 4.7	+ 1.3	+ 3.6
Non-Appalachian South Carolina	- 4.6	+ 4.6	0.0	+ 4.5	+ 1.4	+ 3.2
Tennessee	- 6.3	+ 6.3	+ 0.8	+ 5.4	+ 1.6	+ 3.8
Appalachian Tennessee	- 6.3	+ 6.3	+ 1.1	+ 5.1	+ 1.4	+ 3.7
Non-Appalachian Tennessee	- 6.1	+ 6.1	+ 0.6	+ 5.6	+ 1.8	+ 3.8
Virginia	- 4.7	+ 4.7	0.0	+ 4.8	+ 1.0	+ 3.8
Appalachian Virginia	- 8.3	+ 8.3	+ 2.8	+ 5.5	+ 1.6	+ 3.8
Non-Appalachian Virginia	- 4.2	+ 4.2	- 0.4	+ 4.5	+ 0.9	+ 3.6
West Virginia (entire state)	- 6.4	+ 6.4	+ 1.2	+ 5.1	+ 1.4	+ 3.8

Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

Figure 6.10: Percentage Point Change in the Share of Persons Ages 25 and Over in the Appalachian Region With a High School Diploma or More, 2015-2019 to 2020-2024

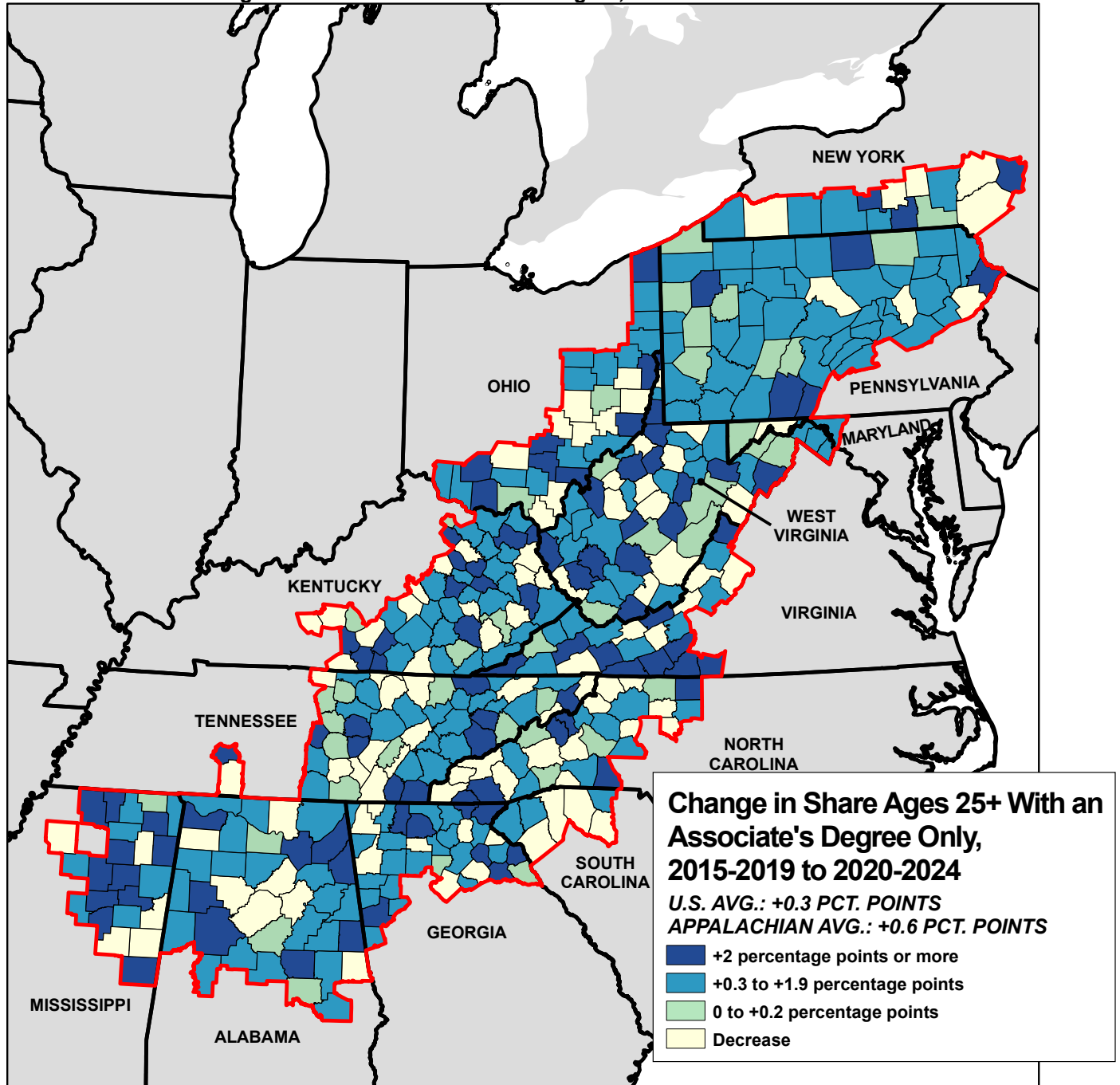


Map Title: Percentage Point Change in the Share of Persons Ages 25 and Over in the Appalachian Region With a High School Diploma or More, 2015-2019 to 2020-2024

Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

The Appalachian Region had gains in educational attainment between 2015-2019 and 2020-2024, with an increase of 2.3 percentage points for adults with a high school diploma – a higher rise than the U.S. had during this time. This rise continues a longstanding trend, and the increase was even more pronounced in some parts of the region – in 192 of Appalachia’s 423 counties the share of adults with at least a high school degree rose by at least three percentage points and in 78 of these counties the share rose by at least five percentage points. Nearly half of these 78 counties were in Southern and South Central Appalachia. The Appalachian portions of Kentucky and Virginia had notable increases in high school degree attainment, at more than four percentage points each.

Figure 6.11: Percentage Point Change in the Share of Persons Ages 25 and Over in the Appalachian Region With an Associate's Degree but Without a Bachelor's Degree, 2015-2019 to 2020-2024

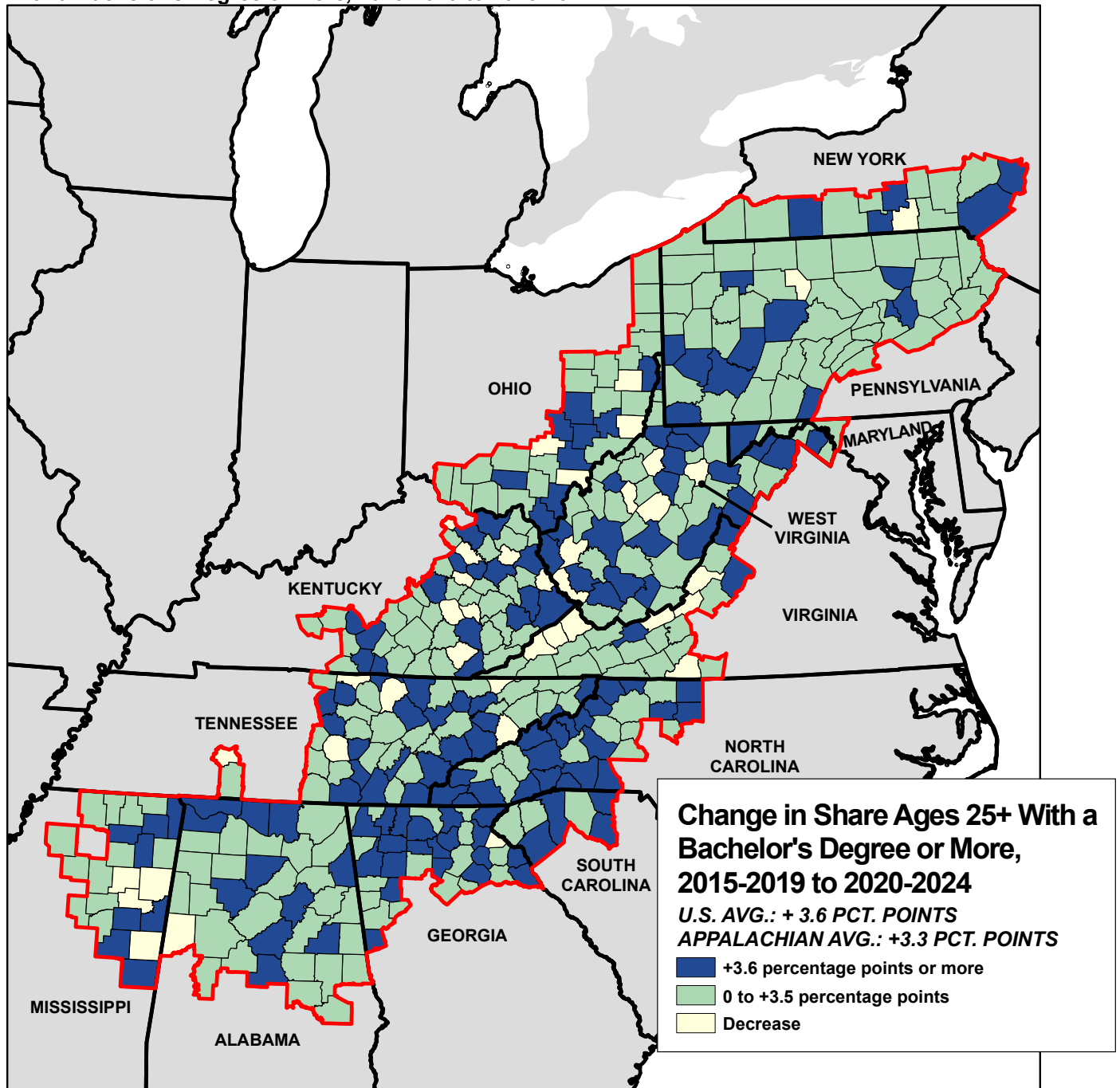


Map Title: Percentage Point Change in the Share of Persons Ages 25 and Over in the Appalachian Region With an Associate's Degree but Without a Bachelor's Degree, 2015-2019 and 2020-2024

Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

The share of adults ages 25 and older in the Appalachian Region whose highest level of education was an associate's degree rose by 0.6 percentage points from 2015-2019 to 2020-2024, slightly more than the increase of 0.3 percentage points seen at the national level. And in 236 of the Appalachian Region's 423 counties, the increase was even greater than the regional average – more than half of which were small metropolitan counties and those adjacent to them – while in 98 counties, the share rose by at least two percentage points. Conversely, in 102 counties the share decreased; however, of these counties 91 also had an increase in the attainment of a bachelor's degree or more.

Figure 6.12: Percentage Point Change in the Share of Persons Ages 25 and Over in the Appalachian Region With a Bachelor's Degree or More, 2015-2019 to 2020-2024



Map Title: Percentage Point Change in the Share of Persons Ages 25 and Over in the Appalachian Region With a Bachelor's Degree or More, 2015-2019 and 2020-2024

Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

The percentage of Appalachian adults ages 25 and over with at least a bachelor's degree increased by 3.3 percentage points between 2015-2019 and 2020-2024, suggesting a continued trend toward greater educational attainment in the Appalachian Region. And in 151 of the region's 423 counties – more than half of which were in Southern and South Central Appalachia – the share of adults 25 and over with a bachelor's degree or more increased at least as much as the national average of 3.6 percent. Yet not all counties in the region saw a rise in attainment of bachelor's degrees and higher – in 39 counties the share with this level of education declined, all but five of which were in non-metropolitan areas.

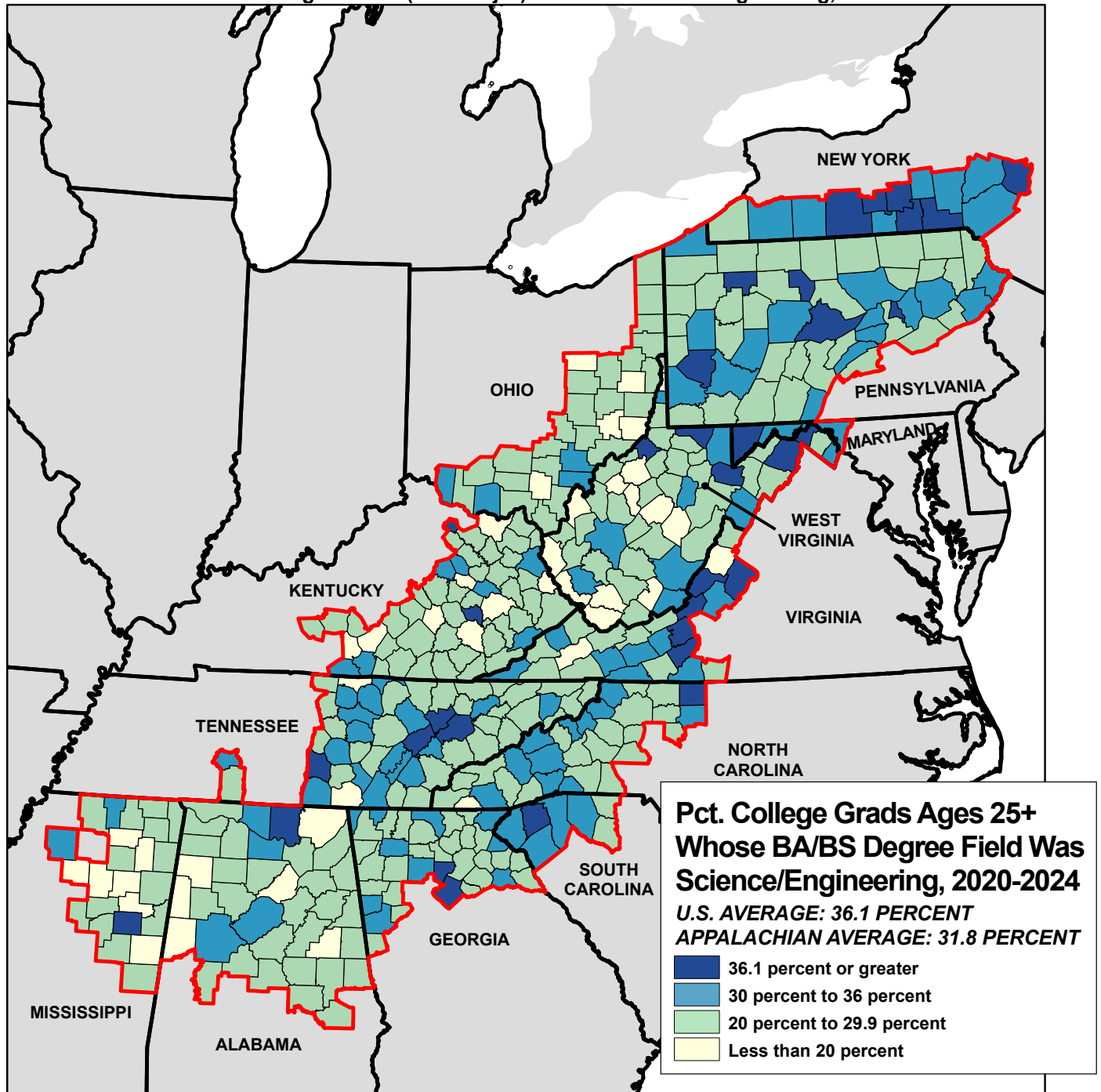
Table 6.7: Bachelor's Degree Field (First Major) for Persons Ages 25 and Over in the Appalachian Region With a Bachelor's Degree or More, 2020-2024

Bachelor's Degree Field (First Major)	Total Population Ages 25 and Over With a Bachelor's Degree or More, 2020-2024	Percent of Population Ages 25 and Over With a Bachelor's Degree or More				
		Science and Engineering	Science- and Engineering-Related Fields	Business	Education	Arts, Humanities, and Other
United States	82,363,216	36.1	10.0	20.1	10.9	23.0
Appalachian Region	5,178,629	31.8	11.6	19.8	15.5	21.3
Subregions						
Northern Appalachia	1,656,761	32.9	11.9	17.9	15.9	21.4
North Central Appalachia	421,801	29.1	13.6	17.9	18.7	20.7
Central Appalachia	220,237	26.7	14.1	16.5	22.2	20.6
South Central Appalachia	1,077,755	31.9	11.3	19.0	14.3	23.6
Southern Appalachia	1,802,075	32.1	10.6	23.0	14.3	20.0
County Types						
Large Metro (metro pop. 1 million +)	1,617,403	33.6	10.7	22.6	12.5	20.6
Small Metro (metro pop. <1 million)	2,248,014	32.8	11.5	19.2	14.6	21.9
Nonmetro, Adjacent to Large Metro	366,659	28.6	12.3	18.4	20.0	20.7
Nonmetro, Adjacent to Small Metro	594,636	28.4	12.9	17.2	20.4	21.2
Rural (nonmetro, not adj. to a metro)	351,917	26.7	12.7	17.2	22.3	21.1
Alabama	985,483	30.4	10.9	23.1	15.3	20.2
Appalachian Alabama	656,653	30.9	10.9	23.2	14.9	20.0
Non-Appalachian Alabama	328,830	29.4	11.0	22.7	16.2	20.8
Georgia	2,571,913	33.6	9.5	23.4	11.5	22.0
Appalachian Georgia	753,688	33.2	10.2	24.0	13.0	19.6
Non-Appalachian Georgia	1,818,225	33.8	9.3	23.1	10.8	23.0
Kentucky	853,791	29.6	12.5	19.4	14.8	23.7
Appalachian Kentucky	142,611	25.4	14.5	15.7	22.5	22.0
Non-Appalachian Kentucky	711,180	30.5	12.1	20.2	13.2	24.1
Maryland	1,868,776	42.0	8.9	17.8	8.7	22.6
Appalachian Maryland	42,005	33.8	10.0	15.8	17.0	23.4
Non-Appalachian Maryland	1,826,771	42.1	8.9	17.8	8.5	22.6
Mississippi	495,720	27.0	13.2	21.4	18.9	19.5
Appalachian Mississippi	87,756	25.5	12.4	19.7	23.6	18.9
Non-Appalachian Mississippi	407,964	27.3	13.4	21.8	17.9	19.7
New York	5,638,631	35.5	9.4	18.4	10.0	26.7
Appalachian New York	206,185	37.4	9.8	13.0	16.2	23.5
Non-Appalachian New York	5,432,446	35.4	9.4	18.6	9.8	26.8
North Carolina	2,631,218	35.0	10.0	20.4	11.3	23.3
Appalachian North Carolina	451,767	31.2	11.1	18.1	14.4	25.1
Non-Appalachian North Carolina	2,179,451	35.7	9.7	20.9	10.7	22.9
Ohio	2,570,052	31.5	12.2	20.8	14.3	21.2
Appalachian Ohio	288,448	26.3	14.6	18.9	19.9	20.2
Non-Appalachian Ohio	2,281,604	32.1	12.0	21.1	13.6	21.3
Pennsylvania	3,231,367	34.4	10.9	19.4	13.1	22.2
Appalachian Pennsylvania	1,252,218	33.1	11.9	18.6	15.2	21.2
Non-Appalachian Pennsylvania	1,979,149	35.3	10.3	19.9	11.7	22.9
South Carolina	1,181,414	32.6	10.3	22.5	13.4	21.1
Appalachian South Carolina	303,978	33.6	10.7	20.8	13.5	21.4
Non-Appalachian South Carolina	877,436	32.3	10.2	23.2	13.3	21.0
Tennessee	1,512,601	30.5	11.0	22.4	12.4	23.7
Appalachian Tennessee	570,348	31.6	11.6	20.3	14.5	22.0
Non-Appalachian Tennessee	942,253	29.8	10.6	23.6	11.2	24.7
Virginia	2,532,890	40.9	8.2	18.5	8.6	23.8
Appalachian Virginia	117,376	35.1	10.9	15.3	15.4	23.4
Non-Appalachian Virginia	2,415,514	41.2	8.1	18.6	8.3	23.8
West Virginia (entire state)	305,596	29.1	13.7	17.6	19.2	20.3

Note: Examples of "Science- and Engineering-Related Fields" include nursing, architecture, and mathematics teacher education.

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

Figure 6.13: Among Persons Ages 25 and Over in the Appalachian Region With a Bachelor's Degree or More, Percent Whose Bachelor's Degree Field (First Major) Was Science and Engineering, 2020-2024



Map Title: Among Persons Ages 25 and Over in the Appalachian Region With a Bachelor's Degree or More, Percent Whose Bachelor's Degree Field (First Major) Was Science and Engineering, 2020-2024

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

Among the more than five million adults in Appalachia with a bachelor's degree or more, 31.8 percent held a science or engineering degree (including majors in computers, mathematics, and statistics; biological, agricultural, and environmental sciences; physical and related science; psychology; social sciences and engineering). Yet, in 34 counties, the share of BA/BS holders with a degree in this field matched or exceeded the national average of 36.1 percent – more than one-fourth of which were home to a college or university, including major research universities such as Cornell and Binghamton University. In contrast, in 43 counties in the Appalachian Region, less than one-fifth of adult college graduates had a science and engineering degree – nearly half of which were in the region's rural areas.

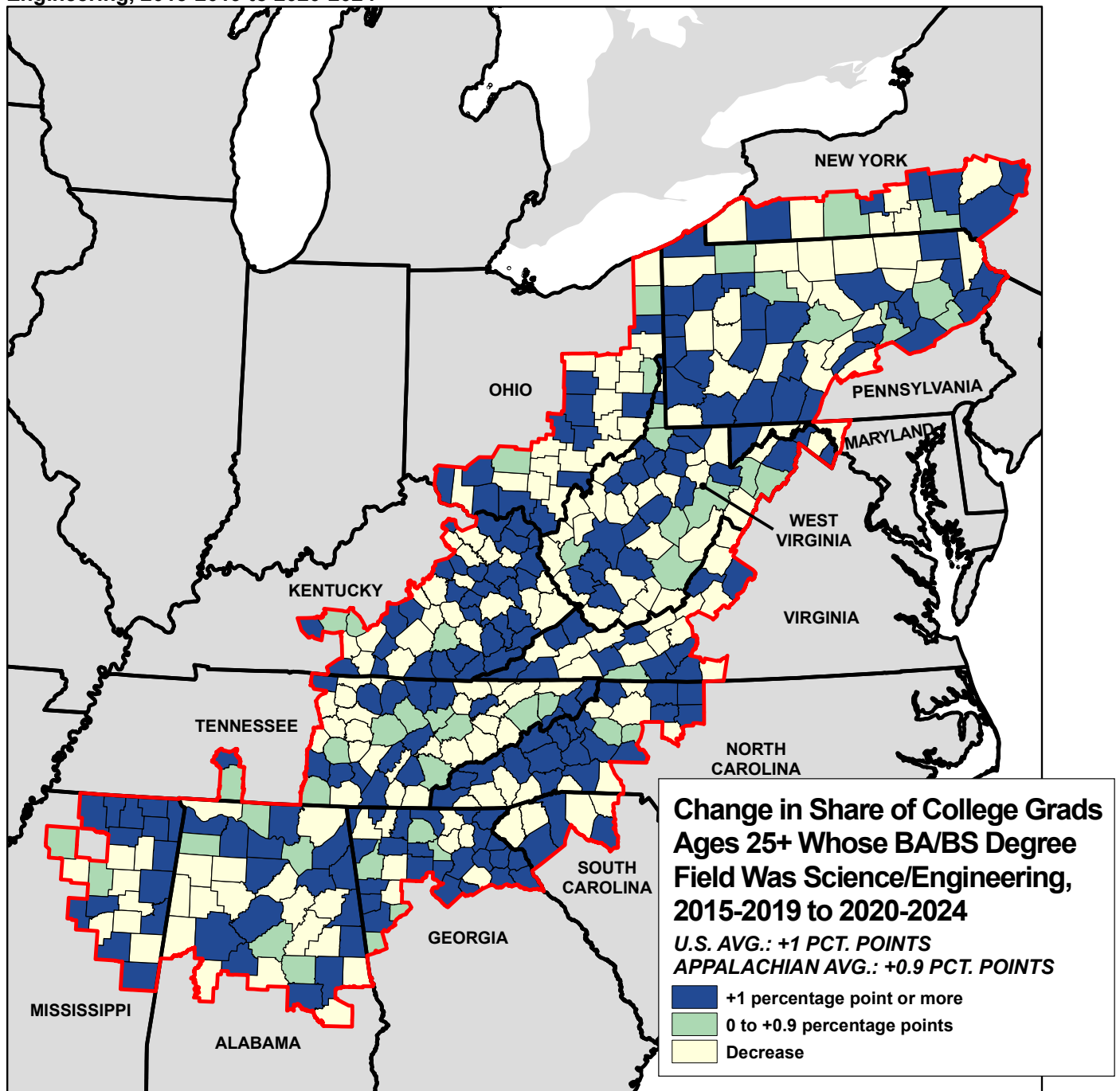
Table 6.8: Percentage Point Change in Bachelor's Degree Field (First Major) for Persons Ages 25 and Over in the Appalachian Region With a Bachelor's Degree or More, 2015-2019 to 2020-2024

Bachelor's Degree Field (First Major)	Percentage Point Change in Share of Population Ages 25 and Over With a Bachelor's Degree or More				
	Science and Engineering	Science- and Engineering-Related Fields	Business	Education	Arts, Humanities, and Other
United States	+ 1.0	+ 0.4	- 0.2	- 1.3	+ 0.2
Appalachian Region	+ 0.9	+ 0.4	- 0.2	- 1.7	+ 0.6
Subregions					
Northern Appalachia	+ 1.0	+ 0.3	0.0	- 1.7	+ 0.4
North Central Appalachia	+ 0.5	+ 0.4	- 0.7	- 1.4	+ 1.1
Central Appalachia	+ 0.5	0.0	+ 0.7	- 3.0	+ 1.9
South Central Appalachia	+ 0.3	+ 0.3	+ 0.1	- 1.5	+ 0.9
Southern Appalachia	+ 1.5	+ 0.6	- 0.8	- 1.7	+ 0.4
County Types					
Large Metro (metro pop. 1 million +)	+ 1.7	+ 0.4	- 0.9	- 1.5	+ 0.2
Small Metro (metro pop. <1 million)	+ 0.7	+ 0.2	- 0.2	- 1.5	+ 0.8
Nonmetro, Adjacent to Large Metro	+ 0.5	+ 0.7	+ 1.0	- 2.2	0.0
Nonmetro, Adjacent to Small Metro	+ 0.6	+ 0.5	+ 0.4	- 2.4	+ 1.0
Rural (nonmetro, not adj. to a metro)	+ 0.1	+ 0.4	+ 0.5	- 2.2	+ 1.2
Alabama	+ 1.2	+ 0.2	- 0.3	- 1.5	+ 0.3
Appalachian Alabama	+ 1.0	+ 0.4	- 0.4	- 1.5	+ 0.4
Non-Appalachian Alabama	+ 1.5	0.0	- 0.2	- 1.5	+ 0.2
Georgia	+ 1.3	+ 0.2	- 0.8	- 1.3	+ 0.7
Appalachian Georgia	+ 2.0	+ 0.8	- 1.3	- 1.7	+ 0.1
Non-Appalachian Georgia	+ 1.1	+ 0.1	- 0.7	- 1.3	+ 0.9
Kentucky	+ 0.6	+ 0.8	- 0.4	- 1.7	+ 0.7
Appalachian Kentucky	+ 0.5	+ 0.8	+ 0.6	- 3.5	+ 1.6
Non-Appalachian Kentucky	+ 0.6	+ 0.8	- 0.5	- 1.4	+ 0.6
Maryland	+ 1.0	0.0	- 0.3	- 0.7	+ 0.1
Appalachian Maryland	0.0	0.0	- 1.0	- 0.6	+ 1.7
Non-Appalachian Maryland	+ 0.9	0.0	- 0.4	- 0.8	+ 0.1
Mississippi	+ 1.3	+ 0.5	+ 0.5	- 1.9	- 0.4
Appalachian Mississippi	+ 0.2	+ 0.4	+ 0.6	- 2.3	+ 1.1
Non-Appalachian Mississippi	+ 1.5	+ 0.5	+ 0.5	- 1.8	- 0.6
New York	+ 1.1	+ 0.5	- 0.4	- 1.0	- 0.2
Appalachian New York	+ 0.4	+ 0.2	+ 0.7	- 1.9	+ 0.5
Non-Appalachian New York	+ 1.1	+ 0.5	- 0.5	- 1.0	- 0.2
North Carolina	+ 0.7	+ 0.5	+ 0.1	- 1.5	+ 0.2
Appalachian North Carolina	+ 1.1	0.0	+ 0.5	- 2.0	+ 0.2
Non-Appalachian North Carolina	+ 0.6	+ 0.6	0.0	- 1.4	+ 0.2
Ohio	+ 0.8	+ 0.8	- 0.7	- 1.4	+ 0.5
Appalachian Ohio	+ 0.7	+ 0.9	0.0	- 2.2	+ 0.5
Non-Appalachian Ohio	+ 0.7	+ 0.9	- 0.7	- 1.3	+ 0.4
Pennsylvania	+ 1.0	+ 0.1	- 0.2	- 1.4	+ 0.4
Appalachian Pennsylvania	+ 1.1	+ 0.2	- 0.1	- 1.6	+ 0.4
Non-Appalachian Pennsylvania	+ 1.0	+ 0.2	- 0.3	- 1.3	+ 0.4
South Carolina	+ 1.3	+ 0.7	- 0.1	- 1.9	- 0.1
Appalachian South Carolina	+ 1.4	+ 0.9	- 1.0	- 2.0	+ 0.8
Non-Appalachian South Carolina	+ 1.3	+ 0.7	+ 0.4	- 2.0	- 0.3
Tennessee	+ 0.3	+ 0.4	0.0	- 1.8	+ 1.1
Appalachian Tennessee	- 0.2	+ 0.1	- 0.1	- 1.4	+ 1.6
Non-Appalachian Tennessee	+ 0.6	+ 0.5	0.0	- 2.0	+ 0.8
Virginia	+ 0.3	+ 0.5	- 0.2	- 0.8	+ 0.3
Appalachian Virginia	- 0.2	+ 0.3	- 0.8	- 0.3	+ 1.2
Non-Appalachian Virginia	+ 0.3	+ 0.5	- 0.2	- 0.8	+ 0.2
West Virginia (entire state)	+ 0.3	+ 0.4	- 0.9	- 1.0	+ 1.2

Note: Examples of "Science- and Engineering-Related Fields" include nursing, architecture, and mathematics teacher education.

Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

Figure 6.14: Among Persons Ages 25 and Over in the Appalachian Region With a Bachelor's Degree or More, Percentage Point Change in the Share Whose Bachelor's Degree Field (First Major) Was Science and Engineering, 2015-2019 to 2020-2024



Map Title: Among Persons Ages 25 and Over in the Appalachian Region with a Bachelor's Degree or More, Percentage Point Change in the Share Whose Bachelor's Degree Field (First Major) Was Science and Engineering, 2015-2019 to 2020-2024

Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

Among adults in the Appalachian Region with a bachelor's degree or more, the share with a degree in the science and engineering field was 0.9 percentage points greater in 2020-2024 than it was in 2015-2019. And in 200 Appalachian counties, the increase matched or exceeded the national increase of 1 percentage point. The share with a degree in science and engineering increased most in Southern Appalachia (1.5 percentage points) and in the Appalachian Region's large metropolitan counties (1.7 percentage points). Yet in 176 of Appalachia's counties, the share actually decreased – more than half of which were small metropolitan counties and those adjacent to them.

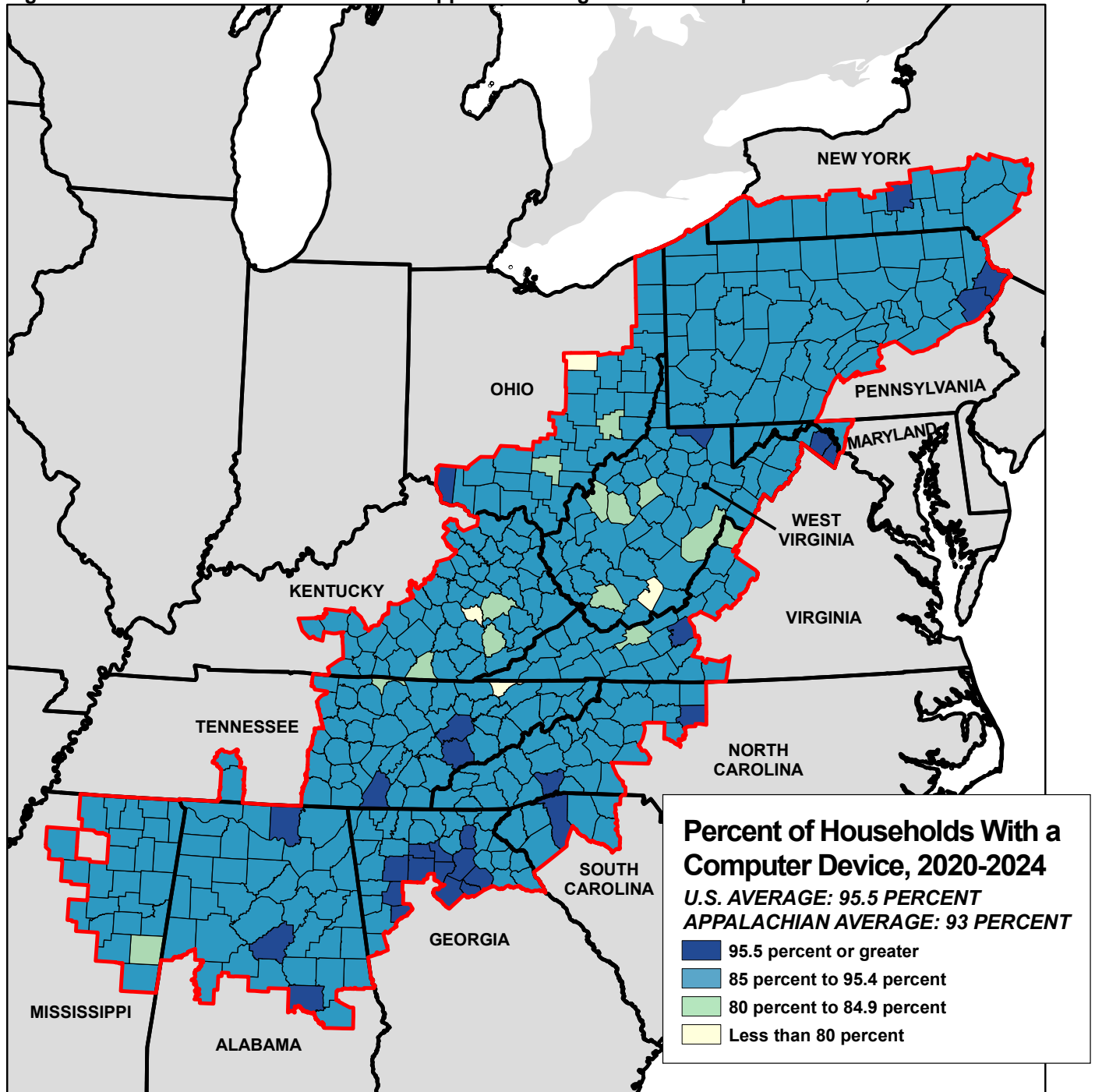
Table 6.9: Households in the Appalachian Region With a Computer Device, By Type of Device, 2020-2024

Device Ownership	Total Households	Percent of Households With One of More Computer Devices					Percent of Households Without a Computer Device
		Total	Desktop or Laptop Computer	Smartphone	Tablet	Other Device	
United States	129,227,496	95.5	80.3	91.0	64.2	2.6	4.5
Appalachian Region	10,576,156	93.0	73.9	87.2	59.6	2.2	7.0
Subregions							
Northern Appalachia	3,354,116	92.2	74.9	85.0	59.3	2.0	7.8
North Central Appalachia	1,010,094	91.6	71.0	84.9	57.8	1.8	8.4
Central Appalachia	738,890	90.2	64.7	83.4	55.4	1.7	9.8
South Central Appalachia	2,157,071	93.1	73.7	87.9	58.8	2.5	6.9
Southern Appalachia	3,315,985	94.7	76.0	90.6	62.0	2.4	5.3
County Types							
Large Metro (metro pop. 1 million +)	2,553,376	95.0	80.2	90.1	64.9	2.4	5.0
Small Metro (metro pop. <1 million)	4,395,150	93.4	74.8	88.1	60.2	2.3	6.6
Nonmetro, Adjacent to Large Metro	946,307	92.2	71.5	85.9	57.5	2.0	7.8
Nonmetro, Adjacent to Small Metro	1,670,330	90.7	68.0	83.7	54.4	1.8	9.3
Rural (nonmetro, not adj. to a metro)	1,010,993	90.1	65.9	83.5	54.2	2.2	9.9
Alabama	1,997,247	93.7	71.7	89.3	58.2	2.1	6.3
Appalachian Alabama	1,287,136	94.0	72.9	89.6	59.4	2.1	6.0
Non-Appalachian Alabama	710,111	93.0	69.5	88.7	56.1	2.1	7.0
Georgia	4,074,366	95.8	80.7	92.1	65.1	2.5	4.2
Appalachian Georgia	1,228,941	96.4	82.3	92.8	67.0	2.6	3.6
Non-Appalachian Georgia	2,845,425	95.6	80.0	91.9	64.2	2.5	4.4
Kentucky	1,814,469	93.6	73.1	88.6	60.5	2.3	6.4
Appalachian Kentucky	460,530	90.5	65.6	84.1	57.0	1.8	9.5
Non-Appalachian Kentucky	1,353,939	94.6	75.7	90.1	61.8	2.5	5.4
Maryland	2,362,928	96.5	85.3	92.0	69.4	3.2	3.5
Appalachian Maryland	99,778	92.7	75.3	85.4	59.0	2.1	7.3
Non-Appalachian Maryland	2,263,150	96.7	85.8	92.3	69.8	3.2	3.3
Mississippi	1,145,431	92.7	67.2	88.5	54.3	2.2	7.3
Appalachian Mississippi	243,164	90.3	62.1	86.3	50.5	1.8	9.7
Non-Appalachian Mississippi	902,267	93.3	68.6	89.2	55.3	2.3	6.7
New York	7,722,646	94.7	79.8	89.4	64.3	2.8	5.3
Appalachian New York	424,591	93.1	76.0	85.2	59.7	2.1	6.9
Non-Appalachian New York	7,298,055	94.8	80.0	89.6	64.6	2.8	5.2
North Carolina	4,282,345	94.9	79.1	90.5	62.6	2.6	5.1
Appalachian North Carolina	839,160	92.9	74.7	87.5	58.8	3.3	7.1
Non-Appalachian North Carolina	3,443,185	95.3	80.2	91.2	63.6	2.5	4.7
Ohio	4,863,191	94.4	77.3	88.9	62.1	2.4	5.6
Appalachian Ohio	803,572	91.1	70.0	84.4	56.9	1.7	8.9
Non-Appalachian Ohio	4,059,619	95.0	78.8	89.8	63.1	2.5	5.0
Pennsylvania	5,274,853	93.8	78.8	87.6	62.8	2.4	6.2
Appalachian Pennsylvania	2,375,588	92.3	75.7	85.2	59.8	2.1	7.7
Non-Appalachian Pennsylvania	2,899,265	94.9	81.3	89.6	65.2	2.6	5.1
South Carolina	2,117,989	94.5	76.1	90.0	62.1	3.5	5.5
Appalachian South Carolina	556,744	94.5	75.4	90.0	62.2	2.5	5.5
Non-Appalachian South Carolina	1,561,245	94.4	76.4	90.0	62.0	3.8	5.6
Tennessee	2,824,277	94.5	75.6	90.3	61.7	2.8	5.5
Appalachian Tennessee	1,230,278	93.3	72.7	88.5	59.2	2.0	6.7
Non-Appalachian Tennessee	1,593,999	95.4	77.8	91.6	63.5	3.4	4.6
Virginia	3,365,732	95.4	82.4	91.1	66.2	2.5	4.6
Appalachian Virginia	298,019	90.4	67.9	83.7	52.1	2.1	9.6
Non-Appalachian Virginia	3,067,713	95.9	83.9	91.8	67.6	2.5	4.1
West Virginia (entire state)	728,655	91.2	70.1	83.9	57.4	1.8	8.8

Note: Device percentages are not mutually exclusive.

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

Figure 6.15: Percent of Households in the Appalachian Region With a Computer Device, 2020-2024



Map Title: Percent of Households in the Appalachian Region With a Computer Device, 2020-2024

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

In 2020-2024, 93 percent of households in the Appalachian Region had one or more computer devices (desktop or laptop, smartphone, tablet, or other device) – 2.5 percentage points below the national average. The share was below 85 percent in 18 of Appalachia’s 423 counties. Among those counties, all were outside of metropolitan areas and nearly two in five were in Central Appalachia. On the other hand, in 29 Appalachian counties the share of households with a computer device matched or exceeded the national average of 95.5 percent. Of these, more than half were in Southern Appalachia and all but four were in metropolitan areas. These data indicate an ongoing “digital divide” between urban and rural areas in Appalachia as well as between the Appalachian Region and the rest of the nation. Even before the COVID-19 pandemic hit, computer devices had become commonly used for such activities as schoolwork, entertainment, online banking, health care access, and socializing – and the pandemic’s effects magnified the importance of such devices during the 2020-2024 period.

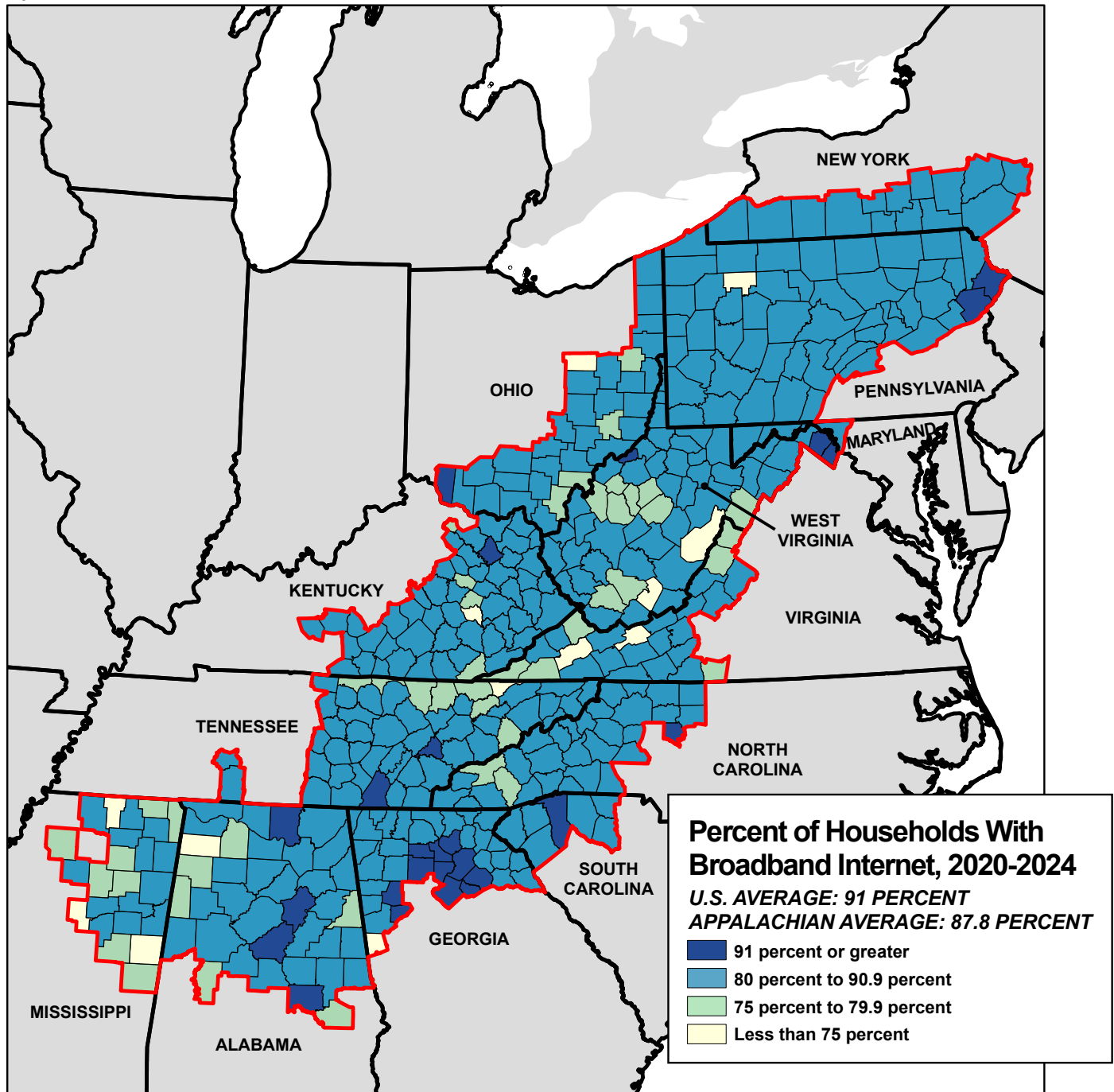
Table 6.10: Households in the Appalachian Region With an Internet Subscription, By Type of Subscription, 2020-2024

Type of Internet Subscription	Total Households	Percent of Households With an Internet Subscription					
		Total	Dial-Up Only	Broadband (High-Speed)			
				Total	Cable, Fiber Optic, or DSL	Cellular	Satellite
United States	129,227,496	91.1	0.1	91.0	75.6	85.2	6.6
Appalachian Region	10,576,156	88.0	0.2	87.8	71.4	80.2	6.5
Subregions							
Northern Appalachia	3,354,116	87.9	0.3	87.7	72.5	79.1	5.2
North Central Appalachia	1,010,094	86.6	0.2	86.3	68.1	77.4	7.4
Central Appalachia	738,890	84.6	0.2	84.4	67.9	74.4	7.0
South Central Appalachia	2,157,071	87.4	0.2	87.3	71.0	79.7	6.5
Southern Appalachia	3,315,985	89.6	0.1	89.5	72.4	83.7	7.6
County Types							
Large Metro (metro pop. 1 million +)	2,553,376	91.2	0.1	91.1	77.6	84.8	5.8
Small Metro (metro pop. <1 million)	4,395,150	88.4	0.2	88.3	72.6	80.8	5.8
Nonmetro, Adjacent to Large Metro	946,307	86.9	0.2	86.7	68.3	78.4	7.4
Nonmetro, Adjacent to Small Metro	1,670,330	85.0	0.3	84.7	64.6	75.6	7.8
Rural (nonmetro, not adj. to a metro)	1,010,993	83.9	0.2	83.7	65.0	75.2	8.7
Alabama	1,997,247	87.7	0.2	87.5	67.9	81.3	8.6
Appalachian Alabama	1,287,136	88.4	0.1	88.4	69.9	81.8	8.0
Non-Appalachian Alabama	710,111	86.3	0.5	85.9	64.4	80.3	9.6
Georgia	4,074,366	91.1	0.1	91.0	76.2	85.6	7.2
Appalachian Georgia	1,228,941	92.5	0.1	92.4	77.7	87.6	7.1
Non-Appalachian Georgia	2,845,425	90.4	0.1	90.3	75.6	84.7	7.2
Kentucky	1,814,469	88.8	0.1	88.6	71.1	82.3	6.8
Appalachian Kentucky	460,530	85.5	0.2	85.3	68.2	76.9	7.1
Non-Appalachian Kentucky	1,353,939	89.9	0.1	89.8	72.1	84.1	6.7
Maryland	2,362,928	92.5	0.1	92.4	79.8	86.6	4.8
Appalachian Maryland	99,778	86.9	0.1	86.8	71.2	79.4	5.4
Non-Appalachian Maryland	2,263,150	92.8	0.1	92.6	80.2	86.9	4.8
Mississippi	1,145,431	84.2	0.1	84.1	61.6	78.1	10.0
Appalachian Mississippi	243,164	82.1	0.1	82.0	58.5	76.5	9.5
Non-Appalachian Mississippi	902,267	84.8	0.1	84.7	62.4	78.6	10.1
New York	7,722,646	91.0	0.1	90.8	77.2	84.5	4.3
Appalachian New York	424,591	88.6	0.2	88.3	73.8	78.3	5.9
Non-Appalachian New York	7,298,055	91.1	0.1	91.0	77.4	84.9	4.2
North Carolina	4,282,345	90.2	0.1	90.1	76.2	84.1	6.1
Appalachian North Carolina	839,160	87.5	0.2	87.3	71.1	80.0	6.7
Non-Appalachian North Carolina	3,443,185	90.9	0.1	90.8	77.4	85.1	6.0
Ohio	4,863,191	90.3	0.2	90.1	75.7	83.5	5.8
Appalachian Ohio	803,572	86.3	0.2	86.1	66.5	77.4	7.3
Non-Appalachian Ohio	4,059,619	91.0	0.1	90.9	77.5	84.7	5.5
Pennsylvania	5,274,853	90.0	0.2	89.7	75.8	82.8	4.5
Appalachian Pennsylvania	2,375,588	88.3	0.3	88.0	73.3	79.6	4.8
Non-Appalachian Pennsylvania	2,899,265	91.3	0.1	91.2	77.8	85.5	4.3
South Carolina	2,117,989	88.9	0.1	88.8	72.8	82.9	7.2
Appalachian South Carolina	556,744	89.3	0.1	89.2	72.4	82.7	7.0
Non-Appalachian South Carolina	1,561,245	88.8	0.1	88.7	73.0	83.0	7.2
Tennessee	2,824,277	89.3	0.1	89.2	73.3	82.9	6.1
Appalachian Tennessee	1,230,278	87.5	0.1	87.4	71.3	79.5	5.3
Non-Appalachian Tennessee	1,593,999	90.7	0.1	90.6	74.8	85.5	6.8
Virginia	3,365,732	91.1	0.1	91.0	75.8	85.6	6.4
Appalachian Virginia	298,019	83.2	0.3	82.9	65.3	73.3	11.0
Non-Appalachian Virginia	3,067,713	91.9	0.1	91.8	76.8	86.8	6.0
West Virginia (entire state)	728,655	86.3	0.3	86.1	69.7	76.3	6.9

Note: Households can have more than one type of Internet subscription at a time. Broadband categories are not mutually exclusive.

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

Figure 6.16: Percent of Households in the Appalachian Region With a Broadband Internet Subscription, 2020-2024



Map Title: Percent of Households in the Appalachian Region With a Broadband Internet Subscription, 2020-2024

Data Source: U.S. Census Bureau, 2020-2024 American Community Survey.

During the 2020-2024 period, the share of Appalachian households with access to broadband internet (including cable, fiber optic, DSL, cellular, or satellite) was 3.2 percentage points lower than the national average of 91 percent. There are also signs of a rural-urban “digital divide” within the Appalachian Region: In 59 Appalachian counties, less than 80 percent of households had broadband internet – more than four in five of these were outside metropolitan areas and nearly forty percent of these were in rural counties. In contrast, all but five of the 26 counties with subscription rates at or above the national average were in metro areas. With high-speed internet access being vital for increased remote interaction during and following the COVID-19 pandemic, these are signs that many communities in Appalachia continue to be at risk of being left behind.

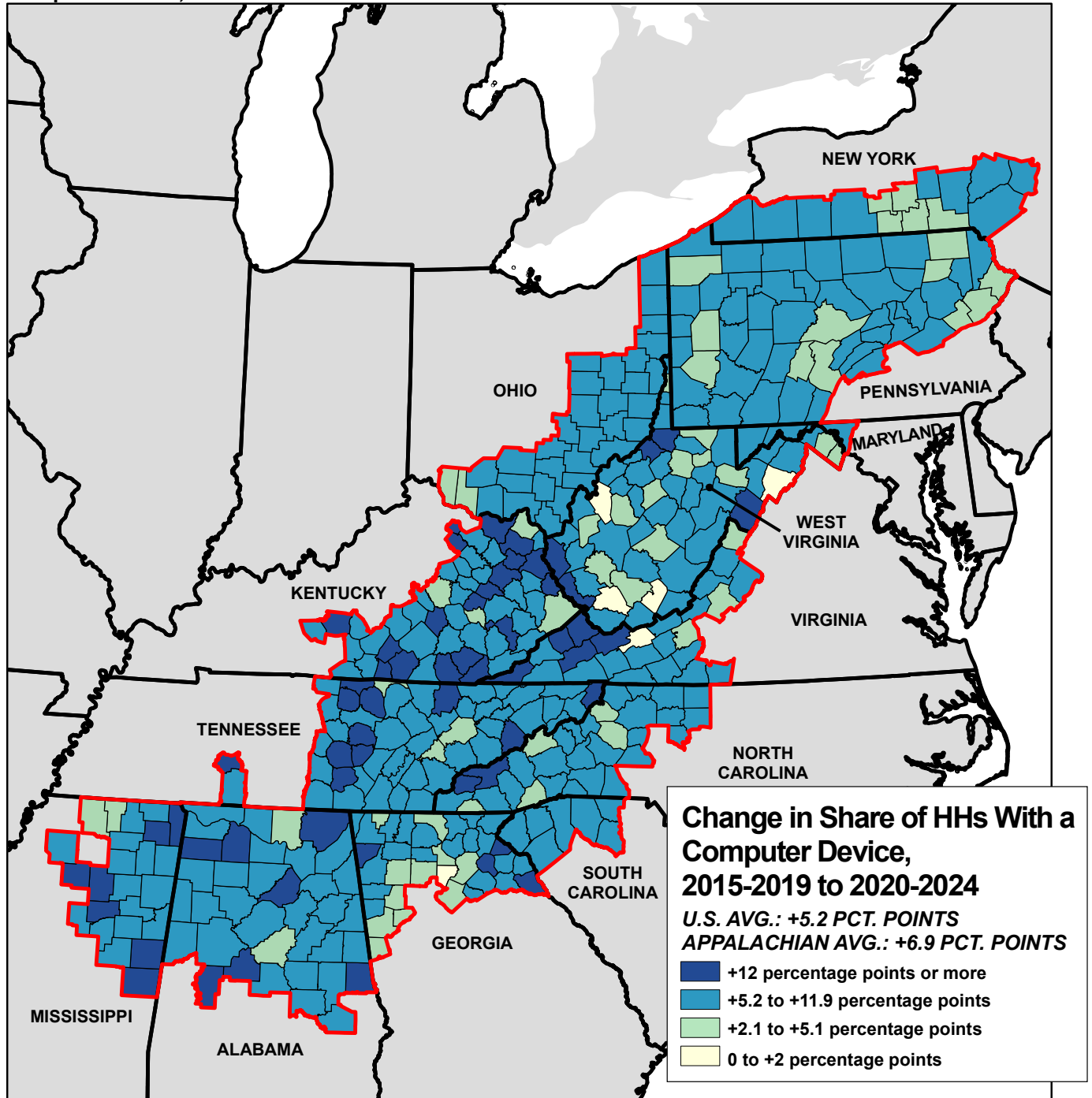
Table 6.11: Percentage Point Change in the Share of Households in the Appalachian Region With a Computer Device, By Type of Device, 2015-2019 to 2020-2024

Device Ownership	Percentage Point Change in Share of Households With One or More Computer Devices				
	Total	Desktop or Laptop Computer	Smartphone	Tablet	Other Device
United States	+ 5.2	+ 2.5	+ 11.1	+ 4.6	- 1.0
Appalachian Region	+ 6.9	+ 2.3	+ 13.7	+ 5.0	- 0.5
Subregions					
Northern Appalachia	+ 6.1	+ 1.2	+ 13.7	+ 5.0	- 0.4
North Central Appalachia	+ 6.6	+ 1.4	+ 14.4	+ 4.9	- 0.7
Central Appalachia	+ 10.4	+ 2.0	+ 18.0	+ 6.5	- 0.6
South Central Appalachia	+ 7.2	+ 2.8	+ 14.1	+ 5.4	0.0
Southern Appalachia	+ 6.7	+ 3.4	+ 12.0	+ 4.4	- 0.8
County Types					
Large Metro (metro pop. 1 million +)	+ 5.2	+ 2.7	+ 11.2	+ 4.5	- 0.6
Small Metro (metro pop. <1 million)	+ 6.4	+ 2.4	+ 13.1	+ 5.0	- 0.6
Nonmetro, Adjacent to Large Metro	+ 7.6	+ 2.0	+ 15.3	+ 5.4	- 0.3
Nonmetro, Adjacent to Small Metro	+ 8.3	+ 1.5	+ 16.3	+ 4.8	- 0.3
Rural (nonmetro, not adj. to a metro)	+ 9.3	+ 1.9	+ 16.9	+ 6.0	+ 0.2
Alabama	+ 8.2	+ 3.5	+ 13.9	+ 5.3	- 0.7
Appalachian Alabama	+ 7.6	+ 3.5	+ 13.1	+ 4.9	- 0.6
Non-Appalachian Alabama	+ 9.0	+ 3.6	+ 15.2	+ 5.9	- 0.9
Georgia	+ 5.6	+ 3.9	+ 10.7	+ 5.0	- 1.0
Appalachian Georgia	+ 5.1	+ 3.1	+ 10.5	+ 3.7	- 1.5
Non-Appalachian Georgia	+ 5.8	+ 4.2	+ 10.9	+ 5.5	- 0.8
Kentucky	+ 7.2	+ 2.2	+ 13.5	+ 4.8	- 0.8
Appalachian Kentucky	+ 10.2	+ 2.0	+ 17.7	+ 7.3	- 0.6
Non-Appalachian Kentucky	+ 6.0	+ 2.3	+ 12.0	+ 4.0	- 0.8
Maryland	+ 4.1	+ 2.5	+ 9.6	+ 4.9	- 1.2
Appalachian Maryland	+ 8.0	+ 4.0	+ 14.8	+ 4.5	- 0.3
Non-Appalachian Maryland	+ 4.0	+ 2.5	+ 9.4	+ 4.9	- 1.3
Mississippi	+ 8.9	+ 4.0	+ 13.1	+ 4.7	- 0.6
Appalachian Mississippi	+ 8.9	+ 4.3	+ 12.6	+ 4.1	+ 0.3
Non-Appalachian Mississippi	+ 8.8	+ 4.0	+ 13.3	+ 4.8	- 0.8
New York	+ 5.1	+ 1.3	+ 11.0	+ 5.1	- 1.5
Appalachian New York	+ 5.8	0.0	+ 15.5	+ 5.8	- 0.2
Non-Appalachian New York	+ 5.0	+ 1.4	+ 10.7	+ 5.1	- 1.6
North Carolina	+ 5.8	+ 3.2	+ 11.8	+ 4.7	- 0.7
Appalachian North Carolina	+ 7.0	+ 3.3	+ 14.4	+ 6.4	+ 0.8
Non-Appalachian North Carolina	+ 5.3	+ 3.2	+ 11.0	+ 4.3	- 1.0
Ohio	+ 5.3	+ 1.8	+ 11.8	+ 3.9	- 0.4
Appalachian Ohio	+ 6.4	+ 0.7	+ 13.4	+ 3.9	- 0.3
Non-Appalachian Ohio	+ 5.0	+ 2.1	+ 11.5	+ 3.8	- 0.5
Pennsylvania	+ 5.8	+ 2.4	+ 12.6	+ 5.4	- 0.5
Appalachian Pennsylvania	+ 6.0	+ 1.4	+ 13.5	+ 5.0	- 0.4
Non-Appalachian Pennsylvania	+ 5.5	+ 3.1	+ 11.8	+ 5.5	- 0.6
South Carolina	+ 6.2	+ 3.2	+ 11.6	+ 5.6	- 1.4
Appalachian South Carolina	+ 6.7	+ 2.7	+ 12.2	+ 4.7	- 0.5
Non-Appalachian South Carolina	+ 5.9	+ 3.4	+ 11.4	+ 5.9	- 1.7
Tennessee	+ 7.4	+ 3.8	+ 13.2	+ 5.6	- 1.0
Appalachian Tennessee	+ 7.8	+ 2.9	+ 14.4	+ 5.4	- 0.5
Non-Appalachian Tennessee	+ 7.1	+ 4.3	+ 12.2	+ 5.5	- 1.4
Virginia	+ 4.3	+ 1.9	+ 9.8	+ 3.9	- 1.2
Appalachian Virginia	+ 8.2	+ 1.6	+ 15.4	+ 1.9	- 0.3
Non-Appalachian Virginia	+ 3.8	+ 1.9	+ 9.2	+ 4.1	- 1.4
West Virginia (entire state)	+ 7.0	+ 1.4	+ 15.0	+ 5.4	- 1.0

Note: Device percentages are not mutually exclusive.

Data Source: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Survey.

Figure 6.17: Percentage Point Change in the Share of Households in the Appalachian Region With a Computer Device, 2015-2019 to 2020-2024



Map Title: Percentage Point Change in the Share of Households in the Appalachian Region With a Computer Device, 2015-2019 to 2020-2024

Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

The share of Appalachian households with at least one computer device (desktop or laptop, smartphone, tablet, or other device) increased by 6.9 percentage points – 1.7 percentage points more than in the U.S. as a whole. More than four in five Appalachian counties had an increase at least that of the national average, and in 60 of Appalachia’s counties the share increased even further, by at least 12 percentage points. Of these 60 counties, all but eight were outside of metropolitan areas, and half were concentrated in Central Appalachia, where the overall increase in device ownership was highest at 10.4 percentage points. Meanwhile, rural Appalachian counties had the highest overall increase in device ownership of the county types, at 9.3 percentage points. Increases in smartphone ownership contribute to much of the increase in device ownership.

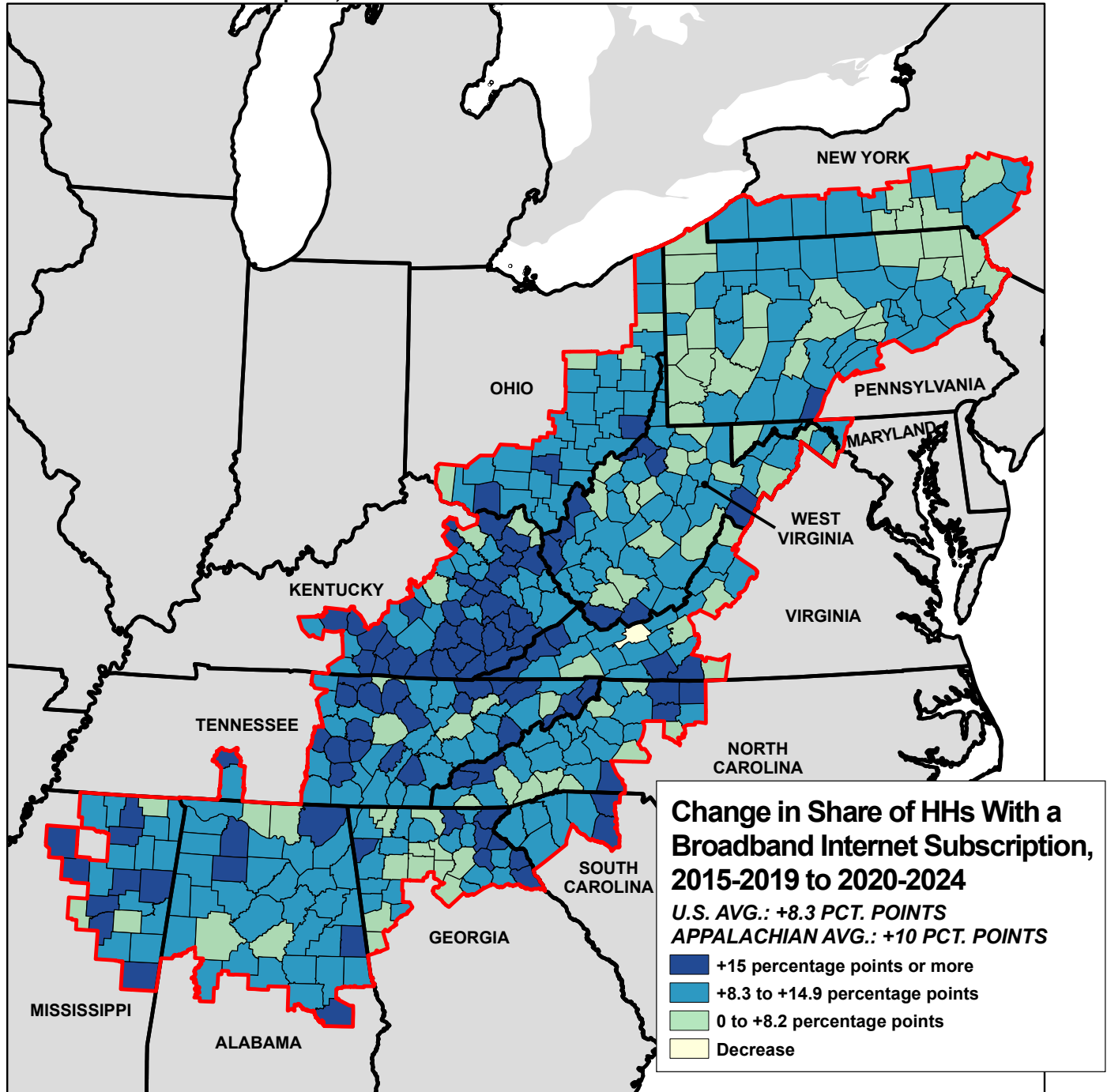
Table 6.12: Percentage Point Change in the Share of Households in the Appalachian Region With an Internet Subscription, 2015-2019 to 2020-2024

Type of Internet Subscription	Percentage Point Change in Share of Households With an Internet Subscription					
	Total	Dial-Up Only	Broadband (High-Speed)			
			Total	Cable, Fiber Optic, or DSL	Cellular	Satellite
United States	+ 8.1	- 0.3	+ 8.3	+ 6.7	+ 18.9	+ 0.3
Appalachian Region	+ 9.7	- 0.3	+ 10.0	+ 8.6	+ 20.6	+ 0.1
Subregions						
Northern Appalachia	+ 8.1	- 0.3	+ 8.6	+ 6.2	+ 19.7	+ 0.2
North Central Appalachia	+ 9.9	- 0.3	+ 10.1	+ 7.2	+ 21.6	+ 0.3
Central Appalachia	+ 14.1	- 0.3	+ 14.4	+ 12.1	+ 24.5	+ 0.3
South Central Appalachia	+ 10.3	- 0.2	+ 10.6	+ 9.9	+ 21.8	+ 0.2
Southern Appalachia	+ 9.9	- 0.2	+ 10.1	+ 9.9	+ 19.2	0.0
County Types						
Large Metro (metro pop. 1 million +)	+ 7.9	- 0.3	+ 8.2	+ 7.0	+ 18.3	+ 0.1
Small Metro (metro pop. <1 million)	+ 9.1	- 0.2	+ 9.4	+ 8.1	+ 20.2	+ 0.1
Nonmetro, Adjacent to Large Metro	+ 11.3	- 0.4	+ 11.7	+ 10.5	+ 22.5	0.0
Nonmetro, Adjacent to Small Metro	+ 11.2	- 0.4	+ 11.6	+ 8.9	+ 21.5	+ 0.5
Rural (nonmetro, not adj. to a metro)	+ 12.6	- 0.3	+ 12.9	+ 11.8	+ 24.1	+ 0.5
Alabama	+ 10.9	- 0.2	+ 11.1	+ 10.7	+ 19.4	+ 1.0
Appalachian Alabama	+ 10.5	- 0.2	+ 10.8	+ 11.0	+ 19.2	+ 0.6
Non-Appalachian Alabama	+ 11.5	- 0.1	+ 11.7	+ 10.3	+ 19.6	+ 1.7
Georgia	+ 9.5	- 0.2	+ 9.7	+ 8.9	+ 19.7	+ 0.2
Appalachian Georgia	+ 8.5	- 0.2	+ 8.7	+ 7.3	+ 19.4	- 0.5
Non-Appalachian Georgia	+ 9.8	- 0.1	+ 10.0	+ 9.5	+ 19.7	+ 0.5
Kentucky	+ 10.0	- 0.3	+ 10.2	+ 8.3	+ 19.8	+ 0.2
Appalachian Kentucky	+ 14.1	- 0.4	+ 14.4	+ 11.3	+ 24.2	+ 0.3
Non-Appalachian Kentucky	+ 8.5	- 0.3	+ 8.7	+ 7.2	+ 18.2	+ 0.2
Maryland	+ 5.8	- 0.2	+ 6.0	+ 4.3	+ 16.0	+ 0.5
Appalachian Maryland	+ 9.2	- 0.4	+ 9.6	+ 9.8	+ 19.0	- 1.0
Non-Appalachian Maryland	+ 5.7	- 0.2	+ 5.8	+ 4.0	+ 15.8	+ 0.6
Mississippi	+ 12.3	- 0.2	+ 12.6	+ 14.0	+ 19.9	+ 0.4
Appalachian Mississippi	+ 12.9	- 0.2	+ 13.1	+ 18.6	+ 20.0	- 0.8
Non-Appalachian Mississippi	+ 12.2	- 0.2	+ 12.4	+ 12.8	+ 19.9	+ 0.7
New York	+ 7.8	- 0.2	+ 8.0	+ 4.6	+ 21.0	+ 0.7
Appalachian New York	+ 9.2	- 0.5	+ 9.5	+ 9.6	+ 22.3	- 1.2
Non-Appalachian New York	+ 7.7	- 0.2	+ 7.9	+ 4.3	+ 20.9	+ 0.8
North Carolina	+ 9.1	- 0.2	+ 9.4	+ 8.4	+ 20.3	+ 0.3
Appalachian North Carolina	+ 10.3	- 0.2	+ 10.6	+ 9.2	+ 22.6	+ 0.3
Non-Appalachian North Carolina	+ 8.8	- 0.2	+ 9.0	+ 8.0	+ 19.6	+ 0.3
Ohio	+ 7.9	- 0.2	+ 8.1	+ 7.0	+ 19.0	+ 0.1
Appalachian Ohio	+ 9.6	- 0.4	+ 10.0	+ 7.2	+ 21.5	+ 0.3
Non-Appalachian Ohio	+ 7.4	- 0.3	+ 7.7	+ 6.9	+ 18.4	+ 0.1
Pennsylvania	+ 7.9	- 0.3	+ 8.2	+ 5.1	+ 19.0	+ 0.6
Appalachian Pennsylvania	+ 7.8	- 0.4	+ 8.2	+ 5.3	+ 18.8	+ 0.4
Non-Appalachian Pennsylvania	+ 7.9	- 0.3	+ 8.2	+ 4.8	+ 19.1	+ 0.8
South Carolina	+ 10.4	- 0.2	+ 10.6	+ 9.5	+ 20.1	+ 0.5
Appalachian South Carolina	+ 9.9	- 0.2	+ 10.1	+ 8.1	+ 18.5	+ 0.2
Non-Appalachian South Carolina	+ 10.6	- 0.2	+ 10.8	+ 10.0	+ 20.7	+ 0.5
Tennessee	+ 10.6	- 0.2	+ 10.8	+ 11.1	+ 19.9	- 0.4
Appalachian Tennessee	+ 10.9	- 0.2	+ 11.2	+ 10.9	+ 21.9	- 0.5
Non-Appalachian Tennessee	+ 10.4	- 0.2	+ 10.5	+ 11.1	+ 18.1	- 0.2
Virginia	+ 6.8	- 0.3	+ 7.1	+ 5.8	+ 16.5	+ 0.6
Appalachian Virginia	+ 10.4	- 0.3	+ 10.8	+ 10.9	+ 20.6	+ 2.8
Non-Appalachian Virginia	+ 6.4	- 0.2	+ 6.6	+ 5.2	+ 15.9	+ 0.4
West Virginia (entire state)	+ 9.9	- 0.1	+ 10.1	+ 7.0	+ 22.2	+ 0.7

Note: Households can have more than one type of Internet subscription at a time. Broadband categories are not mutually exclusive.

Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

Figure 6.18: Percentage Point Change in the Share of Households in the Appalachian Region With a Broadband Internet Subscription, 2015-2019 to 2020-2024



Map Title: Percentage Point Change in the Share of Households in the Appalachian Region With a Broadband Internet Subscription, 2015-2019 to 2020-2024

Data Sources: U.S. Census Bureau, 2015-2019 and 2020-2024 American Community Surveys.

In the Appalachian Region, the share of households with broadband internet access (including cable, fiber optic, DSL, cellular, or satellite) increased by 10 percentage points between 2015-2019 and 2020-2024, 1.7 percentage points higher than the national rate of increase. And this increase was even more pronounced in some areas – in 100 of the Appalachian Region’s 423 counties the share increased by at least 15 percentage points – with clusters throughout the Central, South Central, and Southern portions of Appalachia. Of these 100 counties with the highest rate of increase, 85 were outside of metropolitan areas and 41 were in the region’s most rural areas. These increases show progress toward bringing the Appalachian Region’s rural communities closer to their urban neighbors when it comes to digital resources.

TRENDS IN EDUCATION, DEVICE OWNERSHIP, AND INTERNET ACCESS

- Since the 2015-2019 period, the share of Appalachian adults ages 25 and over with at least a high school diploma has risen 2.3 percentage points, to 89.5 percent in 2020-2024, a larger increase than for the U.S. overall (see Tables 6.1 and 6.4). Within the Appalachian Region, the prevalence of adults ages 25 and over with at least a high school diploma increased most in Central Appalachia and in the region's rural counties. With these changes, the share of adults who have at least a high school education as of 2020-2024 has reached 83.7 percent in Central Appalachia and 85.3 percent in the region's rural areas. The Appalachian sections of Kentucky and Virginia had the largest increases among the states – more than four percentage points in both states.
- The share of Appalachian adults ages 25 and over with an associate's degree as their highest level of education increased by 0.6 percentage points, to 9.5 percent, between 2015-2019 and 2020-2024. Central Appalachia and the Appalachian sections of Kentucky, Mississippi, Ohio, Virginia, and all of West Virginia had the greatest increases, of at least one percentage point. Meanwhile, the share of adults 25 and older in the Appalachian Region who had at least a bachelor's degree increased by 3.3 percentage points, with more than one in four Appalachian adults having a bachelor's degree or more in 2020-2024 (see Tables 6.1 and 6.4). The share of degree holders with at least a bachelor's rose most in Southern and South Central Appalachia as well as in metropolitan areas throughout the region. The Appalachian portions of Georgia and the Carolinas, and all of West Virginia had notable increases in the share of adults with at least a bachelor's degree with increases in bachelor's degree attainment that exceeded the regional average.
- The group with the most notable changes in educational attainment since 2015-2019 has been adults ages 65 and over. The share of older adults in Appalachia with at least a high school diploma has risen 5.2 percentage points; the share with at least a bachelor's degree has increased 3.6 percentage points (see Table 6.6). Possible factors fueling this increase may include the arrival of well-educated older adults moving into the Appalachian Region upon retirement and shifts in this rapidly growing cohort as younger baby boomers age into this group.
- Even as Appalachia has seen improvement to educational attainment since 2015-2019, the share of adults in all age groups who hold a bachelor's degree or higher was still lower than in the U.S. as a whole in 2020-2024 (see Tables 6.1 through 6.3). In Central Appalachia, the share of adults 25 and older with a bachelor's degree or more (16.8 percent) was less than half the national average (35.7 percent), and just 14.7 percent of Central Appalachia's adults ages 65 and older had at least a bachelor's degree.
- Among adults in Appalachia with a bachelor's degree or more, the share with a degree in the science and engineering field was 31.8 percent in 2020-2024 – 0.9 percentage points higher than it was in 2015-2019 – and comparable to national increase (see Tables 6.7 and 6.8). While the share rose in most parts of the Appalachian Region, the increase was especially noticeable in Southern Appalachia, counties in large metropolitan areas, and Appalachian Georgia.
- While the Appalachian Region still lags behind the U.S. in device ownership and internet access – and the rural-urban “digital divide” persists in the Appalachian Region – the share of households with at least one computer device and with broadband internet access increased between 2015-2019 and 2020-2024. The share of households in Appalachia with at least one computer device rose 6.9 percent since 2015-2019, while the share with broadband internet access increased by 10 percentage points (see Tables 6.11 and 6.12). These increases were above the national averages. Programs at the federal and state level to narrow persistent gaps in digital resources may have contributed to the rise in device ownership and internet access throughout the region.