JOINT CENTER
FOR POLITICAL AND ECONOMIC STUDIES

AFFORDABILITY & AVAILABILITY: EXPANDING BROADBAND IN THE BLACK RURAL SOUTH

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Executive Summary

This report details the potential for broadband to increase economic, educational, and health care opportunities in the Black Rural South—152 rural counties with populations that are at least 35 percent Black. Key findings show:
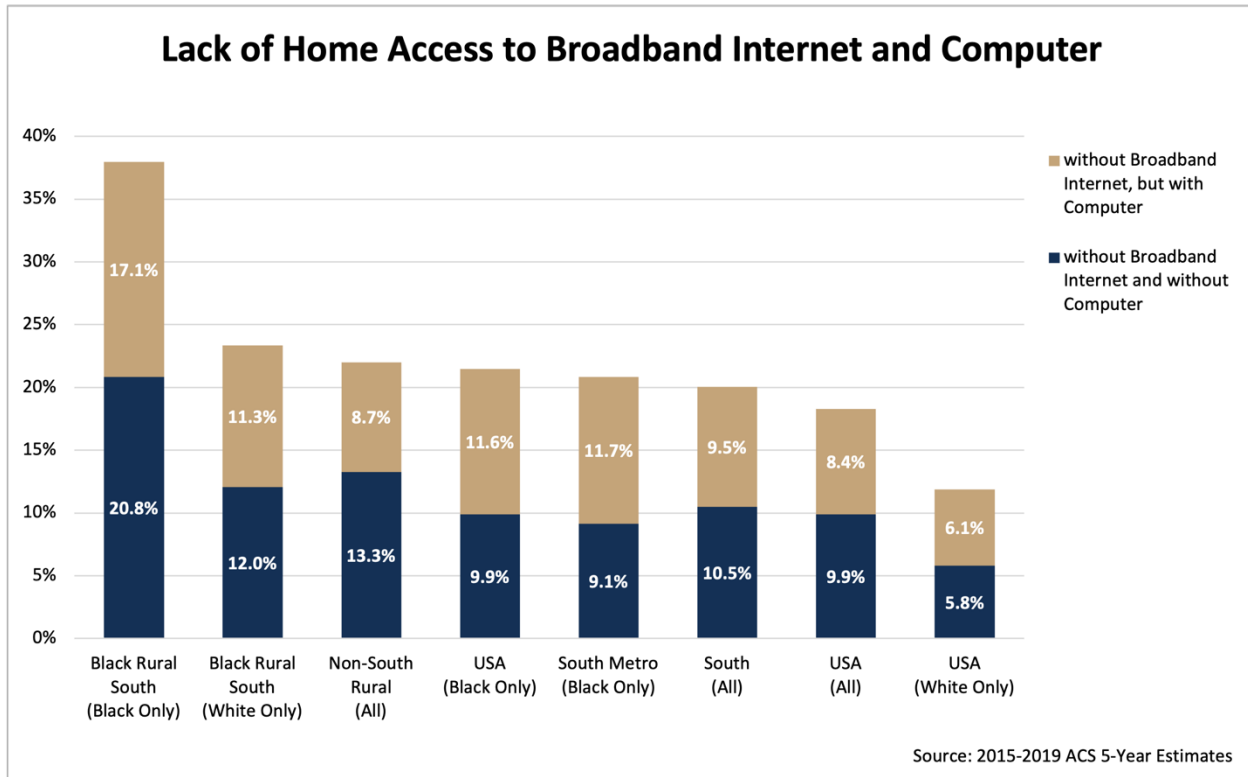
- **In the Black Rural South, 38% of African Americans report that they lack home internet access.** By comparison, 23% of White Americans in the Black Rural South, 22% of African Americans nationwide, 22% of rural residents outside of the South, and 18% of all Americans nationwide report that they lack home internet access.

- **Expanding broadband can help improve employment, incomes, education, and health care in the Black Rural South.** Currently, 49% of Black children in the Black Rural South live in poverty compared to 18% of White children in the region and 19% of all children nationwide. During the past 10 years, many states with Black Rural South counties have experienced high rates of rural hospital closures. Expanding broadband in the Black Rural South can increase incomes, employment, workforce skills, and educational and health care opportunities, and help Black farmers build modern agricultural businesses.

- **Many households in the Black Rural South lack high-speed broadband because it is either unavailable or they lack the financial means to purchase service.** According to FCC data, in the Black Rural South, 25.8% of residents lack the option to subscribe to high-speed broadband (internet at speeds of 25/3 Mbps or higher) compared to 8.8% of non-southern rural residents and 3.8% of all Americans. Microsoft data suggest an even larger percentage of Black Rural South households do not use broadband at speeds of at least 25/3 Mbps. Even where broadband is available in the Black Rural South, many find it unaffordable. Pew estimates that U.S. households with incomes less than $35,000 are much less likely to have broadband, and they account for 28.6% of all households nationwide but 60.8% of Black households in the Black Rural South.

- **To address these challenges, any national broadband strategy should ensure equitable outcomes for the Black Rural South.** Solutions include: 1) establishing a permanent and meaningful broadband benefit program; 2) requiring broadband providers that receive Universal Service Funds to provide low-income households and high-cost-area consumers with an affordable option; 3) a federal build-out of broadband infrastructure in the Black Rural South; 4) recovery funds to expand broadband in the Black Rural South; 5) a taskforce and rules to prevent digital redlining; 6) prioritizing funding for broadband projects developed by HBCUs; 7) investing in research to understand challenges and constantly improve broadband access; 8) updating the federal definition of high-speed broadband; 9) lifting state prohibitions on municipal broadband; and 10) increasing federal coordination and focus on the Black Rural South.

Introduction

Access to broadband is a problem in both metropolitan and rural areas, but efforts to close the digital divide often overlook the Black Rural South. Too often, national broadband conversations conflate rural with "White" and point to affordability as the reason for racial disparities in broadband adoption in metropolitan areas. The discussions rarely examine the unique plight of Black residents of rural communities.[1]

The Black Rural South consists of U.S. counties designated as "rural" by the U.S. Department of Agriculture and with populations that are at least 35 percent African American.[2] The 152 counties that meet this definition are spread across 10 states (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia) and are home to approximately 3.2 million residents. Black people collectively make up 49.2 percent of the region's population, and narrowly edge out White people as the largest racial group.[3] By comparison, African Americans account for nearly 13 percent of the U.S. population and 8 percent of the total U.S. rural population.[4]

The barriers to broadband faced by African Americans in the Black Rural South are significant and deserve attention. Across the United States, approximately 18 percent of all Americans report lacking home access to the internet. Outside the South, 22 percent of rural residents lack home internet access, as do 22 percent of African Americans nationwide and 23 percent of White Americans who live in the Black Rural South. In contrast, 38 percent of African Americans in the Black Rural South lack broadband access.[5]

Lack of Home Access to Broadband Internet and Computer

Category	without Broadband Internet, but with Computer	without Broadband Internet and without Computer
Black Rural South (Black Only)	17.1%	20.8%
Black Rural South (White Only)	11.3%	12.0%
Non-South Rural (All)	8.7%	13.3%
USA (Black Only)	11.6%	9.9%
South Metro (Black Only)	11.7%	9.1%
South (All)	9.5%	10.5%
USA (All)	8.4%	9.9%
USA (White Only)	6.1%	5.8%

Source: 2015-2019 ACS 5-Year Estimates

Note: Broadband includes high-speed internet services such as cable, fiber optic, DSL service, or cellular data, but excludes dial-up internet (which composes less than 0.1 percent of services) and satellite.[6]

The lack of broadband infrastructure magnifies the structural racism that African American families experience in the Black Rural South. Broadband is essential to education, job growth, economic prosperity, health care, and civic engagement.[7] Systemic policy changes must address racial disparities, digital inequality, and broadband connectivity. New and inclusive federal solutions must make high-speed broadband affordable and result in the build-out of high speed, quality broadband infrastructure in the Black Rural South.[8] If as the White House has stated, the country must "build back better," the Black Rural South should be a priority.

This report details the opportunities broadband could create in the Black Rural South, the current barriers to broadband there, and policy recommendations to expand high-speed, quality broadband in the region.

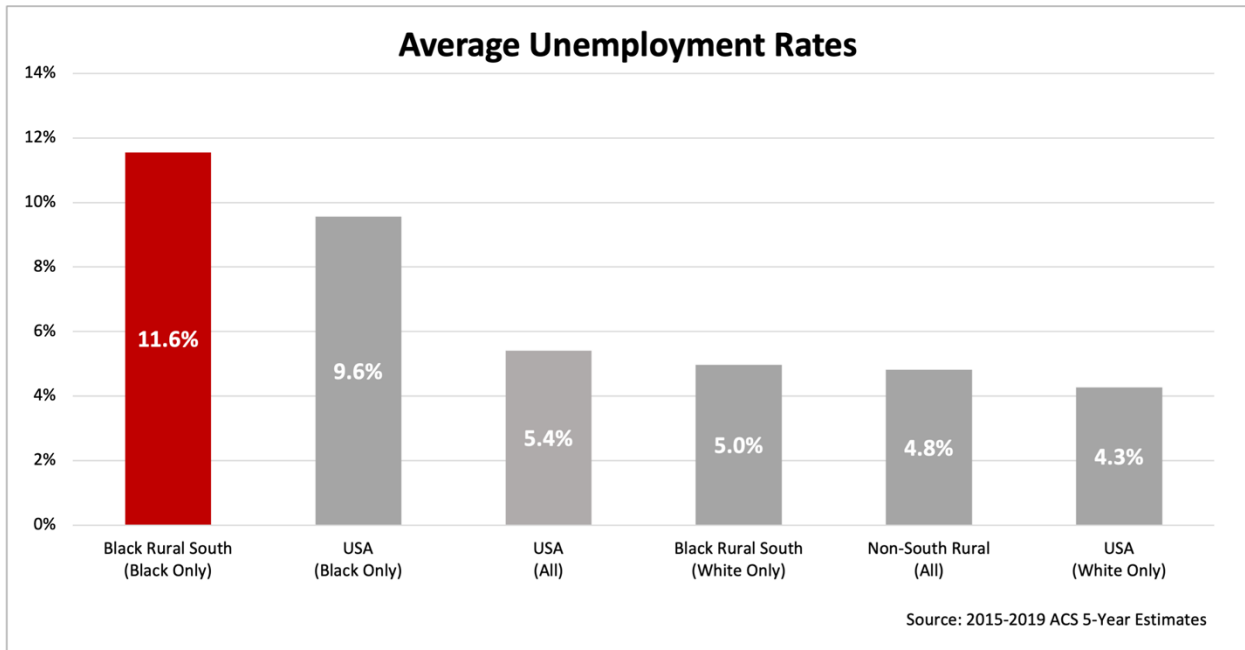# The Opportunities Broadband Would Provide in the Black Rural South

Cotton grown by enslaved Black people in the Black Rural South allowed the United States to quickly become the world's second economic superpower as cotton represented more than one-half of U.S. exports during the first six decades of the 1800s (and was the leading export until 1937).[9] The unpaid labor of Black people in the Black Rural South not only allowed the United States to displace India and China as dominant global cotton markets, but it also ushered in industries in other regions that were foundational to U.S. dominance in the global economy (e.g., banks, insurance companies, textiles, ports, shipping lines).[10]

The adverse effects of slavery, sharecropping, Jim Crow, and other strategies to maintain a low-cost labor pool persist in the Black Rural South, particularly among the descendants of enslaved persons. New barriers to jobs and economic opportunity, the lack of essential services such as health care and clean water, and the high racial polarization in voting patterns all contribute to the unique challenges of the Black Rural South.

> *The adverse effects of slavery, sharecropping, Jim Crow, and other strategies to maintain a low-cost labor pool persist in the Black Rural South.*

Opportunities to Increase Earnings and Job Growth

Unemployment, labor force participation, income, and child poverty rates are worse in the Black Rural South than in most other parts of the United States.[11] Significant racial disparities also persist. Fully 49 percent of Black children live in poverty in the Black Rural South compared to 18 percent of White children, and Black unemployment rates in the Black Rural South are more than double the national White unemployment rate.[12]

Average Unemployment Rates

Category	Rate
Black Rural South (Black Only)	11.6%
USA (Black Only)	9.6%
USA (All)	5.4%
Black Rural South (White Only)	5.0%
Non-South Rural (All)	4.8%
USA (White Only)	4.3%

Source: 2015-2019 ACS 5-Year Estimates

Note: Average non-seasonally adjusted unemployment rates from 2015-19.

Greater broadband access and adoption in the Black Rural South could help increase earnings and reduce unemployment. Research shows that expanding access to broadband provides larger employment gains in rural areas than in metro areas, and moving from no availability to full availability boosts employment in rural areas by 2.2 percentage points.[13] Research by Deloitte finds a strong correlation between broadband availability, jobs, and growth in the gross domestic product.[14] Other research shows that an internet subsidy program can increase average earnings of low-income families by 5.3 percent and reduce the probability of unemployment.[15]

While most areas in the United States enjoyed job growth in the first two decades of the 21st century, the Black Rural South lost jobs, and these trends are expected to continue absent policy interventions.[16] The Joint Center's analysis of county-level data projected 9 percent net job loss for the Black Rural South between 2017 and 2030. By comparison, distressed rural areas nationwide could, on average, experience 3 percent net job loss. Resilient rural areas[17] could experience net job growth of 1 percent, and various types of metro areas could experience net job growth of 6-17 percent.[18]

Policies that expand broadband access and adoption can help increase job growth in the Black Rural South. Various studies indicate that access to broadband increases job growth rates,[19] and that 80 new jobs are developed for every 1,000 new broadband users.[20] Broadband can also support people working remotely, slow outmigration, and encourage talented people and growing businesses to stay in the Black Rural South.[21]

Access to broadband and digital devices can also help workers in the Black Rural South upskill through online training programs and help residents search and apply for quality jobs. Because of the technological transformation of jobs, entry-level workers need digital readiness skills (both the capacity and cognitive skills to navigate technology) now more than ever.

The National Skills Coalition finds that Black workers make up 12 percent of overall workers but 15 percent of those with no digital skills and 21 percent of those with limited skills.[22] The coalition emphasizes that workers need high-quality programs, services, and devices, such as tablets, laptops, or desktop computers to help them build digital skills in the context of their education and career goals.[23]

Online training can facilitate skill-building that leads to advances in earnings and careers, and lack of digital readiness can impede the economic mobility and financial security of families.[24]

Black Farmers and Broadband

Today, there are 45,508 Black farmers.[25] For far too long, Black farmers have struggled for fairness and equity in access to information, land ownership, funding by banks, and federal resources.[26]

Broadband is a necessity for Black farmers to access data and government funding and to operate precision agricultural equipment that maximizes harvests and preserves resources. High-speed, affordable, quality broadband can cut costs for farmers[27] and create "more efficient, economical, and environmentally responsible agriculture operations."[28]

Agriculture accounts for 6 percent of employment in the Black Rural South,[29] and internet connectivity can help Black farmers develop modern agricultural businesses that succeed now and into the future.
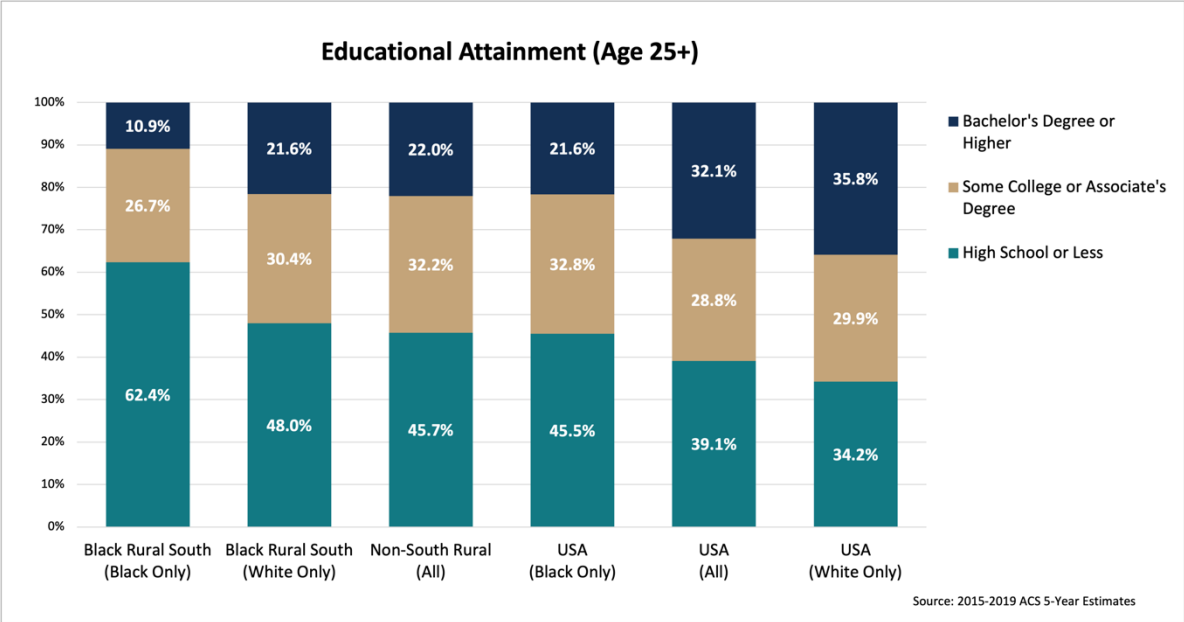
Data on broadband connections from the Federal Communications Commission (FCC) and farming data from the U.S. Department of Agriculture's Census of Agriculture suggests that internet connectivity enables farmers to obtain the highest prices for their crops and livestock and negotiate with suppliers for better prices. To compete in the national and international markets, Black farmers will need access to emerging technology that relies on broadband.

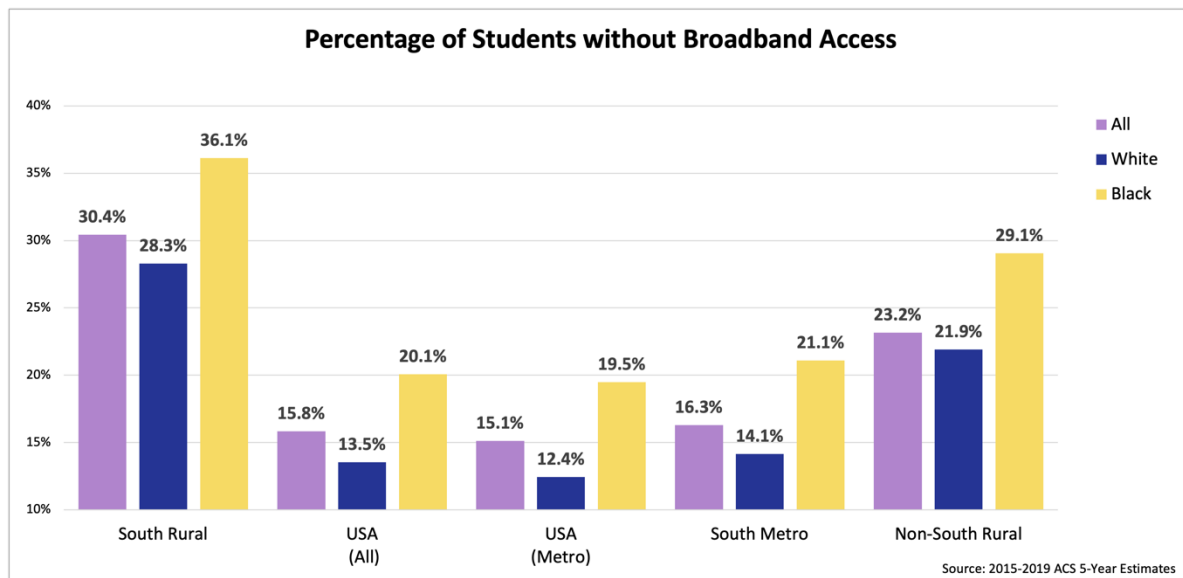## Opportunities to Increase Educational Attainment

Schools in the Black Rural South face a host of challenges—including teacher retention, an achievement gap, funding problems, and a lack of broadband—that limit educational opportunities. [30]

In the Black Rural South, more than 60 percent of African Americans aged 25 or older only have a high school diploma or less, compared to approximately 46 percent of African Americans nationwide. About half as many (11 percent) African Americans aged 25 or older in the Black Rural South have college degrees as African Americans nationally (21 percent).

Educational Attainment (Age 25+)

	Bachelor's Degree or Higher	Some College or Associate's Degree	High School or Less
Black Rural South (Black Only)	10.9%	26.7%	62.4%
Black Rural South (White Only)	21.6%	30.4%	48.0%
Non-South Rural (All)	22.0%	32.2%	45.7%
USA (Black Only)	21.6%	32.8%	45.5%
USA (All)	32.1%	28.8%	39.1%
USA (White Only)	35.8%	29.9%	34.2%

Source: 2015-2019 ACS 5-Year Estimates

Note: Distribution of educational attainment averaged over 2015-19.

Expanding home broadband access is one component in addressing these issues. Lack of home high-speed broadband prevents many Black Rural South students from completing assignments.[31] Research suggests that students of color and students in rural communities are disproportionately affected by the digital divide.[32] Black students throughout the entire rural South (including the Black Rural South) are among those least likely to have broadband. Given the economic constraints of COVID-19, many more students may be left offline.
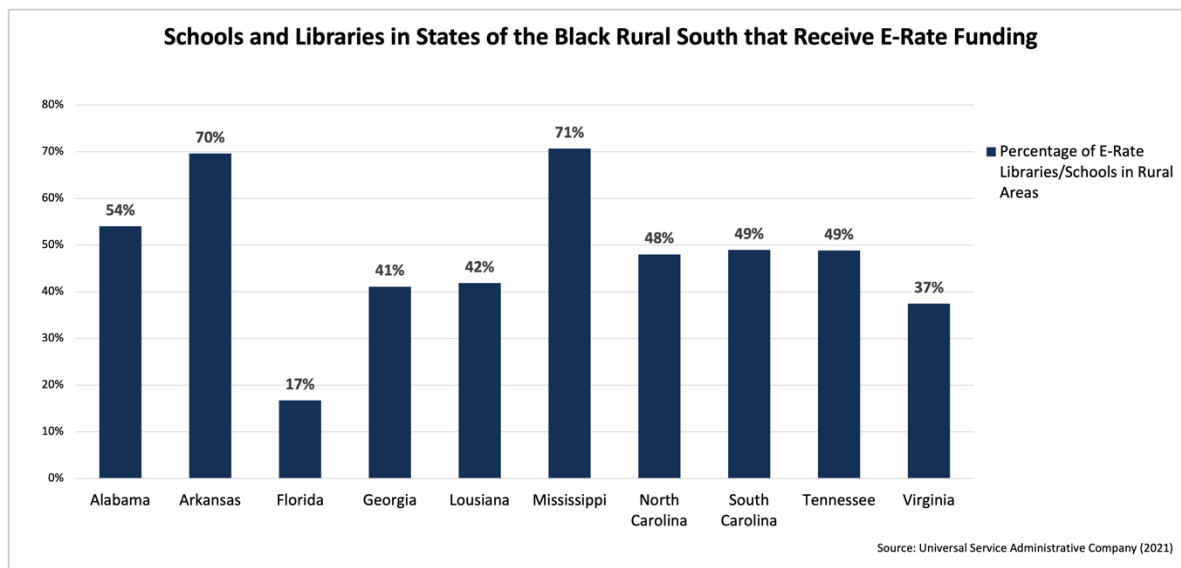
Percentage of Students without Broadband Access

Legend: ■ All ■ White ■ Black

Category	All	White	Black
South Rural	30.4%	28.3%	36.1%
USA (All)	15.8%	13.5%	20.1%
USA (Metro)	15.1%	12.4%	19.5%
South Metro	16.3%	14.1%	21.1%
Non-South Rural	23.2%	21.9%	29.1%

Source: 2015-2019 ACS 5-Year Estimates

Note: "Students" are defined as those living in households who were aged 6-18 and who were reported as having attended school in the past three months. This graph reflects micro data, which means that the county code was omitted by the ACS to preserve privacy. Counties of the Black Rural South cannot be specifically identified because of the lack of this county code data.

Without broadband, many students are cut off from specialized faculty and more customized, competency-based, and self-paced online learning. The "homework gap"—children who lack the home internet connectivity they need to complete schoolwork at home[33]—was particularly pronounced during the COVID pandemic.[34] In spring 2020, when schools were forced to close because of the pandemic, 74 percent of the 100 largest school districts chose remote learning as their only instructional model, affecting more than 9 million students.[35] Nearly one-half (49 percent) of all districts reopened with remote learning.[36] However, students without broadband—particularly those from lower-income households—could not participate in remote learning or complete their homework.

Pew research suggests that the homework gap is more pronounced for Black, Hispanic, and lower-income households across the nation. For example, 25 percent of Black teens have stated they cannot do homework assignments due to lack of reliable access to a computer or internet connectivity. This compares with 13 percent of White teens and 17 percent of Hispanic teens.[37] Pew data also indicate that 35 percent of teens say they often or sometimes must do their homework on their cell phone, and 12 percent say they often or sometimes use public wi-fi in the parking lots outside their schools, libraries, or at a business.[38] These are inadequate learning environments for students who need the most support.

The shortcomings of the FCC's E-Rate program also likely contribute to the challenges students face in the Black Rural South. The E-Rate program provides discounts for internet access to schools and libraries, with larger discounts for schools with more students eligible for free and reduced lunch.[39] An average of 42 percent of rural schools and libraries receive E-Rate funding in states with Black Rural South counties.[40]

Schools and Libraries in States of the Black Rural South that Receive E-Rate Funding

Source: Universal Service Administrative Company (2021)

E-Rate, however, has several limitations. The program is traditionally limited to broadband services provided at the school or library rather than home learning.[41] Many eligible schools and libraries miss out on E-Rate funding because the application process is overly long, exhaustive, and complicated; the program's rules periodically change; and there are numerous application deadlines to track.[42] Rural schools do not always apply for the proper equipment to enhance their digital capabilities. Also, E-Rate funding is not available to postsecondary institutions, such as community colleges and Historically Black Colleges and Universities (HBCUs).[43] New America found that 19 percent of community college students enrolled in spring 2020 did not enroll in fall 2020 because they did not have the technology or internet access to take classes online.[44]

Innovative systems and wireless internet connections can alleviate immediate inequality in access to broadband and facilitate online learning and remote training in the Black Rural South. Nicol Turner Lee suggests that parking a wi-fi enabled school bus in communities where underserved students live can accelerate access to broadband for students and families, especially during the pandemic.[45] However, the National Rural Education Association has recognized that "schools that provide wi-fi hotspots that use mobile data

connections...are often slower and less reliable than wired home internet, [and it] is not a sustainable solution."[46]

Some schools are investing in building cell towers to broadcast internet services to neighborhoods where low-income students live. Cellular internet service from a school-run cell tower can be a targeted, long-term solution to help families that need broadband.[47]
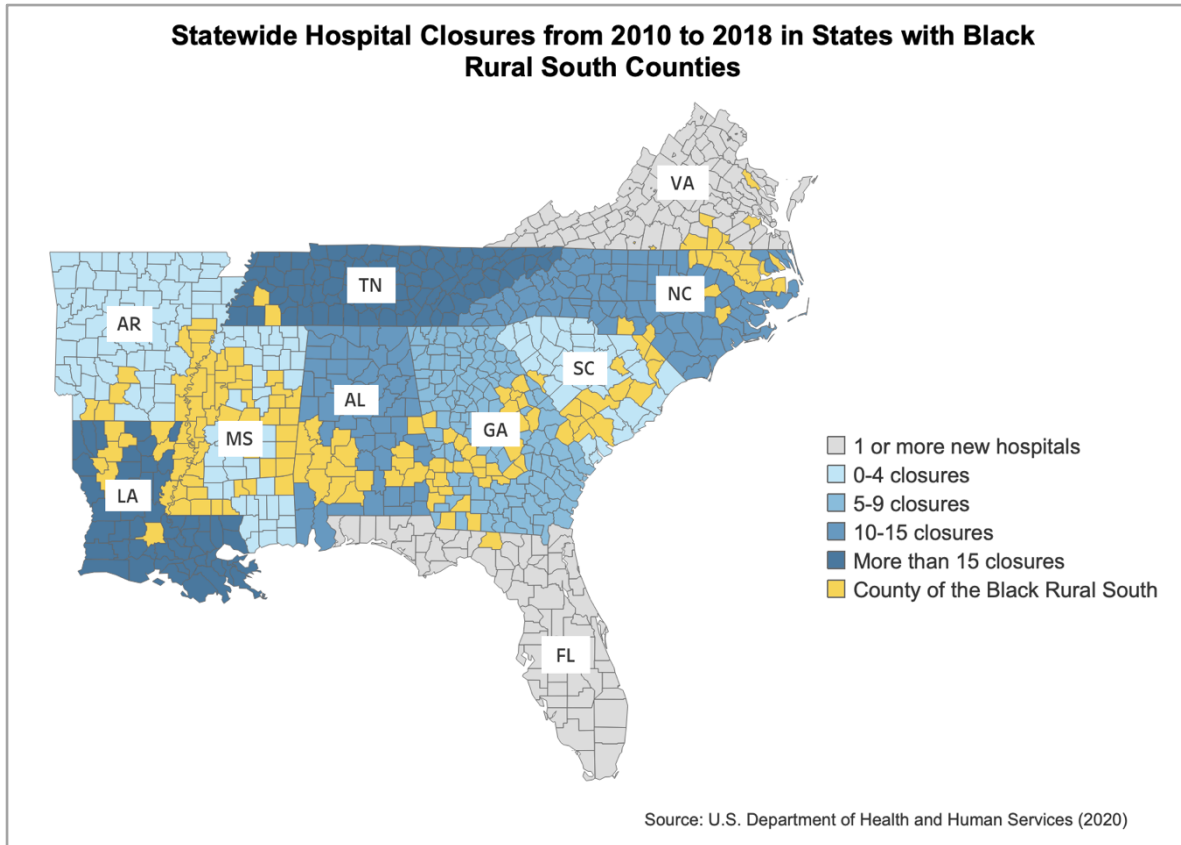
While education leaders should use innovative tactics to expand internet to as many people as possible immediately, fully addressing the challenge requires federal investments that expand the availability and affordability of high-speed, quality home broadband to Black communities in the Black Rural South.

Cellular internet service from a school-run cell tower can be a targeted, long-term solution to help families that need broadband.

Opportunities to Improve Health

Expanding broadband in the Black Rural South is also an essential component of increasing access to health care.[48] Many counties in the Black Rural South are largely underserved in terms of health care.[49] They lack physical access to hospitals or clinics, and many existing rural locations are closing.[50] For example, from 2010 to 2018, many states that have Black Rural South counties experienced some of the highest number of rural hospital closures.

Research from the Sheps Center for Health Services finds that 19 rural hospitals closed in 2020.[51] And many more hospitals across the South are vulnerable to closures.[52] When rural hospitals close, people living in those areas must travel about 20 miles farther to receive care.[53] These closures have immediate and severe consequences. For example, COVID-19 death rates in counties where hospitals closed were 37 percent higher than statewide COVID-19 death rates.[54]

Statewide Hospital Closures from 2010 to 2018 in States with Black Rural South Counties

Legend:
- 1 or more new hospitals
- 0-4 closures
- 5-9 closures
- 10-15 closures
- More than 15 closures
- County of the Black Rural South

Source: U.S. Department of Health and Human Services (2020)

Also, many rural communities lack medical specialists to address a range of medical conditions. While about 20 percent of Americans live in rural areas,[55] only 11 percent of physicians practice in rural regions.[56] People of color rely heavily on community health centers, emergency rooms or outpatient care, and community-based providers because of the lack of available primary care and mental health providers in a given area.[57]

The coronavirus has also compounded these problems for African Americans across the South.[58] According to city and state data, a disproportionate number of African Americans (some located in the Black Rural South) have been infected and died from the virus.[59] An analysis by the Southern Economic Advancement Project shows that the South is vulnerable

to the pandemic in ways that other regions are not.[60] Inadequate infrastructure, lack of access to affordable, reliable broadband, and health care deserts in poor rural counties have exacerbated the consequences of the pandemic.[61]

The pandemic has revealed the necessity of telemedicine in rural areas, given higher infection and death rates related to the virus.[62] During the pandemic, many health care providers provided free telemedicine services, such as virtual medical visits for

Broadband connectivity is a social determinant of health in rural counties that lack local resources and services.

people with no health insurance.[63] In the United States, the use of telehealth increased from 11 percent in 2019 to 46 percent in May 2020, with doctors seeing 50 to 175 times the number of patients via telehealth than they did before the pandemic.[64]

Broadband connectivity is a social determinant of health in rural counties that lack local resources and services.[65] Telemedicine can connect rural patients to medical specialists and specialty care not available in their local community and can also save money by diverting patients from more expensive care settings, which is particularly important for communities in poverty.[66] Telehealth can also help health care systems, HBCUs, organizations, and providers expand access to and improve rural health care quality by eliminating transportation challenges, lowering costs, and improving the quality of care. Research conducted by Deloitte finds that rural patients use telehealth services for convenience, an inability to see a regular doctor in person, and because of difficulty traveling to a doctor or hospital.[67]

HBCUs play a significant role in increasing access to telehealth services for their surrounding rural communities.[68] HBCUs tested students and residents for the COVID virus, raised awareness, made appointments for vaccinations, and provided online technical support.[69] Without broadband, many patients could not fully access telehealth services to communicate with physicians or use remote monitoring devices.

Funding for broadband services and equipment is essential to provide telehealth options for HBCUs that serve Black rural residents. HBCUs are trusted institutions for African American communities. Because many Black communities place little trust in the health care system, HBCUs are uniquely positioned to engage them to participate in testing, vaccination, or treatment.[70] Given their significance in their respective communities, HBCUs are able to advocate for policies that can strengthen community resources when implementing

telehealth services.[71] These institutions can act as brain trusts that convene and help community leaders apply for broadband grants and help foster technical assistance in applying for new telemedicine opportunities at the federal, state, and local levels.

Barriers to Broadband Access and Adoption in the Black Rural South

The primary barriers to broadband access in the Black Rural South are availability and affordability. High-speed broadband is not available to some households because the service has not been deployed by an internet service provider (e.g., AT&T, Charter Communications, Comcast, Google Fiber, Verizon, or a municipality). In areas where high-speed broadband infrastructure is available, some low-income households lack access because the service is not affordable.

Although this report lacks precise data on how many households in the Black Rural South lack broadband because the service is unavailable and or unaffordable, policy should address both barriers to close the digital divide.[72]

Barriers to Broadband Availability

Broadband is less available in rural counties, including the Black Rural South. The FCC's 2020 fixed broadband deployment data finds that 3.8 percent of the U.S. population, 8.8 percent of residents in non-southern rural areas, and 25.8 percent of those in the Black Rural South lack the option to subscribe to fixed high-speed broadband (as opposed to satellite and cellular) with download speeds of at least 25 megabits per second and upload speeds of at least 3 megabits per second (25/3 Mbps), the FCC's current definition of high-speed broadband.[73]
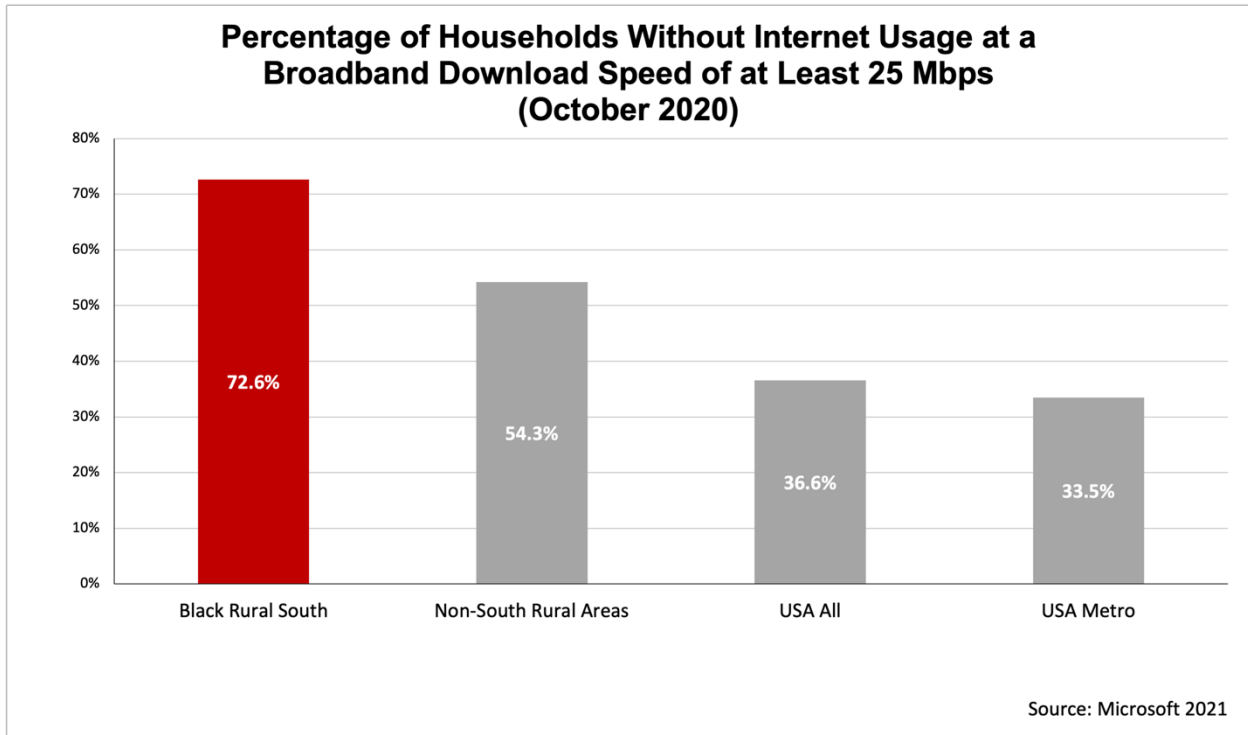
The FCC's 2020 fixed broadband deployment data finds that 25.8 percent of those in the Black Rural South lack the option to subscribe to fixed high-speed broadband.

Share of Population Without Access to Fixed Terrestrial Broadband (June 2020)

	Value
Black Rural South	25.8%
Tribal Lands	17.7%
Non-South Rural Areas*	8.8%
USA (All)	3.8%
USA (Metro)	2.3%

Source: Federal Communications Commission 2021
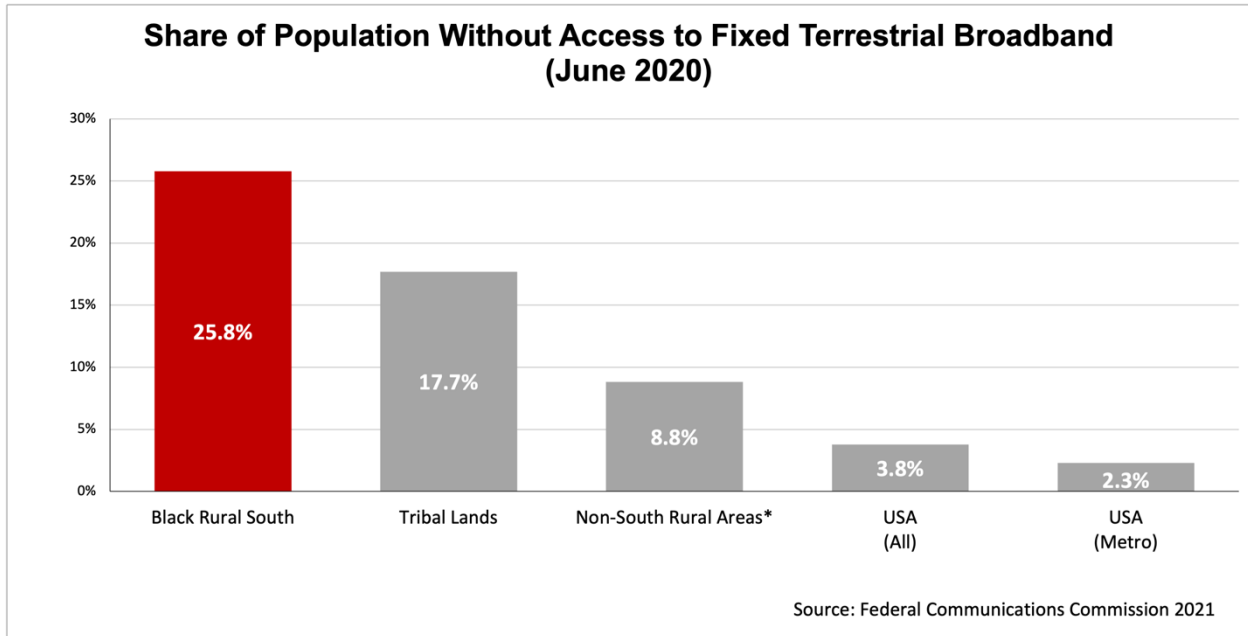
Note: *Non-southern rural areas excluding tribal lands. The FCC defines "high speed" broadband as at least 25 Mbps download and 3 Mbps upload.

Microsoft data on broadband speeds among users of its cloud services also substantiates the significant disparities between the Black Rural South and other regions of the country in access to high-speed broadband. The findings show that 36.6 percent of all American households do not use the internet at a broadband speed of at least 25 Mbps download and 72.6 percent of Black Rural South households do not use broadband at this speed.

Percentage of Households Without Internet Usage at a Broadband Download Speed of at Least 25 Mbps (October 2020)

Black Rural South: 72.6%
Non-South Rural Areas: 54.3%
USA All: 36.6%
USA Metro: 33.5%

Source: Microsoft 2021

Note: We estimate the percentage for a total area by taking the average across all counties in the area, weighted by the number of households. While the Microsoft data is from 2020, we use the 2015-2019 5-Year American Community Survey to obtain the number of households in each county because it is the best available data, and the Joint Center recognizes that the use of data from these different years may result in slight discrepancies.

The Criticisms of the FCC's Current Broadband Availability Data

Some have claimed that FCC data on broadband availability is incomplete and that an even larger percentage of Americans lack broadband. One problem is that broadband providers themselves report the data, and if providers can serve just one customer in a census block, the FCC considers the entire census block as served. Further, the FCC does not audit the data to deter internet providers from overstating their service. One study that employed an independent check on availability estimated that those without broadband was double the FCC estimate.[74]

The criticisms of the FCC data suggest that an even greater percentage of Black Rural South households could lack availability and that existing disparities exist, especially when examined in the context of other datasets.

The FCC is currently revising its broadband deployment mapping data to respond to the need for accurate data pinpointing where broadband service is available, and where it is not available.[75] Other federal agencies are also responding to the need for more detail and precise broadband information.

The U.S. Department of Commerce's National Telecommunications and Information Administration (NTIA) recently released the National Broadband Availability Map (NBAM), which combines public and private data on internet access from the U.S. Census Bureau, the FCC, M-Lab, Ookla, and Microsoft.[76] However, some advocates have stated that the tool provides an inaccurate view of broadband availability because of unreliable data sources and different methodologies that respond to divergent questions.

Studies show that internet service providers are less likely to build digital infrastructure and deploy broadband in low-income or sparsely populated rural areas because these communities often are seen as high-risk endeavors with little financial return.[77] Traditional telecommunications providers (such as AT&T and Verizon) and, in some cases, new entrants (such as Google Fiber) practice digital redlining when they do not invest in and upgrade broadband networks to provide maximum available broadband speeds to *all* communities.[79]

Research shows that low-income rural areas experience digital redlining—the practice of ISPs systematically excluding low-income neighborhoods from high-speed, affordable internet service.[80] Recent research also finds that competition between internet service providers offering fast broadband speeds is less likely in low-income areas and areas with a large share of Black residents.[81] Digital redlining can exacerbate economic, educational, and health care inequality in the Black Rural South when there is a lack of investment in broadband infrastructure.

Rural areas also tend to have slower internet speeds than other regions.[82] During the COVID pandemic network speeds declined as more people logged on at home.[83] The speed of an internet connection is vital because it can determine what types of activities people can do online and how many people can be online at once. Households with low broadband speeds and multiple family members face challenges engaging in distance learning, teleworking, and telemedicine simultaneously.[84]

Deloitte finds that faster broadband speeds drive job growth,[85] and faster broadband speeds have also been shown to raise household income.[86] Internet speeds also affect production, sales, and use of precision technologies for farmers in rural communities.[87]

A March 2021 analysis reveals that the average internet service is currently 180.84 Mbps download / 65.79 Mbps upload.[88] By these standards, the FCC's 25/3 Mbps minimum broadband speed is a low bar and out of date for current needs. Advocates have urged the FCC and the Biden administration to update high-speed broadband requirements. The definition of "high-speed" is important because federal infrastructure solutions that fund broadband deployment will use the definition to consider whether areas are "served," "underserved," or "unserved." The definition

will determine the minimum quality an internet service provider must offer to receive federal subsidies.
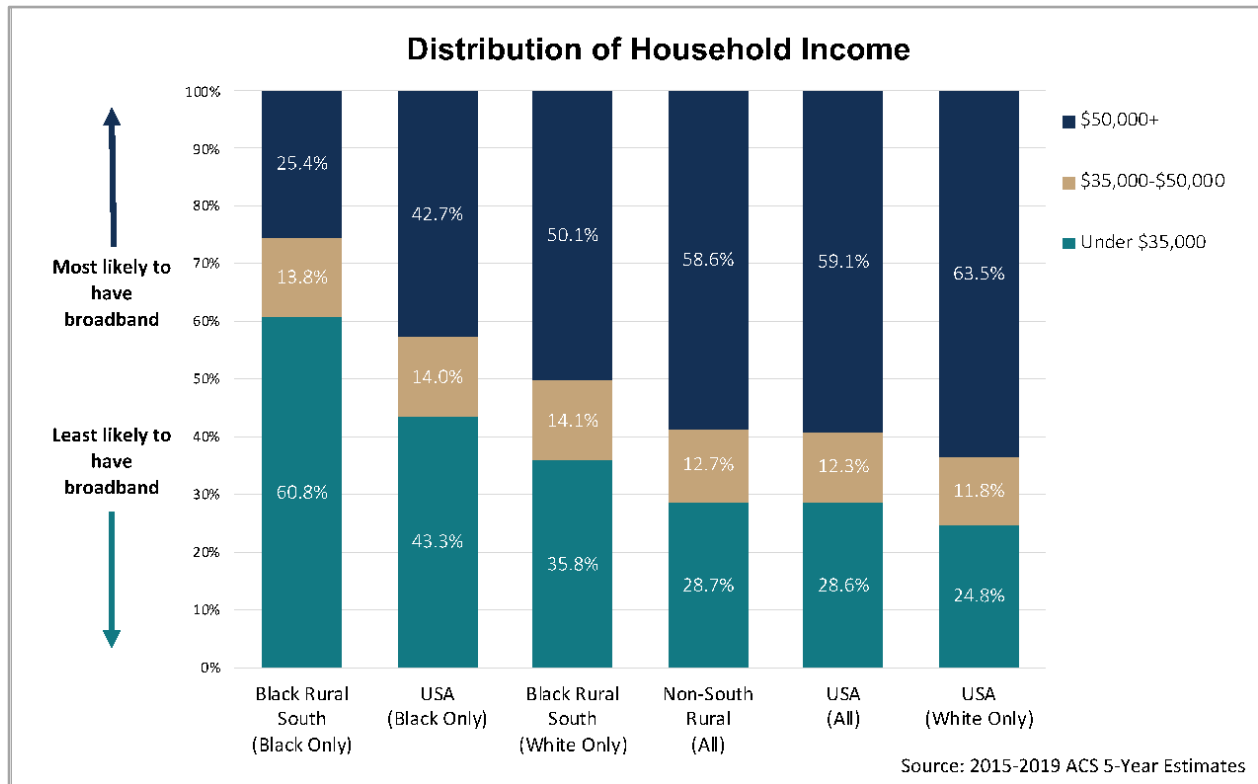
Any solution to update speed requirements should ensure that federal investments prioritize unserved over underserved areas. Defining areas as "unserved" will be essential to efficiently target federal funding to communities in the Black Rural South that completely lack internet availability and to those that have a slow internet connection. Any new definition of high-speed broadband should be evaluated to ensure that it does not divert funds away from truly needy areas in the Black Rural South.

Barriers to Broadband Affordability

Nationally, affordability is one of the primary reasons that low-income Black families do not have broadband.[89] The National Telecommunications and Information Administration finds that 22 percent of offline Black households nationwide cited cost as a reason for not using broadband, compared with 16 percent of their White counterparts.[90]

…affordability is one of the primary reasons that low-income Black families do not have broadband.

This problem is particularly significant among Black families in the Black Rural South. The Pew Research Center, for example, estimates that nationwide, 44 percent of households with incomes less than $35,000 lack broadband while only 13 percent of those with incomes $50,000 or above do.[91] In the Black Rural South, 60.8 percent of Black households have incomes less than $35,000, and only 25.4 percent have incomes above $50,000.[92] Recent research from Pew also shows that 38 percent of Black Americans and 46 percent of Americans with lower-incomes who use broadband say they worry about paying their broadband bills in the coming months.[93] As the data below show, Black households in the Black Rural South are much less likely to have broadband.

Distribution of Household Income

Chart: Distribution of Household Income. Stacked bar chart with categories Under $35,000, $35,000-$50,000, and $50,000+. Source: 2015-2019 ACS 5-Year Estimates.

Arrows on left: "Most likely to have broadband" (up) and "Least likely to have broadband" (down).

Category	Under $35,000	$35,000–$50,000	$50,000+
Black Rural South (Black Only)	60.8%	13.8%	25.4%
USA (Black Only)	43.3%	14.0%	42.7%
Black Rural South (White Only)	35.8%	14.1%	50.1%
Non-South Rural (All)	28.7%	12.7%	58.6%
USA (All)	28.6%	12.3%	59.1%
USA (White Only)	24.8%	11.8%	63.5%

Even if broadband costs declined, services still might be out of reach for many Black families in the Black Rural South who live in "digital poverty"—incomes that put even the least expensive broadband services out of reach.[94] These families are often struggling to pay for basic utility bills and food.[95] Thus, many low-income households will remain disconnected.[96]

While the FCC does not systematically collect data on prices of internet service plans, and internet service providers do not publicly disclose data about their fees,[97] existing research suggests that many rural communities must rely on expensive broadband plans and slow speeds because of the lack of competition between internet service providers in their community. Black Americans are also more likely than White Americans to live in an area with limited internet service providers.

Some argue that without competition, consumers pay higher prices for lower-quality services.[98] However, analyses of affordability data find only a small correlation between competition and home broadband adoption.[99] Instead, poverty and residential segregation are much more strongly correlated with adoption than is lack of competition. Therefore, subsidies are more important than competition in connecting more households. That said, some research does show that additional broadband providers lower costs for consumers and improves the quality of both new and incumbent providers.[100]

States with localities that offer high-speed internet ("municipal broadband")—including seven of the ten states in the Black Rural South—have lower prices on average.[101] Many states, however, have banned this practice or placed onerous restrictions on municipalities.[102]

Restrictions to Municipal Broadband in States with Black Rural South Counties

Source: BROADBANDNOW (2021)
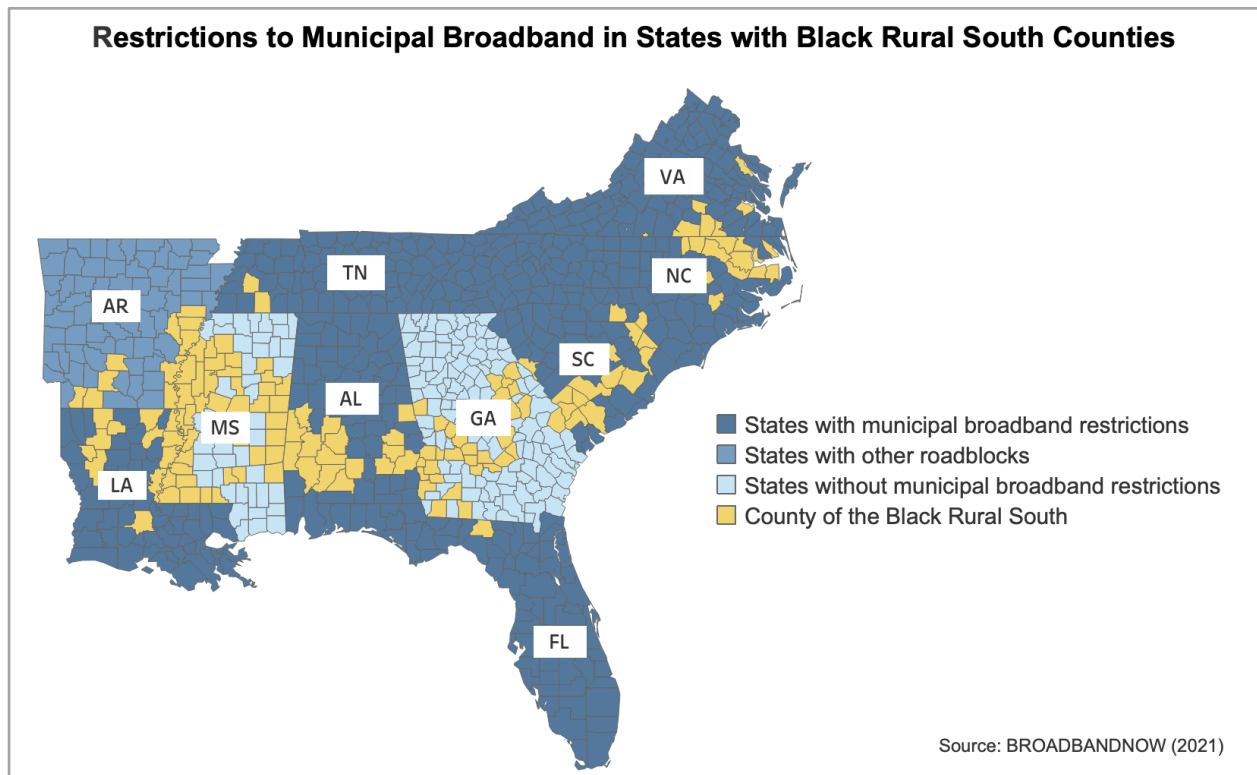
These laws also disadvantage local economies and communities, as research shows that municipal networks can encourage economic development by attracting businesses and jobs.[103] As Next Century Cities notes, economic development is driven by meaningful choice of internet service providers, dedicated leadership, smart collaboration, and the shared goal of universal access to high-speed, affordable broadband for residents.[104]

Policy Recommendations for Broadband in the Black Rural South

Any national strategy to increase broadband access and narrow the digital divide should devote significant effort to overcoming the factors that put internet access out of reach for the Black Rural South. This distinct region needs resources that expand the availability and affordability of high-speed, quality broadband. The recommendations below apply to many Black rural communities outside the 152 counties of the Black Rural South, as large concentrations of African Americans live in rural areas that do not meet our 35 percent Black threshold. Our economic recovery depends on equitable, targeted policy solutions for all Americans, including rural Black communities.

1. **Establish a permanent and meaningful broadband benefit program for lower-income households.** The FCC's outdated Lifeline program provides a maximum $9.25 monthly discount on broadband and mobile services for eligible low-income subscribers. The amount has not changed since 2016, and households that participate may still face $20-$33 in additional costs to access broadband—which may be too steep for many.[105] Lower-income households have traditionally used Lifeline for mobile phones rather than broadband,[106] and should not be forced to choose between the two services.

   Federal pandemic relief attempted to address this issue but only temporarily. The federal Consolidated Appropriations Act of 2021 created the Emergency Broadband Connectivity Fund, which provides $3.2 billion for internet services and devices to help low-income families connect to broadband.[107] The act directed the FCC to establish an Emergency Broadband Benefit Program (EBB Program), which uses the fund to provide a $50 per-month subsidy for low-income families to pay broadband service. The program started in May 2021 but will end when the fund is exhausted or six months after the end of the public health emergency.

   This temporary fix will not close the digital divide. The FCC should be instructed to enact a permanent broadband benefit program that provides greater subsidies to eligible households to pay any broadband provider for internet services, and a separate voucher to purchase a computer or tablet to connect to the internet.[108]

2. **Require broadband providers that receive Universal Service Funds (USF) to provide low-income households and high-cost-area consumers with an affordable option.** Affordability is the primary reason many low-income households do not subscribe to broadband.[109] Some internet service providers offer low-income assistance programs that have been shown to increase subscription rates for broadband service.[110] Government incentives for

internet service providers to offer low-cost options to eligible households can increase broadband adoption.[111]

3. **Federal broadband infrastructure investments should prioritize the Black Rural South.** Private market incentives alone are inadequate to build out broadband infrastructure in the Black Rural South. Federal government intervention is needed.[112] Similar to the nearly $7 billion in broadband funding in the Consolidated Appropriations Act,[113] the federal government should renew significant investments in building out broadband infrastructure in underserved and unserved communities, and it should target considerable amounts to the Black Rural South.

4. **When distributing recovery funds, southern states should prioritize broadband expansion in Black Rural South counties.** Given the significant need for available, affordable, and faster broadband in the Black Rural South to advance education, jobs, and health care, southern states should prioritize this region in distributing their federal pandemic recovery funds. The American Rescue Plan Act of 2021 created the Coronavirus State and Local Fiscal Recovery Fund to provide $350 billion in emergency funding for state, local, territorial, and Tribal governments to respond to the COVID-19 pandemic.[114] That funding could be used for investments in broadband infrastructure.[115] State governments have significant flexibility to target the funds to specific communities, such as giving money to a private nonprofit organization or a special-purpose unit of state or local government to address the law's broad purposes, such as expanding broadband access.

   The act provides additional funds that local governments (including "metropolitan cities, non-entitlement units of local government, and counties") can use for internet service or broadband-related projects in the Coronavirus Capital Projects Fund ($10 billion), the Economic Development Administration grants ($3 billion), and the Homeowners Assistance Fund ($9.9 billion).[116] To address the affordability of broadband services, policymakers must take a close look at states that have high concentrations of rural poverty to ensure that people in those communities are eligible and receive federal broadband investments.[117]

5. **Launch a task force and create rules to prevent digital redlining.** The FCC should develop a task force to address digital redlining that leaves too many low-income communities and people of color without internet access comparable to their peers in wealthier, Whiter areas (often accelerating existing socioeconomic disparities). The task force should be multidisciplinary and develop expertise, research, technical assistance, recommendations, and regulatory solutions at the federal, state, and local levels to stop redlining—such as requiring all internet service providers that deploy broadband services in a specific locale to serve entire communities.

6. **Prioritize federal funding for broadband projects developed by Historically Black Colleges and Universities (HBCUs).** Local governments should prioritize federal infrastructure funding they receive for HBCUs to promote broadband access, adoption, telehealth, and digital readiness in their surrounding communities. As recognized by the FCC,[118] HBCUs are often anchor institutions that boost surrounding economic activity,[119] and several of the nation's 107 HBCUs are located within the Black Rural South.[120]

   The federal government should also provide HBCUs with the technical assistance and capacity to apply for funding and the resources necessary to develop sustainable broadband programs. The NTIA "Connecting Minority Communities" pilot program should ensure HBCUs are connected to existing and planned regional and state broadband networks and provide case studies on best practices for successful partnerships and projects between HBCUs and Black-led businesses and nonprofits.[121]

7. **Invest in research to understand challenges and to continuously improve broadband access.** Robust, accurate, disaggregated data is vital to expand broadband to communities that need the most help, and policymakers should invest in research infrastructure that continuously gives them the best information to make good decisions.[122]

   Currently, data is limited to fully understand the magnitude of challenges and to tailor solutions to most effectively fix problems.[123] For example, as discussed above, the FCC has lacked accurate data about where broadband is and is not available. Similarly, the data is insufficient to analyze and address claims of waste, fraud, and abuse in internet subsidy programs,[124] or claims that federal subsidies reward internet service providers for high rates, hidden costs, and service fees.[125] Although private firms have explored why households without internet do not use government subsidy programs,[126] government agencies could do a better job continuously collecting and analyzing this data, which is constantly changing due to policy changes, demographic shifts, and evolving technologies.

   Policymakers should invest in developing a more robust research and analysis infrastructure to examine these and related problems. By constantly studying the extent to which affordability and current government programs contribute to the lack of broadband adoption, for example, governments can revise subsidy programs to be more effective and accessible. Improving the accuracy of broadband availability data and maps would allow the FCC to target and tailor support to where it is most needed.

8. **Update the federal definition of "high-speed" broadband.** The FCC should be required to update broadband speed standards for federally funded broadband projects. The FCC's current 25/3 Mbps is a low bar and out of date relative to today's average speed of

180.84/65.79 Mbps. The FCC should raise speeds periodically to adjust to the needs of families. Federal infrastructure solutions that fund broadband deployment will use the definition of "high-speed" to determine whether areas are "unserved" and warrant investment. Updating speed standards is critical to ensuring that areas of the Black Rural South with slow or no internet qualify for investments to enable remote learning, telehealth services, and videoconferencing capabilities. In updating speeds, however, policymakers should ensure that unserved areas in the Black Rural South are prioritized in receiving federal support over underserved areas. Just like other Americans, families and children in the Black Rural South need "future proof" technology to keep pace with the ever-changing internet infrastructure needs of our evolving economy.

9. **Prohibit state governments from inhibiting local broadband networks.** Congress should allow local governments, public-private partnerships, and cooperatives to build, own, and operate broadband services for their constituents by lifting state prohibitions on municipal broadband. Electric and telephone cooperatives that deliver services and have the infrastructure in place could be especially successful in connecting rural Americans. Policymakers should eliminate barriers and legal obstacles for localities that desire to deploy public telecommunications services, especially in the Black Rural South.

   In turn, local electric and telephone cooperatives that offer broadband services should seek diverse partners, a diverse workforce, diverse boards of directors, and diverse member perspectives to ensure equitable distribution of broadband services and infrastructure.[127] It is essential that these entities represent the constituents they serve and provide fair access to services for *all* community members.

10. **Increase federal coordination and focus on the Black Rural South.** The various federal agencies that work on broadband should be required to coordinate, simplify application processes, increase investments in the Black Rural South, and establish metrics and goals for their efforts in the region. Recently, NTIA, the FCC, and the USDA announced an interagency agreement to share information about and coordinate the distribution of federal broadband deployment funds to ensure the federal government's efforts to expand broadband access are effective and efficient.[128] Still, it is unclear whether other federal broadband programs have overlapping mandates, coordinated investments, or shared data.[129] Currently, 57 federal broadband programs span 14 federal agencies with billions of dollars for broadband grants and loans for industry, state and local governments, schools, libraries, small businesses, and other community institutions.[130] Recognizing the Black Rural South's significant challenges, federal agencies should work together to support broadband build-out in the region.

The E-Rate application process should also be streamlined so more schools and libraries can take advantage of the program. It should also expand the list of eligible services to include wi-fi on school buses. Recognizing the prevalence of online learning, the home should also be considered a classroom. Permitting non-schools to receive Category 2 funding (money for hardware such as wireless access points, wi-fi services, and maintenance of eligible products) and expanding E-Rate to cover expenses related to remote learning will help close the digital divide, especially in remote parts of the Black Rural South.

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Acknowledgments

Endnotes

[1] Notable exceptions include Stephen G. Katsinas, Noel E. Keeney, Emily Jacobs, Emily G. Corley, and Hunter Whann, *Internet Access Disparities in Alabama and the Black Belt* (Tuscaloosa: University of Alabama Education Policy Center, 2020).

[2] Harin Contractor and Spencer Overton, "An Introduction to the Future of Work in Black Rural South" (Washington, DC: Joint Center for Political and Economic Studies, February 2020), pp. 36-38. The Joint Center's February 2020 report on the Black Rural South was based on 2013-17 data, and 156 counties were 35 percent Black and designated as rural by the USDA. This current broadband report is based on 2015-19 data, and 152 counties are 35 percent Black and designated as rural by the USDA. The following counties are counted as part of the Black Rural South in the February 2020 report but not this report because their populations have either fallen below 35 percent Black or they are no longer designated as rural by the USDA: Mississippi County, AK; Hamilton County, FL; Jenkins County, GA; Greene County, NC; Halifax County, VA; Covington city, VA; Galax city, VA; and Norton city, VA. The following counties are independent cities and are classified by the United States Census Bureau as "county equivalents" but are not included within the 2013 Rural-Urban Continuum Codes: Galax city, VA and Norton city, VA. The following counties are counted as part of the Black Rural South in this report but not the February 2020 report: Emporia city, VA and Franklin city, VA. Any definition of Black Rural South is underinclusive, as large concentrations of rural African Americans live in parts of counties that do not meet our 35 percent Black threshold. Recognizing that many datasets are organized by county, we aimed to isolate counties that were clearly part of the Black Rural South to understand the region's distinctive characteristics relative to other parts of the nation. Thus, the recommendations offered here are applicable to address the needs of many Black rural communities outside the 152 counties this report defines as the Black Rural South.

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[4] U.S. Department of Agriculture, "Rural America at a Glance: 2018 Ed." (Washington, DC: Economic Research Service, USDA, 2018), p. 3.

[5] U.S. Census Bureau, "2015-19 Current Population Survey Data" (Washington, DC: Census, various years). Many advocates argue that maps by the Federal Communications Commission (FCC), National Telecommunications and Information Administration (NTIA), and Rural Utilities Service (RUS) are inaccurate or incomplete. The Congressional Research Service points to several factors contributing to the difficulty in mapping broadband availability, such as a lack of data granularity, overstated availability, lack of independent data validation, and the difficulty in keeping up with real-time deployments. Congressional Research Service, "Broadband Data and Mapping: Background and Issues for the 117th Congress" (Washington, DC: CRS, May 19, 2021). What's most important for our purposes is not the precise number (22 percent of Black people nationwide lacking broadband under our methodology vs. 30 percent under other methods), but the disparities between groups. We have no reason to believe this gap between Black Americans in the Black Rural South and all Americans would not exist using any other methodology.

[6] Data is for counties in the Black Rural South, rural counties not in the South, metro counties in the South, southern counties, and the entire USA and includes analysis of the entire population of a region and for demographic categories *Black or African American alone* and '*White alone, not Hispanic or Latino*' when noted.

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[15] George Zuo and Daniel Kolliner, "Wired and Hired: Employment Effects of Subsidized Broadband Internet for Low-Income Americans," *SSRN* (October 16, 2019), p. 3. The effect is driven both by increases in labor force participation and decreases in the probability of being unemployed, the authors conclude. Enrolling in "Internet Essentials" increases average earnings by 5.3 percent. The authors calculate that the average earnings benefit to each household is approximately $1,060 and that this benefit is roughly double the annual cost to provide the service, which includes a monthly broadband subsidy, fee waivers, and other administrative costs.

[16] Contractor and Overton, "Future of Work in Black Rural South," p. 32. Decline in manufacturing is driving much of the Black Rural South's job loss likely from outsourcing and automation, the authors report. The Black Rural South lost more than 100,000 manufacturing jobs from 2001-17, or almost 40 percent of the region's manufacturing jobs. This loss is twice as high as the loss in non-South rural counties, they find.

[17] Resilient communities can use their resources and assets to respond to, withstand, and recover from adverse situations, such as a public health emergency, natural disaster, or economic instability.

[18] Contractor and Overton, "Future of Work in Black Rural South," p. 33.

[19] International Telecommunication Union, "Impact of Broadband on the Economy" (Geneva, April 2012), p. 13, finding employment growth of 0.2-0.3 percent per year for every 1 percentage point increase in broadband, and another of total employment growth of 0.14-5.32 percent for a 1 percentage point increase in broadband penetration.

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[21] Ashley Bozarth and Whitney M. Strifler, "Strengthening Workforce Development in Rural Areas" (Washington, DC: Federal Reserve System, 2019), p. 10; Brian Dabson, "The Rural Dimensions of Workforce Development," in *Investing in America's Workforce: Improving Outcomes for Workers and Employers*, Stuart Andreason et al., eds. (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2018), p. 190.

[22] Amanda Bergson-Shilcock, "Applying A Racial Equity Lens to Digital Readiness" (Washington, DC: National Skills Coalition, April 2021), p. 2.

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[38] Monica Anderson and Andrew Perrin, "Nearly One-in-Five Teens Can't Always Finish Their Homework Because of the Digital Divide" (Washington, DC: Pew Research Center, October 26, 2018); Petula Dvorak, "'When 'Back To School' Means a Parking Lot and the Hunt for a Wi-Fi Signal," *Washington Post*, August 27, 2020.

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