Exploring Broadband Adoption in Mississippi

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For 8th Annual Advancing Mississippi Conference
September 29, 2023

Broadband

- High-speed internet with at least **25/3 Mbps speed** (FCC, 2015)
- Essential for modern daily activities:
  - Online education, e-commerce, telehealth, and social media usage
- Key role in the economy:
  - Impacting the economy through employment, productivity, and entrepreneurship
- The Bipartisan Infrastructure Law (The White House, 2022)
  - Investment: $65 billion
  - Goal: Ensuring affordable, reliable, and high-speed internet access for **ALL** Americans
  - Seven large-scale broadband deployment programs

Broadband deployment programs

Program	Fund($B)	Description
Broadband Equity, Access and Deployment Program (BEAD)	42.45	• Data collection, mapping, and infrastructure development • Promote adoption
Affordable Connectivity Program	14.25	• Ensure low-income households can afford broadband ($30/month subsidy)
Digital Equity Planning, Capacity and Competitive Grants	2.75	• Promote digital inclusion and equity • Ensure adequate information technology capacity • Planning and adoption
Tribal Broadband Connectivity Program	2	• Planning & construction • Digital skills training, distance learning, and telehealth • Devices/ equipment's, mapping, research and /or evaluation
Rural Broadband Programs at the Department of Agriculture	2	• Broadband deployment in rural areas
the Middle Mile Grant Program	1	• Infrastructure deployment (e.g., construction) • Reduce the cost of connecting unserved and underserved areas to the internet backbone.
Private Activity Bonds	0.6	• Broadband deployment in rural areas.

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Broadband Equity, Access, and Deployment (BEAD)

The Notice of Funding Opportunity (NOFO) for the Broadband Equity, Access, and Deployment (BEAD) program requires each state to submit a five-year plan that shares information regarding preparations for BEAD funding. The NOFO details the information to be provided, including but not limited to, the structure and activities of the state broadband office (BEAM), current and projected funding sources, data collection strategies, partnerships, alignment with other state agencies, stakeholder engagement strategies, identification of barriers and obstacles to service, key implementation strategies, expected costs, and a timeline for universal service. To review Mississippi's 5- year plan developed by BEAM, please click here.

Mississippi's 5-year Plan

The 5-year plan includes strategies and variables that will necessarily change over the course of BEAD implementation. BEAM anticipates updating the plan as new information becomes available. While no public comment period is required for this plan, the BEAM office seeks input and comments from interested stakeholders. Comments will be accepted from September 15, 2023, until 12:00 pm on September 25, 2023. Comments may be submitted to **comments@beam.ms.gov**.

Why we care about broadband adoption?

- Broadband availability ≠ Broadband adoption
  - Adoption is vital for leveraging the benefits of broadband
- Persisting digital divide in MS
  - Disparities in availability, affordability, and adoption of broadband across demographics, socio-economics, and geographic groups in MS
- Many face barriers to adoption
  - Lack of digital literacy and limited availability
  - Unaffordable costs related to the internet: monthly bills, installation and activation fees, and computing devices
  - Demographic factors related to them, such as age, income, education, race, and location, also affect adoption

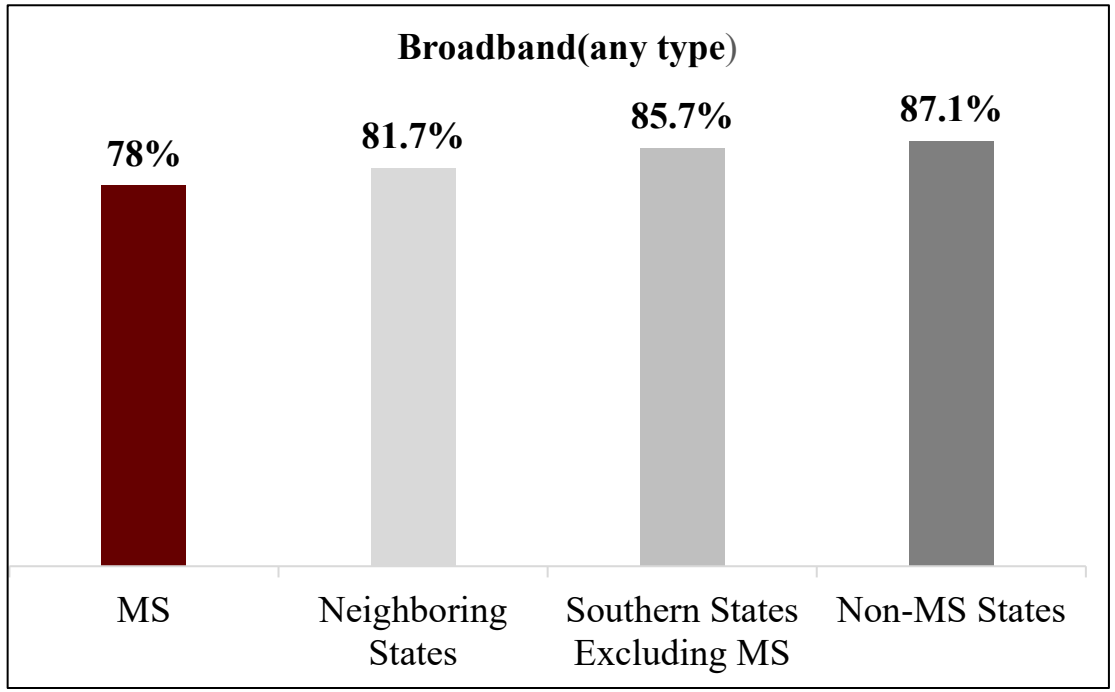
Why we care about broadband adoption?

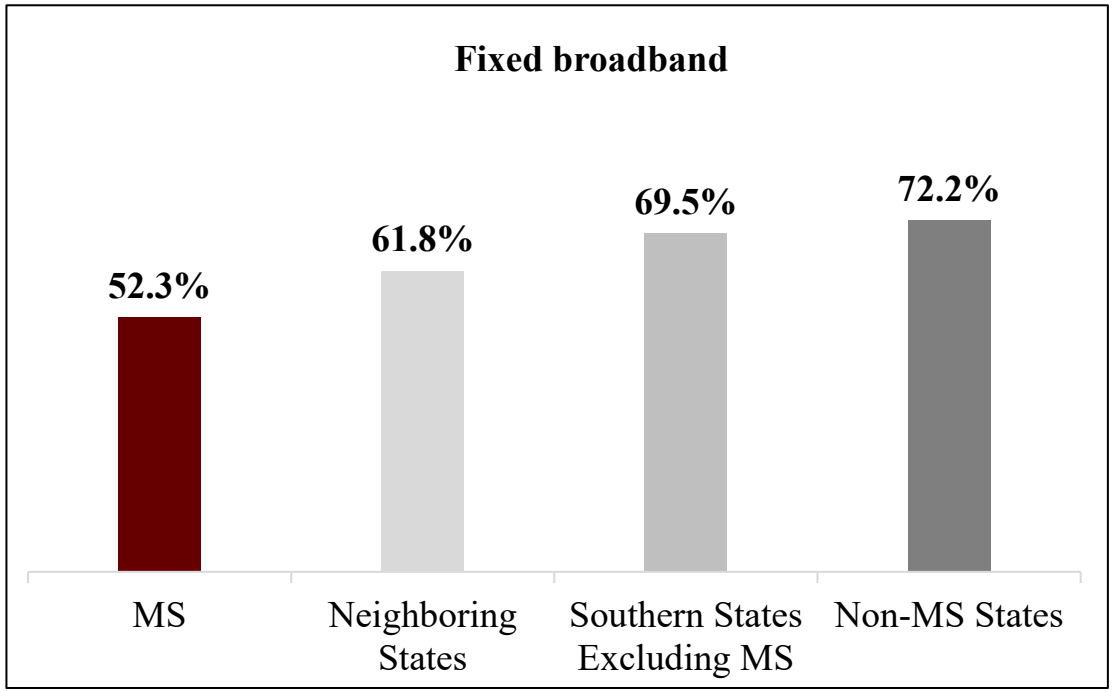
- Addressing the disparities in broadband adoption is the key to:
  - Understand the severity of disparities and identify groups or regions that require assistance
  - Bridge the digital divide
  - Promote economic development in underserved communities
  - Reduce socio-economic inequalities among lower-income and minority households

Today,

- Explore broadband adoption in Mississippi
  - Broadband (any type): including fixed broadband, cellular data plan, and satellite internet services
  - High-speed fixed broadband (cable, fiber optic, or DSL)
  - Data from American Community Survey, 2021 (5-year estimates), U.S. Census Bureau
- Assess MS broadband adoption variations by:
  - Urban-rural status
  - MS Economic development regions
  - Income and racial groups

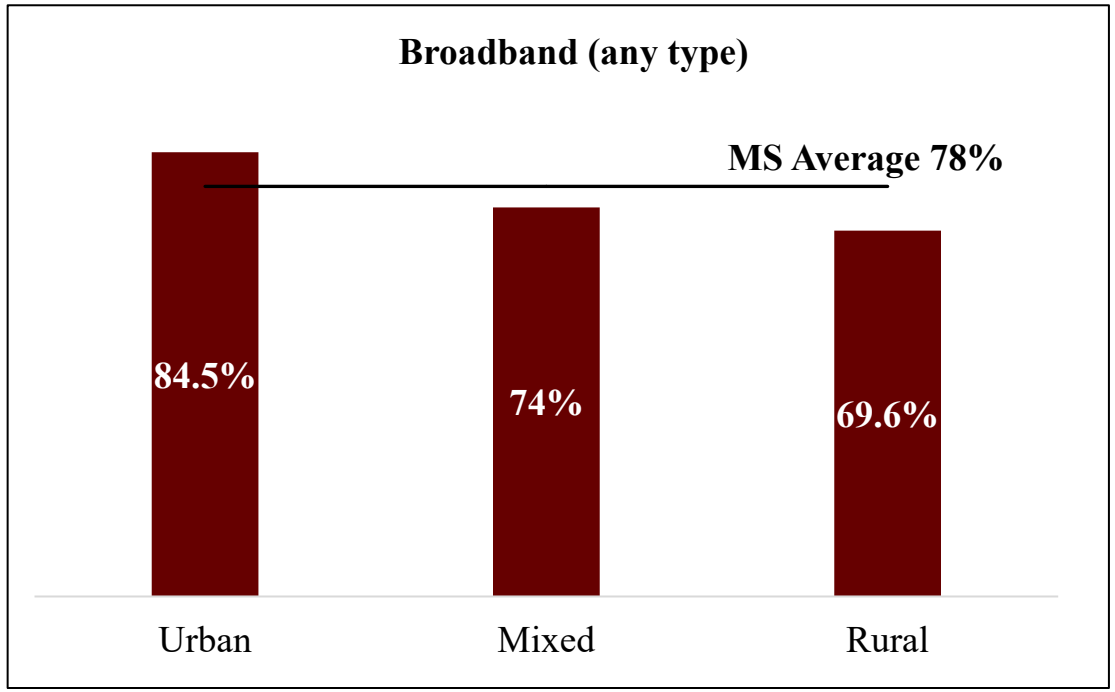
Broadband adoption (subscription rates)

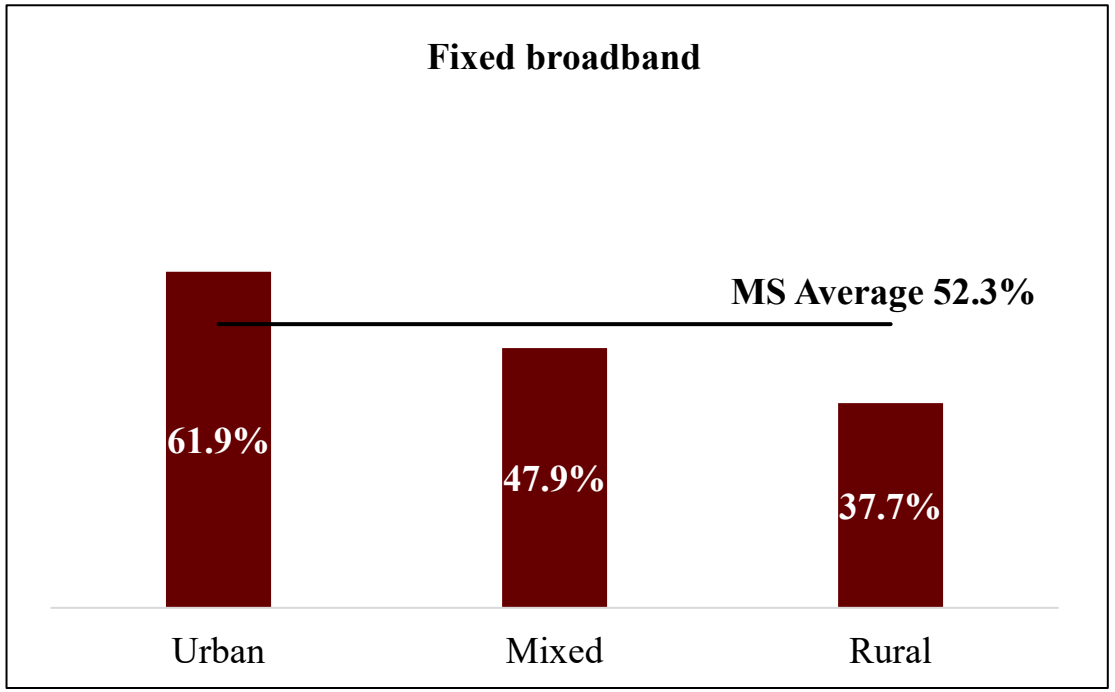




- MS falls behind Non-MS states in 2021 by:
  9.1 percentage points (broadband (any type))
  19.9 percentage points (fixed broadband)
- Highlights the primary challenge: a need in increasing high-speed fixed broadband adoption

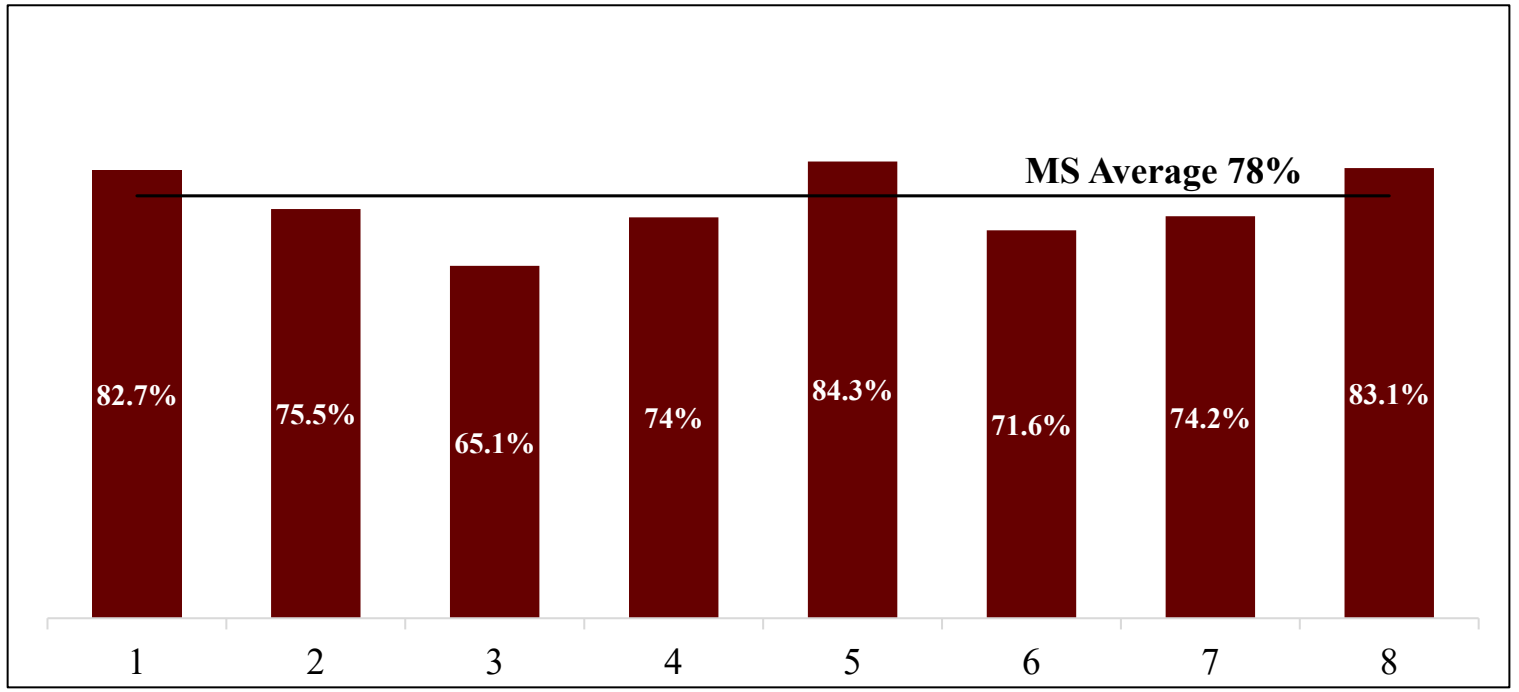
Broadband adoption (subscription rates) by urban-rural status





- Rural MS falls behind urban MS by :
  - 14.9 percentage points (broadband (any type))
  - 24.2 percentage points (fixed broadband)
- Highlights the digital divide between urban and rural settings in MS

Broadband (any type) adoption by economic development regions



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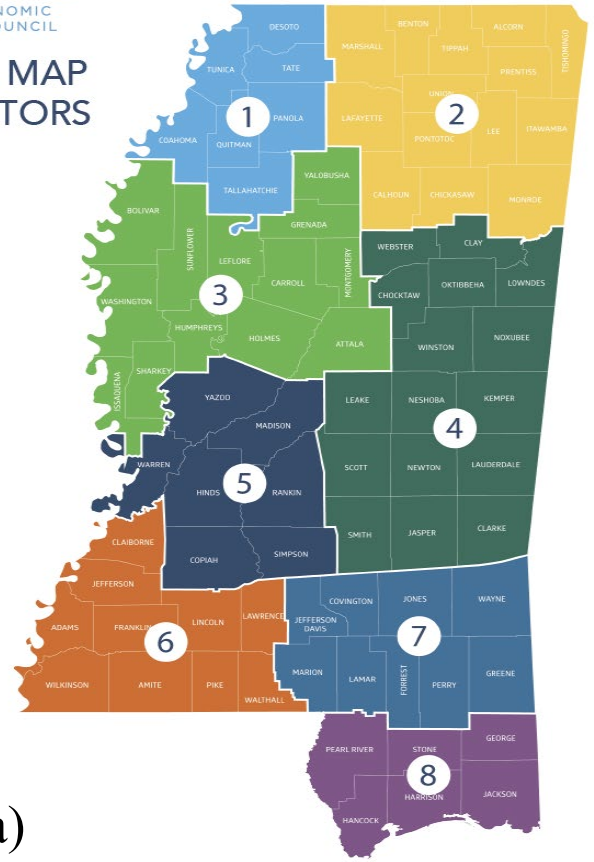
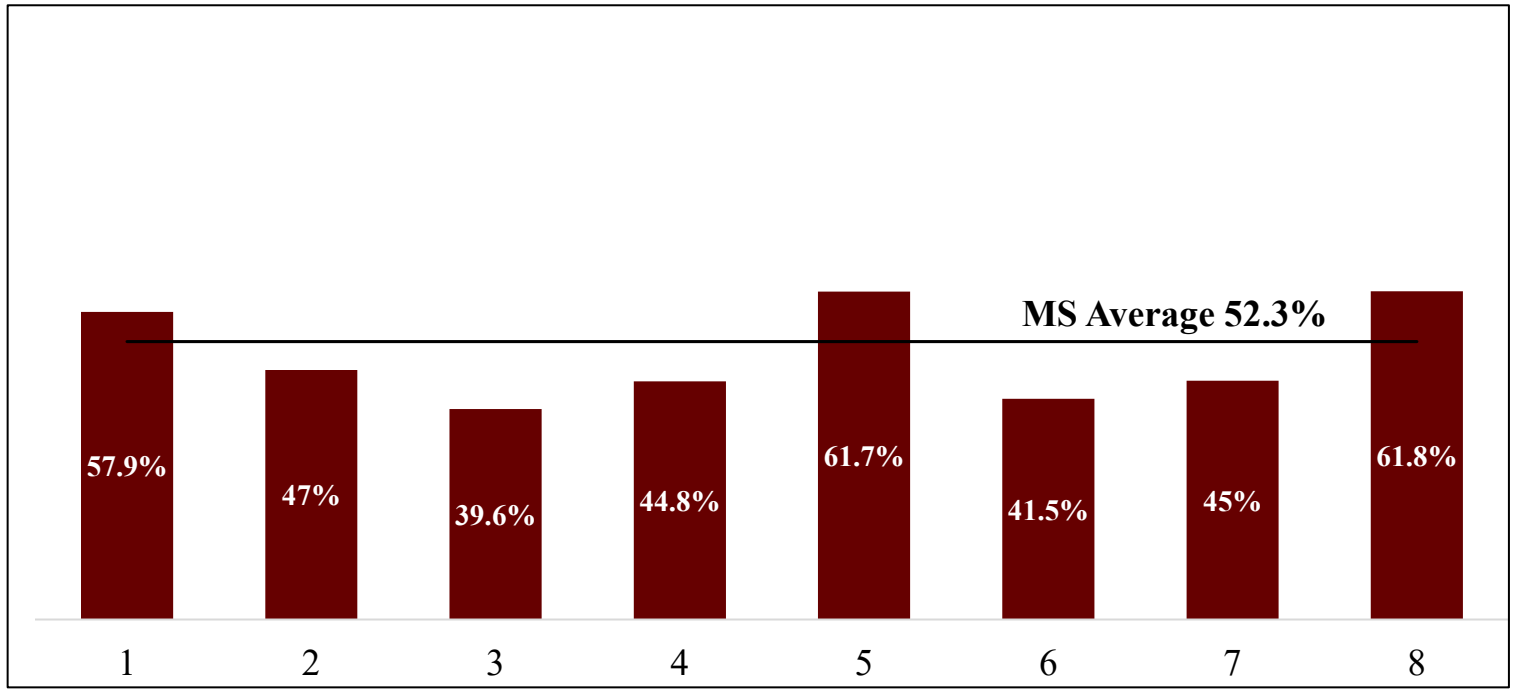
REGIONAL MAP FOR DIRECTORS



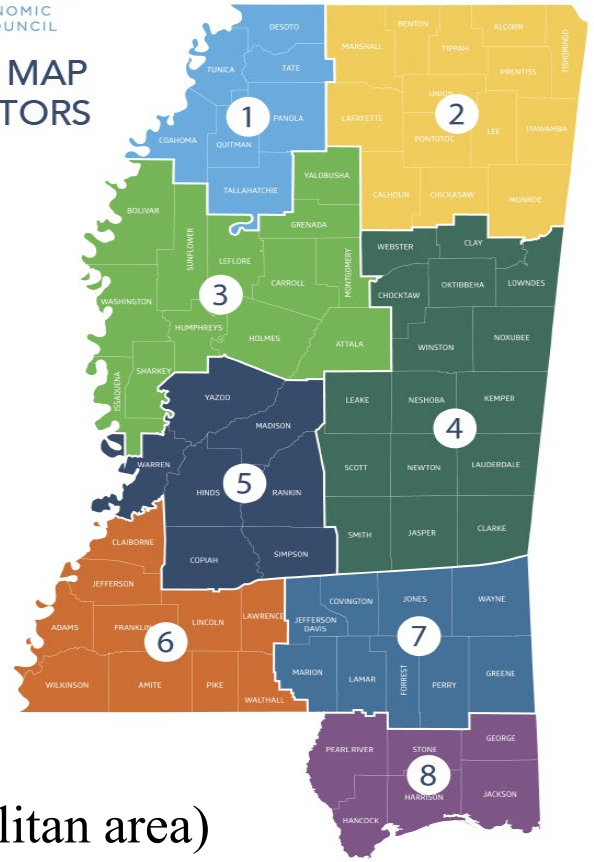
- Region 3 (including Delta) has the lowest broadband adoption rate
  - 19.2 percentage points below region 5 (including Jackson Metropolitan area)
  - 12.9 percentage points below the state average

Fixed broadband adoption by economic development regions



MISSISSIPPI ECONOMIC DEVELOPMENT COUNCIL

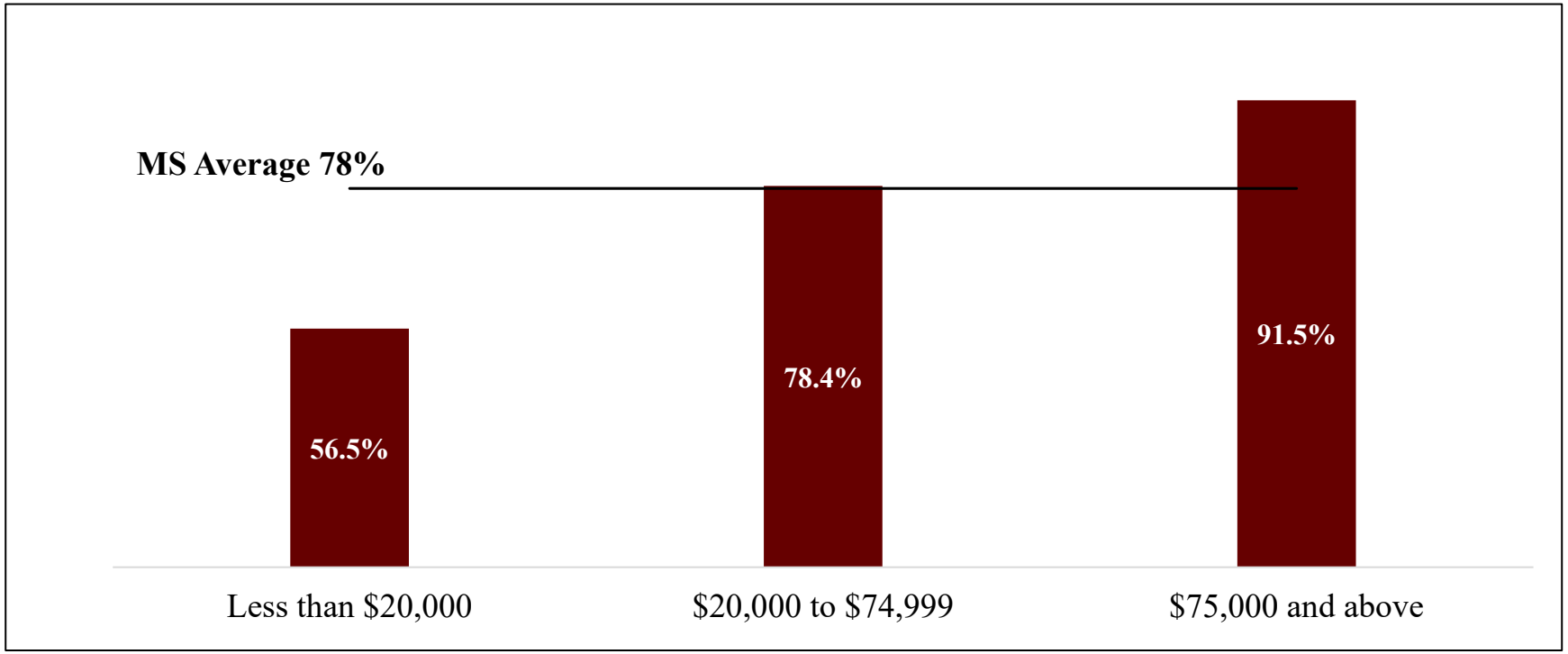
REGIONAL MAP FOR DIRECTORS



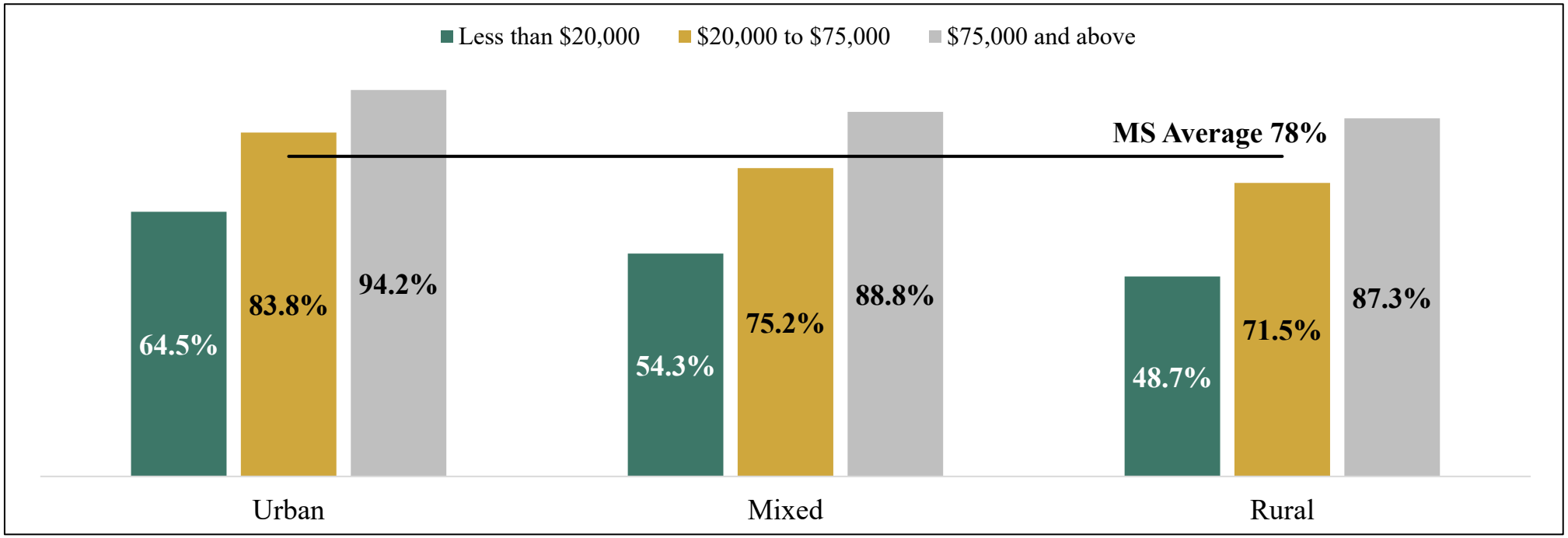
- Region 3
  - 22.2 percentage points below Region 8 (including Gulfport-Biloxi Metropolitan area)
  - 12.7 percentage points below the state average
- Reflects limited adoption of reliable broadband in regions having economically lagging counties

Broadband (any type) adoption (subscription rates) by income groups

- MS poverty rate: 18.7%
- MS median income: $46,637, National median income: $70,784

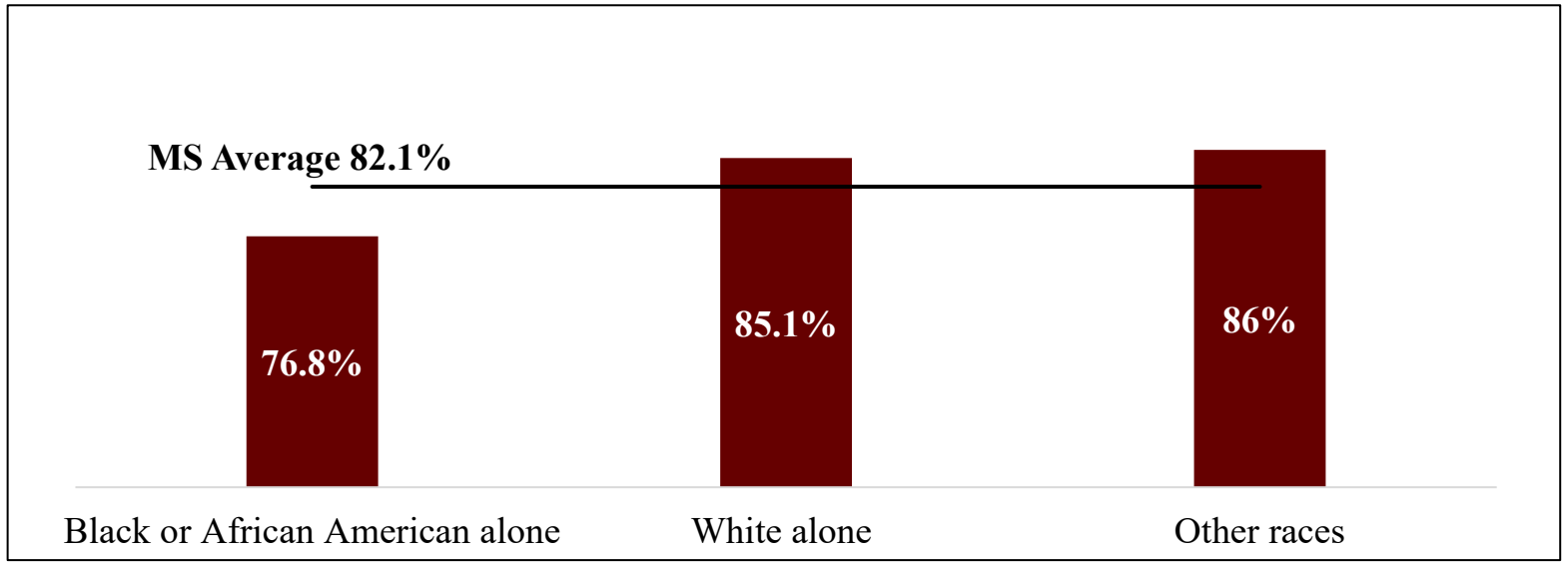


Broadband (any type) adoption by income groups: urban-rural status



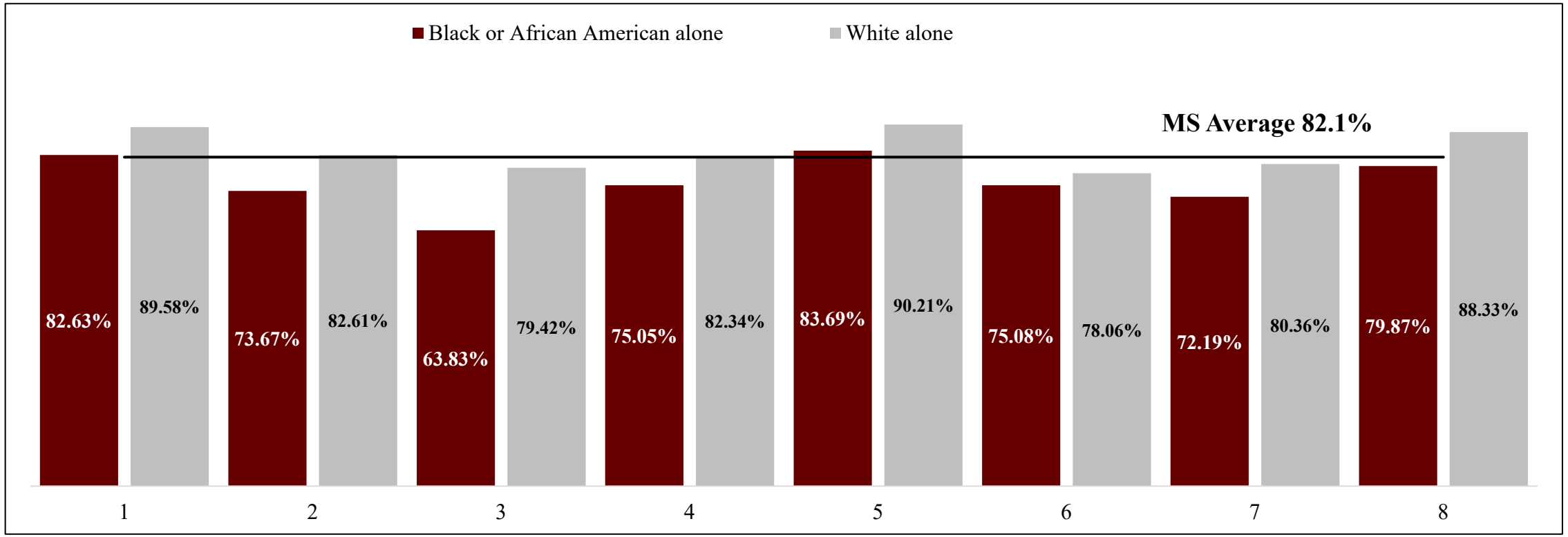
- Poor rural households: 48.7% subscription rate lower than several benchmarks
  - State average (78%)
  - All MS rural areas (69.6%), and
  - Households with income less than $20,000 in MS (56.5%)

Broadband (any type) adoption (subscription rates) by race



- Among population owning a computer
- Black or African American alone
  - 8.3 percentage points below white alone
  - 5.3 percentage points below the state average

Broadband adoption by race in economic development regions



Key takeaways

- A substantial gap in broadband adoption
- Urban-rural disparities, particularly for fixed broadband (24.2% points)
  - Economic regions, including most rural areas, exhibit lower adoption rates
- Racial disparities: black or AA alone behind white alone and other races
- Low-income households' adoption rate:
  - 21.5% points below the state average, widening to 29.3% points when combined with rural areas
  - Possibly due to affordability, limited broadband availability, digital skills gaps, and lower broadband deployment in rural areas
- Further study is needed to determine major barriers hindering broadband adoption

Thank you!

Any Questions?

References

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4. USDA Economic Research Service. 2013 Rural-Urban Continuum Codes. 2020. https://www.ers.usda.gov/data-products/rural-urban-continuum-codes/
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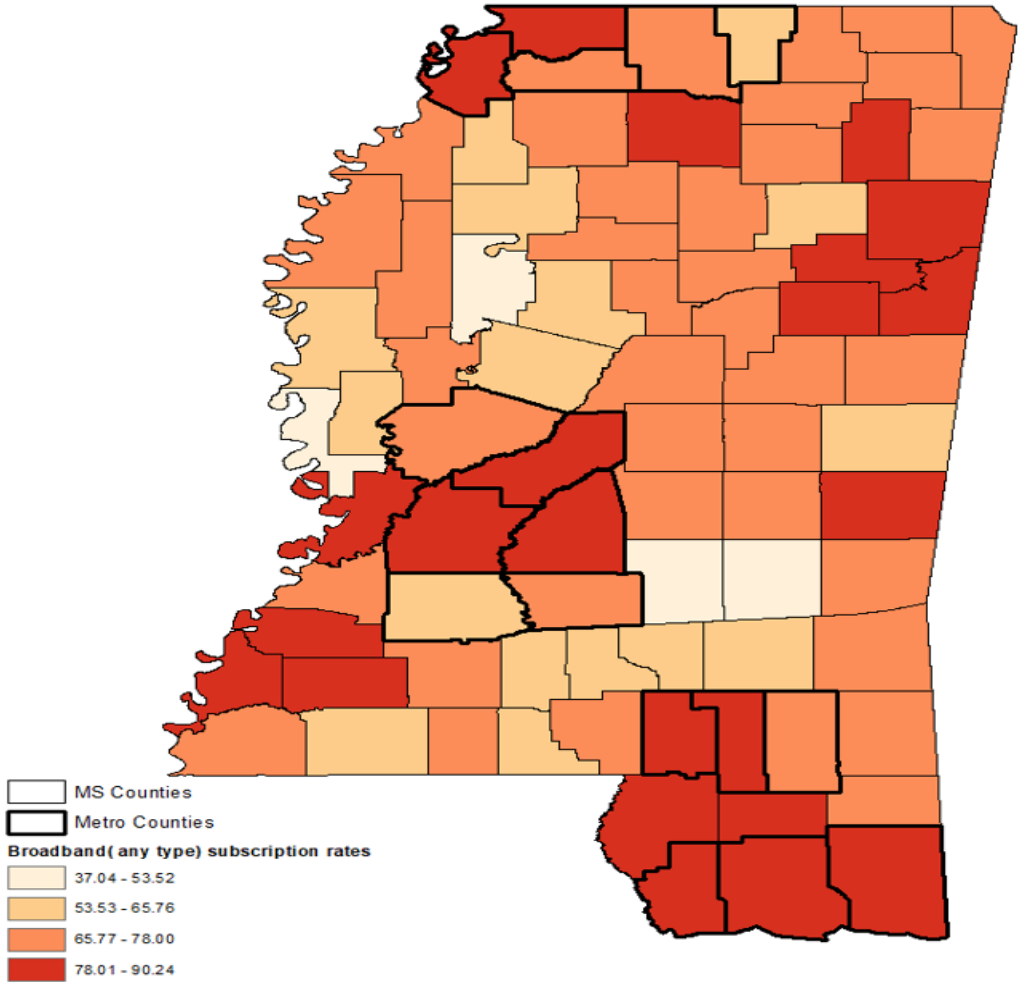
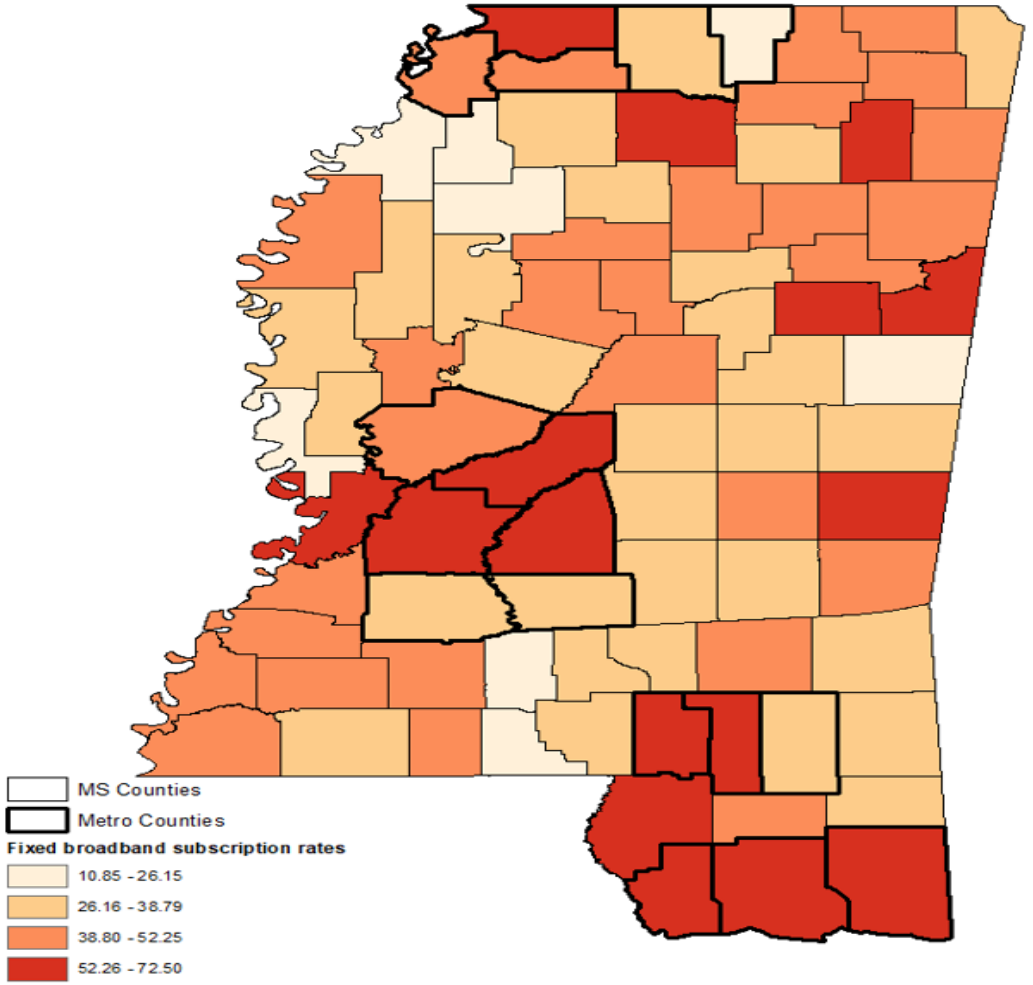
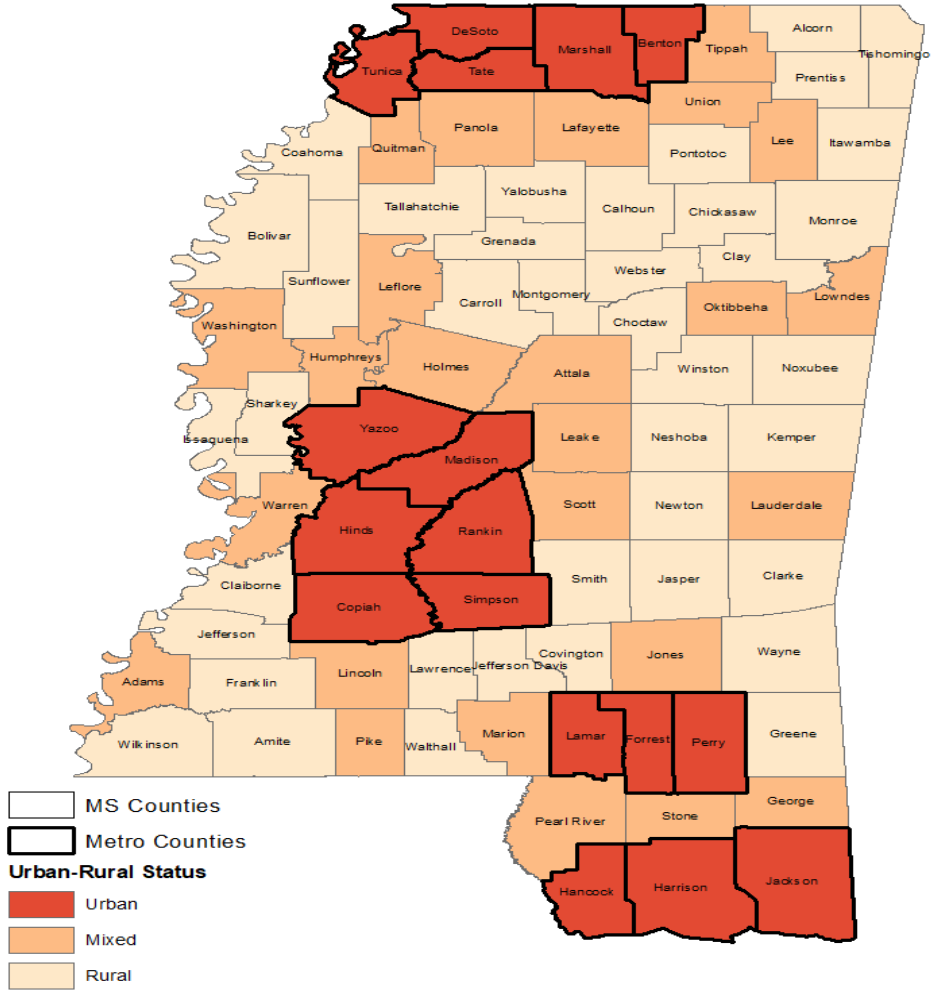
Broadband (any type left, fixed right) subscription rates in MS counties





Urban, mixed, and rural areas by counties in Mississippi



Broadband adoption in MS by income groups

Table 1: Comparison of internet subscription by income groups in Mississippi

Internet Subscription	Less than $20,000	$20,000 to $74,999	$75,000 and above
Broadband	56.54%	78.38%	91.48%
Dialup	0.37%	0.26%	0.17%
No Internet	43.26%	21.36%	8.36%
Total households	2,34,351	5,15,643	3,58,676

Broadband adoption by income groups and urban-rural status

Table 1: Comparison of internet subscription by income groups in urban, rural, and mixed areas in Mississippi

Internet subscriptions	Urban	Mixed	Rural
	Less than $20,000		
Broadband	64.51%	54.33%	48.73%
Dialup	0.25%	0.44%	0.46%
Non-Internet subscribed	35.32%	45.44%	51.05%
Total households	86,200	83,900	64,251
	$20,000 to $74,999		
Broadband	83.81%	75.15%	71.52%
Dialup	0.17%	0.32%	0.36%
Non-Internet subscribed	16.01%	24.53%	28.12%
Total households	24,1945	1,55,438	1,18,260
	$75,000 and above		
Broadband	94.17%	88.84%	87.27%
Dialup	0.08%	0.20%	0.37%
Non-Internet subscribed	5.75%	10.96%	12.36%
Total households	1,96,110	99,550	63,016