BROADBAND EXPANSION AND RURAL ECONOMIC DEVELOPMENT

what does REMI say? sm

Presented by Regional Economic Models, Inc.

Historically Motivated Issue

- Rural electrification of the 1930s
  - Rural electric cooperatives
  - Connecting rural economies to the rest of the country
  - Necessary for economic development
- Broadband expansion 2020s
  - Growing reliance on virtual connectivity (COVID-19)
    - Education, labor access, employment, health
  - Necessary for economic development

Why is Broadband Important?

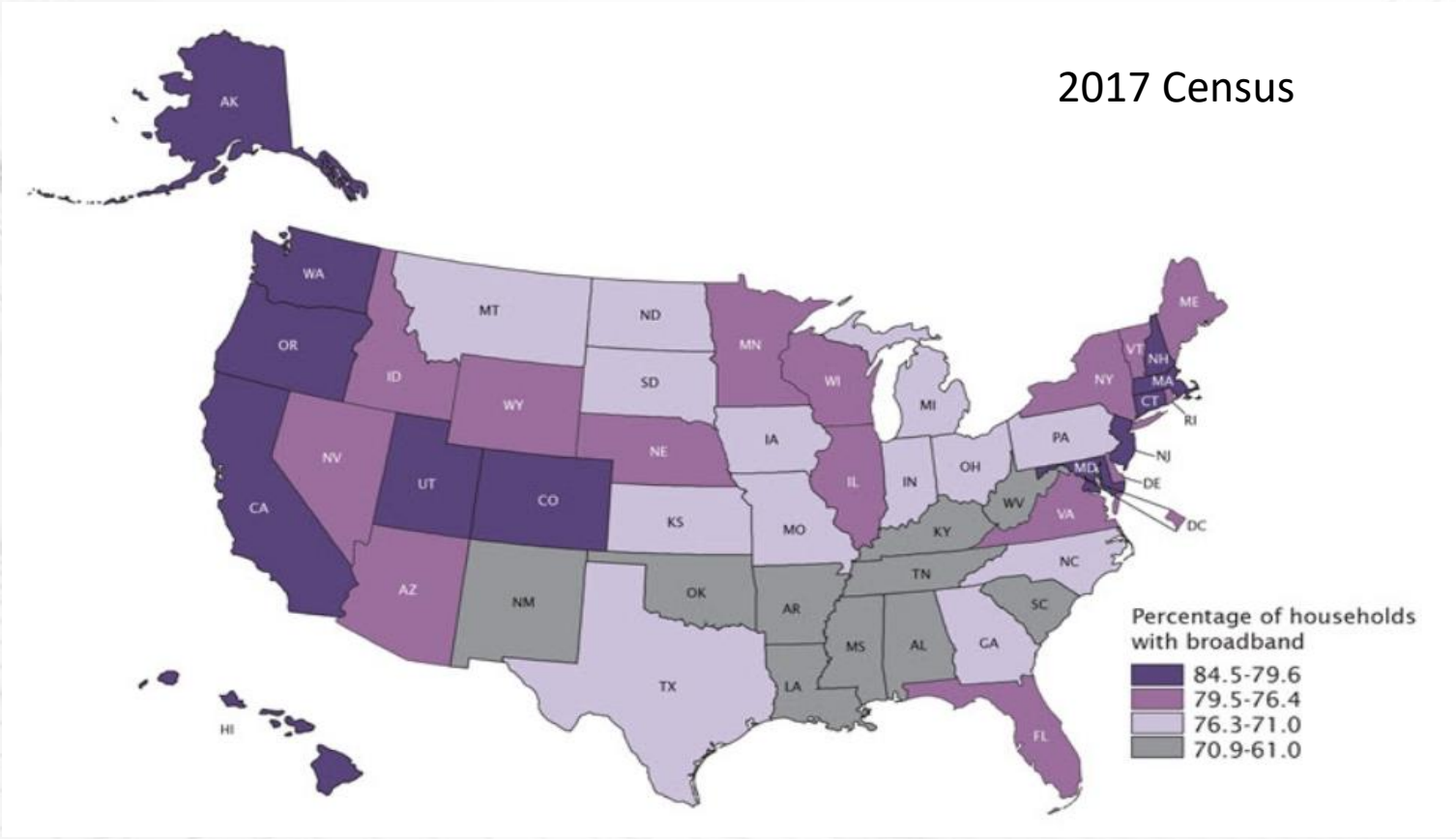
- Increases access to Information and Communication Technology (ICT)
- Competitiveness
- Labor access to remote work
- Alleviate urban congestion with less commuting
- Access to online educational resources and institutions
- Innovation
- Lowers consumer search and information cost
- COVID-19

Why is Broadband Important for Rural Economies?

- Competitiveness
  - Site selection
  - Local business access to larger markets and cooperative opportunities
- Economic Diversity
  - Access to remote work
  - Attract new business
- Population improvement
  - Access to remote work
  - Amenity
- Equity
  - Remote access to educational resources

The Digital Divide

2017 Census

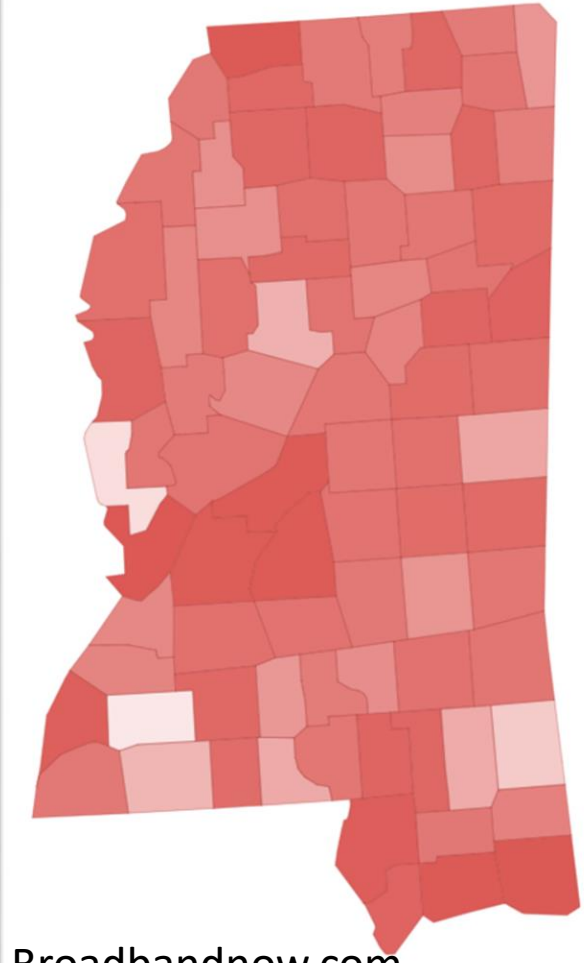


[1] Broadband internet refers to households who said "Yes" to one or more of the following types of subscriptions: DSL, cable, fiber optic, mobile broadband, satellite or fixed wireless.

Cencus.gov

Mississippi Broadband Access by County

Key:
Light: 0% coverage
Medium: 50% coverage
Dark: 100% coverage



Broadbandnow.com

% population with access to 25mbps download speed coverage.
Broadbandnow.com

Mississippi County Breakdown

County	Pop	% pop with 25mbps BB access	% pop in poverty	% pop that is non-white
Amite	12,412	1.90%	22.20%	41.90%
Franklin	7,733	9.20%	20.10%	36.50%
Issaquena	**1,361**	**14.40%**	**40.50%**	**64.60%**
Perry	12,006	22.50%	22%	21.30%
Greene	13,645	26.30%	22.60%	26.90%
Carroll	10,070	27.50%	17.90%	34.50%
Walthall	14,477	28.80%	23.40%	45.90%
Kemper	9,943	41.00%	27.50%	65.70%
Lawrence	12,633	42.80%	18.70%	33.80%
Webster	9,768	51.70%	18.10%	20.80%
Chickasaw	17,193	54.60%	20.30%	47.10%
Covington	18,978	54.70%	26.50%	37.90%
Sharkey	4,404	57.60%	33.60%	72.50%
Benton	8,232	57.70%	22.10%	37.30%
Pontotoc	31,618	58.00%	16.50%	17.80%

County	Pop	% pop with 25mbps BB access	% pop in poverty	% pop that is non-white
Clarke	15,770	59.90%	21.60%	36%
Jasper	16,505	61.00%	19%	54.70%
Choctaw	8,277	62.20%	20.40%	32.10%
Tishomingo	19,441	62.80%	15.20%	4.20%
Quitman	7,187	64.80%	37.60%	73.30%
Marion	24,990	65.00%	27.20%	33.60%
Itawamba	23,462	65.30%	13.70%	8.90%
Holmes	17,737	65.50%	33.20%	83.80%
Clay	19,640	65.70%	21.90%	60.30%
Tallahatchie	14,158	65.90%	33.40%	59.60%
Claiborne	9,089	66.40%	36.30%	88%
Smith	16,009	66.60%	16.80%	25%
Prentiss	25,255	67.80%	19.80%	16.40%
Attala	18,437	68.10%	23.70%	44.80%
Union	28,507	69.00%	13.40%	18.50%

Broadbandnow.com, IndexMundi, Mississippi demographics by Cubit

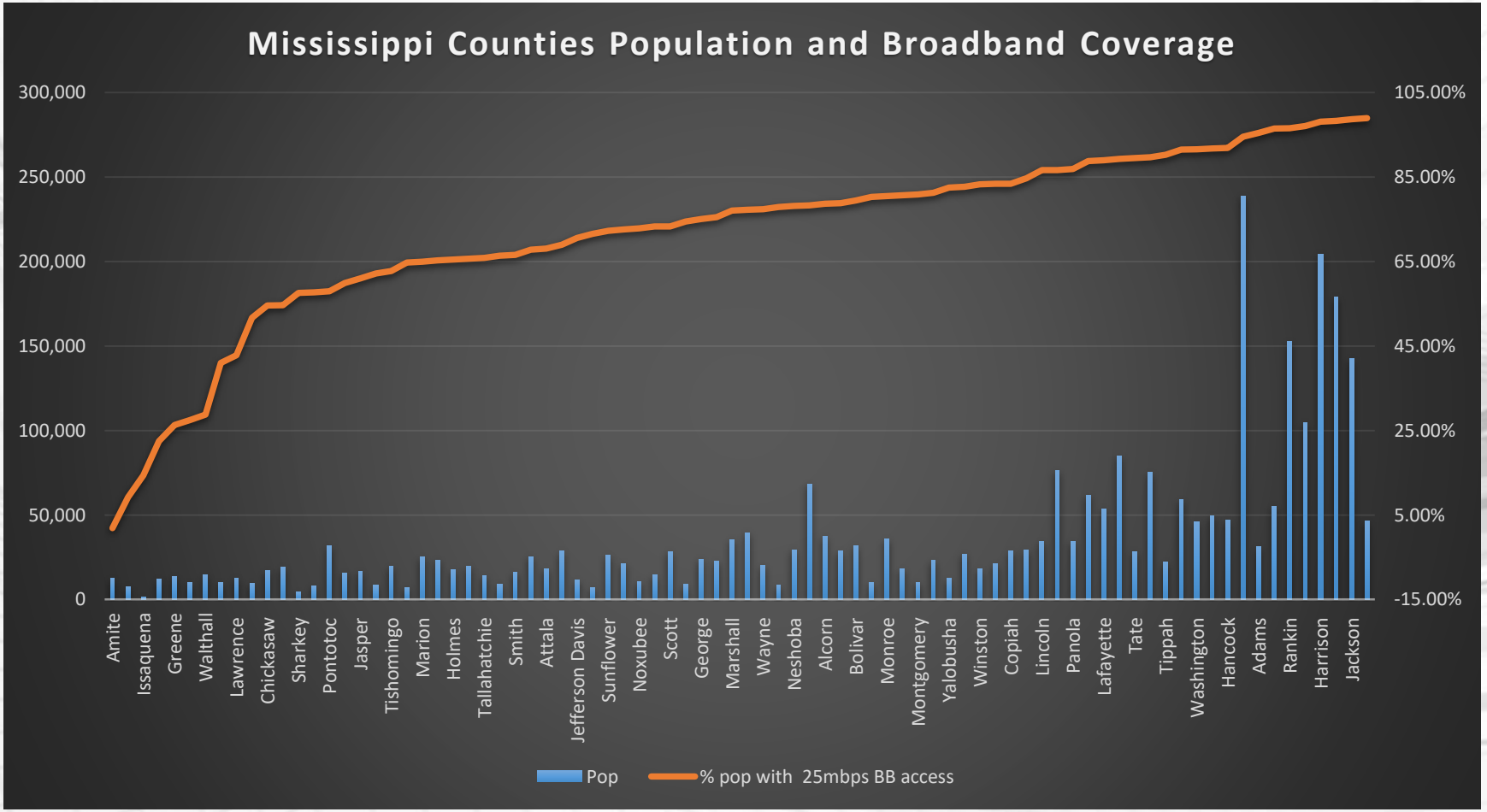
Mississippi County Breakdown

County	Pop	% pop with 25mbps BB access	% pop in poverty	% pop that is non-white
JeffersonDavis	11,339	70.60%	26%	61.50%
Jefferson	7,225	71.60%	35.50%	86.40%
Sunflower	26,168	72.30%	32.60%	75.30%
Newton	21,360	72.60%	21.20%	38.40%
Noxubee	10,700	72.90%	29%	73.50%
Calhoun	14,499	73.30%	21.30%	30.20%
Scott	28,332	73.30%	25.50%	41.60%
Wilkinson	8,875	74.50%	30.30%	71.70%
George	23,917	75.10%	16.10%	10.30%
Leake	22,792	75.50%	25.40%	50.50%
Marshall	35,599	77.10%	20.90%	49.30%
Pike	39,532	77.30%	30.60%	55.60%
Wayne	20,373	77.40%	21.40%	41.60%
Humphreys	8,389	77.90%	37%	77.60%
Neshoba	29,332	78.20%	26.90%	40.70%
Jones	68,352	78.30%	19.90%	31.80%
Alcorn	37,090	78.70%	18.20%	14.40%
Yazoo	28,565	78.80%	37.10%	59.60%
Bolivar	31,848	79.50%	29.40%	65.90%
Tunica	9,988	80.30%	26.50%	79.80%
Monroe	35,673	80.50%	16.40%	32%
Stone	18,276	80.70%	20.10%	22.20%
Montgomery	10,068	80.90%	22.90%	46.80%
Coahoma	23,255	81.30%	35.90%	78.50%
Yalobusha	12,367	82.50%	18.10%	40.60%
Simpson	26,888	82.70%	19.80%	37.20%

County	Pop	% pop with 25mbps BB access	% pop in poverty	% pop that is non-white
Winston	18,229	83.30%	21%	49.40%
Grenada	21,088	83.40%	22.30%	44.60%
Copiah	28,501	83.40%	26.50%	53.60%
Leflore	29,222	84.70%	35.10%	76.50%
Lincoln	34,320	86.70%	19.10%	31.90%
Lauderdale	76,279	86.70%	25.50%	46.40%
Panola	34,190	86.90%	21.80%	51.40%
Lamar	61,969	88.80%	14%	24.10%
Lafayette	53,590	89.00%	18%	27.30%
Lee	85,072	89.30%	13.10%	32.80%
Tate	28,404	89.50%	17.60%	33.10%
Forrest	75,224	89.70%	24%	40.80%
Tippah	22,018	90.30%	16.90%	19.30%
Lowndes	59,150	91.50%	23.10%	47.20%
Washington	46,057	91.60%	32.60%	74.10%
Oktibbeha	49,512	91.80%	27.30%	42.20%
Hancock	46,961	91.90%	17.50%	12.10%
Hinds	238,797	**94.60%**	**19.40%**	**74.50%**
Adams	31,266	95.50%	29.40%	55.20%
Pearl River	55,219	96.50%	18.10%	15.60%
Rankin	152,677	96.60%	9.60%	24.10%
Madison	104,562	97.10%	9.40%	42.40%
Harrison	204,502	98.10%	20%	31.90%
DeSoto	178,975	98.30%	9%	32.30%
Jackson	142,376	98.70%	17.90%	26.70%
Warren	46,519	99.00%	19.20%	51.50%

what does REMI say? [sm]

Mississippi Population and Broadband Coverage



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Broadband Policy

- Biden campaign promises
  - Expand broadband or wireless broadband via 5G
  - Invest $20 billion in rural broadband infrastructure
  - Increase funding for rural broadband expansion grants
    - "Community Connect"
  - Support municipally owned broadband networks
  - Digital Equity Act
    - Broadband access and affordability
- FCC
  - Emergency Broadband Benefit Program
    - Congress directed $3.2 billion to help Americans pay broadband bills

Joebiden.com, (Wayne Rash, 2021)

Broadband Policy Modeling

- Why Model?
  - Grant and other funding application
  - Know how to invest in your regional economy
  - Know your regional economic impact
  - Analyze and increase efficacy of economic development efforts
  - Make data driven project proposals
  - Make data driven arguments to defend projects and spending

Modeling Broadband Policy

- Affect the 30 Mississippi counties with broadband coverage below 70%
- Increase labor productivity in Manufacturing and Service industries
  - 5% Manufacturing
  - 10% Services
    - Fornefeld, Delaunay, Elixmann with MICUS on behalf of the European Commission
- Increase government spending in Mississippi
  - Broadband affordability and maintenance funding
- Increase construction and telecommunication sales
  - Construction of infrastructure
  - Internet consumption

(Fornefeld et al., 2008)

Conclusions

- Broadband expansion is necessary for rural economic development
  - Jobs, income, population
- Economic modeling is necessary to determine the efficacy of economic development initiatives in a region

Questions

- Put your questions in the webinar questions chat
- You may email Alexandra Burelbach at Alexandra.Burelbach@remi.com with further questions or requests