

# #SMARTer Together

**Webinar Series**  
**Thursdays at Noon**



# Importance of Investing in Rural Transit in Georgia

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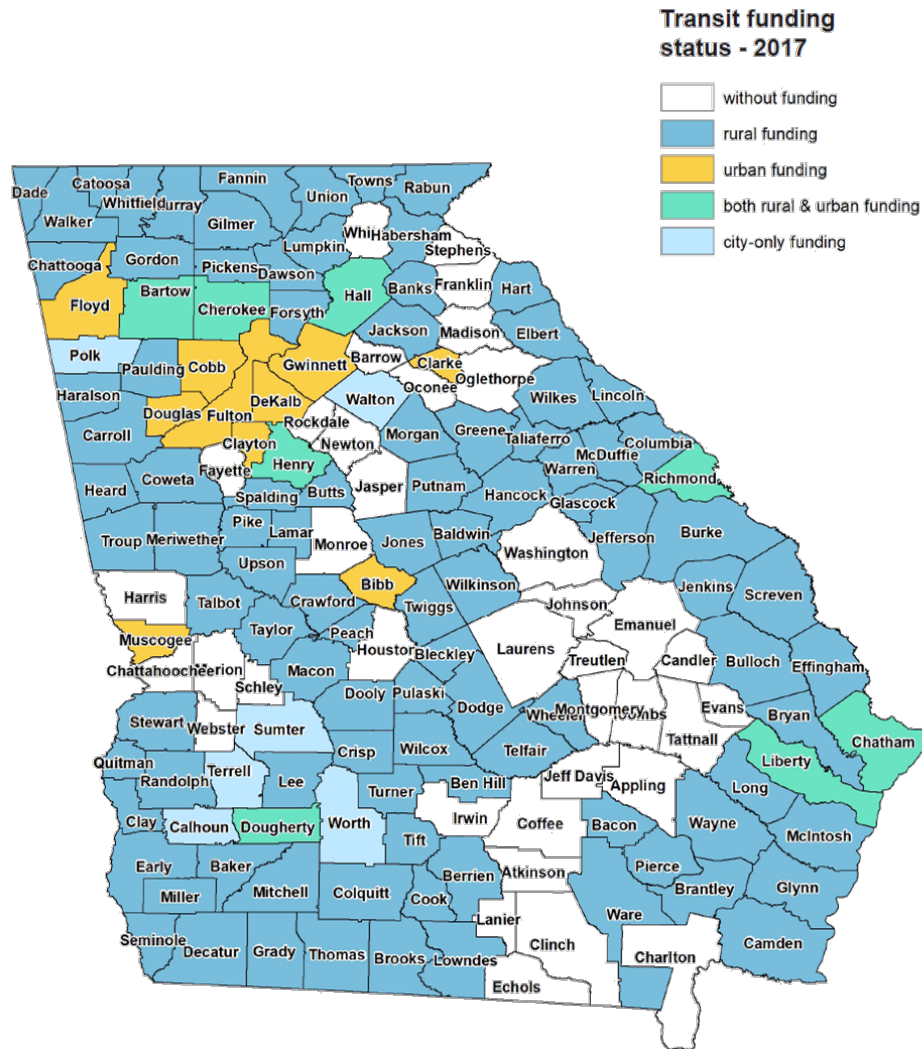
May 14, 2020

# Transit in Georgia





# Transit Operations in Georgia



- Georgia has a mix of urban and rural transit operators
- GDOT is responsible for providing oversight for 80 rural transit systems and 5 small urban operators

# Research Scope

- **Rural Areas: (FTA, 2018 )**

Serves communities with a contiguous population of 50,000 or less

- **Rural Transit:**

Those receiving Section 5311 Non-Urbanized Area Formula Funding and who report to the Rural National Transit Database (Rural NTD) .

- **In This Study:**

- Covered more than 80 rural transit agencies;
- Provided demand-response service to 114 counties, which count for 71.7% of all counties in Georgia.

- **Small Urban : (FTA, 2018 )**

Serves communities with population between 50,000 and no more than 200,000

- **Small Urban Transit:**

Those receiving Section 5307 Urbanized Area Formula Funding.

- **In This Study:**

- Include 9 small urban transit agencies;
- 8 of them provide both fixed bus route service and demand-response service service for 8 counties;
- In Liberty, only fixed bus route is available by public transit.

# Data

Data Source	Main Variables	Year
National Transit Database (NTD)	<ol style="list-style-type: none"><li>1. Capital costs</li><li>2. Operating costs</li><li>3. Partially operated cost (POS)</li><li>3. Service data (operating statistics)</li><li>4. Fleet data</li><li>5. Fare revenue</li><li>6. Contract revenue</li></ol>	FY 2016, 2017, 2018 (3 Year average)
American Community Survey (ACS)	<ol style="list-style-type: none"><li>1. County-level population and demographic data</li><li>2. County-level transportation-in-need statistics (e.g. population aged 65 or older/ below the poverty level/ without access to a vehicle)</li><li>3. County-level transportation-in-use statistics</li><li>4. County-level commute statistics</li></ol>	FY 2017 (5 Year average)

# Rural Transit Costs

## Operating Costs

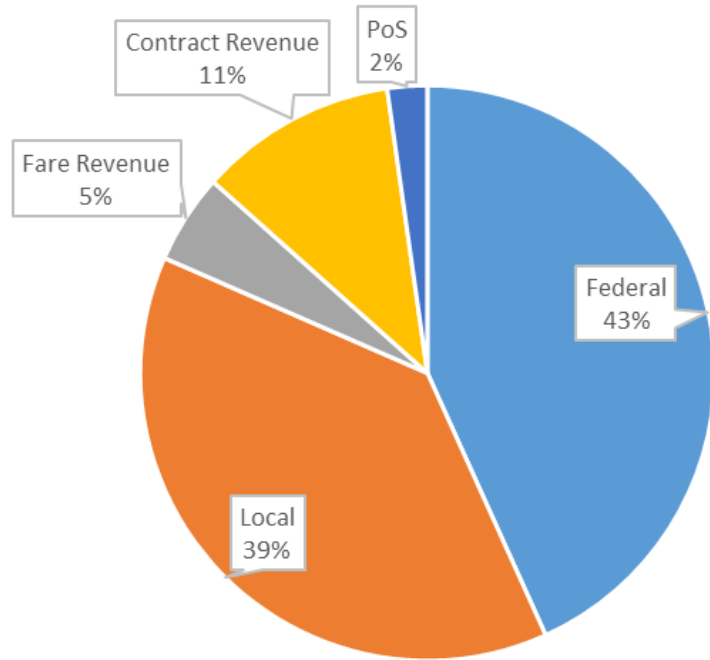
- Costs of labor, fringe benefits, materials and supplies (e.g., fuel), maintenance, office space, equipment, and administrative costs
- Total operating costs for rural transit in Georgia amounted to \$30-32 million

## Capital Costs

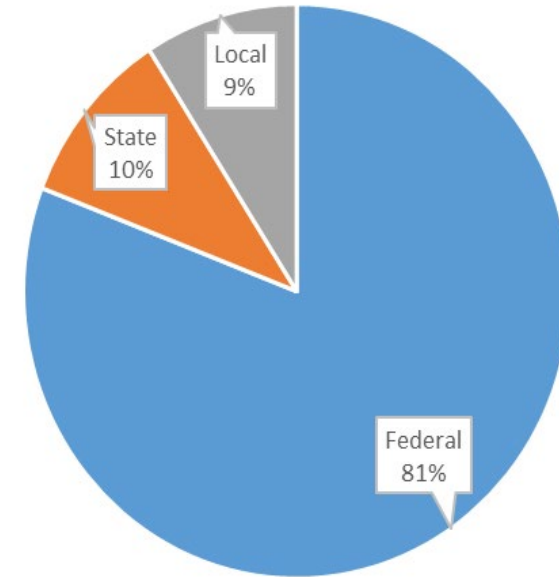
- Costs towards long-term acquisitions and leases of physical assets such as buses, garages, and maintenance facilities as well as small purchases like computers and tablets
- Total capital costs for rural transit amounted, on average, to \$5 million or about 1/6th of the operating costs

# Rural Transit Costs by Funding Sources

Operating Costs



Capital Costs





# Model to Estimate Transit Benefits

## Economic Benefits



- **Total Output**
- **Value Added in Production**
- **New jobs Created**
- **Household Income and Tax Revenue**

### *Direct Effects:*

Initial spending that is undertaken by transit agencies

### *Indirect Effects:*

Initial spending creates demand for goods and services among firms operating in the supply chains of related industries

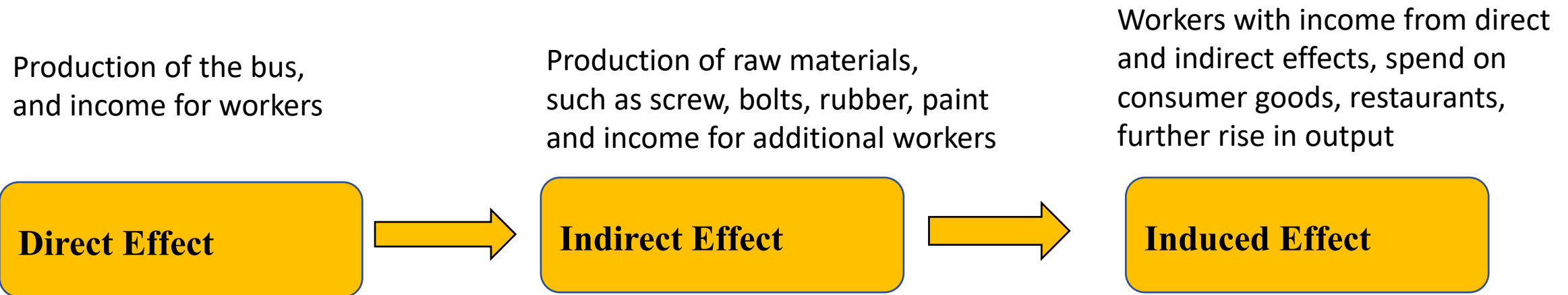
### *Induced Effects:*

Economic activity resulted from the income generated through both the direct and indirect effects.

**Multiplier Effect**

# Economic Benefits from Transit: Example

**Transit Agency purchases a bus**



# Methodology

- Statewide multipliers used to estimate impact of transit expenditure on total output, employment, wages, value-added, and tax revenues
- Economic benefits calculated separately:
  - Rural and Small Urban Transit
  - Operating and Capital costs
- Model assumes transit related costs spent within state:
  - 90% of the operating costs and 50% of capital costs
  - 90% OR 25% of capital costs as alternate scenarios
- Analysis based on Impact Analysis for Planning (IMPLAN)

# Rural Transit Benefits

## Economic Benefit

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	75.2	908,018	1,257,392	2,861,065
Indirect Effect	753	17,059,947	22,738,699	45,528,117
Induced Effect	114.1	5,151,976	9,551,344	16,216,438
Total Effect	942.3	23,119,940	33,547,436	64,605,620

## Fiscal Benefit

	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations	Total
State and Local Taxes	6,464	0	1,498,376	627,494	47,927	2,180,261
Federal Taxes	2,219,271	149,786	189,795	1,659,474	395,395	4,613,721

# Rural Transit Benefits: Operating Costs

Sector	Employment	Labor Income	Value Added	Output
Transit and ground passenger transportation	598.7	7,228,367	10,009,586	22,775,783
Local government passenger transit	50.7	3,373,759	2,880,150	5,820,911
Insurance agencies, brokerages, and related activities	13.2	969,670	1,294,031	2,520,544
Services to buildings	9.8	182,894	217,476	382,268
Real estate	8.1	161,036	1,061,587	1,511,662
Wholesale trade	7.6	668,225	1,287,498	1,857,244
Employment services	7.5	311,187	456,841	609,761
Management consulting services	7	595,716	536,632	837,935
Full-service restaurants	6.9	155,878	171,281	338,399
Limited-service restaurants	6.3	115,231	279,524	520,195

# Rural Transit Benefits- Capital Costs

## Economic Benefit: Different Scenarios

	Scenario 1 (50% spent in-state)		Scenario 2 (90% spent in-state)		Scenario 3 (25% spent in-state)	
Impact Type	Employment	Output	Employment	Output	Employment	Output
Direct Effect	75.2	2,861,065	135.4	5,149,918	37.6	1,430,533
Indirect Effect	10.6	1,697,175	19.5	3,059,974	5.4	849,993
Induced Effect	9.8	1,398,363	18.1	2,518,569	5	699,602
Total Effect	95.6	5,956,603	173	10,728,461	48	2,980,128



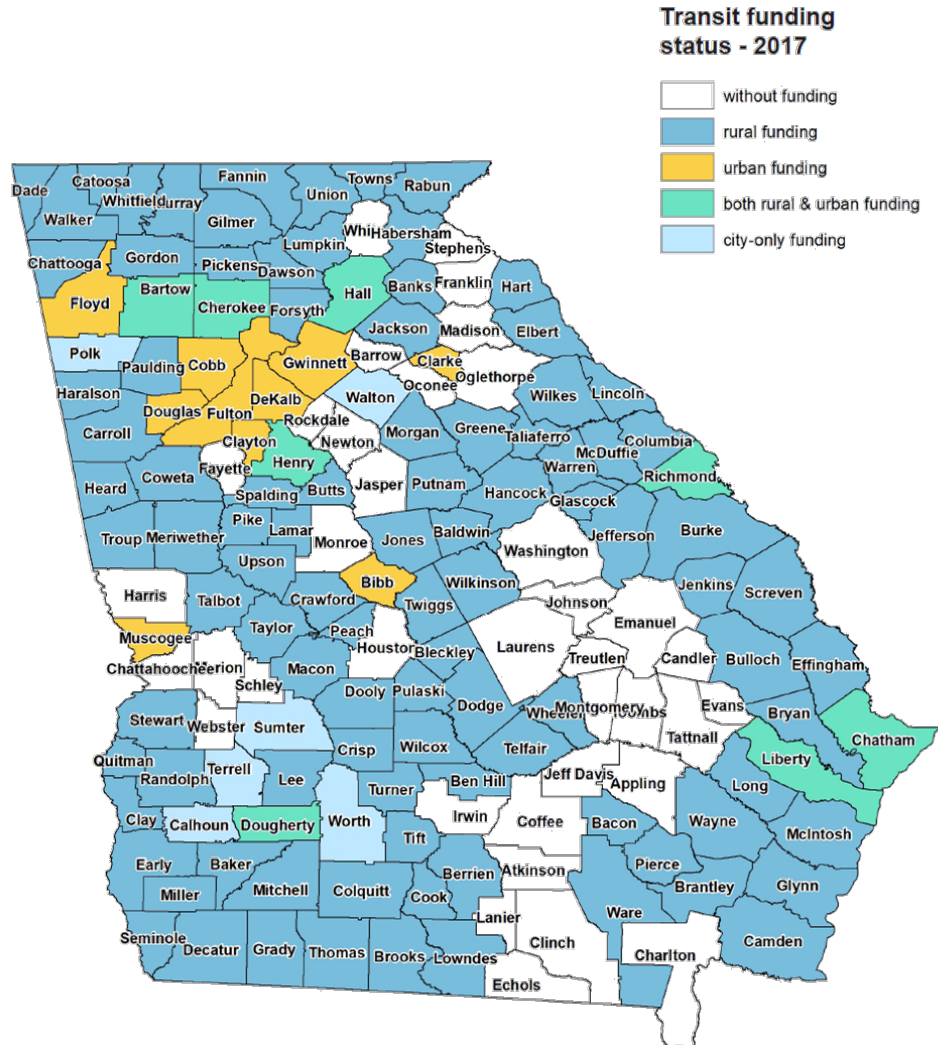
# Summary of Main Findings

- A total of \$31.5 million was spent, on average, annually on rural transit.
- We estimate a total benefit of \$64.6 million in terms of increase in output.
- Thus, every dollar spent on rural transit, translated to \$2.05 in economic benefits.
- This return on investment lies between the range of \$0.14 to \$3.25 in economic benefits found in the literature.

# Summary of Main Findings

- Expenditure on rural transit led to the creation of more than 900 new jobs annually.
- A large majority of the jobs resulted from the multiplier effect of transit expenditure.
- In addition to transportation sector, jobs were created in insurance agencies, real estate, wholesale trade, and restaurants.
- A dollar spent on rural transit led to \$0.22 in tax revenue.
- State and local taxes benefitted largely from an increase in sales tax revenue.
- Federal tax revenue was generated from additional household income.

# Where are Transit Investments Needed? – Current Service by County



Transit in GA	# counties	% counties
No service	37	23%
Service	122	77%
Total	159	100%

# Where are Transit Investments Needed? – Current **Weekday** Service Hours

Starting time	# systems	% systems
24 hour service	5	6%
4:00 AM	2	2%
6:00 AM	11	13%
6:30 AM	3	4%
7:00 AM	11	13%
7:30 AM	13	16%
8:00 AM	37	45%
9:00 AM	1	1%

33% end service  
before 5 PM

Almost 50% start  
at 8 AM or later

Ending time	# systems	% systems
24 hour service	5	6%
12 noon	1	1%
2:30 PM	1	1%
3:00 PM	2	2%
3:30 PM	2	2%
4:00 PM	14	17%
4:30 PM	8	10%
5:00 PM	26	31%
6:00 PM	11	13%

# Where are Transit Investments Needed? – Current Trip Purposes

Trip Purpose	Number of Trips	Percent of Trips (%)
Medical	694,919	25.7
Shopping	537,846	19.9
Employment	312,687	11.6
Social/Recreation	160,517	6.0
Behavioral Health	154,001	5.7
Social Assistance	136,506	5.1
Adult Daycare/Senior Center	122,512	4.5
Other	117,962	4.3
Dialysis	88,616	3.3
Child Care	74,108	2.8

Note: Based on sample of data from RouteMatch routing data for GDOT as described in Wolfe (2019).

# Extending Rural Transit in Georgia

- Scenario: Extend and/or initiate service from 9 AM – 4 PM Monday through Saturday in all rural counties
- Methodology: used data on existing rural transit trips to estimate increase in ridership, operating costs, and capital costs
  - 5 systems offered 24 hour service
  - 6 systems offer Saturday service (5 are 24 hours, 1 is 4 AM – 4 PM)



# Extending Service

	<b>Ridership Gains</b>	<b>Annual Cost (Operating)</b>	<b>Annual Cost (Vehicles)</b>	<b>Total Cost</b>	<b>New Vehicles Required</b>
Extending current service to baseline level (6 AM to 4 PM Monday–Saturday)	136,559	\$2,015,386	\$837,000	\$2,852,386	93
Initiating service in counties without service	276,154	\$5,846,849	\$423,000	\$6,269,849	47
Total	412,713	\$7,862,235	\$1,260,000	\$9,122,235	140
FY18 Georgia levels	664,856	\$30,229,545	\$4,446,000	\$34,675,545	494
% FY18 Georgia levels	62%	26%	28%	26%	28%

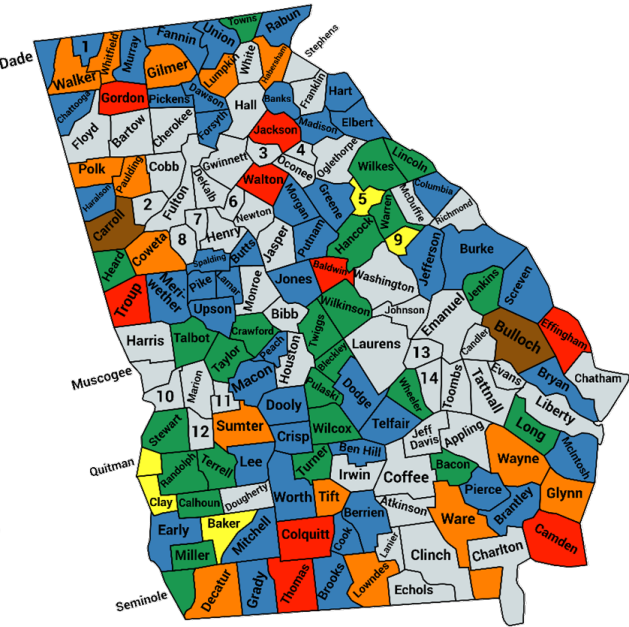
Analysis suggests 4 in 10 rural transit trips are currently not being served, majority  
of these are in low density counties

# Current Rural Transit is Linked to Population

FY19 Rural Appropriation	# Counties Offering Rural Service	# Counties Not Offering Rural Service	% Counties Not Offering Rural Service
25K – 49K	4	6	60%
50K – 99K	25	13	34%
100K – 199K	53	19	26%
200K – 299K	18	3	14%
300K or more	11	2	15%

5311 Appropriations

- \$500K-\$587K
- \$300K-\$499K
- \$200K-\$299K
- \$100K-\$199K
- \$50K-\$99K
- \$22K-\$49K



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Economies of scale appear to kick in around \$50K to \$100K, suggesting regionalized rural transit may be a viable option

# Next Steps – Participate in Statewide Plan!

- GDOT has drafted a statewide transit plan and the final report is ready for review!
- Provide any comments you may have to GDOT by **May 22, 2020**. The documents for your review can be accessed and downloaded through the following link <https://we.tl/t-WT5l6p8Ou3>.
- Once reviewed, please visit the following link to provide any comments you may have: <https://www.surveymonkey.com/r/SWTRPreview>.

# **Thank you to our project sponsor!**

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