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Trends in Georgia Highway Funding, Urban Congestion, and Transit Utilization

Peter Bluestone

**Fiscal Research Center
Andrew Young School of Policy Studies
Georgia State University
Atlanta, GA**

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Introduction

In the 2008 legislative session of the Georgia General Assembly several proposals to increase funding for transportation were advanced, but none passed. It is expected that the issue of transportation funding will be considered again in the coming session. The purpose of this report is to provide some context for future proposals. In particular, this report tracks transportation funding in Georgia and makes comparisons with a selected group of six states: Florida, North Carolina, South Carolina, Ohio, Texas, and Virginia. These states are examined as three are border states, while the others have economies that Georgia competes against as well as major metropolitan areas that suffer from similar transportation issues. We examine transportation revenue for fiscal years 2000 and 2005, and consider federal, state, and local funding sources. We also then examine urban congestion and transit utilization.

Georgia experienced a transportation funding decline in real terms over the period, which is contrary to the experience of the six comparison states. In summary:

- Georgia experienced a decrease in total inflation-adjusted state highway funding between 2000 and 2005, from \$2.1 billion to \$1.8 billion, a 14.4 percent decline.
- Georgia experienced a decrease in total inflation-adjusted local highway funding between 2000 and 2005, from \$1.2 billion to \$953 million, a 20.7 percent decline.
- Georgia's share of transportation funding from state own sources in 2005 was the lowest of all the comparison states.
- Georgia had the greatest increase in percent of urban interstate highway miles that were heavily congestion from 2000 to 2005.
- In 2005, Georgia collected 3.9 cents in transportation receipts per daily vehicle mile traveled, ranking it last among the comparison states.
- Atlanta had the highest annual congestion cost per peak traveler of all the sample cities in the comparison states.
- Atlanta experienced the largest declines of all the sample cities in the comparison states in passenger trips per capita and annual passenger miles per capita, declining by 34.4 percent and 24.9 percent respectfully.

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This report proceeds as follows. The first section examines federal, state, and local sources of Georgia highway funding. In the second section, we report state transportation revenue on a per capita and per daily vehicle mile traveled basis. In the third section, we examine state urban highway congestion, while in the fourth section we discuss measures of urban congestion and transit utilization. The fifth section offers some concluding observations.

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I. Federal, State, and Local Sources of Georgia Highway Funding

Georgia generally experienced a decline in real terms in all categories of state highway funding between 2000 and 2005. We examine the different components of state and local funding and compare their changes over time. In addition, we compare the composition of state transportation funding in Georgia with the six states of interest.

A. State Funding for Highways 2000 and 2005

Table 1 provides state transportation revenue, adjusted for inflation, by source for fiscal year 2000 and 2005 for Georgia, the six comparison states and the U.S. average. Data for 2000 is adjusted for inflation in all tables to 2005 dollars (see Box 1 for an additional discussion of the data and terms used in the tables). As can be seen in Table 1, Georgia experienced a decrease in total state highway funding between 2000 and 2005, from \$2.1 billion to \$1.8 billion (Table 1 does not include local government spending). The top three funding categories in 2000 and 2005 for Georgia were: payments from the federal government, state highway user tax revenues (i.e., fuel taxes), and imposts and general funds. These three sources of funding accounted for 95 percent of total transportation funding, and the revenue from all three declined from 2000 to 2005.

Only in the category of bond proceeds did Georgia experience an increase in state highway funding, growing by approximately \$2.3 million. Bond proceeds were the smallest source of highway funding of the categories shown in Table 1.

While comparisons across states are difficult due to different populations, funding mechanisms, and the role of government in transportation, transportation revenue per capita is one reasonable measure to use for comparison. Georgia ranked sixth in 2000 and seventh in 2005 for total transportation receipts per capita. Georgia was also below the U.S. state average for total receipts per capita in 2000 and 2005. In 2000, Georgia collected \$256 in transportation receipts per capita, well below the U.S. state average of \$367. While in 2005, Georgia collected \$196 in transportation receipts per capita, compared to the U.S. state average of \$374 (see Table 1).

**TABLE 1. STATE FUNDING FOR HIGHWAYS – SUMMARY – 2000 AND 2005¹ RECEIPTS
(THOUSANDS OF DOLLARS EXCEPT TOTAL RECEIPTS PER CAPITA)**

	State Highway User Tax Revenues ²	Road And Crossing Tolls ²	Imposts And General Funds ³	Miscellaneous Income	Bond Proceeds ⁴	Payments From Federal Government	Total Receipts	State Population	Total Receipts Per Capita
State FY 2005									
Georgia	614,207	14,203	318,711	65,286	5,661	759,721	1,790,797	9,132,553	196
Florida	2,547,529	910,573	341,572	137,654	1,293,931	1,887,621	7,412,180	17,768,191	417
North Carolina	1,678,021	2,298	420,103	62,496	324,601	1,123,870	3,622,847	8,672,459	418
Ohio	2,399,633	182,449	-	44,184	149,274	1,082,671	3,922,994	11,470,685	342
South Carolina	582,211	9,630	2,233	11,569	140,191	809,654	1,582,471	4,246,933	373
Texas	3,356,112	180,496	33,004	296,601	1,525,748	3,203,191	8,778,673	22,928,508	383
Virginia	1,579,440	117,287	797,560	82,598	35,317	459,302	3,156,506	7,564,327	417
US State Avg.	964,239	124,622	150,477	56,791	227,881	606,409	2,172,597	5,813,864	374
State FY 2000*									
Georgia	697,043	24,292	464,027	90,162	3,390	814,040	2,092,952	8,186,000	256
Florida	2,218,588	637,878	112,901	144,467	309,561	1,137,570	4,612,005	15,982,000	289
North Carolina	1,404,784	1,797	627,054	92,888	0	833,141	2,959,664	8,049,000	368
Ohio	2,148,888	200,360	7,646	114,427	281,857	744,365	3,532,379	11,353,000	311
South Carolina	499,358	0	88,994	25,793	0	369,543	985,428	4,012,000	246
Texas	3,884,507	109,677	31,157	158,625	0	2,025,030	6,387,044	20,852,000	306
Virginia	1,649,210	99,796	454,669	63,450	248,080	543,606	3,109,291	7,079,000	439
US State Avg.	980,309	105,064	145,022	60,554	181,193	521,715	2,026,825	5,518,078	367

* Inflation adjusted to 2005 dollars.

¹ This table is generated from Table SF-21 of the Federal Highway Authority. Table SF-21 is compiled from reports of State authorities (See <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm>).

² Amounts shown represent only those highway-user revenues that were expended on State or local roads. Amounts expended on non-highway purposes are excluded.

³ Amounts shown represent gross general fund appropriations for highways reduced by the amount of highway-user revenues placed in the State General Fund.

⁴ Bonds issued for and redeemed by refunding are excluded.

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BOX 1. DATA AND DEFINITIONS

State and local highway funding data were obtained from the Federal Highway Authority. Congestion and transit data were obtained from the Texas Transportation Institute Urban Mobility and Congestion Statistics Report. Data for 2000 is adjusted for inflation to 2005 dollars in all tables. Below we define terms used in the tables for state and local government funding for highways, as well as congestion and transit.

State and Local Table Terms

State Highway-User Tax Revenues include taxes on motor fuel, motor vehicles, and motor carriers.

Local Highway- User Tax Revenues include taxes on motor fuel and motor vehicles.

State and local imposts are taxes or similar compulsory payments and include sales taxes, infrastructure and impact fees, liens, and licenses. In some areas local imposts include Property Taxes and Assessments.

Appropriations from General Funds- A legislative act authorizing the expenditure of a designated amount of public funds for a specific purpose.

State and Local Miscellaneous Income includes: interest on investments, traffic fines and penalties, parking garage fees, parking meter fees, and sale of surplus property, charges for services, and other miscellaneous receipts.

Congestion and Transit Definitions

Annual Delay per Traveler – Extra travel time for peak-period travel during the year divided by the number of travelers who begin a trip during the peak period (6 to 9 a.m. and 4 to 7 p.m.). Free-flow speeds (60 mph on freeways and 35 mph on principal arterials) are used as the comparison threshold.

Travel Time Index – The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.35 indicates a 20-minute free-flow trip takes 27 minutes in the peak period. Free-flow speeds are 60 mph on freeways and 35 mph on principal arterials.

Annual Passenger miles are the cumulative sum of the distances ridden by each passenger.

Unlinked Passenger Trips is defined as the number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

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Table 2 examines the sources of highway funding in fiscal year 2000 and 2005 and expresses them as a percentage of total state highway funding. Table 2 also includes the percentage change in total state highway funding from 2000 to 2005. Georgia's total funding for highways declined by 14.4 percent in the period 2000 to 2005. The composition of Georgia's funding sources for highways changed very little over the period, and thus this section focuses on the 2005 data. Georgia is the only one of the six comparison states that experienced a decline in funding. Georgia's largest share of highway funding was from the federal government. Federal government funds accounted for 42.4 percent of total state transportation receipts in 2005. This share was second, behind only South Carolina with 51.2 percent. Georgia was well above the U.S. state average of 27.9 percent for federal contributions to state highway funding.

The second highest category of state highway revenue by percentage for Georgia was state highway user tax revenues. State highway user tax revenues accounted for 34.3 percent of total Georgia state highway funding in 2005. This percentage ranked Georgia last among the comparison states in this category. Georgia also fell below the U.S. state average of 44.4 percent of total highway funds generated from state highway user tax revenues. This is not surprising as Georgia had the lowest state gas tax in both periods among the comparison states.

B. Local Government Funding for Highways

Local governments in Georgia did not fare much better than the state in the period 2000 to 2005 (Table 3). For the states of Georgia, Florida, North Carolina, and Ohio local government funding sources were estimated by the Federal Highway Authority for the year 2000. Thus, caution should be used when comparing individual categories across years. For instance, the amount of property taxes funding highways reported for Georgia increased from approximately \$2.2 million in 2000 to approximately \$100 million in 2005. Further research would be needed to ascertain the exact source of this increase. Possibly some existing local property taxes were shifted from the category of other local imposts in 2000 to the property tax category in 2005, while other local imposts (which can include property tax in some

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TABLE 2. PERCENTAGE OF TOTAL STATE FUNDING FOR HIGHWAYS 2000 AND 2005¹

	State Highway- User Tax Revenues ²	Road And Crossing Tolls ²	Imposts And General Funds ³	Miscel- laneous Income	Bond Proceeds ⁴	Payments From Federal Government	Total Receipts % Change 2000-2005
State FY 2005							
<i>Georgia</i>	34.3%	0.8%	17.8%	3.6%	0.3%	42.4%	-14.4%
Florida	34.4%	12.3%	4.6%	1.9%	17.5%	25.5%	60.7%
North Carolina	46.3%	0.1%	11.6%	1.7%	9.0%	31.0%	22.4%
Ohio	61.2%	4.7%	0.0%	1.1%	3.8%	27.6%	11.1%
South Carolina	36.8%	0.6%	0.1%	0.7%	8.9%	51.2%	60.6%
Texas	38.2%	2.1%	0.4%	3.4%	17.4%	36.5%	37.4%
Virginia	50.0%	3.7%	25.3%	2.6%	1.1%	14.6%	1.5%
US State Avg.	44.4%	5.7%	6.9%	2.6%	10.5%	27.9%	7.2%
State FY 2000*							
<i>Georgia</i>	33.3%	1.2%	22.2%	4.3%	0.2%	38.9%	---
Florida	48.1%	13.8%	2.4%	3.1%	6.7%	24.7%	---
North Carolina	47.5%	0.1%	21.2%	3.1%	0.0%	28.1%	---
Ohio	60.8%	5.7%	0.2%	3.2%	8.0%	21.1%	---
South Carolina	50.7%	0.0%	9.0%	2.6%	0.0%	37.5%	---
Texas	60.8%	1.7%	0.5%	2.5%	0.0%	31.7%	---
Virginia	53.0%	3.2%	14.6%	2.0%	8.0%	17.5%	---
US State Avg.	48.4%	5.2%	7.2%	3.0%	8.9%	25.7%	---

* Inflation adjusted to 2005 dollars.

¹ This table is generated from Table SF-21 of the Federal Highway Authority. Table SF-21 is compiled from reports of State authorities (See <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm>).

² Amounts used represent only those highway-user revenues that were expended on State or local roads. Amounts expended on non-highway purposes are excluded.

³ Amounts used represent gross general fund appropriations for highways reduced by the amount of highway-user revenues placed in the State General Fund.

⁴ Bonds issued for and redeemed by refunding are excluded.

TABLE 3. LOCAL GOVERNMENT FUNDING FOR HIGHWAYS – SUMMARY – 2005^{1,2} (THOUSANDS OF DOLLARS)

	Receipts	Road	Appropriations	Property	Other	Miscellaneous	Bond	Payments	Local
	Local Highway User Tax Revenues ³	And Crossing Tolls ³	From General Funds	Taxes	Local Imposts	Income	Proceeds ⁴	From Federal Government	Total Receipts
State FY 2005									
Georgia	9,105	-	506,316	100,667	234,976	77,526	7,937	11,208	953,036
Florida	655,864	69,973	489,831	254,122	1,036,462	227,071	276,687	111,160	3,773,032
North Carolina	13,343	-	433,948	4,057	11,219	33,713	30,118	1,935	664,529
Ohio	-	-	395,090	187,404	256,247	33,280	79,260	43	2,022,798
South Carolina	-	-	205,369	26,027	41,348	-	11,000	1,332	352,661
Texas	177,222	413,248	1,300,209	1,058,894	106,051	703,767	901,491	111,998	5,246,856
Virginia	149,635	33,131	515,860	37,000	22,779	63,742	102,808	5,318	1,287,695
US State Avg.	43,883	27,196	368,384	163,174	88,169	101,349	112,342	26,250	1,227,840
State FY 2000*									
Georgia ⁵	-	-	371,223	2,205	750,394	70,590	6,562	382	1,202,278
Florida ⁵	673,439	54,560	214,671	183,789	484,933	139,496	80,076	17,796	2,200,329
North Carolina ⁵	18,100	-	383,137	7,466	7,437	22,982	114,544	6,824	799,060
Ohio ⁵	-	-	248,001	222,525	34,990	107,283	17,504	-	1,597,916
South Carolina	-	-	139,465	66,647	34,301	-	-	2,875	308,232
Texas	175,000	315,557	1,287,256	825,625	-	740,039	481,655	103,056	4,396,832
Virginia	133,914	27,323	428,823	-	9,006	48,593	121,748	9,199	1,052,038
US State Avg.	41,460	22,378	317,196	138,209	71,603	103,863	70,588	20,845	1,058,354

* Inflation adjusted to 2005 dollars.

¹ This table is generated from Table LGF-21 of the Federal Highway Authority. Table LGF-21 summarizes the receipts of local governments for highways. Local government reporting is on a biennial basis with even-numbered years optional. This table is compiled from the reports of State and local governments (See <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm>).

² D. C. is excluded as there are no local jurisdictions within the District.

³ The amounts shown are identical with the receipts allocated for highways as shown on Table LDF from the Federal Highway Authority. Table LDF also includes allocations for mass transit, and nonhighway purposes (See <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm>).

⁴ Bonds issued for and redeemed by refunding are excluded.

⁵ Estimated by FHWA.

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states according to the Federal Highway Authority) declined from approximately \$750 million in 2000 to approximately \$235 million in 2005.

Georgia ranked relatively low among the six comparison states in total local receipts. In 2000, Georgia collected approximately \$1.2 billion in local highway funds. This was slightly above the U.S. state average of approximately \$1.1 billion. In 2005, Georgia ranked fifth in total local highway funds among the seven comparison states, collecting approximately \$953 million. This fell below the U.S. state average of \$1.2 billion.

The top three categories for local government funding for highways in Georgia were: appropriations from general funds, property taxes, and other local imposts. For 2005, Georgia collected approximately 88 percent of all local government funding for highways from these three sources. Table 4 shows the percentage by source of total local government funding for highways in 2000 and 2005. In 2005, Georgia received 53.1 percent of its funding from appropriations from the general fund, 10.6 percent of its funding from property tax, and 24.7 percent of its funding from other local imposts. Local funding for transportation declined in the period 2000 to 2005. Georgia collected 20.7 percent less in local funds in 2005 than it did in 2000. This is in contrast to a 16 percent increase in the U.S. state average. North Carolina was the only other state of the six comparison states to suffer a loss of local funding in the period, with a 16.8 percent decline.

C. Total Federal, State, and Local Funding for Highways

Combining funding for all levels of government, we find that Georgia's state share of funding is relatively small compared to the six other states. Table 5 lists federal total receipts, the state's own receipts, local own receipts, and total transportation receipts for the seven states.¹ Table 5 also examines the percent of

¹ Federal total receipts are the sum of federal monies paid to states and local governments. State own receipts are all state sources of transportation revenue minus federal and local receipts. Local own receipts are all local sources of transportation revenue minus federal and state receipts. Total state spending in Table 5 includes local government spending while Table 1 does not.

TABLE 4. PERCENTAGE OF TOTAL LOCAL GOVERNMENT FUNDING FOR HIGHWAYS – 2000 – 2005 ^{1,2}

	Local Highway User Tax Revenues ³	Road and Crossing Tolls ³	Appropriations From General Funds	Property Taxes	Other Local Imposts	Miscellaneous Income	Bond Proceeds ⁴	Payments		% Change Total Receipts 2000-2005
								From Federal Government	ment	
State FY 2005										
Georgia	1.0%	0.0%	53.1%	10.6%	24.7%	8.1%	0.8%	1.2%		-20.7%
Florida	17.4%	1.9%	13.0%	6.7%	27.5%	6.0%	7.3%	2.9%		71.5%
North Carolina	2.0%	0.0%	65.3%	0.6%	1.7%	5.1%	4.5%	0.3%		-16.8%
Ohio	0.0%	0.0%	19.5%	9.3%	12.7%	1.6%	3.9%	0.0%		26.6%
South Carolina	0.0%	0.0%	58.2%	7.4%	11.7%	0.0%	3.1%	0.4%		14.4%
Texas	3.4%	7.9%	24.8%	20.2%	2.0%	13.4%	17.2%	2.1%		19.3%
Virginia	11.6%	2.6%	40.1%	2.9%	1.8%	5.0%	8.0%	0.4%		22.4%
US State Avg.	3.6%	2.2%	30.0%	13.3%	7.2%	8.3%	9.1%	2.1%		16.0%
State FY 2000*										
Georgia ⁵	0.0%	0.0%	30.9%	0.2%	62.4%	5.9%	0.5%	0.03%		---
Florida ⁵	30.6%	2.5%	9.8%	8.4%	22.0%	6.3%	3.6%	0.8%		---
North Carolina ⁵	2.3%	0.0%	47.9%	0.9%	0.9%	2.9%	14.3%	0.9%		---
Ohio ⁵	0.0%	0.0%	15.5%	13.9%	2.2%	6.7%	1.1%	0.0%		---
South Carolina	0.0%	0.0%	45.2%	21.6%	11.1%	0.0%	0.0%	0.9%		---
Texas	4.0%	7.2%	29.3%	18.8%	0.0%	16.8%	11.0%	2.3%		---
Virginia	12.7%	2.6%	40.8%	0.0%	0.9%	4.6%	11.6%	0.9%		---
US State Avg.	3.9%	2.1%	30.0%	13.1%	6.8%	9.8%	6.7%	2.0%		---

* Inflation adjusted to 2005 dollars.

¹ This table is generated from Table LGF-21 of the Federal Highway Authority. Table LGF-21 summarizes the receipts of local governments for highways. Local government reporting is on a biennial basis with even-numbered years optional. This table is compiled from the reports of State and local governments (See <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm>).

² D. C. is excluded as there are no local jurisdictions within the District.

³ The amounts used are identical with the receipts allocated for highways as shown on Table LDF from the Federal Highway Authority. Table LDF also includes allocations for mass transit, and nonhighway purposes (See <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm>).

⁴ Bonds issued for and redeemed by refunding are excluded.

⁵ Estimated by FHWA.

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TABLE 5. TOTAL FEDERAL, STATE, AND LOCAL FUNDING FOR HIGHWAYS – SUMMARY – 2000-2005^{1,2}
(THOUSANDS OF DOLLARS)

	Federal Total Receipts²	State Own Receipts³	Local Own Receipts⁴	Total Transportation Receipts	Percent Federal Receipts	Percent State Receipts	Percent Local Receipts
State FY 2005							
<i>Georgia</i>	770,929	1,031,076	936,527	2,738,532	28.2%	37.7%	34.2%
Florida	1,998,781	5,524,559	3,010,010	10,533,350	19.0%	52.4%	28.6%
North Carolina	1,125,805	2,498,977	526,398	4,151,180	27.1%	60.2%	12.7%
Ohio	1,082,714	2,840,323	951,281	4,874,318	22.2%	58.3%	19.5%
South Carolina	810,986	772,817	283,744	1,867,547	43.4%	41.4%	15.2%
Texas	3,315,189	5,575,482	4,660,882	13,551,553	24.5%	41.1%	34.4%
Virginia	464,620	2,697,204	924,955	4,086,779	11.4%	66.0%	22.6%
US State Avg.	632,659	1,566,188	904,497	3,103,344	20.4%	50.5%	29.1%
State FY 2000*							
Georgia	814,422	1,278,913	1,200,973	3,294,307	24.7%	38.8%	36.5%
Florida	1,155,366	3,474,435	1,830,964	6,460,765	17.9%	53.8%	28.3%
North Carolina	839,965	2,126,523	553,665	3,520,153	23.9%	60.4%	15.7%
Ohio	744,365	2,788,014	630,304	4,162,683	17.9%	67.0%	15.1%
South Carolina	372,417	615,885	240,413	1,228,716	30.3%	50.1%	19.6%
Texas	2,128,086	4,362,014	3,825,132	10,315,232	20.6%	42.3%	37.1%
Virginia	552,805	2,565,685	769,408	3,887,898	14.2%	66.0%	19.8%
US State Avg.	542,560	1,505,110	765,298	2,812,968	19.3%	53.5%	27.2%

* Inflation adjusted to 2005 dollars.

¹ This table is generated from Tables LGF-21 and SF-21 of the Federal Highway Authority. (See <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm>).

² Federal total receipts are the sum of federal monies paid to states and local governments from Tables LGF-21 and SF-21.

³ State own receipts are all state sources of transportation revenue from Table SF-21 minus federal and local payments.

⁴ Local own receipts are all local sources of transportation revenue from Table LGF-21 minus federal and state payments.

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total state receipts for these three categories. The figures for Georgia for fiscal year 2000 and 2005 are similar, so we focus on fiscal year 2005. In 2005, Georgia received approximately \$2.7 billion in transportation receipts. This was the sixth lowest total among the comparison states, ahead of only South Carolina with approximately \$1.8 million. Georgia was also below the U.S. state average for transportation receipts of approximately \$3.1 billion.

Georgia's share of transportation funding from state own sources was the lowest of all the comparison states. Relative to the comparison states, Georgia had the second-highest percent of federal receipts and second-highest percent of local receipts. Georgia's share of transportation funding from the three levels of government in 2005 were: 28.2 percent from the federal government; 37.7 percent from the state, and 34.2 percent from local governments. Georgia was also below the U.S. state average of 50.5 percent for state receipts. We next examine the growth in congestion on Georgia's urban highways in the period.

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II. Congestion in the Urban Areas of the Seven Comparison States

The next two tables illustrate the increasing levels of road congestion experienced in the urban areas of Georgia in the period 2000 to 2005. Table 8 uses the percentage of total miles of the national highway system in each of three categories of volume service flow ratio for urban areas. Volume service flow ratio is a measure of congestion and is determined by dividing the peak traffic in the peak direction by the capacity; larger values imply greater congestion. We use it as an indicator of congestion to make comparisons across the states. In Table 8 the percentage is the number of lane miles that meets the volume service flow ratio divided by the total amount of that type of highway. For instance, in 2005 Georgia had 528 miles of urban interstate highway system miles, and of that 277 miles (52 percent) were considered to have volume service flow ratios of 0.71 or greater. Values of the service flow ratio of 0.71 or greater are categorized as heavy congestion to severe congestion. For ease of explanation, we will just use heavy congestion when referring to this category.

In 2000, Georgia ranked seventh among the comparison states, being the least congested, in the three categories of urban interstate system, other highway, and total highways. In Georgia, 19 percent of the urban interstate system was considered heavily congested, with service flow ratios of 0.71 or greater. For other urban highways, only 8 percent were considered heavily congested. For the category of total urban highways, 12 percent were considered heavily congested in Georgia. These values were below the U.S. state average of 40 percent for urban interstate highway systems, 28 percent for other urban highways, and 32 percent for total urban highways. In 2005, Georgia ranked sixth for urban interstate system volume service flow ratio, with 52 percent considered heavily congested. This was the same as the U.S. state average. For the other urban highway category Georgia ranked seventh with 9 percent; this is below the U.S. state average of 25 percent. For total urban highways Georgia ranked seventh among the comparison states with 24 percent, this was below the U.S. state average of 34 percent.

TABLE 8. PERCENTAGE OF TOTAL MILES OF NATIONAL HIGHWAY SYSTEM 2000-2005 BY VOLUME - SERVICE FLOW RATIO FOR URBAN AREAS ¹

	Volume Service Flow Ratio (V/SF) ^{2,3}						Total		
	Interstate System		Other						
	< 0.40	0.41-0.70	0.71->	< 0.40	0.41-0.70	0.71->	< 0.40	0.41-0.70	0.71->
State FY 2005									
<i>Georgia</i>	8%	40%	52%	66%	25%	9%	46%	30%	24%
<i>Florida</i>	3%	37%	59%	30%	42%	28%	21%	41%	39%
<i>North Carolina</i>	2%	26%	72%	33%	38%	29%	20%	33%	47%
<i>Ohio</i>	12%	28%	60%	64%	25%	11%	43%	26%	31%
<i>South Carolina</i>	3%	48%	49%	30%	41%	29%	23%	43%	34%
<i>Texas</i>	15%	26%	60%	35%	34%	31%	31%	32%	37%
<i>Virginia</i>	15%	42%	43%	44%	39%	17%	35%	40%	25%
<i>U.S. avg</i>	16%	32%	52%	40%	35%	25%	32%	34%	34%
State FY 2000									
<i>Georgia</i>	33%	48%	19%	63%	30%	8%	52%	36%	12%
<i>Florida</i>	9%	40%	50%	38%	40%	22%	29%	40%	31%
<i>North Carolina</i>	7%	44%	49%	34%	41%	25%	22%	42%	35%
<i>Ohio</i>	6%	39%	56%	46%	35%	19%	28%	37%	36%
<i>South Carolina</i>	3%	46%	51%	29%	34%	37%	23%	37%	40%
<i>Texas</i>	24%	28%	49%	36%	35%	29%	33%	34%	33%
<i>Virginia</i>	14%	43%	43%	37%	39%	24%	30%	40%	30%
<i>U.S. Avg</i>	23%	37%	40%	37%	35%	28%	33%	36%	32%

¹ From the Federal Highway Authority Table HM-42 see <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm>.

² V/SF Ratio greater than 1.0 = Severe Congestion; V/SF Ratio of 0.71 to 1.0 = Heavy Congestion; V/SF Ratio of 0.41 to 0.70 = Moderate Congestion; V/SF Ratio of less than 0.40 = Low or No Congestion.

³ For multilane facilities volume-service flow ratio is determined by dividing the peak traffic in the peak direction by the capacity. For all other facilities the ratio is determined by dividing the peak traffic by the capacity. Peak traffic is estimated as Annual average daily traffic *K, where K is the design hour volume (30th highest hour) as a percent of Annual average daily traffic.

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Table 9 illustrates the changes in the percentage of congested urban highways. Table 9 further illustrates Georgia's change over the period in the percentage of urban highway congestion. Georgia added an additional 33 percent more urban interstate highway miles that were heavily congestion from 2000 to 2005.² This is the highest value among the comparison states and exceeded the U.S. state average of 12 percent. Georgia also had an increase of 12 percent in total urban highways that were considered heavily congested. This ranked Georgia tied for first with North Carolina and was greater than the U.S. state average increase of 2 percent.

² The values for Table 9 are merely the differences between the values in 2000 and 2005 from Table 8. For instance, Georgia had 19 percent of its urban interstate highways with the volume service flow ratio 0.71 or greater in 2000 and 52 percent in 2005. Thus, the difference is 33 percent.

TABLE 9. CHANGE IN PERCENTAGE OF TOTAL MILES OF NATIONAL HIGHWAY SYSTEM BY VOLUME – SERVICE FLOW RATIO FOR URBAN AREAS FROM 2000-2005¹

State FY 2005	Volume Service Flow Ratio (V/SF) ^{2,3}												
	Interstate System						Other						Total
	00-05 chg < 0.40	00-05 chg 0.41-0.70	00-05 chg 0.71->	00-05 chg < 0.40	00-05 chg 0.41-0.70	00-05 chg 0.71->	00-05 chg < 0.40	00-05 chg 0.41-0.70	00-05 chg 0.71->	00-05 chg < 0.40	00-05 chg 0.41-0.70	00-05 chg 0.71->	
Georgia	-25%	-8%	33%	4%	-4%	1%	4%	-4%	-7%	-6%	12%		
Florida	-6%	-3%	9%	-7%	2%	5%	-7%	2%	-8%	1%	7%		
North Carolina	-6%	-18%	24%	-1%	-3%	4%	-1%	-3%	-3%	-9%	12%		
Ohio	6%	-11%	4%	18%	-10%	-8%	18%	-10%	15%	-10%	-4%		
South Carolina	-1%	2%	-1%	1%	6%	-7%	1%	6%	0%	5%	-6%		
Texas	-9%	-2%	11%	-1%	-1%	2%	-1%	-1%	-3%	-1%	4%		
Virginia	2%	-1%	0%	7%	0%	-7%	7%	0%	5%	0%	-5%		
U.S. Avg	-7%	-4%	12%	3%	0%	-3%	3%	0%	0%	-1%	2%		

¹ From the Federal Highway Authority Table HM-42 see <http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm>.

² V/SF Ratio greater than 1.0 = Severe Congestion; V/SF Ratio of 0.71 to 1.0 = Heavy Congestion; V/SF Ratio of 0.41 to 0.70 = Moderate Congestion; V/SF Ratio of less than 0.40 = Low or No Congestion.

³ For multilane facilities volume-service flow ratio is determined by dividing the peak traffic in the peak direction by the capacity. For all other facilities the ratio is determined by dividing the peak traffic by the capacity. Peak traffic is estimated as Annual average daily traffic *K, where K is the design hour volume (30th highest hour) as a percent of Annual average daily traffic.

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III. State Per Capita Daily Vehicle Miles Traveled and Per Capita Revenue for 2000 and 2005

Georgia experienced a small decline in daily vehicle miles traveled in 2000 and 2005, yet transportation revenues declined by a seemingly disproportionate amount. Table 6 examines state daily vehicle miles traveled (DVMT) per capita, transportation revenue per capita and per DVMT for 2000 and 2005. To illustrate Georgia's decline in the period, we focus on the relative positions of Georgia and South Carolina in 2000 and 2005. In 2000, Georgia ranked ahead of the less populous state, South Carolina, in the categories of transportation receipts per daily vehicle mile traveled and revenue per capita. However, by 2005 South Carolina had surpassed Georgia in both categories.

In 2000, Georgia ranked fifth among the seven comparison states, raising approximately five cents in transportation receipts for every daily vehicle mile traveled. Georgia ranked fourth in both daily vehicle miles traveled per capita, with 22.1 DVMT per capita, and revenue per capita, with \$402 in transportation money per state resident. Georgia was below the U.S. state average for daily transportation receipts per capita of approximately eight cents and per capita transportation revenue of approximately \$510. Georgia was above the U.S. state average for daily vehicle miles traveled per capita of approximately 17.3. In 2000, South Carolina was ranked seventh in transportation receipts for daily vehicle miles traveled and per capita revenue, and also had the highest daily vehicle miles traveled per capita of the seven states.

In 2005, Georgia collected 3.9 cents in transportation receipts per daily vehicle mile traveled, ranking it seventh. South Carolina collected four cents per daily vehicle mile traveled. Georgia collected only \$300 in transportation revenue per capita, ranking it seventh. South Carolina collected \$440 in transportation revenue per capita. In terms of DVMT per capita Georgia remained fourth at 21.2.

Georgia experienced the only decline in total federal, state, and local transportation receipts among the seven states. Table 7 illustrates Georgia's decline in the categories of revenue per capita and DVMT. Georgia experienced a decline of approximately 17 percent of total transportation receipts from 2000 to 2005. In the

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TABLE 6. STATE PER CAPITA DVMT AND REVENUE 2000 AND 2005

	State Population	Total Transportation Receipts (\$1000s)	DVMT (1000s)	Daily Transportation Receipts Per DVMT (\$)	DVMT Per Capita	Per Capita Revenue (\$)
State FY 2005						
<i>Georgia</i>	9,132,553	2,738,532	193,461	0.039	21.2	300
Florida	17,768,191	10,533,350	301,362	0.096	17.0	593
North Carolina	8,672,459	4,151,180	240,218	0.047	27.7	479
Ohio	11,470,685	4,874,318	190,362	0.070	16.6	425
South Carolina	4,246,933	1,867,547	127,211	0.040	30.0	440
Texas	22,928,508	13,551,553	480,817	0.077	21.0	591
Virginia	7,564,327	4,086,779	176,096	0.064	23.3	540
US State Avg.	5,813,864	3,103,344	102,988	0.083	17.7	534
State FY 2000*						
<i>Georgia</i>	8,186,000	3,294,307	181,118	0.050	22.1	402
Florida	15,982,000	6,460,765	266,346	0.066	16.7	404
North Carolina	8,049,000	3,520,153	213,355	0.045	26.5	437
Ohio	11,353,000	4,162,683	183,888	0.062	16.2	367
South Carolina	4,012,000	1,228,716	117,627	0.029	29.3	306
Texas	20,852,000	10,315,232	418,154	0.068	20.1	495
Virginia	7,079,000	3,887,898	180,521	0.059	25.5	549
US State Avg.	5,518,078	2,812,968	95,678	0.081	17.3	510

* Inflation adjusted to 2005 dollars.

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TABLE 7. PERCENTAGE CHANGE IN STATE PER CAPITA DVMT AND REVENUE 2000 AND 2005

	% Chg State Population	% Chg Transportation Receipts	% Chg State DVMT	%Chg 00-05 Rev/DVMT	%Chg 00-05 DVMT/Cap	%Chg 00-05 Rev/Cap
<i>Georgia</i>	11.6%	-16.9%	6.8%	-22.2%	-4.3%	-25.5%
Florida	11.2%	63.0%	13.1%	44.1%	1.8%	46.6%
North Carolina	7.7%	17.9%	12.6%	4.7%	4.5%	9.4%
Ohio	1.0%	17.1%	3.5%	13.1%	2.5%	15.9%
South Carolina	5.9%	52.0%	8.1%	40.5%	2.2%	43.6%
Texas	10.0%	31.4%	15.0%	14.3%	4.6%	19.5%
Virginia	6.9%	5.1%	-2.5%	7.8%	-8.7%	-1.6%
US State Avg.	5.4%	10.3%	7.6%	2.5%	2.2%	4.7%

same period Georgia experienced the greatest percent change in population, gaining 11.6 percent. The U.S. state average for percent change in total federal, state, and local transportation receipts was an increase of 10.3 percent. Georgia experienced a 22.2 percent decline in revenue per DVMT from 2000 to 2005, while the six comparison states experienced growth. The U.S. state average for revenue per DVMT grew by 2.5 percent. Georgia also experienced a 25.5 percent decline in revenue per capita, while five of the six comparison states experienced growth. The U.S. state average for revenue per capita grew by 4.7 percent. One minor bright spot for Georgia was the decline in DVMT per capita of 4.3 percent, ranking it sixth.

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IV. Measures of Urban Transit Utilization and Congestion

The Texas Transportation Institute has conducted extensive analysis of the transportation systems of 85 MSAs (see the Appendix for a list). Tables 10, 11, and 12 examine MSAs in the seven comparison states for which the Texas Transportation Institute data exist on congestion and public transit measures. These tables illustrate particular transportation elements that may lead to greater urban congestion. The MSAs are categorized by population; very large urban areas are those with over three million inhabitants, large urban areas are those over one million and less than three million, medium urban areas are over 500,000 and less than one million, and small urban areas are less than 500,000 in population. Due to these differences in population, caution should be used when comparing across MSAs. Per capita measures as well as per peak travel figures are displayed to facilitate comparisons.

A. Delay and Congestion Cost for Selected Urban Areas

Table 10 shows the annual hours of traffic delay for 2005 (estimates for 2000 are not included). In 2005, the Texas Transportation Institute adopted a more expansive Atlanta metropolitan area than was used in 2000.³ Because the Atlanta metropolitan area is not geographically consistent, we only include the 2005 figures. Atlanta is considered a very large city, as is Dallas-Fort Worth, Houston, Miami, and Washington, DC. In 2005, Atlanta had 32 annual hours of travel time delay per capita. This is the third highest value for the MSAs listed. Dallas-Fort Worth and Houston had slightly higher values of 34 and 33, respectively. For the travel time index, Atlanta had a value of 1.34. This 1.34 measure can be interpreted as meaning that a 20 minute trip at free flow would take approximately 26.8 minutes at peak conditions, or 34 percent longer than at free flow. Atlanta ranked eleventh of the 85

³ We presented this table with the 2000 estimates to Jane D. Hayse, Chief of the Transportation Planning Division at the Atlanta Regional Commission. She informed us of the change in the Atlanta MSA definition used by the Texas transportation institute for the 2005 estimates. The Census changed the MSA definition for Atlanta to include 28 counties in June of 2003. In 2000 the Atlanta metropolitan area was 20 counties.

TABLE 10. ANNUAL HOURS OF DELAY, TRAVEL TIME INDEX, AND ANNUAL CONGESTION COST FOR SELECTED URBAN AREAS¹

2005 Urban Area	State	Pop Group ²	Pop (000)	Annual Hrs of Delay ⁴		Travel Time Index ⁵		Annual Congestion Cost			
				Total Delay (000)	Delay/Cap	Value	Rank ³	Total Dollars (million)	Rank ³	Per Peak Traveler (\$)	Rank ³
Atlanta	GA	Vlg	4170	132,295	32	1.34	11	2581	6	1177	2
Dallas-Fort Worth-Arlington	TX	Vlg	4445	152,129	34	1.35	9	2747	4	1046	6
Houston	TX	Vlg	3790	124,132	33	1.36	8	2225	9	1012	7
Miami	FL	Vlg	5330	150,146	28	1.38	6	2730	5	903	16
Washington	DC-VA-MD	Vlg	4280	127,394	30	1.37	7	2331	8	1094	4
Cincinnati	OH-KY-IN	Lrg	1620	24,377	15	1.18	39	459	30	502	45
Cleveland	OH	Lrg	1790	13,162	7	1.09	64	236	46	240	75
Columbus	OH	Lrg	1195	21,958	18	1.19	36	408	32	620	38
Orlando	FL	Lrg	1360	40,595	30	1.30	17	738	22	983	9
San Antonio	TX	Lrg	1360	29,380	22	1.23	28	530	27	706	32
Tampa-St. Petersburg	FL	Lrg	2250	56,203	25	1.28	23	1004	19	809	24
Virginia Beach	VA	Lrg	1540	25,602	17	1.18	39	468	29	550	43
Charlotte	NC-SC	Med	860	21,205	25	1.23	28	409	32	875	20
Jacksonville	FL	Med	990	20,779	21	1.21	35	376	36	699	34
Raleigh-Durham	NC	Med	950	18,234	19	1.18	39	347	37	671	35
Charleston-North Charleston	SC	Sml	475	8,041	17	1.17	42	147	59	572	41

¹ Source: Texas transportation institute Urban Mobility and Congestion Statistics http://mobility.tamu.edu/ums/congestion_data/#population_groups.

² Very Large Urban Areas—over 3 million population. Large Urban Areas—over 1 million and less than 3 million population. Medium Urban Areas—over 500,000 and less than 1 million population. Small Urban Areas—less than 500,000 population.

³ Rank: The rank is for the 85 urban areas studied in detail by the Texas transportation institute Urban Mobility and Congestion report.

⁴ Annual Delay per Traveler – Extra travel time for peak-period travel during the year divided by the number of travelers who begin a trip during the peak period (6 to 9 a.m. and 4 to 7 p.m.). Free flow speeds (60 mph on freeways and 35 mph on principal arterials) are used as the comparison threshold.

⁵ Travel Time Index – The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.35 indicates a 20-minute free flow trip takes 27 minutes in the peak period. Free flow speeds are 60 mph on freeways and 35 mph on principal arterials.

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MSAs based on the travel time index. However, it was the best rank for the very large cities in the sample using the comparison states. Miami had the highest travel time index in this sample, 1.38. Charlotte, North Carolina, considered a medium size city, had a travel time index of 1.23.

Atlanta ranked second out of the 85 MSAs for annual congestion cost per peak traveler, this was the highest rank of all the sample cities. Atlanta's rank improves somewhat when the broader measure of total congestion cost is examined. Atlanta ranked sixth out of the 85 MSAs in total dollars of annual congestion cost. Only Dallas and Miami had higher annual congestion costs than Atlanta in the sample of comparison states.

B. Public Transit Measures for Selected Urban Areas

Table 11 examines MSA transit systems' annual passenger miles, passenger trips, trips per capita, and passenger miles per capita in 2000 and 2005. In 2000, Atlanta ranked second among the very large cities in the sample for all four categories, behind only Washington, DC. Atlanta had 803 million annual passenger miles, 170 million passenger trips, 55 annual trips per capita, and 259 annual passenger miles per capita. In 2005, Atlanta still ranked second, behind Washington, DC for three of the four categories. However, for Atlanta three of the four categories experienced declines from their 2000 levels. Atlanta ranked second among the very large cities in annual passenger miles, which increased to 811 million in 2005. Atlanta's annual passenger trips declined to 150 million, ranking Atlanta third, behind Miami, which had 159 million passenger trips in 2005. Atlanta's passenger trips per capita declined to 26 and passenger miles per capita declined to 194 in 2005. However, Atlanta was still ranked second in both categories.

Table 12 examines the percentage change in the four transit categories of annual passenger miles, annual passenger trips, annual passenger trips per capita, and annual passenger miles per capita. In addition, it shows the percentage change in MSA population. Atlanta had the greatest increase in population in the period. However, one should be cautious in comparing MSA population numbers, as the

TABLE 11. PUBLIC TRANSIT ANNUAL PASSENGER MILES AND PASSENGER TRIPS FOR SELECTED URBAN AREAS¹

	State	Pop Group ²	Pop (000)	Annual Passenger Miles (million)	Annual Unlinked Passenger Trips (million)	Annual Unlinked Passenger Trips Per Capita	Annual Passenger-Miles Per Capita
2005 Urban Area							
<i>Atlanta</i>	GA	Vlg	4170	811	150	36	194
Dallas-Fort Worth-Arlington	TX	Vlg	4445	486	82	18	109
Houston	TX	Vlg	3790	552	95	25	146
Miami	FL	Vlg	5330	806	159	30	151
Washington	DC-VA-MD	Vlg	4280	2195	462	108	513
Cincinnati	OH-KY-IN	Lrg	1620	163	30	19	101
Cleveland	OH	Lrg	1790	293	67	37	164
Columbus	OH	Lrg	1195	60	15	13	50
Orlando	FL	Lrg	1360	160	25	18	118
San Antonio	TX	Lrg	1360	181	41	30	133
Tampa-St. Petersburg	FL	Lrg	2250	112	23	10	50
Virginia Beach	VA	Lrg	1540	108	24	16	70
Charlotte	NC-SC	Med	860	90	18	21	105
Jacksonville	FL	Med	990	67	11	11	68
Raleigh-Durham	NC	Med	950	66	15	16	69
Charleston-North Charleston	SC	Sml	475	12	4	8	25
2000 Urban Area							
<i>Atlanta</i>	GA	Vlg	3100	803	170	55	259
Dallas-Fort Worth-Arlington	TX	Vlg	4000	372	74	19	93
Houston	TX	Vlg	3500	596	100	29	170
Miami	FL	Vlg	4870	628	122	25	129
Washington	DC-VA-MD	Vlg	3900	1854	381	98	475
Cincinnati	OH-KY-IN	Lrg	1500	170	30	20	113
Cleveland	OH	Lrg	1780	290	64	36	163
Columbus	OH	Lrg	1110	76	19	17	68
Orlando	FL	Lrg	1185	140	22	19	118
San Antonio	TX	Lrg	1255	183	45	36	146
Tampa-St. Petersburg	FL	Lrg	1945	87	19	10	45
Virginia Beach	VA	Lrg	1495	95	19	13	64
Charlotte	NC-SC	Med	690	70	13	19	101
Jacksonville	FL	Med	865	48	9	10	55
Raleigh-Durham	NC	Med	750	44	12	16	59
Charleston-North Charleston	SC	Sml	455	17	5	11	37

¹ Source: Texas Transportation Institute Urban Mobility and Congestion Statistics. http://mobility.tamu.edu/ums/congestion_data/#population_groups.

² Very Large Urban Areas—over 3 million population. Large Urban Areas—over 1 million and less than 3 million population. Medium Urban Areas—over 500,000 and less than 1 million population. Small Urban Areas—less than 500,000 population.

TABLE 12. PERCENTAGE CHANGE IN SELECTED URBAN AREAS FOR PUBLIC TRANSIT ANNUAL PASSENGER MILES AND PASSENGER TRIPS 2000-2005¹

Urban Area	State	Pop Group ²	Pop (000)	Annual Passenger Miles (million)	Annual Unlinked Passenger Trips (million)	Annual Unlinked Passenger Trips Per Capita	Annual Passenger Miles Per Capita
Atlanta	GA	Vlg	34.5%	1.0%	-11.8%	-34.4%	-24.9%
Dallas-Fort Worth-Arlington	TX	Vlg	11.1%	30.6%	10.8%	-0.3%	17.6%
Houston	TX	Vlg	8.3%	-7.4%	-5.0%	-12.3%	-14.5%
Miami	FL	Vlg	9.4%	28.3%	30.3%	19.1%	17.3%
Washington	DC-VA-MD	Vlg	9.7%	18.4%	21.3%	10.5%	7.9%
Cincinnati	OH-KY-IN	Lrg	8.0%	-4.1%	0.0%	-7.4%	-11.2%
Cleveland	OH	Lrg	0.6%	1.0%	4.7%	4.1%	0.5%
Columbus	OH	Lrg	7.7%	-21.1%	-21.1%	-26.7%	-26.7%
Orlando	FL	Lrg	14.8%	14.3%	13.6%	-1.0%	-0.4%
San Antonio	TX	Lrg	8.4%	-1.1%	-8.9%	-15.9%	-8.7%
Tampa-St. Petersburg	FL	Lrg	15.7%	28.7%	21.1%	4.6%	11.3%
Virginia Beach	VA	Lrg	3.0%	13.7%	26.3%	22.6%	10.4%
Charlotte	NC-SC	Med	24.6%	28.6%	38.5%	11.1%	3.2%
Jacksonville	FL	Med	14.5%	39.6%	22.2%	6.8%	22.0%
Raleigh-Durham	NC	Med	26.7%	50.0%	25.0%	-1.3%	18.4%
Charleston-North Charleston	SC	Sml	4.4%	-29.4%	-20.0%	-23.4%	-32.4%

¹ Source: Texas Transportation Institute Urban Mobility and Congestion Statistics. http://mobility.tamu.edu/ums/congestion_data/#population_groups.

² Very Large Urban Areas—over 3 million population. Large Urban Areas—over 1 million and less than 3 million population. Medium Urban Areas—over 500,000 and less than 1 million population. Small Urban Areas—less than 500,000 population.

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Census MSA definition changed from 2000 to 2005; the Texas Transportation Institute adopted the new MSA definitions in its 2005 analysis (see previous section on congestion). Despite its population growth Atlanta increased annual passenger miles by only one percent. This was the second lowest increase behind Houston, for which passenger miles declined by 7.4 percent. In the categories of annual passenger trips, per capita trips, and passenger miles per capita, Atlanta experienced the greatest declines of the five very large cities in the sample. In Atlanta, annual passenger trips declined by 11.8 percent, passenger trips per capita declined by 34.4 percent, and annual passenger miles per capita declined by 24.9 percent. Houston also experienced a decline in all three areas.

The Metropolitan Atlanta Rapid Transit Authority (MARTA) is the primary transit provider in the Atlanta metropolitan area. There are also smaller suburban transit providers for counties such as Cobb and Gwinnett. Due to budget shortfalls, MARTA had to make massive service cuts in 2003 and 2004. Jane D. Hayse, Chief of the Transportation Planning Division at the Atlanta Regional Commission, suggests that these service cuts are the primary reason for the decline in transit usage and mileage from 2000 to 2005 in the Atlanta metropolitan area. Suburban transit services over this period are very small compared to number of transit customers MARTA serves. Thus, the suburban increases in ridership could not offset the decline in transit ridership and mileage in the area served by MARTA according to Hayse.

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V. Conclusions

In Georgia, transportation funding at the state and local levels declined during the period 2000 to 2005. This is in contrast to the experience of the comparison states, with the exception of North Carolina, which experienced a local transportation funding decline as well. Congestion in Georgia also rose in the period on urban interstates at the fastest rate of all the comparison states. To further illustrate Georgia's decline in transportation funding we compared Georgia to North Carolina as well as the metropolitan areas of Atlanta and Charlotte for the period 2000 to 2005 (see Table 13).

TABLE 13. GEORGIA AND NORTH CAROLINA: AN OVERVIEW

	GA	NC
Total State Funding Percent Change 2000-2005	-14.4%	22.4%
State Revenue Per Capita 2005	\$196	\$418
State Revenue Per Capita Change From 2000 -2005	-23%	14%
Percent Change in Revenue Per Daily Vehicle Miles Traveled 2000-2205	-22.2%	4.7%
Statewide Urban Interstate Congestion Percent Increase 2000-2005	33%	24%
Comparing Atlanta and Charlotte		
	Atlanta	Charlotte
Annual Congestion Cost Per Peak Traveler Transit	\$1,177	\$875
Passenger Trips Per Capita Percent Change	-34.4%	11.1%
Passenger Miles Per Capita Percent Change	-24.9%	3.2%

Georgia does not compare favorably to North Carolina on any of the selected measures. Georgia had a decline of 14.4 percent in state transportation funding while North Carolina had an increase of 22.4 percent. Georgia experienced declines in revenue per capita of 23 percent compared with an increase of 14 percent for North Carolina. North Carolina more than doubled the level of per capita transportation revenue, raising \$418 per capita to Georgia's \$196 in 2005.

We next compare Atlanta and Charlotte. While Atlanta is a much bigger metropolitan area than Charlotte, we can illustrate the potential effects of these funding declines in Georgia by looking at congestion costs per capita and per traveler. For instance, in 2005, Atlanta had an annual cost of \$1,177 per peak traveler while

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Charlotte's cost was \$875. These per peak traveler costs rank Atlanta second and Charlotte 20th out of the 85 cities in the sample. In addition, transit ridership per capita and transit miles per trip have declined in Atlanta while Charlotte has seen an increase. In Atlanta, passenger trips per capita declined by 34.4 percent and passenger miles per capita declined by 24.9 percent. This is in contrast to Charlotte, which increased passenger trips per capita by 11.1 percent and passenger miles per capita by 3.2 percent.

In an effort to allow for greater transportation financing flexibility, legislation was introduced in 2008 that would permit regions across the state to pass a one percent transportation tax. That legislation did not pass. However, it appears that efforts will again be made to obtain additional funding for transportation and transit projects.

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APPENDIX. TEXAS TRANSPORTATION INSTITUTE URBAN MOBILITY AND CONGESTION REPORT: STUDIED MSAS

MSA	State	MSA Size
Atlanta	GA	Very Large
Boston	MA-NH-RI	Very Large
Chicago	IL-IN	Very Large
Dallas-Fort Worth-Arlington	TX	Very Large
Detroit	MI	Very Large
Houston	TX	Very Large
Los Angeles-LBch-Santa Ana	CA	Very Large
Miami	FL	Very Large
New York-Newark	NY-NJ-CT	Very Large
Philadelphia	PA-NJ-DE-MD	Very Large
Phoenix	AZ	Very Large
San Francisco-Oakland	CA	Very Large
Seattle	WA	Very Large
Washington	DC-VA-MD	Very Large
Jacksonville	FL	Very Large
Baltimore	MD	Large
Buffalo	NY	Large
Cincinnati	OH-KY-IN	Large
Cleveland	OH	Large
Columbus	OH	Large
Denver-Aurora	CO	Large
Indianapolis	IN	Large
Kansas City	MO-KS	Large
Las Vegas	NV	Large
Memphis	TN-MS-AR	Large
Milwaukee	WI	Large
Minneapolis-St. Paul	MN	Large
New Orleans	LA	Large
Orlando	FL	Large
Pittsburgh	PA	Large
Portland	OR-WA	Large
Providence	RI-MA	Large

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APPENDIX (CONT). TEXAS TRANSPORTATION INSTITUTE URBAN MOBILITY AND CONGESTION REPORT: STUDIED MSAS

MSA	State	MSA Size
Riverside-San Bernardino	CA	Large
Sacramento	CA	Large
San Antonio	TX	Large
San Diego	CA	Large
San Jose	CA	Large
St. Louis	MO-IL	Large
Tampa-St. Petersburg	FL	Large
Virginia Beach	VA	Large
Corpus Christi	TX	Large
Eugene	OR	Large
Laredo	TX	Large
Little Rock	AR	Large
Pensacola	FL-AL	Large
Salem	OR	Large
Spokane	WA	Large
Akron	OH	Medium
Albany-Schenectady	NY	Medium
Albuquerque	NM	Medium
Allentown-Bethlehem	PA-NJ	Medium
Austin	TX	Medium
Birmingham	AL	Medium
Bridgeport-Stamford	CT-NY	Medium
Charlotte	NC-SC	Medium
Dayton	OH	Medium
El Paso	TX-NM	Medium
Fresno	CA	Medium
Grand Rapids	MI	Medium
Hartford	CT	Medium
Honolulu	HI	Medium
Louisville	KY-IN	Medium
Nashville-Davidson	TN	Medium
New Haven	CT	Medium
Oklahoma City	OK	Medium
Omaha	NE-IA	Medium

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APPENDIX (CONT). TEXAS TRANSPORTATION INSTITUTE URBAN MOBILITY AND CONGESTION REPORT: STUDIED MSAS

MSA	State	MSA Size
Oxnard-Ventura	CA	Medium
Raleigh-Durham	NC	Medium
Richmond	VA	Medium
Rochester	NY	Medium
Salt Lake City	UT	Medium
Sarasota-Bradenton	FL	Medium
Springfield	MA-CT	Medium
Toledo	OH-MI	Medium
Tucson	AZ	Medium
Tulsa	OK	Medium
Anchorage	AK	Small
Bakersfield	CA	Small
Beaumont	TX	Small
Boulder	CO	Small
Brownsville	TX	Small
Cape Coral	FL	Small
Charleston-No. Charleston	SC	Small
Colorado Springs	CO	Small
Columbia	SC	Small

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About the Author

Peter Bluestone is a Research Associate with the Fiscal Research Center. He is a Georgia State University Urban Fellows Recipient. His research interests include urban economics, environmental economics and state and local fiscal policy. He received his Ph.D. in Economics from Georgia State University.

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