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## APPLYING THE SALES TAX TO SERVICES: REVENUE ESTIMATES

### Introduction

The Georgia sales tax is levied largely on the sale and lease of tangible personal property; services are generally not taxed. But services are an increasing share of personal consumption, which has led to calls to include services in the sales tax base. At the same time, arguments have been made that the sales tax should be applied only to final consumption (that is, not on business inputs). Given the call to tax services, but only if purchased by consumers, we have developed updated estimates of the revenue that might be generated from taxing services purchased by consumers. The revenue estimates presented in this brief are updates of estimates presented in an earlier Fiscal Research Center (FRC) report by Matthews, Sjoquist, and Winters (2007).

We estimate the state sales tax revenue that would be expected from adding each of over 100 services to the Georgia sales tax base (see Table I for a list of the services). We assume that only the purchase of these services by households would be taxed. If business purchases of these services were not exempt, expected revenue would be larger. However, most of these services are purchased only by households, and thus revenue from business would be relatively small. We rely on data from the 2008 Bureau of Labor Statistics'

Consumer Expenditure Survey interview files, adjusted for Southern family size and cost of living, as well as data from the Economic Census. It is expected that the first eight categories in Table I would most likely be purchased by households. If only these eight categories were added to the sales tax base, an additional \$646 million in state sales tax would be generated in 2012. In total, the estimated revenue if all of the services listed in Table I were added to the sales tax base would be \$1.09 billion in fiscal year 2012. Table I provides revenue estimates for each service.

### General Methodology

We use two primary methods to estimate the 2008 sales tax base for each service. For the first eight categories listed in Table I, we utilize the 2008 Bureau of Labor Statistics Consumer Expenditure Survey (CES) interview files.<sup>1</sup> The CES expenditure files contain detailed expenditure records from households on major items of expense. The CES interview files report data on the annual average household expenses, using a national sample. To extrapolate to Georgia certain adjustments are made. The cost of living is generally lower in the South than the national average; thus, the CES adjusts its mean consumption for southern cost of living by multiplying by an

**TABLE 1. SALES TAX REVENUE ESTIMATES**

<b>Description</b>	<b>Sales Tax Base 2008 (thousands)</b>	<b>Fiscal Year Sales Tax Base 2012 (thousands)</b>	<b>Fiscal Year State Sales Tax Revenue 2012 (thousands)</b>
Clothing Services (CS)			
Shoe repair and other shoe services	\$4,457	\$4,718	\$189
Repair, alteration, and tailoring for clothing and accessories	\$22,438	\$23,752	\$950
Watch or jewelry repair	\$18,082	\$19,141	\$766
Clothing storage	\$5,051	\$5,347	\$214
Sub total	\$50,028	\$52,959	\$2,118
Household Utilities and Related Expenses (HURE)			
Residential telephone expense for long distance service	\$608,803	\$644,468	\$25,779
Cell phone service (replace pagers)	\$2,255,512	\$2,387,646	\$95,506
Voice over IP telephone service	\$21,681	\$22,951	\$918
Cable TV, satellite services or community antenna	\$2,048,563	\$2,168,573	\$86,743
Garbage and trash pick-up	\$332,921	\$352,424	\$14,097
Septic cleaning	\$11,093	\$11,743	\$470
streaming or downloaded video	\$3,947	\$4,178	\$167
Water softening	\$17,236	\$18,245	\$730
Internet service	\$10,066	\$10,656	\$426
Sub total	\$5,309,821	\$5,620,885	\$224,835
Other Household Services (OHS)			
Household appliance and equipment service contracts	\$1,041,262	\$1,102,263	\$44,091
Condo, co-op, and homeowner's association fees	\$211,156	\$223,526	\$8,941
Housekeeping services	\$417,225	\$441,667	\$17,667
Gardening or lawn care services	\$405,951	\$429,733	\$17,189
Household appliance and equipment repair	\$75,506	\$79,930	\$3,197
Other home services and small repair jobs around the house	\$67,809	\$71,782	\$2,871
Home security system service fees	\$76,334	\$80,806	\$3,232
Installation charges for home electronics	\$5,554	\$5,879	\$235
Sub total	\$1,877,813	\$1,987,821	\$79,513
Miscellaneous (MISC)			
Moving, storage and freight express	\$166,119	\$175,851	\$7,034
Care for disabled or elderly persons in the home	\$189,287	\$200,376	\$8,015
Adult day care centers	\$10,313	\$10,917	\$437
Laundry and dry cleaners coin-operated	\$147,533	\$156,176	\$6,247
Laundry and dry cleaners	\$190,383	\$201,536	\$8,061
Professional photography fees	\$48,898	\$51,763	\$2,071
Pet services	\$129,072	\$136,634	\$5,465
Veterinarian expenses for pets	\$386,900	\$409,566	\$16,383
Haircuts, styling, and other related services	\$1,021,962	\$1,081,831	\$43,273

*Table 1 continues next page...*

**TABLE 1 (CONTINUED). SALES TAX REVENUE ESTIMATES**

<b>Description</b>	<b>Sales Tax Base 2008 (thousands)</b>	<b>Fiscal Year Sales Tax Base 2012 (thousands)</b>	<b>Fiscal Year State Sales Tax Revenue 2012 (thousands)</b>
Miscellaneous (MISC) (cont.)			
Services of lawyers or other legal professionals	\$502,868	\$532,327	\$21,293
Funerals, burials and cremations	\$198,496	\$210,125	\$8,405
Safe deposit box rental	\$13,088	\$13,854	\$554
Charges for checking accounts or other banking services	\$74,844	\$79,229	\$3,169
Purchase or upkeep of cemetery lots or vaults	\$70,693	\$74,834	\$2,993
Accounting fees	\$217,905	\$230,671	\$9,227
Sub total	\$3,368,362	\$3,565,690	\$142,628
CS+HURE+OHS+MISC	\$10,606,024	\$11,227,355	\$449,094
Education and Childcare			
Babysitting, nanny, or child care in your home	\$164,191	\$173,810	\$6,952
Babysitting, nanny, or child care in someone else's home	\$124,815	\$132,127	\$5,285
Private school bus	\$2,466	\$2,611	\$104
Recreational lessons or other instructions	\$349,076	\$369,526	\$14,781
Nursery school, preschool, and child day care expenses	\$504,196	\$533,734	\$21,349
Other school expenses at other schools (other than public)	\$34,323	\$36,334	\$1,453
Other school expenses at private colleges and universities	\$25,514	\$27,008	\$1,080
Other school expenses at private elementary and high schools	\$46,703	\$49,439	\$1,978
Tuition at other schools (other than public)	\$101,598	\$107,550	\$4,302
Tuition at private colleges and universities	\$999,861	\$1,058,435	\$42,337
Tuition at private elementary and high schools	\$408,430	\$432,357	\$17,294
Sub total	\$2,761,174	\$2,922,932	\$116,917
Membership Fees			
Global positioning services (GPS), such as OnStar	\$7,413	\$7,847	\$314
Golf courses, country clubs, and other social organizations; civic, service, or fraternal organizations; health clubs, swimming pools fitness, and weight loss centers	\$447,532	\$473,750	\$18,950
Credit card membership fees	\$5,961	\$6,310	\$252
Shopping club membership such as Costco and Sam's	\$26,553	\$28,109	\$1,124
Direct or online dating services	\$922	\$976	\$39
Sub total	\$488,381	\$516,992	\$20,680
Vehicle Maintenance, Repairs, and Equipment Installation			
Tire purchases and mounting	\$218,072	\$230,848	\$9,234
Audio equipment and installation	\$3,703	\$3,920	\$157
Video equipment and installation	\$6,143	\$6,503	\$260
Body work and painting	\$54,871	\$58,085	\$2,323
Clutch or transmission work	\$64,237	\$68,000	\$2,720
Drive shaft or rear-end work	\$6,976	\$7,384	\$295

*Table 1 continues next page...*

**TABLE 1 (CONTINUED). SALES TAX REVENUE ESTIMATES**

<b>Description</b>	<b>Sales Tax Base 2008 (thousands)</b>	<b>Fiscal Year Sales Tax Base 2012 (thousands)</b>	<b>Fiscal Year State Sales Tax Revenue 2012 (thousands)</b>
Vehicle Maintenance, Repairs, and Equipment Installation (cont.)			
Brake work	\$104,488	\$110,609	\$4,424
Steering or front end work	\$37,706	\$39,915	\$1,597
Engine cooling system work	\$38,948	\$41,230	\$1,649
Motor tune-up	\$80,010	\$84,697	\$3,388
Oil change, lubrication, and oil filter	\$123,579	\$130,818	\$5,233
Front end alignment, wheel balancing, and wheel rotation	\$23,996	\$25,401	\$1,016
Shock absorber replacement	\$7,776	\$8,232	\$329
Battery purchase and installation, tire repair misc. repairs	\$92,033	\$97,425	\$3,897
Exhaust system work	\$17,066	\$18,066	\$723
Electrical system work	\$48,043	\$50,857	\$2,034
Engine repair or replacement	\$120,169	\$127,208	\$5,088
Vehicle accessories and customization	\$20,879	\$22,102	\$884
Vehicle cleaning services and cleaning supplies	\$8,300	\$8,786	\$351
Sub total	\$1,076,995	\$1,140,088	\$45,604
Other Vehicle Related Expenses			
Auto repair service policies	\$67,086	\$71,016	\$2,841
Vehicle inspection	\$37,677	\$39,885	\$1,595
Parking including metered	\$109,377	\$115,785	\$4,631
Towing charges	\$16,194	\$17,143	\$686
Docking and landing fees for boats and planes	\$22,677	\$24,005	\$960
Automobile service clubs	\$62,444	\$66,102	\$2,644
Sub total	\$315,456	\$333,936	\$13,357
Construction, Repairs, and Maintenance of Real Property			
Building an addition to house or new structure	\$572,136	\$605,653	\$24,226
Building outdoor patios, walks, fences, and pools	\$215,182	\$227,788	\$9,112
Dwellings under construction	\$1,085,124	\$1,148,694	\$45,948
Electrical work	\$42,715	\$45,217	\$1,809
Finishing a basement or an attic or enclosing a porch	\$42,054	\$44,518	\$1,781
Flooring repair or replacement	\$159,376	\$168,713	\$6,749
Heating or air-conditioning jobs	\$286,503	\$303,287	\$12,131
Inside painting or papering	\$90,558	\$95,863	\$3,835
Installation, repair, and replacement of windows, doors, etc.	\$113,752	\$120,416	\$4,817
Insulation	\$2,144	\$2,270	\$91
Landscaping the ground or planting new shrubs or trees	\$192,559	\$203,839	\$8,154
Masonry, brick or stucco work	\$9,697	\$10,266	\$411
Other construction, improvements and repairs	\$920,906	\$974,856	\$38,994

*Table 1 continues next page...*

**TABLE 1 (CONTINUED). SALES TAX REVENUE ESTIMATES**

<b>Description</b>	<b>Sales Tax Base 2008 (thousands)</b>	<b>Fiscal Year Sales Tax Base 2012 (thousands)</b>	<b>Fiscal Year State Sales Tax Revenue 2012 (thousands)</b>
Construction, Repairs, and Maintenance of Real Property (cont.)			
Outside painting	\$57,196	\$60,547	\$2,422
Plastering or paneling	\$6,865	\$7,267	\$291
Plumbing or water heating installations and repairs	\$100,925	\$106,837	\$4,273
Remodeling one or more rooms in the house	\$453,416	\$479,978	\$19,199
Repairing outdoor patios, walks, fences, driveways, or pools	\$65,851	\$69,709	\$2,788
Roofing, gutters, or downspouts	\$261,118	\$276,415	\$11,057
Siding	\$29,017	\$30,717	\$1,229
Sub total	\$4,707,093	\$4,982,848	\$199,314
Residential Real Estate Transaction Services			
Other selling and buying costs	\$263,728	\$279,178	\$11,167
Real estate agent commissions and fees	\$2,174,807	\$2,302,213	\$92,089
Sub total	\$2,438,535	\$2,581,391	\$103,256
Transportation and Travel			
Travel by airplane during trips and vacations	\$783,572	\$829,476	\$33,179
Travel by ship during trips and vacations	\$96,162	\$101,795	\$4,072
Travel by train during trips and vacations	\$49,467	\$52,365	\$2,095
Sub total	\$929,200	\$983,635	\$39,345
Health Care Services			
Care in convalescent or nursing home	\$16,493	\$17,460	\$698
Dental care	\$824,472	\$872,772	\$34,911
Eye examinations, treatment, or surgery	\$134,993	\$142,901	\$5,716
Hospital room and hospital services	\$441,854	\$467,739	\$18,710
Lab tests and x-rays	\$147,263	\$155,890	\$6,236
Other medical care	\$44,593	\$47,205	\$1,888
Physician services	\$580,962	\$614,996	\$24,600
Purchase of supportive or convalescent equipment	\$9,470	\$10,024	\$401
Services by medical professionals other than physician	\$166,023	\$175,749	\$7,030
Sub total	\$2,366,121	\$2,504,735	\$100,189
Total	\$25,688,978	\$27,193,911	\$1,087,756

adjustment factor equal to 0.933. Also, the CES adjusts for slightly larger family sizes in the south; the 2008 factor was 1.32. To estimate the total 2008 expenditures in Georgia we multiply by the number of families in Georgia for 2008, by the southern adjusted CES average household expense.<sup>2</sup> For the first eight categories the CES expenditure files match up with the services listed in Table 1. For instance, in the CES expenditure file data, there is a category that corresponds to the Table 1 service of “Shoe repair and other shoe services.”

The remaining four categories listed in Table 1 do not have adequate corresponding categories in the CES interview files or the responses are from too small a sample and are deemed unreliable.<sup>3</sup> In order to generate 2008 baseline estimates for these categories, we use the change in similar categories of reported southern consumer expenditures from 2006 to 2008 from the expenditure tables, *Region of Residence: Average Annual Expenditures and Characteristics, Consumer Expenditure Survey* (2006 and 2008). We use this percentage change to extrapolate data from Matthews, Sjoquist, and Winters (2007), Appendix Table 2. For example, under the broad category of education expenses, the reported consumer expenditures increased by 12.7 percent from 2006 to 2008. Under the education category, the service subcategory in Table 1 of “Tuition at Private Elementary and High Schools” for Georgia families in 2006 is estimated to be \$362,404,784. Our baseline estimate for 2008 becomes \$408,430,192, an increase of 12.7 percent. For the category of Healthcare, related expenditures increased by 2.7 percent from 2006 to 2008. For residential real estate transaction services, we utilize the change in owned dwellings expenses of 6.0 percent from 2006 to 2008. For the category of construction, repairs and maintenance, we used the subcategory of maintenance and repairs under the CES heading of housing expenses. Consumer reported maintenance and repairs have increased by 1.6 percent from 2006 to 2008. Note, residential real estate transaction services and the construction, maintenance, and repair estimates are likely to have a considerable variance due to the 2008 recession. Also, the original CES figures from Matthews, Sjoquist, and Winters (2007) are for 2006, close to the peak of the housing boom.

Adjustments had to be made to certain CES figures as well as for services not available from the CES. We include the discussion of these procedures from Matthews, Sjoquist, and Winters (2007) in Section III, with some minor modifications. Again, caution should be used in comparing our 2008 CES estimates with those from Matthews, Sjoquist, and Winters (2007) Appendix Table 2. It is unclear if the 2006 CES estimates were weighted in an equivalent manner to our 2008 CES estimates and service categories have slightly changed over the years.

Our baseline data are for calendar year 2008. To extend these estimates to fiscal year 2012, we make several adjustments. We first adjust the baseline CES data to reflect observed changes from calendar year 2008 to fiscal year 2010. The biggest adjustment is for changed economic circumstances. Sales tax revenue collections fell by 8.82 percent between fiscal year 2009 and 2010.<sup>4</sup> The CES adjusts for slightly larger family sizes in 2010 by a factor of 1.34. The less expensive cost of living in the south is also taken into consideration using the CES factor of 0.933. Finally we multiply the 2010 adjusted CES mean family expenses by the number of families in Georgia in calendar year 2010. To extend our estimates into succeeding fiscal years, the following year over year increases in sales tax collections are used: a 4.88 percent increase in sales tax for 2011 and 5.3 percent increase in 2012.<sup>5</sup>

As an alternative to the CES we developed a revenue estimate from taxing services using the 2007 Economic Census. Table 2 contains the estimates from the 2007 Economic Census for several of the subcategories from Table 1. Caution should be exercised in comparing tax revenue estimates from the CES data to those from the Economic Census data for several reasons. First, the CES services and the Economic Census services in each subcategory are not always the same. Second, the Economic Census includes expenditures made by firms as well as individuals, while the CES only samples individual consumers. Thus, the Economic Census revenue estimates could be thought of as an upper bound to state sales tax collections in a particular subcategory.<sup>6</sup>

The categories in the Economic Census that match fairly closely to those in the CES are included in Table 2. The first four categories correspond closely to the general category of personal/household services listed in the Economic Census.<sup>7</sup> Thus, we compare the sum of the four categories to the personal/household total from the Economic Census for FY 2012. In this case, the Economic Census revenue estimate, \$366.0 million, is less than the CES estimate of \$449.1 million. We did not do a full analysis of the different services in each category. However, after a cursory review, neither legal nor accounting fees were present in the Economic Census figures. There are likely other personal services not included in the Economic Census estimate. The other three categories of the Economic Census estimates are all greater than the CES revenue estimates, as would be expected.<sup>8</sup>

The Economic Census data can also help determine the types of firms in a category. The Economic Census lists sales from firms that have employees and those that do not have employees. For instance, in the area of barbershops and beauty salons, only 18 percent of barbershop sales are attributed to firms with

**TABLE 2. CENSUS SALES TAX REVENUE ESTIMATES\***

<b>Description</b>	<b>Econ Census '07 Tax Base</b>	<b>Fiscal Year 2012</b>
Clothing Services (CS)		
Household Utilities and Related Expenses (HURE)		
Miscellaneous (MISC)		
Other Household Services (OHS)		
CS+HURE+OHS+MISC	\$347,520	\$365,938
Membership Fees	\$31,154	\$32,805
Vehicle Maintenance, Repairs, and Equipment Installation	\$49,839	\$52,480
Other Vehicle Related Expenses	\$36,689	\$38,633

\* all data are in thousands of 2009 dollars.

employees, while 52 percent of beauty salon sales are attributed to firms with employees. However, beauty salons account for 91 percent of the total barbershop and beauty salon sales.

#### **Details of Revenue Estimation Procedures For Certain Services**

For certain services, we had to use other data sources to generate revenue estimates. For other services, adjustments to our procedures were required in order to generate our estimates. This section describes these other data and adjustments.

##### *Residential Real Estate Transaction Services*

Estimates for consumer expenditures on real estate transaction services were not available using the CES, so we use data from the National Association of Realtors (NAR) instead. According to the NAR, there were 248,800 sales of existing homes in Georgia in 2006. The NAR reports the median sales price for U.S. regions and major metropolitan areas, but not for states. The median sales price of single-family homes was \$183,700 for the South and \$171,800 for the Atlanta metropolitan area. We use sales prices in Atlanta because we expect them to more closely correspond to sales prices for Georgia as a whole than do sales prices for the Southern region. Of course, sales prices in Georgia outside of the Atlanta area are likely lower than those in the Atlanta area, but we make no adjustment for this. We next estimate the total value of existing home sales by multiplying the number of sales in Georgia by the median sales price in the Atlanta metropolitan area, which equals \$42.7 billion. We then multiply this number by 80 percent to adjust for the fact that some home sales do not use a real estate agent, which yields \$34.2 billion. We then multiply by 6 percent

as an estimate of the percentage of the sales price that is paid in agent fees, which yields \$2.1 billion. This gives us our estimate of consumer expenditures for commissions and fees to real estate agents. We also realize there are other potentially taxable consumer services related to buying and selling property such as property surveys, title searches, appraisals, and home inspections. However, it is not clear how we should estimate these consumer expenditures. As a first approximation, we assume the average combined expenditure on these services for each home sale is \$1,000. Multiplying \$1,000 by the number of home sales yields a consumer expenditures estimate for these services of \$248.8 million in 2006. We use the change in reported expenses for owned dwellings of 6.0 percent from the CES from 2006 -2008 to convert to the 2008 baseline.

##### *Long Distance Phone Service*

The CES reports expenditures on residential telephone service, which consists of local service and long distance service. However, the CES does not allow us to separate the expenditures between the two. Therefore, consumer expenses on residential phone service as reported by the CES require adjustment to net out the portion of local service that is already taxed. We do so by using data from the *Statistical Abstract of the United States* (2007) to determine the percentage of telephone company revenues that come from local service and long distance service respectively. According to the *Statistical Abstract*, long distance revenues are 37.1 percent of combined local and long distance revenues. Therefore we multiplied expenditure for residential phone services as reported in the CES by 37.1 percent to obtain our estimate of consumer expenditures on long distance telephone service.

### *Construction, Repairs, and Maintenance of Real Property*

Expenditures on construction in the CES refer to payments to builders and contractors by households for the purpose of construction, but do not include houses built and sold to consumers at retail. Therefore, potential revenues from taxing houses built and sold at retail are not presented in this brief. We do, however, present revenue estimates for taxing many services related to the construction, repair, and maintenance of property. Expenditures as reported by the CES require adjustment to account for the fact that materials and supplies that go into the construction and maintenance process are already subject to the sales tax in Georgia. In estimating the potential revenue gain, we therefore want to net out the portion that is already taxed. We do so by using data from the *Statistical Abstract of the United States* (2007) to estimate the percentage of construction value that is “added” by construction firms. Value added is simply total construction receipts minus the costs of materials and supplies. In other words, value added corresponds to the portion of construction receipts that is not currently taxed in Georgia. According to the *Statistical Abstract*, value added represents 64.5 percent of total construction activity. Therefore, we multiply construction and repair expenditures as reported by the CES by 64.5 percent to estimate the amount of expenditures that are not currently taxed but could be in order to provide an estimate of the increase in revenues that would result from taxing construction, repairs, and maintenance of property.

### *Vehicle Maintenance, Repairs, and Equipment Installation*

Under current law vehicle parts and equipment are subject to the sales tax, but the value of labor in vehicle maintenance, repair, and equipment installation is not taxed if itemized by the service provider. The CES reports consumer expenditures on these items but does not separate expenditures into separate parts and labor components. Therefore we must adjust expenditures on these items to net out the cost of parts. To determine the percentage of repairs that is attributable to labor, we examined several different sources. First, Minnesota, which itemizes the auto repair labor exemption in its tax expenditure budget, has historically used 50 percent-54 percent of total repair cost to be labor. Second, in the National Auto Dealers Association 2009 report, labor accounted for 45 percent of total dealership repair costs in 2007 and 44 percent in 2008. Third, a local business’s records over several years indicated that 61 percent of auto maintenance, service, and repair expenses are attributed to charges for labor. Given the range of labor estimates from 44 percent to 61 percent, we choose 50 percent, similar to Minnesota. Therefore, we

multiply auto maintenance, service and repair expenditures reported in the CES by 50 percent to estimate the amount of these expenditures that is not currently taxed.

### *Auto Repair Service Policies*

Auto service policies were treated in the same manner as vehicle maintenance and repairs.

### *Tuition at Private Colleges and Universities*

The CES reports consumer expenditures on tuition at colleges and universities but does not specify if the tuition was paid to private or public institutions. However, we assume that tuition paid to public colleges and universities will not be taxed, so we need to adjust consumer expenditures on tuition to eliminate the component that goes to public institutions of higher education. We do so by using *Digest of Education Statistics* (2006) to estimate the percentage of tuition charges that go to public and private colleges and universities. According to the Digest, private institutions levy 60.9 percent of tuition charges of all colleges and universities. Therefore, we multiply expenditures on tuition for higher education as reported in the CES by 60.9 percent in order to net out tuition payments to public colleges and universities.

### *Other School Expenses at Private Colleges and Universities*

The CES reports consumer expenditures on miscellaneous school expenses (other than tuition, books, housing, and board) at colleges and universities, but this is a broad category that likely includes both goods and services. Furthermore, this category again includes expenses at public and private institutions. We have no reliable way of knowing how much of these other expenses are already taxed or how much would be subject to broadening of the sales tax base to include services. Therefore, the only adjustment we make is to multiply consumer expenditures as reported by the CES by 60.9 percent in order to net out the percent of other expenses that occur at public institutions, as is done with tuition. However, this likely overstates the potential revenue gains from taxing miscellaneous services at private colleges and universities.

### **Expenditures That Were Not Adjusted**

#### *Other School Expenses at Private Elementary and High Schools and Other Non-Public Schools*

Again, other school expenses likely include goods and services, but we cannot reliably separate the various components. Therefore, we make no adjustment to these expenditure items, but recognize that the revenue estimates reported likely overstate the actual revenue increases from taxing the service component of these other school expenses.



### *Travel by Ship During Trips and Vacations*

Our estimates are based on the Southern regional average for consumer expenditures, but some items are likely to be less important in Georgia than in other states. Such is likely the case with travel by ship. However, we made no adjustment for this expenditure item.

### *Funerals, Burials and Cremations*

The CES reports consumer expenditures on funerals, burials, and cremations but does not allow us to separate the portion that is goods from the portion that is services. However, we make no adjustment for the goods that are already taxed in this category, so the revenue estimates provided are likely overestimates.

### *Condo, Co-Op, and Homeowner's Association Fees*

Condo, co-op, and homeowner's association fees would not be taxed in themselves but the services they are used to purchase would be taxed. Consumer expenditures on these fees are therefore used as a proxy for the actual services. These services include lawn maintenance, landscaping, pool cleaning and maintenance, and management fees among other things. However, some of these fees go to pay for things that are already taxed, such as electricity or things that would not be subject to the sales tax, such as property tax payments and water usage. However, we make no adjustment for this, therefore the revenues estimates reported likely overestimate the actual revenue gain from taxing these services.

### *Garbage and Trash Pick-up*

Garbage and trash pick-up is provided publicly in some jurisdictions, but privately in others. We expect that trash pick-up by local governments would not be subject to the sales tax but pick-up by private companies would be subject to the sales tax. However, we do not adjust consumer expenditures on trash pick-up for the portion that is provided by local governments. Therefore, the revenue estimates provided likely overstate the actual revenue increase from taxing private garbage pick-up.

### *Health Care Services*

Health care services in the CES are for consumer expenditures net of reimbursements. Therefore, payments by insurance providers (including Medicare and Medicaid) for health care services are not included as part of the sales tax base in these estimates. The state might wish to tax payments by private insurance providers, but the CES does not allow us to estimate the amount of revenue that would be obtained from doing so.

## **Behavioral Response to Sales Tax on Services**

The addition of the four percent state sales tax would increase the cost of services for consumers. Standard economic theory predicts that as price increases, demand for a service will decrease. The amount of quantity decrease for a one percent price increase can be estimated and is the service's price elasticity. For most consumer goods and services, price elasticity tends to be between -0.5 and -1.5. This means that for a one percent increase in the price of a service, the amount of the service purchased will decrease between 0.5 percent and 1.5 percent. However, the data used to develop the revenue estimate include household observations in states that tax these services, and thus, the data reflect the behavioral response to some degree. Thus, we reduce this range of elasticities somewhat. We use the range of -0.2 to -1.2 to estimate a behavioral response by consumers if sales tax were to be levied on the list of services in Table 1. Note that some services on the list are luxury items and likely have higher elasticities, such as vacation air travel, while others could be considered necessities and likely have lower elasticities, such as health care. Taking into account these behavioral responses to adding a sales tax to the purchase of services would likely diminish the estimated state sales tax revenue in Fiscal year 2012 of \$1.09 billion by \$8.8 million assuming the elasticity of -0.2 and by \$52.4 million assuming an elasticity of -1.2.

## **Conclusion**

In this brief, we update prior estimates of the revenue that might be generated if services were added to the sales tax base in Georgia. We estimate the revenue for over 100 services in 12 broad categories. We assume that only the purchase of these services by households would be taxed. If business purchases of these services were not exempt, expected revenue would be larger as is generally shown in Table 2. It is expected that the first eight categories in Table 1 would most likely be purchased by households. These categories are: clothing services; household utilities and related expenses; other household services; miscellaneous; education and childcare; membership fees; vehicle maintenance, repairs, and equipment installation; and other vehicle related expenses. If only these eight subcategories were added to the sales tax base, the revenue estimate is \$646 million in 2012. It is less clear that the remaining four categories make ideal candidates to be added to the sales tax base as some of these services are primarily business inputs while other services present compliance or other policy concerns (see Bluestone, Bourdeaux and Sjoquist (2011) for a discussion of the criteria for addition of services to the sales tax base). Recall these are: construction, repairs and

maintenance of real property; residential real estate transaction services; transportation and travel; and healthcare services. If these services were also included, the estimated revenue would be \$1.09 billion in 2012. Taking into account the effect of decreased demand due to the higher price of services could reduce these estimates by 0.8 percent to 4.8 percent.

#### Notes

1. These categories are: clothing services; household utilities and related expenses; other household services; miscellaneous; education and childcare; membership fees; vehicle maintenance, repairs, and equipment installation; and other vehicle related expenses.
2. The number of families in Georgia for 2008 was 2,943,995 for 2010 there was a slight increase to 2,944,767.
3. These categories are: construction, repairs and maintenance of real property; residential real estate transaction services; transportation and travel; and healthcare services.
4. For fiscal year 2010 the sales tax growth rate reflects actual sales tax collections from the Georgia Department of Revenue. As our CES estimates are for the calendar year and the sales tax estimates are for the fiscal year we do not make a 2009 calendar year adjustment as the second half of the 2008 calendar year falls in the first half of the 2009 fiscal year for Georgia.
5. For fiscal year 2011 the growth rate comes from the Governors FY 2011 budget. The 5.3 percent figure is the forecasted growth in sales tax collections from the Georgia State's fiscal economist, Kenneth Heaghey.
6. The Economic Census data includes a category for federally tax-exempt sales. For consistency, we include the sales in our estimates. Consumer expenditure data do not distinguish between consumer expenditures made to charitable organizations and those to for-profit firms.
7. These are: clothing services, household utilities and related expenses, other household services, and miscellaneous.
8. These are: membership fees; vehicle maintenance, repairs and equipment installation; and other vehicle related expenses.

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## Applying the Sales Tax to Services: Revenue Estimates

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