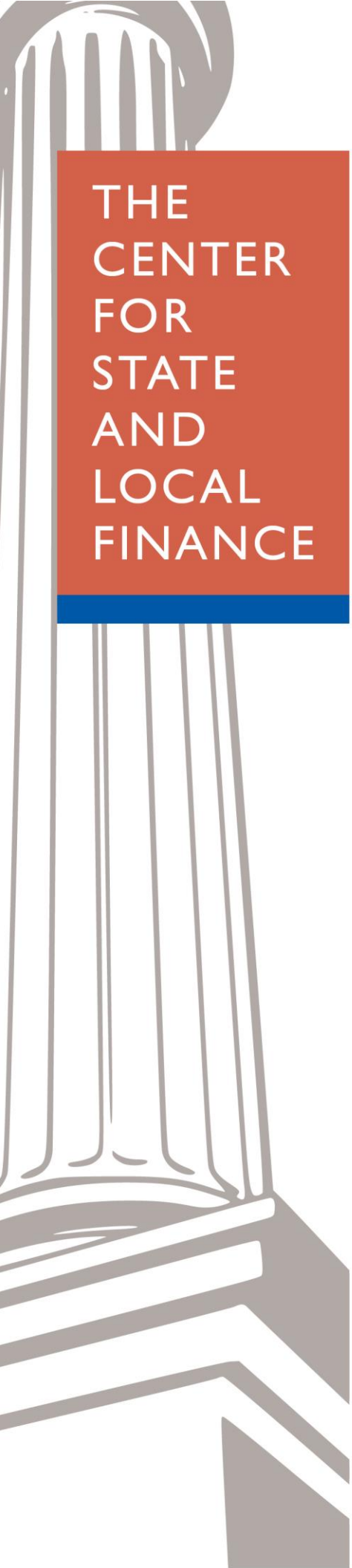

THE CENTER FOR STATE AND LOCAL FINANCE

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Georgia's Special Purpose Local Option Sales Tax for Education: Review of Trends and Policy Implications

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Introduction

Georgia enacted the special purpose local option sales tax for education (ESPLOST) in 1996, giving school districts in the state the opportunity, with voter approval, to adopt a 1¢ sales tax with revenue earmarked for capital outlay. The ESPLOST has proven to be extremely popular with voters, as all but one county in the state have passed at least one ESPLOST referendum, each of which remains in effect for a maximum of five years. As shown in Table 1, most counties have approved the tax four times, while a handful have had five or six ESPLOSTs approved. The vast majority of counties (132) have had an ESPLOST in effect continuously since first passage, with only three counties allowing the tax to lapse. Therefore, the ESPLOST has become, in effect, a permanent statewide 1 percent sales tax.

Table 1. The Popularity and Permanence of ESPLOST

NUMBER OF ESPLOSTS PER COUNTY TO DATE	COUNTIES WITH AN ESPLOST IN PLACE UNTIL AT LEAST 2017	COUNT OF COUNTIES BY ANY INTERRUPTIONS IN ESPLOST SINCE FIRST IMPLEMENTED
No ESPLOSTs = 1*	Yes = 143	None = 132
2 ESPLOSTs = 5	No = 16	Yes but Reinstated = 24
3 ESPLOSTs = 15		Yes and Not Reinstated = 3**
4 ESPLOSTs = 126		
5 ESPLOSTs = 11		
6 ESPLOSTs 1		

* Burke County

** Burke, Hancock and Towns counties

Source: Georgia Department of Revenue Sales Tax Rate History Chart Effective April 1, 2016

Note: Counties pass and collect ESPLOST and then distribute the funding to the associated county and city systems, so the count of school districts in these categories is slightly larger with similar proportions.

The ESPLOST is a unique approach to financing capital outlay for education. Capital outlay is traditionally financed through municipal bond debt, sometimes referred to as "pay-as-you-use" because debt service payments often match the useful life of the asset. The ESPLOST allows school districts to substitute current revenues for debt financing. Current financing is sometimes referred to as "pay-as-you-go" because the assets are fully paid for as they are constructed. Moreover, rather than relying on general revenues, it provides an earmarked funding source that is only available for capital outlay and must be approved directly by voters.[1] The ESPLOST has now been available in Georgia for 20 years and through several economic boom and bust cycles, making this an opportune time to reexamine its relationship to funding equity, capital outlay and debt.

This report examines a range of policy issues related to the ESPLOST, including the distribution of revenues, and the relationship between the ESPLOST and school district debt and capital outlay needs. It begins by reviewing previous research on the Georgia ESPLOST specifically and alternative revenue

[1] Counties may issue bonds backed by ESPLOST revenues at the time the ESPLOST is approved. Because debt service on the bonds must be paid solely with ESPLOST revenue, it would still be considered pay-as-you-go financing.

sources for capital outlay more generally. It then examines the ESPLOST's effect on school finance equity in Georgia over time. Next, the report discusses the relationship between school district debt and ESPLOST revenue. Analysis of changes in capital outlay over time follows, and a final section provides a summary and policy recommendations. An appendix describes the data sources for each analysis and the methods used to calculate the inequality measures.

Previous Research on Sales Taxes for Capital Outlay

Given the relatively infrequent use around the United States of local sales taxes to fund facilities investments, or capital outlay, it is not surprising that the research on these taxes is limited. Several articles, however, have examined Georgia's ESPLOST specifically or local sales taxes for capital outlay more generally.

Rubenstein and Freeman (2003) analyzed the effects of Georgia's ESPLOST on school finance equity during the program's early years in the late 1990s and early 2000s. Voter approval of ESPLOST was already widespread, with 165 of 180 districts enacting one within the first six years of the program. The authors found that districts with large property tax bases also tended to have large sales tax bases and that the ESPLOST revenue increased disparities in funding across districts above what they would otherwise be. Although the state's capital outlay program was designed to provide more resources to low-wealth districts, it was not large enough to offset differences across districts in tax bases. Brunner and Warner (2012) produced a follow-up study on school facility funding in Georgia and found that the ESPLOST had significantly increased school capital outlay funding in Georgia overall, but that wide disparities in funding across districts remained. They also found that districts with larger sales tax bases tend to be urban with higher levels of income and education. Finally, they reported that school construction needs in Georgia were expected to decline as enrollment growth slowed.

Zhao and Wang (2015) studied the effect of Georgia's ESPLOST on capital outlay disparities and reported lower capital outlays on average in South Georgia districts with higher percentages of African American residents and higher poverty. They also found that disparities across districts were substantially larger for capital outlay than for operating expenditures.

Brunner and Schwegman (2016) examined the Georgia ESPLOST's effects on school district capital outlay and debt. They found that adoption of an ESPLOST led to higher capital outlay and reduced debt for districts located in metropolitan statistical areas (MSAs) in Georgia. For districts outside of MSAs, they found evidence of higher capital outlay but not reduced debt. Though ESPLOST revenue is restricted to capital outlay and debt reduction, they also reported that the tax increased current spending per pupil in districts within MSAs.

Benson (2015) examined the relationship between the ESPLOST and expenditures on various categories of capital outlay. He also surveyed a sample of district administrators and school board members on their opinions about the ESPLOST. He found that inflation-adjusted expenditures for capital outlay increased

after the ESPLOST went into effect, though not by a statistically significant amount, and that expenditures for new construction and renovation became more equitable across districts. He also reported that administrators in urban districts felt the ESPLOST was more effective than did administrators in rural districts.

Zhao and Hou (2008) analyzed the general purpose local option sales taxes (LOST) in Georgia, including potential tax exportation, meaning the sales taxes paid by people shopping outside their county of residence. They estimated that 76 counties were tax importers (net beneficiaries of exporting), and 83 were exporters. The largest beneficiaries of tax exportation were regional retail centers, not necessarily districts in the metro-Atlanta area. They also found that tax base inequalities increased between 1970 and 2000 and that sales taxes were more unequally distributed than property tax revenues. The authors used two models to examine tax base inequality. Using a representative tax system model, they found that LOST revenue did not increase overall revenue disparities during this period, whereas the income-with-exporting model suggested that it did.

In a study of North Carolina rather than Georgia, Wang and Zhao (2010) examined a 0.5¢ local sales tax earmarked for school construction and debt retirement. Using data on 100 counties, they found that the LOST reduced inequalities in capital outlay funding across districts. They noted an important institutional feature that differs from Georgia, however. In Georgia, counties retain the sales tax revenue for sales that occur within their boundaries. In North Carolina, the state collects sales taxes and distributes them to counties based on population rather than sales. Thus, counties with few retail outlets can still receive sales tax revenues.

Findings from the Current Study

ESPLOST'S ROLE IN FUNDING INEQUALITY

Like property taxes, an ESPLOST is a local tax, with revenue remaining in the district in which it was collected.[2] Therefore, as with property taxes, we would expect to find disparities across districts in the amount of revenue collected, even after adjusting for the size of the district. In Georgia, as in all states, a variety of state education funding formulas help to offset differences in property tax capacity by allocating higher levels of operating funding to districts with lower levels of property wealth per pupil, particularly those districts levying higher property tax rates. (See Davis and Ruthotto 2015 and Rubenstein and Sjoquist 2003 for a fuller discussion of Georgia's QBE funding formulas for education.) While Georgia does have a capital outlay program to provide resources to districts with high needs and low sales tax bases, most capital outlay is financed using local resources.[3] Additionally, while ESPLOST revenue can be used only for school construction, renovation, capital equipment or debt service on bonds issued for

[2] Because revenues are collected at the county level, city school districts must enter tax-sharing agreements with their corresponding county school districts.

[3] For a thorough review of Georgia's capital outlay program, see Walker and Sjoquist (1996). Some of the aspects of the capital outlay program have changed since 1996, but much of the report is still relevant to the current capital outlay. See O.C.G.A. § 20-20-260-263.

these purposes, the revenue may be fungible to some extent. In other words, if some districts would have used property tax revenue for capital outlay in the absence of the ESPLOST, the tax could have indirectly helped to fund operating expenditures or property tax reductions.

Figure 1 displays a map of Georgia color-coded to show geographic differences in potential ESPLOST revenue per full-time equivalent pupil (FTE) by district.[4] The map also shows the location of major highways. Darker areas indicate higher levels of ESPLOST revenue per FTE. Not surprisingly, the districts in metro Atlanta, all have high levels of ESPLOST revenue per FTE. Other high revenue districts are scattered around the state and are typically served by major highways, for example, Savannah and Augusta or other urban centers. Also note that the districts with the lowest ESPLOST revenue are often contiguous to districts with the highest revenues, an issue we discuss further below.

[4] The analyses in this report use potential ESPLOST revenue, calculated as 1 percent of the sales tax base, rather than actual revenue, to account for the small number of districts not levying the ESPLOST.

Figure 1. Per Student Potential ESPLOST by School District in School Year 2015

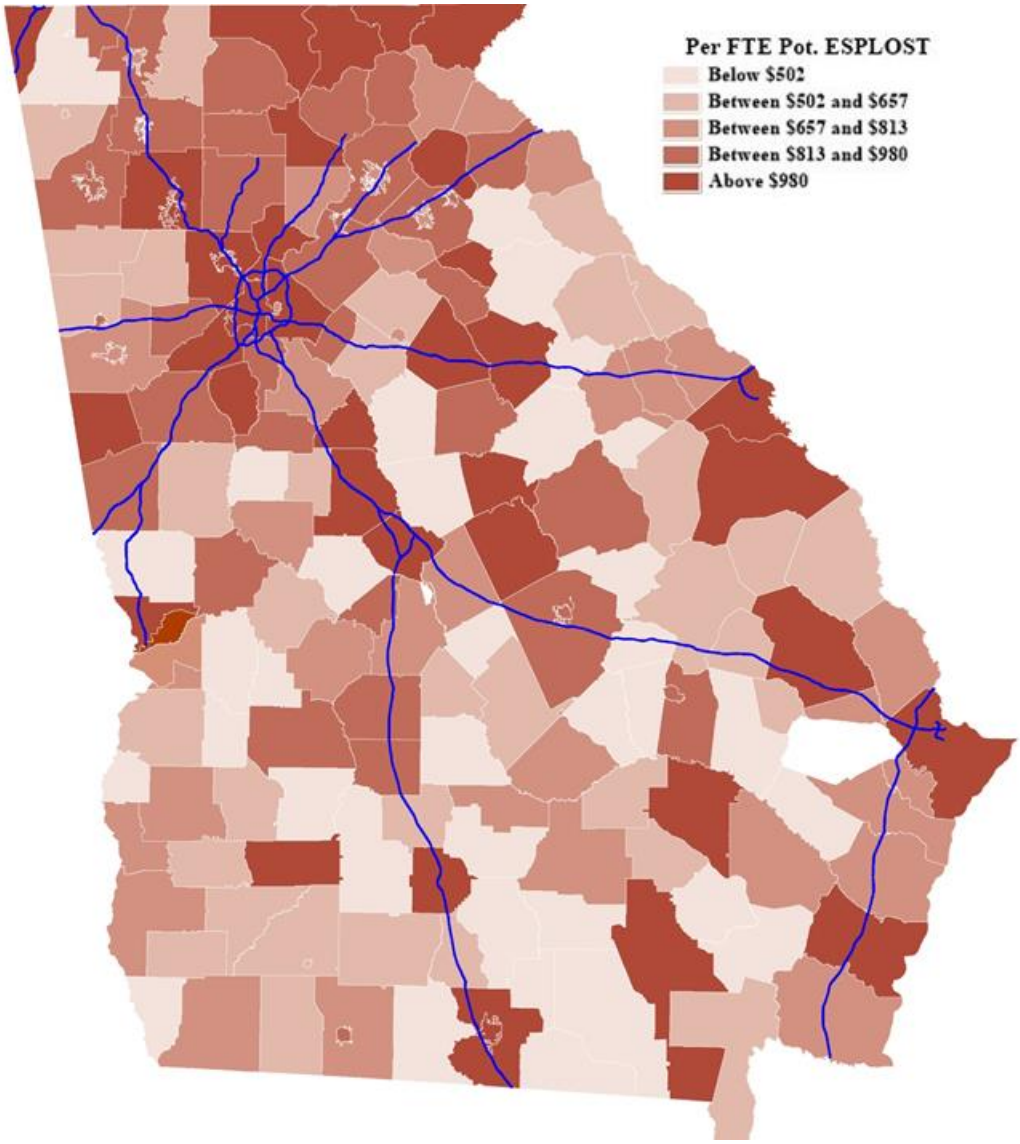


Table 2 compares the inequality of four funding sources in 2007 (a pre-recession year) to that in 2015. Disparities are quantified using five statistics that measure inequality in slightly different ways. The Restricted Range examines the extremes by looking at the difference in per FTE revenue for districts at the 5th and 95th percentiles of revenue. This measure eliminates districts at the far ends of the distribution, but uses data for only two districts (those at the 5th and 95th percentiles) in the calculation. The Federal Funding Inequality Index puts the restricted range in context by dividing it by revenues at the 5th percentile. Lower values indicate greater equality. The Coefficient of Variation is calculated as the mean of per pupil funding divided by the standard deviation, with higher numbers indicating greater inequality. This measure includes the full distribution of districts. The McLoone Index focuses on districts in the bottom half of the distribution, with higher numbers indicating that revenues for districts below the median are closer to those in districts above the median (greater equality). The Gini Coefficient, often

used to measure income inequality, also uses the full distribution of districts, with lower numbers indicating greater equality. Because the Gini Coefficient is a cumulative measure of inequality, it is less sensitive to inequality in the extremes and is highly influenced by inequality in the middle of the distribution.

Table 2. Inequality in Georgia School Districts Revenues, 2007 and 2015

	LOCAL PER FTE	PLUS STATE	PLUS FEDERAL	PLUS POTENTIAL ESPLOST
			2007	
Restricted Range p95-p5	$4,134	$2,833	$3,556	$4,436
Federal Funding Inequality Index	3.54	0.43	0.49	0.56
Coefficient of Variation	0.493	0.126	0.139	0.142
McLoone Index	0.481	0.844	0.834	0.829
Gini Coefficient	0.253	0.063	0.068	0.071
			2015	
Restricted Range p95-p5	$4,832	$3,947	$4,472	$5,266
Federal Funding Inequality Index	3.01	0.58	0.60	0.66
Coefficient of Variation	0.480	0.165	0.169	0.168
McLoone Index	0.506	0.809	0.808	0.804
Gini Coefficient	0.243	0.080	0.081	0.083

The first column in Table 2 shows the results for local, non-ESPLOST revenues only. Not surprisingly, local revenues are the most unevenly distributed by every measure, but other than the Restricted Range, the measures indicate that the distribution became slightly less unequal between 2007 and 2015.[5] State revenues are generally distributed inversely to property wealth, so inequality is substantially reduced when these revenues are added to local funding. Between 2007 and 2015, however, state funds became somewhat less equalizing, as most of the measures show larger inequalities in 2015 than in 2007. Federal revenues are largely targeted to high-poverty districts — which may not be the districts with the lowest revenues — so their expected effects on inequality are not straightforward.[6] Table 2 shows that in both years, the addition of federal funds had relatively little effect on overall inequality, likely because they account for a small portion of overall revenues.

The last column in Table 2 adds potential ESPLOST revenue to local, state and federal funding. In both years, the addition of ESPLOST revenues leads to larger disparities as measured by the Restricted Range and Federal Funding Ratio. Interestingly, however, the measures examining the full range of districts (Coefficient of Variation and Gini Coefficient) indicate that the ESPLOST worsened inequalities in 2007 but

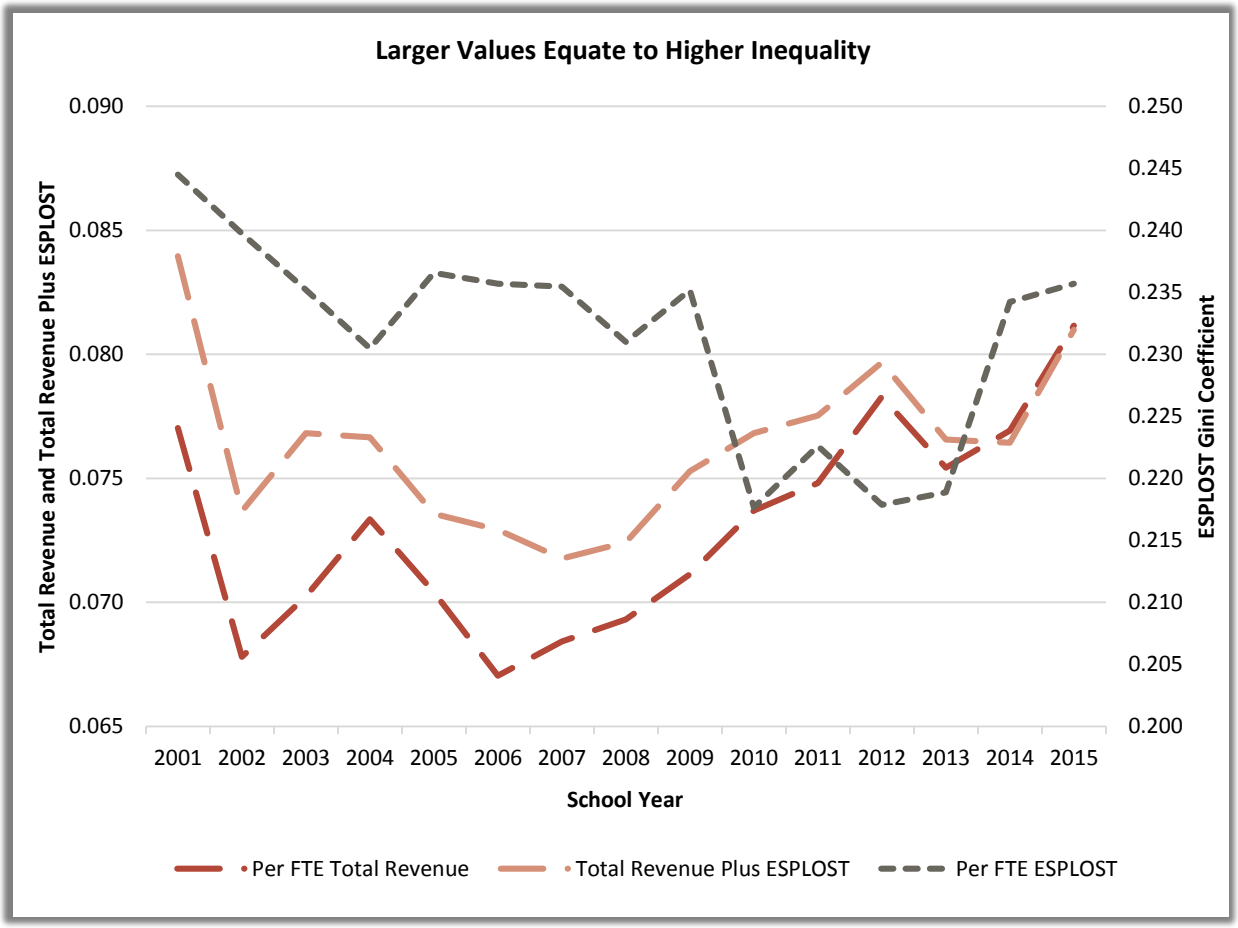
[5] Warner (2014) similarly found that in the wake of the Great Recession the decline in per student property values was most concentrated in previously high wealth districts, effectively lowering property wealth disparities across districts.

[6] Our analyses examine "horizontal equity," which focuses on the equality of resources irrespective of student needs. "Vertical equity" examines whether students with greater needs receive more resources. Federal funding would be expected to improve vertical equity but could worsen horizontal equity.

had almost no effect on inequalities in 2015, relative to either state and local, or federal, state and local revenues.

Figure 2 also shows how the effect of the ESPLOST on inequality has changed over time by graphing the Gini coefficient by year from 2001 to 2015 for total revenues with and without the ESPLOST. There was a sharp improvement in equality across districts between 2001 and 2002, coinciding with expansion of state equalization grants (Rubenstein and Sjoquist 2003). Inequality largely stayed the same between 2002 and 2008 but ESPLOST revenue was unequally distributed across districts over the period, leading to a more unequal distribution of overall revenues (pink line). Beginning with the start of the Great Recession in 2009, inequality of total revenues increased each year until 2012. Inequality of ESPLOST funding dropped during the Great Recession so that ESPLOST revenue no longer exacerbated overall revenue inequality. By 2014, however, ESPLOST inequality across districts began to grow but no longer contributed to an overall increase funding disparities.

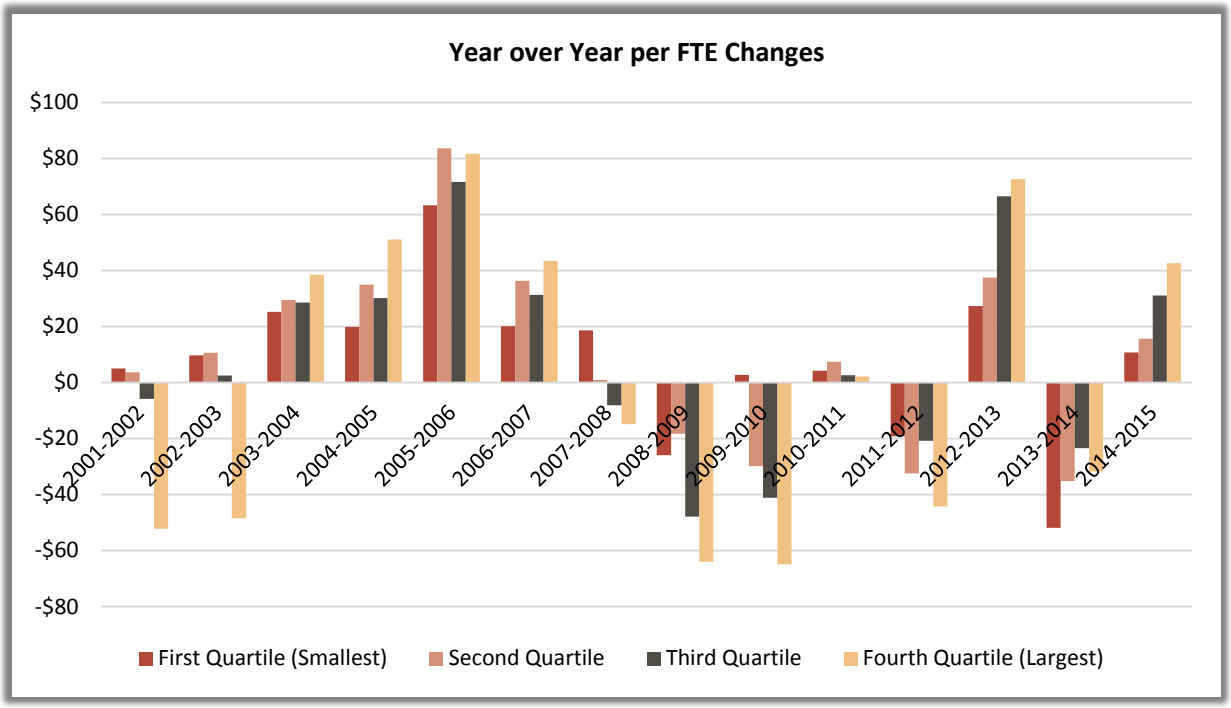
Figure 2. District Level Gini Coefficient 2001-15



Sources: Georgia Department of Revenue for ESPLOST and Georgia Department of Education DE-46 Detailed Revenue Files

The trends presented in Figure 3 shed some light on why the ESPLOST's impact on inequality has changed over time. The figure shows year-to-year changes in ESPLOST revenue per FTE for four quartiles of ESPLOST revenue. The first quartile (red) had the lowest sales tax base per student in 2001, and the highest quartile (yellow) had the largest sales tax base per student. The quartiles are based on 2001 revenues so that the groups of counties are consistent over time.

Figure 3. Potential ESPLOST 2001-15 by 2001 ESPLOST Quartile



The figure shows that from 2003-04 through 2006-07, ESPLOST revenue grew consistently across all quartiles, with the highest ESPLOST quartile generally experiencing the highest growth. ESPLOST revenue contributed to larger inequalities over this period (Figure 2). Revenues began to fall across the top two quartiles in 2007-08 and, beginning with the start of the Great Recession in 2008-09, decreased in three of the next four years, with essentially flat revenue in 2010-11. The declines were largest in the highest ESPLOST districts. Therefore, as ESPLOST revenue overall shrank and disproportionately affected the districts with the highest revenues, ESPLOST revenue no longer contributed substantially to greater inequality. During this period, inequality overall was growing but ESPLOST revenue was playing an increasingly smaller role in that inequality.

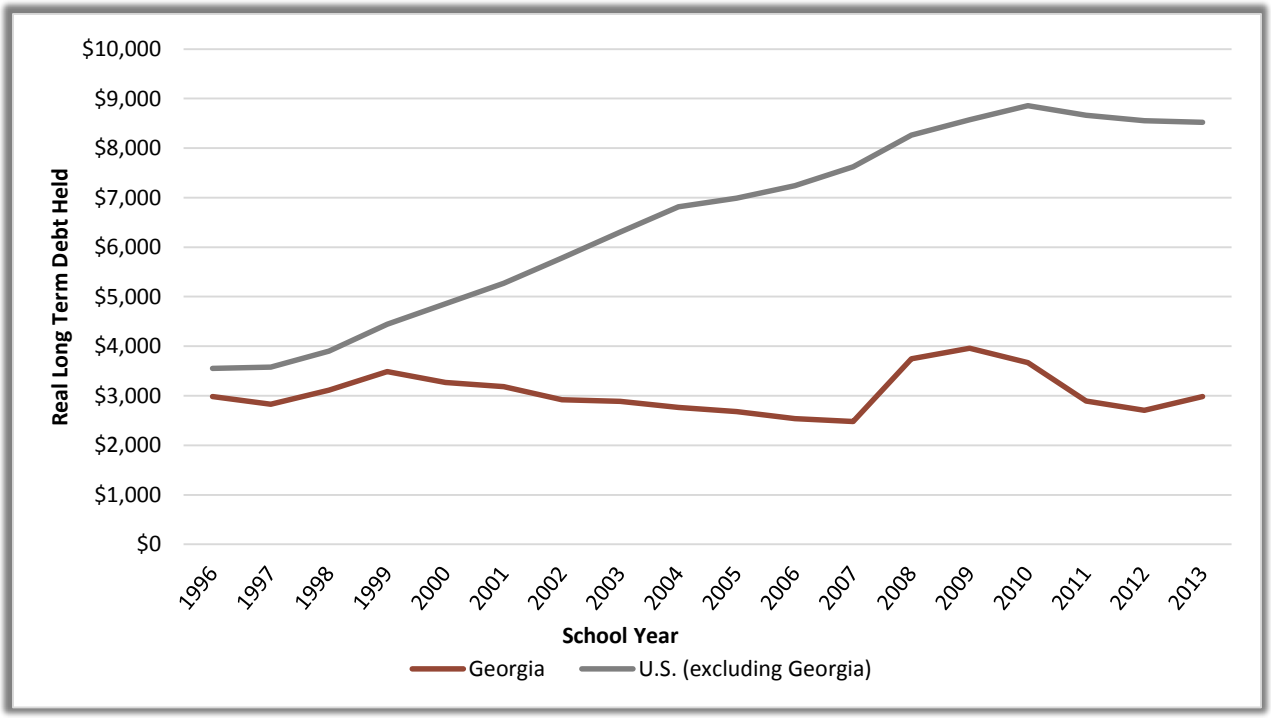
In sum, it appears that the Great Recession led to growing inequality in educational funding in Georgia. At the same time, severe declines in sales tax revenue in the districts with the largest sales tax bases led to greater equality in the distribution of ESPLOST revenue. Due to increasing inequality in operating revenues for education, the ESPLOST no longer exacerbated these inequities in the post-recession years.

ESPLOST AND SCHOOL DISTRICT DEBT

Capital outlay in the public sector generally, and in Georgia school districts specifically, is traditionally financed through a mix of municipal bonds and excess current revenue from taxes and other sources (Sjoquist and Walker 1996). The ESPLOST allows school districts in Georgia to fully substitute current sales tax revenue for long-term debt. For districts with capital outlay needs that exceed ESPLOST revenue, long-term debt financing can supplement sales tax revenue. Given the ubiquity of debt as a financing source for municipal governments around the United States, it is worth examining the extent to which school districts in Georgia have moved away from debt and the extent to which they rely solely on pay-as-you-go financing.

Figure 4 compares debt levels per pupil in Georgia to the rest of the United States. Before ESPLOST enactment, Georgia was close to the national average in debt per student held by school districts. Between 1999 and 2007, debt per student in Georgia fell by approximately $1,000, adjusted for inflation, while in the rest of the United States it rose by about $3,200 per student. During the Great Recession, with ESPLOST revenues shrinking, districts increased their debt levels, peaking at almost $4,000 per pupil in 2009. Debt levels outside Georgia in 2009, however, were over twice as high. Debt per student then began to fall in Georgia, while staying roughly constant in the rest of the United States.

Figure 4. Real Per Pupil Long-Term Debt Held



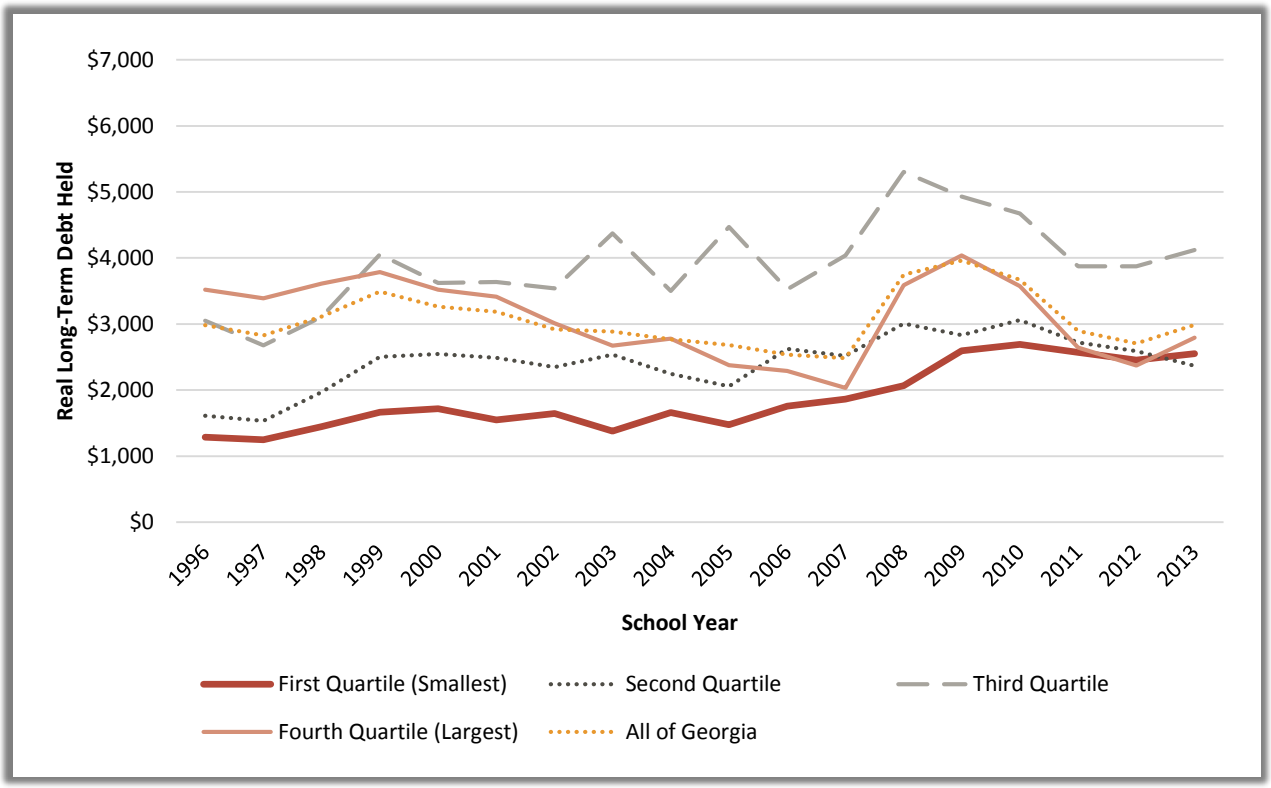
Source: National Center For Education Statistics F-33 Data Files

Inflation adjusted to 2013 dollars using the Producer Price Index for Construction

If we assume that in the absence of the ESPLOST, Georgia's debt levels would have followed a similar trajectory to the rest of the United States, then the ESPLOST led to a dramatic decrease in debt levels in Georgia compared to what they would have otherwise been. Given Georgia's fast population growth during much of this period, it is also possible that debt for capital outlay would have increased more quickly than in the rest of the country in the absence of the ESPLOST.

Figure 5, which breaks down debt levels within Georgia by quartile of ESPLOST revenue, shows an interesting pattern. Districts with the lowest ESPLOST revenues also had the lowest debt per student over most of the period, but debt in these districts more than doubled in inflation-adjusted dollars, from approximately $1,000 per student in 1996 to over $2,000 per student in 2007. Only districts in the highest revenue quartile lowered their debt levels over this period, indicating that ESPLOST-driven debt reductions were concentrated in districts with the highest ESPLOST revenues.

Figure 5. Real Per Student Long-Term Debt Held by 2001 ESPLOST Quartile

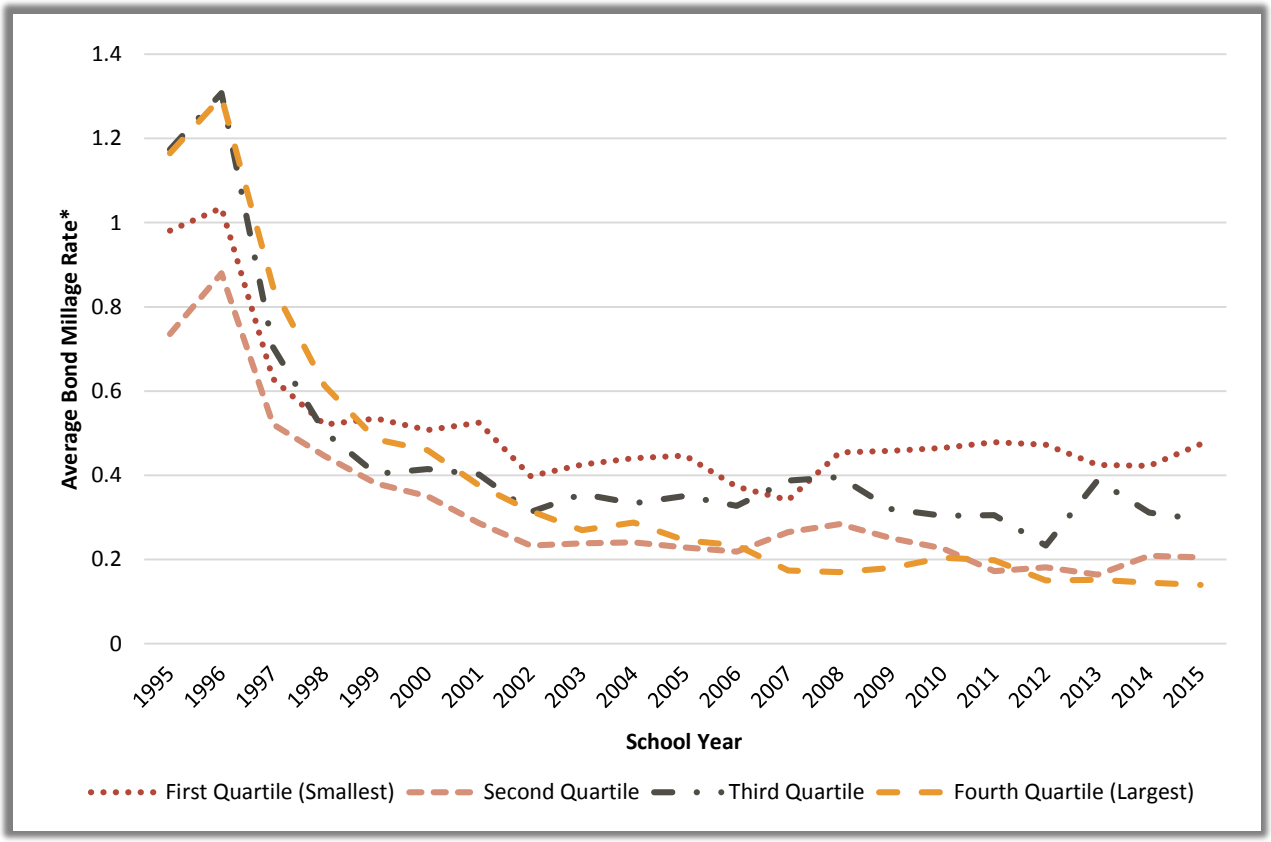


Source: National Center For Education Statistics F-33 Data Files
Inflation adjusted to 2013 dollars using the Producer Price Index for Construction

Figure 6 examines how districts' reliance on debt has affected related property tax rates since the ESPLOST became available. School districts have the authority to charge a separate property tax millage rate to fund debt service on bonds, so these millage rates provide information about districts' reliance on

property taxes rather than sales taxes to repay debt.[7] The figure displays changes in average property tax bond millage rates by quartile of ESPLOST revenue. Beginning in 1996 with the start of the ESPLOST program, average bond millage rates fell dramatically for all four quartiles. Average rates were initially highest in the districts with the most ESPLOST revenue, which also showed the most dramatic decline. For example, average rates were approximately 1.3 mills in 1996 and fell to under 0.2 mills by 2015. As might be expected given their more limited capacity to substitute sales taxes for property taxes, districts in the lowest quartile of ESPLOST revenue showed the smallest drop in bond millage rates over the period, from approximately 1 mill to 0.5 mills. The figure shows that districts have drastically reduced their debt service payments as they have increasingly relied on ESPLOST revenue to fund capital outlay. The chart also shows the gap between high and low revenue districts. High revenue districts have gone from having the highest bond millage rates before ESPLOST to an average close to zero, while the lowest revenue districts now have the highest property tax rates to pay back debt.

Figure 6. Average Bond Millage Rates 1995-2015 by 2001 ESPLOST Quartile



*Includes only districts charging a bond millage rate

[7] Districts also have the ability to finance capital outlay by issuing other forms of short-term debt like revenue anticipation notes or certificates of participation. Data on the use of these types of debt are limited. The analyses here focus on long-term debt issuance — debt obligations with a repayment period longer than one year.

Table 3 shows the number of districts over time charging a millage rate to fund bond debt service payments, and the average millage rate for those levying the tax. Charging a bond millage rate indicates that the district has outstanding debt, but it does not necessarily mean the debt was issued in the current year. The property tax revenue could be used to meet debt service obligations on debt issued in the past. As shown in the table, most Georgia districts (102 out of 180) had outstanding debt backed by the property tax in 1996, just prior to the start of the ESPLOST program. When ESPLOST became an option, the number of districts repaying debt directly through property tax millage declined dramatically, falling to 28 districts (15.5 percent) by 2015.

Table 3. Millage Rates for Bond Debt Service

SCHOOL YEAR	NO. OF DISTRICTS CHARGING A BOND MILLAGE RATE	AVERAGE RATE	25TH PERCENTILE	75TH PERCENTILE
1995	97	1.869	0.96	2.59
1996	102	1.969	1	2.8
1997	69	1.750	1	2.32
1998	57	1.633	1	2.31
1999	52	1.553	0.971	2.11
2000	51	1.519	1	1.98
2001	48	1.481	0.955	1.92
2002	43	1.311	0.71	1.835
2003	41	1.408	0.8	1.835
2004	42	1.394	0.8	1.75
2005	42	1.362	0.699	1.75
2006	38	1.365	0.65	1.878
2007	37	1.42	0.67	1.838
2008	39	1.505	0.65	2.45
2009	37	1.469	0.599	2.2
2010	35	1.542	0.65	2.2
2011	32	1.623	0.66	2.359
2012	29	1.610	0.65	2.173
2013	29	1.751	0.671	2.3
2014	28	1.739	0.658	2.359
2015	28	1.781	0.673	2.704

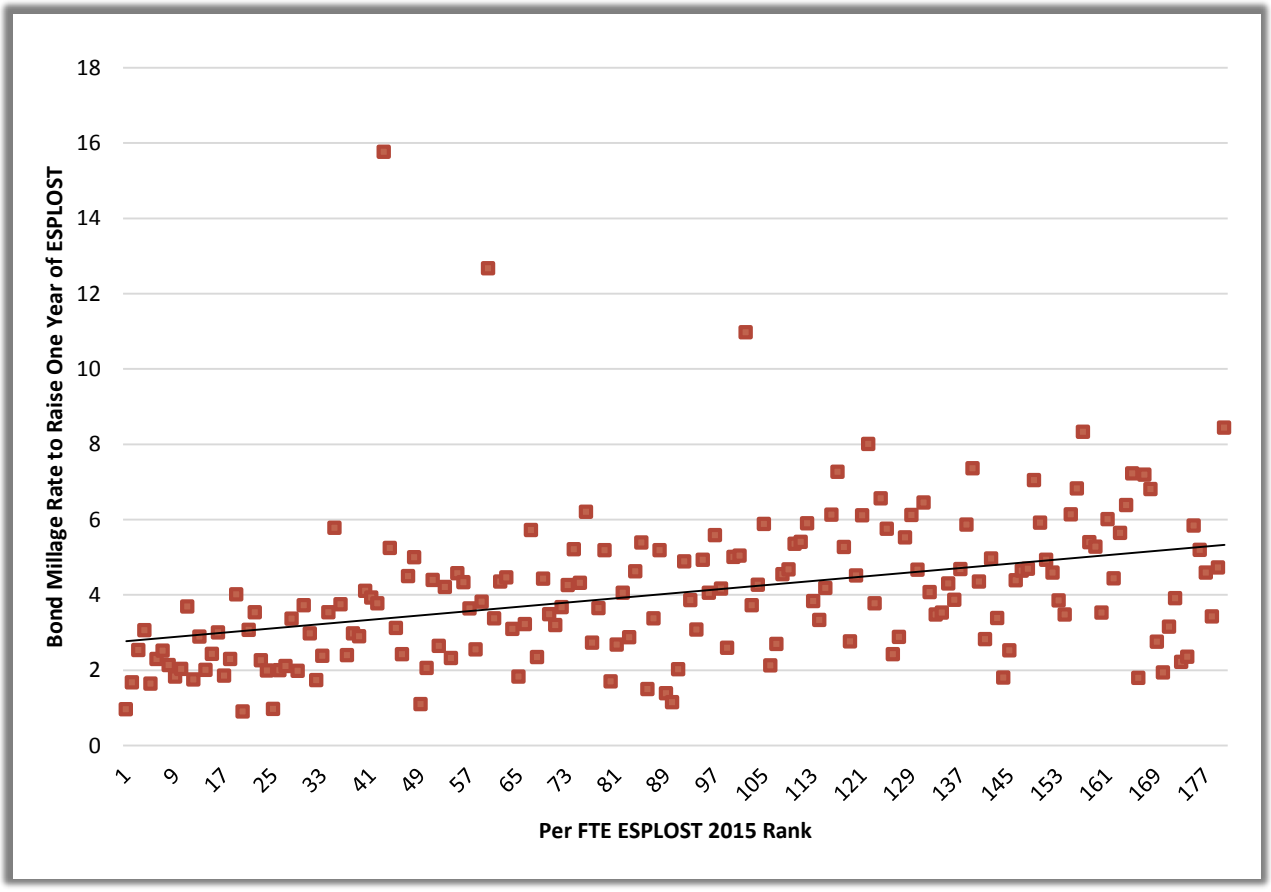
From the taxpayer's perspective, in those districts levying a bond millage rate, the rates were low, averaging less than 2 mills over the entire period and not exceeding 3 mills even for districts at the 75th percentile of tax rates. For the owner of a home with a market value of $153,900 (about the median home price in Georgia), a 2-mill tax would translate into property tax payments of $123 per year.[8]

[8] Residential property in Georgia is usually taxed on 40 percent of its assessed market value. In 2015, Decatur City Schools taxed at 50 percent, and Gainesville City and Dalton City Schools taxed at 100 percent. This calculation ignores any property tax exemptions to which the homeowner may be entitled.

COMPARISON OF PROPERTY AND SALES TAXES FOR CAPITAL OUTLAY

Figure 7 examines household ESPLOST and property tax payments by comparing the bond millage rate that would be required in each district to replace ESPLOST revenue in 2015. This comparison assumes that districts would be able to fund the same level of capital outlay from either the current ESPLOST or a property tax millage rate at the level shown in the chart. While there are several extreme outliers — districts that would need a bond millage rate over 10 to replace ESPLOST revenue — most districts are clustered between 2 and 4 mills. Therefore, for most districts, it would be feasible to substitute property tax revenue for sales taxes. For those with particularly low ESPLOST revenue, it would likely be possible to raise more revenue from a relatively low property tax of 4 to 5 mills.[9] Note, however, that if a district chose to eliminate the ESPLOST and issue municipal bonds backed by property tax revenues instead, a homeowner in that county would pay the additional millage rate plus the ESPLOST on any purchases in other counties with the tax.

Figure 7. Necessary Bond Millage Rate Required to Raise ESPLOST Equivalent Amount of Revenue in 2015 By ESPLOST Rank



[9] A 5-mill tax on a property valued at $150,000 would cost the homeowner an additional $300 per year in property taxes.

Figure 8 shows a district perspective of how much potential revenue could be raised in each district through a 2-mill property tax as compared to a 1¢ sales tax. For the approximately 20 districts with the lowest potential ESPLOST revenue, the two taxes generate roughly the same amount of revenue. Virtually all of the remaining districts would raise more from the ESPLOST, with particularly large gaps for the 10 districts with the highest ESPLOST revenues per FTE. Table 4 looks at this issue more directly by quartile of ESPLOST wealth. Across all quartiles, the median household spends more on the ESPLOST than it would on a 2-mill property tax, with a difference of almost two to one in the bottom two quartiles.

Figure 8. Per FTE Annual Potential ESPLOST vs. Per FTE Bond Property Tax Revenues in 2015 By ESPLOST Rank

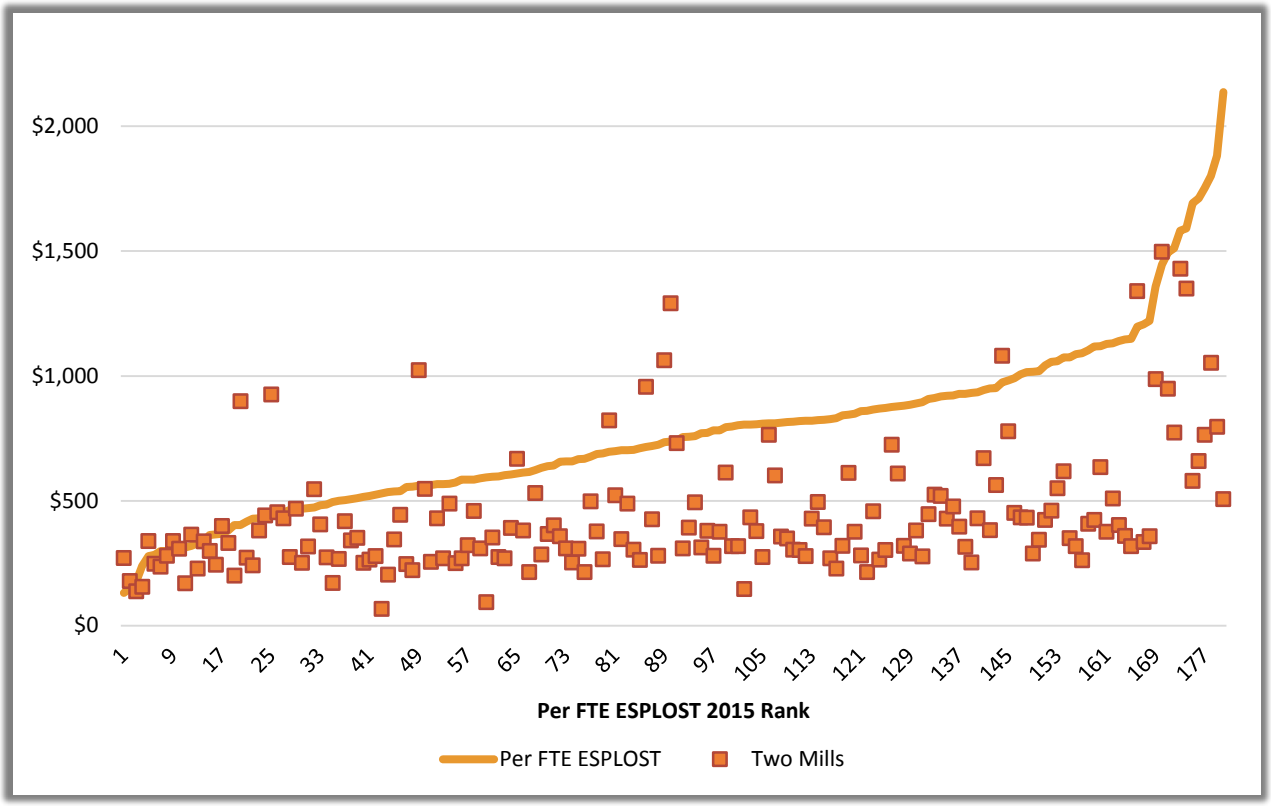


Table 4. Average Property Tax and ESPLOST by 2001 ESPLOST Quartile

	1 (SMALLEST)	2	3	4 (LARGEST)
	TAXES PAID BY AVERAGE HOUSEHOLD			
Average Median House Value at 2 Mills	$72.54	$75.67	$106.58	$109.17
ESPLOST Paid Overall	$155.96	$154.89	$166.75	$163.61
ESPLOST Paid in Local County	$123.33	$141.78	$150.61	$149.31

Note: The statewide median home value is $153,900 and is heavily influenced by the large number of homes in the metro-Atlanta area. The district averages in this table are lower because they are across districts, ignoring their relative number of homes, and the majority of districts have a lower median home value than the statewide median.

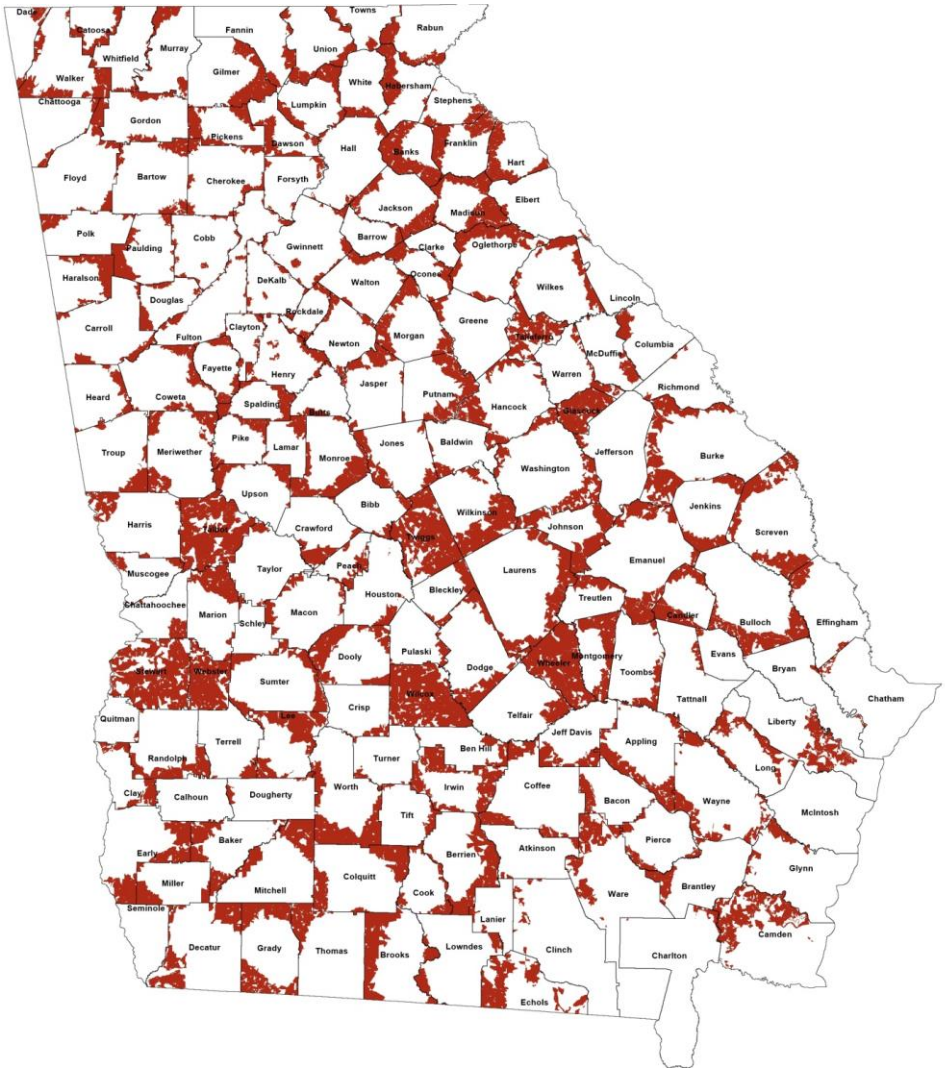
TAX EXPORTING

One difficulty in comparing property tax burdens to sales tax burdens is that sales taxes are generally more exportable than property taxes. While some property owners may live outside the school districts in which they pay property tax (such as vacation or investment property owners), it is more common for people to pay sales taxes outside their home counties. The higher the share of retail sales in a school district made by individuals who reside outside the district, the larger the share of district capital outlay that is financed by nonresidents. Like the sales tax base itself, the ability to export sales taxes varies considerably across districts. In most cases, buyers do not report their county of residence when making purchases; therefore, the extent of tax exporting must be estimated based on consumer purchasing surveys and the location of retail businesses.

In districts with little retail activity, particularly grocery stores, it is likely that residents must travel outside the county to shop. Figure 9 looks at this issue by showing census blocks (shaded) in which the nearest grocery store is in another county. Residents in these neighborhoods most likely shop outside the county, sending potential tax revenue to neighboring districts. The map shows very few shaded areas in metro Atlanta, aside from some census blocks on county borders, indicating that, not surprisingly, most metro-Atlanta residents can shop in their home county.[10] Grocery stores tend to be concentrated in urban areas, particularly in the metro-Atlanta districts, Bibb County (Macon), Chatham County (Savannah), Glynn County (Brunswick and St. Simons Island), Richmond County (Augusta) and Muscogee County (Columbus). In contrast, several counties are nearly completely shaded, indicating that there are almost no retail grocery outlets in the county and that most residents must, by necessity, do most of their shopping outside the county. Most of these districts also rank very low in terms of ESPLOST revenue per pupil, including Glascock County (5th lowest), Wilcox County (10th), Wheeler County (18th), Taliaferro (20th), Webster (23rd) and Lee County (36th). It is important to note that if these districts repealed the ESPLOST in favor of additional property taxes, residents in these counties would still pay ESPLOST on purchases outside the county, thereby potentially exacerbating their tax burdens.

[10] Note that this map does not show where people actually shop, but simply whether they have the option to shop in their home county.

Figure 9. "Leaving" Census Blocks for Grocery Stores in Georgia in School Year 2015



Note: Red indicates a census block whose closest grocery store is outside of its county. White indicates either a census block with no households or a census block with a closest grocery store located within its county.

Given the concentration of retail outlets throughout metro Atlanta and the geographic proximity of the districts to each other, these districts likely both import and export tax burdens. Atlanta and Fulton County, which serve as retail and employment centers, particularly benefit from tax importation, however, and their school districts have the third and fifth highest ESPLOST revenues per student, respectively. In more rural parts of the state, counties with retail centers particularly benefit from importation if nearby counties lack retail establishments. For example, Bibb County benefits not only from having a retail center in Macon, but also from being located near counties such as Twiggs that have very few retail outlets.

Table 5 attempts to quantify tax exporting by examining "leaving shares" by quartile of ESPLOST revenue. The analysis uses the location of all grocery stores, home stores, gas stations and clothing stores in Georgia that were included in the fiscal year 2015 Department of Labor employment files, geocoded with their specific latitude and longitude coordinates.[11] Each census block in Georgia is then linked to its closest retailer of each type. In most cases, this retailer was in the same county as that census block's centroid point. The share of a county's households whose closest retailer was in a different county is used to create a "leaving share,"[12] which estimates the percentage of households in each county purchasing goods outside the county. Higher leaving shares are therefore expected to be strongly correlated with greater numbers of households crossing county borders to purchase retail goods on which they must pay ESPLOST.

Table 5. Leaving Shares by 2015 Per FTE Potential ESPLOST Quartile

	1 (SMALLEST)	2	3	4 (LARGEST)
Count of Districts	45	45	45	45
Average Leaving Share	30.4%	18.3%	10.4%	9.5%
Range of Leaving Shares	0.3%-86.4%	0.2%-100.0%	1.0%-36.6%	1.2%-53.6%

As expected, districts with lower potential ESPLOST revenue also have the highest average leaving shares, and those with the highest ESPLOST revenue have the lowest leaving shares. Districts in the lowest quartile of ESPLOST wealth average 30.4 percent of households likely shopping outside the district, while those in the highest quartile average less than 10 percent shopping elsewhere.

Table 6 sheds further light on this issue by looking at exporting outside Georgia's urban and suburban districts. Not surprisingly, rural "distant" and rural "remote" districts, as classified by the U.S. Department of Education, have particularly high levels of potential exporting, with over 30 percent of households having the nearest retail outlets outside the district. Rural fringe districts, as well as districts in or near a town, have much lower levels of potential exporting, on average. Fifty-five of Georgia's 180 districts are considered rural distant or remote, and another 60 are classified as rural fringe.

[11] Grocery store purchases of food and food ingredients for at-home consumption are exempt from the state sales tax but are charged local sales taxes including ESPLOST.

[12] The equation for the leaving share for a certain type of retail purchase is calculated as $LS_{cr} = \frac{LH_{cr}}{TH_{cr}}$, where c indexes county, r indexes retail type, LH is leaving households and TH is total households. A school system's leaving share is the average across the various retail leaving shares. For city systems, the leaving share for their primary host county proxies for their leaving share because ESPLOST is collected by county and then shared between the applicable school systems based on student population or some other agreed upon method.

Table 6. Rural School Districts' Leaving Share by Urbanization School Year 2015

	TOWN: FRINGE	TOWN: DISTANT	TOWN: REMOTE	RURAL: FRINGE	RURAL: DISTANT	RURAL: REMOTE
Count of Districts	2	24	11	60	40	15
Average Leaving Share	4.4%	12.1%	8.3%	13.1%	31.7%	31.0%
Range of Leaving Shares	2.2%-6.6%	1.0%-35.3%	2.4%-20.6%	0.2%-49.0%	0.6%-86.4%	1.1%-100.0%

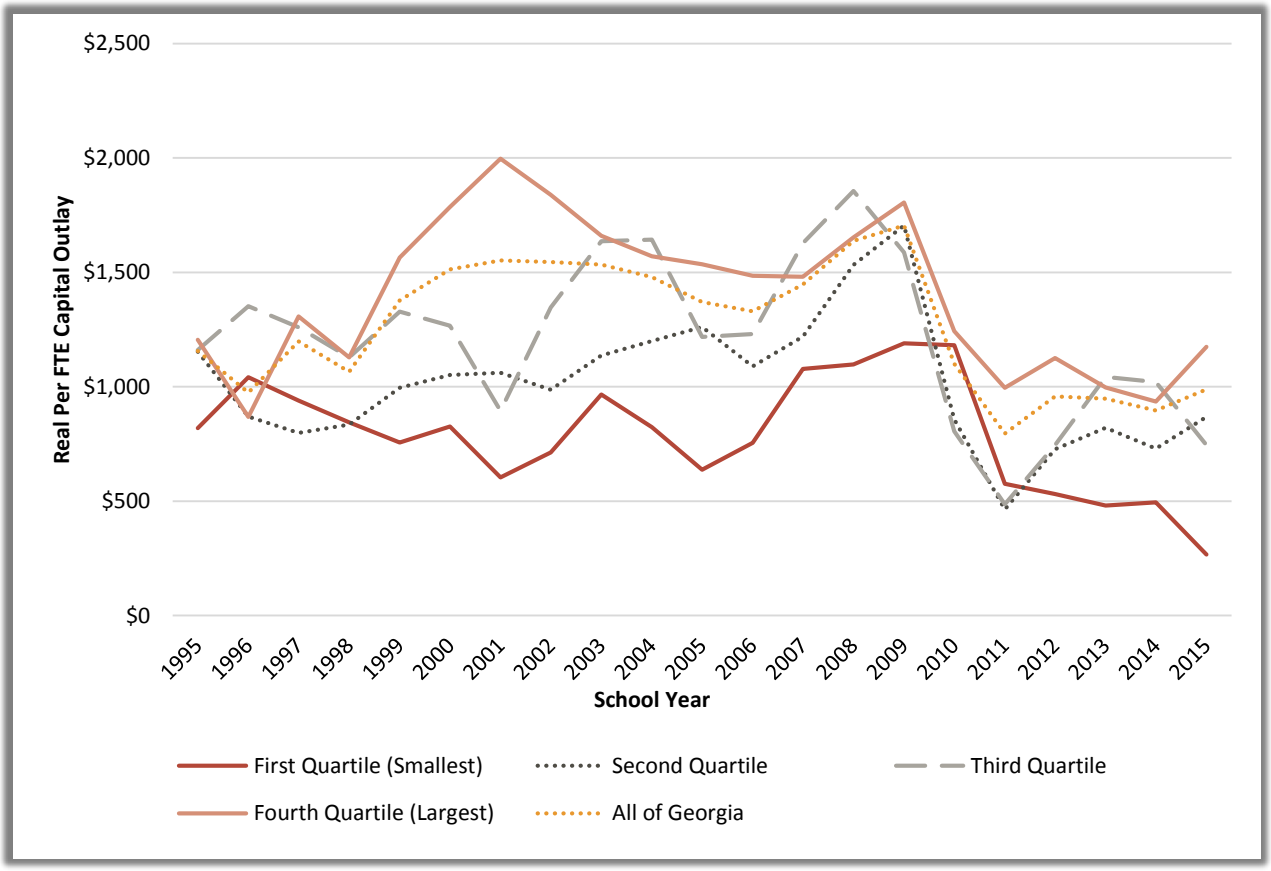
Note: The National Center for Education Statistics provides each school district's level of urbanization. "Town" indicates the existence of a small population center, and "rural" indicates no population center. "Fringe" indicates close proximity to a large urbanized area, "distant" indicates farther away from an urbanized area, and "remote" indicates extremely distant from an urbanized area.

In sum, these analyses demonstrate that many districts have limited capacity to raise revenues through a sales tax because they lack substantial retail activity. Districts in counties with no urban areas, particularly very rural districts, have substantial potential "leakage" of sales tax revenues to nearby districts. Moreover, large shares of residents in many counties are likely paying ESPLOST revenue to neighboring counties, adding to location-based disparities in resources available to pay for school capital outlay.

ESPLOST AND CAPITAL OUTLAY

Debt and ESPLOST revenues are used to finance capital outlay. Thus, we also examine trends in capital outlay for education over the same period to assess the extent to which they are related to debt and pay-as-you-go revenues. Figure 10 displays per pupil capital outlay from 1995 to 2015 by quartile of ESPLOST wealth. Following the start of the ESPLOST program, overall capital outlay increased consistently until 2009, then fell dramatically during the Great Recession. The capital outlay patterns by quartiles of ESPLOST wealth are fairly volatile, however. This volatility is understandable as capital outlay is typically "lumpy." Districts may only need to make large expenditures irregularly as facilities are built or renovated. Despite the volatility, some consistent patterns do emerge. Most notable is that capital outlay per pupil in the highest ESPLOST revenue districts consistently exceeds that in the lower quartile districts. The lowest quartile districts had the lowest capital outlay throughout the study period, except between 2010 and 2012. By 2015, capital outlay in the lowest quartile of districts was approximately $600 per pupil lower than the next-lowest-spending quartile, and approximately $900 per pupil lower than the highest revenue quartile. This gap was still far smaller than in the early 2000s, when capital outlay differences between the highest and lowest revenue quartiles reached as much as $1,300 per pupil.

Figure 10. Real Per FTE Capital Outlay by 2001 ESPLOST Quartile



Source: Georgia Department of Education Detailed Expenditure DE-46 Files
Inflation adjusted to 2015 dollars using the BEA Construction Chain Price Index

Capital outlay in the highest quartile districts increased substantially with the start of the ESPLOST program in 1996, growing from $728 per pupil to $1,963 in 2001. While spending in the highest revenue districts regularly exceeded that in all other quartiles in the early 2000s, the gaps between the top three quartiles narrowed considerably during the mid-2000s and disappeared beginning in 2009 as spending fell dramatically in all districts. By 2015, spending in the top three quartiles remained similar, while a large gap opened up between the bottom quartile and the top three.

Capital outlay spending is not necessarily the same as capital outlay need. Policymakers might be less concerned about high levels of spending in districts with large sales tax bases and more concerned with ensuring that all students are taught in safe, uncrowded schools in acceptable conditions and with the necessary facilities. In the language of school finance, they may be more concerned with having adequate school facilities for all students than with ensuring an equitable distribution of facilities. Capital needs are influenced by a variety of factors, including student enrollment growth, the age of facilities and the condition of facilities. While all districts typically have some level of unmet capital needs, the greatest needs are likely to be in the fastest growing districts, which are likely to need new schools, and in districts

with facilities in the worst condition. Therefore, lower spending on capital outlay could reflect lower facility needs or a lower capacity to finance construction through the ESPLOST or the issuance of debt.

Table 7 compares districts by quartile of ESPLOST wealth and by quartile of student enrollment growth. The 14 districts in the upper left cell have both slow growth and low ESPLOST revenues; these are the districts in which we would expect low capital outlay spending. The 18 districts in the bottom right cell have high growth rates and high ESPLOST revenues; these are the districts in which we would expect high capital outlay spending.

Table 7. Student Growth and ESPLOST Quartile Ranks

STUDENT GROWTH RATE QUARTILE	ESPLOST QUARTILE 2001				
	1	2	3	4	TOTAL
1	14	11	13	7	45
2	17	13	8	7	45
3	7	14	11	13	45
4	7	7	13	18	45
Total	45	45	45	45	180

Pearson Rank Correlation Coefficient: .293

As the table shows, however, growth is not perfectly correlated with ESPLOST revenue. For example, seven districts have low growth but high revenues (upper right cell), and seven districts have high growth but low revenues (bottom left cell). We next look at the top and bottom half of the distribution. Thirty-five districts (19.4 percent) in the upper half of student growth are in the lower half of ESPLOST revenues, indicating that they likely have higher capital outlay needs but lower revenues. The Pearson rank correlation between growth rates and ESPLOST revenues is 0.293, suggesting that the two are positively related but that the relationship is not particularly strong. Thus, higher capital outlay expenditures are not driven solely by higher student population growth, one indicator of higher needs.

Table 8 uses multiple regression analysis to examine the independent effects of student growth and ESPLOST revenue on capital outlay expenditures. Both variables have independent and statistically significant positive effects on capital outlay per FTE. The model includes district fixed effects, which control for all unobserved time-invariant district characteristics (e.g., location), and school year fixed effects, which control for underlying trends in capital outlay spending. The growth rate coefficient indicates that a one percentage point increase in the student growth rate is associated with approximately $21 higher per FTE capital expenditures, while a $1 increase in ESPLOST revenues is associated with a $1.02 increase in capital expenditures.[13]

[13] Note that the coefficient is greater than $1.00, suggesting that little to no ESPLOST revenues are leaked to other purposes.

Table 8. Regression Results, Capital Outlay Per FTE

VARIABLES	REAL PER FTE CAPITAL OUTLAY
Three-Year Student Growth Rate	21.40**
	(8.965)
Real Per FTE ESPLOST Revenues	1.019***
	(0.147)
District Level Fixed Effects	*Yes*
School Year Fixed Effects	*Yes*
Constant	163.0
	(148.9)
Observations	2,700
Number of districts	180
R-squared: Within, Between, Overall	(W:.0704)(B:.367)(O:.101)

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

It is difficult to compare the effects of the growth rates and ESPLOST revenues because they are measured in different scales. To make them comparable, we examine the effects of a one standard deviation increase in each on capital outlay. For three-year enrollment growth, a one standard deviation increase (9.3 percent) is associated with an increase of $199 in capital outlay. A one standard deviation increase in real per FTE ESPLOST revenues ($434.03) is associated with $442 in capital outlay. Thus, capital outlay appears to be slightly more strongly related to ESPLOST revenue than to enrollment growth.

The other possible driver of capital outlay is facility needs, but data on the condition of school facilities in Georgia are limited. For these analyses, we rely on the capital outlay needs identified in local facility plans. Capital outlay needs include two measures: 1) total need as identified in the local facilities plans submitted by each district to the Facilities Services Division of the Georgia Department of Education, and 2) eligible need approved for state capital outlay grants. A weakness of the first measure is that districts with higher expected revenues to finance capital outlay, such as ESPLOST, might include more locally financed facility needs in their plans. A weakness of the second measure is that it includes only capital outlay approved by the state. Moreover, because the plans are developed by the districts, those with more funding may develop more extensive and expensive plans than those with less funding.

Figure 11 plots the relationship between eligible needs and ESPLOST revenue. We focus on eligible needs because the state applies the same criteria across districts for determining eligible capital outlay costs. Consequently, these estimates are likely to be more comparable across districts than total needs. The figure shows a very slight downward slope, indicating that districts with lower ESPLOST revenue per pupil tend to have higher needs per student FTE. The slope is small and there is considerable variation across districts, suggesting a weak relationship between revenue and needs, at best. The negative slope could indicate that low ESPLOST revenue has not allowed low revenue districts to meet their past capital outlay

needs. Because these are cross-sectional data, however, it is possible that districts with higher levels of ESPLOST revenue were able to reduce their capital outlay needs in previous years. Figure 12, which displays the relationship between total needs and ESPLOST revenue, shows an even weaker relationship between the two variables.

Figure 11. Potential ESPLOST in 2015 and "Eligible Need"

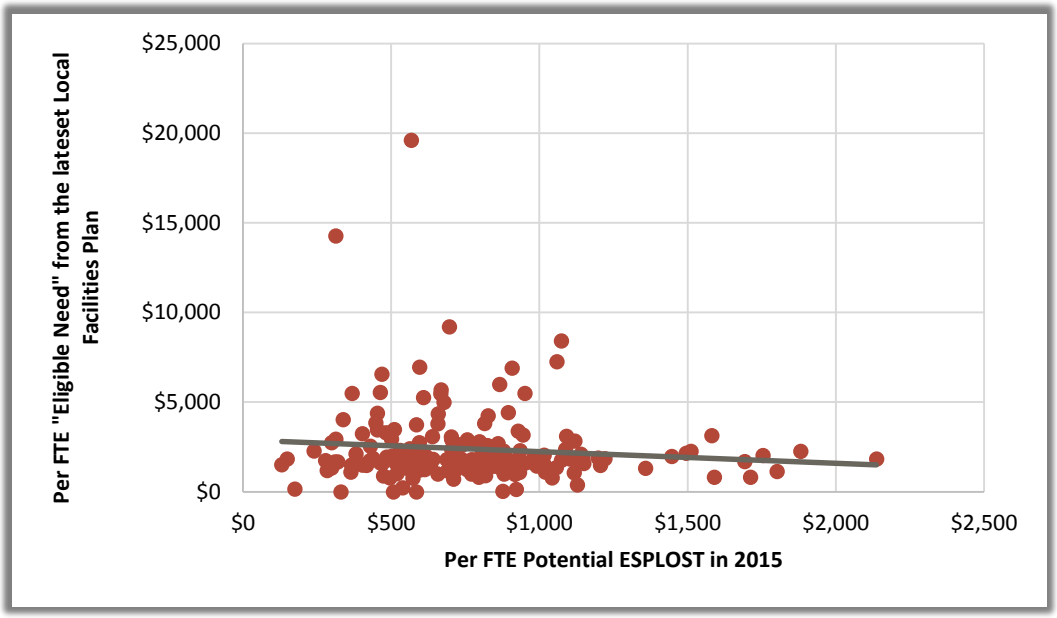


Figure 12. Potential ESPLOST in 2015 and "Total Need"

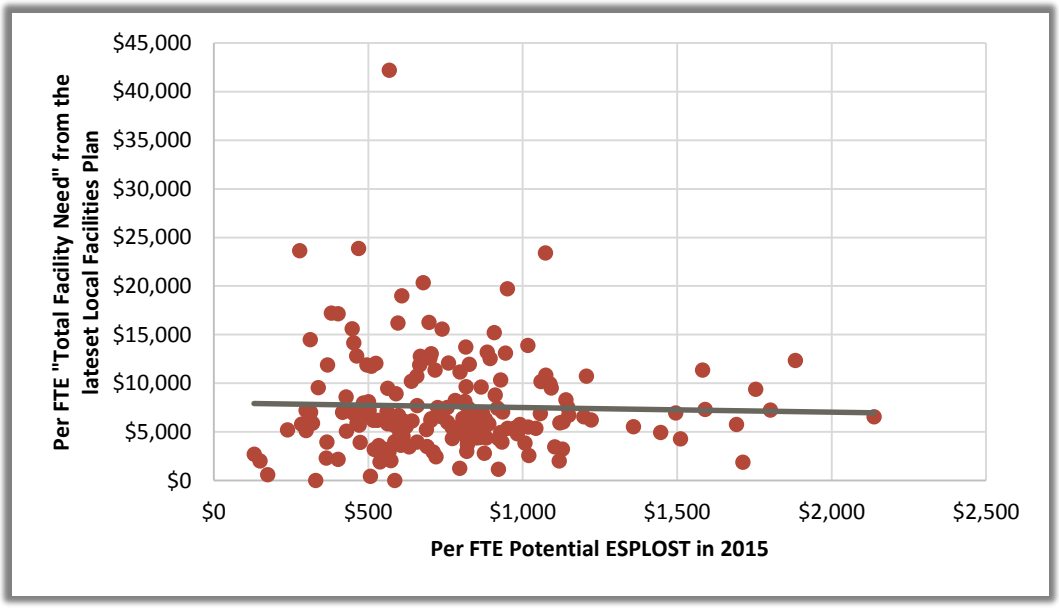
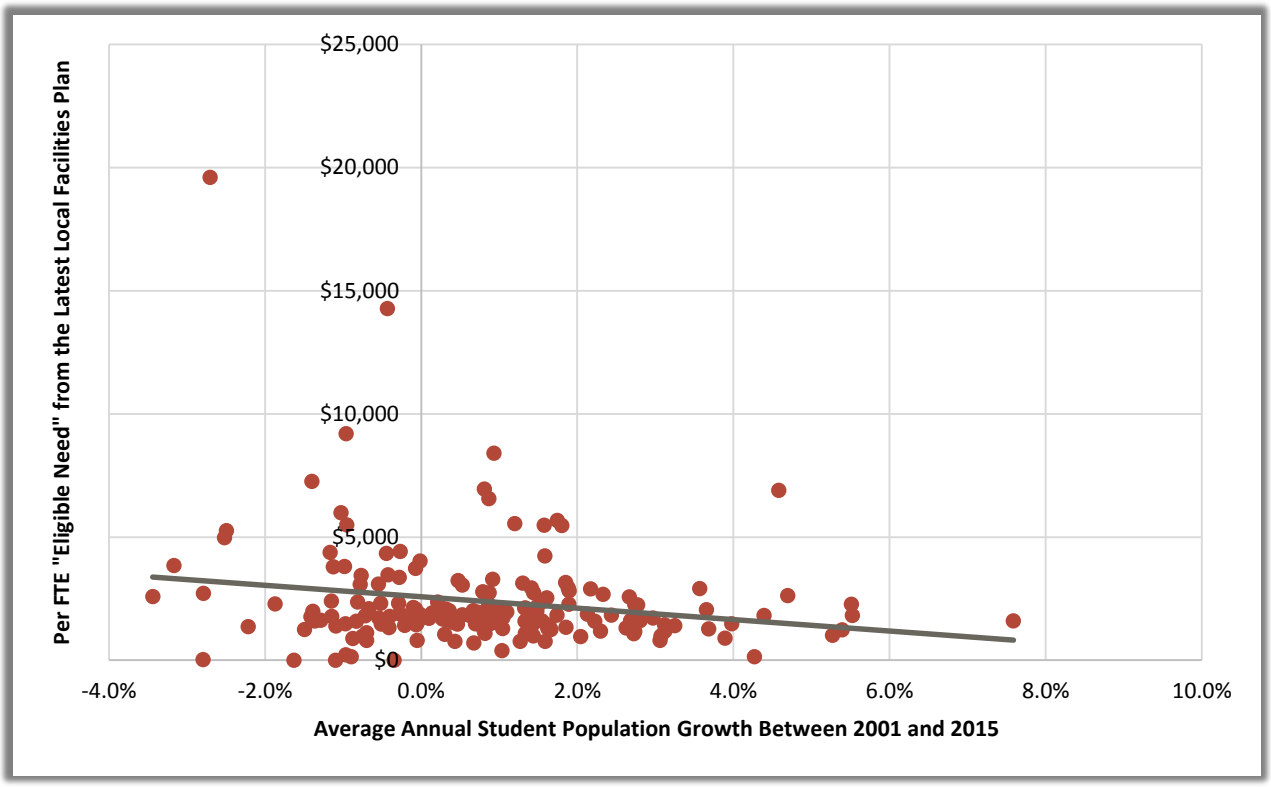


Figure 13 examines the relationship between student growth and eligible capital outlay needs. The relationship is weak but is, surprisingly, slightly negative. This result suggests that the fastest growing districts have, on average, somewhat lower capital outlay needs than districts with lower or even negative growth rates. Again, this may indicate that fast-growing districts have been able to meet their capital outlay needs in previous years through higher state funding. While the relationship between growth and needs is weak, it does suggest that the greatest facility needs are not necessarily found in the fastest growing districts.

Figure 13. Student Population Growth 2001-15 and "Eligible Need"



Summary and Recommendations

Overall, these data present a somewhat complex story regarding capital outlay and funding sources in Georgia. The ESPLOST undoubtedly contributed to large increases in capital outlay spending along with decreasing reliance on debt, compared to the rest of the United States (Brunner and Warner 2012). These patterns were not uniform across districts, however, as districts with the highest ESPLOST revenues were able to fund considerably more capital outlay than other districts while not taking on more debt.

An interesting pattern emerges for the districts with the lowest ESPLOST revenue. Not surprisingly, these districts spent considerably less on capital outlay than other districts. However, they also had relatively low millage rates for debt service suggesting a reluctance to spend on capital outlay if it could not be paid

for with current sales tax revenue. Many of these districts would be able to raise more revenue for capital outlay from a relatively low (4 to 5 mill) property tax than from the ESPLOST.

The data also show the substantial effect of the Great Recession on revenue inequality in Georgia. Beginning in 2007, there was an increasing pattern of revenue inequality. Because the highest revenue districts saw sharp declines in ESPLOST revenue, though, the ESPLOST no longer caused an increase in overall inequality.

We find large disparities in sales tax bases across the state and considerable potential for tax exporting across districts, particularly in rural parts of the state. These patterns suggest that many districts, especially those with few retail outlets that are located near districts with a greater concentration of stores, may experience substantial exportation of sales tax revenue to nearby districts. Net importing districts benefit from collecting sales taxes from nonresidents, while net exporters may have a limited capacity to raise revenue for capital outlay from the ESPLOST.

Policymakers might be particularly concerned if districts with the greatest capital outlay needs also have the weakest ability to raise revenue through the ESPLOST. Unfortunately, the available data on capital outlay needs are very limited. We do find that districts experiencing high enrollment growth have tended to have higher capital outlay spending, but gaps between higher and lower growth districts have narrowed considerably in the post-recession years. We also find little correlation between facility needs, as identified on local facility plans, and ESPLOST revenues.

To address inequities in the ability of school districts across the state to fund needed capital outlays through the ESPLOST, we recommend that the state examine several options.

- Explore sales tax base sharing. Our analysis of geographic disparities in sales tax bases shows clearly that many school districts in Georgia, particularly those in the most rural areas, have limited capacity to raise revenue through sales taxes. A number of districts have few or no retail outlets, such as grocery stores, located within their boundaries, and these disparities are exacerbated by the location of retail centers in nearby districts that draw sales tax revenue from nonresidents. To help break the link between the quality of a district's school facilities and the happenstance of retail locations, the state could explore regional sales tax sharing plans. Such plans could draw on existing state-defined regions like the Department of Education's Regional Education Service Areas or the Department of Community Affairs' Service Delivery Regions, or could implement newly defined regional borders. Within each region, some or all ESPLOST revenues could be distributed across member districts using a predetermined formula.[14]

[14] A per FTE allocation would be the simplest to implement, but many other options exist that would allow for better targeting to district needs.

A tax base sharing plan would, in most cases, reduce ESPLOST revenue in districts that include the regional commercial center in order to provide additional revenue to surrounding districts. Thus, it would be necessary to ensure that districts potentially losing revenue are able to meet their capital outlay needs during a phase-in period. Additionally, ESPLOST renewal under such a plan would likely require approval by voters in each district, or a majority across all districts.

- Develop incentives and technical support for borrowing in low ESPLOST districts. Since the ESPLOST program began in 1996, sales tax revenues have largely replaced property tax-backed debt as the primary method for financing school capital outlay. The extremely high rate of ESPLOST renewal across the state suggests that voters prefer sales taxes to property taxes for this purpose. As the analyses in this report demonstrate, however, the ESPLOST raises limited revenue in many districts and, in fact, can sometimes represent a greater tax burden for typical households than would additional property taxes for capital outlay. For these districts, using property taxes to fund pay-as-you-go construction or to pay the debt service on bonds issued for that purpose may be a more effective option, despite many voters' distaste for both debt and property taxes. Incentives could include:
  - Matching grants for districts with low debt that issue bonds: Georgia already provides capital outlay grants to districts with low wealth. For districts with severe needs (such as unsafe or overcrowded facilities), the state could provide additional incentives in the form of matching grants if the districts are willing to borrow to finance additional capital outlay. These grants could help districts leverage additional resources for capital outlay at a relatively low cost to the state. Such grants should only be available to districts with low existing debt levels.
  - State credit enhancement to lower interest rates: Smaller districts or those with limited experience in credit markets may face additional borrowing costs such as higher interest rates or premium payments for commercial bond insurance. In such cases, the state could guarantee debt service payments to creditors to lower interest costs. Texas, for example, has the Texas Permanent School Fund, which uses dedicated revenue from state land to guarantee school district bonds, thereby lowering interest rates and debt service costs (see Duncombe and Wang 2009).
- Create a state bond bank: A bond bank pools bond issues by local government entities to achieve lower borrowing costs. Small school districts with limited tax bases and borrowing experience may face higher interest rates due to higher potential credit risk. Bond banks are typically able to borrow at lower interest costs and pass the savings on to local government issuers. Additionally, by pooling smaller bond issues into a single larger issue, economies of scale can also reduce borrowing costs. Bond banks are typically intended to be self-supporting through fees from local government borrowers. A bond bank could provide low-cost, easy-to-access financing for school districts at little or no cost to the state.

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Appendix: Data Sources and Methods

Table A1. Data Sources

TABLE OR FIGURE NUMBER	DATA SOURCE
Table 1	Georgia Department of Revenue Sales Tax History Chart, version effective April 1, 2016.
Table 2	Georgia Department of Education DE-46 Revenues Files for Local, State, and Federal Revenue. Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections.
Table 3	Georgia Department of Revenue Local Government Services Consolidation Sheet data for school bond digest data. The 2015 American Community Survey for school district median home values and census block household counts. Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections. Consumer Expenditure Survey data for average southern household consumption by retail categories. Georgia Department of Labor Quarterly Census of Wages and Employment for retail locations.
Table 4	Georgia Department of Revenue Local Government Services Millage Rate Annual Report.
Table 5	The 2015 American Community Survey for household counts. Georgia Department of Labor Quarterly Census of Wages and Employment for retail locations.
Table 6	The 2015 American Community Survey for census block household counts. Georgia Department of Labor Quarterly Census of Wages and Employment for retail locations. National Center for Education Statistics F-33 Data Files for district level of urbanization.
Table 7	Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections. Georgia Department of Education fall full-time equivalent counts.
Table 8	Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections. Georgia Department of Education fall full-time equivalent counts. National Center for Education Statistics and Georgia Department of Education DE-46 Revenues Files for annual capital outlay. Inflation adjustment for 2015 constant dollars using Construction Chain Price Index from the Bureau of Economic Analysis.
Figure 1	Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections. Georgia Department of Education fall full-time equivalent counts.
Figure 2	Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections. Georgia Department of Education fall full-time equivalent counts. Georgia Department of Education DE-46 Revenues Files for total federal revenue.
Figure 3	Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections. Georgia Department of Education fall full-time equivalent counts.
Figure 4	National Center for Education Statistics F-33 Data Files for long-term debt held. Inflation adjustment for 2015 constant dollars using Construction Producer Price Index from the Bureau of Labor Statistics.
Figure 5	National Center for Education Statistics F-33 Data Files for long-term debt held. Inflation adjustment for 2015 constant dollars using Construction Producer Price Index from the Bureau of Labor Statistics. Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections.
Figure 6	Georgia Department of Revenue Local Government Services Millage Rate Annual Report.

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Figure 12	Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections. Georgia Department of Education fall full-time equivalent counts. Georgia Department of Education Facilities Division local facility plan data for district eligible need.
Figure 13	Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections. Georgia Department of Education fall full-time equivalent counts. Georgia Department of Education Facilities Division Local facility plan data for district total need.
Figure 14	Georgia Department of Revenue Local Government Services data for ESPLOST and LOST monthly collections. Georgia Department of Education fall full-time equivalent counts.

Inequality Measures:

This section describes how we calculate the inequality measures and provides their equations. In all cases, n indicates the number of districts, $\sum$ is the summation operator, $\sqrt{}$ is the square root operator, and r indicates rank.

The Restricted Range is calculated as the difference between the 95th percentile district in per full-time equivalent (FTE) and the 5th percentile district:

$$Restricted\ Range = \left(\frac{Rev}{FTE}\right)_{95th\ Percentile\ District} - \left(\frac{Rev}{FTE}\right)_{5th\ Percentile\ District}$$

The Federal Funding Inequality Index is the Restricted Range divided by the 5th percentile district's amount:

$$\frac{Restricted\ Range}{\left(\frac{Rev}{FTE}\right)_{5th\ Percentile\ District}}$$

Coefficient of variation is the ratio of the standard deviation of the district's per student revenues to the average:

$$Standard\ Deviation = \sqrt{\sum \frac{((\frac{Rev}{FTE} - Average(\frac{Rev}{FTE}))^2}{\sum \frac{Rev}{FTE} \quad (n-1)}}$$

$$Average = \frac{\sum \frac{Rev}{FTE}}{n}$$

$$Coefficient\ of\ Varation = \frac{Standard\ Deviation}{Average}$$

The McLoone Index is calculated as the ratio of the per FTE revenues of the districts below the median of per FTE revenues to the per FTE revenues of the above-median districts.

$$McLoone\ Index = \frac{\sum(\frac{Rev}{FTE})_{Below\ Median\ Districts}}{\sum(\frac{Rev}{FTE})_{Above\ Median\ Districts}}$$

The Gini coefficient is calculated as the distance between the ranked cumulative per FTE wealth curve and the curve that would exist under perfect equity.

$$Gini\ Coefficient = \frac{1}{n}(n + 1 - 2\frac{\sum(n+1-r)\frac{Rev}{FTE}}{\sum \frac{Rev}{FTE}})$$

The "Leaving Share" Calculation and the Estimate of ESPLOST Paid in Home County

The Consumer Expenditure Survey provides estimates of household unit average annual expenditure by category and household before-tax income. These estimates can then be isolated to only include ESPLOST-eligible expenditures (Table A2). These annual estimates multiplied by the count of households within these income categories for a school district serves as the estimate for ESPLOST paid by district residents. These estimates, therefore, differ across districts by number of households as well as their level of household wealth.

To account for ESPLOST-eligible purchases that could have been made outside of a resident's home school district, we calculated "leaving shares." These shares are expected to be correlated with the percentage of a school district's residents traveling outside of their county to make ESPLOST-eligible purchases.

Using the Quarterly Census of Wages and Employment data for all employers in Georgia, grocery stores, gas stations, home stores, department stores, and restaurants were geocoded by their physical location. Then each census block in Georgia, the smallest geographic unit available, was assigned their closest business. The ratio of households whose closest grocery store is outside of their home county to the total number of households in their county is that county's grocery store "leaving share." Each school district's leaving share is then the weighted average of their leaving shares across the retail types. The annual housing unit amount of expenditure in that category serves as the weight.

Table A2. Annual Household ESPLOST-Eligible Expenditures by Income Group

	LESS THAN $10K	$10K TO $15K	$15K TO $20K	$20K TO $30K	$30K TO $40K	$40K TO $50K	$50K TO $70K	MORE THAN $70K
Groceries[1]	$2,971	$3,211	$3,344	$4,113	$4,422	$4,844	$5,392	$7,367
Clothes	$612	$595	$836	$748	$1,055	$1,341	$1,515	$2,251
Home Furnishings or Equipment	$580	$437	$519	$777	$869	$1,051	$1,212	$2,139
Gasoline[2]	$1,286	$1,295	$1,472	$1,915	$2,331	$2,651	$3,100	$4,454
Utilities[3]	$2,172	$2,208	$2,607	$3,072	$3,367	$3,406	$3,750	$5,173
Restaurant	$950	$844	$1,046	$1,253	$1,703	$2,062	$2,579	$3,846

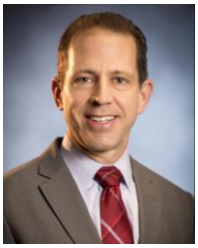
Source: Consumer Expenditure Survey Table 3123 southern region by income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2013-14.

[1] Food purchased for at-home consumption is exempt from state sales tax, but local sales taxes are charged on groceries.

[2] The Transportation Funding Act of 2015 changed the taxation of motor fuels in Georgia but largely left in place the local sales taxation on gasoline.

[3] This includes purchases of natural gas, electricity, home phones and cell phones, which are all charged local sales taxes.

About the Authors



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