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POLICY BRIEF

CSLF.GSU.EDU • DECEMBER 17, 2019

Georgia K-12 School Capital Spending and Maintenance: An ESPLOST Promise Kept?

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Introduction

School funding is a popular topic of debate, but such conversations often focus on operating expenses like teacher salaries.[2] Another important component of school funding is capital expenses, that is, the buildings, school buses, and so on that support teaching activities. Historically, schools have funded such expenditures either through debt, typically in the form of bonds, or by using a portion of their operating budget, supported in large part by property taxes (GADoE, 2018a).

Governments can also use other avenues to fund capital expenditures. Georgia is one of the few states in the nation that allows for special purpose local sales taxes, including taxes earmarked for specific uses such as transportation or education (Sanders and Lee, 2009). The latter, known as an Educational Special Purpose Local Sales Tax (ESPLOST), is a popular alternative path to fund those capital expenses otherwise covered by property taxes or debt.

Campaigns to build support for ESPLOST referenda cite a number of benefits of the tax, some of which have been empirically tested to a greater extent than others. One such claim is that ESPLOST-funded capital improvements can reduce capital maintenance expenses. This brief explores whether ESPLOST is

[1] The author wishes to thank Nick Warner for his extensive advice and assistance in this research and Jorge Martinez-Vazquez and Ross Rubenstein for their reviews of and extremely helpful comments on the draft. Any remaining errors are the author's own.

[2] For example, see Burnette (2018).

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associated with reduced or increased maintenance spending as a share of all operating expenditures.

> "Newer buildings will lower the costs of maintenance." - Chatham School District COO Otis Brock, 2006

Background

Georgia has an extensive public education system, with 159 county-level local boards of education and 21 independent city boards. In 1997, the Georgia General Assembly authorized each local board of education to hold public referenda on the passage of a special purpose local option sales tax for education (ESPLOST) for that jurisdiction.[3] If an ESPLOST referendum passes, it adds a 1-percent tax on all sales-tax-eligible purchases within a jurisdiction, with receipts from the tax earmarked to support capital projects for education.

Actual referendum adoption dates vary, but the majority (55 percent) of local boards have maintained a continuous ESPLOST since their first referendum in fiscal year 1998 (Figure 1). ESPLOST taxes require a renewal vote after five years, if not sooner, and since 2010, nearly every jurisdiction has an active ESPLOST tax. Between 2001 and 2017, annual school district ESPLOST receipts ranged from less than 1 cent to $4,007 per pupil, with an average of $847 per pupil (Figure 2).[4]

In theory, ESPLOST receipts are exogenous to a district's current capital needs or conditions and its current operating expenses (Brunner and Warner, 2012). However, the links between district wealth, facility quality and educational outcomes complicate this prospect. High-wealth areas tend to have higher property values, resulting in more property tax revenues available for both capital outlays and teaching, which some research finds can improve educational outcomes (Thompson et al., 1989). In turn, high-quality schools raise home values (Barrow and Rouse, 2002) and draw wealthier residents, while those very educational outcomes are themselves influenced by the quality of the facilities in use (Gunter and Shao, 2016). Finally, the same high-wealth areas are also more likely to have both shopping opportunities (Rubenstein and Freeman, 2003) and disposable income (Brunner and Warner, 2012) available to make ESPLOST-eligible purchases, increasing the tax's receipts and therefore the funding available to make capital improvements in those higher-wealth districts. Indeed, research shows that ESPLOST adoption is endogenous to local conditions such as student population growth (Rubenstein and Freeman, 2003) and further finds that ESPLOST adoption influences operating expenditures, increasing real per-pupil capital spending (by 24 percent) *and* operational spending (by 4 percent) (Brunner and Schwegman, 2017).

Previous research has explored the relationship between ESPLOST receipts and net capital spending per pupil but has not taken the further step of investigating whether capital spending in turn lowers maintenance, as a number of ESPLOST campaigns have suggested (for example, see Peterson, 2006; Brown, 2011; Bibb County, 2015; Catoosa COC, 2016; Yes Fayette ESPLOST, 2017; Wilkinson County, 2019). In this brief, we test whether ESPLOST revenue is associated with lower maintenance spending in the operating budget. As Figure 3 shows, while there has been some fluctuation, the average share of operation expenses

> "Goals for ESPLOST on the November 3, 2015 ballot… More efficient buildings, facilities and vehicles mean reduced maintenance and operations costs."
> – Bibb County, 2015 ESPLOST campaign

[3] Technically, until 2018, county boards required the approval of any independent city school districts within their borders to call for a joint referendum. Amendment 5 of the Georgia Constitution, approved Nov. 6, 2018, removed this requirement.

[4] These figures are in 2017 dollars, using data provided by the Georgia Department of Revenue through their public website of tax distributions.

by category has not changed dramatically over the study period, suggesting deeper evaluation is needed.

In theory, a high level of capital spending with a relatively stable student population should lower maintenance costs via substitution, as buildings that are newly built or recently substantially rehabilitated require less upkeep than older structures (Erickson, 2011). School districts in Georgia saw an average of 0.32 percent more students per year between 2002 and 2017, a gradual-enough increase to suggest that construction of entirely new facilities would be relatively rare. Accordingly, one would expect to find lower maintenance expenditures per pupil in population-stable districts with higher net capital spending (U.S. Green Building Council, 2017). Furthermore, ESPLOST funding in some cases replaced funding for capital that had previously been taken from maintenance and operations funds derived from property taxes—meaning that the share of funds marked for "M&O" would decrease as those operational funds are freed up (by ESPLOST dollars) for other operations uses like salaries (GADoE, 2018a; Brunner and Schwegman, 2017). Combined, these dynamics should allow greater spending in non-maintenance parts of the operating budget without increasing the total operating expenditure per pupil (see Figures 3, 4 and 5 for more on observed operations spending shares). As previously cited, such arguments—particularly that ESPLOST-based capital amounts will "free up" operational dollars specifically by improving equipment quality and thereby reducing the amount of upkeep needed—tend to be popular when attempting to generate voter support for an ESPLOST renewal. However, no extant studies test the ESPLOST-maintenance connection.

Data and Methods

To explore the association between ESPLOST receipts and maintenance spending, we employed a dataset of capital spending and depreciation by each school district between 2006 and 2017, provided by the Georgia Department of Education (GADoE). To this dataset, we added information from GADoE on:

- district enrollment (1996–2017),
- the percentage of students receiving free and reduced-price lunch (2006–17), and
- operating expenditures (1996–2017).

We also added data from the Georgia Department of Revenue (GADoR) on:

- dates that ESPLOST was in force (1997–2017),
- ESPLOST receipts (2001–17), and
- tax base and property tax receipt data (1996–2017).

Due to data limitations, we explored the ESPLOST-maintenance relationship in two ways: whether the *presence* of ESPLOST receipts affected maintenance spending and whether the *level* of ESPLOST receipts affected maintenance spending. First, we constructed a dataset of maintenance expenditures for fiscal years 1998–2017 from GADoE data. Then, we used information on the historical effective dates of various local sales taxes from GADoR to determine whether a given district was collecting ESPLOST for none of, half of, or the entire fiscal year occurring two years prior to the maintenance date (to allow time for capital project completion using the ESPLOST funds collected). We then examined whether the *presence* or *absence* of ESPLOST influenced a district's share of spending on maintenance.[5]

Second, we used a dataset that covered only fiscal years 2006–17 with more detailed data, including information on annual ESPLOST receipts and net capital amount—the total spent in capital improvements less the depreciation of existing capital—per pupil.[6] We used this second analysis to examine the effects of the actual *level* of ESPLOST receipts, rather than just their presence or absence, on the share of maintenance spending.

[5] We employed a panel approach to control for district characteristics that are fixed over time, such as level of urbanization.

[6] Note that this dataset did not include information for Marietta City School district.

Findings

Contrary to referendum campaign expectations, the presence of ESPLOST receipts has a moderate, statistically significant, positive relation to maintenance's share of operating expenses:[7] ESPLOST's presence for a whole year was associated with an increase in the percentage of operating expenses devoted to maintenance by just over one third of a percentage point compared to years with no ESPLOST in that same district.

The second part of our exploration adds further nuance to these findings. We find that the percentage of maintenance expenditures has a large, statistically significant, positive association ($894 per percentage point of maintenance) with net capital amount per pupil. Maintenance further has a small, but statistically significant, positive association with the lagged amount of ESPLOST receipts per pupil (an additional percentage point of maintenance for every $2,230 per student collected two years prior).[8] Unsurprisingly, the ESPLOST collections of two years prior also has a statistically significant, positive effect on the net capital amount per pupil, with every $1 of such collections associated with just under a $2 increase in net capital amount per pupil.

Combined, the two approaches suggest that the specific effects found in the more recent dataset are likely to be applicable beyond the 2006–17 timeframe. They also appear to be harmonious with the less specific results from the very start of the program, represented in the 1998–2017 dataset.

Conclusions

This pattern supports some of the common narratives around ESPLOST and contradicts others. The association of higher net capital amounts with higher ESPLOST receipts points to preferential funding of expansionary new construction activities—rather than replacement, renovation, retrofitting or similar activities—to an even greater extent than prior capital sources, a finding congruent with previous research (Benson, 2015). Additionally, there is indeed a significant positive relationship between the presence of ESPLOST and the overall level of operational spending per pupil, as other studies have found (Brunner and Schwegman, 2017).

However, despite these points of agreement with other sources, these findings cast doubt on a common argument in favor of ESPLOST: that the tax reduces maintenance spending. ESPLOST receipts were associated with higher maintenance expenses once those receipts became completed projects. It is likely that the positive association of both net capital amount and percentage of maintenance spending with ESPLOST receipts reflects the increased need for maintenance caused by entirely new buildings—the new construction that ESPLOST-based capital spending tends towards—requiring regular maintenance on top of existing maintenance needs in existing buildings. Any reduction of existing facility maintenance costs from retrofitting and upgrades is likely overwhelmed by the increase in maintenance required by added facilities.

This dynamic suggests that district leaders should carefully analyze the future maintenance costs of all proposed projects if reduced overall maintenance spending is a goal of the current ESPLOST cycle. Moreover, if campaigns for ESPLOST approval rely on lower maintenance as a justifying factor for voter approval, ESPLOST project designers may wish to place more emphasis on projects that alleviate maintenance costs to a greater degree than

[7] For this longer-term analysis, the explanatory (right-hand) variable being tested was *hadesplost*, a trinary measure indicating whether the school district was collecting ESPLOST taxes for half the (fiscal) year, the entire year, or not at all in that year. The model investigated the response of the percentage of operating expenses devoted to maintenance two-year post-collection, *percmaint*, to this explanatory variable.

[8] For this figure, lagged ESPLOST receipts and net capital per pupil were used as the explanatory variables with the maintenance percentage as the response variable. The subsequent figure of $1 of collections to nearly $2 net capital was derived from the model outlined in footnote 7.

in the past, reducing the share of funds spent on new construction in favor of improving existing buildings in maintenance-saving ways.

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Appendix

Figure 1. Fiscal Year of First ESPLOST Adoption

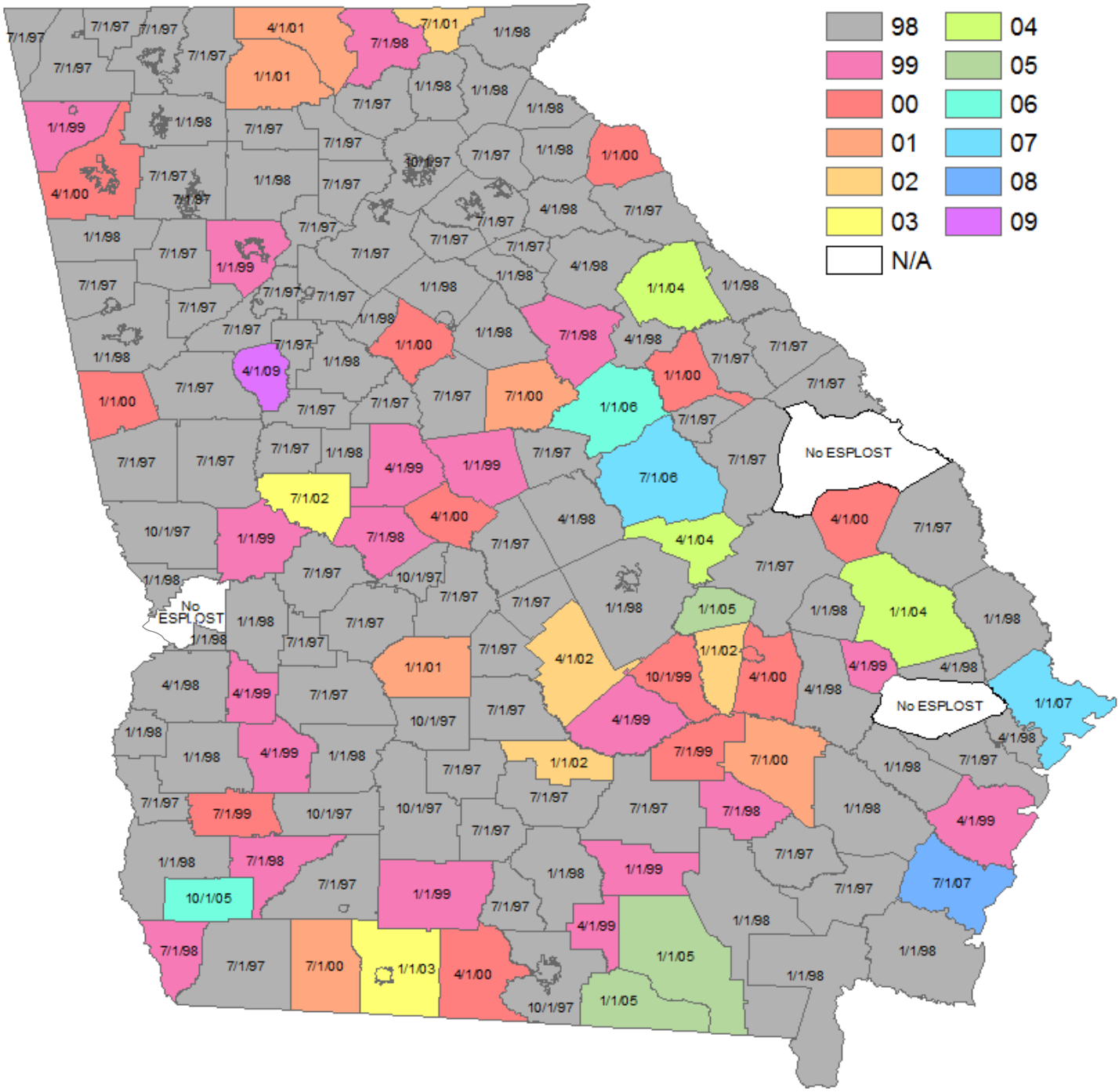


Figure 2. Average ESPLOST Receipts Per Pupil, 2001–17 (2017 Dollars)

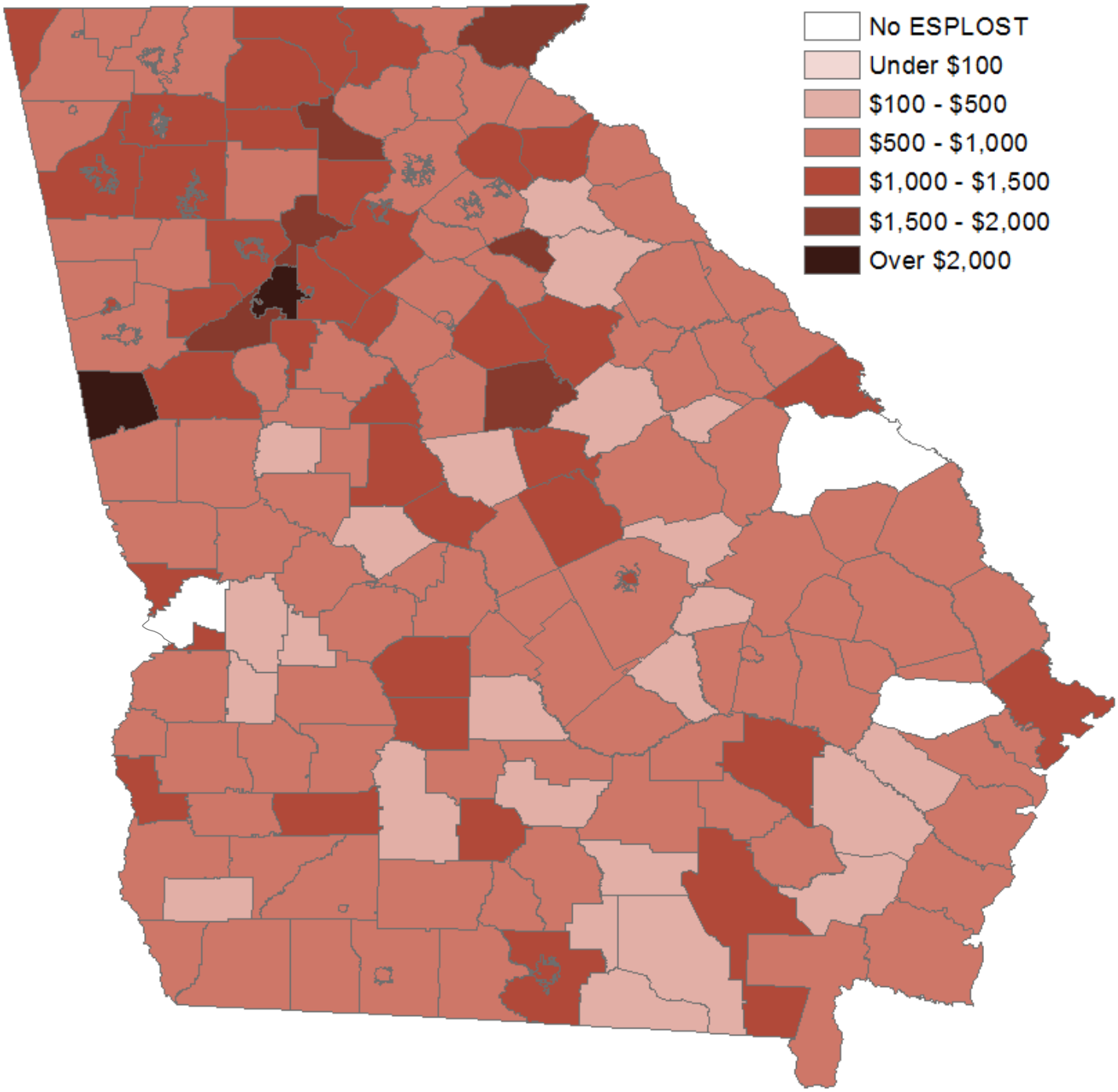


Figure 3. Operations Spending Components by Fiscal Year, with Percentage of Districts Collecting ESPLOST

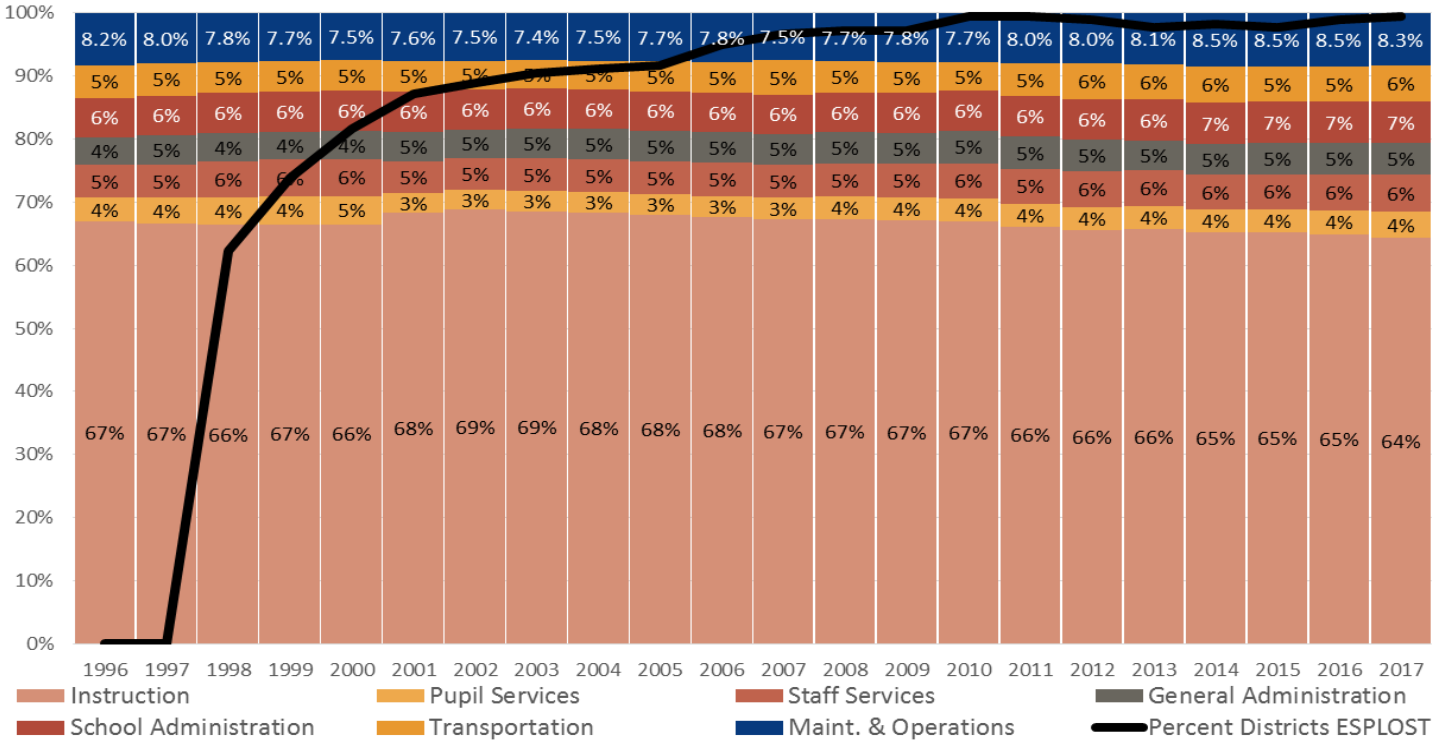


Figure 4. Average Share of Operations Spending Component Across All Districts, 1996–2017

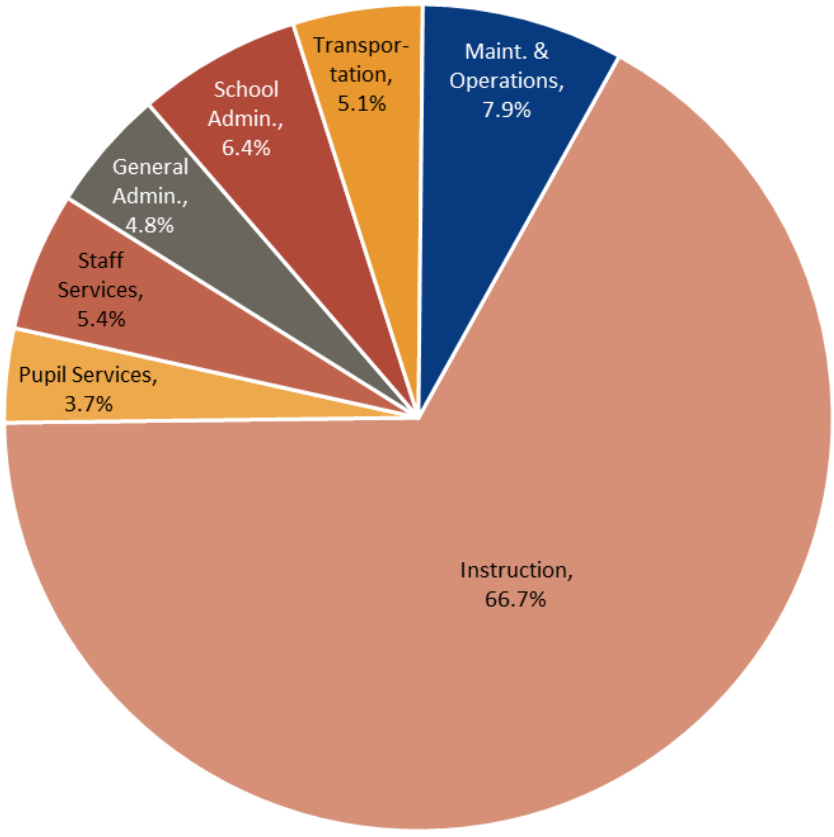
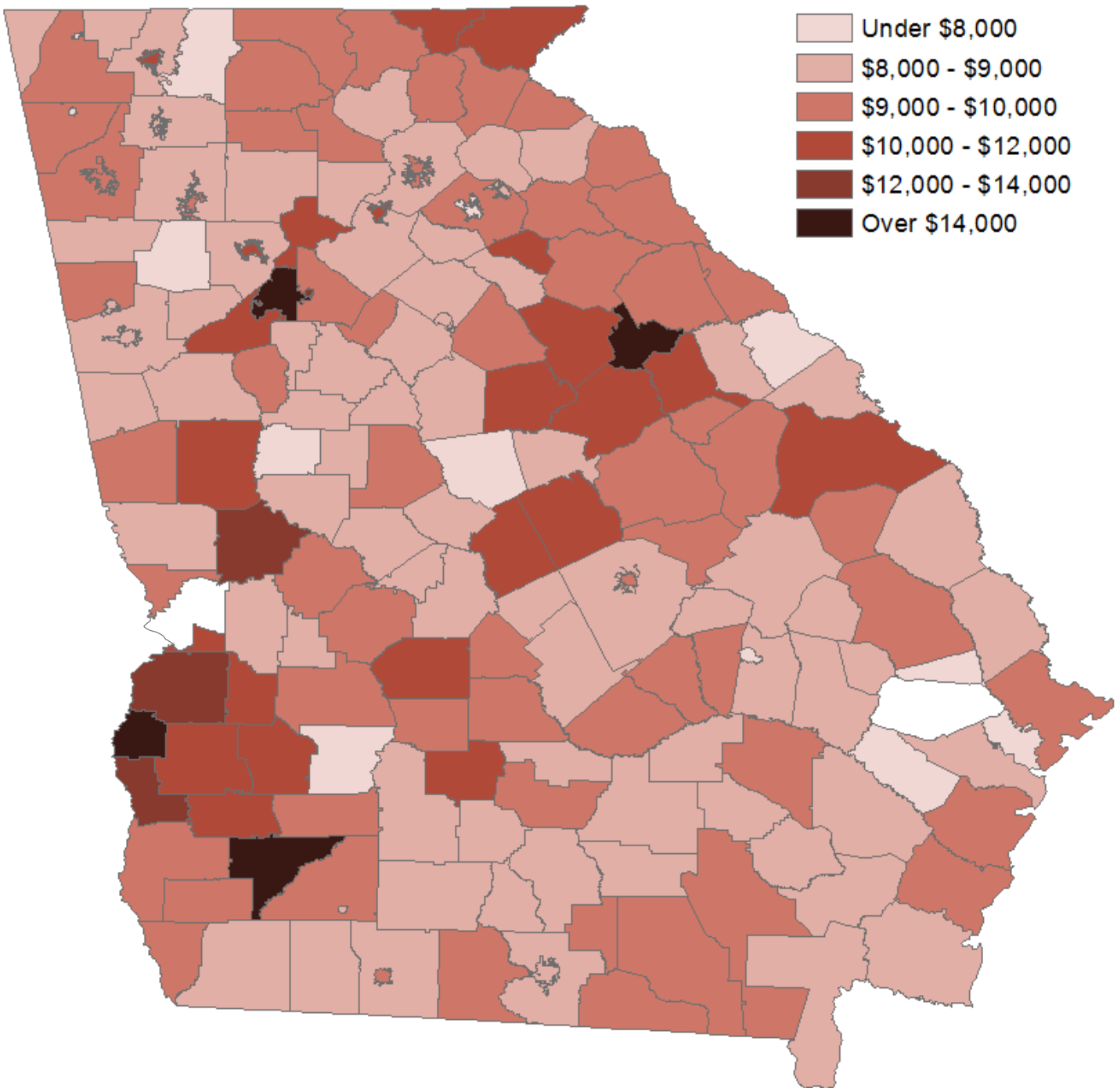


Figure 5. Average Operations Spending Per Pupil, 1996–2017 (2017 Dollars)



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