A Deep Dive on South Carolina's Property Tax System

Complex, Inequitable and Uncompetitive

Volume 2

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113 Brattle Street

Cambridge, MA 02138

(617) 661-3016

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Volume 2[1]

[1] Volume 1 summarizes the chapters in Volume 2. Volume 1 also includes key findings, the executive summary, and policy options. Some material, such as the definitions section, appears in both volumes.

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Chapter 1:

Introduction and Overview of South Carolina's Property Tax System

by

Daphne A. Kenyon, Ph.D. and Bethany P. Paquin

With Appendices D & E by Alannah Shute

Introduction

South Carolina has a property tax system that is unique among the 50 states.[2] As this report will show, South Carolina's property tax system is complex, nontransparent, inequitable, and noncompetitive. Act 388 passed in 2006 with the ostensible aim of providing property tax relief to homeowners, but it has exacerbated the problems with South Carolina's property tax system.

This introductory chapter first presents criteria for a good tax system. Next, it provides an overview of the South Carolina property tax system and Act 388. Third it describes revisions to the property tax since Act 388. The final section discusses outcomes of Act 388 and South Carolina's property tax system, paying special attention to effective tax rates. Some of the data illustrate how the property tax has changed since Act 388 went into effect.

Figure 1.1 South Carolina Focus Counties

This analysis includes data from 10 focus counties: Allendale, Charleston, Edgefield, Florence, Greenville, Horry, Orangeburg, Richland, Sumter, and York. These counties vary in size, geography, and economic status and provide a representative cross-section of South Carolina's property tax systems.[3]

[2] The body of this chapter focuses on South Carolina's disparate effective property tax rates. Appendix C compares South Carolina's property tax system to the systems in other states more broadly.
[3] Appendix A provides a description and comparison of these ten focus counties.

Criteria for a Good Tax System

Studies of state and local tax systems traditionally present principles of sound tax policy as a benchmark for comparison. South Carolina policymakers should evaluate any reform proposals in the context of these principles. While policy goals may overlap or conflict, policymakers should aim for a tax system characterized by equity, efficiency, stability, and transparency. Adopting any tax policy involves tradeoffs, and the citizens of each state and local government are best suited to choose the policies that achieve their aims.

Equity. Equity or fairness are fundamental to sound tax policy. Two theories of tax fairness, the *benefit principle* and the *ability-to-pay principle*, present distinct approaches to equity.

The benefit principle ties equity to benefits received. Under this theory, taxes are the cost paid for public services. In an equitable system, taxes will be proportional to demand for services and taxes will fund the public services citizens desire (Musgrave 2005).

The ability-to-pay principle ties equity to each taxpayer's financial resources. The terms *horizontal equity* and *vertical equity* describe two components of the ability to pay principle. Horizontal equity implies that taxpayers in similar situations face similar tax liability. We see horizontal equity when neighbors who own homes with similar values owe about the same amount in property taxes. We observe vertical equity when an owner of a high-value property pays a higher tax than an owner of a low-value property. Vertical equity implies that taxpayers in dissimilar situations face dissimilar tax liability (Cordes 2005 and Ebel 1990). In other words, equitable tax systems impose higher tax rates on taxpayers with more income and wealth and similar tax rates on taxpayers with similar resources.

When evaluating equity, analysts often describe a tax as *regressive*, *progressive*, or *proportional*. A regressive tax imposes a higher tax burden on taxpayers whose income, or other measures of ability to pay, is less. For example, lower-income taxpayers tend to spend a higher percentage of their income on sales taxes than high-income taxpayers, which makes the sales tax regressive. A progressive tax imposes a higher tax burden on taxpayers whose income or ability to pay is greater. For example, federal income tax rates are graduated, so a higher marginal tax rate applies as income rises. A proportional tax is one that is imposed at a constant rate regardless of income level. (Almy, Dornfest, and Kenyon 2008).

Efficiency. An efficient revenue system is marked by neutrality. An efficient tax minimizes unintended interference with markets by avoiding policies that alter personal or business behaviors and decisions. In aiming for neutrality, governments should minimize tax preferences and favor policies that uniformly apply low rates to a broad base (Ebel 1990). While a state may intentionally enact a policy to encourage a desired behavior, policymakers should attempt to avoid unintended interference when choosing between reform options (Minnesota Tax Study Commission 1986). Efficient systems also minimize the costs of administering and complying with taxes for governments and taxpayers respectively.

Stability. Tax revenues increase and decrease by varying degrees as government needs and economic conditions fluctuate. The more stable a tax or system of taxes is, the steadier the revenue stream will be in times of economic change (Almy, Dornfest, and Kenyon 2008). For example, during the Great Recession, income and sales taxes experienced greater volatility than the property tax. Income tax revenues declined when incomes fell, and sales tax revenues reflected lower consumer spending. In contrast, property tax revenues remained relatively stable.

Transparency. A tax is transparent when the process of taxation is easily understandable, and all information is publicly disclosed. Taxpayers should clearly understand what is taxed (the tax base), what

they must pay, and when a tax is payable. Uniformity contributes to simplicity and transparency, which are hallmarks of an efficient tax system. For example, it is easy to understand property tax liability if all types of property are uniformly assessed at full market value and subject to a uniform rate. Under such a system, calculating the tax on a business or home of a given value is simple and easy to understand.

Overview of South Carolina Property Taxes and Act 388

South Carolina's Property Tax System

The method by which South Carolina tax bills are calculated reveals the complexities of the state's property tax system. In very basic terms, a South Carolina property tax bill is determined in three steps:

(1) The property is first appraised at its fair market value. Three different entities appraise properties. The county assessor values property that is owner-occupied, agricultural, commercial, or rental. The county auditor assesses personal property including vehicles. The Department of Revenue assesses manufacturing, utility, business personal, and motor carrier properties.
(2) The property is then assigned an assessment ratio. South Carolina has a classified property tax system under which different types of property are taxed at different ratios of assessed value. Owner-occupied primary residences[4] and private agriculture receive the lowest assessment ratio—4 percent—while manufacturing, utility, and personal property receive the highest assessment ratio—10.5 percent (table 1.1). The fair market value is multiplied by the assessment ratio to produce the assessed value. The assessment ratio for primary residences in South Carolina is 4 percent, so a homeowner's primary residence valued at $100,000 would be assigned an assessed value of $4,000.
(3) Assessed value is multiplied by the total millage rate to derive the property tax bill. The total millage rate is the sum of the tax rates of the county, municipality, school district, and other taxing entities.

Table 1.1 Constitutional Assessment Ratios by Property Classification

Property Classification	Tax Rate (%)
Owner-Occupied	4.0
Agricultural (Private)	4.0
Agricultural (Corporate)	6.0
Commercial/Rental	6.0
Personal Property (Vehicles)	6.0
Other Personal Property	10.5
Manufacturing	10.5
Utility	10.5
Business Personal	10.5
Motor Carrier	9.5

Source: South Carolina State Constitution

Table 1.2 presents a simplified property tax bill calculation for two South Carolina residential properties, both with a fair market value of $150,000. The owner-occupied primary residence has an assessment ratio of 4 percent while the rental property has an assessment ratio of 6 percent. Even if the two properties are

[4] Throughout this report "owner-occupied" will mean the same as "primary residence." Definitions of these terms and others can be found in the Definitions section at the end of the report.

in the same taxing jurisdiction, they will not be subject to the same total millage rate because the owner-occupied property is exempt from millage for school operating costs. So, in this stylized example, the total millage rate for the owner-occupied primary residence is 0.2022 and the millage rate for the rental property is 0.4590. As of result of varying assessment ratios and the school exemption, these two properties with identical market values face two very different tax rates and tax bills. The tax on the rental property of $4,131 is approximately three-and-a-half times that of the owner-occupied property ($1,213).

Table 1.2 Comparison of Tax Bills for Two South Carolina Residential Properties

	Owner-Occupied	**Rental**
Fair Market Value	$150,000	$150,000
Assessment Ratio	4%	6%
Assessed Value	$6,000	$9,000
Millage Rate	0.2022	0.4590
Property Taxes	$1,213	$4,131
Effective Tax Rate	0.81%	2.75%

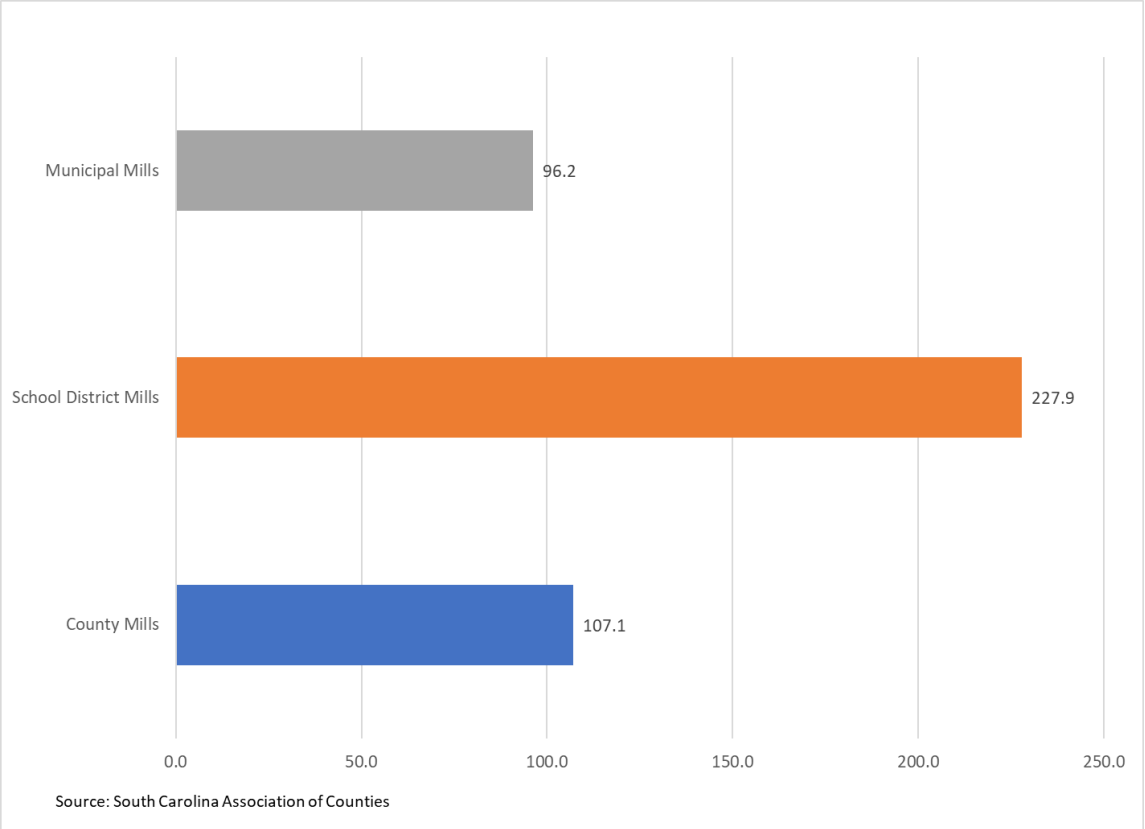
Source: Author's calculation

Note: Owner-occupied primary residences have an assessment ratio of 4.0% and rental property has an assessment ratio of 6.0%. Owner-occupied property is exempt from property taxes for school operating costs and so is subject to a lower millage rate.

Differentially high taxation of rental property compared to primary residential property is inequitable for two reasons. First, homeowners typically have higher incomes than renters.[5] Thus, the differentially heavy taxation of renters fails the ability-to-pay principle. Second, homeowners are the primary beneficiaries of school spending. Thus, exempting primary residences from paying for school operating costs fails the benefit principle. In South Carolina, more than half of all property taxes collected go to school districts (South Carolina Department of Revenue). This holds true in the 10 focus counties as illustrated by figure 1.2.

[5] In South Carolina the median household income of homeowners is nearly twice that of renters. In 2018, median household income for owner-occupied houses was $63,482 and for renter-occupied houses was $33,813 (U.S. Census Bureau).

Figure 1.2 Average Millage by Source for 10 South Carolina Counties



Source: South Carolina Association of Counties

Act 388

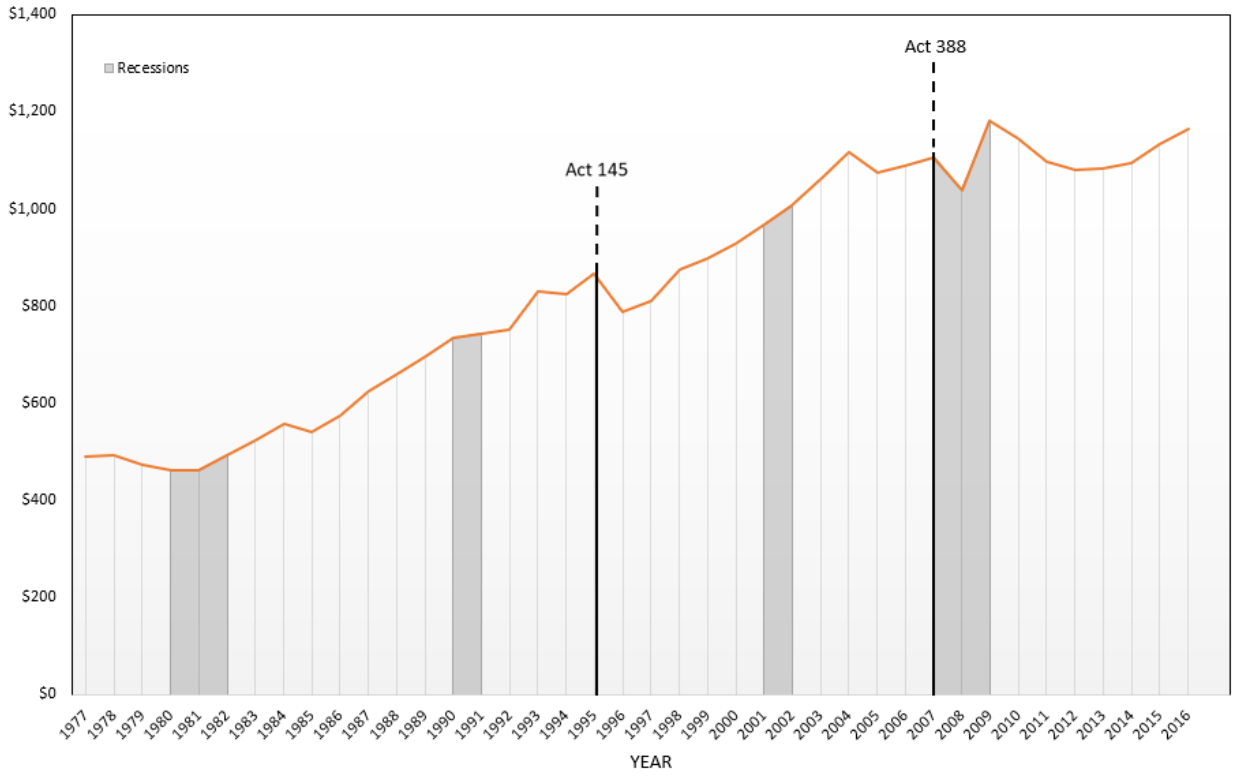
Act 388, passed in 2006, limits property tax revenue in three major ways:

- It eliminated property tax liability on owner-occupied primary residences for school operating costs. This is known as the "O&M" (operations and maintenance) exemption. Homeowners are still liable for property taxes for school debt service. So, homeowner property taxes do support school capital spending, but non-homestead property owners bear the burden of school operating costs funded by property taxes. Act 388 raised the sales tax one cent to offset the revenue loss, mandating state reimbursement of local government tax loss. *Tax swap* is a term used to describe such a policy, whereby a government reduces or eliminates one tax (in the case of South Carolina, the property tax), and replaces the lost revenue by increasing or establishing another tax, such as a sales tax.
- It placed a 15 percent cap on the growth of property tax appraisals (fair market value) over a five-year period unless the property is sold. This cap was enacted as a constitutional amendment. When a property is sold, it is revalued at its full fair market value. This provision for reappraisal upon sale is called ATI (assessable transfer of interest).
- It placed a cap on the rate of growth of jurisdiction-specific property tax rates. The *Maximum Millage Cap* limits increases in local millage rates for operating purposes. Under the law, a locality may not increase its millage rate by more than the increase in the consumer price index

plus its population growth percentage in the previous year except in very limited conditions (Significant Features of the Property Tax).[6]

All else being equal, one would expect these three measures to either reduce the rate of growth of property taxes or reduce property tax revenues compared to what revenues would have been otherwise. However, one must account for the impact of the Great Recession, which reduced economic activity and likely depressed property tax revenues. The Great Recession began in December 2007 and officially ended in June 2009, although state and local tax revenue did not reach prerecession levels until 2015. Before 2007, South Carolina's real per capita state and local own-source property tax revenue grew at an average annual rate of 2.4 percent; between 2009 and 2016, the average annual growth rate fell to 1.6 percent (figure 1.3).[7]

Figure 1.3 South Carolina Real Per Capita State and Local Own-Source Property Tax Revenue 1977–2016



Source: Tax Policy Center
*Values for 2001 and 2003 are estimates.

[6] For example, the millage rate limitation may be overridden by a 2/3rd majority of the local council in the case of a natural disaster or if required to comply with a court order (S.C. Code Ann. § 6-1-320).

[7] In Act 145, passed in 1995, the legislature enacted a $100,000 homestead exemption from school operating property taxes. Because the exemption amount exceeded the median 1995 median home value, the law exempted most homeowners from school property taxes (State-by-State Property Tax at a Glance).

Revisions to South Carolina's Property Tax System Post-Act 388

Since enactment of Act 388, South Carolina has made a number of legislative and administrative revisions to its property tax system. No attempt has been made to provide a comprehensive list of these changes, however, some of the most important ones are highlighted.

The fees in lieu of taxes programs (FILOTs), which reduce property tax liabilities for firms that make new investments and create jobs in the state, predates Act 388. However, the use of FILOTs has expanded considerably since Act 388 was enacted. Nominally, industrial property is assessed at 10.5 percent while commercial property is assessed at 6 percent. But under the FILOT program, industrial property can obtain an assessment rate of 6 percent, and sometimes 4 percent, as well as other property tax relief. Data analysis and interviews conducted during this study provided convincing evidence that without the FILOT program, South Carolina would be uncompetitive in attracting new manufacturing investment. However, FILOTs are time consuming for both counties and companies. FILOTs do not directly address the sticker shock that multistate companies face when comparing nominal property tax rates in South Carolina to other states.

Recent legislation used a phase-in plan to exempt 14.3 percent of manufacturing property from property taxation and reduce the effective assessment rate on manufacturing property to 9 percent. This statutory change targets investment not eligible for FILOTs. This is a backdoor way of effectively reducing the 10.5 percent assessment rate that the constitution applies to manufacturing property.

When property is sold in South Carolina, the ATI law requires that the property be reappraised at market value. Because of the state's long, 5-year assessment cycle, this means that recently sold property can be valued much higher than similar property that has not been recently sold. There is a special exemption of 25 percent of market value for properties assessed at a 6 percent rate that would otherwise qualify as ATIs. However, the property owner must apply to receive this exemption and apparently many taxpayers are unaware of this provision (Baker 2018).

The O&M deduction exempts owner-occupied homes, which are also the primary residence of the homeowner, from paying property taxes for school operating expenses. This creates an incentive for homeowners to declare their South Carolina homes as primary residences. It also creates an administrative burden for the counties, who often need to hire additional staff to monitor homeowners' residency status.

These changes to the property tax system attempted to reduce the differentially heavy property tax burden on manufacturing and commercial properties. However, each of these revisions can be considered "patches" as they increase the complexity of the property tax system and reduce its transparency.

South Carolina's Property Tax is Characterized by Disparate Tax Rates

Effective Tax Rates

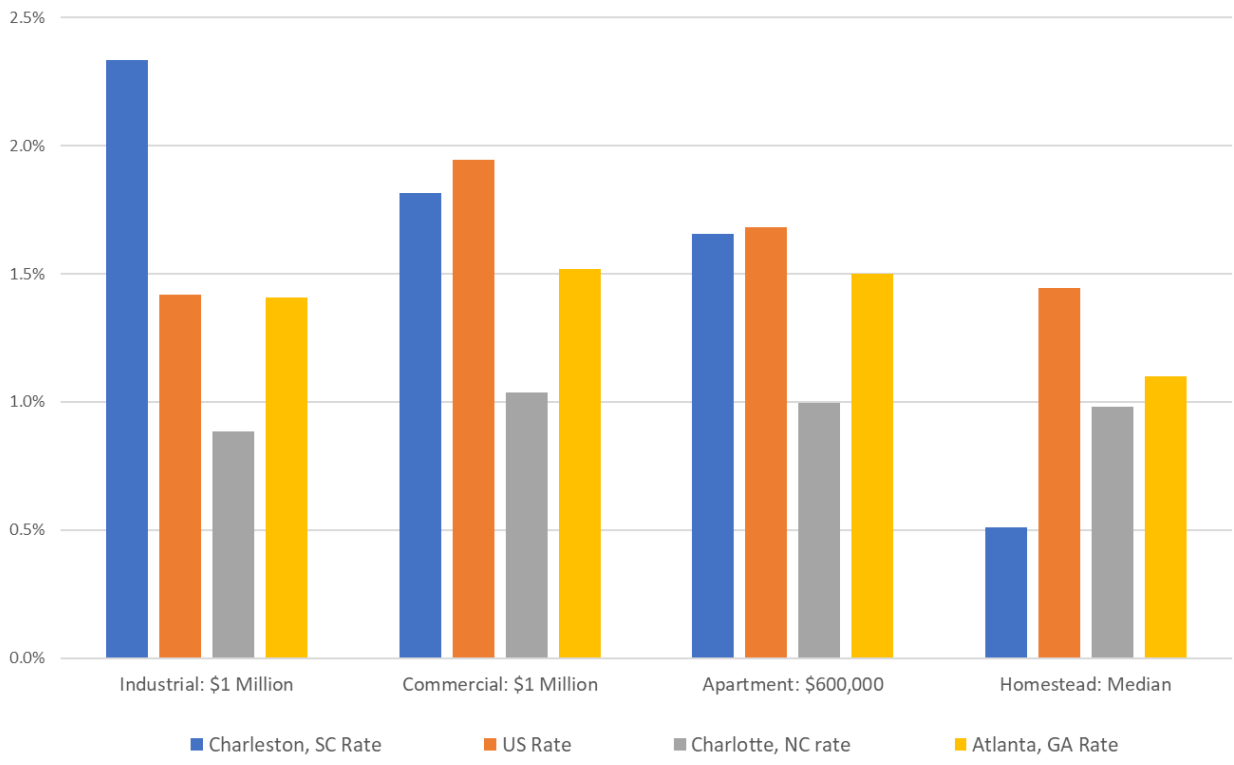
Common measures of property tax burden suggest a skewing of South Carolina's property tax system. While the state's overall property tax burden is about average by common measures, the state ranks very low for effective property tax rate on owner-occupied homes.[8] The effective tax rate compares the tax

[8] Appendix B provides a comparative analysis of South Carolina's property tax burden in table B9.

paid (tax liability) to the market value of the property on which the tax is levied (tax base). Another way to think of effective tax rate is the tax bill as a percent of the property's market value.

Fortunately, a data source is available that examines effective property tax rates by type of property: homestead, apartment, commercial, and industrial. Much of the analysis in this chapter relies on an annual report examining the effective property tax, by category of property, for the largest city in each state (Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence 2018).[9] This data source reports effective property tax rates for cities within states, and not for states as a whole. Nevertheless, for many states, examining the property tax in the largest city in the state, as these data do, provides a reasonable measure of the property tax burden for the state as a whole.

Figure 1.4 Effective Property Tax Rates by Property Type, 2018



Source: Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence 2019
Note: Median home values vary across states. The median home value for Charleston was $344,600; the median home value in Charlotte was $215,500; and the median home value in Atlanta was $299,400.

As figure 1.4 shows, Charleston, South Carolina's effective tax rate for industrial property is markedly high compared to the U.S. average and counterpart cities in neighboring North Carolina and Georgia. In the commercial and apartment categories, effective tax rates are close to the U.S. average but higher than the comparison cities. The homestead effective tax rate is exceptionally low compared both to the U.S. average and that of neighboring comparison cities.

[9] In addition to published estimates, the staff of the Minnesota Center for Fiscal Excellence calculated additional estimates for the purposes of this report.

Charleston ranks fourth highest in the U.S. with respect to its effective property tax rate for industrial property. In contrast, Charleston ranks fifty-first with respect to its effective property tax rate for homeowners.[10] It is important to note that the study does not include FILOTs in its calculations of South Carolina's industrial effective tax rates.

None of South Carolina's neighbors have a pattern of effective tax rates that is skewed in this way. For example, Virginia Beach, Virginia's effective tax rates for all types of property rank low—between forty-first to fifty-third. (See Appendix table B10.) A high or low property tax burden does not necessarily mean the state's overall tax burden is high or low. It does, however, indicate the relative importance of the property tax in the state's mix of taxes. Virginia's rankings reveal that it relies very little on the property tax and that all types of property are taxed at a low rate relative to other states. South Carolina's pattern of widely disparate effective tax rates is unusual.

Comparisons of commercial-to-homestead, apartment-to-homestead, and industrial-to-homestead ratios of effective property tax rates show the disparity in tax rates between different property classes. Some states, like North Carolina, tax all property at the same rate. Therefore, in Charlotte, North Carolina, commercial-to-homestead and apartment-to-homestead ratios both equal 1. It is not unusual to tax either apartment or commercial property categories at a higher rate than homestead property as Florida, Georgia, and Tennessee do. However, it is unusual to tax apartment or commercial property at a rate that is three times higher than homestead property as South Carolina does.

Among the group of largest cities in the comparison states, Jacksonville, Florida, has the next highest commercial-to-homestead and apartment-to-homestead ratios compared to Charleston, South Carolina. Jacksonville taxes apartment and commercial property at about twice the rate that it taxes homestead property. But Charleston, South Carolina, taxes apartment and commercial properties at about three times the rate of homestead property. Thus, when states are ranked by their apartment-to-homestead and commercial-to-homestead ratios in the largest city in each state, South Carolina ranks among the top five states in the nation and higher than all of its comparison states.

Effective tax rates can vary within a property category such as industrial. For the U.S. as a whole, industrial properties valued at $100,000 are typically taxed at a somewhat lower rate than those properties valued at $25 million. The effective property tax rate in Charleston, South Carolina, for industrial property always ranks fourth among the largest cities in each of the 50 states (very high). Its effective tax rate for commercial property ranks from twenty-fourth to twenty-seventh (about average), its effective tax rate for apartments ranks nineteenth (somewhat lower than average), and its effective tax rate for residential ranks either fiftieth or fifty-first (very low).[11] Even after adjusting for sales ratios,[12] South Carolina has the highest or second-highest industrial-to-homestead ratio for effective tax rates in the nation (Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence).[13]

Table 1.3 demonstrates the disparity in effective property tax rates for industrial property in South Carolina compared to selected states using an independent data source (anonymously provided by the tax director of a large multistate company). South Carolina's property tax rate on the company is three times

[10] See Appendix B for a comparison of ETRs by property type for South Carolina and comparison states in table B10.

[11] See the appendix for effective tax rates and rankings by property type for South Carolina, the U.S., North Carolina, and Georgia in table B11.

[12] The ratio of a property's appraised value compared to its sales price is called a sales ratio. Sales ratios are used to measure the accuracy of appraisals and equalize values among jurisdictions. Even if it is assumed that appraised values are overstated by 10 to 20 percent, South Carolina's ratio of industrial-homestead effective tax rates is among the highest in the nation.

[13] See appendix F for a discussion of business property tax burden in South Carolina.

higher than the next highest rate among the seven states in the table and more than 30 times higher than the lowest rate in neighboring North Carolina.

Table 1.3 Average Effective Property Tax Rates for a Large Multistate Company

State	Average Effective Tax Rate (%)
South Carolina	30.7
North Carolina	0.9
Florida	1.6
Tennessee	2.8
Indiana	1.7
Kentucky	1.0
Ohio	10.2

Source: Confidential

Note: Effective property tax rates are calculated by dividing property taxes by appraised value.

County Effective Property Tax Rate Comparison

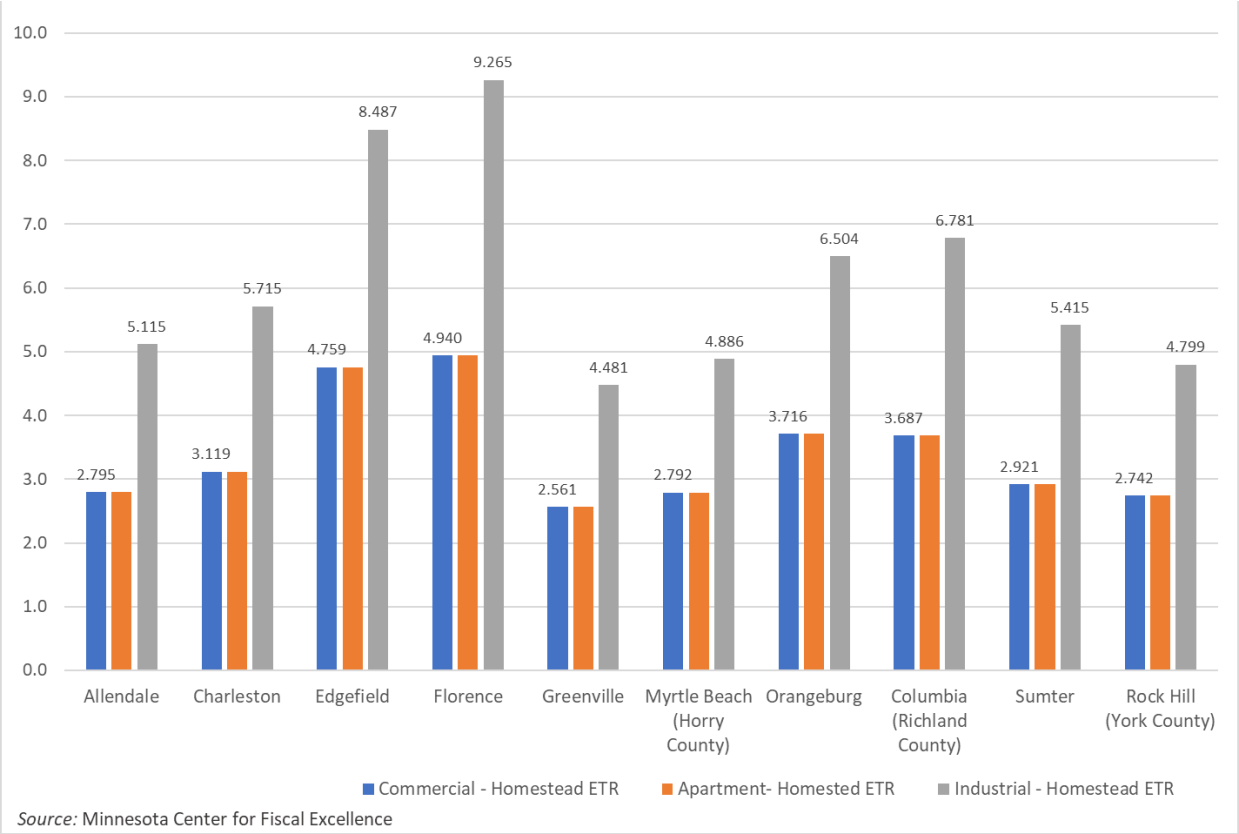
The annual report of the Lincoln Institute of Land Policy and the Minnesota Center for Fiscal Excellence reports effective tax rates for selected cities. The question arises whether effective property tax rates reported for Charleston (the most populous city in South Carolina) or Columbia (previously the most populous city in South Carolina) are representative of the state as a whole. Calculations done by the staff of the Minnesota Center for Fiscal Excellence present information on ratios of effective property tax rates for the largest city in each of the ten focus counties.

Ratios of effective tax rates for commercial or industrial property compared to homestead property vary among the largest city in each county. However, in all 10 focus counties, commercial property is taxed at an effective rate two-and-a-half to five times higher than homestead property and industrial property is taxed at an effective rate four-and-a-half to nine times higher than homestead property (figure 1.5). Since South Carolina taxes apartments at the same rate as commercial properties, the ratios of effective tax rates of commercial and apartment properties compared to homestead rates are identical.

We obtained comprehensive annual financial reports of the largest cities in seven of the ten focus counties.[14] In six of the seven counties, the largest tax bill belonged to an energy/utility company. The top ten taxpayers in these counties accounted for 3 to more than 17 percent of the total assessed value in the county. In York County, the top 10 taxpayers comprised 17.4 percent of the county's assessed value and the North Carolina Municipal Power Agency alone accounted for nearly 5 percent of the county's assessed value. In Horry County, the top 10 taxpayers accounted for just 3.2 percent of the county's total assessed value and the largest taxpayer, an investment firm, accounted for less than 1 percent.

[14] The seven counties reporting the largest taxpayers by either assessed value or tax liability were Charleston, Edgefield, Florence, Greenville, Horry, Richland, and York. See tables B1-B7 for detailed county-by-county data.

Figure 1.5 ETR Ratios for Largest City in 10 Comparison Counties



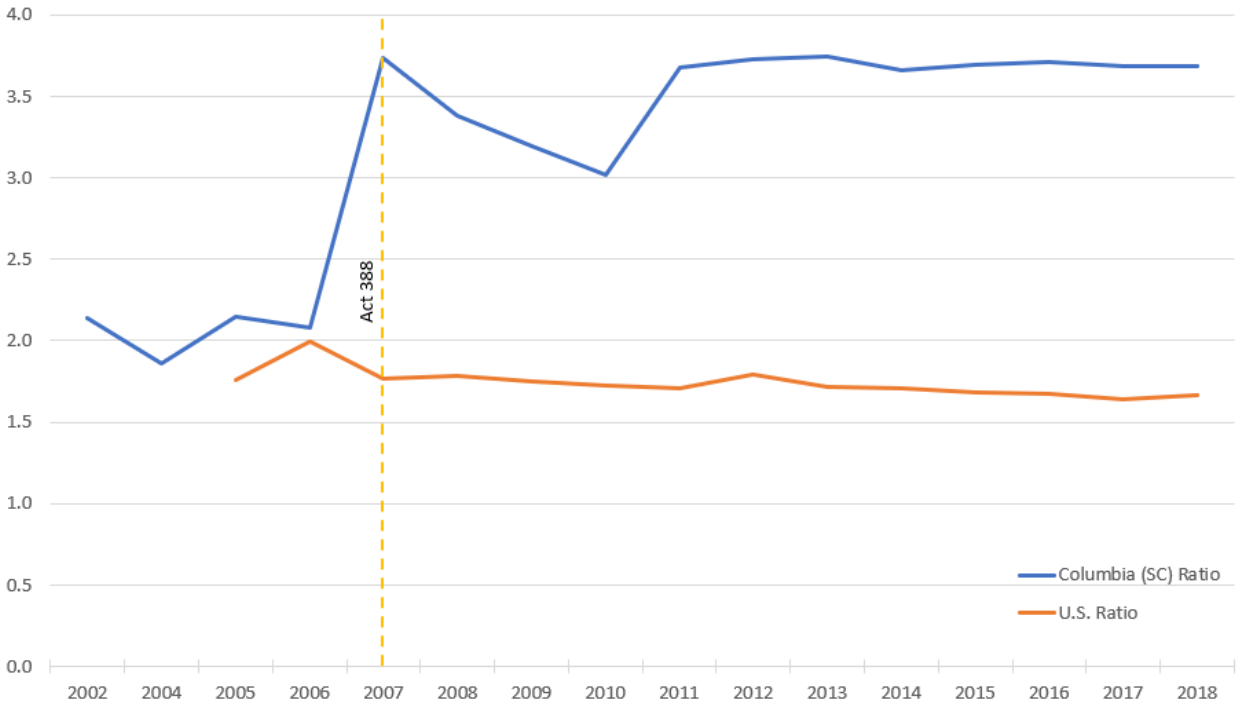
Source: Minnesota Center for Fiscal Excellence

Changes in Effective Tax Rates since Act 388

New estimates by staff of the Minnesota Center for Fiscal Excellence (MCFE) combined with statistics from previously published reports were used to create a time series of the ratio of commercial-to-homestead effective tax rates for the city of Columbia, South Carolina, from 2002 to 2018. (In 2017, Charleston replaced Columbia as the largest city in South Carolina. Consequently, from 2017 forward, Charleston's tax system is used to represent the state in the MCFE annual reports.) In 2002, commercial property in Columbia, South Carolina, was taxed at just over twice the rate of homestead property. In 2007, after the passage of Act 388, commercial property was taxed at nearly four times the rate of homestead property. Although the ratio of commercial-to-homestead effective tax rates has varied from 2007 to 2018, in each year after the passage of Act 388, commercial property has been taxed at a rate at least three times higher than the residential tax rate.[15] Figure 1.6 shows ratios of the commercial effective property tax rate for Columbia, South Carolina, over time.

[15] See appendix table B12 for a table of Columbia's ratio of commercial-homestead effective property tax rates for years 2002–2018.

Figure 1.6 Columbia, South Carolina, and U.S. Average Ratio of Commercial-Homestead Effective Tax Rates, 2002–2018



Source: Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence 2019
Note: The 2017 and 2018 studies reported Charleston as the largest city in South Carolina. This ranking is based on data for the City of Columbia provided by the Minnesota Center for Fiscal Excellence.

Other cities in addition to Charleston, South Carolina, that ranked among the top five commercial-to-homestead effective tax rates in 2018 were Boston, Honolulu, Denver, and Chicago. Boston treats commercial property differently than other Massachusetts municipalities and Chicago's system is different from the rest of Illinois, so those two cities are not necessarily representative of their states as a whole.[16]

Ratios of effective tax rates for industrial property compared to homestead property in South Carolina are even higher and rank first or second nationally (table 1.4). South Carolina is one of only two states where the property tax system treats commercial properties preferentially compared to industrial properties (Minnesota Center for Fiscal Excellence).[17]

[16] See appendix B for a listing of the cities and states with the top five commercial-to-homestead ETR ratios in 2018 and their rates and ratios in table B13.
[17] The other state is Wyoming.

Table 1.4 South Carolina Ratio of Industrial to Homestead Effective Tax Rate, City of Columbia, 2002–2018

Tax Year	Rank	Columbia (SC) Ratio
2002		3.678
2004		3.250
2005	3	3.667
2006	4	4.930
2007	3	6.947
2008	2	8.172
2009	2	6.103
2010	2	5.688
2011	2	6.747
2012	2	6.849
2013	1	6.880
2014	1	6.727
2015	1	6.800
2016	1	6.873
2017	1	6.791
2018	1	6.781

Source: Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence 2019

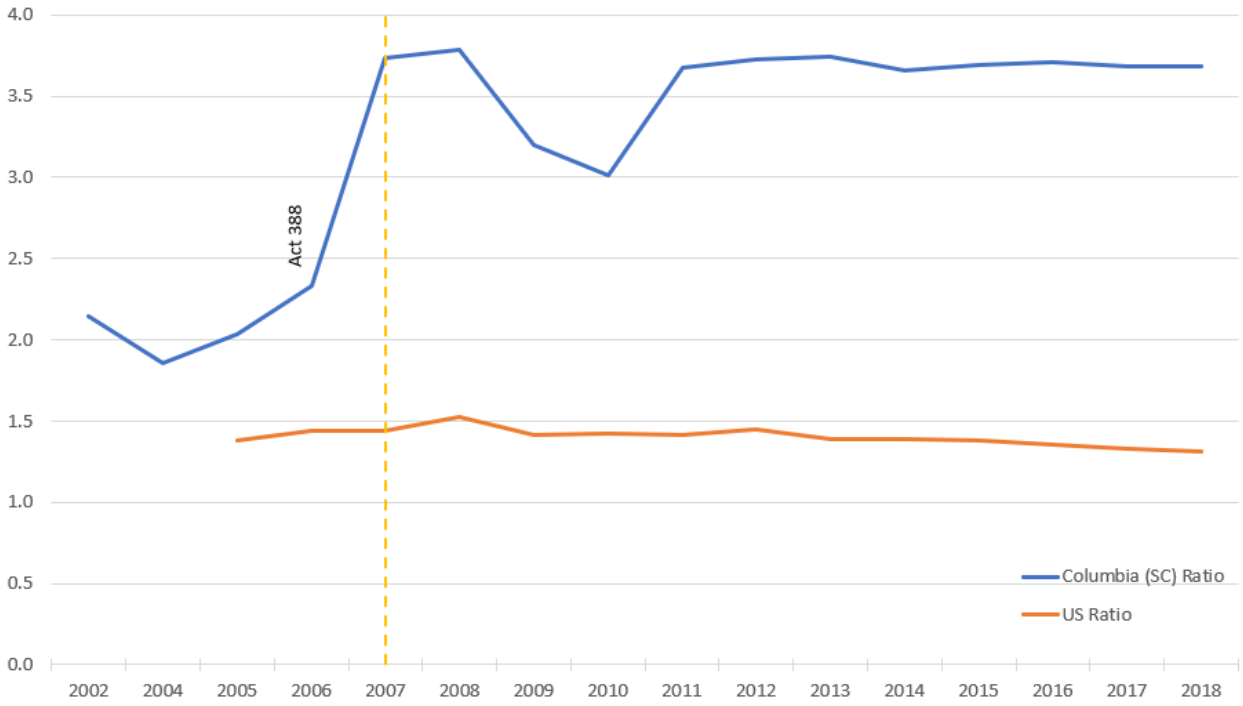
Figure 1.7 shows a time series of the ratio of apartment-to-homestead effective tax rates for the city of Columbia, South Carolina, from 2002 to 2018. It uses data provided by the staff of the Minnesota Center for Fiscal Excellence combined with statistics from previously published reports. In 2002, apartment property in South Carolina was taxed at just over twice the rate of homestead property. In 2007, after passage of Act 388, apartment property was taxed at nearly four times the rate of homestead property. Although the ratio of apartment-to-homestead effective tax rates has varied from 2007 to 2018 in each year after the passage of Act 388 (except 2010) apartment property has been taxed at a rate at least three and a half times higher than the residential tax rate.

In 2018, Charleston, South Carolina, had the highest ratio of apartment-to-homestead effective property tax rates among the largest cities in each state. Other cities in the top five were New York City, Indianapolis, Birmingham, and Charlestown, West Virginia.[18]

See Appendix D for a discussion of Minnesota's reforms which reduced disparities in effective property tax rates among different property types.

[18] See the appendix for a listing of the top 5 states in 2018 and their rates and ratios in table B14.

Figure 1.7 Columbia, South Carolina, and U.S. Average Ratio of Apartment-to-Homestead Effective Tax Rates, 2002–2018



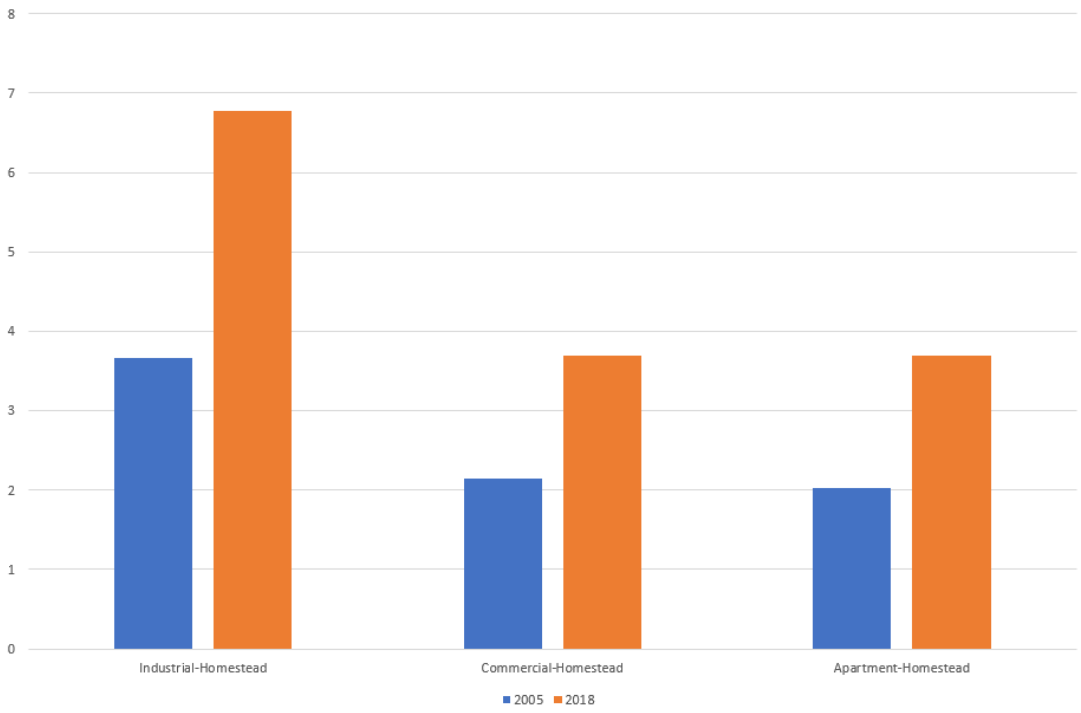
Source: Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence 2019
Note: The 2017 and 2018 studies reported Charleston as the largest city in South Carolina. This ranking is based on data for the City of Columbia provided by the Minnesota Center for Fiscal Excellence.

Figure 1.8 presents three ratios of effective property tax rates for 2005 and 2018. South Carolina clearly shows disparities in effective property tax rates that were exacerbated by enactment of Act 388:

- Before Act 388, industrial property was taxed at about three and a half times higher than homestead property. After Act 388, industrial property has been taxed at nearly seven times the rate compared to homestead property.
- Before Act 388, commercial and apartment properties were taxed at more than two times the rate of homestead property. After Act 388, commercial and apartment properties have been taxed at about three and a half times the rate of homestead property.

South Carolina's unique policy, which fully exempts primary homesteads from property taxes for school operating costs, contributes to the high ratios of industrial, apartment, and commercial property tax rates compared to homestead property tax rates. Michigan exempts primary homesteads from local property taxes for school operating costs, however, it imposes a statewide property tax that captures revenue for schools from all property classes. See Appendix E for a more extended description of Michigan's state education tax.

Figure 1.8 The Impact of Act 388: Changing Ratios of Effective Property Tax Rates



Source: Minnesota Center for Fiscal Excellence

Conclusion

Data on property taxes in South Carolina reveal a complex and unusual system where businesses bear a proportionally greater share of the property tax than homeowners. Taxation of property in the state is subject to assessment ratios and exemptions that have led to widely disparate effective tax rates on homestead and non-homestead property. In a recent survey, 28 percent of businesses reported that South Carolina's property tax has limited their ability to grow in the state.[19] South Carolina is conspicuous for its highest-in-the-nation ratio of industrial-to-homestead property tax rates. Its policy of taxing industrial property differently from commercial property is highly unusual. The state's exemption of all primary homesteads from school operating taxes is unique among the 50 states and a primary driver of South Carolina's property tax imbalance. The South Carolina property tax system lacks the characteristics of equity, efficiency, stability, and transparency, which are foundational to a sound tax system.

[19] See Appendix G for a summary of the South Carolina Chamber Property Tax Survey.

Appendix A:
Overview of Focus Counties

South Carolina comprises 46 diverse counties. In order to identify local effects of the state's property tax structure and Act 388, the South Carolina Chamber Foundation and the South Carolina Realtors chose a set of ten diverse counties for the authors to examine in depth: Allendale, Charleston, Edgefield, Florence, Greenville, Horry, Orangeburg, Richland, Sumter, and York. These counties were chosen from representative parts of the state. Investigation of border counties is especially important because Georgia and North Carolina have very different tax structures than South Carolina and the competitive impact of a different tax structure is most apparent at the border. Greenville, York, and Horry counties border North Carolina. Edgefield and Allendale counties border Georgia. This appendix describes characteristics of these counties (table A1).

Some counties are rural, and others urban, as defined by population per square mile, which ranges from about 26 in Allendale to 575 in Greenville. Total county populations range from 8,903 in Allendale to 414,576 in Richland, the site of Columbia, the state's capitol. Some counties are growing rapidly, such as Horry and York, where population growth since 2010 has exceeded 20 percent; other counties are shrinking, such as Allendale, where population has declined by almost 15 percent since 2010 (table A2).

The number of local building permits issued, and the local unemployment rate can act as indicators of the health of a county's economy. Allendale reported that only seven building permits were issued for 2018, while Greenville reported 4,669. The unemployment rate was highest in Allendale at 6.2 percent, followed by Orangeburg at 5.6 percent. The two counties with the lowest unemployment rates were Charleston (2.9 percent) and Greenville (3.1 percent).

County tier rankings and local poverty rates are two indicators of average county income. The county tiers reflect both per capita income and the unemployment rate. Each January the South Carolina Department of Revenue (DOR) ranks counties into four tiers giving equal weight to per capita income and unemployment rate. The DOR then uses these tiers to determine qualification for the job tax credit, tax moratorium, and reduced fee-in-lieu-of property tax benefits. Tier 1 counties have the lowest unemployment rates and highest per capita income, while tier 4 counties have the highest unemployment rates and lowest income per capita (South Carolina Department of Revenue 2019). Charleston, Greenville, Richland, and York are tier 1 counties. Florence and Sumter are tier 2 counties. Edgefield and Horry are tier 3 counties, and Allendale is a tier 4 county. The poverty rate ranges from 11 percent in York to 37 percent in Allendale. Median household income ranges from $58,000 in Charleston to $23,000 in Allendale.

Table A1 Ten County Comparison

	Allendale	Charleston	Edgefield	Florence	Greenville	Horry	Orangeburg	Richland	Sumter	York
Rural/Urban	Rural	Urban	Rural	Rural	Urban	Rural and Urban	Rural	Urban	Rural	Urban
Tier (based on unemployment rate and per capita income)	4	1	3	2	1	3	4	1	2	1
Number of School Districts	1	1	1	5	1	1	1	2	1	4
Region of the state	Lower Savannah	Low Country/Coastal	Central Savannah	Pee Dee	Upstate	Pee Dee/Coastal	Midlands	Midlands	Midlands	Piedmont
Leading Industry	Manufacturing	Healthcare and Social Assistance	Manufacturing/ Agriculture	Healthcare and Social Assistance	Healthcare and Social Assistance	Tourism	Manufacturing	Healthcare and Social Assistance	Manufacturing	Retail Trade
Top Employer	Fluor	Medical University of South Carolina	Milliken & Co., Johnson Mill	McLeod Health	Greenville Health System/Prism Health	1. Embassy Suites 2. Hilton Grand Vacations 3. Southeast Restaurants Corp.	Husqvarna	1. State of South Carolina 2. Palmetto Health/Prisma Health	Continental	Lash Group
Military Base (Y/N)	N	Y	N	N	N	N	N	Y	Y	N
Border County (Y/N)	Y	N	Y	N	Y	Y	N	N	N	Y

Sources: South Carolina Department of Commerce, 2019; *South Carolina Business Magazine* 2019; Infogroup, Inc., ReferenceUSAGov Database 2019

Table A2 Ten County Comparison

	Allendale	Charleston	Edgefield	Florence	Greenville	Horry	Orangeburg	Richland	Sumter	York	South Carolina
Population Estimates, July 1, 2018	8,903	405,905	27,052	138,159	514,213	344,147	86,934	414,576	106,512	274,118	5,084,127
Population Percent Change 4/1/2010 to 7/1/2018	-14.6%	15.9%	0.3%	0.9%	14.0%	27.9%	-6.0%	7.8%	-0.9%	21.3%	9.9%
Population Percent Under 18	18.9%	19.7%	18.1%	23.6%	23.0%	17.9%	21.9%	21.4%	23.8%	24.3%	21.8%
Population Percent 65 years and over	20.1%	16.4%	18.8%	17.0%	15.8%	24.0%	19.7%	12.7%	16.4%	14.3%	17.7%
Housing Units July 1, 2018	4,488	191,891	11,047	61,116	214,128	210,698	42,785	175,070	48,284	110,237	2,318,271
Percentage of Houses Owner Occupied 2013–2017	66.1%	60.6%	74.8%	65.8%	66.1%	69.9%	68.6%	59.0%	64.9%	71.0%	68.6%
Median Value Owner-occupied Housing Unit 2013–2017	$52,100	$273,100	$123,000	$128,400	$165,600	$166,500	$92,700	$154,100	$113,200	$173,600	$148,600
Building Permits 2018	7	3,969	114	463	4,669	4,520	59	2,644	279	2,692	35,487
Percent of Population Aged 16+ in Civilian Labor Force	41.6%	65.0%	50.2%	60.3%	63.7%	57.8%	53.7%	63.6%	56.9%	66.3%	59.9%
Median Household Income 2013–2017 (2017 dollars)	$23,331	$57,882	$47,500	$43,310	$53,739	$46,475	$34,943	$52,082	$41,946	$59,394	$48,781
Per Capita Income 2013–2017 (2017 dollars)	$13,439	$35,587	$23,804	$23,797	$29,132	$25,804	$19,489	$28,018	$21,733	$30,387	$26,645
Persons in Poverty, Percent	36.7%	13.3%	17.3%	18.6%	12.4%	16.1%	24.4%	16.9%	19.1%	11.2%	15.4%
Persons age 25+ with bachelor's degree or higher 2017	9.4	41.9	19.5	22.5	33.3	23.0	20.1	37.7	19.5	31.1	27.0
Total Employment (June 2019)	2,625	208,671	10,440	65,383	248,547	154,041	33,117	194,001	43,539	135,692	2,291,363
Unemployment Rate (June 2019)	6.2	2.9	3.6	3.7	3.1	3.8	5.6	3.6	4.2	3.5	3.5
Population per Square Mile, 2010	25.5	382.3	53.9	171.1	574.7	237.5	83.6	507.9	161.6	332.2	153.9

Sources: U.S. Census, QuickFacts and American Factfinder, Employment Association of South Carolina 2019, and South Carolina Department of Employment and Workforce 2019

Appendix B: Tables of Top County Taxpayers and Other Property Tax Information

Table B1 Charleston County Top Taxpayers, 2018

Taxpayer	Type of Business	Taxable Assessed Value ($)	% of Total Taxable Assessed Value
South Carolina Electric & Gas	Public Utility	77,537,160	2.0
Boeing	Manufacturing	70,741,530	1.8
Kapstone Kraft	Manufacturing/Chemical	19,051,304	0.5
Kiawah Real Estate Co.	Real Estate	9,058,050	0.2
BellSouth Telecommunications	Public Utility	8,590,980	0.2
Charleston/North Charleston MSA	Retail	8,049,120	0.2
Mid-America Apartments, LP	Apartment	7,962,930	0.2
Ingevity Corp	Chemical Production	6,747,538	0.2
Berkeley Electric Co-Op	Public Utility	6,414,330	0.2
Northwood Mall CMBS	Retail	5,915,360	0.2
TOTAL		220,068,302	5.7

Source: Charleston County Comprehensive Annual Financial Report, 2018

Table B2 Edgefield County Top Taxpayers, 2018

Taxpayer	Taxable Assessed Value ($)	% of Total County Taxable Assessed Value
South Carolina Electric & Gas	4,138,090	5.1
Aiken Electric Co-op, Inc.	2,497,250	3.1
Southern Felt Co.	1,165,830	1.5
Milliken & Company, Inc.	1,050,280	1.3
Fulcra Trenton, LLC	810,000	1.0
Bluegrass Materials Co., LLC	581,070	0.7
Costa Layman	561,070	0.7
Bondex	502,720	0.6
Colonial Pipelines Co.	481,300	0.6
Buckeye Terminals, LLC	412,590	0.5
TOTAL	12,200,200	15.1

Source: Edgefield County Comprehensive Annual Financial Report, 2018

Table B3 Florence County Top Taxpayers, 2018

Taxpayer	Taxes Levied ($)	% of Total Taxes Levied
Duke Energy	3,779,252	2.8
FCWC JI PC Nanya	2,719,009	2.0
QHG of South Carolina	2,044,132	1.5
South Carolina Electric & Gas	1,227,194	0.9
Rocktenn Company	1,036,485	0.8
PR Magnolia, LLC	945,852	0.7
CSX Transportation, Inc.	852,599	0.6
Ruiz Food Products	730,939	0.6
BellSouth Telecommunications	601,943	0.5
Time Warner Cable	577,060	0.4
TOTAL	14,514,465	10.9

Source: Florence County Comprehensive Annual Financial Report, 2018

Table B4 Greenville County Top Taxpayers, 2018

Taxpayer	Taxable Assessed Value ($)	% of Total Taxable Assessed Value
Duke Energy	48,543,000	2.1
Cellco Partnership	11,755,000	0.5
BellSouth Telecommunications	9,157,000	0.4
Greenridge Shops, Inc	6,046,000	0.3
Simon Haywood, LLC and Bellweather	5,986,000	0.3
Magnolia Park	5,963,000	0.3
Piedmont Natural Gas	5,847,000	0.3
Michelin North America	6,588,000	0.3
Laurens Electric Coop, Inc.	5,273,000	0.2
3M Company	5,323,000	0.2
TOTAL	110,481,000	4.9

Source: Greenville County Comprehensive Annual Financial Report, 2018

Table B5 Horry County Top Taxpayers, 2018

Taxpayer	Taxable Assessed Value ($)	% of Total Assessed Value*
Burroughs & Chapin Company, Inc. (2)(3)	19,116,080	0.9
Horry Electric Coop, Inc.	18,671,960	0.8
Lawyers Title Insurance Corp.	5,260,390	0.2
Bluegreen Vacations Unlimited, Inc.	5,212,970	0.2
South Carolina Electric & Gas	4,522,120	0.2
Marriott Ownership Resorts, Inc.	4,068,990	0.2
Time Warner Cable	4,003,410	0.2
AVX Corporation	3,608,263	0.2
Ocean Lakes Family Campground	3,564,080	0.2
Wal-Mart Real Estate Business Trust	3,290,530	0.2
TOTAL	71,318,793	3.2

Source: Horry County Comprehensive Annual Financial Report, 2018

*Property exempt from county taxes has been subtracted from Total Assessed Value.

Table B6 Richland County Top Taxpayers, 2018

Taxpayer	Type of Business	Taxable Assessed Value ($)	% of Total Taxable Assessed Value
South Carolina Electric & Gas	Electric Utility	81,943,210	5.1
International Paper Co.	Paper Products	23,712,350	1.5
Blue Cross Blue Shield	Insurance	12,652,720	0.8
Cellco Partnership	Wireless Communication	8,598,630	0.5
BellSouth Telecommunications	Telephone Service	7,837,350	0.5
Westinghouse Electric Co.	Nuclear Fuel	7,615,160	0.5
Providence Hospital, LLC	Healthcare	5,596,350	0.4
Time Warner Cable	Cable	4,740,300	0.3
HPT Sunbelt Portfolio, LLC	Real Estate Investments	3,201,950	0.2
AT&T Mobility	Telephone Service	3,315,480	0.2
TOTAL		159,213,500	9.8

Source: Richland County Comprehensive Annual Financial Report, 2018

Table B7 York County Top Taxpayers, 2018

Taxpayer	Taxable Assessed Value ($)	% of Total Taxable Assessed Value
NC Municipal Power Agency #1	63,721,000	4.8
Duke Energy	43,810,000	3.3
NC Electric Membership Corp.	42,000,000	3.2
Piedmont Municipal Power	20,277,000	1.6
Resolute FP U.S., Inc./Bowater Incorporated	11,268,000	1.5
Ross Dress for Less, Inc.	11,268,000	0.9
York Electric Co-op, Inc.	9,837,000	0.8
Comporium, Inc./Rock Hill Telephone Company	7,807,000	0.6
Schaffler Group USA, Inc.	5,986,000	0.5
LPL Holdings, Inc.	4,622,000	0.4
TOTAL	220,596,000	17.4

Source: York County Comprehensive Annual Financial Report, 2018

Table B8 South Carolina Assessment Ratio and Projected Property Tax Revenue by Class of Property, 2019–2020

Property Classification	Assessment Ratio (%)	Projected Property Tax Revenue ($)	% of Total Revenue	Appraised By
Owner-Occupied	4.0	1,370,549,000	18.2	County Assessor
Agricultural (Private)	4.0	38,524,000	0.5	County Assessor
Agricultural (Corporate)	6.0	6,178,000	0.1	County Assessor
Commercial/Rental	6.0	3,251,720,000	43.2	County Assessor
Personal Property (Vehicles)	6.0	879,498,000	11.7	County Auditor
Other Personal Property	10.5	125,753,000	1.7	County Auditor
Fee-in-Lieu	N/A*	581,966,000	7.7	N/A
Manufacturing	10.5	271,396,000	3.6	Department of Revenue
Utility	10.5	662,456,000	8.8	Department of Revenue
Business Personal	10.5	305,984,000	4.1	Department of Revenue
Motor Carrier	9.5	29,777,000	0.4	Department of Revenue
TOTAL		7,523,801,000	100.0	

Source: South Carolina Revenue and Fiscal Affairs, 2019

*Assessment ratios for Fee-in-Lieu are negotiable and vary by agreement. The minimum ratio is 4.0%.

Table B9 Selected Measures of Property Tax Burden, South Carolina and Selected States, 2016

	South Carolina		U.S.	North Carolina		Georgia		Florida		Tennessee		Virginia	
	Rate	**Rank**	Rate	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
Per capita property tax	**$1,164**	**32**	$1,556	$975	39	$1,159	33	$1,263	31	$836	46	$1,545	20
Total property tax as percentage of state-local revenue	**14.5%**	**29**	16.1%	12.2%	38	17.1%	20	17.7%	17	12.2%	38	18.5%	14
Property tax percentage of personal income	**2.9%**	**23**	3.1%	2.3%	39	2.7%	29	2.7%	28	1.9%	47	2.9%	22
Effective tax rate, median owner-occupied home	**0.57%**	**45**	1.10%	0.86%	31	0.91%	27	0.98%	26	0.74%	38	0.80%	34

Sources: U.S. Census via Significant Features of the Property Tax, American Community Survey

Notes: All revenue numbers in this table include the state government as well as local governments. Effective tax rate is calculated as the median real estate tax paid on owner-occupied homes as a percent of the median owner-occupied home value.

Table B10 Effective Tax Rates and Ratios by Property Type, South Carolina and Selected States, 2018

		Charleston (SC)*		**U.S.**	**Charlotte (NC)**		**Atlanta (GA)**		**Jacksonville (FL)**		**Nashville (TN)**		**Virginia Beach (VA)**	
		Rate	**Rank**	Rate	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
Business	$1 M Commercial EFT	**1.814%**	***26***	1.945%	1.036%	48	1.520%	30	1.644%	29	1.209%	43	0.956%	51*
	$1 M Industrial EFT	**2.335%**	***4***	1.418%	0.884%	44	1.409%	24	1.332%	29	1.104%	33	0.494%	53
Residential	Median Homestead EFT	**0.511%**	***51****	1.443%	0.980%	38	1.099%	35	1.226%	26	0.789%	44	0.905%	41
	$600,000 Apartment EFT	**1.656%**	***19***	1.680%	0.996%	44	1.500%	25	1.604%	21	1.247%	37	0.827%	48
Relative ETR	Commercial to Homestead Ratio	**3.119**	***4***	1.666	1.000	45	1.358	25	2.103	13	1.600	24	0.915	53**
	Apartment to Homestead Ratio	**3.119**	***1***	1.308	1.000	45	1.358	14	2.103	6	1.600	11	0.871	53**

Source: Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence, 2019

* The rates reported for South Carolina are revised rates based on new methodology for South Carolina which is reflected in a forthcoming revision of the original source report.

** The 50-State Property Tax Comparison Study reports effective tax rates for the largest city in each state. The tables list 53 cities because the study includes Washington D.C. and two cities each in Illinois and New York since property taxes in Chicago and New York City differ markedly from the rest of the state.

Table B11 Selected Effective Tax Rates by Property Type, South Carolina and Selected States, 2018

	Charleston (SC)		U.S.	Charlotte (NC)		Atlanta (GA)	
	Rate	**Rank**	**Rate**	**Rate**	**Rank**	**Rate**	**Rank**
Homestead: Median*	0.511%	51	1.443%	0.980%	38	1.099%	35
Homestead: $150,000	0.511%	50	1.397%	0.980%	37	0.698%	46
Homestead: $300,000	0.511%	51	1.459%	0.980%	39	1.100%	35
Apartment: $600,000	1.656%	19	1.680%	0.996%	44	1.500%	25
Apartment-Homestead Ratio	**3.119**	**1**	**1.308**	**1.000**	**45**	**1.358**	**14**
Commercial: $100,000	1.814%	24	1.878%	1.036%	48	1.520%	28
Commercial: $1 Million	1.814%	26	1.945%	1.036%	48	1.520%	30
Commercial: $25 Million	1.814%	27	1.981%	1.036%	48	1.520%	32
Commercial-Homestead Ratio	**3.119**	**4**	**1.666**	**1.000**	**45**	**1.358**	**25**
Industrial: $100,000	2.335%	4	1.336%	0.884%	40	1.409%	22
Industrial: $1 Million	2.335%	4	1.418%	0.884%	44	1.409%	24
Industrial: $25 Million	2.335%	4	1.447%	0.884%	44	1.409%	25

Source: Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence, 2019

*Median home values vary across states. The median home value for Charleston was $344,600; the median home value in Charlotte was $215,500; and the median home value in Atlanta was $299,400.

Table B12 South Carolina Ratio of Commercial-Homestead Effective Tax Rates, City of Columbia, 2002–2018

Tax Year	Rank	Columbia (SC) Ratio	U.S. Ratio
2002	10	2.139	
2004	17	1.857	
2005	12	2.143	1.757
2006	13	2.083	1.993
2007	3	3.732	1.766
2008	5	3.377	1.786
2009	6	3.198	1.751
2010	5	3.016	1.724
2011	2	3.675	1.707
2012	4	3.729	1.791
2013	3	3.747	1.716
2014	4	3.661	1.710
2015	3	3.691	1.683
2016	3	3.713	1.672
2017	3	3.682	1.641
2018	4	3.687	1.666

Source: Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence, 2019

Note: The 2017 and 2018 studies reported Charleston as the largest city in South Carolina. This ranking is based on data for the City of Columbia provided by the Minnesota Center for Fiscal Excellence.

Table B13 Top Five Commercial-Homestead Ratios of Effective Tax Rates, 2018

City	Rate	Rank
Boston (MA)	4.425	1
Honolulu (HI)	3.973	2
Denver (CO)	3.885	3
Charleston (SC)	3.119	4
Chicago (IL)	2.943	5

Source: Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence, 2019

Table B14 Top Five Apartment-Homestead Ratios of Effective Tax Rates, 2018

City	Rate	Rank
Charleston (SC)	3.119	1
New York (NY)	2.550	2
Indianapolis (IN)	2.425	3
Birmingham (AL)	2.183	4
Charlestown (WV)	2.148	5

Source: Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence, 2019

Appendix C
South Carolina: A Comparison with Neighboring States

Although property taxes are levied in every state in the country, the structure of those tax systems varies markedly. Table C1 relies primarily on the Lincoln Institute of Land Policy's unique property tax database, *Significant Features of the Property Tax,* and its companion tool, *State-by-State Property Tax at a Glance*, to compare South Carolina's property tax structure to neighboring states, while providing a count of states in the U.S. with each feature.

Table C1 Property Tax Features, South Carolina and Selected States, 2017

	South Carolina	Count for U.S. 50 states plus DC	Georgia	Florida	North Carolina	Tennessee	Virginia
Statewide classification of real property	**Yes**	25	Yes	No	Yes	Yes	No
State property tax at least 5% of own-source revenue	**No**	8	No	No	No	No	No
Assessment of property primarily by county	**Yes**	31	Yes	Yes	Yes	Yes	No
Annual assessment cycle	**No (5 years)**	20	Yes	Yes	No (up to 8 years)	No (4-6 years)	No (1-6 years)
Limits on property tax rates	**Yes**	36	Yes	Yes	Yes	No	No
Limits on property tax levies	**No**	36	No	No	No	No	Yes
Limits on the rate of growth of assessed value	**Yes**	20	Yes	Yes	No	No	No
Homeowners exempt from all school operating taxes	**Yes**	1	No	No	No	No	No
Circuit breaker property tax relief program	**No**	34	No	No	Yes	No	No
Tax increment financing Program	**Yes**	50	Yes	Yes	Yes	Yes	Yes
Economic development property tax abatement	**Yes**	37	No	Yes	Yes	No	Yes
Fee in lieu of taxes (FILOT)	**Yes**	6	No	No	No	No	No

Sources: Significant Features of the Property Tax; Kenyon, Langley, and Paquin, 2012

When South Carolinians describe manufacturing property as being assessed at 10.5 percent, rental property at 6 percent, and residential property at 4 percent, they are describing a classified property tax system. "A classified property tax system is one in which different kinds or classes of property are assessed at different assessment ratios or taxed at different tax rates" (Woolery 1979, 85). In the South Carolina property tax system, the assessment ratios vary but the nominal tax rates do not.

Twenty-five states classify real property for taxation purposes. Among South Carolina's comparison states, Florida and Virginia do not have a classified system, while Georgia, North Carolina, and Tennessee do.

Although the property tax is primarily a local government tax in the U.S., 36 states, including South Carolina derive some revenue from a property tax that is levied by the state government. In most cases, these state property taxes are levied on railroads, utilities, or natural resources. A subset of those 36 states derive at least 5 percent of their revenue from a state property tax. Those eight states are Arkansas, Kansas, Michigan, Montana, New Hampshire, Vermont, Washington, and Wyoming. Some of these states use a state property tax to help pay for schools. This allows the state access to a tax with a base that is

more stable than income or sales taxes, while avoiding the fiscal disparity problem linked to local reliance on the property tax. An example is Michigan, which enacted a state property tax known as the Education Property Tax. Interestingly, Michigan is another *tax swap* state, like South Carolina, which decided to swap some of its reliance on local property taxes for greater reliance on state sales taxes. However, at the same time that Michigan swapped higher sales taxes for lower local property taxes, it also enacted the state property tax for education. Unlike Michigan, South Carolina did not establish a statewide property tax to offset local property tax loss, but instead increased its sales tax rate from 5 percent to 6 percent and mandated state reimbursement of local tax loss. Shortly after adoption of the policy, economic recession battered the sales tax base and the increase in the rate did not produce sufficient revenue to offset the local property tax loss (State-by-State Property Tax at a Glance).

Chapter 2 will explore property tax assessment issues in some detail. This table presents only a few features of property tax assessment systems. Like all the comparison states except for Virginia, South Carolina relies primarily on counties to perform assessments. The qualification "primarily" leaves room for some property tax assessment by other than county governments.

In South Carolina, the Department of Revenue assesses the following types of property: manufacturing real property, utilities, business personal property, railroads, private carlines, airlines, and pipelines. Although the majority of states conduct central assessing for railways, railroad cars, gas utilities, natural gas pipelines, electric utilities, oil pipelines, and telecommunications companies, it is rare for a state to conduct central assessment for manufacturing properties (Dornfest, et al 2019).
For properties assessed by the counties, the assessment function is split between assessors and auditors. The county assessor assesses primary residential, other residential, agriculture, and commercial properties. The auditor assesses vehicles and some types of other personal property with the exception of business personal property.

Another assessment feature is the assessment cycle. It should be noted that the standard recommended by the International Association of Assessing Officers is a one-year assessment cycle (IAAO 2010). Nevertheless, only Florida and Georgia among the comparison states employ an annual assessment cycle. Nationwide, 20 states have laws requiring annual reassessment. In Virginia, the cycle ranges from one to six years, in Tennessee, the cycle ranges from four to six years, in North Carolina, counties are allowed up to eight years, and in South Carolina, the assessment cycle is five years, except when a county appeals for a one-year extension, in which case they are granted a six-year assessment cycle.

In table C1, the three rows following the *annual assessment cycle* row concern state-imposed limitations on local property tax collections. "All but four states limit property taxation through at least one state-imposed restriction on the growth of state and/or local property tax rates, levies, or assessments. Those states are Hawaii, New Hampshire, Tennessee, and Vermont" (Paquin 2015).

A rate limit restricts property tax rates so they are either frozen or limited by some index or formula. Act 388 placed a limit on local property tax rates. Rate increases are capped at the rate of inflation plus the rate of population growth. Among South Carolina's comparison states only Tennessee and Virginia do not have limits on property tax rates. In total, 36 states have limits on property tax rates.

A levy limit is a limit on the amount of revenue raised by the property tax or on the rate of growth in property tax revenues. Again, 36 states impose limits on property tax levies. However, among the comparison states, only Virginia places a limit on property tax levies. Recall that Virginia does not limit property tax rates.

The third type of property tax limit is a constitutional limit on the rate of growth in assessed values. Assessment limits place a limit on annual increases in assessed values (or in the case of South Carolina,

appraised value) so that increases in assessed values are either frozen or limited by an index or formula. Act 388 imposed an assessment cap. This is a 15 percent cap on the growth of property tax appraisals over a five-year period unless the property is sold during that time. Twenty states impose assessment caps, including Florida and Georgia among the comparison states, though Georgia's assessment limit is enacted at local option and is not imposed statewide.

Of the three types of limits on property taxes—rate limits, levy limits, and assessment limits—property tax analysts typically have the greatest concerns about assessment limits. For example, the Haveman and Sexton (2008) report on assessment limits concludes:

> Assessment limits are often put forward as a means of combating two problems popularly associated with rapidly appreciating property values: increasing tax bills and the redistribution of tax burdens. In fact, 30 years of experience suggests that these limits are among the least effective, least equitable, and least efficient strategies for providing property tax relief.

Joan Youngman (2016) is similarly critical of assessment limits:

> Assessment limits address the problem of volatility in property taxation, but at a heavy price. They can undermine the distribution of the tax according to property value, providing the greatest benefit to the most expensive property experiencing the most rapid price appreciation. Their complexity diminishes the transparency and accountability that are among the greatest strengths of the property tax. When tax limitations are under consideration as necessary responses to pressure for tax relief, alternative approaches that maintain the integrity of the valuation rolls should be considered first. These would include restrictions on tax rates, deferrals and other extended payment options, [and] "circuit breaker" relief for owners whose taxes are disproportionate to their income…"

One very unusual feature of South Carolina's property tax system is the complete exemption of primary homesteads from property taxes for school operating costs. Six states do have a partial school exemption solely for school property taxes, but this is typically a much smaller reduction in property tax liability. For example, residential properties in Kansas receive a $20,000 exemption from the local school property tax (Significant Features of the Property Tax). The only other state to exempt homeowners from local property taxes for school operating costs is Michigan. And in Michigan's case, there is an additional state education property tax which is levied on all property, including homesteads.

The row labeled *circuit breaker property tax relief program* in table C1 identifies states that use this option. Circuit breakers are a form of targeted property tax relief. A circuit breaker provides direct property tax relief that increases as household income declines, for a given property tax bill (Bowman, Kenyon, Langley, and Paquin 2009). A simple form of circuit breaker is a threshold circuit breaker that provides homeowners with property tax relief if their property taxes exceed a certain percent of their income. For example, Massachusetts' circuit breaker provides property tax relief to seniors whose property tax bill exceeds 10 percent of their income. As the table shows, although 34 states employ circuit breakers, this device is not popular in the Southeast. Among South Carolina's comparison states only North Carolina employs a circuit breaker.

The last three rows of the table concern special property tax treatment for business. The first program, tax increment financing (TIF) is used in 49 states and Washington, DC, but apparently much less intensively in South Carolina. Typically, business property taxes are not abated under TIF but earmarked for uses such as construction of new infrastructure in the TIF district.

Thirty-seven states, including South Carolina, have some sort of stand-alone non-geographically based property tax abatement for businesses, which is used for economic development purposes (Kenyon, Langley, and Paquin 2012). In South Carolina, the most prominent form of property tax abatement is fee in lieu of taxes (FILOT). The various forms of FILOTs will be described in Chapter 5. It is difficult to ascertain how many other states use a similar property tax abatement scheme because this type of device is not tracked systematically in Significant Features of the Property Tax, and different states use different names for the mechanism. Most often the device is termed payment in lieu of taxes (PILOT), but this can be confused with nonprofit payments in lieu of taxes, a very different animal. Arizona uses an economic development incentive called a government property lease excise tax (GPLET) which is very similar to a FILOT:

> Under a GPLET, certain developers avoid paying property tax by allowing the title of their land to go to the city in exchange for an exclusive right to lease the property back. Since cities do not pay property taxes, neither does the developer nor the final user. However, the developer or end user does make alternative tax payments based on the size, height, and use of the development, thus explaining why this is an excise tax. After a set period, the GPLET expires and the property goes back on the tax roll (Chapman 2018).

Table C2 Selected Measures of Property Tax Burden, South Carolina and Selected States, 2016

	South Carolina		U.S.	North Carolina		Georgia		Florida		Tennessee		Virginia	
	Rate	Rank	Rate	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank
Per capita property tax	**$1,164**	**32**	$1,556	$975	39	$1,159	33	$1,263	31	$836	46	$1,545	20
Total property tax as percentage of state-local revenue	**14.5%**	**29**	16.1%	12.2%	38	17.1%	20	17.7%	17	12.2%	38	18.5%	14
Property tax percentage of personal income	**2.9%**	**23**	3.1%	2.3%	39	2.7%	29	2.7%	28	1.9%	47	2.9%	22
Effective tax rate, median owner-occupied home	**0.57%**	**45**	1.10%	0.86%	31	0.91%	27	0.98%	26	0.74%	38	0.80%	34

Sources: U.S. Census via Significant Features of the Property Tax, American Community Survey

Notes: All revenue numbers in this table include the state government as well as local governments. Effective tax rate is calculated as the median real estate tax paid on owner-occupied homes as a percent of the median owner-occupied home value.

South Carolina relies on the property tax for 14.5 percent of its state-local revenue, placing the state twenty-ninth highest among states in its reliance on the property tax. In this respect, South Carolina is not very different from its neighbors. Although in percentage terms, South Carolina's property tax reliance sounds low, its property tax collections amounted to $5.6 billion in 2016.

Table C2 presents the most common measures of property tax burden: per capita property tax, property tax as a percent of personal income, and the estimated effective tax rate for the median owner-occupied home. Of these three measures, the effective tax rate is considered the best way to measure property tax burden. An effective tax rate compares the tax paid (tax liability) to the value of the property on which the tax is levied (tax base). Another way to think of effective tax rate is the tax bill as a percent of the property's market value.

Because South Carolina is a relatively low-income state, it ranks twenty-third among the states in property tax as a percent of personal income. But its per capita property tax burden of $1,164 in 2016 placed South Carolina thirty-second among the states, and its estimated effective tax rate for a median owner-occupied home of 0.6 percent, gave South Carolina a rank of forty-five. South Carolina's low ranking for property tax burden on homeowners and its average or above-average ranking for broad measures of the property tax burden suggest the burden of the property tax is skewed away from homeowners.

Appendix D
Minnesota's Compression of Property Tax Rates

Minnesota used to have widely disparate effective property tax rates on different classes of property, as South Carolina does now.[20] This is a brief history of how Minnesota implemented various reforms between 1997 and 2002 to decrease the disparities in effective property tax rates among different property types.

Currently, the effective tax rate on commercial property in South Carolina is three times that of homestead property (Lincoln Institute of Land Policy 2018, 37-38). In Minnesota, the effective tax rate on commercial property is almost twice that of homestead property. The effective tax rate on apartments in South Carolina is also three times that of homestead property while Minnesota's effective tax rate on apartments is just 1.3 times that of homestead property (table D1).

Table D1 Ratios of Effective Tax Rates in South Carolina and Minnesota, 2018

State	Commercial-Homestead Rate (%)	Apartment-Homestead Rate (%)
South Carolina*	3.1	3.1
Minnesota	1.8	1.3

Source: Lincoln Institute of Land Policy and Minnesota Center for Fiscal Excellence 2019
*These numbers are for Charleston, while ratios reported elsewhere are for Columbia. The two cities have slightly different ratios.

Minnesota was able to successfully decrease the disparities in effective property tax rates by compressing the rates for different classes of property. The first step in compressing property tax rates was done with the passage of the 1997 Omnibus Tax Bill, which reduced business and apartment properties' share of the local tax base by reducing classification rates for businesses and apartments relatively more than it reduced classification rates for homestead property (Minnesota Taxpayers Association 1996).

In order to explain the impact of these changes, some key terms related to Minnesota's property tax system need to be defined. Both South Carolina and Minnesota have a classified property tax system meaning that different types of property can be taxed at different rates. In Minnesota, however, the class rate varies by both class of property and by value of property. Like South Carolina, the value of the property is determined by the assessor. Minnesota refers to this appraised value as the market value or estimated market value, while South Carolina uses the term fair market value. The value actually used in calculating property taxes in Minnesota is the taxable market value, which includes all limits, deferrals, and exclusions. The taxable market value is multiplied by the class rate to get the "net tax capacity." The cumulative net tax capacity of all properties in a county is the tax base used to determine a county's tax levy. (Minnesota Department of Revenue 2019)

For example, a residential homestead property in Minnesota with a taxable market value of $300,000 would have a class rate of 1 percent. To find the net tax capacity of this property, the taxable market value is

[20] Minnesota has a long history of providing extensive state aid to local governments in order to keep property taxes low for homeowners. Homeowners saw their property taxes decrease year after year with seemingly endless increases in state aid making up for the lost revenue. By the mid-90s, rapid valuation increases along with vast disparities among homes and businesses contributed to calls for property tax reform. For more details visit "State-by-State Property tax at a Glance" on the Lincoln Institute website. https://www.lincolninst.edu/research-data/data-toolkits/significant-features-property-tax/state-state-property-tax-glance

multiplied by the class rate. Thus, the tax capacity would be $3,000. Another residential homestead property may have a taxable market value of $600,000, which would mean the property is subject to a higher class rate.[21] The first $500,000 would be taxed at the 1 percent rate ($500,000 x 0.01) and the last $100,000 would be taxed at a higher rate of 1.25 percent ($100,000 x 0.0125). The net tax capacity for this property would be the sum of these two values, or $6,250. (Minnesota Department of Revenue 2019)

The reforms made in 1997 increased the tax capacity of homesteads to a percentage much closer to the market value while it decreased the tax capacity for businesses and apartments. Despite the increase in tax capacity, homesteads still saw a 5.4 percent decrease in property taxes. Businesses saw a 6.3 percent decrease and rental units saw an 8.2 percent decrease.

The following year, Governor Carlson's budget proposal, enacted by the legislature, decreased property tax classification rates even further in a near replay of the 1997 session. Classification rates decreased for higher value homes, but commercial and industrial class rates experienced an even greater decrease, which further compressed property tax rates (Minnesota Taxpayers Association 1998).

The next major reform came in 2001 when Governor Ventura created the Big Tax Reform Plan that included a full state takeover of basic education expenses, a statewide property tax on "non-voting" property, an exemption from school operating levies for property subject to the statewide tax, and further compressed property tax classification rates (Minnesota Taxpayers Association 2001). The results of this reform included a shift of both homestead and business tax capacity share closer to their taxable market share. Businesses experienced a net decrease in property taxes by paying the new statewide property tax rather than school operating levies. Although homeowners would pay a greater percentage of the total property tax, they also saw reductions in local property tax collections. In other words, homeowners would now have a bigger share of a smaller pie.

Table D2 Minnesota Class Rate Changes, 1997-2002

Class of Property	Class Rate (%)					
	1997	1998*	1999**	2000	2001	2002***
Residential Homestead:						
First $72,000	1.00	1.00	1.00	NA	1.00	1.00
$72,000 - $75,000	2.00	1.00	1.00	NA	1.00	1.00
$75,000 - $200,000	2.00	1.85	1.70	NA	1.65	1.00
$200,000 and over	2.00	1.85	1.70	NA	1.65	1.50
Commercial/Industrial:						
First $100,000	3.00	2.70	2.45	NA	2.40	1.50
$100,000 - $150,000	4.60	2.70	2.45	NA	2.40	1.50
$150,000 - $200,000	4.60	4.00	3.50	NA	3.40	1.50
$200,000 and over	4.60	4.00	3.50	NA	3.40	2.00

Source: Minnesota Tax Handbook
*Compression 1
**Compression 2
***Compression 3

[21] The current class rates on residential homestead property are 1 percent on the first $500,000 and 1.25 percent over $500,000 (Minnesota Department of Revenue 2019).

Between 1997 and 2002, three major compressions of property tax rates significantly decreased the disparities between residential homesteads and commercial property. Prior to these compressions, commercial and industrial properties had a 4.6 percent class rate on the portion of property valued over $100,000 while residential homestead property had a 2 percent class rate on the same portion of a property's value (table D2). After the compressions in tax rates, there was just a 0.5 percentage point difference in class rate between residential homesteads and commercial and industrial property. For example, a $100,000 property would be subject to a 1.5 percent rate if it was classified as a commercial property and a 1 percent class rate if it was classified as a residential homestead.

Appendix E
Michigan's State Property Tax

South Carolina and Michigan both passed legislation that provided homeowners with a full exemption from property taxes that pay for school operating costs. This is an explanation of how Michigan replaced lost revenue by making a variety of changes to school funding, including the implementation of a state-wide property tax.

In 1993, the Michigan Legislature approved Public Act 145, eliminating real and personal property taxes for school operating expenditures for all property types (Office of Revenue and Tax Analysis 2002, 3). This law cut about 65 percent, or $6.5 billion, of school funding for the following fiscal year without providing any alternative source of funding (Cullen & Loeb 2004, 222).

It was not until the following year that voters approved Proposal A, which made changes to the state's school aid fund and taxation (table E1). This proposal, much like in South Carolina, increased the state sales tax from 4 percent to 6 percent with the additional 2 percent completely dedicated to the state's School Aid Fund. It also created a state property tax called the State Education Tax. This tax is assessed on the taxable value of all property, including homestead property, at 6 mills (Cullen & Loeb 2004, 222). Local taxation for operations was set at 18 mills for full participation in the state school finance program and was levied on the taxable value of non-homestead property (Cullen & Loeb 2004, 222). Additionally, a new real estate transfer tax of 0.75 percent applied to the selling price of property and the cigarette tax increased by 50 cents.

Table E1 Taxes in Michigan Before and After Proposal A

	Before Proposal A	**After Proposal A**
Local School Operations Tax		
Homesteads	34 mill average	None
Non-homesteads		Capped at 18 mills
State Education Tax		
Homesteads	None	6 mills
Non-homesteads		
Sales Tax	4 percent	6 percent
Real Estate Transfer Tax	None	0.75 percent
Cigarette Tax	25 cents per pack	75 cents per pack

Source: Michigan Office of Revenue and Tax Analysis 2002

Proposal A drastically changed how public schools in Michigan are funded. The reduction in property taxes and the increase in state aid to schools meant that the state would provide about 78 percent of school funding (Cullen & Loeb 2004, 222). Prior to Proposal A, the state was only providing about 31 percent of school funding while 65 percent was funded by local taxation.

The primary difference in how Michigan and South Carolina implemented the homestead exemption for local school operating taxes is that Michigan introduced a state property tax. Residential homestead property in Michigan became subject to a new 6 mill state education tax while primary residential homeowners in South Carolina saw no new state property tax.

Appendix F
Business Property Taxation in South Carolina

The share of state and local taxes paid by South Carolina businesses is eleventh highest among the states. According to research by Ernst & Young LLP (E&Y), the share of these taxes paid by businesses did not change dramatically with the enactment of Act 388. This appendix focuses on the extent that South Carolina state and local governments tax businesses relative to governments in other states, and the proportion of South Carolina's property taxes that E&Y estimates is borne by business.

Each year E&Y prepares a report on state and local business taxes in conjunction with the Council on State Taxation and the State Tax Research Institute. The most recent report provides estimates for FY2017 (Phillips, Sallee, and Ibaid 2018). The report includes the following taxes as business taxes: property taxes, general sales taxes, a portion of excise taxes, corporate income taxes, taxes on insurance premiums and utilities, individual income taxes on pass-through business income, unemployment insurance taxes, business licenses, and severance taxes. E&Y do not attempt to determine final incidence of business taxes. That means that there is no attempt to determine the fraction of taxes for which businesses are legally liable that are forwarded to consumers in the form of higher prices or passed backwards to employees in the form of lower wages. Also, property taxes paid on income-generating residential rental properties are considered a business tax.

Nationwide, property taxes are the most important state and local tax paid by business. In FY2017, property taxes accounted for nearly 40 percent of state-local taxes paid by business in the U.S., the largest share of any state and local tax. Sales taxes accounted for about 21.3 percent of total state and local taxes paid by businesses, and corporate income taxes accounted for 8.5 percent. (Phillips, Sallee, and Ibaid 2018). Table F1 reports the business share of taxes in South Carolina from 2003 to 2017. Over that period, the business share of state and local taxes in South Carolina ranged from 42 to 52 percent. The business share of property taxes ranged from 62 to 73 percent. These data do not show a sustained increase in business share of property taxation after the enactment of Act 388. Although the business share of property taxes rose from 67 percent to 70 percent from 2005 to 2006, in subsequent years that percentage dropped, and then fluctuated. For the most recent year reported, the business share of property taxes was 68 percent.

Table F1 Business Share of Taxes in South Carolina, 2003–2017

Fiscal Year	Business Share of State & Local Taxes (%)	Business Share of State Taxes (%)	Business Share of Local Taxes (%)	Business Share of Property Taxes* (%)
2003	43.0	NA	NA	NA
2004	42.6	NA	NA	62.1
2005	41.5	29.3	63.4	66.9
2006	42.1	29.8	62.7	70.3
2007	43.4	30.4	65.1	70.6
2008	43.3	29.9	65.8	68.7
2009	45.5	32.5	65.5	61.9
2010	49.2	32.4	69.5	72.5
2011	51.5	36.6	67.8	70.8
2012	47.3	32.6	67.2	65.6
2013	47.4	34.1	65.6	65.8
2014	47.8	35.1	66.2	67.2
2015	47.9	34.7	66.8	69.4
2016	47.1	34.0	64.0	67.6
2017	45.7	31.3	64.3	NA

*Calculated using COST study business property tax amount and total state and local property taxes in South Carolina as reported by the U.S. Census

Table F2 compares South Carolina to other states in terms of the business share of property taxes. This figure was not reported in the E&Y report but estimated by the authors from E&Y data and Census data. As the table shows, the District of Columbia had the highest estimated business share of property taxes at 87 percent. South Carolina's business share of property taxes, estimated to be 68 percent, placed South Carolina eleventh highest among the states. The U.S. average business share of property taxes was 55 percent.

Table F2 Top 12 States with the Highest Business Share of Property Taxes

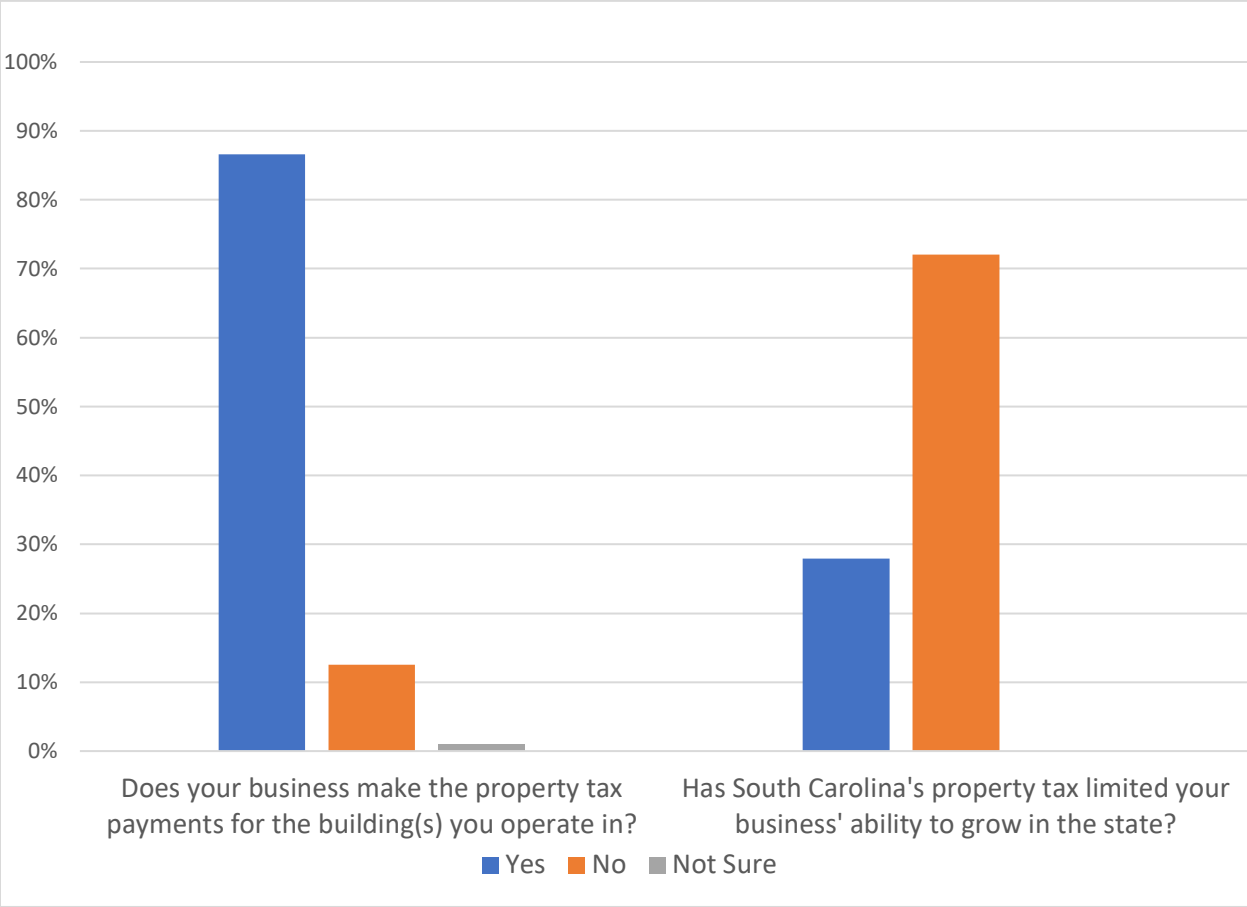
State	Business Share of Property Taxes* (%)
District of Columbia	86.8
Alabama	75.0
Louisiana	74.6
Mississippi	74.6
Indiana	73.2
West Virginia	71.7
Kansas	71.6
Maine	71.4
Arizona	70.9
Colorado	68.5
Vermont	68.1
South Carolina	67.6
United States	55.3

*Calculated using COST study business property tax amount and total state and local property taxes in each state as reported by the U.S. Census

Appendix G
South Carolina Chamber of Commerce Property Tax Survey

A recent survey of businesses by the South Carolina Chamber of Commerce found 87 percent of firms paid property taxes on the buildings in which they operated. Among businesses surveyed, 63 percent employed 250 or fewer employers and over half operated only in South Carolina. Manufacturing firms accounted for 32 percent of organizations surveyed and 29 percent of respondents, a larger share than any other industry. Most businesses surveyed pay property taxes directly, and nearly 28 percent of respondents reported that property taxes have limited their ability to grow in South Carolina (figure G1).

Figure G1 Responses to Selected South Carolina Chamber of Commerce Survey Questions, 2019



Source: South Carolina Chamber of Commerce

The South Carolina Chamber of Commerce administered the survey on SurveyMonkey and distributed it by e-mail. The chamber sent 786 survey e-mails to 729 organizations (table G1) and received 112 responses. Many interviews, which were valuable to the report, came from survey respondents.

Table G1 South Carolina Chamber of Commerce Survey Distribution by Industry

Industry	Count
Associations	2
Business Services	53
Communications	21
Construction Services	50
Professional/Consulting/Legal Services	108
Financial Services	40
Retail/Food Services	40
Health Services	28
Hotels, Hospitality & Tourism	21
Insurance	21
Manufacturing	233
Real Estate	22
Other Services	42
Utilities	23
Wholesalers	25
TOTAL	**729**

Source: South Carolina Chamber of Commerce

Chapter 2:

Property Tax Assessment Practices in South Carolina

by

Michael Bell, Ph.D.

With Appendix B by Bethany Paquin

Introduction

This chapter describes how the property tax is administered in selected counties in South Carolina and evaluates the effect of the 5-year reassessment cycle on the equity of the property tax across different land use types and within specific land use categories. The first section provides an overview of the legal framework for the property tax in South Carolina. The second section summarizes variations in property tax administration among selected counties. The third section discusses the 5-year reassessment cycle and provides preliminary insights into how it affects property tax equity.

An Overview of the Legal Framework for Administering the Property Tax in South Carolina

The property tax in South Carolina is an ad valorem tax applied to all real property, personal property used in business, and certain other types of personal property like motor vehicles, boats, and airplanes. The South Carolina Constitution provides for property taxation based on "fair market value" (Article X, Section 1). All real property is to be valued "at its true value in money that is the price that the property would bring following reasonable exposure to the market where both seller and buyer are willing" (SC Code §12-37-930). Personal property is to be valued on its actual value (SC Const. Article III, Section 29). "All property must be assessed uniformly and equitably throughout the State" (SC Code §12-43-210 (A)).

Classes of property and mandated fractional assessment ratios are defined in the South Carolina Constitution. The classification system defines which assessment ratio to apply to the fair market value of a property. This determines the final assessed value for property tax purposes. In addition, the classification system is used to determine whether property will be valued by the county assessor (most real property), the county auditor (personal property including vehicles), or the Department of Revenue (specified real and personal property under South Carolina Code 12-43-540). Table 2.1 summarizes the assessment ratios defined in the Constitution (Article X, Section 1 Taxation and assessment).

Table 2.1 South Carolina Assessment Ratio and Appraisal by Class of Property, 2018

Property Classification	Assessment Ratio	Appraised By
Owner-Occupied	4.0	County Assessor
Agricultural (Private)	4.0	County Assessor
Agricultural (Corporate)	6.0	County Assessor
Commercial/Rental	6.0	County Assessor
Personal Property (Vehicles)	6.0	County Auditor
Other Personal Property	10.5	County Auditor
Fee-in-Lieu	NA*	NA
Manufacturing	10.5	Department of Revenue
Utility	10.5	Department of Revenue
Business Personal	10.5	Department of Revenue
Motor Carrier	9.5	Department of Revenue

Source: South Carolina Revenue and Fiscal Affairs Office (2018)

*Assessment ratios for Fee-in-Lieu are negotiable and vary by agreement. The minimum ratio is 4.0 percent.

The State Constitution gives the General Assembly the authority to "change the ratios as set forth in Section 1, but only with the approval of at least two-thirds of the membership of each house." (SC Const. Article X, Section 2 (d)).

The South Carolina code requires that "once every fifth year each county or the State shall appraise and equalize those properties under its jurisdiction. Property valuation must be complete at the end of December of the fourth year" and taxpayers must be notified of any change in classification or value greater than $1,000 (§12-43-217 (A)). The newly appraised values are implemented in the fifth year; however, a county can postpone the implementation of new values resulting from the reassessment for not more than one tax year. For tax purposes "Each political subdivision shall value real property by a method in which the value of each parcel of real property, adjusted for improvements and losses, does not increase more than fifteen percent every five years" (SC Const. Article X, Section 6) unless there is an assessable transfer of interest.[22]

An *assessable transfer of interest* (ATI) is a transfer of an existing interest in real property that subjects the real property to appraisal (SC Code §12-37-3130 Definitions). Four pages in SC Code §12-37-3150 list 11 specific types of transfers that qualify as ATIs and 14 specific types of transfers that do not qualify as assessable transfers of interest. For example, a valid ATI occurs if there is a conveyance by deed or if there is a change of use from agricultural real property that is subject to the rollback tax. Alternatively, an ATI does not occur if there is a transfer through a foreclosure or a transfer of ownership interest among members of an affiliated group, like a transfer within a corporation or a family. If a transaction qualifies as an ATI, then the assessor must reappraise that property in the year of the transfer and record the new appraisal as the fair market value of the property as of December 31 of the year of the transaction.

The assessor's office in each county is responsible for appraising all real property except those properties valued by the Department of Revenue (DOR). The DOR is responsible for valuing real and personal property for manufacturing, utility, railroad, pipeline, and motor carrier businesses and is responsible for valuing other business personal property as defined by statute. The auditor in each county is responsible for valuing vehicles and personal property like boats, airplanes and some personal property used by businesses, including rental residential properties.

The assessor's office in each county also carries out specific activities that are the result of changes to the property tax system since the passage of Act 388. Specifically, local assessors must address a potentially significant increase in the number of applications for residency, which qualifies homeowners for a 4 percent assessment ratio for owner-occupied residences. In addition, there is an increased workload resulting from the requirement to reassess ATIs in the year of the transaction.

The assessor's office is also responsible for identifying properties that are exempt from property taxation, and therefore exempt from appraisal. The exemptions are defined in §12-37-220: General Exemption from Taxation. In addition, the assessor must implement a series of property tax relief provisions that are administered through the valuation process. For example,

- §12-43-224 provides for special assessment of undeveloped acreage subdivided into lots
- §12-43-225 provides for multiple lot discounts

§12-37-3135 provides for a 25 percent reduction in a property's ATI fair market value for properties assessed at 6 percent if the buyer files an application with the county assessor.

[22] See also Section 12-37-3150 of the South Carolina Code which also requires that "Any increase in the fair market value of real property attributable to the periodic countywide appraisal and equalization program implemented pursuant to Section 12-43-217 is limited to fifteen percent within a five-year period …"

An Overview of Property Tax Administration in South Carolina

This section compares property tax administration practices in South Carolina for each of ten case study counties including:

- the composition of the property tax base; and
- assessment administration approaches.

The ten case study counties were identified by the South Carolina Chamber Foundation and South Carolina Realtors to reflect a representative cross section of the 46 counties in the state. The case study counties include

- eight of the 20 most populous counties and two of the 11 least populated counties in the state;
- four urban and five rural counties and one described as rural/urban mix;
- four tier 1 counties based on unemployment and per capita income, two tier 2 counties, two tier 3 counties and two tier 4 counties;
- seven counties with just one school district, and one county each with two, four, and five school districts.

A detailed description of each county is provided in Appendix A and summarized in Chapter 1.[23] Appendix B describes property tax administration in Tennessee. Some features of Tennessee's system may serve as a model for South Carolina.

Composition of the Property Tax Base

To compare the composition of the property tax base across the ten case-study counties, information was solicited from the assessor and auditor in each county. They were provided with a standard template and asked for information on the appraised and assessed value for each land use classification in the constitution.

This data collection effort faced several challenges. First, the valuation process in South Carolina is shared between three different organizations, as mentioned earlier in this chapter. As a result, no single entity has complete information for the property tax roll in an individual county.

Another complicating factor is that no two counties use the same land use codes for classifying properties for tax purposes. Allendale County has 135 different land use codes and they generally follow the categories described in the State Constitution. For example, land use code 100 includes all types of owner-occupied residential properties, which are assessed at 4 percent. Land use code 200 includes all types of residential properties that are non-owner occupied, which are assessed at 6 percent.

Comparatively, Greenville County has 119 land use codes, but all single-family residential properties, whether owner-occupied or rented, fall into land use code 1100. Horry County has 225 land use codes and all single-family residential properties, both owner-occupied and rental, fall into land use code 101. York County has 23 land use codes and there is one code for residential improved properties that are assessed at 6 percent and another for residential improved properties that are owner-occupied and assessed at 4 percent.

[23] The detailed descriptions of individual counties in Appendix A are based on information obtained through in-person interviews with assessors in the 10 case study counties during two visits the author made to South Carolina in June and July 2019. The author made additional contacts with assessors and auditors in each county by e-mail and phone to obtain requested information.

Another obstacle to collecting information was a lack of standardized language. In the context of this effort, everyone agreed that the meaning of the terms *Appraisal* and *Fair Market Value* is the *estimated market value of a property*; however, there was variation in the interpretation of the term *Taxable Value*. In some cases, it was used interchangeably with the term *Assessed Value,* which is the value multiplied by the assessment ratio to determine the property tax liability for each property. Alternatively, Taxable Value has been used to refer to the capped or limited value resulting from the 15 percent assessment limit. The SC code, however, defines the capped or limited value as the Property Tax Value (SC Code §12-37-3155).

The data collection effort was challenging because no one entity has sufficient information to complete the entire template on property-tax-base composition. As a result, the top portion of the template, Real Property Valued by County Assessor, is provided by the assessor's office. When data were provided for the lower panel in the template, Other Real and Personal Property Valued by County Auditor and State Department of Revenue, it was often missing information on the number of parcels and appraised values. At the time of publication four counties (Charleston, Edgefield, Greenville, and Richland) had provided all the information requested on the composition of the property tax base in 2018. Allendale and York counties provided assessed value for all property types, but appraised value for only real property. Two counties (Horry and Sumter) provided appraised and assessed value for real properties valued by the county assessor. Florence and Orangeburg did not provide information on the composition of their tax base.

The templates for each county are included in the individual write-ups in Appendix A. The goal is to compare the share of appraised value and the corresponding share of assessed value for each land use classification in each county. These differences, if viewed through the lens of uniformity and equity, indicate whether property taxes paid are consistently proportional to the appraised value for each classification.

A couple of themes emerge when looking at the data for the four counties that provided full information as presented in Table 2.2. The Primary Residential share of total assessed value is 9 to 15 percent ***lower*** than its share of total appraised value. Alternatively, the Other Residential share of assessed value is 1 to 3 percent ***higher*** than its share of appraised value and the Commercial share (which includes rental residential properties in Edgefield and Richland counties) of assessed value is 2 to 7.5 percent ***higher*** than its share of appraised value. Charleston County has nearly 33 percent of its assessed property tax base in Other Residential property which is typically rental property with an assessment ratio of 6 percent. Greenville County has nearly 27 percent of its assessed value in commercial property while the share for Richland County is nearly 39 percent.

Table 2.2 Selected Land Use Shares of Appraised and Assessed Values by County, 2018

PROPERTIES VALUED BY COUNTY ASSESSORS						
	Primary Residential		**Other Residential**		**Commercial**	
	Appraised Value (%)	Assessed Value (%)	Appraised Value (%)	Assessed Value (%)	Appraised Value (%)	Assessed Value (%)
Allendale	NA	14.9	NA	8.4	NA	3.7
Charleston	45.9	33.8	29.8	32.9	17.8	19.7
Edgefield	55.6	41.7	NA*	NA*	17.1	19.2
Greenville	54.6	41.6	7.3	8.4	23	26.9
Richland	51.1	42.4	NA*	NA*	31.2	38.7
York	NA	39.1	NA	8.2	NA	17.4
PROPERTIES VALUED BY AUDITORS AND DEPARTMENT OF REVENUE						
	Vehicles		**Manufacturing**		**Utilities**	
	Appraised Value	Assessed Value	Appraised Value	Assessed Value	Appraised Value	Assessed Value
Allendale	NA	8.2	NA	30.2	NA	21
Charleston	2.4	5.9	0.2	0.4	1.6	3.1
Edgefield	12.4	13.9	3.3	6.6	5.8	11.4
Greenville	9	11.1	1.8	3.6	1.9	3.7
Richland	8.8	11.8	1.7	3.5	4.3	9.3
York	NA	9.7	NA	3	NA	14

Source: Data provided by assessor and/or auditor in each county.

Note: Each value is the percentage of total land use in the county. For example, Primary Residential property in Allendale is 14.9 percent of total assessed value in the county.

*For Edgefield and Richland Counties "Other Residential" is included with "Commercial."

Similar trends emerge when looking at properties valued by the county auditor and the Department of Revenue. Specifically, the Vehicles share of assessed value is between 1.5 and 3 percent ***higher*** than its share of appraised values, while the Manufacturing and Utilities share of assessed value is approximately twice as ***high*** as their share of appraised value.

Allendale and York counties did not provide data that allowed the comparison of appraised and assessed values across all land uses, but they did provide information on assessed value for all land uses. Allendale County has a much different property tax base composition than the other four counties providing data for all land uses. Specifically, Primary Residential properties account for less than 15 percent of the assessed value in Allendale County, but average 39.7 percent of the assessed value in the other five counties providing data. Alternatively, manufacturing and utility properties account for 30.2 and 21.0 percent of assessed value in Allendale County, respectively, but average just 3.4 and 8.3 percent of assessed value for the other five counties, respectively.

Two counties, Horry and Sumter, provided appraised and assessed value data for real property valued by the county assessor. According to the data in Table 2.3, the Primary Residential share of assessed value in both counties is significantly lower than its share of appraised value. Alternatively, the Other Residential share of assessed value in both counties is significantly higher than its share of appraised value, and the same is true for commercial properties in Sumter County.

Table 2.3 Selected Land Use Shares of Appraised and Assessed Values in Horry and Sumter Counties, 2018

PROPERTIES VALUED BY COUNTY ASSESSORS						
	Primary Residential		**Other Residential**		**Commercial**	
	Appraised Value	Assessed Value	Appraised Value	Assessed Value	Appraised Value	Assessed Value
Horry	35.5	30.8	36.4	47.2	21.4	21.1
Sumter	63	53.3	11.3	14.8	24.1	30.5

Source: Data provided by assessor and/or auditor in each county.

As a result of the classified property tax system in South Carolina, and other features of the property tax, the burden of financing locally provided goods and services through the property tax has shifted, sometimes significantly, from owner-occupied residential properties to non-owner-occupied residential properties as well as commercial, manufacturing, and utility properties.

Valuing Personal Property for Property Tax Purposes

While household goods are generally exempt from property taxation, South Carolina taxes some personal property, including vehicles, boats, and aircraft as well as business personal property, including personal property in rental residential property. The county auditor values some personal property for tax purposes, including vehicles, while the Department of Revenue values business personal property.

Table 2.4 presents information on personal property taxes in states neighboring South Carolina. Most of the neighboring states tax motor vehicles, albeit the details vary on what is included and what is not. But nationally only 11 other states have an ad valorem property tax on motor vehicles like the treatment in South Carolina (Walters 2015). Similarly, all neighboring states tax machinery and equipment, but again the details on what is included and what is not vary from state to state.

Table 2.4 States Neighboring South Carolina and Personal Property Taxes*				
State	**Year**	**Are Motor Vehicles Taxed?**	**Is Inventory Taxed?**	**Are Machinery and Equipment Taxed?**
Florida	2017	No	No	Yes
Georgia	2017	Yes	Yes	Yes
Kentucky	2017	Yes	Yes	Yes
North Carolina	2017	Yes	No	Yes
South Carolina	2017	Yes	No	Yes
Tennessee	2017	No	No	Yes
Virginia	2017	Yes	Yes	Yes
West Virginia	2017	Yes	Yes	Yes

Source: ***Significant Features of the Property Tax***. https://www.lincolninst.edu/research-data/data-toolkits/significant-features-property-tax/topics/taxable-personal-property, Lincoln Institute of Land Policy and George Washington Institute of Public Policy. (Personal Property Tax; accessed: 09/08/2019)

*Visit Significant Features of the Property Tax at Lincolninst.edu for an explanation on how each of these items is included in the property tax base in each state.

Department of Revenue Valuing Personal Property for Tax Purposes

South Carolina Code §12-4-540 enumerates the types of properties to be valued by the Department of Revenue (DOR). This responsibility includes determining appraised and assessed values for corporate headquarters, corporate office facilities, distribution facilities, and the real and personal property owned by or leased to the following businesses—manufacturing; railway; private carlines; airlines; utilities (including water, heat, light and power, telephone companies, cable television, and sewer); pipeline; and mining. In addition, the DOR is responsible for the appraisal and assessment of certain business personal property of merchants.

Business personal property valuation: Business Personal Property Tax (BPP) is a tax on the furniture, fixtures, and equipment that are owned and used in a business. Any assets that are claimed on the business' income taxes should be reported on the BPP tax return. The BPP tax return is due four months after the business' accounting closing period. For example, if a business has a December accounting closing period, then the return is due April 30 of the following year. On the return, the business owner reports the total cost of the assets, the income tax depreciation, and the net depreciated value. The Department of Revenue then sends assessed values to the county where the business is located. The county will send a BPP tax notice after September 1. The payment is due on or before the following January 15 of each year.

Utility real and personal property valuation: The DOR uses the *unit valuation method* for determining the value of real and personal property for utilities and railroad transportation property. A unit appraisal of a business is an appraisal of the integrated business as a whole without any reference to the value of its component parts. This is in contrast to a fractional appraisal, which is a valuation of one of the parts without reference to the value of the whole, and a summation appraisal, which is a valuation of the whole derived by adding two or more fractional appraisals.

The unit valuation method is the most frequently used method for valuing utilities because it accurately estimates the value of the company or unit in its entirety. Typically, public utility properties extend into

several taxing jurisdictions and retain/optimize their value by integrating the operation as a system or unit. The individual portion of the system that is located within a designated taxing district has a value that is contributory to the entire system.

From this integrated perspective, any one particular component or asset in this system of many property items defies individual or segregated valuation. Any single component cannot reflect the value it contributes to the overall system of all the assets assembled to assure the long-term viability of the entire utility entity. As a result, there are three steps to valuing a utility or railroad property using the unit valuation method:

1. Identify the unit or total assemblage of assets to be appraised;
2. Form an opinion of the total unit's value by the appropriate approaches to value; and
3. Allocate a portion of the total unit value to the appropriate assessing tax district(s).

The "Unit Method" is then implemented through a combination of traditional valuation techniques (including the cost, sales comparison, and income approaches to valuation) depending on the nature of the business being valued. Real property that is valued by the Unit Method is excluded from the 15 percent assessment limit in §12-37-3140.

Table 2.5 reports how many states appraise certain types of property at the state level.

Table 2.5 Number of States That Centrally Assess Properties, by Type of Property

Property Type	Number of States
Commercial Airlines	22
Railways	33
Railroad Cars	29
Gas Utilities	27
Natural Gas Pipelines	27
Oil Pipelines	27
Water Utilities	20
Electric Utilities	27
Telecommunications Companies	29
Mines	10

Source: Dornfest, et al., 2019

Manufacturing personal property valuation: SC Code §12-37-930 requires that the fair market value of manufacturing machinery and equipment used in the conduct of the manufacturing business "must be determined by reducing the original cost by an annual allowance for depreciation…" according to a detailed schedule of depreciation rates enumerated in the legislation. The DOR can permit an adjustment in the depreciation allowances enumerated in the law, with the total allowance not to exceed 25 percent, based on documentation of "extraordinary obsolescence." Once these values are determined they are combined with estimates of the assessed value of manufacturing real property and sent to the auditor in each county to determine tax liabilities.

Once the Department of Revenue values these various types of properties the assessed values are transmitted to each county. Statutory tax rates are then applied to each of these assessments by the county

auditor to determine property tax liabilities for each property. A summary of assessed values of centrally assessed properties is provided in Table 2.6 for our 10 case study counties.

Table 2.6 Department of Revenue Assessed Values by Property Type, 2017

County	Manufacturing ($)	Utility/Railroad ($)	Business Personal ($)	Motor Carrier ($)
Allendale	4,808,400	5,589,897	611,440	37,816
Charleston	16,390,592	124,575,460	97,925,140	3,410,055
Edgefield	5,038,150	9,608,170	2,023,070	99,000
Florence	34,240,279	30,772,676	21,347,024	2,703,560
Greenville	68,551,830	100,992,313	114,666,430	9,904,074
Horry	9,877,848	38,508,060	62,019,518	6,153,025
Orangeburg	22,688,920	49,506,813	15,789,710	2,643,391
Richland	64,594,651	134,183,460	68,400,660	1,973,067
Sumter	9,783,930	19,726,850	15,565,822	4,088,208
York	41,974,652	198,449,077	40,622,850	1,988,651

Source: Prepared by the SC Department of Revenue

County Auditor Valuing Personal Property for Tax Purposes

In South Carolina, personal property subject to the property tax encompasses all things other than real estate that have value. Specifically, taxable personal property valued by the county auditor includes motor vehicles, recreational vehicles, aircraft, and watercraft (including boats, motors, and personal recreational vehicles such as wave runners, jet skis, and the like). Personal property taxation also applies to equipment, furniture, fixtures, and machinery primarily used by businesses and rental residential properties.

Owners are required to file an annual personal property tax return with the county auditor.

Vehicle Valuation: Virtually all motor vehicles registered in a county are subject to property taxation. Vehicles are defined to include:

- Cars and trucks
- Big Trucks and utility trailers
- Campers, recreational vehicles, and motor homes
- Motorcycles
- Watercrafts and motors
- Pontoon boats and house boats
- Commercial boats
- Documented vessels
- Aircraft

The process for determining the fair market value of vehicles is the same across all counties in South Carolina and is based on the same general set of information. First, for motor vehicles, the auditor receives a list of motor vehicles registered in the county from the South Carolina Department of Motor

Vehicles. Second, the auditor estimates the fair market value of each vehicle by consulting the Motor Vehicle Values manual prepared by the Department of Revenue, which contains information on values of most makes of motor vehicles. If the manual does not have the required information for a specific vehicle, the auditor can consult other national sources of information including the NADA Vehicle Guide. Individuals have the right to apply for a high-mileage discount if they qualify according to the High-Mileage Chart prepared by the Department of Revenue.

Similarly, county auditors receive a list of boats registered in the county along with information on the value of most makes of boats from the South Carolina Department of Natural Resources. This information is used to estimate the fair market value of boats. If the value of a motor vehicle or boat is not included in the information provided by the state, other national sources can be used to determine the fair market value of the property.

The assessment ratio is then multiplied by the estimated fair market value to produce the assessed value which is the base for determining tax liability.

Personal Property Valuation: South Carolina Code of Regulations, Chapter 117-1840.1 provides: "The fair market value of merchants' furniture, fixtures, and equipment shall be the depreciated value as shown by the merchants' records for income tax purposes, provided however, that in no event is the original cost of the property to be reduced by more than ninety percent of the original capitalized cost." This information is provided by the South Carolina Department of Revenue.

The county auditor is responsible for valuing business personal property not valued by the Department of Revenue as defined in §12-39-70 according to the North American Industrial Classification System Manual. According to the York County Auditor's Web page, operationally that means personal property of businesses that have a retail license are valued by the South Carolina Department of Revenue and personal property of all other businesses is valued by the auditor's office.

At the time of publication, six of the 10 case study counties provided data on the assessed value of vehicles and other personal property as determined by the county auditor and summarized in Table 2.7. The relative importance of vehicles as a share of the county property tax base varies significantly across counties reporting information, from 13.9 percent in Edgefield County to 5.9 percent in Charleston County. The relative importance of other personal property also varies across counties providing information, but the share in each county is less than 2 percent of total assessed value in the county. This is consistent with the general national trend of declining importance of personal property in the property tax base across states over the last several decades.

Table 2.7 Assessed Value of Personal Property Determined by County Auditors, 2018

County	Vehicles ($)	Share of County Property Tax Base (%)	Other Personal Property ($)	Share of County Property Tax Base (%)
Allendale	1,871,631	8.2	63,350	0.3
Charleston	233,566,623	5.9	71,467,020	1.8
Edgefield	11,379,337	13.9	866,570	1.1
Florence	NA	NA	NA	NA
Greenville	266,284,340	11.1	7,793,689	0.3
Horry	NA	NA	NA	NA
Orangeburg	NA	NA	NA	NA
Richland	170,730,590	11.8	8,423,180	0.6
Sumter	NA	NA	NA	NA
York	134,972,244	9.7	13,886,858	1.0

Source: Data provided by county assessor and/or auditor

Valuing Real Property for Tax Purposes

Most real property in South Carolina is valued for property tax purposes by the county assessor.[24] The Department of Revenue is also charged with valuing real property for manufacturing, commercial headquarters, and utilities.

The process of determining property tax liabilities for each property starts with the assessor estimating its "true value in money" or "the price which the property would bring following reasonable exposure to the market, where both the seller and the buyer are willing, are not acting under compulsion, and are reasonably well informed of the uses and purposes for which it is adapted and for which it is capable of being used." (South Carolina Code §12-37-930) This is referred to as the Fair Market Value or Appraised Value of a property and those values remain in place for a period of five years until such time as the county implements a new county-wide reassessment.

Between the five-year intervals for county-wide reassessment, the Fair Market Value stays the same unless there is an Assessable Transfer of Interest, or ATI. ATIs trigger a reassessment in the year of transfer that becomes the new Fair Market Value as of December 31 of that year. Assessors expressed concerns that this undermines the equity of the property tax because significant numbers of properties could be reassessed in each of the five years during the reassessment cycle, be given a new effective date for the Fair Market Value and result in parcels on the property tax rolls with divergent effective dates for their appraisals. Such inequities are avoided in other states when the assessor reassesses the property at the time of sale but trends the value back to the same specific date as all other properties on the tax roll.

[24] §12-43-330 says that "Property exempt from taxation is also exempt from assessment. Property exempted from ad valorem taxation by Section 12-37-220 is also exempt from assessment."

The South Carolina Code, §12-37-3150 defines 11 circumstances where the transfer of ownership of a property qualifies as an Assessable Transfer of Interest in real property and 14 circumstances that do not qualify as an Assessable Transfer of Interest. Counties with dynamic real estate markets often deal with as many as 20,000–30,000 ATIs annually. In one case a county hired an attorney to help determine those transfers that are an ATI and require reassessment and those that are not.

In addition, other situations can trigger a reassessment of an individual parcel during the course of a five-year reassessment cycle. For example, new construction, reconstruction, major additions to the boundaries of the property or a structure on the property, remodeling, or renovation and rehabilitation could impact the estimate of Fair Market Value. The value of any new construction and/or additions or renovations is added to the previous estimate of Fair Market Value in the year of the construction at actual cost. A new estimate of Fair Market Value is certified December 31 of the year in which the construction took place. Again, multiple properties on the tax roll will have different effective dates for the estimate of Fair Market Value undermining the equity of the property tax.

Once every five years each county or the state shall appraise those properties under its jurisdiction. Property valuation must be complete at the end of December of the fourth year and the county or state will notify taxpayers of any change in value if the change is $1,000 or more. In the fifth year the county or state will implement the newly appraised values. (§12-43-217)

South Carolina assessors utilizes the three standard approaches to estimating the market value of individual properties that do not sell during the tax year:[25]

- the sales approach;
- the cost approach; and
- the income approach.

The valuation process used most frequently in South Carolina is the ***cost approach*** to valuation.

The cost approach is based on the idea that the value of a property can be determined by the value of the land and the replacement cost of the structures less depreciation reflecting the loss in value of the structure because of physical deterioration and functional and economic obsolescence. The appraiser determines the replacement cost of a new structure that would be functionally the same as the property being valued and then adds the value of the land (Eckert 1990, 82–83).

The cost approach to valuation can be based on a set of tables with information on the cost of construction and depreciation, formulas, or a combination of both tools. Initially cost models tended to rely on tables of information, but more recently cost model software is becoming available that incorporates formulas because they are faster and can incorporate local market information (Eckert 1990).

The cost approach used most widely in South Carolina, however, is not the standard cost approach that relies on national sources or developers to determine costs. In South Carolina most assessors use what is commonly referred to as a "Market Driven Cost Approach," a "Modified Cost Approach," or a "Market Calibrated Cost Approach." While this modified approach functions like a traditional cost approach, and often starts with cost and depreciation tables from Marshall & Swift, the cost and depreciation information are modified to reflect local market conditions. For example, in a county with 500 sales per

[25] There is an exception for valuing agricultural land that qualifies for preferential treatment (see §12-43-230 for the definition "agricultural real property"). For both private and corporate agricultural land receiving preferential treatment, "The fair market value for agricultural purposes determined for the 1991 tax year is effective for all subsequent years." (§12-43-220(d)(2)(B)(i))

year, the assessor makes adjustments to the cost estimates from traditional sources until they produce values that are similar to that of the 500 qualified sales. Once recalibrated with the new sales information, the cost system is applied to the remaining properties in the county to ensure each property is assessed at market levels.

Under the cost method, once the cost of structures is determined, the assessor then determines the market value of the land by examining sales of comparable vacant land sales. If enough vacant land sales are not available from the local neighborhood, assessors in South Carolina often estimate land values based on land/improvement ratios from adjoining neighborhoods.

The ***sales approach*** to valuation involves a comparison between a property being valued and similar properties that sold recently in arm's-length transactions (sales between willing buyers and willing sellers who are unrelated). There is an assumption that, if the real estate market is competitive, the property being valued would sell for a price similar to comparable arm's-length transactions.

This method is generally used for valuing properties when frequent sales of similar properties are available. It is often used for valuing residential, small apartment, and commercial properties. It is based on the principle that the value of a property tends to be similar to the cost of buying an equally desirable substitute property. Adjustments may be made to reflect differences between the property being valued for tax purposes and the comparable sales being used to determine value. Such adjustments may reflect physical differences (e.g., square footage, lot size, number of garages, baths, bedrooms, and so on), economic conditions (age and condition of the property), location, time of sale, financing, and so on. Since no two properties are identical, all differences, minor and major, between a comparable sale and the property being valued are enumerated and evaluated. For example, if a property that sold had a 2-car garage and the property being valued had a 1-car garage, an appropriate adjustment would be made to the sales price to reflect this difference. Adjustments can be expressed on a lump-sum or percentage basis and are applied to the properties that sold (Eckert 1990).

There are two approaches to implementing a sales approach to valuation used in South Carolina. A manual approach to the comparable sales method involves looking for sales of properties that are comparable to the property being valued and then adjusting for differences between the two properties to arrive at an estimate of the market value of the subject property. This is used in smaller jurisdictions or jurisdictions with a relatively stable real estate market and few annual sales. The assessor might have to consider sales from several years to obtain sufficient comparables.

Alternatively, in jurisdictions that have a high volume of sales, the assessor can apply the sales comparison approach using a statistical model, employing multiple regression analysis, to estimate the coefficients of variables representing individual characteristics of the properties that sold and then using those coefficients to estimate the value of properties that have not sold (Eckert 1990).

Finally, the ***income approach*** to valuation can be used to estimate the market value of investment properties, including industrial properties, commercial buildings, larger apartment buildings, and other rental residential properties. For these properties, the market value is estimated by looking at the relationship between the net income generated by the property and the relevant capitalization rate.

The income approach looks at the relationship between the underlying asset and the stream of income it generates. For example, if you put $1,000 in a bank account and the interest rate is 5 percent, then the bank will pay you $50 per year in income. The fundamental relationship in this example is

Income = value x interest rate.

This same relationship is used to determine the value of the underlying asset when the interest rate and annual flow of income are known, but the market value of the asset is not known. Rearranging the above relationships yields

value = income/interest rate.

Thus, if a property yields an annual net income of $1 million and the applicable interest (capitalization) rate is 10 percent, the value of the property for tax purposes would be $10 million ($1 million/0.1 = $10 million) (Eckert 1990).

When applying the income approach to valuation, the first step is to estimate annual net income for the property being valued. This requires information on the income and operating expenses for the property. Typically, this information is obtained from information requests sent to the property owner by the assessor. Property owners in South Carolina, however, are generally not required to provide this information to the assessor. Alternatively, these data can be estimated based on tables with representative estimates of income and expenses for various business types.

The second step is to estimate the capitalization rate to be applied to the annual net income. Just as fluctuations in construction costs influence the value of property using the cost approach, market trends in the rate of return on money invested, expectations of future market conditions (i.e., rents, vacancy, etc.), or other lease agreements and other variations in capital costs and risk estimates will influence the determination of the appropriate interest rate to use in capitalizing net income. As a result, different capitalization rates may be used on similar properties in different neighborhoods or towns or may be utilized for the same property over time as market conditions change. Estimates of typical capitalization rates applied to various types of properties can be purchased from private providers based on information gathered from a wider geographic area.

County Assessors

County assessors value all real property for tax purposes except properties valued by the Department of Revenue and agricultural properties.[26] The author surveyed how assessors from the 10 case study counties valued real property for tax purposes. Table 2.8 summarizes the responses received to date.

Of the 8 counties presented in Table 2.8, half have some form of a cost model as the basis for estimating fair market values of individual residential parcels and half have some variant of the sales approach for estimating fair market values of residential properties. The four counties using the cost approach all use some variation of the Market Calibrated Cost Approach, which incorporates local market information to calibrate both the cost estimates and depreciation allowances to better reflect market conditions. The results of these modified cost models are often compared to comparable sales and further adjusted by assessment/sales ratios computed for neighborhoods or specific land uses in other cases.

[26] Agricultural values are established by legislation and the current value is the agricultural use value from 1991.

Table 2.8 Property Tax Administration in Selected Counties, 2019

County	Reassessment Year	CAMA Model	Data	Determining Land Values	Total Number of Parcels	Annual Sales	Value Tax Exempt Properties
Allendale	2018	Comparable Sales	For residential properties use comparable sales. For commercial properties use comparable sales and cost model using Marshall/Swift cost and depreciation tables.	Market values	9,000	20-25 true sales	No
Charleston	2019	Market / Sales	Seven different regression models for different neighborhoods in various communities in the county.	Multiple Regression Analysis	195,000	14,000	No
Greenville	2019	Cost	For residential use modified cost based model starting with Marshall/Swift cost tables and then using market determined cost tables based on sales. Adjust by neighborhood using sales ratio study. Commercial properties valued based on income tables and can be refined by using local market information.	Vacant land sales by neighborhood. If not sufficient market information estimate land value based on land improvement ratios.	205,000	10,000	No
Horry	2018	Cost	For residential properties, cost based approach using Marshall/Swift cost and depreciation tables to estimate FMV which is then modified based on local market data and A/S ratios for each neighborhood. Test cost based values with actual sales. Commercial properties based on Marshall/Swift cost tables and straight line method. These estimates can be refined based on local market information.	Vacant land sales by neighborhood. If not sufficient market information estimate land value based on land improvement ratios.	265,000	20,000-30,000	No
Orangeburg	2017	Market / Sales	For residential use a sales/market based regression model to calibrate coefficients. Try to confirm price with cost approach using Marshall Swift for average house. For commercial properties use cost approach and Marshall Swift. Try to use comparable sales, but sales are rare.	Vacant land sales used to determine land values. If not sufficient look to neighboring jurisdictions	65,000	712	No
Richland	2018	Cost	For residential properties use property characteristics and Marshall Swift cost and depreciation tables. For commercial properties use potential income estimates, vacancy rates, and COSTR cap rates for metro area.		170,000	20,000	Yes
Sumter	2015	Comparable Sales	Residential properties are valued using comparable sales approach. For commercial property the income approach is generally used. Marshall/Swift income and expense tables are used to estimate gross and net income. Marshall/Swift depreciation tables are used to adjust for economic, functional, and physical depreciation.	Vacant land sales	64,000	1,500-2,000	No
York	2019	Cost	For residential cost tables used based on square feet and quality. Cost tables based on local market analysis using sales and regression analysis. For commercial property cost basis using Marshall Swift values.	Vacant land sales	121,000	6,000-7,500	No

Source: Data provided by county assessor

For the four counties using some variant of the sales approach, the two smaller counties, Allendale and Sumter, use a comparable sales approach to valuing residential properties, while the two larger counties, Charleston and Orangeburg, use a regression model to estimate fair market values of residential properties. Because of limited sales in Allendale County, the assessor uses sales from the previous three to five years.

For commercial properties, counties use a combination of cost and income approaches, sometimes testing the results with actual comparable sales if available. Three counties use some variation of the income approach to valuation. Two of the three seem to use income and expense tables for specific industries, the third did not specify, but taxpayers are not required by law to provide income and expense information. Four counties use some variant of the cost model. Two start with Marshall & Swift cost and depreciation tables and then adjust for local market conditions. The other two appear to rely solely on Marshall & Swift cost and depreciation tables.

Under the cost approach, for both residential and commercial properties, once the cost of structures is determined the assessor then determines the market value of the land by examining comparable vacant

land sales. If there are insufficient vacant land sales in the local neighborhood, assessors in South Carolina often estimate land values based on land/improvement ratios from adjoining neighborhoods.[27]

Department of Revenue

The Department of Revenue is responsible for valuing real and personal property for manufacturing, utility, railroad, pipeline, and motor carrier businesses. As discussed above, all but manufacturing properties are valued by the Unit Method and allocated to individual counties. The Department of Revenue values personal property used for manufacturing separately from real property used for manufacturing and then combines them for a final estimate of value. Unless otherwise stipulated, the assessed values provided to counties by the DOR are a total of real and personal manufacturing property. Values are updated by the DOR according to the 5-year reassessment cycle of each county.

The DOR presents manufacturing values by tax account, not for individual parcels. Fair Market Value is estimated first and then multiplied by the appropriate assessment ratio to determine the assessed value, which is then sent to each county auditor to determine the property tax liability.

The DOR does not collect information on sales of manufacturing properties so they could not provide a sales file to include with the sales information provided by the assessors. Because they do not collect sales information, they do not calculate assessment/sales ratios for manufacturing properties.

Quality of Assessment and the 5-Year Reassessment Cycle

The property tax is the most difficult state and local tax to administer because it is the only major tax whose base, the market value of unsold properties, must be estimated, rather than observed. Assessing property requires highly trained and experienced personnel. This final section summarizes the outcome of that process for five case study counties that provided the requested data.

Given the requirement that "All property must be assessed uniformly and equitably throughout the State" (§12-43-210) state statute requires the Department of Revenue to "make sales ratio studies in all counties of the State" to determine if a county needs to reassess properties to comply with this requirement. Prior to 2008, these assessment/sales ratios were calculated annually. Since 2008, they are only calculated in the year a county does a reassessment. The International Association of Assessing Officers, however, recommends that "Regardless of the reappraisal cycle, ratio studies made by assessors should be conducted at least annually" (IAAO 2013, 10).

Property sales files were requested from each of the 10 case study counties for 2015 and 2018 in order to consider the impact of the 5-year reassessment cycle on the uniformity and equity of the property tax. A starting hypothesis is that, over 5 years, markets within a county change at different rates for different land use types and different locations. This causes the selling price of parcels to diverge by varying degrees from the estimated fair market value implemented in the first year of the 5-year cycle. To test this hypothesis, three standard metrics for measuring assessment quality were computed for 2 years of sales in the reassessment cycle.

[27] Bell and Bowman (2008) analyzed three different methods used to value land for property tax purposes when there are insufficient vacant land sales and found the land/improvement ratio method had the greatest variation, or was the least accurate, of the three methods based on examination of coefficients of dispersion and price related differentials.

Three indicators of assessment uniformity are important in assessment/sales ratio studies. First, the level of appraisal in relation to market values should be measured. Second, the variability or uniformity of appraisals around a measure of central tendency should be checked. (This is a measure of *horizontal* equity.) Finally, the variability of appraisals relative to the value of properties should be evaluated. (This is a measure of *vertical* equity.) Such an analysis proceeds as follows:

1) The first step is to determine the level of appraisal or how close appraised values are to actual market values. Three measures of central tendency are typically computed:

    a) an average assessment/sales ratio, which is the mean of the assessment/sales ratios for sales within each property type;
    b) the median of the individual ratios, which is the value in the middle of the ratios when sorted into ascending or descending order; and
    c) the weighted average, which is the total of assessed value divided by the total sales value of all the properties.

In practice the median ratio is most often used, although some jurisdictions use the mean ratio.[28]

According to the IAAO *Standard on Ratio Studies* the appraisal level for each type of property should be between 0.90 and 1.10 of actual market value, unless stricter standards are imposed locally (IAAO 2013).

2) The next step is to determine the extent to which similar properties are treated the same. This is a measure of *horizontal uniformity*, where properties of equal value are treated equally, which measures how individual properties are clustered around the measure of central tendency. The most commonly used measure of horizontal uniformity is the Coefficient of Dispersion (COD).[29] The International Association of Assessing Officers recommends the following standards for specific ranges of the COD by type of property:

    a) Single-family residential (including residential condominiums) in newer or more homogeneous areas—5.0 to 10.0
    b) Single-family residential in older or more heterogeneous areas – 5.0 to 15.0
    c) Other residential in rural areas or seasonal or recreational residents or manufactured housing, or 2–4-unit family housing—5.0 to 20.0
    d) Income producing properties in larger areas represented by large samples—5.0 to 15.0
    e) Income producing properties in smaller areas represented by smaller samples—5.0 to 20.0
    f) Vacant land—5.0 to 25.0
    g) Other real and personal property—varies by local conditions (IAAO 2013).

3) The final step is to determine if there is a systematic bias in valuing high- or low-valued properties. The statistical measure used to gauge *vertical assessment uniformity* is the Price-Related Differential (PRD).[30] The PRD tests to see if higher and lower valued properties are assessed at the same level. According to the International Association of Assessing Officers

[28] Bell and Bowman (1991) found that while there are differences when using the mean vs the median ratio, the differences often are not critical. This analysis uses the median ratio.
[29] The coefficient of dispersion is the average absolute deviation of individual-parcel appraisal/sales ratios from the median ratio, expressed as a percentage of the median ratio (Eckert 1990).
[30] The Price Related Differential is calculated by dividing the mean appraisal/sales ratios of a number of properties that actually sold by the weighted (or aggregate) mean ratio (Eckert 1990).

(IAAO 2013) the PRD for each type of property should range between 0.98 and 1.03 to indicate vertical uniformity in assessments. A PRD greater than 1 indicates an undervaluation of high value properties, while a value less than 1 indicates undervaluation of low valued properties.

The Data

While data was requested from all 10 case study counties, at the time of publication only 5 counties are included in the analysis—Allendale, Charleston, Greenville, Horry and York counties. Five counties have not provided data for this analysis to date.

It is difficult to compare results of this analysis across counties for a variety of reasons. For example, of the responding counties, no two counties have the same list of land use codes. Allendale (135 land use codes) and York (23 land use codes) have land use codes that approximate the land use categories identified in the Constitution. Greenville (118 land use codes) and Horry (225 land use codes) have a wide range of land use categories that are more difficult to align with the land use categories in the Constitution. Charleston County provided data for 7 different categories of residential land uses and agricultural properties. This variation in classification codes across counties is unusual and complicates transparency across counties.

Another issue that complicates cross-county comparisons is when apparently similar land use categories contain different information. For example, Allendale County land use code 100 contains owner-occupied residential properties with assessment ratios of 4 percent and land use code 200 contains non-owner-occupied residential properties with assessment ratios of 6 percent following the categories in the Constitution. Greenville County, on the other hand, puts both owner-occupied and non-owner-occupied residential properties in land use code 1100, which includes 88 percent of all sales used in this analysis for 2018. York County has land use codes for Residential Improved (RI), which is non-owner-occupied residential properties and Residential Improved Occupied (RIO), which is owner-occupied residential properties. The vast majority of residential properties in York County's data set provided for this analysis are classified as Residential Improved Letter (RIL), which have an assessment ratio of 6 percent. When an owner-occupied residential property sells in York County, it immediately loses its preferential treatment until the new owner reapplies for reclassification as an owner-occupied property. These properties all go into the RIL, which accounts for 77 percent of all sales analyzed in 2018, until the application is submitted and reviewed by the assessor. Only then is the use class changed to RIO. As a result, it is impossible to construct land use categories that are consistent across counties based on the information provided. The issue could be corrected if a standard set of land use codes were used by all counties.

Valuation terminology also varies across counties. Everyone agrees that the starting point for the valuation process is to determine the *Fair Market* or *Appraised Value* of a property. Because of the 15 percent assessment limit, however, the appraised value is not always the starting point to calculate the assessed value of a property. For properties subject to the assessment limit there is also a capped value which can be referred to as the capped or limited value. The South Carolina Code §12-37-3135 defines this value as the ***property tax value*** which "means fair market value as it may be adjusted downward to reflect the limit imposed pursuant to Section 12-37-3140(B)." This is the legal definition of the value to which the assessment ratio is applied to determine the assessed value for each property. Sometimes, however, this capped value is referred to as the taxable value of a property, even in the definitions on one assessor's Web page. Other times, *taxable value* is used interchangeably with *assessed value,* which is the value the auditor uses to calculate property tax liabilities.

Another complicating language issue is what is meant by a "sale." For example, the law requires that all Assessable Transfers of Interest (ATIs) be revalued in the year of the transfer. However, not all ATIs are actual sales. There are within-family transfers, intercompany transfers, foreclosures, and transfers where

significant cash value is not exchanged. Ownership might change, but there is no formal arm's-length market transaction. Alternatively, there are market transactions that are labeled "true sales" because they involve a formal market exchange. But some "true sales" may not accurately reflect actual market value of a property. For example, a sale by a bank of a foreclosed property or a sale involving multiple lots may not reflect actual market value of the properties involved in the transaction. They are "true sales" but not "arm's-length" sales.

For this analysis, counties were asked to provide a file of "arm's-length" sales between a willing buyer and a willing seller. Some of the files provided contained arm's-length sales and some contained all true sales. The challenge is determining true sales versus arm's-length sales. The data provided was often not sufficient to make these determinations.

Non-arm's-length sales, or sales misclassified as arm's-length, become outliers when assessment/sales ratios are calculated in what is basically a comparison of apples to oranges. Similarly, if there is a change in land use (which is not always detectible from the data available) during the period analyzed, the assessment/sales ratio will be an outlier. As a result, following IAAO (2013) guidelines, in an effort to remove outliers that distort the calculation of the metrics used to measure assessment quality in the 2 years examined, properties with an assessment/sales ratio of 2.5 and greater and 0.5 and less were omitted from the analysis.

Five counties provided sales data for 2015 and 2018—Allendale, Charleston, Greenville, Horry, and York counties. These data often included "true" sales and not just arm's-length sales. Therefore, some adjustments had to be made to the data before the analysis was attempted. For example, any property that had a land use code suggesting it was a property exempt from property taxation was omitted; duplicate entries for the same Parcel Identification Number were identified and omitted depending on the circumstances; outliers were omitted; and properties where there was some sort of data entry mistake were also omitted.

Table 2.9 reports for each of the 5 counties how many sales were in the initial sales file sent by the assessor and how many sales were used in the analysis after adjustments were made for the 2015 and 2018 data files. Three of the five counties reporting results use over 95 percent of the provided sales data (Allendale, Charleston, and York) in both 2015 and 2018. Less than 90 percent of the sales are used for the analysis of residential and commercial properties in Horry County in both 2015 and 2018. Less than 90 percent of the sales are used in 2018 for Greenville County. In all three cases, a large number of properties are coded as residential vacant property and the 2015 estimate of Fair Market Value is based on that land use classification. However, the actual sale price in 2015 and 2018 reflects the sale of a developed property. As a result, the sales price is many times larger than the estimated Fair Market Value and the resulting assessment/sales ratio is below 0.5, and these parcels are excluded from the analysis.

Table 2.9 Total Sales Provided and Sales Used for Analysis for 2015 and 2018, by County

	2015			2018		
County	**Total Sales**	**Useable Sales**	**% Useable**	**Total Sales**	**Useable Sales**	**% Useable**
Allendale	22	22	100.0%	32	32	100.0%
Charleston	9,183	8,971	97.7%	8,859	8,680	98.0%
Greenville	10,614	9,762	92.0%	10,221	8,339	81.6%
Horry	9,024	6,922	76.7%	11,819	10,301	87.2%
York	5,988	5,771	96.4%	7,524	7,170	95.3%

Source: Data provided by the county assessor and author's computations based on assessor sales files.

The sales were then sorted by land use code and put into groups for analysis of similar types of properties. Even then there were several land use classes that did not have enough sales to carry out the analysis.

The Results

The first step in the analysis is to calculate an assessment/sales ratio for each parcel included in each land use category. Once the assessment/sales ratios were computed, the median and mean ratios were calculated. The absolute difference between each individual assessment/sales ratio and the median ratio were calculated and the average variation from the median ratio calculated. The COD and PRD were then computed. The results of this analysis for each county providing data are summarized in the descriptions for the individual counties in Appendix A.

As mentioned previously, the different land use codes used in each county made it impossible to construct groups of parcels in each county that had consistent definitions across counties. Because of this and the wide range in the number of land use codes across counties, it is difficult to summarize the results of the analysis here.

For illustrative purposes, Table 2.10 presents findings for two general classes of property in the five counties that provided complete information.[31]

Counties providing data generally included one class of residential property that had most, or the plurality, of all parcels in the sales file for each year used in this analysis. For example,

- In Allendale County we reported the results for land use code 100 which is owner-occupied residential properties.
- In Charleston County we reported the results of the analysis for owner-occupied residential properties which included 4,404 sales in 2015, or 49 percent of all sales that year, and 4,234 sales in 2018, or 49 percent of total sales analyzed.
- In Greenville County we reported analysis for land use code 1100, which contains single family residential properties including both owner-occupied and non-owner-occupied properties. This class included 8,388 sales in 2015 or 87 percent of all sales analyzed and 7,236 sales in 2018 or 88 percent of sales analyzed.

[31] Results for all land use classification for these counties can be found in the individual county descriptions in Appendix A.

- In Horry County there are 30 different land use codes for residential property. We reported the results for land use code 101, single family residential properties, for this analysis. This included 2,816 sales, or 31 percent of all parcels analyzed in 2015 and 3,866 sales, or 33 percent of all parcels analyzed in 2018.
- In York County there is a land use code for owner-occupied and non-owner-occupied residential properties, but because of how sales are coded, most of the residential properties are included in the category for residential properties that are in limbo, RIL, as their final land use code is being determined, We reported the RIL results because in 2015 this land use code included 4,488 sales, or 78 percent of all sales analyzed and in 2018 it included 5,497 sales, or 77 percent of all sales analyzed.

For commercial properties, the only land use class generally consistent across the reporting counties was vacant commercial property. Allendale and Charleston counties did not report information on vacant commercial sales in 2015 or 2018. In Greenville County the land use code for vacant commercial property is 6800. In 2015, there were 38 sales in this category and in 2018 there were 40 sales. In Horry County, general vacant commercial land is code 300. In 2015 there were 40 sales in this land use code and in 2018 there were 49 sales. Finally, in York County land use code CV is commercial vacant property. In 2015, there were 27 sales in this category and in 2018 there were 26 sales.

Table 2.10 reports median ratios, CODs, and PRDs for each land use for each county (when available) for 2015 and 2018. Allendale did not have enough sales to calculate these metrics in 2015 for residential properties. Allendale and Charleston counties did not report sales for vacant commercial land in both 2015 and 2018.

Table 2.10 Appraisal Outcomes for Properties Providing Sales Files for 2015 and 2018, by County

Residential Properties						
	2015			2018		
County (1)	Median Appraisal/Sales Ratio (2)	COD (3)	PRD (4)	Median Appraisal/Sales Ratio (5)	COD (6)	PRD (7)
Allendale	NA	NA	NA	0.985	14.65	1.027
Charleston	0.899	11.43	1.007	0.794	13.89	0.999
Greenville	0.941	12.38	1.024	0.783	16.31	1.012
Horry	0.915	13.43	1.026	0.807	13.45	1.009
York	0.937	4.94	1.008	0.96	4.46	1.000
Vacant Commercial Properties						
Allendale	NA	NA	NA	NA	NA	NA
Charleston	NA	NA	NA	NA	NA	NA
Greenville	0.997	35.52	1.102	0.907	36.69	1.189
Horry	1.205	32.73	1.045	0.933	34.65	1.018
York	0.938	22.27	1.027	0.973	11.75	1.102

Source: Author's computations based on assessor sales files.

Note: COD is coefficient of dispersion. PRD is price related differential.

The first aspect of appraisal outcomes to consider is the level of appraisals to determine how close the estimated Fair Market Value is to actual market value, or sales price. For residential properties in 2015, all four counties had median appraisal/sales ratios that were consistent with IAAO standards. By 2018, however, all the median ratios had declined (except for York County) and were no longer consistent with IAAO standards. This represents a deterioration in appraisal quality, in part due to the 5-year reassessment cycle.

The 2015 results are mixed for the three counties with results derived from vacant commercial land. Greenville and York counties had median appraisal/sales ratios consistent with IAAO standards, but the ratio for Horry County exceeded the standards. By 2018, the median ratios for Greenville and Horry counties had declined, but both were consistent with IAAO standards. The median ratio in York County improved and remained consistent with the IAAO standards.

The second aspect of appraisal outcomes to consider is the horizontal equity of the appraisals, or the degree to which individual appraisal/sales ratios are clustered around the median ratio. This is measured by the COD as described above. For residential properties in all counties reporting results, the COD is generally consistent with the IAAO standards. The coefficients did increase slightly from 2015 to 2018 for all counties except York County, indicating that the horizontal equity of appraisals deteriorated somewhat over this period.

The results for vacant commercial property were not as satisfying for the three counties reported in the table. In 2015, the COD for each of the three counties was outside the IAAO standards, significantly for Greenville and Horry counties. This indicates a degree of horizontal inequity greater than that for residential properties. In addition, by 2018 the CODs in Greenville and Horry counties increased, further undermining horizontal equity. The COD improved in York County bringing it in compliance with the IAAO standards.

The final aspect of appraisal outcomes to consider is the degree of vertical equity of the appraisals, or the extent to which appraisal/sales ratios move in relationship to the value of a property. This is measured by the PRD as described previously. For residential properties in the four counties reported in the table, the PRDs in 2015 and 2018 were consistent with IAAO standards. There was no bias in the appraisals in terms of vertical equity.

Again, the results are mixed for vacant commercial property. In 2015, the results for Greenville and Horry counties indicate a slight degree of *regressivity* in the appraisal indicating that low valued properties tend to be slightly over valued compared with high valued properties. York County's results were consistent with IAAO standards. By 2018, appraisals had deteriorated further in Greenville county indicating that *regressivity* of appraisals increased somewhat. This was the case in York County as well, and by 2018 the results did not comply with IAAO standards indicating slight *regressivity*. Horry County results indicated improvement with regard to vertical equity and they are now in compliance with IAAO standards.

Conclusion

The property tax is the most difficult state and local tax to administer because it does not have a readily observable base like income or sales taxes. The tax base has to be estimated by the county assessor. This chapter described how that challenge is met in the case study counties that were examined. It also provides information on the variation in outcomes across counties and over time.

Counties in South Carolina use standard methods of valuation to estimate the Fair Market Values of properties. For the five county results presented here, the results for residential properties are generally

consistent with IAAO standards of performance in 2015 and 2018, with the exception of the level of assessments in 2018. The results are mixed, and less consistent with IAAO standards, for vacant commercial properties in both 2015 and 2018 for the three counties reported.

For the counties reported in Table 2.10 there is evidence that the 5-year reassessment cycle contributes to a deterioration in the level of appraisals as well as the horizontal and vertical equity of those appraisals between 2015 and 2018. Specifically, there is decline across the board in median assessment/sales ratios, some CODs, and some PRDs over the period examined. These results suggest the 5-year reassessment cycle undermines the equity of the property tax in terms of level of assessment, the dispersion of ratios around the mean, and in two cases the vertical equity of assessments.

Appendix A: The Experience in Ten Case Study Counties

Introduction

For the purposes of this project, the South Carolina Chamber Foundation and the South Carolina Realtors identified ten case study counties that are representative of property tax policies and practices across the 46 counties in the state. This appendix includes a narrative report and supporting tables for each case study county. The narrative for each county includes four types of information as follows:

- a description of key geographic, demographic, and economic characteristics, as well as information on the general status of the real estate market
- a brief overview of how the property tax is administered, with a focus on how assessors determine their estimates of market value for real property
- a snapshot of the composition of the property tax base in each county using data supplied by the county assessor and the county auditor, and
- an analysis of the extent to which the 5-year reassessment cycle undermines assessment quality, uniformity, and the fairness of the property tax.

Allendale County

Geographic, Demographic, and Economic Characteristics

Allendale County lies in the Lower Savannah portion of South Carolina along the Georgia/South Carolina border. It is the smallest of the ten case study counties and the smallest county in South Carolina, with a 2018 estimated population of 8,903. From April 1, 2010, to July 1, 2018, the population in Allendale County fell by 14.6 percent, the largest decline of the three case study counties that lost population during this period. Of the ten case study counties, Allendale had the second highest percentage of residents that were 65 years old or older (20.1 percent).[32] It also had the lowest labor force participation rate with just 41.6 percent of the population aged 16 or greater in the civilian labor force.

In Allendale County, 66.1 percent of houses are owner-occupied, which statistically is in the middle range when compared to the other case study counties. The county has the lowest median value owner-occupied housing unit of $52,100, the lowest median household income of $23,331, and the lowest per capita income of $13,439 compared to the other case study counties. More than a third of the population (36.7 percent) lives below the poverty line. There were only 7 building permits issued for new construction in 2018, suggesting a stable housing market in the county. Allendale is a rural county with the lowest population density of the case study counties at just 25.5 people per square mile.

Property Tax Administration

The assessor values approximately 9,000 real property parcels in Allendale County. The county conducted a reassessment in 2018 with implementation of new values in the 2019 tax year. The prior reassessment was implemented in 2014.

Residential properties are valued based on comparable sales. In this approach, the property being appraised is compared with similar properties that have recently sold. The comparable properties' sales

[32] These and the following data come from QuickFacts issued by the U.S. Census Bureau which can be found at https://www.census.gov/quickfacts/fact/map/US/PST045218.

prices are then adjusted for differences from the property being valued. Finally, the market value of the property being valued is determined based on the modified sales prices of comparable properties. Sales prices of comparable properties are usually considered the best indication of market value (Eckert 1990, 153). Because of the limited real estate activity in the county (20 to 30 useable sales annually) comparable sales are collected from the previous 3–5 years.

Whenever possible, commercial properties are also valued based on comparable sales. For commercial properties, sales from the previous 6–7 years might be used. If sufficient comparable sales are not available, commercial properties can also be valued by the cost approach using Marshall & Swift cost and depreciation tables.

Because of the relatively stable real estate market in the county, few properties are subject to the 15 percent assessment limit imposed by Act 388. Similarly, the county assessor receives few requests each year for properties to be classified as owner-occupied residences. Finally, most sales in the county are between family members and cannot be considered arms-length transactions. The county receives assistance from QS1, a data company in Spartanburg, to process the reassessments and store property tax roll data.

Composition of the Property Tax Base

The first level of comparison in the case study counties is the composition of the property tax base. The county assessor provided information on aggregate appraised value and aggregate assessed value, organized by property use category, according to classifications in the state constitution. The top panel in Table A1 references real property valued by the assessor and the lower panel references other real property valued by the Department of Revenue and personal property (including automobiles) valued by the county auditor and the Department of Revenue.

Unlike the property tax in the other case study counties, approximately two-thirds of the assessed value in Allendale County is property valued by the Department of Revenue and the county auditor, not real property valued by the assessor. More than 50 percent of the assessed property tax base is in real and personal property for manufacturing and utilities. Just over one-third of the property tax base is real property valued by the assessor and nearly 44 percent of that value is in owner-occupied residential properties.

Effect of the 5-Year Reassessment Cycle

Legitimacy and fairness concerns require that the property tax be administered uniformly within each jurisdiction. Uniformity is important because the assessed values calculated for individual properties determine the distribution of the responsibility for funding local government activities among taxpayers. Ideally, everyone should feel they are paying their fair share of the property tax burden.

A hypothesis presented here is that the quality of assessments deteriorates during the 5-year reassessment cycle because real estate markets grow at different rates for different types of properties and in different neighborhoods, thereby moving away from uniformity of assessments and undermining the equity of the property tax.

Table A1 Allendale Property Tax Base Composition by Property Type, 2018

Real Property Valued by County Assessor				
Property Classification	Total Appraised (Fair Market) Value ($)	% Total Appraised Value	Total Assessed Value ($)	% Total Assessed Value
Primary Residential	88,849,357	52.0	3,385,640	14.9
Other Residential	32,178,734	18.8	1,904,420	8.4
Agriculture (Private)	26,526,280	15.5	1,064,220	4.7
Agriculture (Corporate)	8,794,935	5.1	527,840	2.3
Commercial	14,606,503	8.5	831,580	3.7
Subtotal	170,955,809	100.0	7,713,700	34.0
Other Real and Personal Property Valued by County Auditor and State Department of Revenue				
Property Classification	Total Appraised (Fair Market) Value	Percent Total Appraised Value	Total Assessed Value	Percent Total Assessed Value
Personal Property (Vehicles)	NA	NA	1,871,631	8.2
Other Personal Property	NA	NA	63,350	0.3
FILOT	NA	NA		0.0
Manufacturing	NA	NA	6,845,070	30.2
Utility	NA	NA	4,771,560	21.0
Business Personal Property	NA	NA	611,440	2.7
Railroads, Private Carlines, Airlines and Pipelines	NA	NA	811,626	3.6
Subtotal	NA	NA	14,974,677	66.0
TOTAL	NA	NA	**22,688,377**	**100.0**

Source: County assessor and/or county auditor

To test this hypothesis, three measures of the quality of assessment were computed for 2015 and 2018 files, representing true arms-length sales provided by the Allendale County assessor. Three measures of assessment quality were compared for the two years—a measure of central tendency (the median appraisal/sales ratio), the dispersion of ratios around the median ratio, and the degree of bias in valuations based on whether the property is high-valued or low-valued.

The assessor in Allendale provided selected information for 22 sales in 2015 and 32 sales in 2018.[33] Information for each parcel included a unique *Property Identification Number* (PIN), the land use class, the sales amount, the sales date, and the appraised value from 2014 which reflects the new values established during the 2013 reassessment. Allendale County has 135 land use codes that closely follow the real property classifications identified in the State Constitution. For example, properties with a classification in the 100s are owner-occupied residential properties, 200s are non-owner-occupied residential properties, 300s are commercial properties, and 800s are either privately owned agricultural properties, privately owned timber properties, or corporate owned agricultural and timber properties.

The parcels in each file had to be rearranged for the analysis, which was carried out for each land use type, to the extent there were enough sales for the analysis. For example, in 2015 sales fell into four different land use categories, but only non-owner-occupied residential properties had sufficient sales for the relevant analysis. There were 17 arm's-length sales of rental residential properties in Allendale County in 2015. The *Coefficient of Dispersion* (COD) was 23.38, slightly higher than the target range identified by the International Association of Assessing Officers (IAAO 2013). The *Price-Related Differential* (PRD) was 1.210 indicating a slight degree of regressive assessment outcomes.

In 2018, sales fell into five different land use categories with enough sales in three of those categories to carry out the desired analysis. Table A2 presents those findings. For owner-occupied residential properties the median appraisal/sales ratio was 0.985, very close to the desired target of 1.0. The COD was 14.65 and the PRD was 1.027, both within the standards set by the IAAO (2013). The median ratio for rental residential properties was 0.861 and the COD was 24.56, both somewhat outside the IAAO targets. The PRD was 1.025, again within the IAAO target range. The final category was farmland. The *fair market value* (FMV) for farmland is based on agricultural land values determined by the Department of Revenue in 1991. In this case, the appraised value is only a fraction of the actual sales price, illustrated by a median of just 0.084. The COD is 9.48, well within the IAAO target range, and the PRD is 1.096, slightly outside the IAAO target range.

In 2018, there were five agricultural land sales with data on FMV, assessed value, and actual sales price. The aggregate FMV for the five agricultural properties that sold in 2018 was $67,496 and their aggregate assessed value was $2,700. The aggregate FMV is 7.8 percent of the aggregate sales value of the properties and the assessed value is only 0.3 percent of aggregate sales price. In other words, for the five agricultural properties that sold in 2018, fully 99.7 percent of the true market value, reflected by actual sales, escapes property taxation. The results are consistent across years and land use categories but should be interpreted with caution because of the limited number of sales. Overall, however, the results generally meet IAAO standards.

[33] In 2018, two observations were deleted: 1) 104-01-03-001 because it was misclassified as 316 when it was really 206 and the property parcel did not exist in 2014; and 2) 109-01-02-030 which is a farm with a home site on it.

Table A2 Allendale Summary by Land Use Type, 2015 and 2018

	2015				2018			
Land Use	**Parcels**	**Median**	**COD**	**PRD**	**Parcels**	**Median**	**COD**	**PRD**
100 series	2	NA	NA	NA	11	0.985	14.65	1.027
200 Series	17	0.783	23.38	1.21	14	0.861	24.56	1.025
300 Series	1	NA	NA	NA	1	NA	NA	NA
600 Series	NA	NA	NA	NA	1	NA	NA	NA
800	2	NA	NA	NA	5	0.084	9.48	1.096
Total Sales	**22**				**32**			

Source: Author's computations based on assessor sales files.

Note: COD is coefficient of dispersion. PRD is price related differential.

Charleston County

Geographic, Demographic, and Economic Characteristics

Charleston County lies in the Low Country, or Coastal, region of South Carolina. It is the third largest county in South Carolina, with a 2018 estimated population of 405,905. The population of the county increased 15.9 percent from April 1, 2010 to July 1, 2018, the third largest increase in the case study counties. Of the ten case study counties, Charleston had the fourth lowest percentage of its residents that were 65 years old or older (16.4 percent). [34] It had the second highest labor force participation rate with 65.0 percent of the population aged 16 or greater in the civilian labor force.

Charleston County had the highest median value of owner-occupied housing units in the study at $273,100, the second highest median household income of $57,882, and the highest per capita income of $35,587. Just 13.3 percent of the population lives below the poverty line, the third lowest level of any county in the study. Charleston County had 3,969 building permits issued in 2018, the third highest of the case study counties, which suggests a vibrant real estate market. It is an urban county with a population density of 382.3 people per square mile, the second highest in the study.

Property Tax Administration

The assessor values slightly more than 195,000 taxable real property parcels in Charleston County. During the 2019 reassessment, residential properties were valued using a multiple regression model. The model initially uses data from actual sales and then extrapolates values for residential properties that did not sell. A number of different models were used for different areas of the county. Commercial properties were valued using the income approach.

In 2018, there were approximately 14,000 *Assessable Transfers of Interest* (ATIs) in Charleston County, about 7 percent of the total number of parcels in the county. These properties were reappraised to determine the estimated FMV as of December 31, 2018.

Because of the relatively dynamic real estate market in the county, many properties were not affected by the 15 percent assessment limit imposed by Act 388 because they were reappraised when they were transferred as a valid ATI. The new estimates of market value became effective December 31 of the year of the assessible transfer and take effect in the next tax year. Also, because of the dynamic real estate

[34] These and the following data come from QuickFacts issued by the U.S. Census Bureau which can be found at https://www.census.gov/quickfacts/fact/map/US/PST045218.

market, there are numerous requests for residency status in the county.[35] There are seven full-time staff in the assessor's office processing applications for residency. Determining residency requires significant information from the applicant, including recent income tax returns, that must be reviewed and evaluated.

Composition of the Property Tax Base

The first level of comparison in the case study counties is the composition of the property tax base. The county assessor provided data for the top panel in Table A3, reporting the aggregate appraised value and the aggregate assessed value by property category. The second panel in the table references other real property valued by the Department of Revenue and personal property (including automobiles) valued by the county auditor and the Department of Revenue.

When looking at the property tax base in Charleston County, primary residential properties account for 45.9 percent of total appraised value in the county, but just one-third of total assessed value in the county, which is the base for determining property tax liabilities. Alternatively, other residential properties account for 29.8 percent of appraised value, but 32.9 percent of assessed value. Commercial properties account for 17.8 percent of appraised value and 19.7 percent of assessed value.

In the second panel, vehicles account for 2.4 percent of appraised value, but 5.9 percent of assessed value. Nonvehicle personal property accounts for 2.1 percent of total appraised value, but 4.0 percent of assessed value.

Effect of the 5-Year Reassessment Cycle

Three measures of the quality of assessment were computed for 2015 and 2018 using true sales provided by the Charleston County assessor.[36] Three different measures of assessment quality were compared for the two years—a measure of central tendency (the median appraisal/sales ratio), the dispersion of ratios around the median ratio, and the degree of bias in valuations based on whether the property is high-valued or low-valued.

The assessor in Charleston provided selected information for 9,183 true sales in 2015 and 8,859 true sales in 2018. Each file included a unique *Property Identification Number* (PIN), the land use class, the sales amount, date of sale, the 2015 estimate of FMV (except for properties that qualified as an ATI and had a new FMV determined in the year of transfer), a jurisdiction code, and a several codes for the type of property represented by each sale (for example, government owned, religious, city owned, ATI partial exemption).

[35] The number of applications for residency status has grown substantially because of Act 388 and the exemption of the education operating and maintenance portion of the property tax.

[36] 2015 was the first tax year to use the new values produced in the 2014 reassessment and 2018 was the fourth year in the current 5-year assessment cycle.

Table A3 Charleston County Property Tax Composition by Property Type, 2018

Property Classification	Total Appraised (Fair Market) Value ($)	Share of FMV (%)	Total Assessed Value ($)	Share of Assessed Value (%)	Appraised By
Primary Residential	33,228,205,681	45.9	1,328,889,020	33.8	County Assessor
Other Residential	21,546,961,189	29.8	1,292,790,030	32.9	County Assessor
Agriculture (Private)	53,096,033	0.1	2,123,830	0.1	County Assessor
Agriculture (Corporate)	6,219,055	0.0	373,130	0.0	County Assessor
Commercial	12,884,672,515	17.8	773,081,050	19.7	County Assessor
Personal Property (Vehicles)	1,748,486,316	2.4	233,566,623	5.9	County Auditor
Other Personal Property	713,827,518	1.0	71,467,020	1.8	County Auditor
FILOT		0.0		0.0	NA
Manufacturing	133,966,762	0.2	14,066,510	0.4	DoR
Utility	1,175,749,524	1.6	123,453,700	3.1	DoR
Business Personal Property	823,501,905	1.1	86,467,700	2.2	DoR
Railroads, Private Carlines, Airlines, and Pipelines	65,763,830	0.1	6,780,360	0.2	DoR
TOTAL	72,380,450,328	100.0	3,933,058,973	100.0	NA

Source: County assessor and/or county auditor

To create the work file for the analysis, the first step was to sort all the parcels by land use code. Then, each class of property was pasted into its own tab in an Excel file. Charleston County provided sales for several different residential land use codes (that is, residential single family, residential multi-family, residential townhouses, residential condos). For these categories the data were divided into owner occupied properties subject to a 4 percent assessment ratio and non-owner-occupied properties subject to an assessment ratio of 6 percent. Five commercial properties were included in the 2018 sales file. In addition, several individual properties with other land use codes were also included in the original data set (for example, specialty commercial/condo, vacant commercial, specialty apartment) but were not included in the analysis.

Each land use category was then examined to identify duplicate entries with the same PIN number. A unique PIN number may have multiple entries for a variety of reasons and the reason for the duplication determined how the issue was resolved. For example, all the information in each of multiple entries for the same PIN could be identical. In this case the entry simply appears in the file twice and one can be cut and pasted into a tab for deletions. Alternatively, all the information for multiple entries could be identical except the sale amounts. This suggests the property was flipped in the year examined and both sales were kept in the file. However, if the sales price difference was $1,000 or less it was assumed the property was not flipped and both entries were removed from the analysis.

The purpose of the analysis is to better understand the effect the 5-year assessment cycle has on the equity of the property tax by comparing the sales amount in each year with the estimated FMV of the property at the beginning of the cycle. Since Charleston County did its most recent reassessment in 2014 (certified as of December 31, 2014) for implementation in tax year 2015, it was assumed that there was not much difference between appraised value and the sales amount in 2015, but by 2018 there would be more significant differences between the sales amount and the estimate of FMV.

Over that 5-year period there are several other factors that might influence the relationship between the estimate of FMV and the sales amount of an individual property. For example, a property could sell in 2016 or 2017 and receive an updated estimate of FMV effective December 31 of the year sold. So, for many properties the analysis could be comparing the sales amount with an updated estimate of FMV. Also, there could have been a change in zoning or land use, a parcel could have been split or combined so it may not have existed at the beginning of the reassessment cycle, buildings could have been added, remodeled or demolished, all of which would affect market value and would be reflected in the sales amount, but not the estimate of FMV as of December 31, 2014. Finally, there could simply be incorrect data entries.

In other words, there are factors that could affect the difference between the sales amount and the estimated FMV other than the 5-year cycle. To the extent such factors exist, they can result in appraisal/sales ratios that are outliers for purposes of the analysis (outlier ratios are very low or high ratios compared to other ratios in the sample). The accuracy of ratio study statistics used to evaluate assessment outcomes could be compromised by the presence of outliers. One extreme outlier could have a significant effect on certain statistical measures. To minimize this affect, extreme appraisal/sales ratios of 2.5 and greater, or 0.5 or less, were eliminated.

After cleaning the data, the analysis was performed on 8,971 parcels that sold in 2015 (97.7 percent of the number of parcels in the original work file) and 8,680 parcels that sold in 2018 (98.0 percent of the number of parcels in the original file).

Three traditional measures of assessment uniformity were calculated for each land use and each year by an appraisal/sales ratio study. The first step was to determine the typical appraisal level for each land use category. This is calculated statistically using a measure of central tendency. The median appraisal/sales ratio is the preferred measure of central tendency in most ratio studies. (Eckert 1990, 527; Bell and Bowman 1991, 357).

The median ratio is the midpoint, or middle ratio, when appraisal/sales ratios are arrayed in order of magnitude. It divides the ratios into two equal groups and is not affected by extreme values (Eckert 1990, 527). If the appraised value of each property exactly equaled the actual sales amount, each appraisal/sales ratio would have a value of 1.0 and the median ratio would have a value of 1.0. If the median ratio is higher than 1.0 it means more parcels have appraised values higher than the actual sales amount and if the median ratio is less than 1.0 it means more parcels have appraised values lower than the actual sales price. The following table presents results for the analysis of sales files from 2015 and 2018.

Table A4 Charleston County Summary by Land Use Type, 2015 and 2018

Land Use	Parcels	Median Ratio	COD	PRD	Parcels	Median Ratio	COD	PRD
101 Res Single 4%	4,405	0.899	11.43	1.007	4,234	0.794	13.89	0.999
101 Res Single 6%	990	0.926	16.43	1.033	965	0.789	17.64	0.989
120 Res TWH 4%	484	0.888	9.23	1.007	551	0.789	12.49	0.997
120 Res TWH 6%	160	0.91	13.77	1.026	201	0.76	16.91	0.963
130 Res 2–3 Fam 4%	39	0.932	13.77	0.996	16	0.682	18.63	0.99
130 Res 2–3 Fam 6%	80	0.853	20.27	1.036	59	0.682	27.71	1.1
160 Res Condo 4%	586	0.888	11.51	0.997	684	0.758	14.3	0.983
160 Res Condo 6%	530	0.898	12.33	0.998	622	0.768	16.43	0.951
170 Res Row House	9	1.047	12.87	1.015	10	0.8	18.26	1.066
500 General Commercial	NA	NA	NA	NA	3	0.801	8.57	0.937
905 Res Vacant Lot	635	0.922	20.44	1.039	447	0.85	24.18	1.038
TOTAL SALES	**7,918**				**7,792**			

Source: Author's computations based on assessor sales files.

Note: COD is coefficient of dispersion. PRD is price related differential.

The results for 2015 are generally consistent with IAAO standards across all land uses. About half the median ratios for 2015 are only slightly outside the IAAO target range. Overall, however, it seems the quality of appraisal declined across all land uses during the 5-year reassessment cycle. The median appraisal/sales ratio computed for each land use declined from 2015 to 2018 and all are significantly outside IAAO standards, thereby indicating assessments are moving further away from actual market values. Similarly, the *coefficients of dispersion* (COD) increased for all land uses from 2015 to 2018 indicating increased dispersion of appraisal/sales ratios. Finally, the results for the *price related differential* (PRD) were mixed with six PRDs staying essentially the same from 2015 to 2018, two declining, moving from equal assessments to somewhat progressive assessments and one deteriorating, moving from equal assessments to a slightly regressive assessment.

Uniformity of appraisal *between* land use categories can be considered by looking at variations in the median ratios for each group. Value uniformity relates to the consistency and equity of values. It is important to ensure, for example, that residential and commercial properties are appraised at similar percentages of market value. For example, in 2015, single family, townhouse, and condo residential properties with assessment ratios of 4 percent had median appraisal/sales ratios lower than land uses with assessment ratios of 6 percent. Multi-family residential properties with a 4 percent assessment ratio had a higher median appraisal/sales ratio in 2015 than similar properties with a 6 percent assessment ratio. Alternatively, in 2018, single family and townhouse properties with a 4 percent assessment ratio had slightly higher median appraisal/sales ratios than those with a 6 percent assessment ratio.

In addition, the spread between the highest and lowest median ratios was slightly higher in 2018 than 2015. Specifically, the highest median ratio in 2015 was for residential row houses (1.047) and the lowest was for multi-residential properties with a 6 percent assessment ratio (0.853), a difference of 22.7 percent of the lowest median ratio. Alternatively, in 2018, the highest median ratio (0.850) was for residential vacant lots and the lowest was for both multi-family residential property groups at 0.682. This is a

difference of 24.6 percent of the lowest median ratio. These results confirm the deterioration in equity in the property tax across land use categories between 2015, the first year of the new property values, and 2018, the fourth year of the reassessment cycle.

The second step in the process for understanding the effect of the 5-year assessment cycle on uniformity is to look at uniformity of appraisals *within* each land use category. The *coefficient of dispersion* (COD) is the most used measure of within-class uniformity. The COD is based on the average absolute deviation of individual parcel ratios from the median ratio. The COD is calculated by dividing the average absolute deviation of the appraisal/sales ratio for each parcel and the median ratio by the median ratio and multiplying by 100 (Eckert 1990, 534).

The International Association of Assessing Officers (IAAO 2013) publishes target standards for uniformity within land use classes. Specifically, the following standards are recommended for the COD:

- Single-family homes and condominiums: CODs of 5 to 10 for newer or similar residences and 5 to 15 for older or more heterogeneous areas
- Income-producing properties: CODs of 5 to 15 in larger, urban areas and 5 to 20 in other areas
- Vacant land: CODs of 5 to 15 in very large areas with active markets, 5 to 20 in large to mid-size areas with slower development, or 5 to 25 in rural or seasonal recreation areas
- Rural residential, seasonal, and manufactured homes: CODs of 5 to 20
- Rural vacant land with little development: CODs of 5 to 30 (IAAO 2014).

Table A4 reports the COD for each land use class in 2015 and 2018. Generally, CODs in 2015 are within IAAO standards. However, the CODs are higher across all land uses in 2018 than in 2015, with some falling outside IAAO standards. This suggests that within-class uniformity declined during the reassessment cycle, thereby undermining the equity of the property tax.

A final aspect of assessment uniformity relates to equity between lower and higher value properties. Appraisals are considered *regressive* if high-valued properties are under appraised relative to low-valued properties and progressive if high-valued properties are over appraised relative to low-valued properties.

The most frequent statistic for measuring assessment regressivity or progressivity is the price-related differential (PRD). The PRD provides a simple gauge of price-related bias. It is calculated by dividing the mean appraisal/sales ratio by the weighted mean. According to IAAO standards, the PRD should be between 0.98 and 1.03. PRDs below 0.98 indicate assessment progressivity, the condition in which assessment ratios increase with price. PRDs above 1.03 indicate assessment regressivity, in which assessment ratios decline with price (Eckert 1990; IAAO 2014).

The results are somewhat mixed between 2015 and 2018. In 2015 seven of the ten land uses reported had PRDs consistent with the IAAO standards and the other three land uses were slightly higher than 1.03 indicating only slightly regressive assessments. In 2018, six of the 11 land uses reported had PRDs that were essentially the same as they were in 2015. Four land uses had PRDs that deteriorated between 2015 and 2018 with one becoming somewhat more progressive regarding appraisals (single family residential properties with 6 percent assessment ratio).

In Charleston County, there is strong and consistent evidence that uniformity and fairness of assessments eroded during the 5-year reassessment cycle, thereby undermining the equity of the property tax.

Edgefield County

Geographic, Demographic, and Economic Characteristics

Edgefield County lies in the Central Savannah region of South Carolina along the Georgia border. It is in the bottom third of counties in South Carolina in terms of population, with a 2018 estimated population of 27,052. Population in Edgefield County was relatively stable from April 1, 2010 to July 1, 2018 and only increased by 0.3 percent during this period. Of the ten case study counties, Edgefield County had the fourth highest percentage of residents that were 65 years old or older (18.8 percent).[37] It had the second lowest labor force participation rate with 50.2 percent of the population aged 16 or greater in the civilian labor force.

Edgefield County had the highest home ownership rate of the case study counties at 74.8 percent. The county had the third lowest median value of owner-occupied housing units at $123,000, the fifth highest median household income of the case study counties at $47,500 and the fifth lowest per capita income of $23,084. The county has 17.3 percent of the population living below the poverty line, which is around the middle of the case study counties. Edgefield County had 114 building permits issued in 2018, the third lowest of the case study counties, suggesting a relatively stable real estate market in the county. It is classified as a rural county, with a population density of just 53.9 people per square mile, the second lowest in the study. While the northern portion of the county is relatively stable, the southern portion is experiencing growth because of its proximity to Augusta, Georgia.

Property Tax Administration

The assessor values approximately 22,000 taxable real property parcels in Edgefield County. There are generally between 200 and 300 sales annually. The most recent reassessment was in 2015 and took effect in tax year 2016. Residential properties are valued using a comparable sales approach. In this approach the property being appraised is manually compared with similar properties that have recently sold. The sales prices of the comparables are then adjusted for differences from the property being valued. Finally, the market value of the property being assessed is determined based on the modified sales prices of the comparable properties. Sales prices of comparable properties are usually considered the best indication of market value (Eckert 1990).

For commercial properties the income approach to valuation is typically used. Marshall & Swift income and expense tables are used to estimate gross and net income for commercial properties. Depreciation tables from Marshall & Swift are then used to adjust the estimated values for economic, functional, and physical depreciation. Land values are based on actual sales of vacant land in subdivision developments in the southern portion of the county, while land values in the northern part of the county are relatively stable and change little.

There are approximately 300 *Assessable Transfers of Interest* (ATIs) processed in Edgefield County annually. There has been an increase in the number of applications for primary residency and the office devotes one full-time employee to processing and verifying primary residency applications.

Composition of Property Tax Base

The first place to begin in comparing the case study counties is to look at the composition of the property tax base in each county. The county auditor provided Table A5, which reports the number of parcels, the aggregate appraised value, and the aggregate assessed value organized by property use category according to classifications in the state constitution. The top panel in the table references real

[37] These and the following data come from QuickFacts issued by the U.S. Census Bureau which can be found at https://www.census.gov/quickfacts/fact/map/US/PST045218.

property valued by the assessor and the lower panel references other real property valued by the Department of Revenue and personal property (including automobiles) valued by the county auditor and the Department of Revenue.

When looking at real property in Edgefield County, the real property valued by the assessor accounts for more than three-fourths of appraised real property value, and almost two-thirds of assessed value. Primary residential properties (owner-occupied properties) account for nearly 56 percent of appraised value, but less than 42 percent of assessed value, which is the base for determining property tax liabilities. Alternatively, manufacturing and utility real and personal property account for 9.1 percent of FMV in the county, but 18 percent of assessed value.

No additional data was provided.

Table A5 Edgefield County Property Tax Base Composition by Property Type, 2018

Real Property Valued by County Assessor				
Property Classification	Total Appraised (Fair Market) Value ($)	% Total Appraised Value	Total Assessed Value ($)	% Total Assessed Value
Primary Residential	851,872,000	55.6	34,074,880	41.7
Other Residential	none	NA	none	NA
Agriculture (Private)	51,999,250	3.4	2,079,650	2.5
Agriculture (Corporate)	1,103,166	0.1	66,190	0.1
Commercial	261,705,000	17.1	15,702,300	19.2
Subtotal	1,166,679,416	76.2	51,923,020	63.6
Other Real and Personal Property Valued by County Auditor and State Department of Revenue				
Personal Property (Vehicles)	189,655,616	12.4	11,379,337	13.9
Other Personal Property	825,304	0.1	866,570	1.1
FILOT	15,363,928	1.0	921,833	1.1
Manufacturing	51,260,076	3.3	5,383,380	6.6
Utility	88,496,190	5.8	9,292,100	11.4
Business Personal Property	14,622,666	1.0	1,535,380	1.9
Railroads, Private Carlines, Airlines and Pipelines	3,978,947	0.3	378,000	0.5
Subtotal	364,202,727	23.8	29,755,600	36.4
TOTAL	1,530,882,143	100.0	81,678,620	100.0

Source: County assessor and/or county auditor

Florence County

Geographic, Demographic, and Economic Characteristics

Florence County lies in the Pee Dee region of South Carolina. It has the thirteenth highest population of any county in South Carolina, with a 2018 estimated population of 138,159. This is near the middle when compared with the populations of other case study counties. The population was relatively stable from April 1, 2010 to July 1, 2018, increasing by just 0.9 percent. Florence County is also near the middle of the 10 case study counties in terms of the percentage of residents that were 65 years old or older (17.0 percent).[38] Similarly, the county is near the middle of the 10 case study counties when it comes to its labor force participation rate, with 60.3 percent of the population aged 16 or greater in the civilian labor force.

Florence County has a home ownership rate of 65.8 percent, the fourth lowest among the case study counties. The county is near the middle of the case study counties with a median value of owner-occupied housing units of $128,400, the fourth lowest median household income of the case study counties of $43,310 and has the fourth lowest per capita income of $23,797. The county has 18.6 percent of its population living below the poverty line, the fourth highest of the case study counties. Florence County had 463 building permits issued in 2018, the fifth lowest of the case study counties, suggesting a relatively stable real estate market. Florence is classified as a rural county, with a population density of 117.1 people per square mile, the fifth lowest in the study.

No additional information was provided.

Greenville County

Geographic, Demographic, and Economic Characteristics

Greenville County lies in the Upstate region of South Carolina, along the North Carolina border. It is the largest county in South Carolina with a 2018 estimated population of 514,213. The population of the county increased 14.0 percent between April 1, 2010 and July 1, 2018; the fourth largest increase of the case study counties. Greenville County had the third lowest proportion of residents that were 65 years old or older (15.8 percent). [39] It had the third highest labor force participation rate with 63.7 percent of the population aged 16 or greater in the civilian labor force.

Greenville has a median value of owner-occupied housing units of $165,600, which is near the middle when compared to the other case study counties. It also has the third highest median household income of $53,739 and the third highest per capita income of $29,132. Just 12.4 percent of the population lives below the poverty line, the second lowest level of any county in the study. Greenville County had 4,669 building permits issued in 2018, the highest of the case study counties, suggesting a vibrant real estate market. It is an urban county and has a population density of 574.7 people per square mile, the highest in the study.

Property Tax Administration

There are more than 205,000 taxable real property parcels valued by the assessor in Greenville County. In the 2019 reassessment, residential properties were valued by a modified cost approach. Marshall & Swift

[38] These and the following data come from QuickFacts issued by the U.S. Census Bureau which can be found at https://www.census.gov/quickfacts/fact/map/US/PST045218.
[39] These and the following data come from QuickFacts issued by the U.S. Census Bureau which can be found at https://www.census.gov/quickfacts/fact/map/US/PST045218.

cost tables were initially used to generate an estimate of *fair market value* (FMV), which was then modified, as needed, for each neighborhood based on market data, including assessment/sales ratios for each neighborhood. Land values were estimated for each neighborhood based on actual vacant land sales. If there were insufficient vacant land sales, then land values were estimated based on land/improvement ratios from adjoining neighborhoods.[40]

Commercial properties are valued based on income tables from Marshall & Swift that could be adjusted with market information for different land use types. Again, estimates of FMV can be refined with local market information. Similarly, land values are estimated for each neighborhood based on actual vacant land sales. If there are insufficient vacant land sales, then land values are estimated based on land/improvement ratios from adjoining neighborhoods. If a commercial property owner appeals their appraisal, they must provide data on income and expenses. The provided data is supplemented by data services that provide estimates of income and expenses by type of commercial property (for example, apartments, hotels, motels, some downtown retail, chain stores, chain restaurants, and the like).

In 2018, there were approximately 10,000 *Assessable Transfers of Interest* (ATIs) in Greenville County. These properties were reappraised in 2018, which can be a time-consuming process.

Because of the relatively dynamic real estate market in the county, many properties were not affected by the 15 percent assessment limit imposed by Act 388. They were reappraised when they were transferred as a valid ATI. The new estimate of market value becomes effective December 31 of the year of the assessible transfer and takes effect in the following tax year. Also, because of the dynamic real estate market, there are numerous requests for residency status in the county.[41] Two full time staff in the assessor's office work on processing applications for residency.

Composition of the Property Tax Base

The first level of comparison in the case study counties is the composition of the property tax base. The county assessor provided data for the top panel in Table A6, reporting the number of parcels, the aggregate appraised value, and the aggregate assessed value organized by property category. The top panel in the table references real property valued by the assessor and the second panel references other real property valued by the Department of Revenue and personal property (including automobiles) valued by the county auditor and the Department of Revenue.

When looking at real property in Greenville County, real property valued by the assessor accounts for 85 percent of the FMV, but just 77 percent of assessed value, which is the base for determining property tax liabilities. Within that share of the property tax base, primary residential (owner-occupied) properties account for nearly 55 percent of the FMV, but less than 42 percent of assessed value. On the other hand, commercial properties account for 23 percent of appraised value but nearly 27 percent of assessed value.

[40] Bell and Bowman (2008) analyzed three different methods used to value land for property tax purposes when there are insufficient vacant land sales and found the land ratio method had the greatest variation based on examination of coefficients of dispersion and price related differentials.

[41] The number of applications for residency status has grown substantially because of Act 388 and exemption of the education operating and maintenance portion of the property tax.

Table A6 Greenville County Property Tax Base Composition by Property Type, 2018

Real Property Valued by County Assessor				
Property Classification	Total Appraised (Fair Market) Value ($)	% Total Appraised Value	Total Assessed Value ($)	% Total Assessed Value
Primary Residential	24,900,657,878	54.6	996,029,080	41.6
Other Residential	3,341,740,059	7.3	200,514,590	8.4
Agriculture (Private)	22,891,820	0.1	933,340	0.0
Agriculture (Corporate)	439,870	0.0	210	0.0
Commercial	10,513,283,744	23.0	645,363,420	26.9
Subtotal	38,779,013,371	85.0	1,842,840,640	76.9
Other Real and Personal Property Valued by County Auditor and State Department of Revenue				
Property Classification	Total Appraised (Fair Market) Value	% Total Appraised Value	Total Assessed Value	% Total Assessed Value
Personal Property (Vehicles)	4,120,280,833	9.0	266,284,340	11.1
Other Personal Property	74,225,609	0.2	7,793,689	0.3
FILOT		0.0		0.0
Manufacturing	810,404,382	1.8	85,092,460	3.6
Utility	864,506,762	1.9	90,773,210	3.8
Business Personal Property	843,740,105	1.8	88,592,711	3.7
Railroads, Private Carlines, Airlines and Pipelines	145,681,189	0.3	13,925,892	0.6
Subtotal	6,858,838,880	15.0	552,462,302	23.1
TOTAL	45,637,852,251	**100.0**	2,395,302,942	**100.0**

Source: County assessor and/or county auditor

In the second panel, vehicles account for approximately 9 percent of appraised value, but 11.1 percent of assessed value, while manufacturing and utility real and personal property account for 3.7 percent of appraised value, but 7.4 percent of assessed value.

Effect of the 5-Year Reassessment Cycle

Legitimacy and fairness concerns require that the property tax be administered uniformly within each jurisdiction. Uniformity is important within each jurisdiction because values set for individual properties determine the distribution of responsibility for funding local government activities among taxpayers. Everyone should feel they are paying their fair share of the property tax burden.

A hypothesis presented here is that the quality of assessments deteriorates during the 5-year reassessment cycle because real estate markets grow at different rates for different types of properties and for properties in different neighborhoods, thereby moving away from uniformity of assessment and undermining the equity of the property tax.

To test this hypothesis three measures of the quality of assessment were computed for the 2015 and 2018 files, which represent true sales provided by the Greenville County assessor. Three measures of assessment quality were compared for the two years—a measure of central tendency (the median appraisal/sales ratio), the dispersion of ratios around the median ratio, and the degree of bias in valuations based on whether the property is high-valued or low-valued.

The assessor in Greenville provided selected information for 206,266 parcels on the 2015 property tax roll. One column included information on whether the parcel was a true sale in 2015. Sorting the initial data file on that information identified 10,614 useable true sales that could be used to perform the analysis. The 2018 tax roll provided by the assessor included selected information for 207,700 parcels, including 10,222 true sales. This reflects the dynamic real estate market in Greenville County during this period. Each file included a unique *Property Identification Number* (PIN), the land use class, the sales amount, the 2015 appraisal, a jurisdiction code, and a code for the type of transaction represented by each sale. See Table A7 for sales transaction codes.

The code for the type of transaction classifies each sale by the purpose or nature of the sale. While all sales will be Assessible Transfers of Interest, they will not all be true sales, and not all true sales will be arm's-length transactions. For example, a transaction code of 09 indicates a family transfer while a code of 11 indicates an intercompany transfer, neither of which would be a true sale. All the parcels in the work file had transaction codes of 01, 02 or 03 and were classified as true sales.

For an assessment/sales ratio study, however, sales must be arm's-length sales. An arm's-length sale is one that is between unrelated parties who are not under abnormal pressure from each other or a third party (Eckert 1990). In other words, to determine the accuracy of appraisals with absolute certainty, it is necessary for all properties in the population to have been sold in arm's-length, open-market transfers between a willing seller and a willing buyer (IAAO 2013). Any transaction related to a foreclosure would not be an arm's-length transaction.

Table A7 Greenville County Sales Transaction Codes

Code	Transaction Type
01	Cash (land and building)
02	Cash and assumption of mortgage (land and building w/current balance)
03	Cash (land)
04	Cash and assumption of mortgage (land w/current balance)
05	Assumption of mortgage (original mortgage is 6 months within deed date)
06	Assumption of mortgage (original mortgage is greater than 6 months from deed date)
07	Love and affection
08	Exchange of poverty
09	Family transfer
10	Deed of distribution
11	Intercompany transfer
12	Partial interest
13	Master deed (foreclosure)
14	Tax sale deed
15	Quitclaim
16	Cash and other consideration (for example, other property, assumption of mortgage w/o amount)
17	Corrective deed
18	More than one piece of property transferred by deed
19	Contract sale
20	Condemnation or governmental purchase
21	Gift

Source: County assessor

The county also assigns a jurisdiction code to each parcel. The codes indicate which level of government has responsibility for valuing each type of property, and which properties are exempt from taxation and why. See the list of jurisdiction codes in Table A8. Jurisdiction codes 5, 6, 7, 8, and 9 indicate properties that are exempt from property taxation because they are owned by municipal, county, state, or federal governments, or are otherwise exempt. These exempt properties were identified and removed from the work file for each year.

Table A8 Greenville County Jurisdiction Codes

Code	Jurisdiction
1	County Juris
3	Dept of Revenue Juris
5	Exempt
6	Municipal Owned
7	County Owned
8	State Owned
9	Federal Owned

Source: County assessor

The parcels in each file were rearranged for the analysis, which was carried out for each land use type, to the extent there were enough sales for the analysis. To create the work file, the first step was to sort all the parcels by land use code. Then each class of property was pasted into its own tab in an Excel file. One tab included all properties with an exempt land use code, but these were not included in the analysis. Greenville uses 120 different land use codes to classify properties for tax purposes. The land use classifications are described in Table A9.

Table A9 Greenville County Land Use Codes

		Primary Use	LUSE	
Residential	Res	Single Family	1100	Res
	Res	SF- w/ Auxiliary Use	1101	Res
	Res	MH w/Land	1170	Res
	Res	MH on MH File	1171	Res
	Res	Residential Vacant	1180	Res Vac
	Res	Homeowners Assoc. Prop	1181	Res
	Res	Common Areas	1182	Res
Comm Vacant	Comm	Commercial Vacant	6800	Vac Comm
Comm Common	Com	Commercial Common	205	comm common
Agricultural	Ag	Ag Vacant	9170	Ag
	Ag	Ag Improved	9171	Ag
Multi Family	Mul Fam	Duplex	110	Multi Fam
	Mul Fam	Mplex	112	Multi Fam
Group Hse	Ghous1	Group Hse Converted	113	Multi Fam
Apartments	Apt1	Apartment-Convent (C, D)	120	Multi Fam
	Apt6	Apt- High Rise (A, B)	120	Multi Fam
	Apt2	Apartment Subsidized (E)	122	Multi Fam
MH Park	MH Park	Mobile Home Park	130	Multi Fam

Health Care	Hcare4	Nursing Home	140	Health Care
	Hcare5	Assisted living	141	Health Care
	Hcare6	Converted Res	142	Health Care
	Hcare3	High-rise Retirement w/Dining	143	Health Care
	Apt5	Apt-rooming/B&B	230	Lodging
Hotel	Hotel1	Luxury	240	Lodging
	Hotel2	Full Service Upscale	240	Lodging
	Hotel5	Extended stay	250	Lodging
	Hotel3	Mid-Service	270	Lodging
Motel	Motel1	Motel Economy	271	Lodging
	Motel2	Motel Budget	272	Lodging
	Motel3	Motel Low Cost	273	Lodging
	Auto5	Car Wash Full Service	300	Auto
	Auto3	Car Wash Self Service	301	Auto
	Auto4	Car Wash-Auto	301	Auto
	Auto8	Serv Station-Gas	310	Auto
	Auto12	Cashier Booth-Gas	320	Auto
	Auto11	Serv Garg-Body Shop	330	Auto
	Auto6	Mini Lube	331	Auto
	Auto7	Service Center	332	Auto
	Auto2	Dealership/Maint/Service	350	Auto
Auto	Auto1	Dealership/Showroom	360	Auto
Parking	Park1	Parking Garage	370	Auto
	Park2	Parking-Basement Level	370	Auto
	Park3	Parking Lot	371	Auto
Office	Offc4	Office-Medical	410	Office Med
	Offc2	Office-Dental	409	Office Dental
	Offc10	Vet Clinic	411	Office Med
	Hcare7	Rehab Center	413	Office Med
	Offc11	Vet Clinic Converted/Res	414	Office Med
	Offc7	Office High Rise	420	Office
	Offc1	Office-General	421	Office
	Offc3	Office-Convert/Res	423	Office
	Offc8	Office Inter/Whse	424	Office
	Offc12	Office Retail Strip	425	Office
Bank	Bank1	Full-Service	430	Bank
	Bank2	Branch	431	Bank
Market	Mrk1	Conv. Store-Super	510	Retail
	Mrk2	Conv. Store	511	Retail
	Mrk4	Mom/Pop Grocery	512	Retail
	Mrk6	Super Market	513	Retail

Retail	Rtail1	General	520	Retail
	Rtail2	Drug Store	523	Retail
	Rtail7	Strip Center	521	Retail
	Rtail3	Show Room	522	Retail
	Rtail5	Discount	530	Retail
	Rtail6	Discount Warehouse	531	Retail
Lumber	Lumb1	Lumber-Showroom/Retail	532	Retail
Shopping Ctr	Shopc1	Shop Ctr/Neighborhood	550	Retail
	Shopc2	Shop Ctr/Mall	560	Retail
	Rtail8	Anchor Retail	561	Retail
	Rtail4	Department Store	570	Retail
B/B	B/B1	Barber/Beauty-Convert	580	Retail
	B/B2	Barber/Beauty-Convent	581	Retail
	L/mat3	Laundry/Cleaner Full Service	590	Retail
Laundry	L/mat2	Laundromat (Self)	591	Retail
Restaurant	Rest1	Fast Food	610	Restaurant
	Rest4	Truck Stop	611	Restaurant
	Rest2	Full Service	620	Restaurant
	Rest3	Cafeteria	620	Restaurant
Bar	Bar1	Neighborhood	630	Restaurant
	Bar2	Night Club	631	Restaurant
	Bar3	Rest/Lounge/Sports	632	Restaurant
	Rec1	Bowling Alley	710	Recreation
	Rec2	Gym/Athletic Club	720	Recreation
	Rec5	Health Club	721	Recreation
	Rec3	Skating Rink-Ice	730	Recreation
	Rec4	Skating Rink-Roller	730	Recreation
Theatre	Thea1	Movie Theatre	740	Recreation
	Thea4	Theatre-Play/Dining	741	Recreation
Recreation	Rec101	Golf-A	750	Recreation
	Rec102	Golf-B	750	Recreation
	Rec103	Golf-C	750	Recreation
	Rec104	Golf-D	750	Recreation
	Rec6	Club House/Golf	751	Recreation
	Rec13	Golf-Putt Putt	752	Recreation
	Rec12	Golf-Par 3	753	Recreation
	Rec7	Country Club	754	Recreation
	Rec8	Horse Arena	755	Recreation
	Rec	Community Recreation	770	Recreation
	Rec14	Theme Park	780	Recreation
	Rec16	Tennis/Racquet	790	Recreation

Religious	Church	Religious/Church	810	Gov/Service
Government	Gov1	Government-Post Office	821	Gov/Service
Schools	Sch	Schools	850	Gov/Service
Daycare	Dayc1	Day Care Conventional	851	Gov/Service
	Dayc2	Day Care-Converted Res	852	Gov/Service
Frat Organ	Frat Or	Fraternal Organizations	860	Gov/Service
Funeral	Funer1	Funeral Home Conventional	872	Gov/Service
	Funer2	Funeral Home Converted	873	Gov/Service
Comm	Comm1	Broadcasting Facility	890	Gov/Service
		Utility Facility	891	Gov/Service
Warehouses	Sto16	Mini-Warehouses	910	Storage/Whse
	Stor2	Golf Storage/Service	920	Storage/Whse
	Sto10	Truck Terminal	930	Storage/Whse
	Stor1	Warehouse General	940	Storage/Whse
	Stor5	Warehouse Distribution	950	Storage/Whse
	Flex	Multi-Purpose	960	Storage/Whse
Industrial	Indus1	Industrial Light	970	Storage/Whse
	Sto17	Hangars	980	Storage/Whse
	Sto15	Cold Storage	990	Storage/Whse

Source: County assessor

Given the limited number of sales in many of the individual land use categories, sales were grouped into broader categories for purposes of analysis (for example, all 100s, all 200s, and so on).

Each land use category was then examined to identify duplicate entries with the same PIN number. A unique PIN number may have multiple entries for a variety of reasons and the reason for the duplication determined how the issue was resolved. For example, all the information in multiple entries for the same PIN could be identical. In this case the entry simply appears in the file twice and one can be cut and pasted into a tab for deletion. Alternatively, all the information for multiple entries could be identical except for the sales amounts. This suggests the property was flipped in the year examined and both sales are kept in the file. However, if the sales price difference is $1,000 or less it is assumed the property is not being flipped and both entries are removed for the analysis.

The purpose of the analysis is to better understand the effect of the 5-year assessment cycle on the equity of the property tax by comparing the sales amount in each year with the estimated FMV of the property at the beginning of the cycle. Since Greenville County did its most recent reassessment in 2014, certified as of December 31, 2014, for implementation in tax year 2015, the assumption is there will not be much difference between appraised value and the sales amount in 2015, but by 2018 there will be more significant differences between the sales amount and the estimate of FMV.

The problem is that during that 5-year period there are several other factors that might influence the relationship between the estimated FMV and the sales amount of an individual property. For example, a property could sell in 2016 or 2017 and receive an updated estimate of FMV effective on December 31 of the year sold. So, for many properties the analysis could be comparing the sales amount with an updated estimate of FMV. Also, there could have been a change in zoning, a parcel could have been split or combined so it may not have existed at the beginning of the reassessment cycle, buildings could have been added, remodeled or demolished. All these factors can affect market value, which would be reflected

in the sales amount, but not the estimate of FMV from December 31, 2014. Finally, there could simply be data entry errors.

In other words, there are factors that could affect the difference between the sales amount and the estimated FMV other than the 5-year cycle. To the extent such factors exist they could result in appraisal/sales ratios that are outliers in the analysis (outlier ratios are very low or high ratios compared with other ratios in the sample). The accuracy of ratio study statistics used to evaluate assessment outcomes could be compromised by the presence of outliers. To minimize this affect, extreme appraisal/sales ratios of 2.5 and greater, or 0.5 or less, were eliminated.

After cleaning the data, the analysis was performed on 9,762 parcels that sold in 2015 (92 percent of the number of parcels in the original work file) and 8,339 parcels that sold in 2018 (81.6 percent of the number of parcels in the original file).

Three traditional *measures* of assessment uniformity were calculated for each land use and each year by an appraisal/sales ratio study. The first step was to determine the typical appraisal level for each land use category. This was calculated statistically using a measure of central tendency. The median appraisal/sales ratio is the preferred measure of central tendency in most ratio studies (Eckert 1990; Bell and Bowman 2008).

The median ratio is the midpoint, or middle ratio, when appraisal/sales ratios are arrayed in order of magnitude. It divides the ratios into two equal groups and is not affected by extreme values (Eckert 1990, 527). If the appraised value of each property exactly equaled the actual sales amount each appraisal/sales ratio would be 1.0 and the median ratio would be 1.0. If the median ratio is higher than 1.0 it means more parcels have appraised values higher than the actual sales amount and if the median ratio is less than 1.0 it means more parcels have appraised values lower than the actual sales price. The following table presents results for the analysis of sales files from 2015 and 2018.

In 2015, the median ratio was outside the IAAO target range for just three land uses. However, in terms of the measure of central tendency, the median appraisal/sales ratio for each land use, except for restaurants (code 600), is lower in 2018 than 2015 and only four are still in compliance with the IAAO standards. This means that appraisals are falling further from actual market value during the 5-year reassessment cycle, thereby undermining the equity of the property tax.

Table A10 Greenville County Summary by Land Use type, 2015 and 2018

	2015				2018			
Land Use	**Parcels**	**Median Ratio**	**COD**	**PRD**	**Parcels**	**Median Ratio**	**COD**	**PRD**
100	67	0.96	23.92	1.399	33	0.745	36.64	1.3
300	26	0.822	31.1	1.009	17	0.715	49.64	1.281
400	102	0.957	23.15	1.032	100	0.86	26.74	1.155
500	69	0.868	30.49	1.179	63	0.821	30.21	1.107
600	21	0.905	16.9	1.082	16	0.962	33.81	1.172
900	68	0.894	26.03	1.106	44	0.754	28.17	1.067
1100	8,388	0.941	12.38	1.024	7,236	0.783	16.31	1.012
1180	752	0.974	23.05	1.096	536	0.929	30.65	1.13
6800	38	0.997	35.52	1.102	40	0.907	36.69	1.189
9170	67	1.039	25.74	1.116	53	0.951	28.27	1.135
9171	53	0.949	19.03	1.105	61	0.861	29.49	1.093
Total Sales	**9,651**				**8,199**			

Source: Author's computations based on assessor sales files.

Note: COD is coefficient of dispersion. PRD is price related differential.

Uniformity of appraisal *between* land use categories can be considered by looking at variations in the median ratios for each group. Value uniformity relates to the consistency and equity of values. It is important to ensure, for example, that residential and commercial properties are appraised at similar percentages of market value. During the 5-year reassessment cycle, however, different property types are affected differently by market forces, which alters the distribution of property tax liabilities across land uses.

For example, in 2015, commercial properties (land use classes 300, 400, 500, 600, and 900) typically had lower median appraised/sales ratios than single family homes (1100), while vacant and improved agricultural land (9170 and 9171) had relatively high median ratios. In other words, appraisals for commercial properties were further from actual market values than appraisals for residential properties. Those relative ratios changed during the course of the reassessment cycles. By 2018, most commercial property types had relatively higher median ratios compared to improved residential properties. In other words, by 2018, the appraised values of improved residential properties were further from actual market values than most types of commercial property.

In addition, the spread between the highest and lowest median ratios was higher in 2018 than in 2015. Specifically, the highest median ratio in 2015 was for vacant farmland (1.039) and the lowest was for automobile commercial properties (class 300s with a median ratio of 0.822), a difference of 26.4 percent of the lowest median ratio. Alternatively, in 2018, the highest median ratio (0.927) was for restaurants and the lowest was for automobile related commercial properties at 0.715. This is a difference of 34.5 percent of the lowest median ratio. These results confirm the deterioration in equity in the property tax across land use categories between 2015, the first year of the new property values, and 2018, the fourth year of the reassessment cycle.

The next step in the process for understanding the effect of the 5-year assessment cycle on uniformity is to look at uniformity of appraisals *within* each land use category. The *coefficient of dispersion* (COD) is

the most used measure of within-class uniformity. The COD is based on the average absolute deviation of individual parcel ratios and the median ratio. The COD is calculated by dividing the average absolute deviation of the appraisal/sales ratio for each parcel and the median ratio by the median ratio and multiplying by 100 (Eckert 1990).

The International Association of Assessing Officers publishes target standards for uniformity within land use classes. Specifically, the following standards are recommended for the COD:

- Single-family homes and condominiums: CODs of 5 to 10 for newer or similar residences and 5 to 15 for older or more heterogeneous areas
- Income-producing properties: CODs of 5 to 15 in larger, urban areas and 5 to 20 in other areas
- Vacant land: CODs of 5 to 15 in very large areas with active markets, 5 to 20 in large to mid-size areas with slower development, or 5 to 25 in rural or seasonal recreation areas
- Rural residential, seasonal, and manufactured homes: CODs of 5 to 20
- Rural vacant land with little development: CODs of 5 to 30. (IAAO 2014)

Table A10 reports the COD for each land use class in 2015 and 2018. While the COD for residential property satisfies IAAO standards, the other CODs are not consistent with those standards, and sometimes significantly depart from the standards. The COD is higher across all land uses, except restaurants, in 2018 versus 2015 and generally exceed IAAO standards in both years. This suggests that within-class uniformity, or horizontal equity, declined during the 5-year reassessment cycle as appraisals became more dispersed relative to actual sales prices.

Improved residential properties accounted for nearly 87 percent of the parcels in the work file and had the best CODs in both years. This class nearly complied with IAAO standards. The next lowest COD in both years is for improved farmland and is close to IAAO standards in 2015. Among the land uses with the highest COD, or least uniform appraisals, in both years are vacant commercial land (35.52 and 36.69 in 2015 and 2018 respectively) and automobile related commercial properties (31.10 and 49.64 in 2015 and 2018 respectively).

A final aspect of assessment uniformity relates to equity between lower and higher value properties, or the vertical equity of appraisals. Appraisals are considered *regressive* if high-valued properties are under appraised relative to low-valued properties and progressive if high-valued properties are over appraised relative to low-valued properties.

The most frequent statistic for measuring assessment regressivity or progressivity is the price-related differential (PRD). The PRD provides a simple gauge of price-related bias. It is calculated by dividing the mean appraisal/sales ratio by the weighted mean. According to IAAO standards, the PRD should be between 0.98 and 1.03. PRDs below 0.98 tend to indicate assessment progressivity, the condition in which assessment ratios increase with price. PRDs above 1.03 tend to indicate assessment regressivity, in which assessment ratios decline with increasing prices (Eckert 1990; IAAO 2014).

The results are consistent across land use categories and across years. Most PRDs in 2015 exceed the standards set by IAAO indicating there is some degree of assessment *regressivity* across most land use categories**.** The exceptions are automobile related commercial properties (PRD of 1.009) and improved residential properties (PRD of 1.024). Multi-family and apartment residential properties have the highest PRD at 1.399. By 2018, improved residential property still had the lowest PRD (1.012) and meets the IAAO standard. Multi-family and apartment residential properties still have the highest PRD, and most regressive appraisals, of 1.300, albeit this is a slight improvement over the results in 2015. About half the land use categories had improved PRDs in 2018 compared to 2015, but all still exceed the IAAO standards, except for improved residential property.

In Greenville County there is strong and consistent evidence that the uniformity and fairness of appraisals relative to actual sales prices has eroded during the course of the 5-year reassessment cycle, thereby undermining the equity of the property tax.

Horry County

Geographic, Demographic, and Economic Characteristics

Horry County lies in the Pee Dee/Coastal region of South Carolina along the Atlantic Ocean and is home to Myrtle Beach, South Carolina. It is the fourth largest county in South Carolina, with a 2018 estimated population of 344,147. From April 1, 2010, to July 1, 2018, the population of Horry County increased 27.9 percent, the largest increase of the case study counties. Horry County had the highest percentage of residents 65 years old or older (24.0 percent).[42] It was near the middle of the group in terms of labor force participation with a rate with 57.8 percent of the population aged 16 or greater in the civilian labor force.

Horry County has a home ownership rate of 69.9 percent, the third highest of the case study counties. The county has the third highest median value of owner-occupied housing units at $166,500. It is near the middle of the case study counties in terms of median household income ($46,475) and per capita income is near the middle of the group at $25,804. Just 16.1 percent of the population lives below the poverty line, the fourth lowest level of any county in the study. Horry County had 4,520 building permits issued in 2018, the second highest of the case study counties, suggesting a vibrant real estate market in the county. It is a county with both urban and rural areas and has a population density of 237.5 people per square mile, the fifth highest in the study.

Property Tax Administration

There are more than 265,000 taxable real property parcels valued by the assessor in Horry County. In the 2018 reassessment, which was implemented in tax year 2019, residential properties were valued by a modified cost, or cost step-up, model. Marshall & Swift cost and depreciation tables were initially used to generate an estimate of *fair market value* (FMV), which was then modified, as needed, for each neighborhood based on market data including assessment/sales ratios for each neighborhood. Land values were estimated for each neighborhood based on actual vacant land sales. If there were insufficient vacant land sales, then land values were estimated based on land/improvement ratios from adjoining neighborhoods.[43]

Commercial properties were valued in the same manner as residential properties. Again, estimates of FMV were determined using Marshall & Swift cost tables and straight-line depreciation. These estimates were then refined with local market information. Similarly, land values were estimated for each neighborhood based on actual vacant land sales. If there were insufficient vacant land sales, then land values were estimated based on land/improvement ratios from adjoining neighborhoods.

In 2018 there were approximately 20,000–30,000 *Assessable Transfers of Interest* (ATIs) in Horry County. These properties had to be reappraised in 2018.

Because of the relatively dynamic real estate market in the county, many properties were not affected by the 15 percent assessment limit imposed by Act 388 because they were reappraised when they were

[42] These and the following data come from QuickFacts issued by the U.S. Census Bureau which can be found at https://www.census.gov/quickfacts/fact/map/US/PST045218.

[43] Bell and Bowman (2008) analyzed three different methods used to value land for property tax purposes when there are insufficient vacant land sales and found the land ratio method had the greatest variation based on examination of coefficients of dispersion and price related differentials.

transferred as a valid ATI. The new estimate of market value became effective December 31 of the year of the assessible transfer and took effect in the next tax year.

Also, because of the dynamic real estate market and Act 388, there are numerous requests for residency status in the county. The assessor created a Special Assessments staff to determine legal resident status because of the increase in residency applications after Act 388. Four full time staff currently work on processing 10,000–12,000 residency applications annually, and two full time employees review those determinations. Before Act 388, there was approximately a 20–30 percent difference in taxes between owner-occupied and nonowner-occupied residential properties. Following Act 388, the difference in taxes could vary by as much as 300 percent. There is significant potential for fraud in residential applications, as the tax benefits are so much greater if residency is established.

Composition of Property Tax Base

The first level of comparison in the case study counties is the composition of the property tax base. The county assessor provided data for real property in Table A11. The table shows the number of parcels, the aggregate appraised value, and the aggregate assessed value organized by property category. The table references real property valued by the assessor.

Table A11 Horry County Property Real Property Tax Base Composition by Property Type, 2018

Real Property Valued by County Assessor				
Property Classification	Total Appraised (Fair Market) Value ($)	% Total Appraised Value	Total Assessed Value ($)	% Total Assessed Value
Primary Residential	19,489,180,916	35.5	713,450,030	30.8
Other Residential	19,964,312,811	36.4	1,094,000,900	47.2
Agriculture (Private)	2,801,230,411	5.1	11,507,540	0.5
Agriculture (Corporate)	597,618,690	1.1	877,050	0.0
Commercial	11,728,691,030	21.4	488,446,680	21.1
Other	287,579,560	0.5	10,944,680	0.5
In Process	8,789,400	0.0	0	0.0
TOTAL	**54,877,402,818**	**100.0**	**2,319,226,960**	**100.0**

Source: County assessor

In Horry County, primary residential properties account for more than one-third of total appraised value and 30.8 percent of assessed value, which is the base for determining property tax liabilities. Other residential properties account for 36.4 percent of total appraised value in the county, but 47.2 percent of assessed value. Alternatively, commercial properties account for 21.4 percent of appraised value and 21.1 percent of total assessed value.

Effect of the 5-Year Reassessment Cycle

Legitimacy and fairness concerns require that the property tax be administered uniformly within each jurisdiction. Uniformity is important because values set for individual properties determine the distribution of responsibility for funding local government activities among taxpayers. Everyone should feel they are paying their fair share of the property tax burden.

A hypothesis presented here is that the quality of assessments deteriorates during the 5-year reassessment cycle because real estate markets grow at different rates for different types of properties and in different neighborhoods, thereby moving away from uniformity of assessment and undermining the equity of the property tax.

To test this hypothesis three measures of the quality of assessment were computed for the 2015 and 2018 files representing true arm's-length sales provided by the Horry County assessor.[44] Three different measures of assessment quality were compared for the two years—a measure of central tendency (the median appraisal/sales ratio), the dispersion of ratios around the median ratio, and the degree of bias in valuations based on whether the property is high-valued or low-valued.

The assessor in Horry County provided selected information for 10,589 parcels on the 2015 property tax roll, which were determined to be true sales, and 16,917 true sales in 2018. These numbers reflect the dynamic real estate market in Horry County during this period. Each file included a unique *Property Identification Number* (PIN) for each parcel, the land use class at the time of sale, the sales amount and date, the 2015 appraisal (the value estimated during the prior reassessment and certified as of December 31, 2013), and a jurisdiction code giving information on the location of the parcel.

For an assessment/sales ratio study, however, sales must be arm's-length sales, not just "true" sales. An arm's-length sale is one that is between unrelated parties who are not under abnormal pressure from each other or a third party (Eckert 1990). In other words, to determine the accuracy of appraisals with absolute certainty, it is necessary for all properties in the population to have been sold in arm's-length, open-market transfers between a willing seller and a willing buyer (IAAO 2013). Any transaction related to a foreclosure would not be an arm's length transaction.

The data files were then sorted and all properties with zero for their current taxable value were deleted as tax exempt properties. There was also a column in each data file called *Sales Description*. Most of the cells were blank, but a number had notes in this column that indicated the sale, while a "true" sale, was not an arm's-length sale. For example, some sales were for multiple parcels, or there was an indication of data issues, or the sale was identified as a sale after foreclosure. These non-arm's length sales were deleted from the file. The resulting 2015 Work File contained 9,024 sales presumed to be arm's-length sales and the 2018 Work File contained selected information on 11,819 arm's-length sales.

The Work Files were then sorted according to the land use code at the time of the sale. Horry County classifies property into 225 different land use codes. Individual land uses, or combinations of related land uses, were assigned individual tabs in an Excel file. The parcels in each land use category were then checked for duplicate entries with the same Parcel Identification Number. None were found.

The purpose of this analysis is to better understand the effect of the 5-year assessment cycle on the equity of the property tax by comparing the sales amount in each year with the estimated FMV of the property at the beginning of the cycle. Since Horry County did its most recent reassessment in 2013, certified as of December 31, 2013 for implementation in tax year 2014, the assumption is there will not be much difference between appraised value and the sales amount in 2015, but by 2018 there will be more

[44] 2015 was the second tax year of the just completed 5-year reassessment cycle and 2018 was the final year in that reassessment cycle.

significant differences between the sales amount and the estimate of FMV from the beginning of that reassessment cycle.

The problem is that during that 5-year period there are several other factors that might influence the relationship between the estimate of FMV and the sales amount of an individual property. For example, a property could sell in 2016 or 2017 and receive an updated estimate of FMV effective December 31 of the year sold. So, for many properties the analysis could be comparing the sales amount with an updated estimate of FMV. Also, there could have been a change in zoning, a parcel could have been split or combined so it may not have existed at the beginning of the reassessment cycle, buildings could have been added, remodeled, or demolished, all of which affect market value and would be reflected in the sales amount, but not the estimate of FMV from December 31, 2013. Finally, there could simply be data entries that were mistakes.

In other words, there are factors that could affect the difference between the sales amount and the estimated FMV other than the 5-year cycle. To the extent such factors exist, they result in appraisal/sales ratios that are outliers for purposes of this analysis (outlier ratios are very low or high ratios compared with other ratios in the sample). The accuracy of ratio study statistics used to evaluate assessment outcomes could be compromised by the presence of outliers (IAAO 2013). To minimize this effect, extreme appraisal/sales ratios of 2.5 and greater, or 0.5 or less, were eliminated.

In addition to properties that have appraisal/sales ratios that are outliers, some parcels in 2015 and more parcels in 2018 did not exist in 2013, when the new values were implemented. Both data sets identify those parcels by writing NULL in the current land use field. These parcels were deleted since there was no value from the previous reassessment effort to compare with the sales price in 2015 or 2018.

After cleaning the data, and because several land use categories did not have sufficient sales for this analysis, results are presented based on the analysis of 6,922 parcels that sold in 2015 (76.7 percent of the number of parcels in the original file) and 10,301 parcels that sold in 2018 (87.2 percent of the number of parcels in the original file).

Three traditional measures of assessment uniformity were calculated for each land use each year by an appraisal/sales ratio study. The first step is to determine the typical appraisal level for each land use category in the analysis. This is calculated statistically by a measure of central tendency. The median appraisal/sales ratio is the preferred measure of central tendency in most ratio studies. (Eckert 1990; Bell and Bowman 2008).

The median ratio is the midpoint, or middle ratio, when appraisal/sales ratios are arrayed in order of magnitude. It divides the ratios into two equal groups and is not affected by extreme values (Eckert 1990). If the appraised value of each property exactly equaled the actual sales amount each appraisal/sales ratio would be 1.0 and the median ratio would be 1.0. If the median ratio is higher than 1.0 it means more parcels have appraised values higher than the actual sales amount and if the median ratio is less than 1.0 it means more parcels have appraised values lower than the actual sales price. The following table presents results for the analysis of sales files from 2015 and 2018.

Table A12 Horry Summary by Land Use type, 2015 and 2018

	2015				2018			
Land Use	**Parcels**	**Median Ratio**	**COD**	**PRD**	**Parcels**	**Median Ratio**	**COD**	**PRD**
100	656	0.931	25.2	1.085	661	0.788	27.68	0.951
101	2,816	0.915	13.43	1.026	3,866	0.807	13.45	1.009
102–104	51	0.982	19.88	1.041	63	0.829	26.06	1.005
107	2,747	0.918	12.41	1.011	4,798	0.797	14.14	0.982
109	257	0.903	14.48	1.019	399	0.78	13.18	1.002
110	117	0.884	14.29	1.034	165	0.75	12.02	1.004
112	21	1.064	31.65	1.229	41	0.821	29.71	1.109
113	59	1.115	30.23	1.564	62	0.896	25.79	1.068
123	20	0.924	25.3	1.098	20	0.954	34.2	1.113
126–127	18	0.91	3.98	0.998	18	0.854	10.54	0.961
211–212	8	0.783	31.2	1.151	7	0.771	22.35	0.942
300	39	1.205	32.73	1.045	49	0.933	34.65	1.018
301	25	1.013	30.21	1.122	28	0.837	21.44	1.054
315–317	NA	NA	NA	NA	6	0.705	15.76	0.978
319–348	29	1.108	30.12	1.35	31	0.95	31.28	1.045
349–356	17	0.829	31.41	1.266	30	0.986	32.15	1.127
366–374	27	1.124	32.84	0.966	38	0.838	23.77	1.089
396–399	15	0.959	30.1	1.447	19	0.765	29.79	1.165
TOTAL	**6,922**				**10,301**			

Source: Author's computations based on assessor sales files.

Note: COD is coefficient of dispersion. PRD is price related differential.

Uniformity of appraisal *between* land use categories can be considered by looking at variations in the median ratios for each group. Value uniformity relates to the consistency and equity of values. It is important to ensure, for example, that residential and commercial properties are appraised at similar percentages of market value. For example, in 2015, 14 of the 18 land use groups reported in the table have a median appraisal/sales ratio within 15 percent of the perfect ratio of 1.0. The best ratio is 0.982 for Multi-Family Residential properties (102–104) and the worst ratio is 0.783 for Garden and High-Rise Apartments. Vacant and improved farmland, vacant commercial properties, some improved commercial properties, and warehouses all had appraisal/sales ratios greater than 1.0.

By 2018, the median ratio had fallen for 15 of the 18 land use categories reported in the table. These findings document the decline in the median sales price relative to appraised value during this period indicating sales values are moving further from the appraised values that are used for determining property tax liabilities. Only 6 of the 18 land uses had appraisal/sales ratios within 15 percent of the IAAO target of 1.0 in 2018. Local governments are foregoing significant property tax revenues they would otherwise collect if the values used to calculate tax liabilities were closer to actual market prices and the relative contribution of individual land use categories to property tax liabilities has shifted as a result. There is strong and consistent evidence that uniformity and fairness of assessments eroded during the 5-year reassessment cycle, thereby undermining the equity of the property tax.

The second step in the process for understanding the effect of the 5-year assessment cycle on uniformity is to look at uniformity of appraisals *within* each land use category. The coefficient of dispersion (COD) is the most used measure of within-class uniformity. The COD is based on the average absolute deviation of individual parcel ratios and the median ratio. The COD is calculated by dividing the average absolute deviation of the appraisal/sales ratio for each parcel and the median ratio by the median ratio and multiplying by 100 (Eckert 1990).

The International Association of Assessing Officers publishes target standards for uniformity within land use classes. Specifically, the following standards are recommended for the COD:

- Single-family homes and condominiums: CODs of 5 to 10 for newer or similar residences and 5 to 15 for older or more heterogeneous areas
- Income-producing properties: CODs of 5 to 15 in larger, urban areas and 5 to 20 in other areas
- Vacant land: CODs of 5 to 15 in very large areas with active markets, 5 to 20 in large to mid-size areas with slower development, or 5 to 25 in rural or seasonal recreation areas
- Rural residential, seasonal, and manufactured homes: CODs of 5 to 20
- Rural vacant land with little development: CODs of 5 to 30 (IAAO 2014).

Table A12 reports the COD for each land use class in 2015 and 2018. CODs for individual land use categories somewhat exceeded IAAO standards in both 2015 and 2018 and only six of 18 CODs met IAAO standards in 2015 and 2018. The change in CODs from 2015 to 2018 show mixed results. For eight land use categories the CODs improve somewhat from 2015 through 2018 and 8 land use categories have CODs higher in 2018 than in 2015 reflecting deterioration in uniformity within those land use categories. This suggests that within-class uniformity declined in almost half the land use categories reported in the table and improved in the other half.

Single family residential properties and fee simple condominiums accounted for 80 percent of the parcels examined in 2015 and 84 percent of parcels examined in 2018. Each had the lowest CODs in 2015 and were among the lowest five CODs in 2018. Both land uses satisfy the IAAO standards.

A final aspect of assessment uniformity relates to equity between lower and higher value properties. Appraisals are considered *regressive* if high-valued properties are under appraised relative to low-valued properties and progressive if high-valued properties are over appraised relative to low-valued properties.

The most frequent statistic for measuring assessment regressivity or progressivity is the price-related differential (PRD). The PRD provides a simple gauge of price-related bias. It is calculated by dividing the mean appraisal/sales ratio by the weighted mean. According to IAAO standards, the PRD should be between 0.98 and 1.03. PRDs below 0.98 tend to indicate assessment progressivity, the condition in which assessment ratios increase with price. PRDs above 1.03 tend to indicate assessment regressivity, in which assessment ratios decline with price (Eckert 1990; IAAO 2014).

In 2015, four of the 18 land use categories reporting results in Table 2 had PRDs that were consistent with IAAO standards. The highest PRD was 1.564 for improved agricultural land, indicating regressive appraisals within this category. The second highest PRD was 1.447 for warehouses. The lowest PRD was 0.966 for some miscellaneous and multi-purpose commercial properties, indicating somewhat progressive appraisals across these land use categories.

By 2018, six of the 18 land uses reported had PRDs that were consistent with the IAAO standards and the PRDs were more closely arranged around the IAAO standards. The highest PRD was 1.165 for warehouses, reflecting only slight regressivity in appraisals. The lowest PRD was 0.942 for Garden and High-Rise Apartments, indicating slight progressivity and reversing the slight regressivity seen in 2015.

In conclusion, in the context of deteriorating equity in the property tax in Horry County from 2015 to 2018 the results are mixed. The deterioration in median appraisal/sales ratios during the period are consistent and significant. Over time sales move further and further from the FMV determined for individual properties at the beginning of the reassessment cycle. Alternatively, from 2015 through 2018 about half the land use categories experienced greater dispersions of appraisal/sales ratios indicating a decline in uniformity and horizontal equity, while about half the land use categories experienced improvements in CODs suggesting somewhat improved within-class uniformity and equity. Finally, in terms of the regressivity or progressivity of appraisals within land use groups 13 of the 18 land use categories experienced improvements from 2015 to 2018.

Orangeburg County

Geographic, Demographic, and Economic Characteristics

Orangeburg County lies in the Midlands region of South Carolina. It is near the middle of counties in South Carolina in terms of population with a 2018 estimated population of 86,934. Population in Orangeburg County declined from April 1, 2010, to July 1, 2018, by 6.0 percent during this period, the second greatest decline of the 10 case study counties. Of the ten case study counties, Orangeburg County had the third highest percentage of residents 65 years old or older (19.7 percent). [45] It has the third lowest labor force participation rate of 53.7 percent of the population aged 16 or greater in the civilian labor force.

Orangeburg County has the fourth highest home ownership rate of the case study counties at 68.6 percent. The county has the second lowest median value of owner-occupied housing units of $92,700, the second lowest median household income of the case study counties of $34,943 and has the second lowest per capita income of $19,489. The county has the second highest percent of population living below the poverty line of the case study counties with 24.4 percent. Orangeburg County had 59 building permits issued in 2018, the second lowest of the case study counties, suggesting a relatively stable real estate market in the county. It is classified as a rural county, with a population density of just 83.6 people per square mile, the third lowest in the study.

Property Tax Administration

The assessor values approximately 65,000 taxable real property parcels in Orangeburg County. There are generally between 700 and 750 sales annually. The most recent reassessment was in 2015 and took effect in tax year 2017. Residential properties are valued by the sales approach to valuation using a Computer Assisted Mass Appraisal (CAMA) regression model calibrated using actual sales.[46] The results are confirmed with a Marshall & Swift-based cost estimate for the average house in each neighborhood with land valued by analyzing vacant land sales.

For commercial properties, comparable sales could be used, but they are very rare. Generally, commercial properties are valued using the cost approach and cost and depreciation tables from Marshall & Swift. Land is valued based on actual vacant land sales. If there are insufficient vacant land sales, land values are considered from other neighborhoods or jurisdictions.

[45] These and the following data come from QuickFacts issued by the U.S. Census Bureau which can be found at https://www.census.gov/quickfacts/fact/map/US/PST045218.

[46] CAMA is typically used to appraise only certain types of real property. Multiple regression analysis is a type of statistical analysis.

There are approximately 1,000 *Assessable Transfers of Interest* (ATIs) in Orangeburg County annually. There has not been an increase in the number of applications for residency as a result of Act 388, and few properties are subject to the 15 percent appraisal limit.

No additional information was provided.

Richland County

Geographic, Demographic, and Economic Characteristics

Richland County lies in the Midlands region of South Carolina. It is the second most populated county in South Carolina with a 2018 estimated population of 414,576. Population in Richland County was relatively stable from April 1, 2010 to July 1, 2018 and increased by 7.8 percent during this period. Of the ten case study counties, Richland County had the lowest percentage of residents 65 years old or older (12.7 percent). [47] It had the third highest labor force participation rate of 63.6 percent of the population aged 16 or greater in the civilian labor force.

Richland County has the lowest home ownership rate of the case study counties at 59.0 percent. The county is in the middle of the case study counties with regard to the median value of owner-occupied housing units which is $154,100, the fourth highest median household income of the case study counties of $52,082 and has the fourth highest per capita income of $28,018. The county is among the middle of the case study counties with 16.9 percent of the population living below the poverty line. Richland County had 2,644 building permits issued in 2018, right in the middle of the case study counties, suggesting a relatively dynamic real estate market in the county. It is classified as an urban county, with a population density of 507.9 people per square mile, the second highest in the study.

Property Tax Administration

The assessor values approximately 170,000 taxable real property parcels in Richland County. There are approximately 20,000 sales annually. The most recent reassessment was in 2018 and took effect in tax year 2019. Residential properties are valued using the cost approach. Property characteristics are run through a cost model and valued based on local estimates of building costs. Effective age and depreciation tables are constructed using information for estimates of local averages. The results are then compared to a market index based on actual sales, which are calculated for 1,200 neighborhoods using five years of sales data.

Commercial properties are valued using the income approach and market information if available. Gross income is compared with expenditure ratios for each type of commercial property and then adjusted for vacancy rates. If actual income information is not provided, commercial properties are valued in terms of potential income using average information on rents and vacancy rates for each category of commercial property. Capitalization rates for commercial properties are purchased from COSTAR for use in the metropolitan area.

There were 11,237 *Assessable Transfers of Interest* (ATIs) in Richland County in 2018 and it requires significant staff resources to process them. Similarly, there has been an increase in the number of applications for residency and the office devotes significant resources to processing and verifying residency applications.

[47] These and the following data come from QuickFacts issued by the U.S. Census Bureau which can be found at https://www.census.gov/quickfacts/fact/map/US/PST045218.

Composition of Property Tax Base

The first level of comparison in the case study counties is the composition of the property tax base. Data for Table A13 was provided by the county assessor and/or the county auditor. The county auditor reported the number of parcels, the aggregate appraised value, and the aggregate assessed value by property use category according to classifications defined in the state constitution. The top panel in the table references real property valued by the assessor and the lower panel references other real property valued by the Department of Revenue and personal property (including automobiles) valued by the county auditor and the Department of Revenue.

Table A13 Richland County Property Tax Base Composition by Property Type, 2018

Real Property Valued by the County Assessor				
Property Classification	Total Appraised (Fair Market) Value ($)	% Total Appraised Value	Total Assessed Value ($)	% Total Assessed Value
Primary Residential	15,312,446,500	51.1	612,497,780	42.4
Other Residential	NA	NA	NA	NA
Agriculture (Private)	41,662,400	0.1	1,666,940	0.1
Agriculture (Corporate)	3,530,400	0.0	211,820	0.0
Commercial/Other	9,333,863,700	31.2	560,035,040	38.7
Subtotal	**24,691,503,000**	**82.5**	**1,174,411,580**	**81.2**
Real and Personal Property Valued by the County Auditor and State Department of Revenue				
Property Classification	Total Appraised (Fair Market) Value	% Total Appraised Value	Total Assessed Value	% Total Assessed Value
Personal Property (Vehicles)	2,645,630,160	8.8	170,730,590	11.8
Other Personal Property	83,658,810	0.3	8,423,180	0.6
FILOT	NA	NA	NA	NA
Manufacturing	512,013,803	1.7	50,722,780	3.5
Utility	1,280,101,805	4.3	134,411,780	9.3
Business Personal Property	654,535,651	2.2	70,439,140	4.9
Railroads, Private Carlines, Airlines, and Pipelines	76,083,407	0.3	7,227,924	0.5
Subtotal	**5,252,023,636**	**17.5**	**271,224,804**	**18.8**
TOTAL	**29,943,526,636**	**100.0**	**1,445,636,384**	**100.0**

Source: County assessor and/or county auditor

When looking at real property in Richland County we see that real property valued by the assessor accounts for 82.5 percent of appraised real property value in the county, and 81.2 percent of assessed value. Primary residential properties account for more than 51 percent of appraised value, but just 42 percent of assessed value, which is the base for determining property tax liabilities. Alternatively, manufacturing and utility real and personal property account for 6 percent of *fair market value* (FMV) in the county, but 12.8 percent of assessed value. Similarly, commercial properties account for 31 percent of appraised value, but nearly 39 percent of assessed value.

No additional data was provided.

Sumter County

Geographic, Demographic, and Economic Characteristics

Sumter County lies in the Midlands region of South Carolina. It is the fifteenth most populous county in South Carolina with a 2018 estimated population of 106,512. Of the ten case study counties, Sumter County had the fifth lowest percentage of residents 65 years old or older (16.4 percent). [48] It had the seventh lowest labor force participation rate of 56.9 percent of the population aged 16 or greater in the civilian labor force.

Sumter County had the third lowest median value of owner-occupied housing units at $113,200, the third lowest median household income of $41,946 and had the third lowest per capita income of $21,733. The county had the third highest proportion of its population living below the poverty line at 19.1 percent. Sumter County had 279 building permits issued in 2018, the fourth lowest of the case study counties, suggesting a relatively stable real estate market. It is classified as a rural county, with a population density of just 161.4 people per square mile, the fourth lowest in the study.

Property Tax Administration

The assessor values approximately 64,000 taxable real property parcels in Sumter County. There are generally about 1,500 to 2,000 *Assessible Transfer of Interests* (ATIs) in the county annually. There are relatively few applications for residency, and applicants must provide a South Carolina driver's license and a utility bill to document residency.

The most recent reassessment was in 2015 and took effect in tax year 2016. Residential properties are valued using the comparable sales approach. In this approach, the property being appraised is compared with similar properties that have recently sold. The sales prices of the comparables are then adjusted for differences as compared with the property being valued. The market value of the property being assessed is then determined based on the modified sales prices of the comparable properties. Sales prices of comparable properties are usually considered the best evidence of market value (Eckert 1990).

For commercial properties, the income approach to valuation is typically used. Marshall & Swift income and expense tables are used to estimate gross and net income for commercial properties. Depreciation tables from Marshall & Swift are then used to adjust the estimated values for economic, functional, and physical depreciation. Land values are based on actual sales of vacant land in subdivision developments in the southern portion of the county, while land values in the northern part of the county are relatively stable and change little.

[48] These and the following data come from QuickFacts issued by the U.S. Census Bureau which can be found at https://www.census.gov/quickfacts/fact/map/US/PST045218.

Composition of the Property Tax Base

The first level of comparison in the case study counties is the composition of the property tax base. The county auditor provided data shown in Table A14. The table shows the number of parcels, the aggregate appraised value, and the aggregate assessed value for real property in each land use category according to the classifications defined in the state constitution.

Table A14 Sumter Property Tax Base Composition by Property Type, 2018

Real Property Valued by the County Assessor				
Property Classification	Total Appraised (Fair Market) Value ($)	% Total Appraised Value	Total Assessed Value ($)	% Total Assessed Value
Primary Residential	2,967,635,000	63.0	118,705,400	53.3
Other Residential	531,368,185	11.3	32,882,091	14.8
Agriculture (Private)	68,502,750	1.5	2,740,110	1.2
Agriculture (Corporate)	6,352,166	0.1	381,130	0.2
Commercial/Other	1,133,389,317	24.1	68,003,359	30.5
TOTAL	**4,707,247,418**	**100.0**	**222,712,090**	**100.0**

Source: County assessor

When looking at real property in Sumter County, primary residential properties account for nearly two-thirds of appraised real property value, but just over one-half of total assessed value, which is the base for determining property tax liabilities. Alternatively, commercial and other properties account for 24.1 percent of appraised value, but 30.5 percent of total assessed value.

No additional data was provided.

York County

Geographic, Demographic, and Economic Characteristics

York County lies in the Piedmont region of South Carolina along the North Carolina border. It is the seventh largest county in South Carolina with a 2018 estimated population of 274,118. From April 1, 2010, to July 1, 2018, the population in York County increased by 21.3 percent, the second highest among the case study counties. York County had the second lowest percentage of residents 65 years old or older (14.3 percent). [49] It had the highest labor force participation rate of the 10 case study counties at 66.3 percent of the population aged 16 or greater in the civilian labor force.

York County had the second highest home ownership rate (71.0 percent) of the 10 case study counties. Similarly, York County had the second highest median value of owner-occupied housing units at $173,600, the highest median household income of $59,394 and the second highest per capita income of $30,387. Just 11.2 percent of the population lives below the poverty line, the lowest level of any county in

[49] These and the following data come from QuickFacts issued by the U.S. Census Bureau which can be found at https://www.census.gov/quickfacts/fact/map/US/PST045218.

the study. York County had 2,692 building permits issued in 2018, the fourth highest of the case study counties, suggesting a relatively vibrant housing market. It is an urban county, with a population density of 332.2 people per square mile, the fourth highest in the study.

Property Tax Administration

The assessor values approximately 121,000 real property parcels in York County. The county is implementing a new CAMA system for the 2019 reassessment, when residential properties are being valued by the cost approach. The cost approach is based on the concept that the value of the property being appraised is the value of the land plus the cost of replacing the improvements, less depreciation for physical deterioration, functional obsolescence, and changes in the economy or neighborhood. Tables that reflect construction costs are applied to the characteristics of the structure being valued and the resulting value is reduced using depreciation tables that reflect physical, functional, and economic depreciation.

Standard Marshall & Swift cost and depreciation tables are initially used by the appraiser, values are then adjusted for the square footage and quality of individual properties. The resulting cost estimates are then refined based on analysis of actual sales/market observations and regression analysis. These market adjustments are applied to different types or categories of property being valued, not neighborhoods. Land values are determined based on actual vacant land sales in each neighborhood and then added to the estimated replacement cost of the structures to determine the estimated *fair market value* (FMV) of the subject property.

Commercial properties are valued based on the income approach, if a business is willing to share its income and expense information. If not, commercial properties are valued based on a cost model using Marshall & Swift cost and depreciation tables. Land values are determined by actual vacant land sales. The county receives assistance from QS1 (a data company in Spartanburg) with reassessments, storage of the property tax roll, and production of various reports or data queries.

In 2018, there were approximately 7,500 arms-length real estate sales, or just over 6 percent of total real estate on the property tax roll. There were another 5,500 real estate transfers that were not arms-length. In other words, there were approximately 13,000 *Assessable Transfers of Interest* (ATIs) in York County. These properties had to be reappraised in 2018.

Because of the relatively dynamic real estate market in the county, many properties were not affected by the 15 percent assessment limit imposed by Act 388, because they are reappraised when transferred as a valid ATI. The new estimate of market value becomes effective December 31 of the year of the assessible transfer and takes effect in the next tax year. Also because of the dynamic real estate market there are numerous requests for residency status in the county.[50] There are three full time staff in the assessor's office working on processing applications for residency in the county.

Composition of the Property Tax Base

The first level of comparison in the case study counties is the composition of the property tax base. The county auditor provided data in Table A15 reporting the number of parcels, the aggregate appraised value, and the aggregate assessed value for real property for each land use category according to classifications defined in the state constitution. The lower panel references other real property valued by the Department of Revenue and personal property (including automobiles) valued by the county auditor and the Department of Revenue, but no data on appraised values were provided.

[50] The number of applications for residency status has grown substantially because of Act 388 and the exemption of the education operating and maintenance portion of the property tax.

Table A15 York County Property Tax Base Composition by Property Type, 2018

Real Property Valued by the County Assessor				
Property Classification	Total Appraised (Fair Market) Value ($)	% Total Appraised Value	Total Assessed Value ($)	% Total Assessed Value
Primary Residential	13,624,904,335	68.60	544,365,705	39.10
Other Residential	1,930,049,582	9.70	114,487,455	8.20
Agriculture (Private)	49,271,549	0.20	1,960,690	0.10
Agriculture (Corporate)	1,825,540	0.00	109,536	0.00
Commercial/Other	4,263,392,258	21.50	242,674,776	17.40
Subtotal	**19,869,443,264**	**100.00**	**903,598,162**	**64.90**
Real and Personal Property Valued by the County Auditor and Dept of Revenue				
Property Classification	Total Appraised (Fair Market) Value	% Total Appraised Value	Total Assessed Value	% Total Assessed Value
Personal Property (Vehicles)	NA	NA	134,972,244	9.70
Other Personal Property	NA	NA	13,886,858	1.00
FILOT	NA	NA	67,924,495	4.90
Manufacturing	NA	NA	41,639,940	3.00
Utility	NA	NA	195,551,393	14.00
Business Personal Property	NA	NA	35,366,890	2.50
Railroads, Private Carlines, Airlines, and Pipelines	NA	NA	Included with Utilities	NA
Subtotal	NA	NA	**489,341,820**	**35.10**
TOTAL	NA	NA	**1,392,939,982**	**100.00**

Source: County assessor and/or county auditor

When looking at real property in York County the real property valued by the assessor accounts for nearly 65 percent of the assessed value of the property tax base. Slightly more than 39 percent of the assessed property tax base is owner-occupied residences and 17.4 percent of assessed value is commercial property. That portion of the property tax base valued by the auditor and Department of Revenue accounts for just over 35 percent of assessed value. Utilities account for 14 percent of the assessed value and vehicles account for almost 10 percent of assessed value in the county.

Effect of the 5-Year Reassessment Cycle

Legitimacy and fairness concerns require that the property tax be administered uniformly within each jurisdiction. Uniformity is important because values set for individual properties determine the distribution of the responsibility for funding local government activities among taxpayers. Everyone should feel they are paying their fair share of the property tax burden.

A hypothesis presented here is that the quality of assessments deteriorates during the 5-year reassessment cycle because real estate markets grow at different rates for different types of properties and in different neighborhoods, thereby moving away from uniformity of assessment and undermining the equity of the property tax.

To test this hypothesis the quality of assessments was computed for the 2015 and 2018 files of true arms-length sales that were provided by the York County assessor.[51] Three different measures of assessment quality were compared for the two years—a measure of central tendency (the median appraisal/sales ratio), the dispersion of ratios around the median ratio, and the degree of bias in valuations based on whether the property is *high-valued* or *low-valued*.

The 2015 file of arms-length sales included information on 5,988 sales and the 2018 file included 7,524 parcels that sold that year. This reflects the dynamic real estate market in York County during this period. Each file included a unique *Property Identification Number* (PIN), the land use class, the book and page number for the parcel, the sales date, the sales amount, the appraisal, the land value, and the improvement value for each parcel.

The parcels in each file had to be rearranged for the analysis, which was carried out for each land use type, to the extent there were enough sales for the analysis. To create the work file for the analysis, the first step was to sort all the parcels by the land use code. Then each category of property was pasted into its own tab in an Excel file. One tab included all properties with an exempt land use code, but these were not included in the analysis. The land use classifications are described in Table A16.

Each land use category was then examined to identify duplicate entries with the same PIN number. A unique PIN number may have multiple entries for a variety of reasons and the reason for the duplication determined how the issue was resolved. For example, all the information in each of multiple entries for the same PIN could be identical. In this case, the entry simply appears in the file twice and one can be cut and pasted into a tab for deletion. Alternatively, all the information for multiple entries could be identical except the sale date and sale amount. This suggests the property was flipped in the year examined and both sales are kept in the file. Similarly, all information could be the same for two entries with the same PIN, but the Book and Page number are different. This suggests there are in fact two properties and both entries are kept in the file. Finally, all information in duplicate entries could be the same, but the appraised value differs. In this case, both entries would be shifted to the deleted file because there is no way to know which appraised value should be used in the analysis.

The data was reexamined, and it was discovered that some parcels with land use codes for improved property had zero in the improvement column. For example, several parcels in land use classifications CI, RI, RIL, and RIO had zero listed for improvement value even though they were supposed to be developed. It was not clear if this was just a data entry mistake or a mistake in classifying the land use for the property. In any case, these properties were moved to the deleted file.

[51] 2015 was the first tax year to use the new values produced in the 2014 reassessment and 2018 was the fourth year in the current 5-year assessment cycle.

Table A16 York County Land Use Classification Codes

Class	Description	Assessment Ratio
CI	COMMERCIAL IMPROVED	6%
CV	COMMERCIAL VACANT	6%
EI	EXEMPT IMPROVED	N/A
EIG	EXEMPT IMPROVED GOVERNMENT	N/A
EV	EXEMPT VACANT	N/A
EVG	EXEMPT VACANT GOVERNMENT	N/A
FI	FARM IMPROVED	6%
FUC	FARM USE COMMERCIAL	6%
FUV	FARM USE VALUE	4%
FV	FARM VACANT	6%
FVH	RES. HOMESTEAD ADJUSTED	N/A
MKT	MARKET VALUE	N/A
MI	MANUFACTURING IMPROVED	—
MV	MANUFACTURING VACANT	—
RI	RESIDENTIAL IMPROVED	6%
RIL	RESIDENTIAL IMPROVED LETTER	6%
RIO	RESIDENTIAL IMPROVED OCCUPIED	4%
RIOP	RESIDENTIAL IMPROVED PRORATED	—
RIOZ	OWNER OCCUPIED/NO EXEMPTIONS	4%
RV	RESIDENTIAL VACANT	6%
RVH	RESIDENTIAL VACANT HOMESTEAD ADJUSTED	—
UTI	UTILITY IMPROVED	—
UTV	UTILITY VACANT	—

Source: Data provided by the county assessor.

There is a quirk in South Carolina law that added a complication when interpreting the data in certain land use categories. Specifically, when a property receiving some sort of preferential treatment is sold, the preferential treatment immediately stops, and the parcel is reclassified until the new owner applies for reinstatement of the preferential treatment. In this circumstance, the assessor must determine if the property is still eligible for the preferential treatment. For example, RIO is the code for owner-occupied residential property, which is taxed at 4 percent of market value. When such a property sells, it is reclassified as RIL, which is valued at 6 percent of value. The new owner then must reapply for the owner-occupied classification to be taxed at 4 percent if in fact the property will remain owner-occupied. This reclassification process takes time, especially since there has been a significant increase in applications for residential classification following passage of Act 388. As a result, the land use

categories RIL and FV include properties that might eventually be classified as FUV or RIO. [52] Finally, for purposes of this analysis, all properties in the land use category RV that had entries in the Improved Value column were moved to the land use code RIO for analysis.[53]

The purpose of this analysis is to better understand the effect of the 5-year assessment cycle on the equity of the property tax by comparing the sales amount in each year with the estimated FMV of the property at the beginning of the 5-year assessment cycle. Since York County did its most recent reassessment in 2014, certified as of December 31, 2014, for implementation in tax year 2015, the assumption is there will not be much difference between appraised value and the sales amount in 2015, but by 2018 there will be more significant differences between the sales amount and the estimate of FMV.

The problem is that during that 5-year period there are several other factors that might influence the relationship between the estimate of FMV and the sales amount of an individual property. For example, a property could sell in 2016 or 2017 and receive an updated estimate of FMV effective December 31 of the year sold. So, for many properties the analysis would be comparing the sales amount with an updated estimate of FMV. Also, there could have been a change in zoning, a parcel could have been split or combined so it may not have existed at the beginning of the reassessment cycle, buildings could have been added, remodeled, or demolished, all of which would affect market value and would be reflected in the sales amount, but not the estimate of FMV as of December 31, 2014.

In other words, there are factors that could affect the difference between the sales amount and the estimated FMV other than the 5-year cycle. To the extent such factors exist they could result in appraisal/sales ratios that are outliers in the analysis and distort the findings. To minimize this affect, extreme appraisal/sales ratios of 2.5 and greater, or 0.5 or less were eliminated.

After cleaning the data, the analysis was performed on 5,771 parcels that sold in 2015 (96.4 percent of the number of parcels in the original) and 7,170 parcels that sold in 2018 (95.3 percent of the number of parcels in the original file).

Three traditional *measures* of assessment uniformity were calculated for each land use and each year by an appraisal/sales ratio study. The first step was to determine the typical appraisal level for each land use category. This is calculated statistically by a measure of central tendency. The median appraisal/sales ratio is the preferred measure of central tendency in most ratio studies (Eckert 1990; Bell and Bowman 2008).

The median ratio is the midpoint, or middle ratio, when appraisal/sales ratios are arrayed in order of magnitude. It divides the ratios into two equal groups and is not affected by extreme values (Eckert 1990). If the appraised value of each property exactly equaled the actual sales amount each appraisal/sales ratio would be 1.0 and the median ratio would be 1.0. If the median ratio was higher than 1.0 it means more parcels have appraised values higher than the actual sales amount and if the median ratio is less than 1.0 it means more parcels have appraised values lower than the actual sales price.

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[52] More than three-fourths of the parcels in each sales file were in the RIL use code. The majority of parcels were owner-occupied houses that lost their preferential treatment at time of sale and were reclassified as RIL. As the new owners apply for residency status the properties will be reclassified as RIO. However, for the purposes here there is no way to determine which parcels in the RIL use class will ultimately be reclassified as owner-occupied. They were all left in the RIL class for purposes of analysis.

[53] RV is the code for Residential Vacant so each parcel should have a zero in the Improved Value column. However, given the rapid development in York County, properties may have been developed, with the construction of a new home, and sold before the land use code could be changed to RIO, if the new owner applies for it. As a result, many vacant lots have improvement values listed.

Table A17 presents results of the analysis of sales files from 2015 and 2018. In terms of the measure of central tendency, the median appraisal/sales ratio for each land use was within ten percent of the IAAO target of 1.0 and they all improved from 2015 to 2018 except for improved commercial properties where the ratio was essentially unchanged and vacant residential properties where the ratio declined. This suggests that overall appraisal/sales ratios in 2018 are moving closer to 1.0 than in 2015.

Table A17 Results of the Analysis of Sales Files, 2015 and 2018

Land Use	2015				2018			
	Parcels	Median Ratio	COD	PRD	Parcels	Median Ratio	COD	PRD
CI	69	0.953	17.5	1.196	111	0.955	8.56	1.036
CV	27	0.938	22.27	1.027	26	0.973	11.75	1.102
FUV	47	1.056	25.75	1.046	74	0.989	14.63	1.043
FV	40	0.938	11.58	1.023	38	0.971	10.36	1.022
RI	124	0.943	12.82	1.05	174	0.965	12.33	1.066
RIL	4,488	0.937	4.94	1.008	5,497	0.96	4.46	1
RIO	533	0.932	3.49	1.006	818	0.975	1.3	0.999
RV	443	1	17.82	1.063	432	0.963	18.32	1.033
Total Sales	**5,771**				**7,170**			

Source: Author's computations based on assessor sales files.

Note: COD is coefficient of dispersion. PRD is price related differential.

Uniformity of appraisal *between* land use categories can be considered by looking at variations in the median ratios for each group. Value uniformity relates to the consistency and equity of values. It is important to ensure, for example, that residential and commercial properties are appraised at similar percentages of market value. For example, in 2015 improved commercial properties (CI) had a somewhat higher median appraisal/sales ratio than owner-occupied housing (RIO) and residential improved letter (RIL). By 2018, that had reversed as RIL had somewhat higher median ratios than CI. Privately owned farms had the highest median ratio in both 2018 and 2015.

In addition, the spread between the highest and lowest median ratios was higher in 2015 than 2018. Specifically, the highest median ratio in 2015 was for private use farmland (1.056) and the lowest was for owner-occupied residential properties (0.932), a difference of 0.124 or 13.3 percent of the lowest median ratio. Alternatively, in 2018, the highest median ratio is for privately owned farmland (0.989) and the lowest is for improved commercial properties at 0.955. This is a difference of 0.034, or just 3.6 percent of the lowest median ratio. This is somewhat counterintuitive if valuations are expected to be less uniform during the course of the 5-year assessment cycle.

The next step in the process for understanding the effect of the 5-year assessment cycle on uniformity is to look at uniformity of appraisals *within* each land use category. The coefficient of dispersion is the most used measure of within-class uniformity. The coefficient of dispersion (COD) is based on the average absolute deviation of individual parcel ratios and the median ratio. The COD is calculated by dividing the average absolute deviation of the appraisal/sales ratio for each parcel and the median ratio by the median ratio and multiplying by 100 (Eckert 1990, 534).

The International Association of Assessing Officers publishes target standards for uniformity within land use classes. Specifically, the following standards are recommended for the COD:

- Single-family homes and condominiums: CODs of 5 to 10 for newer or fairly similar residences and 5 to 15 for older or more heterogeneous areas
- Income-producing properties: CODs of 5 to 15 in larger, urban areas and 5 to 20 in other areas
- Vacant land: CODs of 5 to 15 in very large areas with active markets, 5 to 20 in large to mid-size areas with slower development, or 5 to 25 in rural or seasonal recreation areas
- Rural residential, seasonal, and manufactured homes: CODs of 5 to 20
- Rural vacant land with little development: CODs of 5 to 30 (IAAO 2014).

Table A17 reports the COD for each land use class in 2015 and 2018. The COD is lower in 2018 versus 2015 for all land use categories except vacant residential properties. This suggests that within-class uniformity improved during the assessment cycle (again, somewhat counterintuitive). Only vacant residential properties had a COD that indicates appraisal uniformity deteriorated during the assessment cycle. In both years, the CODs for residential properties, both owner-occupied and rental, are consistent with IAAO standards.

A final aspect of assessment uniformity relates to equity between lower and higher value properties. Appraisals are considered *regressive* if high-valued properties are under appraised relative to low-valued properties and progressive if high-valued properties are over appraised relatively relative to low-valued properties.

The most frequent statistic for measuring assessment regressivity or progressivity is the price-related differential (PRD). The PRD provides a simple gauge of price-related bias. It is calculated by dividing the mean appraisal/sales ratio by the weighted mean. The PRD should be between 0.98 and 1.03. PRDs below 0.98 tend to indicate assessment progressivity, the condition in which assessment ratios increase with price. PRDs above 1.03 tend to indicate assessment regressivity, in which assessment ratios decline with price (Eckert 1990; IAAO 2014).

The results were more mixed regarding assessment regressivity/progressivity compared to the COD. For example, from 2015 to 2018, the PRD improved for two land uses (CI and RV) was virtually unchanged for four land uses (FUV, FV, RIL, and RIO), and deteriorated for two land uses (CV and RI). In 2015, four land uses had PRDs that met IAAO standards (CV, FV, RIL, and ROI) while results for the other land uses suggested assessment regressivity. By 2018, three land uses met the IAAO standard (FV, RIL, and RIO), while results for the other land uses suggested assessment regressivity.

In York County, there does not seem to be strong, consistent evidence that the 5-year reassessment cycle has undermined uniformity of the property tax. This could be in part because of the active real estate market in the county, the tremendous growth and land conversion taking place in the county, and the significant annual revaluation of a large number of properties qualifying as Assessible Transfers of Interest in the year each transfer took place.

Appendix B

Property Tax Administration Case Study: Tennessee

When considering reform of its property tax administration system, South Carolina will do well to consider some commendable features of systems in comparable states. While not perfect, Tennessee's property tax system has some features which may serve as a model for South Carolina. This memo first describes the mechanics of Tennessee's property tax administration system and compares it to South Carolina's system, then identifies a few exemplary features.

Assessment Administration

Tennessee's 95 counties appraise most property. The state is responsible for valuing public utilities and transportation companies (Significant Features of the Property Tax).[54]

Tennessee appraises property at market value except for agricultural, conservation, open space, forest land, or timber production eligible for current use valuation (Significant Features of the Property Tax). Revaluation cycles established in state statute range from 4 to 6 years depending on the locality. The Tennessee Comptroller of the Treasury reports reappraisal schedules for each county on its website along with county appraisal ratios (Tennessee Comptroller of the Treasury, Reappraisal Schedules). Revaluation requires physical re-inspections conducted over a period of 3 to 5 years, depending on the length of the reappraisal cycle (Significant Features of the Property Tax). For example, in a county with a five-year appraisal cycle, 25 percent of properties are physically re-inspected each year for the first four years of the cycle leading up to the revaluation year.

Oversight of appeals begins at the local level with the county assessor; appeals may then advance to the county board of equalization and finally to the state board of equalization.

The Division of Property Tax Assessments conducts an annual appraisal ratio report. The appraisal ratio (or sales ratio)[55] report measures the difference between the appraised value and the market value. It is calculated by dividing the appraisal by the sales price. The state is required by statute to conduct sales ratio studies for each county at least every two years. Counties with a six-year review cycle must update values if the average appraisal is less than 90 percent of market value (Tennessee Comptroller of the Treasury 2018a).

Classification

Tennessee has a classified system with ratios ranging from 5 percent (certain personal property) to 55 percent (utility property). Tennessee taxes tangible and intangible personal property but exempts up to $7,500 of household and personal effects (Significant Features of the Property Tax). The state constitution establishes the classes and ratios.

[54] The state assesses airlines, barge lines, railroads, motor bus and motor carrier companies, private electric and gas companies, interstate natural gas and pipeline companies, power companies, phone companies (including cellular and wireless), and state-regulated water and sewer companies.
[55] South Carolina uses the term "sales ratio" whereas Tennessee uses the term "appraisal ratio."

Real Property

Industrial and Commercial - 40%

Residential - 25%

Farm - 25%

Public Utility Property - 55%

Tangible Personal Property

Industrial and Commercial - 30%

Public Utility Property - 55%

All Other Tangible Personal Property - 5%

Intangible Personal Property - 40%

Tax Bill Calculation

Tennessee counties calculate tax bills according to a basic formula: Assessed Value x Tax Rate = Tax Bill. Assessed value is a property's appraised value multiplied by the applicable assessment ratio (listed above). Counties set tax rates (Tennessee Comptroller of the Treasury, How to Calculate Your Tax Bill). The state explains the tax calculation on its website and provides the following sample calculation:

> Assume you have a house with an APPRAISED VALUE of $100,000. The ASSESSED VALUE is $25,000 (25% of $100,000), and the TAX RATE has been set by your county commission at $3.20 per hundred of assessed value. To figure the tax simply multiply the ASSESSED VALUE ($25,000) by the TAX RATE (3.20 per hundred dollars assessed).
>
> $25,000/10 = 250 x $3.20 = $800 or ($25,000 x .3200 =$800)
> for a tax bill of $800

Limitations

Tennessee is one of only four states with no state-imposed tax limitation (Paquin 2015). The state's truth in taxation requires public notice and hearing before a jurisdiction can adopt a tax rate after a reappraisal that would increase the levy over the prior year (Significant Features of the Property Tax).

Disclosure

The state maintains a central database of assessing information for 84 of the state's 95 counties. The other 11 counties do not use the centralized system but have Computer Assisted Mass Appraisal (CAMA) systems with other vendors. The assessment website includes links to the assessing databases for counties using different software (Tennessee Comptroller of the Treasury, Real Estate Assessment Data).

An annual aggregate tax report reports the makeup of the tax base by class of every county and municipality in the state. The report includes actual tax rates and effective tax rates for each county and

municipality, as well as the number of exempt parcels in each jurisdiction (Tennessee Comptroller of the Treasury 2018b). The comptroller publishes a land use classification report.

The state publishes both the appraisal ratio studies and reports of adopted appraisal ratios each year (Tennessee Comptroller of the Treasury 2018a and 2019). The 2019 study includes appraisal ratio studies for 38 counties. It includes data for another 13 counties that completed reappraisals in 2018, and six current value update counties. Current value update counties are those on a 6-year schedule; they are required to complete a current value updated midway through the 6-year cycle.

The State Board of Equalization has a statutory obligation to approve assessment manuals. The web site of the Comptroller of the Treasury provides a set of manuals on sales data procedures, exemptions, equalization, and greenbelt (agriculture, forest, and open space) (Tennessee Comptroller of the Treasury, Manuals). In addition, the comptroller publishes an assessment glossary that defines key property tax assessment terms (Tennessee Comptroller of the Treasury, Tennessee Property Assessment Glossary). The Division of Property Assessments at the Comptroller of the Treasurer supports county assessors and oversees property tax administration. It administers tax relief programs, provides training for assessors, technological services, and it assists jurisdictions with reappraisals.

Summary of Exemplary Features

The absence of property tax limitations or a general homestead exemption in Tennessee simplifies the computation of property tax bills. As in South Carolina, assessed value is calculated as market value times assessment ratio and the tax is calculated by multiplying the assessed value by the tax rate. Whereas in South Carolina Act 388 restricts growth in appraisals to 15 percent per year, in Tennessee, market value appraisals are not subject to a limit. Since Tennessee has no general homestead exemption, computation of tax bills does not require any deduction for residential property such as South Carolina's O & M exemption. Both Tennessee and South Carolina could achieve greater simplicity, transparency, and equity by moving away from classification.

Although its 4- to 6-year revaluation cycles exceed the IAAO recommendation, Tennessee requires physical reinspection each cycle and a subset of properties inspected each year leading up to revaluation. Physical reinspection is important for maintaining accurate assessments.

Tennessee's administration system is a model of transparency. County assessment information is available online and largely centralized in one web-based system (Tennessee Comptroller of the Treasury, Real Estate Assessment Data). In 2003, the state database received the Distinguished Assessment Jurisdiction award from the International Association of Assessing Officers. The CAMA systems support sound appraisal practices and include tax billing capabilities. The state also supports the assessment process by providing other information to the public and assessors online including assessment manuals, a glossary of key terms, simple explanation of tax bill calculation, equalization reports, and data on tax rates and levies (Tennessee Comptroller of the Treasury, Property Tax Resources).

Tennessee county assessors have assumed responsibility for most assessments and assessment appeals since reforms adopted in 1980, but the state provides vital support, not only in maintaining and publishing data, but also by training assessors, assisting counties with reevaluations, providing technical support and administering tax relief programs including awarding exemptions. The balance between local responsibility for assessments and state support is a good model.

Table B1 Property Tax Administration in Tennessee and South Carolina

	Tennessee	South Carolina
Revaluation Cycle	4-6 years	4 years
Physical Reinspection Required?	Yes	No
Central Assessing Database?	Yes	No
Sales Ratio Study Frequency	Annual; Each county at least every two years	Every 5 years
Sales Ratio Reports Available Online?	Yes	Not found
Rate Limit?	No	Yes
Assessment Limit?	No	Yes
Truth in Taxation?	Yes	No
Classification Ratios Published Online?	Yes	Yes
State reports tax base by class for each county?	Yes	Yes
State reports effective tax rates by municipality and county?	Yes	No
State reports number or value of exempt parcels?	Yes, Number	Not online
State publishes assessment manuals online?	Yes	Not found
State publishes glossary of assessment terms online?	Yes	No, but some counties provide glossary
State publishes reappraisal schedules for each county online	Yes	No
State publishes explanation of tax bill calculation online	Yes	No but state links to SCAC report that explains tax bill calculation

Source: South Carolina Association of Counties, Significant Features, and author's research

Sources: Various South Carolina state sources; Tennessee Comptroller of the Treasury; Significant Features of the Property Tax

Chapter 3:

The Burden of the Property Tax and the Effect of Act 388

by

Mark Skidmore, Ph.D., and Camila Alvayay Torrejón, M.Sc.

With Appendices C and D by Bethany P. Paquin

Introduction

This chapter conducts detailed evaluations of the counties discussed in the previous chapters to address the following questions:

- How do effective property tax rates vary by property type in each county?
- How does the assessment cap affect the equity of property tax burdens among different types of property?
- To what extent has the property tax burden shifted from residential taxpayers to business taxpayers?

This chapter begins with a brief summary of the methodology used where we describe difficulties associated with the database and the procedure used to overcome the challenges. We also discuss the key variables used in the evaluation, and the counties that we are able to include in the study. Detailed parcel-level data on appraised property values and tax payments are available from CoreLogic (2019). Summaries of all counties for which data are available include: Allendale, Charleston, Edgefield, Florence, Greenville, Horry, Orangeburg, Richland, Sumter, and York. In-depth analyses of York, Richland, and Edgefield Counties are also provided. The data allow an examination of the extent to which Act 388 altered effective tax rates across property classes and parcels within each property class. However, a complication arises because each county has its own property classification system. Some counties have minimal property classes, corresponding to residential, commercial, industrial, and agricultural categories, whereas other counties have an extensive list of property categories. It is therefore necessary to offer a discussion of the criteria used to group properties prior to a presentation of the analysis.

Methodology and Data Issues

To simplify the analysis and allow for a better comparison across counties, certain property classes were grouped as summarized in figure 3.1. For purposes of the study, the following property classes were used: 1) residential, 2) commercial, 3) industrial, 4) agricultural, and 5) o*ther*.

The *other* category includes properties that clearly do not fit into the residential, commercial, industrial, and farm use categories.

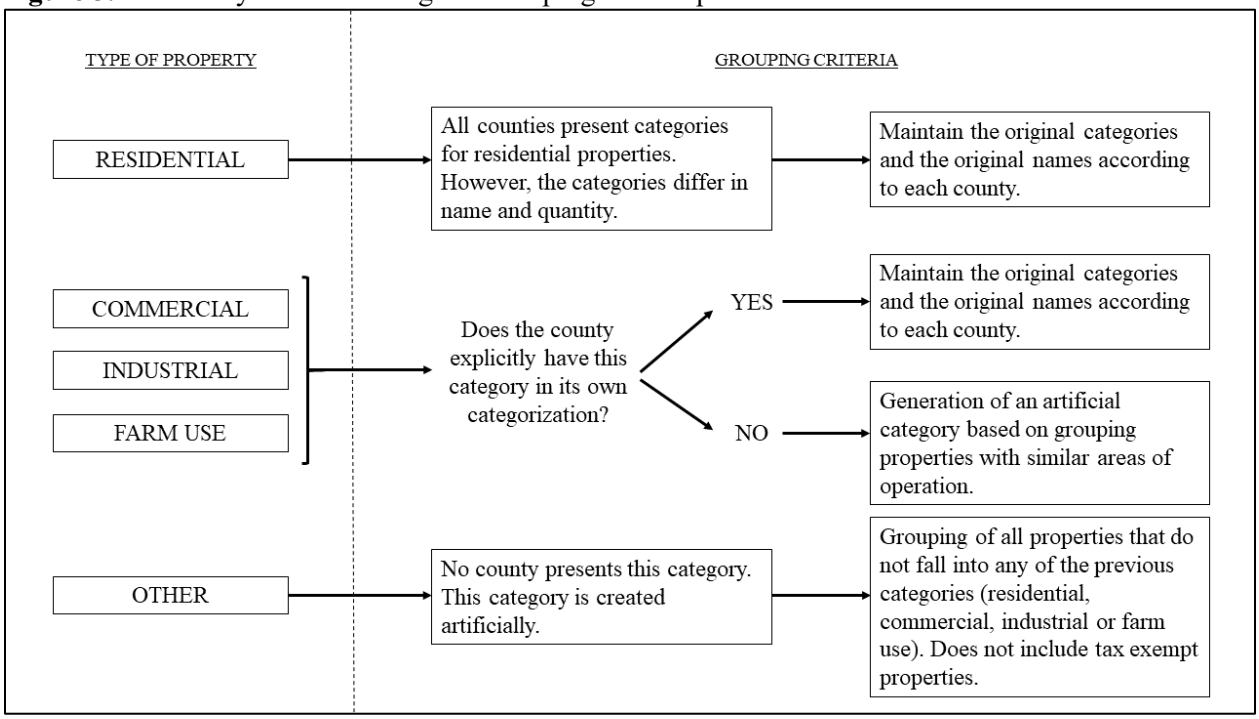
Residential properties were not pooled for the following reasons: 1) the majority of parcels in each county were classified as residential; and 2) there were relatively few residential categories. For example, Sumter County had just one residential property category, whereas Horry County had nine residential property categories.[56] Therefore, summaries of the residential subcategories as originally defined by each of the counties are also provided.

For commercial, industrial, and agricultural properties, a different procedure was used. In the case of commercial properties, some counties lacked a *commercial* category; instead these counties grouped commercial properties by economic purpose. For purposes of this study, all these categories were grouped into a single *commercial* category. For properties that had a formal commercial classification, we retained the original terminology and property classification. If a given county did not have a clearly defined commercial category, then a *commercial* category was created so the many commercial types of properties could be pooled into a single category, even though many have names that reflect the economic purpose. The details regarding which original classes were grouped into the commercial category appear in the notes of the individual county tables.

[56] When we refer to "categories of residential properties" we mean that they are categories where the word "residential" explicitly appears.

Finally, any remaining property classes were pooled into the *Other* category. Note that none of the categories include tax-exempt properties. In addition, the data have been filtered to eliminate parcels with missing values for the relevant variables.

Figure 3.1 Summary of Methodological Groupings for Properties with Similar Land Use Characteristics



As described previously, the property categories differed in each of the ten counties. In most of the counties, information regarding which residential property was primary residential, and thus eligible for the 4 percent assessment ratio and the exemption from paying property tax for school operating costs, was lacking. The lack of specificity made it difficult to compare effective property tax rates among counties.

Although Core Logic data include residential, commercial, manufacturing, agricultural, and other property categories for most counties, some property types are missing for some counties. For example, neither Richland County nor Edgefield County data include information on industrial/manufacturing properties. Greenville County data are missing information on agricultural properties.

Before delving further into the evaluation, a brief discussion of utilities is in order. Chapter 2 of this report notes that utilities in some counties account for a relatively large share of assessed value. In Allendale County, for example, utilities account for 21 percent of assessed value. However, because the classification systems vary from county to county, and there are no consistent property class definitions, it is difficult to systematically evaluate and compare utilities data between counties. Therefore, we cannot analyze in a separate category the properties that correspond to utilities. Nevertheless, a summary table is provided in Appendix A for the utility properties that could be identified.

Finally, for parcels that are included in the database, CoreLogic provides appraised values, sales prices, and property tax payments for 2018 for real property in each of the focus counties.

The study utilized assessor data for York County in conjunction with Core Logic data to identify and confirm capped values for most of the other counties. However, capped values were unavailable in the CoreLogic data for Charleston and Orangeburg Counties, which somewhat limited the analysis for those counties. For all property classes in the other counties, the ratio of capped value to appraised value in percentage -$\left(\frac{Capped\ Value}{Appraised\ Value}\right) * 100$- was examined to determine which properties enjoyed tax relief from the assessment cap (and if so how much) and which did not. The percentage of the tax base reductions resulting from the capped value -$\left(1 - \frac{Capped\ Value}{Appraised\ Value}\right) * 100$- was also examined as was the effective tax rate, $\left(\frac{Tax\ Payment}{Appraised\ Value}\right) * 100$.

For the set of ten counties, the total number of parcels was 1,086,577. The Charleston and Orangeburg parcels were excluded due to lack of data on capped values. Consequently, a total of 857,697 parcels were considered, of which 690,683 were classified as residential (81 percent), 55,647 as commercial (6 percent), and 74,412 as other (9 percent).

For the eight counties that had information on capped values (all counties except for Charleston and Orangeburg), 26 percent of the residential properties and 31 percent of the commercial properties benefited from the assessment cap. The percentage of properties benefiting from the cap varied widely across counties. Only 3 percent of commercial properties in Edgefield County and only 8 percent of commercial properties in Sumter County benefited from the assessment cap. During the past decade, Edgefield's population has grown only modestly and Sumter's population has declined slightly. By contrast, 28 percent of commercial properties in fast-growing York County benefited from the assessment cap.

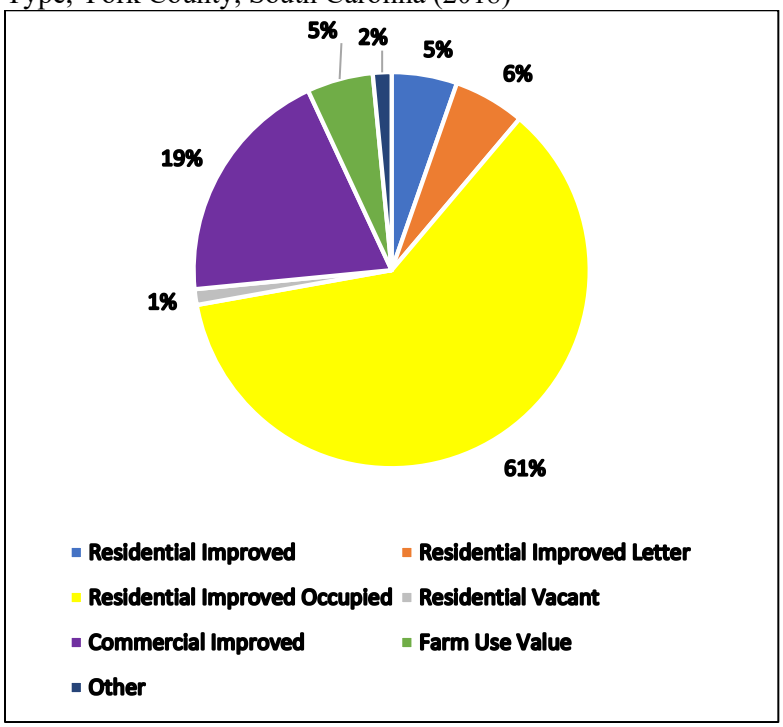
The rest of this chapter focuses on residential and commercial properties, partly because these combined property types account for nearly 90 percent of the properties in the study. Additionally, some data questions are considered for two other property categories—farmland and manufacturing. Use value taxation of farmland substantially reduces the tax base of agricultural lands. Although CoreLogic provides data on manufacturing properties, the analysis in Chapter 2 raises questions about the quality of these data. This chapter provides an overview of how the assessment limit has reduced the tax base and thus resulted in reduced tax burdens for some property owners among the different property classes. Even though Act 388 has resulted in some tax base erosion, it has been relatively small. Next, detailed evaluations are provided for York, Richland, and Edgefield Counties, and then brief summaries for each of the other counties.

York County

York County is in the north-central part of the state. According to U.S. Census Bureau QuickFacts, the population of York County was 274,118 in 2018. As noted in Chapter 1, York County has experienced notable population growth, leading to modest pressure on real estate prices in some parts of the county. Consequently, the assessment limit was applicable in certain areas within York County. While York County does have a suburban component, much of the county is rural.

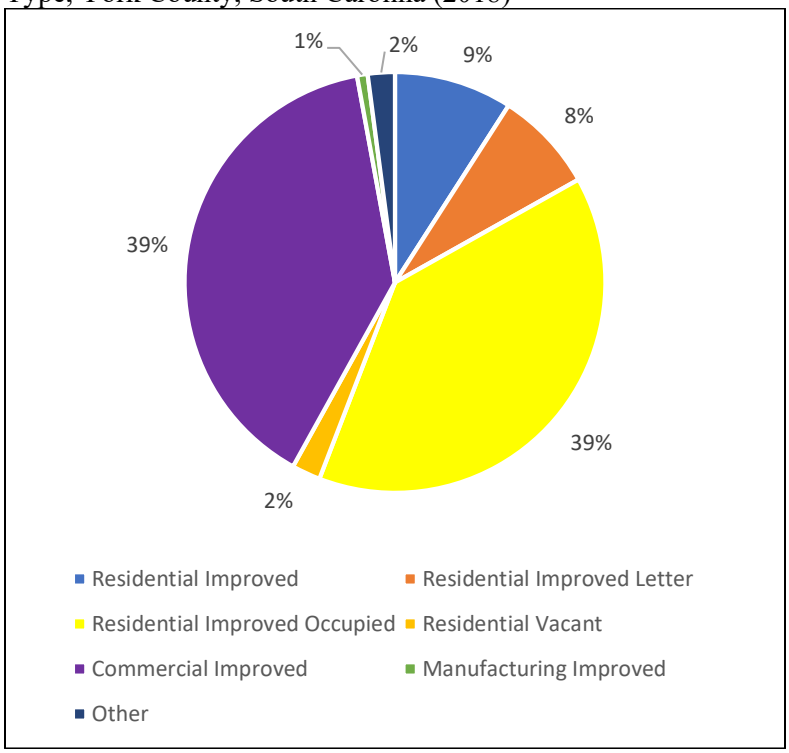
Before offering a comparison of effective property tax rates by property type, it is useful to consider the degree to which different property classes contribute to the tax base. To address this question, consider figures 3.2 and 3.3, which show the proportion of the total tax payment and total appraised value by property class for York County in 2018, respectively.

Figure 3.2. Percentage of the Total Appraised Value by Property Type, York County, South Carolina (2018)



Source: These data are obtained from a subset of a larger database with information for all counties in South Carolina. This information comes from CoreLogic. The subset is York County. The following categories were omitted from the graph (not from the calculation) because the resulting percentages were virtually zero: 1) Owner Occ / No Exempt and 2) Manufacturing Improved.

Figure 3.3. Percentage of the Total Tax Payment by Property Type, York County, South Carolina (2018)



Source: These data are obtained from a subset of a larger database with information for all counties in South Carolina. This information comes from CoreLogic. The subset is York County. The following categories were omitted from the graph (not from the calculation) because the resulting percentages were virtually zero: 1) Owner Occ / No Exempt and 2) Farm Use Value.

Figure 3.2 shows that *Residential Improved Occupied* (primary residential) property is 61 percent of the total appraised value. A distant second is *Commercial Improved* property with 19 percent of the total appraised value. However, as shown in figure 3.3, *Residential Improved Occupied* property accounts for 39 percent of tax revenues with *Commercial Improved* property also at 39 percent of total property tax revenues. Taken together, we see that though residential property has a major share of the tax base, its tax contribution is much less due to a reduced assessment ratio and the exemption from paying local school operating costs.

As shown in table 3.1 (last column), effective property tax rates vary significantly by property type. It should be noted that each taxing jurisdiction within a given county sets its own tax rate and thus, statutory tax rates vary from place to place within a county. The effective tax rate for each property was calculated and then all the effective tax rates were averaged; hence, the figures here are county-wide averages. That is, the effective tax rates presented include variations in statutory rates across municipalities, schools, and special districts in the county. The effective tax rate for primary residential property (as indicated by *Residential Improved OC)* is 0.74 percent. Non-primary residential property classes pay a higher effective tax rate than primary residential properties. However, at 2.32, percent commercial property owners pay the highest effective tax rates.

Table 3.1. Mean of Appraised Value, Capped Value, Sale Prices, Tax Payment, and Ratios by County and Property Type, York County, South Carolina (2018)

	Type of Property		Number of Properties	Mean Appraised Value (1) ($)	Mean Capped Value (2)	Ratio (2)/(1) x 100 (%)	Tax Base Reduction (1 – Ratio) x 100 (%)	Mean Sale Price ($)	Number of Sales	Mean Tax Payment (3)	Effective Tax Rate (3)/(1) x 100 (%)
All Properties	Residential	Owners Occ / No Exempt	2,125	29,320	27,641	94.2730	5.7270	151,716	20	212	0.7223
		Residential Improved	10,406	102,390	87,525	85.4816	14.5184	284,918	464	2,022	1.9750
		Residential Improved Letter	6,755	171,814	168,742	98.2117	1.7883	243,793	1,914	2,667	1.5525
		Residential Improved Oc	63,395	191,805	186,697	97.3372	2.6628	264,635	2,297	1,424	0.7426
		Residential Vacant	9,068	28,134	25,514	90.6892	9.3108	405,571	492	562	1.9989
	Commercial Improved		3,546	1,101,731	1,042,775	94.6488	5.3512	2,319,377	203	25,505	2.3150
	Other (a)		1,625	187,551	123,084	65.6269	34.3731	2,081,650	82	2,969	1.5828
	Total or Weighted Average (100%) (b)		**96,920**	**195,155**	**186,485**	**95.5570**	**4.4430**	**374,779**	**5,472**	**2,388**	**1.2237**
Properties with Ratio <1	Residential	Owners Occ / No Exempt	544	33,606	27,046	80.4816	19.5184	265,000	1	210	0.6250
		Residential Improved	1,068	214,561	69,698	32.4838	67.5162	1,037,009	23	1,512	0.7049
		Residential Improved Letter	187	260,535	149,544	57.3988	42.6012	353,010	14	2,512	0.9643
		Residential Improved Oc	3,454	250,196	156,455	62.5328	37.4672	246,685	48	1,119	0.4474
		Residential Vacant	2,068	29,530	18,043	61.1029	38.8971	329,853	39	406	1.3758
	Commercial Improved		992	1,067,177	856,435	80.2523	19.7477	2,949,497	32	21,791	2.0420
	Other (a)		715	188,641	42,124	22.3305	77.6695	2,905,531	21	1,072	0.5683
	Total or Weighted Average (9.31%) (b)		**9,028**	**267,492**	**174,405**	**65.2000**	**34.8000**	**1,175,076**	**178**	**3,291**	**1.2305**

Source: These data are a subset of a larger database from CoreLogic that has property tax information for all counties in South Carolina.

Note: The observations without information about the Appraised Value and/or the Capped Value and/or Tax Amount (missing values) have been removed from the analysis so they do not interfere with the computation of the average. Additionally, only properties with a non-zero tax amount (no exempt properties) were considered.

(a) The *Other* category comprises the following properties: 1) Commercial Vacant, and 2) Market Value.

(b) The *Total* row only includes the properties that appear in the table, that is, the total of residential, commercial, and *Other* category properties. Therefore, this total does not include industrial, farm use, and tax-exempt properties.

Table 3.1 shows that primary residential property (denoted as *Residential Improved Oc* in the table) has nearly the lowest effective tax rate. This is due in large part to the lower assessment ratio of 4 percent as opposed to 6 percent for rental and commercial properties. In addition, primary residential properties are exempt from paying local school operating costs.

Residential Properties

The extent to which variations in effective tax rates have been affected by Act 388 will be addressed in the following discussion. Table 3.1 contains information for each residential and commercial property class on the *number of parcels*, *mean appraised value, mean capped value, ratio* of capped value to appraised value, *tax base reduction*, *mean sales price, number of sales* in 2018, *mean tax payment*, and *effective tax rate*. This information is summarized for all properties and for just those properties that enjoyed a reduced tax base generated from the assessment limit. Since Act 388 took effect in 2007, the effective tax rate has been higher, on average, for properties purchased more recently. This result is anticipated because recently sold properties have had their capped values reset to market value upon sale. We explore whether this pattern is observed in York County.[57]

Consider residential properties, and primary residential parcels in particular (denoted as *Residential Improved OC* in table 3.1), which make up the largest share of all property classes.[58] York County's last reassessment occurred in 2014, taking effect in 2015. Thus, appraised values were adjusted upward, but capped values were only adjusted to a maximum of 15 percent since 2009. The data being considered are for 2018, which reflects the 2015 revaluation. Another reassessment occurred in 2019 and is being implemented in 2020; with a robust housing market it may be that more properties will have an appraised value that is greater than the capped value.

For 2018, just 3,454 of 63,395 owner-occupied residential parcels (about 5.4 percent) enjoyed a lower capped value relative to appraised value, and thus received lower property tax obligations. In aggregate, capped value is about 97.3 percent of the appraised value for the residential occupied properties in the whole county, indicating that the assessment limit reduces the overall taxable base by just 2.7 percent. Of the group of properties that do have a differential, on average they received a 37.5 percent lower tax bill in 2018 as compared to those properties with no benefit. Given that just 9.31 percent of properties under consideration had a differential between capped value and appraised value, and that the capped value is 97.3 percent of appraised value overall, we conclude that the assessment limit has not resulted in significant differences in effective tax rates across primary residential properties in York County. This finding may be because the rural part of the county has not experienced any significant growth, and thus the assessment limit does not apply. In addition, in those areas where property values are growing, the effect is partially mitigated by a reset of appraised value when properties are sold. However, it is important to recognize that the relatively few property owners who do benefit from the cap enjoy substantial tax reductions compared to those who do not.

Several maps offer additional insights. Figure 3.4 presents 2018 property appraised values for residential improved occupied (primary residential) properties. This map demonstrates that the higher valued properties are located closer to Charlotte, North Carolina. Figure 3.5 shows that there are low effective tax rates in the north central part of the county, high effective tax rates south of Charlotte, a tendency toward higher rates in a swath between Rock Hill and York, and lower rates in the southern part of the county, especially southeast of Rock Hill.

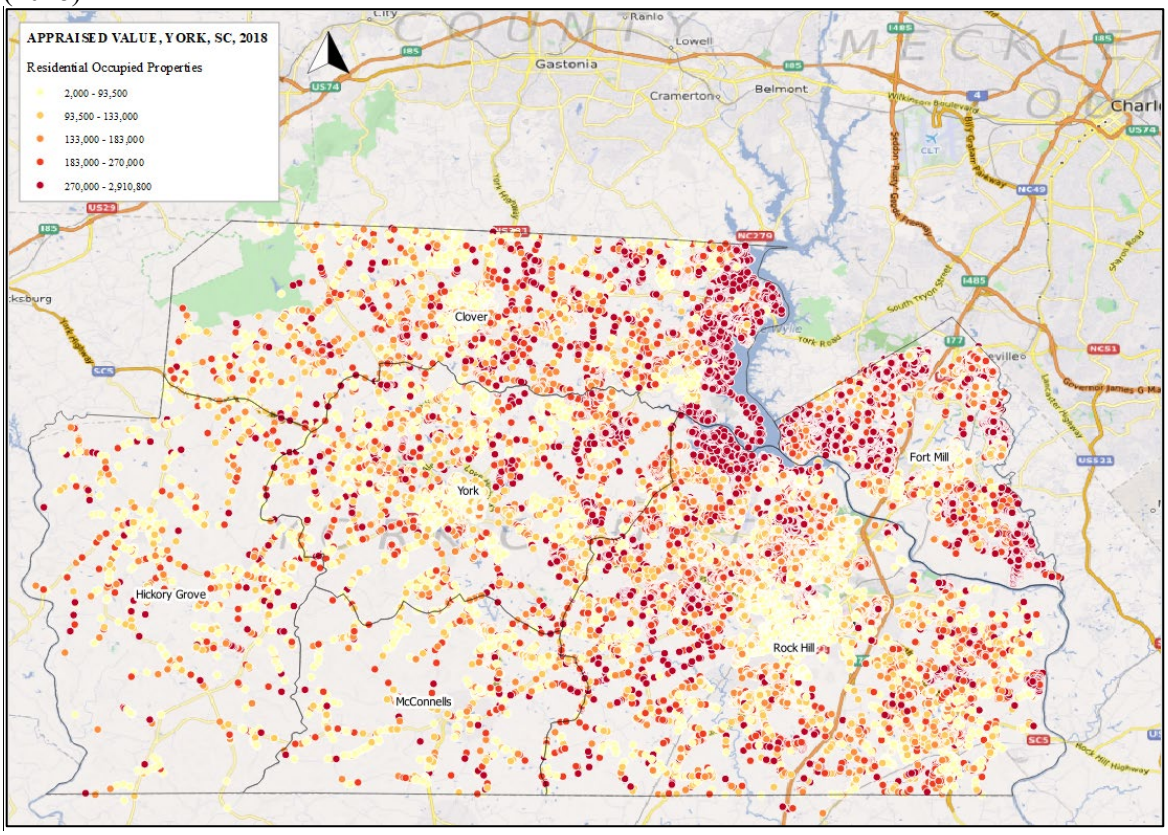
Figure 3.6 shows the ratio of capped value to appraised value. Figures 3.4, 3.5, and 3.6 taken together demonstrate the following: 1) the highest valued properties are near Charlotte; 2) the highest effective tax

[57] In York County capped value is referred to as "limited taxable value." We use the term capped value here to be consistent with the rest of the report.

[58] According to the York County database, in 2015, residential properties were divided into several categories: Residential Improved, Residential Improved Letter, Residential Improved Occupied, Owner-occupied/No exemptions, and Residential Vacant. From the total residential properties (91,749), the occupied residential properties, which are also considered primary residences, account for 70.2 percent of the parcels. Recall that parcels categorized as primary residential are assessed at 4 percent whereas all other residential classifications are assessed at 6 percent.

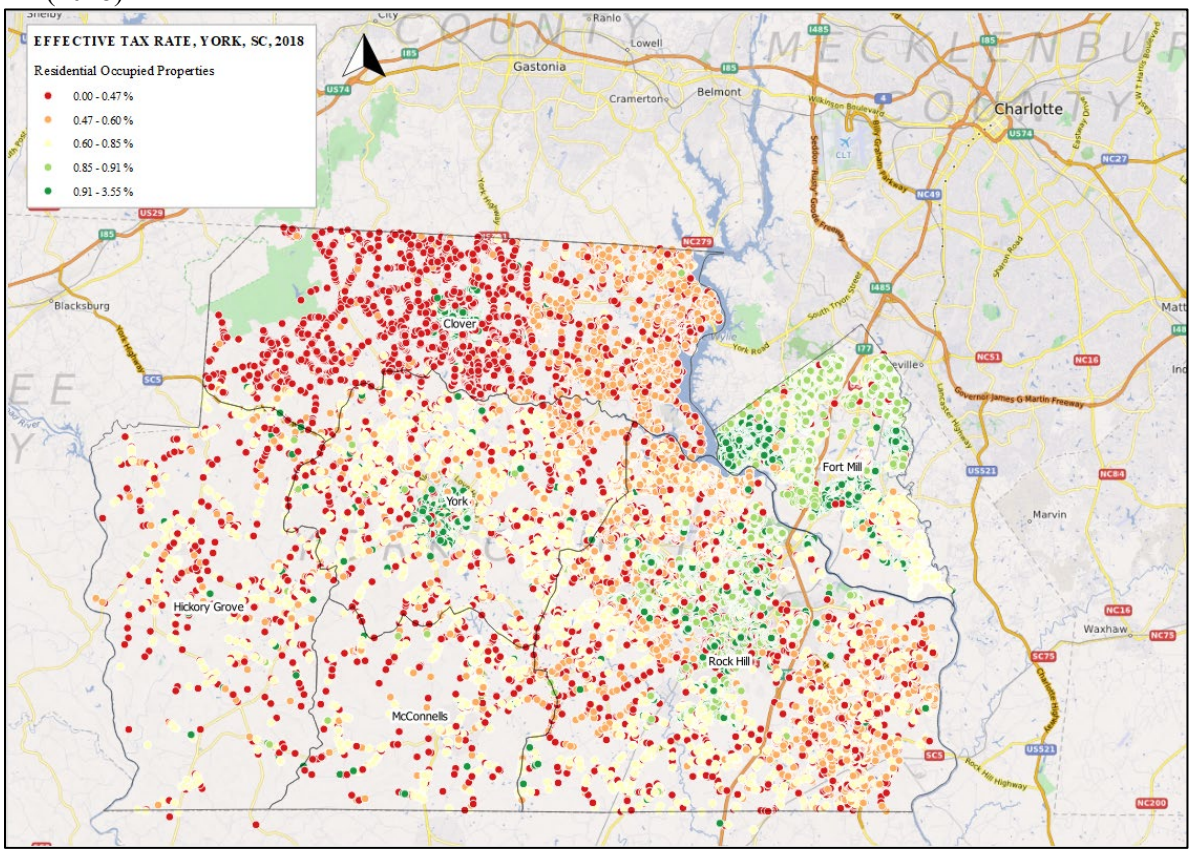
rates are again near Charlotte and those high effective tax rates are primarily driven by higher statutory tax rates; and 3) the properties with a positive differential between capped value and appraised value tend to be located farther away from Charlotte. This finding may be driven by the fact that there is a higher rate of turnover in the real estate market close to Charlotte and thus not as many properties have a gap between capped value and appraised value; recall that capped values are updated to appraised value upon property sale.

Figure 3.4. Quantile Map: Appraised Value, Residential Occupied Properties, York County, SC (2018)



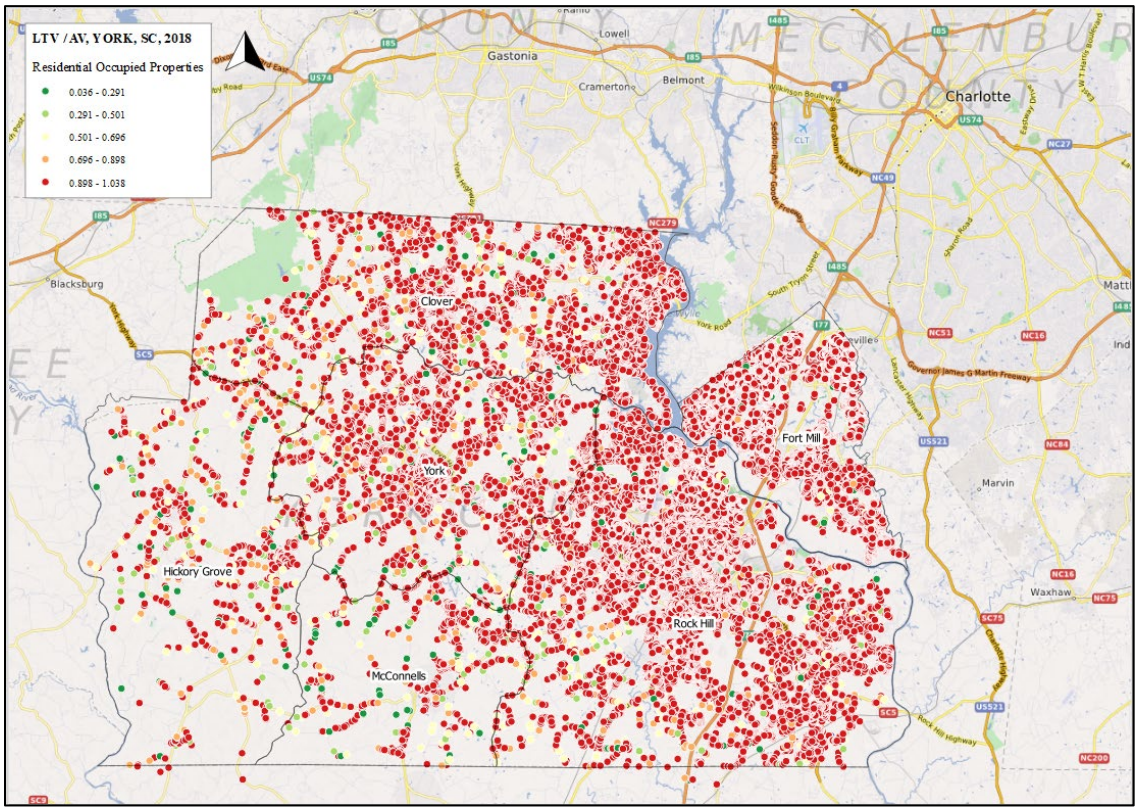
Note 1: This map represents the situation for Residential Improved Occupied (RIO) properties in York County, South Carolina, year 2018. The number of observations is 58,474.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a quantile map of five groups, where each group is expressed in U.S. dollars. A quantile map divides the total number of observations by the number of groups (in this case, 5 groups). Once the sample is divided into five equal parts, each group has a minimum and maximum value that depends on the observations that belong to the group.
Source: CoreLogic Data

Figure 3.5. Quantile Map: Effective Tax Rate (%), Residential Occupied Properties, York County, SC (2018)



Note 1: This map represents the situation for Residential Improved Occupied (RIO) properties in York County, South Carolina, year 2018. The number of observations is 58,474.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a quantile map of five groupings, where each group is expressed in percentages. A quantile map divides the total number of observations by the number of groups (in this case, 5 groups). Once the sample is divided equally, each group has a minimum and maximum value that depends on the observations that belong into the group.
Source: CoreLogic Data

Figure 3.6. Natural Breaks Map: Capped Value/Appraised Value Ratio, Residential Occupied Properties, York County, SC (2018)



Note 1: This map represents the situation for Residential Improved Occupied (RIO) properties in York County, South Carolina, year 2018. The number of observations is 58,474.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a natural breaks (or Jenks) map of five groupings, where each group is expressed in ratio. This method uses an iterative approach to arrange a set of values into "natural" groupings. Therefore, each group is composed of properties that are the most similar among them with respect to the variable of interest. In this case, this type of map is chosen because the ratio does not vary largely across properties and there is a large group of observations with a ratio close to one.
Source: CoreLogic Data

Further evaluation was conducted to learn more about which types of properties tended to have a gap between capped value and appraised value. Three factors that could possibly affect whether a given property would have a gap between appraised value and capped value in 2018 were considered, as follows.

- Higher valued properties in 2015 were more likely to have a gap in 2018 as property value growth had the potential to be higher than lower valued properties.
- Properties closer to Charlotte were anticipated to have a gap, but as illustrated in figure 3.6, this does not seem to be the case.
- Properties being retained by the same owner for longer periods were more likely to have a gap because properties that have been recently sold have capped values reset to appraised value upon sale.

As discussed in Appendix B, the evaluation was conducted by analyzing factors that influenced the likelihood that a parcel would have a gap between the appraised market value and capped value by defining the discrete variable G_i, equal to 1 if *appraised value* > *capped value*, and 0 if *appraised value* = *capped value*. This variable is assumed to be determined for each parcel i by a set of variables that include appraised value in 2015, distance from Charlotte in miles,[59] and the number of years of continuous ownership by the same person. The years of continuous ownership was restricted to 11 years because Act 388 took effect in 2007.[60] The probit regression estimates of this equation are presented in Appendix B. The analysis shows that the probability of having a gap between appraised value and capped value in 2018 increases based on:

- a greater appraised value in 2015;
- a greater distance from Charlotte; and
- a greater number of years since the date of last sale.

More discussion of these results can be found in Appendix B. However, the general conclusion is that wealthier long-time property owners tended to benefit from the assessment limit more than less wealthy owners who purchased their property more recently.

Of the different types of residential property classes, the discussion focuses primarily on residential properties. However, information is also included in the York table for owners of *OCC/non exemption*, *residential improved*, *residential improved letter*, and *residential vacant* for the interested reader. Except for the *OCC/non-exempt* property category, these properties have higher effective tax rates because they receive a higher assessment rate (6 percent rather than 4 percent) and the millage for school operations is applied to these properties.

Commercial Properties

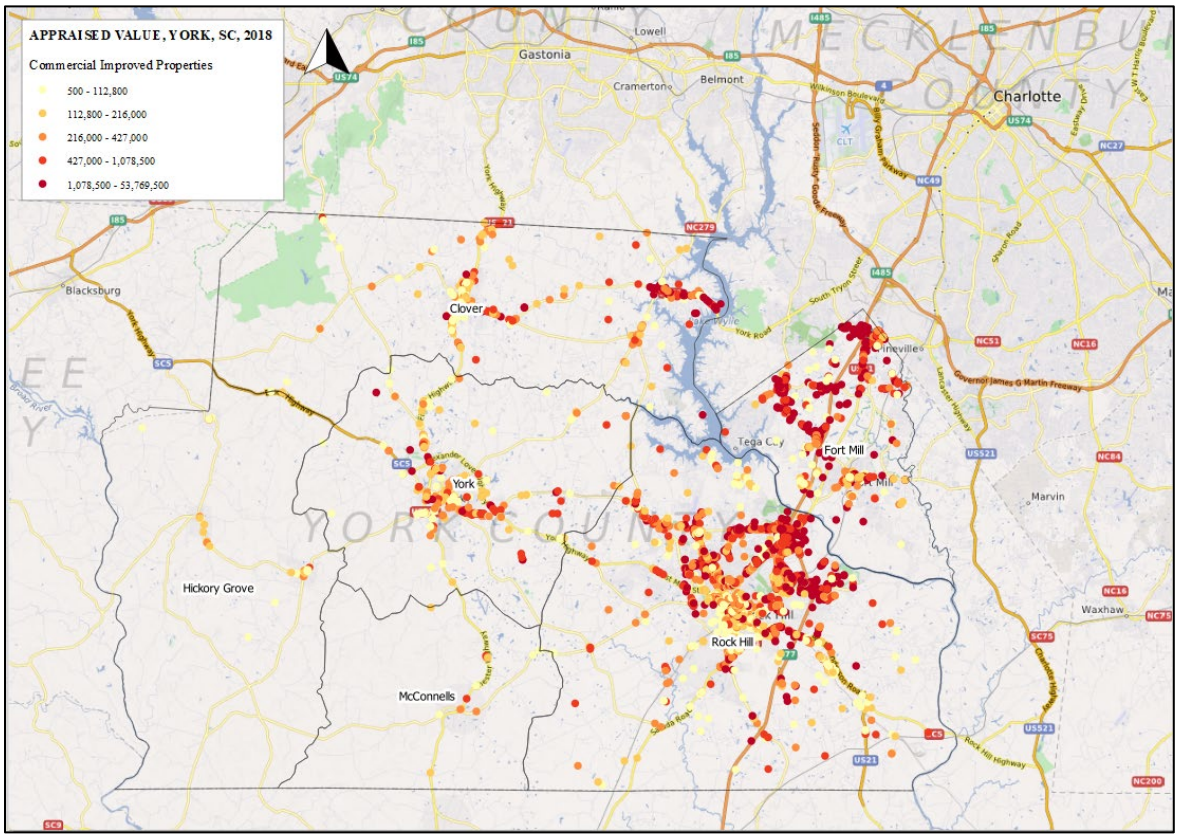
Turning to commercial properties, 28 percent of properties (992 of 3,546) had a differential between appraised value and capped value. Capped value was 94.6 percent of total appraised value. In other words, only 5.4 percent of the tax base was lost due to the cap. However, for those properties that benefited from the cap, the capped value reduced the tax burden by 19.7 percent, on average. The data from CoreLogic shows that effective tax rates for commercial property fell by only a small amount (2.3 percent to 2 percent) as a result of Act 388. From this analysis the conclusion can be made that Act 388 generated minor variations in tax burden among commercial properties.

The three following maps (figures 3.7, 3.8, and 3.9) of *commercial property value*, *effective tax rates*, and *ratio of capped value to appraised value* are also offered for consideration. Higher valued commercial properties and properties with higher effective tax rates tended to be located nearer to Charlotte, though properties located in the city of York also had high effective tax rates and properties near Rock Hill had high appraised values. Figure 3.9 shows the ratio of capped value to appraised value—there seems to be a concentration between York and Rock Hill and between Rock Hill and Charlotte for properties that have a difference between capped value and appraised value.

[59] The data set georeferenced coordinates for each of the properties. These coordinates were used to calculate the distance from each of the properties to Charlotte (Euclidean distance) and this distance measure was used as a variable in the probit regression.

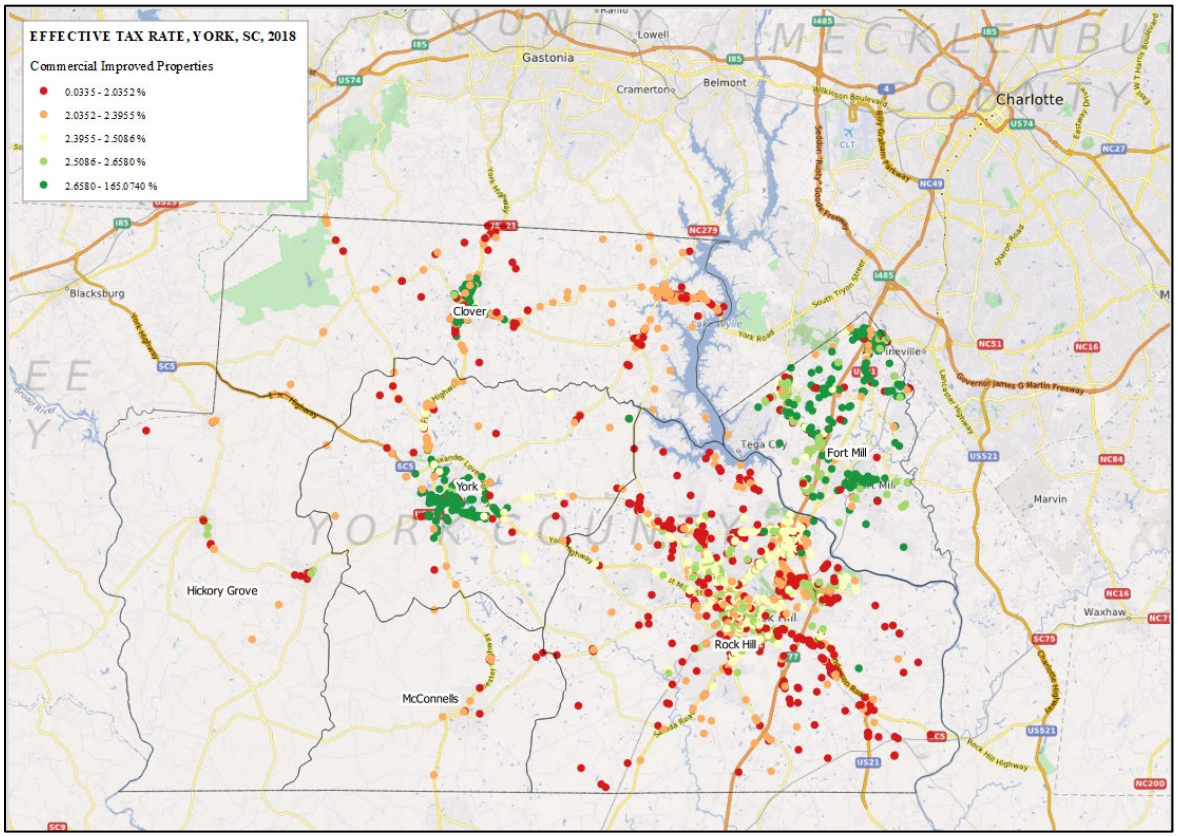
[60] Note that 2018 is the most recent year and is thus assigned a value of 0.

Figure 3.7. Quantile Map: Appraised Value, Commercial Improved Properties, York County, SC (2018)



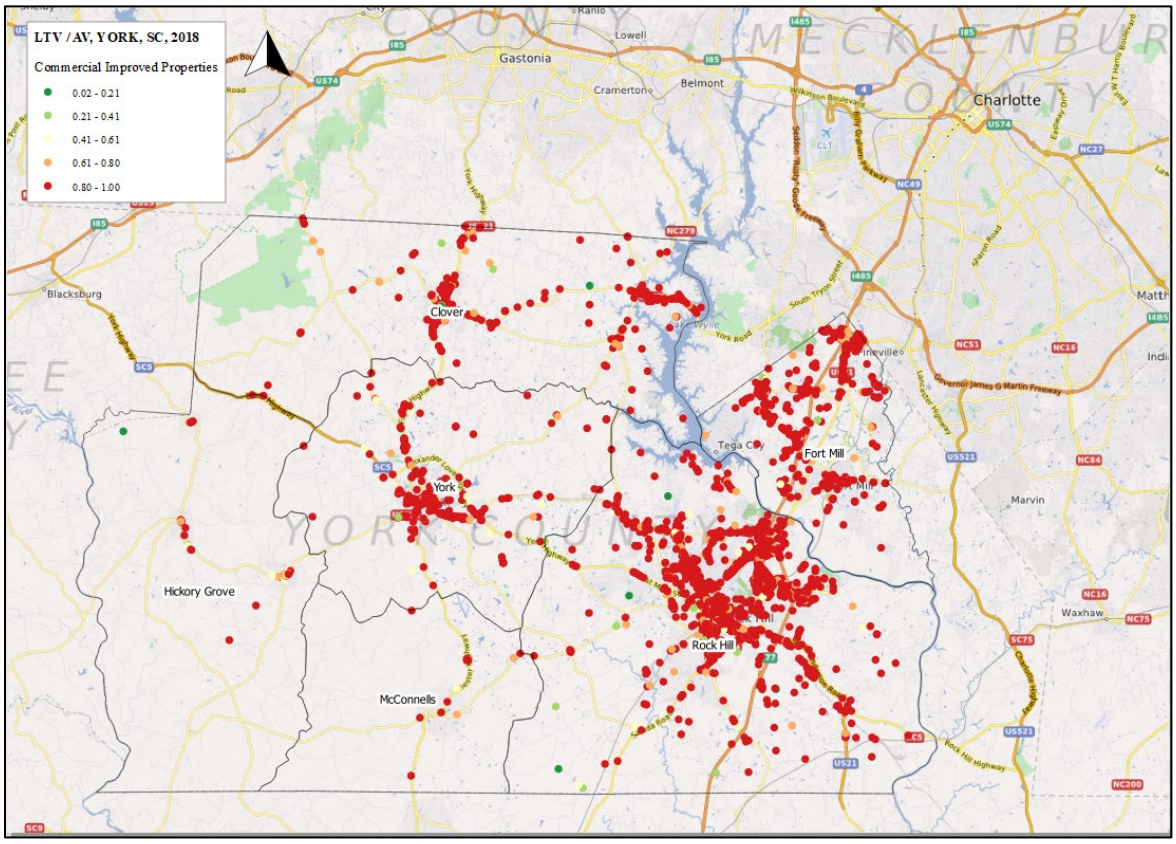
Note 1: This map represents the situation for Commercial Improved (CI) properties in York County, South Carolina, year 2018. The number of observations is 3,420.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a quantile map of five groupings, where each group is expressed in U.S. dollars. A quantile map divides the total number of observations by the number of groups (in this case, 5 groups). Once the sample is divided equally, each group has a minimum and maximum value that depends on the observations that belong to the group.
Source: CoreLogic Data

Figure 3.8. Quantile Map: Effective Tax Rate (%), Commercial Improved Properties, York County, SC (2018)



Note 1: This map represents the situation for Commercial Improved (CI) properties in York County, South Carolina, year 2018. The number of observations is 3,420.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a quantile map of five groupings, where each group is expressed in percentages. A quantile map divides the total number of observations by the number of groups (in this case, 5 groups). Once the sample is divided equally, each category has a minimum and maximum value that depends on the observations that belong to the group.
Source: CoreLogic Data

Figure 3.9. Natural Breaks Map: Capped Value/ Appraised Value Ratio, Commercial Improved Properties, York County, SC (2018)



Note 1: This map represents the situation for Commercial Improved (CI) properties in York County, South Carolina, year 2018. The number of observations is 3,420.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a natural breaks (or Jenks) map of five groupings, where each group is expressed in ratio terms. This method uses an iterative approach to arrange a set of values into "natural" groupings. Therefore, each group is composed of properties that are the most similar among them with respect to the variable of interest. In this case, this type of map is chosen because the ratio does not vary much across properties and there is a large group of observations with a ratio close to one.
Source: CoreLogic Data

A probit regression was also conducted to estimate the factors that affected the likelihood that a commercial property would have a gap between its appraised value and capped value. As shown in Table B2 in Appendix B, the probability of having a gap in 2018 is greater for properties:

- with higher appraised values in 2015;
- that are farther from Charlotte; and
- that have been owned a greater number of years since the date of last sale.

The referenced maps, figures, and tables help to increase understanding of the tax burden differences between residential properties and commercial properties. In 2018, the average effective tax rate among primary residential properties was 0.74 percent, but the rate was about three times greater for commercial properties (2.32 percent). The effective tax rate for all categories other than *residential improved occupied*

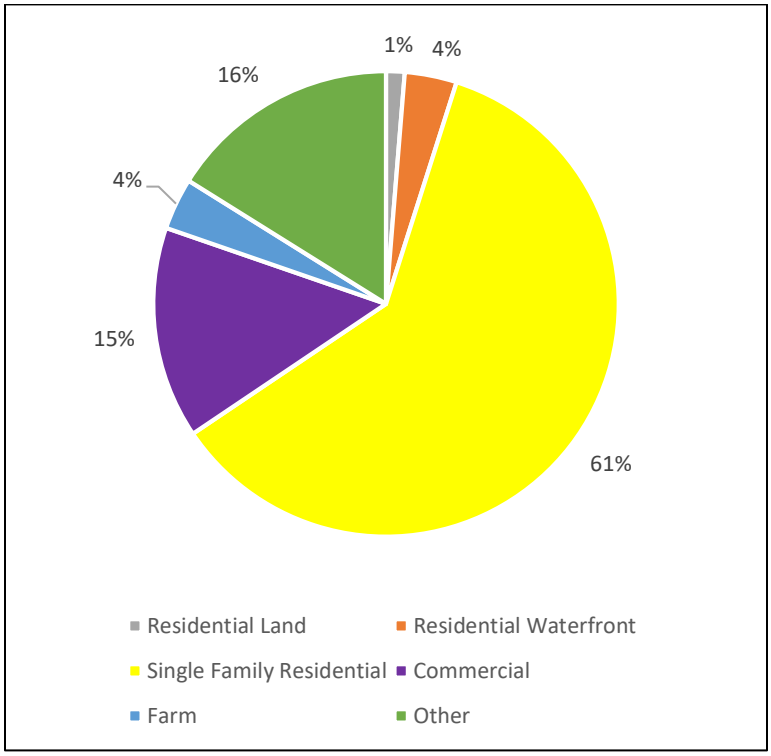
properties was about 1.98 percent, which is substantially higher than for residential occupied properties. Some of these differences are due to primary residential properties being exempt from paying local school operating costs. However, *residential primary residence parcels* also received the lower 4 percent assessment ratio as opposed to 6 percent for rental and commercial properties or 10.5 percent for manufacturing properties.

Richland County

Richland County is in the central part of the state and is home to the state capital of Columbia. The population of Richland County was 414,576 in 2018. It is the second most populous county in South Carolina, second only to Greenville County.

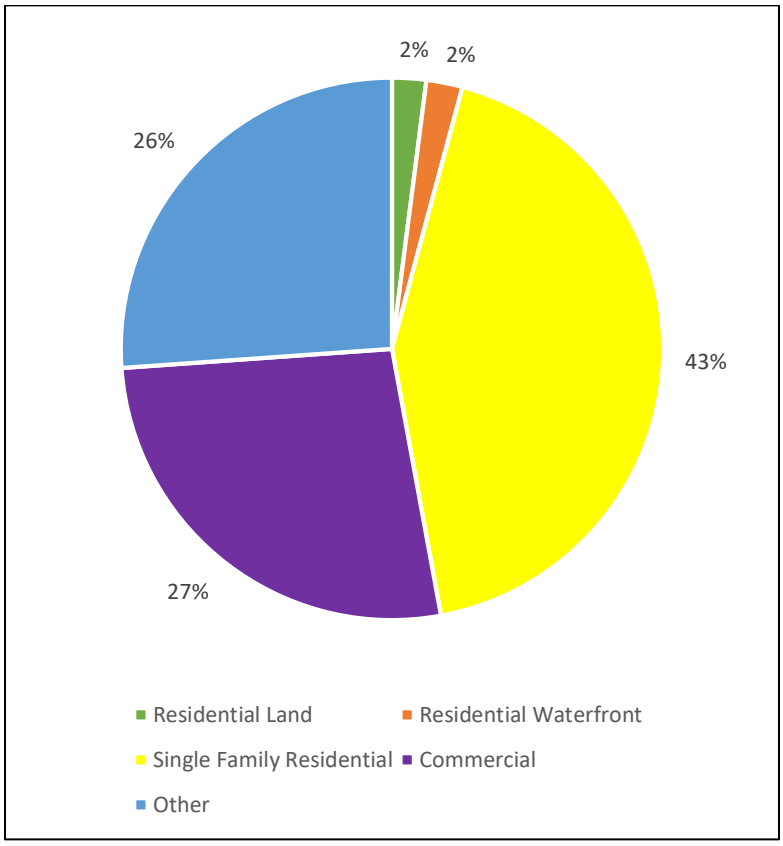
Figures 3.10 and 3.11 show the proportion of total appraised value and total tax payment by property class for Richland County in 2018, respectively. These figures provide a summary of the contribution to the tax base for each property class.

Figure 3.10. Percentage of the Total Appraised Value by Property Type, Richland, South Carolina (2018)



Source: These data are obtained from a subset of a larger database with information for all counties in South Carolina. This information comes from CoreLogic. The subset is Richland County.
The following categories were omitted from the graph (not from the calculation) because the resulting percentages were virtually zero: 1) Multi Family Land and 2) Residential Land Waterfront.

Figure 3.11. Percentage of the Total Tax Payment by Property Type, Richland, South Carolina (2018)



Source: These data are obtained from a subset of a larger database with information for all counties in South Carolina. This information comes from CoreLogic. The subset is Richland County.
The following categories were omitted from the graph (not from the calculation) because the resulting percentages were virtually zero: 1) Multi Family Land, 2) Residential Land Waterfront and 3) Farm.

Single family residential property represents 61 percent of the total appraised value and commercial property accounts for about 15 percent. However, single-family residential property accounts for only 43 percent of tax revenues, whereas commercial property accounts for 27 percent of total property tax revenues. As in York County, residential property has the largest share of the tax base, and yet its tax contribution is lower due to the reduced assessment ratio and the exemption from paying local school operating costs.

Table 3.2 shows that effective property tax rates vary significantly by property type. The effective tax rate is calculated for each property and then averaged for each property class. The numbers therefore represent county-wide averages. Note, however, that these classifications do not allow us to identify primary residential properties. Except for residential waterfront parcels, the other residential property classes pay a higher effective tax rate than single-family residential properties. Commercial property owners pay the highest effective tax rates at almost 3 percent. Most of the waterfront properties are in the northern part of Richland County where statutory tax rates are low. Thus, the average effective tax rates for waterfront properties are low relative to other residential property classes.

Table 3.2. Mean of Appraised Value, Capped Value, Sale Prices, Tax Payment, and Ratios by County and Property Type, Richland, South Carolina (2018)

	Type of Property		Number of Properties	Mean Appraised Value (1)	Mean Capped Value (2)	Ratio (2)/(1) x 100 (%)	Tax Base Reduction (1 – Ratio) x 100 (%)	Mean Sale Price	Number of Sales	Mean Tax Payment (3)	Effective Tax Rate (3)/(1) x 100 (%)
All Properties	Residential	Residential Land	19,348	17,531	15,138	86.3545	13.6455	256,160	1,388	454	2.5883
		Residential Waterfront	2,604	364,719	360,006	98.7076	1.2924	529,682	124	3,577	0.9809
		Single Fam Res	105,492	150,995	148,048	98.0487	1.9513	615,388	5,900	1,757	1.1639
		Multi Family Land	130	22,995	18,544	80.6416	19.358	112,167	3	526	2.2873
		Residential Land Waterfront	430	89,183	85,840	96.2515	3.7485	273,397	39	2,455	2.7528
	Commercial (a)		9,341	413,670	401,364	97.0254	2.9746	1,026,508	370	12,381	2.9929
	Other (b)		21,553	196,349	191,758	97.6617	2.3383	374,094	908	5,236	2.6666
	Total or Weighted Average (100%) (c)		**158,898**	**159,568**	**155,884**	**97.6916**	**2.3084**	**547,699**	**8,732**	2,730	1.7106
Properties with Ratio <1	Residential	Residential Land	4,442	25,272	13,329	52.7443	47.2557	110,718	123	409	1.6202
		Residential Waterfront	146	428,185	342,890	80.0800	19.9200	629,430	10	3,709	0.8662
		Single Fam Res	4,082	235,058	158,253	67.3250	32.6750	316,700	155	1,928	0.8202
		Multi Family Land	9	186,667	122,367	65.5536	34.4464	85,000	1	3,716	1.9909
		Residential Land Waterfront	57	119,879	94,495	78.8251	21.1749	253,333	6	2,405	2.0058
	Commercial (a)		2,549	246,741	195,915	79.4012	20.5988	881,965	72	5,902	2.3920
	Other (b)		1,773	317,847	257,904	81.1409	18.8591	545,313	56	7,318	2.3025
	Total or Weighted Average (8.22%) (c)		**13,058**	**178,839**	**131,597**	**73.584**	**26.4157**	**389,232**	**423**	2,943	1.6458

Source: These data are a subset of a larger database from CoreLogic that has property tax information for all counties in South Carolina.

Note: The observations without information about the Appraised Value and/or the Capped Value and/or Tax Amount (missing values) have been removed from the analysis so they do not interfere with the computation of the averages. Additionally, only properties with a non-zero tax amount (no exempt properties) were considered.

(a) This category was created by aggregating a number of original county classifications. The main objective is to group several types of similar properties into a single category to simplify the comparison. This "Commercial" category consists of the following classifications: 1) Auto dealer new, 2) Auto dealer used, 3) Auto repair, 4) Bank 1-2 story, 5) Bar/lounge, 6) Bowling alley, 7) Branch bank 1 stry, 8) Branch bank 2+ stry, 9) Carwash full svc, 10) Carwash self svc, 11) Carwash semi-auto, 12) Cock-a-boose, 13) Cold, 14) Storage, 15) Comml laundry, 16) Commun retail strip, 17) Convenience store, 18) Commercial Land, 19) Covered parking ga, 20) Drive-in restaurant, 21) Fast food restaurant, 22) Florist, 23) Full service hotel, 24) Garage apt, 25) Golf cours, 26) Hotel 1-8 stor, 27) Hotel 9+ story, 28) Laundromat, 29) Light mfg, 30) Local grocery, 31) Lumber yd/sawmill, 32) Luxury restaurant, 33) Mini lube, 34) Mini-warehouse, 35) motel 1 story, 36) motel 1 stry resort, 37) motel 2-8 story, 38) motel 9+ story, 39) office 1 story, 40) office 2-8 story, 41) office 8+ story, 42) pub warehouse, 43) restau inside service/maj chai, 44) restaurant, 45) retail strip, 46) service center/automobile, 47) store 1 story, 48) store 2-8 story, 49) store 9+ story, 50) store/ofc

condo, 51) store/office combo, 52) store/resid combo, 53) supermarket, 54) svc station full, 55) whse/ofc flex space and 56) whse/store/pole bld.
(b) The "Other" category consists of the following properties: 1) Apt/Condo, 2) Clubhouse, 3) Auto repair/wholesale, 4) Construc, 5) Church, 6) Condo 2-8 story, 7) Condo 9+ story. 8) Condo Cluster, 9) Condo Twnhs, 10) County park/rec, 11) County spcl purp, 12) Dairy, 13) Day Care ctr, 14) Day Care Nursery, 15) Doctor ofc 1 story, 16) Doctor ofc multi-stry, 17) Duplex, 18) Theater, 19) Federal Military, 20) Federal OFC bldg, 21) Financial 1-2 stry, 22) Heavy mfg, 23) Historical Single Fam, 24) Historical Site, 25) Institutional Land, 26) Misc County, 27) Misc Federal, 28) Misc municipal, 29) Misc pub institution, 30) Misc pvt institution, 31) Mob home dbl wide, 32) Mobile home, 33) Mobile Home Park Land Only, 34) Mortuary/crematory, 35) Multi-fam 101+ un, 36) Multi-fam 31-100 un, 37)Multi-fam 5-30 un, 38) Multi-fam retirement, 39) Munic office bldg, 40) Munic park/rec, 41) Munic school, 42) Nbhd retail strip, 43) Nursery, 44) OFC/whse flex space, 45)Organization, 46) Prof ofc 1 story, 47) Prof ofc multi-story, 48) Pub convalescent ctr, 49) Pub country club, 50) Pub hospital, 51) Pub nursing home, 52) Pub retirement ctr, 53)Pvt convalescent ctr, 54) Pvt country club, 55) Pvt hospital, 56) Pvt nursing home, 57) Pvt retirement ctr, 58) Pvt school, 59) Pvt tennis club, 60) Pvt university, 61) Pvt util, 62) Electric, 63) Quadraplex, 64) Recreation ctr, 65) Regional retail, 66) Regnl ctr office, 67) Relig university, 68) Religious school, 69) Res conv to 5 apts, 70) Res conv to ofc, 71)Res conv to store, 72) Res lot on golf course, 73) Res on comml land, 74) Single fam res misc, 75) Single fam rural, 76) Single family, 77)Townhouse, 78) Spcl recreation ctr, 79) State office bldg, 80) State School, 81) Svc station ltd and 82) Svc stn now other.
(c) The "Total" row only considers the properties that appear in the table, that is, the total of residential, commercial and "Other" category properties. Therefore, this total does not consider industrial, farm use, and taxexempt properties.

Residential property again has the lowest average effective tax rate, which is primarily due to the lower assessment ratio of 4 percent for primary residential properties and the exemption from paying local school operating costs.

Residential Properties

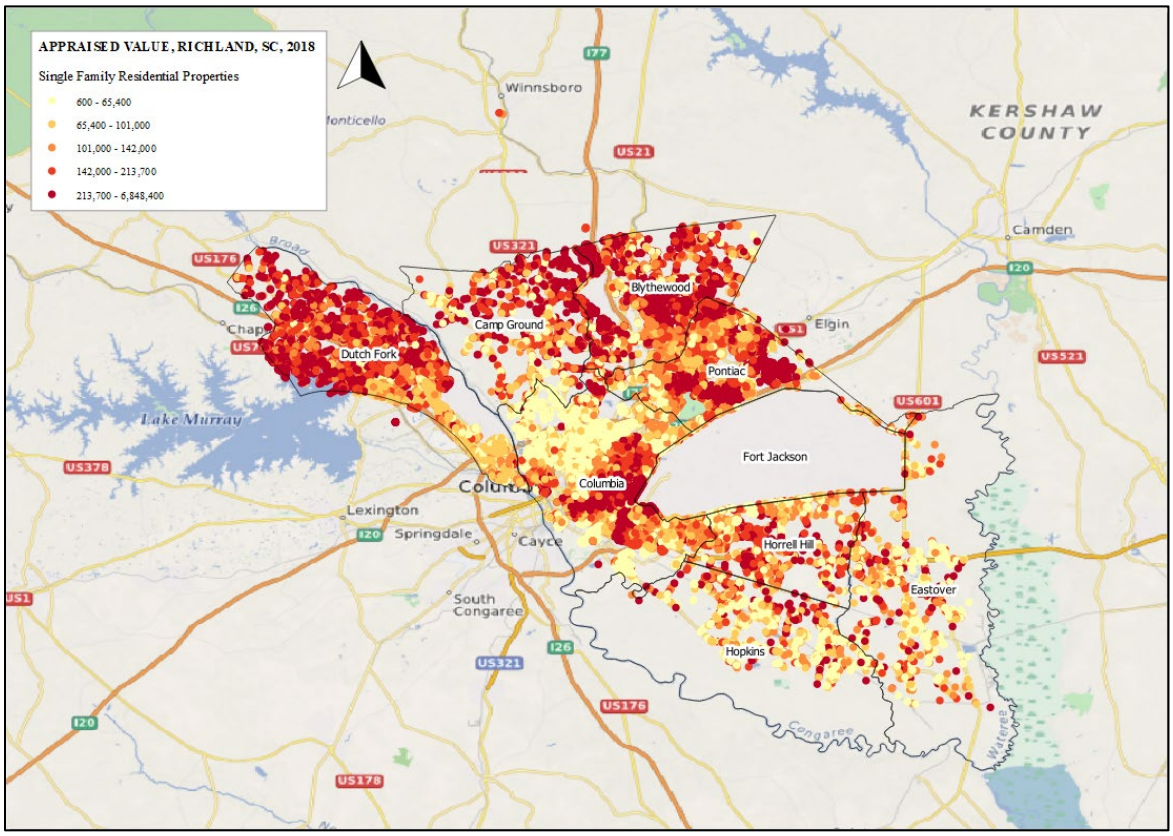
Consider first single family residential properties, which are the largest share of all property classes. In 2018, only 4,082 of 105,492 parcels (about 3.9 percent) had lower capped values relative to appraised values. In aggregate, capped values were about 98 percent of appraised values for the single-family residential properties in the whole county, indicating that the cap reduced the tax base by 2 percent. Of the group of properties that had capped values, on average they received a 32.7 percent lower tax bill in 2018, as compared to those properties with no cap benefit. Given that just 3.9 percent of properties have a differential between capped value and appraised value, and that the capped value is 98 percent of appraised value overall, Act 388 has not resulted in significant differences in effective tax rates across residential occupied properties.

Several maps (figures 3.12, 3.13, and 3.14) illustrate areas where the capped value has had the greatest effect. Figure 3.12 presents 2018 appraised values for single family residential properties; the figure demonstrates that the higher valued properties are located closer to Columbia, and also on the county border with respect to Fairfield, Newberry, and Lexington. Figure 3.13 presents effective tax rates; the properties with the highest effective tax rate are closer to Columbia. Figure 3.14 shows the ratio of capped value to appraised value. Together these figures demonstrate the following:

- the highest valued properties are near and just north of Columbia;
- the highest effective tax rates are near Columbia and in the northeast portion of the county; and
- the properties with a positive differential between capped value and appraised value are primarily located in the northwest and southeast portions of the county.

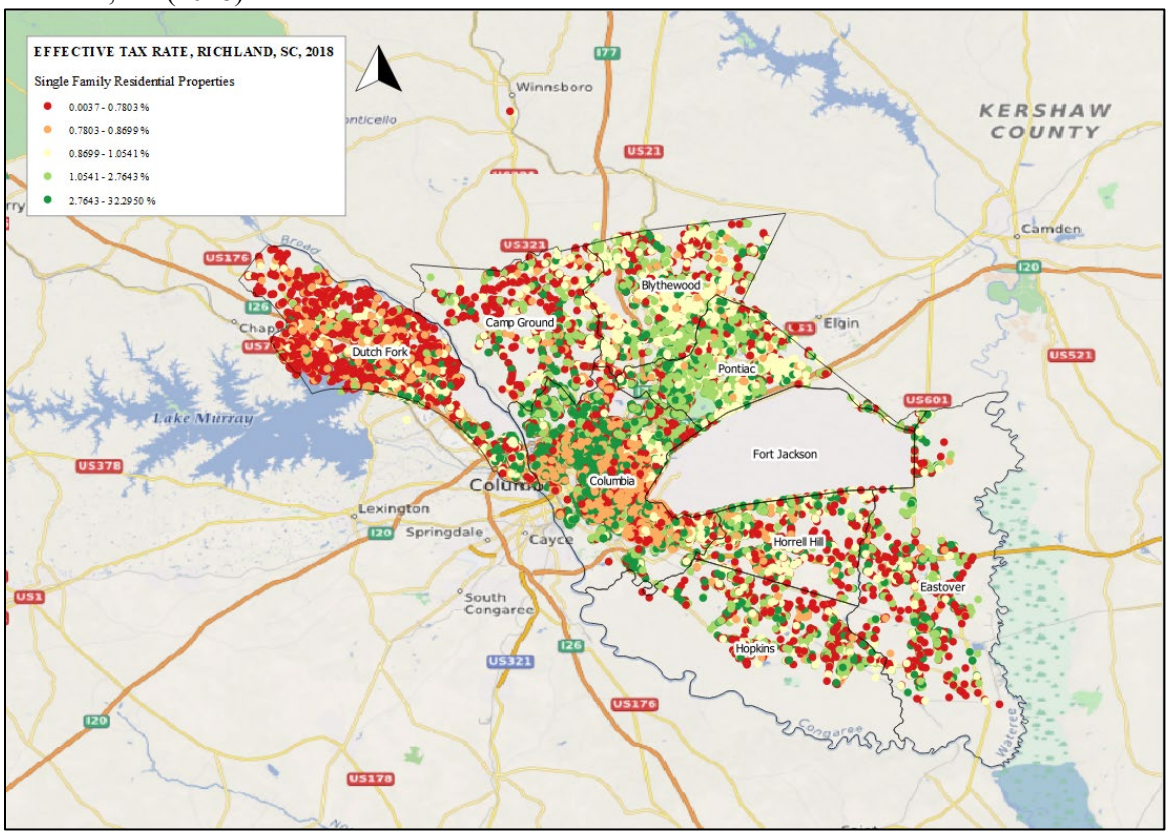
The other residential property classes (*residential land*, *residential waterfront*, and *multi-family land*), which account for about 17 percent of residential properties, also exhibit relatively little tax base erosion. An exception is *multi-family land*, but there are only 130 properties in this category. Among residential properties, *residential waterfront* and *single family residential* have the lowest effective tax rates.

Figure 3.12. Quantile Map: Appraised Value, Single Family Residential Properties, Richland, SC (2018)



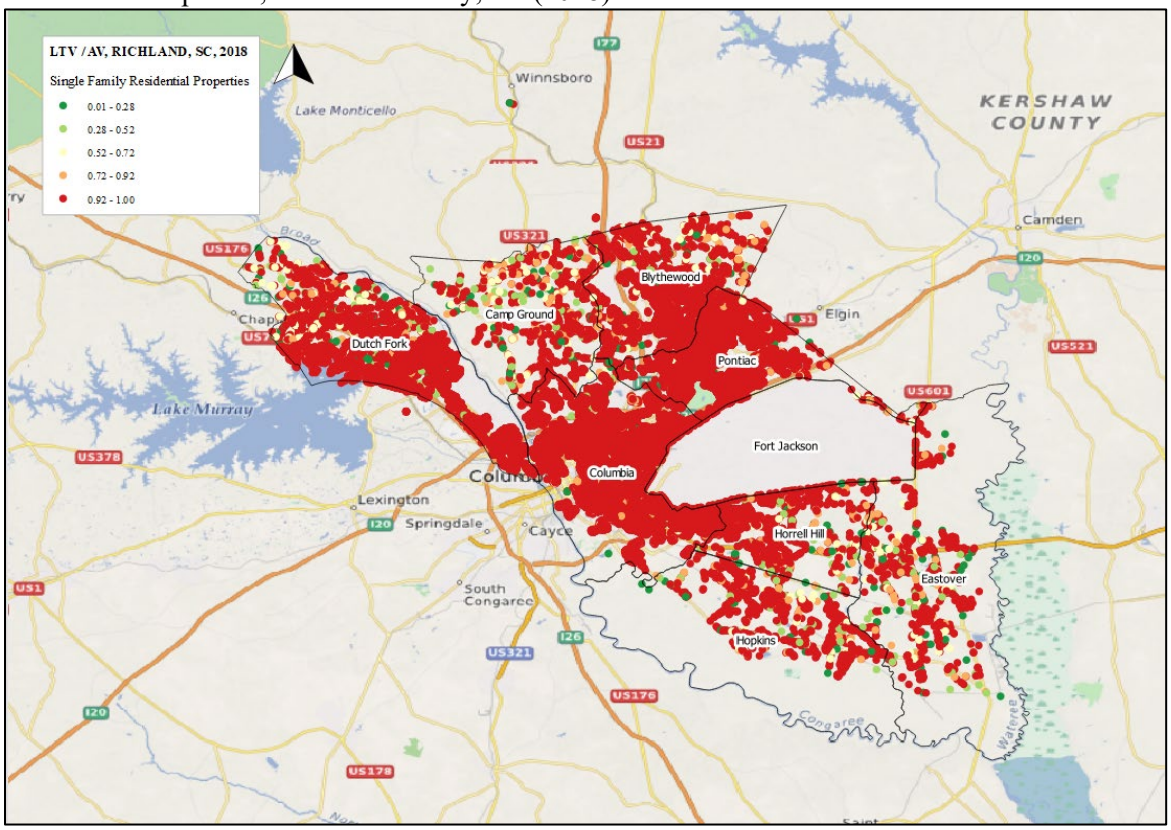
Note: This map represents the situation for Single Family Residential properties in Richland County, South Carolina, year 2018. The number of observations is 104,370.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a quantile map of five groupings, where each group is expressed in U.S. dollars. A quantile map divides the total number of observations by the number of groups (in this case, 5 groups). Once the sample is divided equally, each group has a minimum and maximum value that depends on the observations that belong to the group.
Source: CoreLogic Data

Figure 3.13. Quantile Map: Effective Tax Rate (%), Single Family Residential Properties, Richland, SC (2018)



Note 1: This map represents the situation for Single Family Residential properties in Richland County, South Carolina, year 2018. The number of observations is 104,370.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a quantile map of five groupings, where each group is expressed in percentage terms. A quantile map divides the total number of observations by the number of groups (in this case, 5 groups). Once the sample is divided equally, each group has a minimum and maximum value that depends on the observations that belong in the group.
Source: CoreLogic Data

Figure 3.14. Natural Breaks Map: Capped Value/ Appraised Value Ratio, Single Family Residential Properties, Richland County, SC (2018)



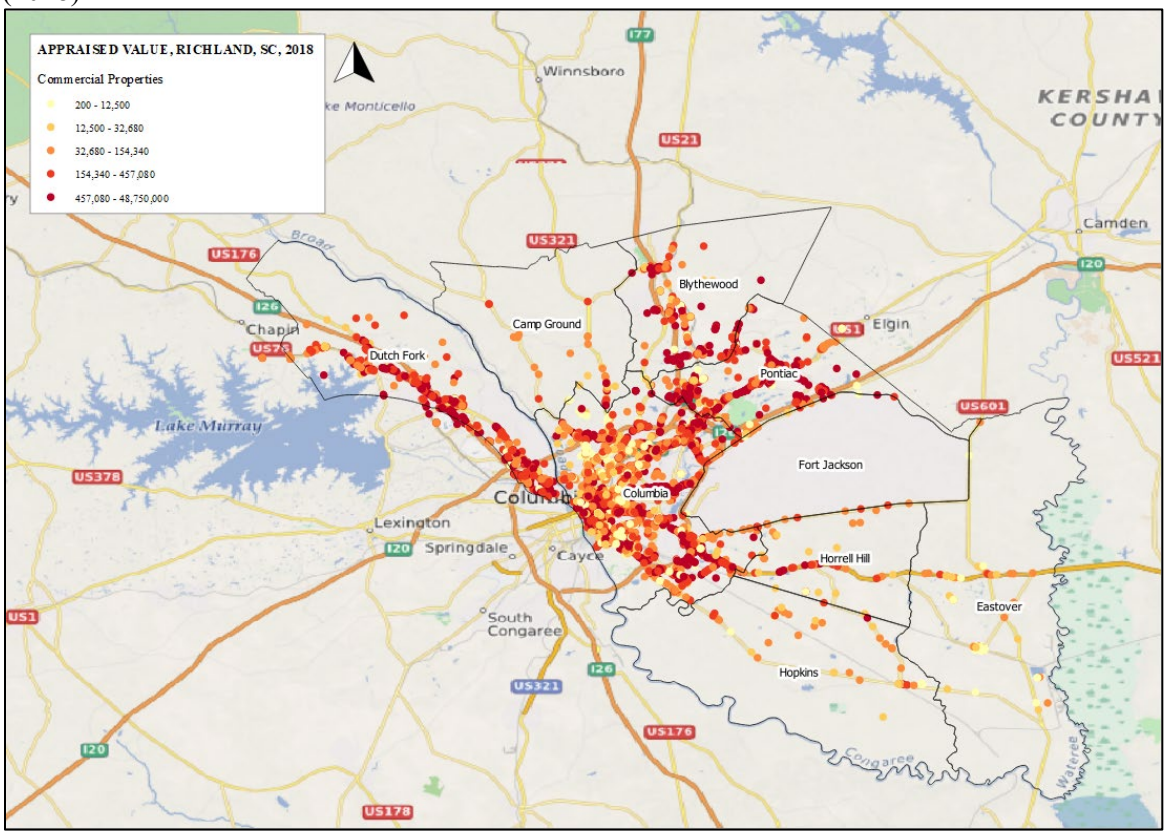
Note: This map represents the situation for Single Family Residential properties in Richland County, South Carolina, year 2018. The number of observations is 104,370.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a natural breaks map (or Jenks) of five classes, where each category is expressed in ratio. This method uses an iterative approach to arrange a set of values into "natural" classes. Therefore, each class is composed of properties that are the most similar among them with respect to the variable of interest. In this particular case, this type of map is chosen because the ratio does not vary largely through properties and there is a large group of observations with a ratio close to one.
Source: CoreLogic Data

Commercial Properties

About 27.3 percent of commercial properties exhibit a gap between appraised value and capped value; commercial capped value is 97 percent of appraised value. Thus, the assessment limit has reduced the commercial tax base by 3 percent. For those properties with a gap between appraised value and capped value, the tax savings were a substantial 21 percent. For reference, we also present figures 3.15, 3.16, and 3.17 for Richland County, which demonstrate the following:

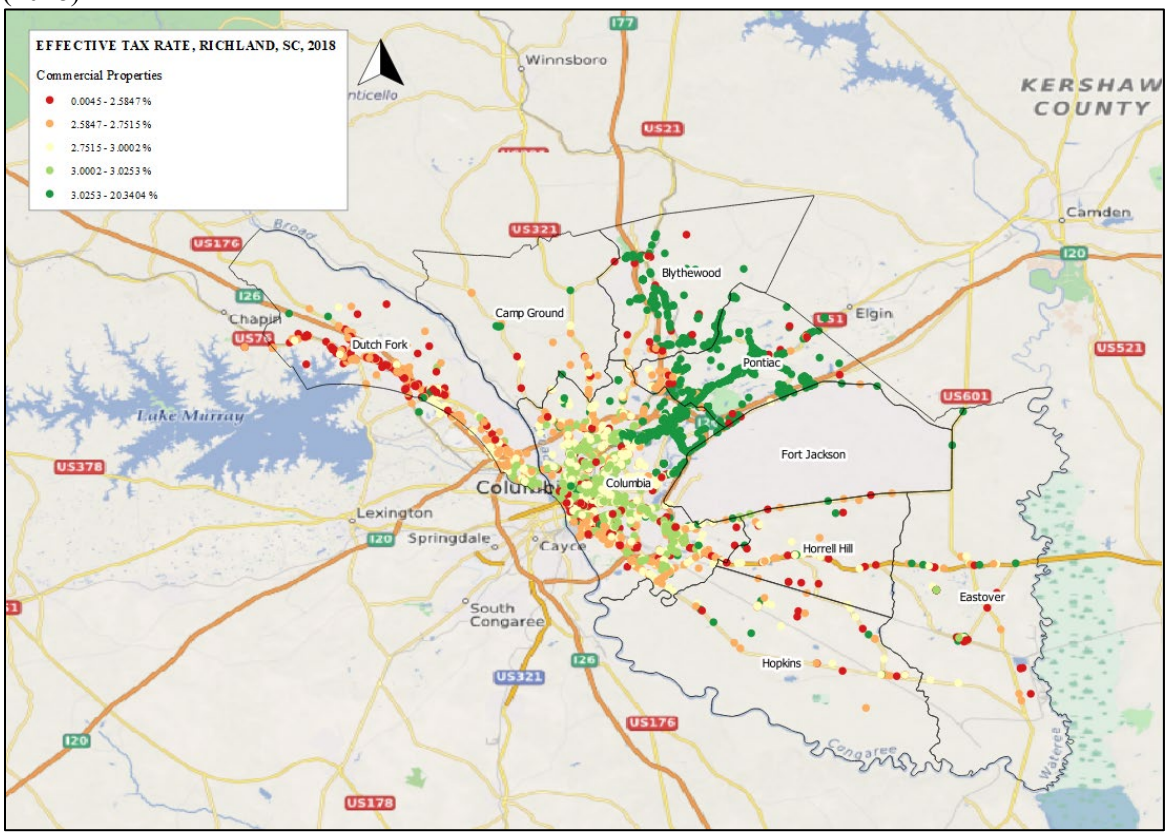
- Commercial properties are generally concentrated around Columbia (figure 3.15);
- the high effective tax rates are in the northeast portion of the county near Dentsville and Pontiac (figure 3.16); and
- properties with a gap between appraised value and capped value are dispersed throughout the county (figure 3.17).

Figure 3.15. Quantile Map: Appraised Value, Commercial Properties, Richland County, SC (2018)



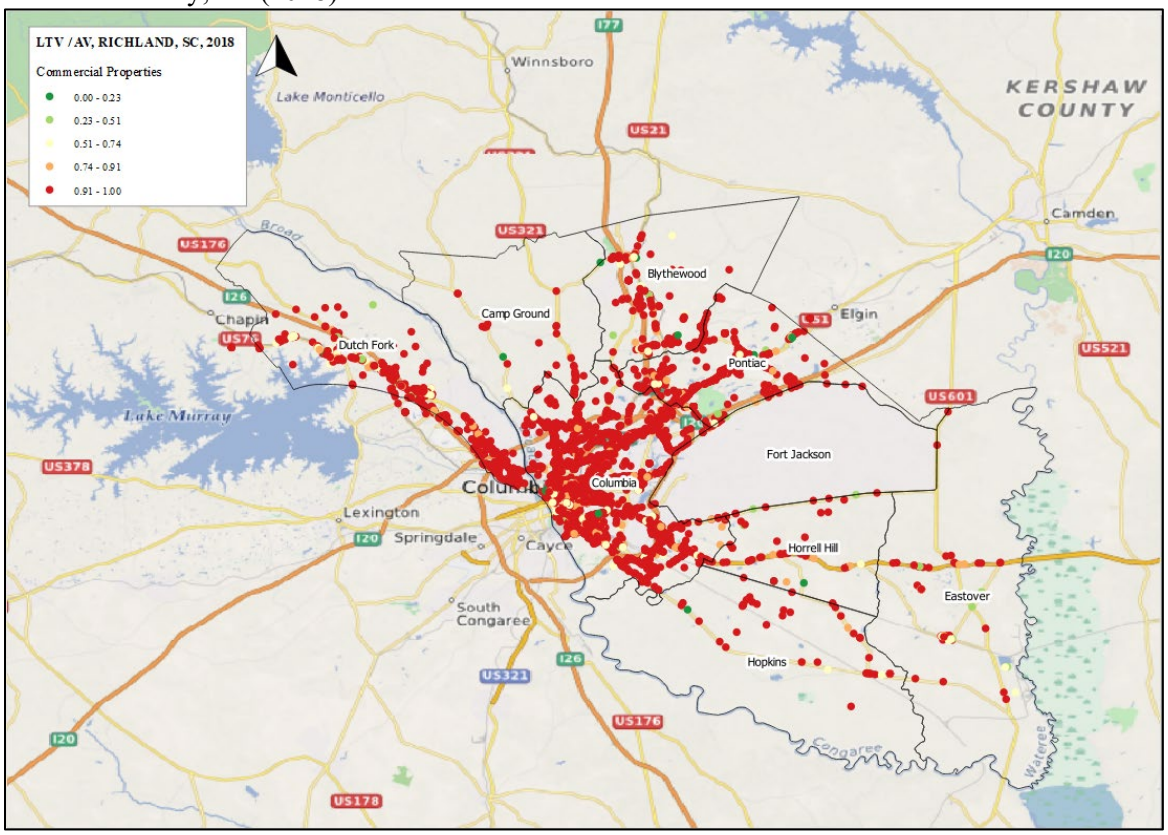
Note 1: This map represents the situation for Commercial properties in Richland County, South Carolina, year 2018. The number of observations is 9,224.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a quantile map of five grouping, where each group is expressed in U.S. dollars. A quantile map divides the total number of observations by the number of groups (in this case, 5 groups). Once the sample is divided equally, each group has a minimum and maximum value that depends on the observations that belong to the group.
Source: CoreLogic Data

Figure 3.16. Quantile Map: Effective Tax Rate, Commercial Properties, Richland County, SC (2018)



Note 1: This map represents the situation for Commercial properties in Richland County, South Carolina, year 2018. The number of observations is 9,224.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a quantile map of five groups, where each group is expressed in percentages. A quantile map divides the total number of observations by the number of groups (in this case, 5 groups). Once the sample is divided equally, each group has a minimum and maximum value that depends on the observations that belong to the group.
Source: CoreLogic Data

Figure 3.17. Natural Breaks Map: Capped Value/Appraised Value Ratio, Commercial Properties, Richland County, SC (2018)



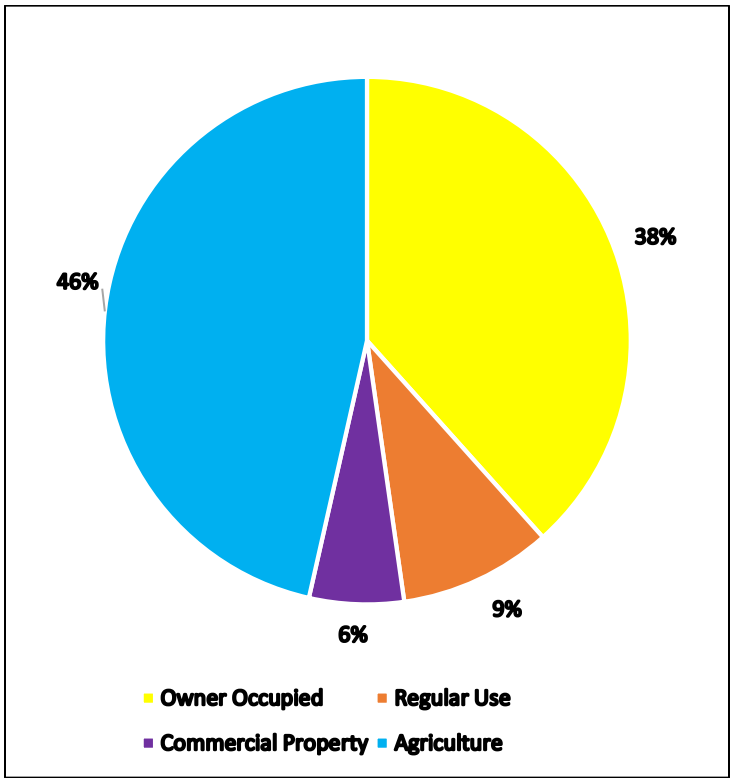
Note: This map represents the situation for Commercial properties in Richland County, South Carolina, year 2018. The number of observations is 9,224.
Note 2: Note that some properties have been omitted for two reasons: 1) corresponds to outlier observations, and 2) are observations that do not have information regarding geographical coordinates.
Note 3: This is a natural breaks map (or Jenks) of five groupings, where each category is expressed in ratio. This method uses an iterative approach to arrange a set of values into "natural" groups. Therefore, each group is composed of properties that are the most similar among them with respect to the variable of interest. In this particular case, this type of map is chosen because the ratio does not vary very much across properties and there is a large group of observations with a ratio close to one.
Source: CoreLogic Data

Edgefield County

Edgefield County is located on the western border of South Carolina. With a population of 27,052 in 2018, it is one of the smaller and more rural counties in South Carolina.

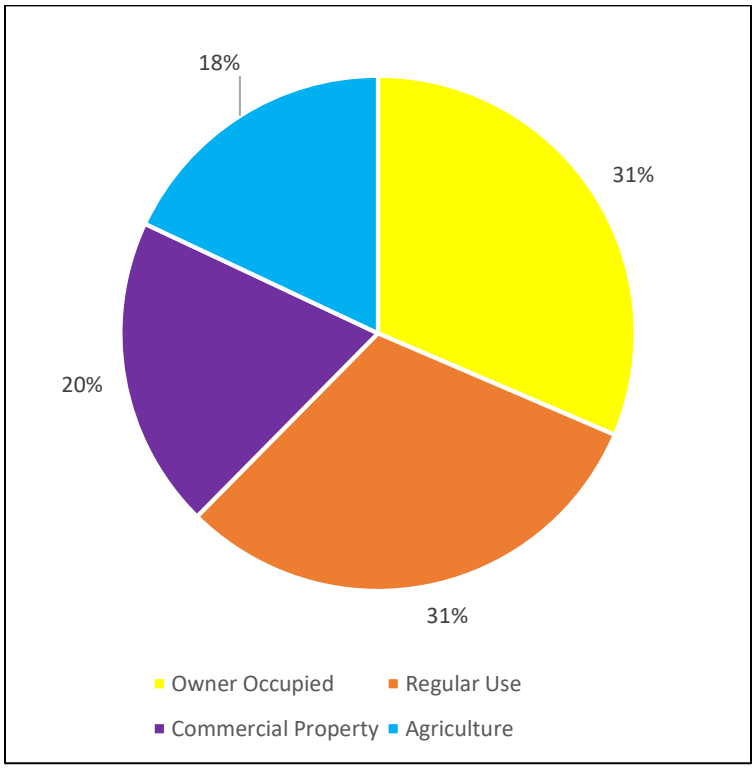
Figures 3.18 and 3.19 show the proportion of the total appraised value and total tax payments by property class for Edgefield County in 2018. The figures summarize contributions to the tax base by different property classes.

Figure 3.18. Percentage of the Total Appraised Value by Property Type, Edgefield, South Carolina (2018)



Source: These data are obtained from a subset of a larger database with information for all counties in South Carolina. This information comes from CoreLogic. The subset is Edgefield County.
The following categories were omitted from the graph (not from the calculation) because the resulting percentages were virtually zero: 1) Multi-Lot Discount and 2) Other.

Figure 3.19. Percentage of the Total Tax Payment by Property Type, Edgefield, South Carolina (2018)



Source: These data are obtained from a subset of a larger database with information for all counties in South Carolina. This information comes from CoreLogic. The subset is Edgefield County.
The following categories were omitted from the graph (not from the calculation) because the resulting percentages were virtually zero: 1) Multi-Lot Discount and 2) Other.

Owner occupied (primary residential) property is 38 percent of the total appraised value with *agriculture* (46 percent), *regular use* (9 percent), and *commercial* property (6 percent) accounting for most of the remaining tax base. However, *owner occupied* property accounts for only 31 percent of tax revenues, whereas *regular use* and *commercial property* make up 31 percent and 20 percent of total property tax revenues, respectively. Residential property has the largest share of the total appraised value; however, its tax contribution is lower due to the reduced assessment ratio and the exemption from paying local school operating costs.

Table 3.3 shows that average effective property tax rates vary significantly by property class. Note that the category *Owner Occupied* is synonymous with primary residential properties. The effective tax rate for owner occupied residential property is 0.51 percent. Commercial property owners pay the highest effective tax rates at 2.12 percent.

The capped value had little effect in Edgefield County, though the relatively few parcels that enjoyed a tax base reduction received substantial tax savings, particularly for commercial property.

Table 3.3. Mean of Appraised Value, Capped Value, Sale Prices, Tax Payment, and Ratios by County and Property Type, Edgefield, South Carolina (2018)

	Type of Property		Number of Properties	Mean Appraised Value (1)	Mean Capped Value (2)	Ratio (2)/(1) x 100 (%)	Tax Base Reduction (1 – Ratio) x 100 (%)	Mean Sale Price	Number of Sales	Mean Tax Payment (3)	Effective Tax Rate (3)/(1) x 100 (%)
All Properties	Residential	Owner Occupied	5,898	113,342	112,667	99.4040	0.5960	210,881	152	583	0.5148
		Regular Use	4,796	33,998	33,347	98.0832	1.9168	113,857	183	706	2.0772
		Multi-Lot Discount	402	2,218	2,218	100.0000	0.0000	168,480	21	44	1.9915
	Commercial Property		392	257,554	250,946	97.4346	2.5654	427,183	12	5,469	2.1234
	Other (a)		10	188,871	179,599	95.0906	4.9094	165,000	1	2,667	1.4120
	Total or Weighted Average (100%) (b)		**11,498**	**81,344**	**80,492**	**98.9530**	**1.0470**	**167,260**	**369**	**787**	**0.9672**
Properties with Ratio <1	Residential	Owner Occupied	239	122,979	106,309	86.4450	13.5550	108,625	4	568	0.4619
		Regular Use	191	68,732	52,369	76.1921	23.8079	223,099	7	1,165	1.6943
		Multi-Lot Discount	0	*n.i.*	*n.i.*	*n.i.*	*n.i.*	*n.i.*	0	*n.i.*	*n.i.*
	Commercial Property		13	457,894	258,661	56.4892	43.5108	*n.i.*	0	6,160	1.3453
	Other (a)		2	168,975	122,613	72.5628	27.4372	*n.i.*	0	2,543	1.5052
	Total or Weighted Average (3.87%) (b)		**445**	**109,686**	**87,681**	**79.9381**	**20.0619**	**181,472**	**11**	**997**	**0.9092**

Source: These data are a subset of a larger database from CoreLogic that has property tax information for all counties in South Carolina.
Note: The observations without information about the Appraised Value and/or the Capped Value and/or the Tax Amount (missing values) have been removed from the analysis so they do not interfere with the computation of the average. Additionally, only properties with a non-zero tax amount (no exempt properties) were considered.
(a) This category was created by aggregating original county classifications 1) Ag at a Corp Rate, 2) Not Occupied and 3) Right of Way.
(b) The *Total* row includes only the properties that appear in the table, that is, the total of residential, commercial, and *Other* property categories. Therefore, this total does not include industrial, farm use, and tax-exempt properties.

Residential property has the lowest average effective tax rate, which again is primarily due to the lower assessment ratio of 4 percent for primary residential properties and the exemption from paying local school operating costs.

Residential Properties

For *owner occupied* residential properties, only 239 of 5,898 parcels have lower capped values relative to appraised values. In aggregate, capped value is about 99 percent of appraised value for the owner-occupied properties in the whole county, indicating that the cap reduces the tax base by less than one percent.

Properties that were subject to a cap received, on average, a 13.6 percent lower tax bill in 2018 than those properties with no benefit. Given that so few properties had a differential between the capped value and appraised value, and that the capped value is 99 percent of appraised value overall, the assessment limit has not resulted in significant differences in effective tax rates across residential occupied properties.

The other residential property classes (*regular use* and *multi-lot discount*), which are about 47 percent of residential properties, also exhibited relatively little tax base erosion.

Commercial Properties

Only 13 of 392 commercial properties exhibited a gap between appraised value and capped value; capped value for commercial property is 97 percent of appraised value. Thus, the assessment limit reduced the commercial tax base by 3 percent. However, for the 13 properties that had a gap between appraised value and capped value, the tax savings were a substantial 44 percent.

In the evaluations of York and Richland counties, the accompanying figures showed the pattern of property tax burden in a spatial context. However, given that so few properties in Edgefield have benefited from the assessment limit, figures have not been included for Edgefield County.

Thus far, an overview of all counties included in the evaluation has been provided as well as more detailed evaluations for York, Richland, and Edgefield counties. The chapter concludes with brief summaries of the remaining counties under consideration.

Allendale County

Information on the Allendale County property tax environment is presented in table 3.4. However, the assessment limit has had essentially no effect on the tax base and therefore is not applicable.

Table 3.4. Mean of Appraised Value, Capped Value, Sale Prices, Tax Payment, and Ratios by County and Property Type, Allendale, South Carolina (2018)

	Type of Property		Number of Properties	Mean Appraised Value (1)	Mean Capped Value (2)	Ratio (2)/(1) x 100 (%)	Tax Base Reduction (1 – Ratio) x 100 (%)	Mean Sale Price	Number of Sales	Mean Tax Payment (3)	Effective Tax Rate (3)/(1) x 100 (%)
All Properties	Residential	Single Family Residence OO/HE	881	41,070	40,958	99.7260	0.2740	58,625	4	183	0.4454
		Single Family Residential	771	24,766	24,745	99.9130	0.0870	52,667	12	710	2.8661
		Single Family Residential -OO	680	42,034	41,887	99.6514	0.3486	39,925	10	370	0.8804
		Residential Lots-Vacant	1,246	4,026	4,013	99.6849	0.3151	61,557	7	116	2.8727
	Commercial (a)		284	44,721	44,545	99.6052	0.3948	42,238	6	1,361	3.0444
	Other (b)		1,229	17,823	17,697	99.2897	0.7103	394,275	4	347	1.9493
	Total or Weighted Average (100%) (c)		**5,091**	**24,301**	**24,211**	**99.6274**	**0.3726**	**82,027**	**43**	**391**	**1.6108**
Properties with Ratio <1	Residential	Single Family Residence OO/HE	12	70,055	61,793	88.2052	11.7948	67,500	1	193	0.2760
		Single Family Residential	6	39,940	37,170	93.0654	6.9346	45,000	1	1,132	2.8334
		Single Family Residential - OO	13	93,611	85,945	91.8114	8.1886	*n.i.*	0	688	0.7352
		Residential Lots - Vacant	9	3,227	1,471	45.5826	54.4174	*n.i.*	0	43	1.3371
	Commercial (a)		4	85,017	72,481	85.2547	14.7453	*n.i.*	0	456	0.5369
	Other (b)		6	50,295	24,364	48.4424	51.5576	*n.i.*	0	663	1.3173
	Total or Weighted Average (0.98%) (c)		**50**	**60,273**	**51,166**	**84.8906**	**15.1094**	**56,250**	**2**	**469**	**0.7774**

Source: These data are a subset of a larger database from CoreLogic that has property tax information for all counties in South Carolina.
Note: The observations without information about the Appraised Value and/or the Capped Value and/or Tax Amount (missing values) have been removed from the analysis so they do not interfere with the computation of the average. Additionally, properties with a non-zero tax amount (no exempt properties) were considered.
(a) This category was created by aggregating original county classifications. The main objective was to group several types of similar properties into a single category to simplify the comparison. This category comprises the following properties: 1) Beauty Shop, 2) Building Supply, 3) Cablevision (Dept of Revenue), 4) Car Dealership & Sales, 5) Church, Cemetery, Parsonage, 6) Florist, 7) Funeral Home, 8) Gas Distributor, 9) Golf Course, 10) Hunting Club, 11) Laundromat, 12) Motels and Hotels, Night Club, and similar, 13) Office, 14) Post Office-Privately Owned, 15) Radio Station, 16) Repair Shop, 17) Res Lot w/Garage/Storage, 18) Restaurant, 19) Store, and 20) Warehouse.
(b) The *Other* category was created by aggregating original county classifications: 1) Apartment Complex, 2) Bank or Savings and Loan, 3) College or University, 4) Commercial Property Vacant, 5) Convalescent Home, 6) County Fee-in-Lieu, 7) County Owned, 8) Duplex, 9) Federal Government, 10) Fraternal Organizations, 11) Hazardous Landfill, Closed, 12) House, 13) Manufacturers County, 14) Mobile Home, 15) Mobile Home-OO, 16) Mobile Home OO/HE, 17) Mobile Home Park, 18) Nursery-Children, 19) Power Company (State), 20) Railroad Property (County), 21) School District, 22) School Private, 23) Service Station, 24) State Owned, 25) Swimming Pool (Multiple Own), 26) Telephone Company (State), 27) Total Market Value, 28) Town of Allendale, 29) Town of Fairfax, 30) Town of Sycamore, and 31) Town of Ulmer.
(c) The *Total* row only includes the properties that appear in the table, that is, the total of residential, commercial, and *Other* property categories. Therefore, this total does not include industrial, farm use, and tax-exempt properties.

Charleston County

Unfortunately, information on capped values was unavailable from CoreLogic. Therefore, the differential effect of tax caps was not considered. Table 3.5 does, however, offer a summary of effective tax rates by property class.

Table 3.5. Mean of Appraised Value, Capped Value, Sale Prices, Tax Payment, and Ratios by County and Property Type, Charleston, South Carolina (2018)

	Type of Property		Number of Properties	Mean Appraised Value (1)	Mean Capped Value (2)	Ratio (2)/(1) x 100	Tax Base Reduction (1 – Ratio) x 100	Mean Sale Price	Number of Sales	Mean Tax Payment (3)	Effective Tax Rate (3)/(1) x 100 (%)
All Properties	Residential	Resid-Cnu	15,463	278,482	*n.i.*	*n.i.*	*n.i.*	2,622,404	1,397	3,103	1.1143
		Resid-Dup/Tri	2,317	322,798	*n.i.*	*n.i.*	*n.i.*	711,372	143	4,291	1.3292
		Resid-Mbh	1,729	80,196	*n.i.*	*n.i.*	*n.i.*	138,893	50	735	0.9163
		Resid-Row	101	1,505,846	*n.i.*	*n.i.*	*n.i.*	1,740,327	9	14,060	0.9337
		Resid-Twh	9,129	224,470	*n.i.*	*n.i.*	*n.i.*	261,848	814	2,021	0.9003
		Sfr-Apts	105,817	399,817	*n.i.*	*n.i.*	*n.i.*	536,009	5,836	2,864	0.7163
		Vac-Res-Lot	20,653	121,500	*n.i.*	*n.i.*	*n.i.*	457,391	2,077	1,445	1.1895
	Commercial (A)		6,211	779,248	*n.i.*	*n.i.*	*n.i.*	1,727,826	318	10,016	1.2853
	Other (B)		12,306	988,497	*n.i.*	*n.i.*	*n.i.*	5,702,858	710	13,814	1.3975
	Total or Weighted Average (100%) (c)		**173,726**	**398,416**	***n.i.***	***n.i.***	***n.i.***	**1,116,576**	**11,354**	**3,681**	**0.9240**
Properties with Ratio <1	Residential	Resid-Cnu	15,463	278,482	*n.i.*	*n.i.*	*n.i.*	2,622,404	1,397	3,103	1.1143
		Resid-Dup/Tri	2,317	322,798	*n.i.*	*n.i.*	*n.i.*	711,372	143	4,291	1.3292
		Resid-Mbh	1,729	80,196	*n.i.*	*n.i.*	*n.i.*	138,893	50	735	0.9163
		Resid-Row	101	1,505,846	*n.i.*	*n.i.*	*n.i.*	1,740,327	9	14,060	0.9337
		Resid-Twh	9,129	224,470	*n.i.*	*n.i.*	*n.i.*	261,848	814	2,021	0.9003
		Sfr-Apts	105,817	399,817	*n.i.*	*n.i.*	*n.i.*	536,009	5,836	2,864	0.7163
		Vac-Res-Lot	20,653	121,500	*n.i.*	*n.i.*	*n.i.*	457,391	2,077	1,445	1.1895
	Commercial (a)		6,211	779,248	*n.i.*	*n.i.*	*n.i.*	1,727,826	318	10,016	1.2853
	Other (b)		12,306	988,497	*n.i.*	*n.i.*	*n.i.*	5,702,858	710	13,814	1.3975
	Total or Weighted Average (100%) (c)		**173,726**	**398,416**	***n.i.***	***n.i.***	***n.i.***	**1,116,576**	**11,354**	**3,681**	**0.9240**

Source: These data are a subset of a larger database from CoreLogic that has property tax information for all counties in South Carolina.
Note: The observations without information about the Appraised Value and/or the Capped Value and/or Tax Amount (missing values) have been removed from the analysis so they do not interfere with the computation of the average. Additionally, only properties with a non-zero tax amount (no exempt properties) were considered.
(a) This category was created by aggregating two original county classifications. The main objective of this action is to group similar properties into a single category to simplify the comparison. This category comprises the following properties: 1) General Commercial, and 2) Vacation Commercial Lot.
(b) The *Other* category was created by aggregating original county classifications: 1) Auto Parking, 2) Building-Only, 3) Cemeteries, 4) Comm-App-Res, 5) Condo Common, 6) Condo Common Comm, 7) Cultural Activity, 8) Electric/Utility, 9) Freeways, 10) Govt Bldg, 11) Mobile Home Parks, 12) Not Currently Classified, 13) OT Undeveloped Land, 14) Playground Activity, 15) Railroad/Train, 16) Religious, 17) Rooming House, 18) Schools, 19) Spclty-Apt, 20) Spclty-Cnu-Tmsbrg, 21) Spclty-Commcondo, 22) Spclty, 23) Spclty-Ofc, 24) Spclty-Rec, 25) Spclty-Rst, 26) Spclty-Rtl, 27) Spclty-Sma, 28) Spclty-Tamsberg, 29) Spclty-Whs, 30) Telephone Communication, 31) Undeveloped Land Residential, and 32) Undeveloped Unused Land.
(c) The *Total* row only includes the properties that appear in the table, that is, the total of residential, commercial, and *Other* category properties. Therefore, this total does not include industrial, farm use, and tax-exempt properties.

Florence County

The assessment limit had little effect on the Florence County tax base (see table 3.6).

Table 3.6: Mean of Appraised Value, Capped Value, Sale Prices, Tax Payment and Ratios by County and Property Type, Florence, South Carolina, 2018

	Type of Property		Number of Properties	Mean Appraised Value (1)	Mean Capped Value (2)	Ratio (2)/(1)x100	Tax Base Reduction (1-Ratio)x100	Mean Sale Price	Number of Sales	Mean Tax Payment (3)	Effetive Tax Rate (3)/(1)x100
All Properties	Residential	Residential	146	20,947	20,597	98.3305%	1.6695%	47,667	3	228	1.0879%
		Residential Auxiliary	1,155	18,829	17,999	95.5932%	4.4068%	86,886	11	237	1.2589%
		Residential Improved	35,064	122,258	121,922	99.7252%	0.2748%	163,270	1,161	790	0.6459%
		Residential Vacant	14,584	31,316	29,571	94.4279%	5.5721%	145,948	459	295	0.9423%
	Commercial Improved		5,035	369,301	361,830	97.9770%	2.0230%	379,743	153	7,993	2.1643%
	Other (a)		736	210,829	202,813	96.1982%	3.8018%	274,672	22	3,748	1.7776%
	Total or Weighted Average (100%) (c)		**56,720**	**119,587**	**118,146**	**98.7947%**	**1.2053%**	**177,882**	**1,809**	**1,193**	**0.9978 %**
Properties with Ratio<1	Residential	Residential	23	44,082	41,862	94.9641%	5.0359%	59,000	2	299	0.6787%
		Residential Auxiliary	295	25,310	22,061	87.1643%	12.8357%	55,417	3	285	1.1275%
		Residential Improved	17,809	124,322	123,660	99.4680%	0.5320%	166,525	590	805	0.6475%
		Residential Vacant	2,516	76,418	66,303	86.7639%	13.2361%	184,088	170	491	0.6421%
	Commercial Improved		1,883	483,632	463,656	95.8695%	4.1305%	515,678	62	8,859	1.8318%
	Other (a)		151	396,242	357,174	90.1404%	9.8596%	287,841	6	6,474	1.6338%
	Total or Weighted Average (39.98%) (c)		**22,677**	**149,284**	**145,679**	**97.5851%**	**2.4149%**	**196,312**	**833**	**1,422**	**0.9523 %**

Source: These data are a subset of a larger database from CoreLogic, which has property tax information for all counties in South Carolina.

Note 1: The observations that do not present information about the Appraised Value and/or the Capped Value and/or Tax Amount (missing values) have been removed from the analysis so that it does not interfere with the computation of the average. Additionally, we only include properties with a non-zero tax amount (no exempt properties).

Note 2: in the case of Florence, we have identified properties where the Capped Value exceeds the Appraised Value. We do not know the origin or reason of these cases; therefore, we have decided to eliminate these observations from the analysis so that they do not affect the averages shown in the table. These are the number of omitted observations by property category: 1) Residential: 465 of 611 properties; 2) Residential Auxiliary: 246 of 1,401 properties; 3) Residential Improved: 91 of 35,155; 4) Residential Vacant: 952 of 15,536 properties; 5) Commercial Improved: 13 of 5,048 properties; 6) Other: 6 of 742 properties.

(a) The "Other" category was created by aggregating a number of original county classifications: 1) Commercial Auxiliary, 2) Commercial Vacant, 3) Utility Improved, and 4) Utility Vacant.

(b) The "Total" row only includes the properties that appear in the table, that is, the total of residential, commercial and "Other" category properties. Therefore, this total does not include industrial, farm use, and tax-exempt properties.

Greenville County

With a population of 514,213, Greenville County is one of the largest counties in South Carolina. Though Greenville has a dynamic and growing economy, the assessment limit had a somewhat larger effect on the tax base; capped value is 90.4 percent of appraised value. About 22 percent of properties in the county had a gap between appraised value and capped value (see table 3.7). While the gaps were small for most parcels, there were a few parcels where the gaps were significant. It may be useful to conduct a case study to learn more about why some properties enjoy substantial tax relief, whereas most properties do not.

Table 3.7. Mean of Appraised Value, Capped Value, Sale Prices, Tax Payment, and Ratios by County and Property Type, Greenville, South Carolina (2018)

		Type of Property	Number of Properties	Mean Appraised Value (1)	Mean Capped Value (2)	Ratio (2)/(1) x 100 (%)	Tax Base Reduction(1 – Ratio) x 100 (%)	Mean Sale Price	Number of Sales	Mean Tax Payment (3)	Effective Tax Rate (3)/(1) x 100 (%)
All Properties	Residential	Res Single Family W/Aux Use	428	79,987	50,128	62.6704	37.3296	505,750	13	751	0.9391
		Resid 1 Family	150,128	187,985	183,827	97.7879	2.2121	265,023	9,684	1,669	0.8881
		Resid 1 Family/Vac	26,810	40,939	28,317	69.1681	30.8319	292,074	1,598	560	1.3689
		Resid Homeowners Assoc Prop	1,127	8,544	7,839	91.7496	8.2504	201,357	7	312	3.6482
		Resid Mobile Home	3,478	52,085	47,049	90.3313	9.6687	100,955	109	544	1.0454
		Resid Vac Mobile	4,013	28,228	21,234	75.2232	24.7768	79,636	56	322	1.1397
	Commercial (a)		11,026	759,258	704,079	92.7324	7.2676	1,634,297	545	14,958	1.9700
	Other (b)		4,865	786,805	590,645	75.0688	24.9312	3,973,250	184	11,621	1.4769
	Total or Weighted Average (100%) (c)		**201,875**	**207,342**	**194,539**	**93.8252**	**6.1748**	**383,604**	**12,196**	**2,432**	**1.1730**
Properties with Ratio <1	Residential	Res Single Family W/Aux Use	166	120,146	42,451	35.3328	64.6672	854,974	6	588	0.4895
		Resid 1 Family	16,113	204,753	165,990	81.0685	18.9315	282,842	2,054	1,694	0.8274
		Resid 1 Family/Vac	12,013	46,821	18,278	39.0384	60.9616	359,145	786	372	0.7953
		Resid Homeowners Assoc Prop	170	12,946	8,273	63.9026	36.0974	*n.i.*	0	272	2.1008 %
		Resid Mobile Home	1,465	49,381	37,355	75.6464	24.3536	115,614	27	445	0.9019
		Resid Vac Mobile	1,221	48,573	21,140	43.5224	56.4776	83,467	23	322	0.6628
	Commercial (a)		2,797	808,222	590,687	73.0848	26.9152	1,301,531	145	12,618	1.5612
	Other (b)		3,428	738,131	459,732	62.2833	37.7167	3,532,612	108	8,373	1.1344
	Total or Weighted Average (18.51%) (c)		**37,373**	**235,634**	**166,197**	**70.5318**	**29.4682**	**458,451**	**3,149**	**2,594**	**1.1010**

Source: These data are a subset of a larger database from CoreLogic that has property tax information for all counties in South Carolina.
Note: The observations without information about the Appraised Value and/or the Capped Value and/or Tax Amount (missing values) have been removed from the analysis so they do not interfere with the computation of the average. Additionally, only properties with a non-zero tax amount (no exempt properties) are considered.
(a) This category was created by aggregating original county classifications. The main objective was to group several types of similar properties into a single category to simplify the comparison. This category comprises the following properties: 1) Anchor Retail, 2) Auto Service Center, 3) Bank-Branch, 4) Bank-Full Service, 5) Barber/Beauty-Convent, 6) Barber/Beauty-Convert, 7) Broadcasting Facility, 8) Car Wash Full Service, 9) Car Wash/Self Service, 10) Cashier Booth-Gas, 11) Cemetery, 12) Cold Storage, 13) Commercial Common, 14) Community Recreation, 15) Conv Store, 16) Conv Store Super (Food), 17) Day Care Conventional, 18) Day Care-Converted Res, 19) Department Store, 20) Discount Warehouse, 21) Funeral Home Conventional, 22) Funeral Home Converted, 23) Golf-Par 3, 24) Hangars, 25) Health Care-Assisted Living, 26) Health Care-Converted Res, 27) Health Care-Nursing Home, 28) Hotel, 29) Laundry/Cleaner Full Service, 30) Laundromat (Self), 31) Lumber-Showroom/Retail, 32) Medical, 33) Office-Dental, 34) Mini Lube, 35) Mini-Warehouses, 36) Mom/Pop Grocery, 37) Motel, 38) Motel Budget, 39) Motel Economy, 40) Motel Low Cost, 41) Motel-Extended Stay, 42) Office High Rise, 43) Office Retail Strip, 44) Office-Convert/Res, 45) Office-General, 46) Office-Inter/Whse, 47) Office-Medical, 48) Parking Lots, 49) Parking Structure, 50) Rec-Bowling Alley, 51) Recreation-Club House/Golf, 52) Recreation-Golf, 53) Recreation-Gym/Athletic Club, 54) Recreation-Health Club, 55) Recreation-Horse Arena, 56) Recreation-Movie Theatre, 57) Recreation-Skating Rink-Ice, 58) Recreation-Theme Park, 59) Rest/Lounge/Sports, 60) Restaurant-Fast Food, 61) Restaurant-Full Service/Cafe, 62) Restaurant-Neighborhood, 63) Restaurant-Night Club, 64) Retail Drug Store, 65) Retail-Discount, 66) Retail-General, 67) Retail-Show Room, 68) Serv, 69) Station-Gas, 70) Service Center, 71) Service Garage, 72) Shop Ctr/Mall, 73) Shop Ctr/Neighborhood, 74) Showroom, 75) Storage Warehouse Multi Purp, 76) Strip Center, 77) Super Market, 78) Tennis/Racquet, 79) Theatre-Play/Dining, 80) Truck Terminal, 81) Utility Facility, 82) Vet Clinic, 83) Vet Clinic Converted/Res, 84) Warehouse Distribution, 85) Warehouse General, and 86) Vac Commercial.
(b) The *Other* category was created by aggregating original county classifications: 1) Apt-Rooming/B&B, 2) Fraternal Organizations, 3) Government-Post Office, 4) Multi Fam-Apartment, 5) Multi Fam-Apartment Subsidized, 6) Multi Fam-Duplex, 7) Multi Fam-Group HSE Converted, 8) Multi Fam-Mobile Home Park, 9) Multi Fam-Mplex, 10) Rehab Center, 11) Religious/Church, 12) Rural W/Dwelling, and 13) Schools.
(c) The *Total* row only includes the properties that appear in the table, that is, the total of residential, commercial, and *Other* property categories. Therefore, this total does not include industrial, farm use, and tax-exempt properties.

Horry County

Horry County also has a relatively large population of more than 344,147 people. However, in Horry County capped value was 94 percent of the appraised value; again, the assessment limit has had a relatively minor effect on the overall tax base (see table 3.8).

Table 3.8. Mean of Appraised Value, Capped Value, Sale Prices, Tax Payment, and Ratios by County and Property Type, Horry, South Carolina (2018)

		Type of Property	Number of Properties	Mean Appraised Value (1)	Mean Capped Value (2)	Ratio (2)/(1) x 100 (%)	Tax Base Reduction (1 – Ratio) x 100 (%)	Mean Sale Price	Number of Sales	Mean Tax Payment (3)	Effective Tax Rate (3)/(1) x 100 (%)
All Properties	Residential	Residential 1 Family	84,275	209,061	206,773	98.9060	1.0940	251,481	4,769	1,330	0.6361
		Residential 2 Family	987	251,908	238,737	94.7716	5.2284	323,930	60	3,029	1.2025
		Residential 3 Family	92	306,061	283,204	92.5321	7.4679	529,975	4	3,838	1.2541
		Residential 4 Family	184	229,911	220,367	95.8491	4.1509	294,810	15	3,007	1.3080
		Residential Auxiliary Improvem	1,149	62,024	49,921	80.4866	19.5134	196,131	37	603	0.9722
		Residential Dwelling on Leased	1,829	180,943	156,311	86.3867	13.6133	250,351	4	1,603	0.8862
		Residential Structure on Comm	703	199,008	167,003	83.9178	16.0822	571,572	35	2,064	1.0371
		Condominium (Fee Simple)	60,704	137,076	136,436	99.5333	0.4667	218,175	5,017	1,712	1.2493
		Residential Vacant Land	19,520	46,315	40,070	86.5147	13.4853	198,550	1,646	513	1.1071
		Commercial (a)	23,104	386,400	344,823	89.2399	10.7601	471,198	1,076	4,324	1.1191
		Other (b)	41,935	75,703	66,686	88.0879	11.9121	185,537	590	621	0.8207
		Total or Weighted Average (100%) (c)	**234,482**	**169,765**	**162,129**	**95.5018**	**4.4982**	**248,353**	**13,253**	**1,533**	**0.9029**
Properties with Ratio <1	Residential	Residential 1 Family	8,167	235,298	211,549	89.9066	10.0934	276,959	407	1,386	0.5889
		Residential 2 Family	275	299,892	252,622	84.2375	15.7625	293,000	10	3,084	1.0282
		Residential 3 Family	32	340,998	275,286	80.7295	19.2705	*n.i.*	0	3,551	1.0414
		Residential 4 Family	40	310,293	266,394	85.8524	14.1476	450,333	3	3,728	1.2016
		Residential Auxiliary Improvem	372	78,217	40,761	52.1133	47.8867	196,893	7	469	0.6001
		Residential Dwelling on Leased	870	191,777	139,993	72.9977	27.0023	286,953	2	1,443	0.7524
		Residential Structure on Comm	277	238,776	157,542	65.9789	34.0211	881,516	17	1,928	0.8075
		Condominium (Fee Simple)	3,183	143,707	131,505	91.5093	8.4907	151,473	248	1,653	1.1503
		Residential Vacant Land	4,483	60,345	33,075	54.8096	45.1904	127,510	129	428	0.7092
		Commercial (a)	4,669	657,624	451,758	68.6955	31.3045	625,517	161	5,172	0.7865
		Other (b)	13,303	92,925	64,469	69.3767	30.6233	145,301	105	494	0.5314
		Total or Weighted Average (15.21%) (c)	**35,671**	**205,325**	**155,056**	**75.5173**	**24.4827**	**279,082**	**1,089**	**1,449**	**0.7058**

Source: These data are a subset of a larger database from CoreLogic that has property tax information for all counties in South Carolina.
Note: The observations without information about the Appraised Value and/or the Capped Value and/or Tax Amount (missing values) have been removed from the analysis so they do not interfere with the computation of the average. Additionally, only properties with a non-zero tax amount (no exempt properties) were considered.
(a) This category was created by aggregating original county classifications. The main objective was to group several types of similar properties into a single category to simplify the comparison. This category comprises the following properties: 1) Amusement Park, 2) Auditorium, 3) Auto Dealer Full Service, 4) Auto Service, 5) Garage, 6) Auxiliary Improvement C/I, 7) Bank, 8) Bar/Lounge, 9) Boarding/Rooming House, 10) Boat Slips, 11) Boat with Legal Residence, 12) Bottling Plant, 13) Bowling, 14) Alley, 15) Campground, 16) Car Wash (Automatic), 17) Car Wash (Manual), 18) Cemetery, 19) Cinema/Theatre, 20) Clothing Mfg.(Excluding Leather, 21) Club House, 22) Commercial/Auxiliary Improvement, 23) Community Shopping Center, 24) Convenience Food Market, 25) Country Club(w/out Golf Course, 26) Department Store, 27) Discount, 28) Department Store, 29) Downtown Row Type, 30) Enclosed Shopping Mall, 31) Fast Food, 32) Fishing Pier, 33) Food Stand, 34) Funeral Home, 35) Furniture Mfg., 36) Garage Only/Condo Complex, 37) Gas Utility, 38) Golf Club with Clubhouse, 39) Golf Course w/out Clubhouse, 40) Government Owned, 41) Greenhouse/Florist, 42) Hanger, 43) Health Spa, 44) High Rise Apartments, 45) Hotel/Motel Hi Rise w/out Lounge, 46) Hotel/Motel Hi Rise with Lounge, 47) Hotel/Motel Lo Rise w/out Lounge, 48) Hotel/Motel Lo Rise with Lounge, 49) Ice Plant, 50) Jewelry, Silverware & Plated Ware, 51) Legitimate Theatre, 52) Library, 53) Limitation for Septic Tank, 54) Logging, Cutting of Timber, 55) Lumber, 56) Storage, 57) Machinery & Equipment Mfg, 58) Mini Warehouse, 59) Miniature Golf Course, 60) Misc Amusement, 61) Motel Tie Back, 62) Motion Picture Theatre, 63) Multiple Service Utility, 64) Neighborhood Shopping Center, 65) Newspaper Plant, 66) Night Club/Dinner Theatre, 67) Nursing Home, 68) Office Building Hi Rise(5 tory), 69) Office Building Lo Rise(4 Story), 70) Office Condominium, 71) Office Warehouse, 72) Other Mfg. Nec, 73) Other Utility Nec, 74) Paired Beach Houses, 75) Paired Ranches, 76) Par 3 Golf Course, 77) Parking Garage/Deck, 78) Parking Miscellaneous, 79) Patio Home, 80) Print Shop, 81) Radio, TV or Motion Picture Studio, 82) Radio/TV Transmitter Building, 83) Rail/Bus/Air Terminal, 84) Recreation & Entertainment, 85) Recreational/Health, 86) Restaurant, 87) Retail Condominium, 88) Retail-Multi Occupancy, 89) Retail-Single, 90) Occupancy, 91) Service Station w/out Bays, 92) Service Station with Bays, 93) Supermarket, 94) Telephone Equipment Building, 95) Telephone Utility Nec, 96) Tennis Club Indoor, 97) Textile Mfg, 98) Time Share Condominium, 99) Town House, 100) Truck Terminal, 101) Veterinary Clinic, 102) Warehouse, 103) Warehouse, Prefab, 104) Water, 105) Amusement, 106) Water Utility, 107) General Commercial Vacant Land, 108) Mixed Residential/Commercial, 109) Strip Shopping Center, 110) Unsound Commercial Structure, and 111) Woodworking Shop.
(b) The *Other* category was created by aggregating original county classifications: 1) Apartment Vacant Land, 2) Apartments Garden (3 story & under), 3) Cold Storage Facility, 4) College & University, 5) Condo/Tel (marketed & operated), 6) Condominium (common element), 7) Correctional, 8) Cultural Facilities, 9) Day Care Center, 10) De-titled Mobile Home, 11) Electric Utility, 12) Electrical Equipment Mfg, 13) Hospital, 14) Leased Land, 15) Marina, 16) Medical Office, 17) Metal Working, 18) Mobile, 19) Home & Addition No Land, 20) Mobile Home Ag, 21) Mobile Home Park, 22) Mobile Home with Legal Resident, 23) Mobile Home(not taxed with land, 24) Mobile home(valued with land), 25) Police or Fire Station, 26) Private Road, 27) Public Boat Ramp or Dock, 28) Public Service, 29) Quarries, Stone & Gravel, Limestone, 30) Religious, 31) Research & Development, 32) Residential Structure on Comme, 33) Savings Institution, 34) School, 35) Sewer Utility, 36) Skating Rink, 37) Social/Fraternal Hall, 38) Traveler Trailer/Mobile Home, 39) Unsound Residential Structure, and 40) Utility Vacant Land.
(c) The *Total* row only includes the properties that appear in the table, that is, the total of residential, commercial and, *Other* property categories. Therefore, this total does not include industrial, farm use, and tax-exempt properties.

Orangeburg County

Unfortunately, data on capped values was unavailable for Orange County. Therefore, the differential effect of tax caps was not considered. However, table 3.9 provides information on the effective tax rates for different property classes.

Table 3.9. Mean of Appraised Value, Capped Value, Sale Prices, Tax Payment and Ratios by County and Property Type, Orangeburg, South Carolina (2018)

	Type of Property		Number of Properties	Mean Appraised Value (1)	Mean Capped Value (2)	Ratio (2)/(1) x 100	Tax Base Reduction (1 – Ratio) x 100	Mean Sale Price	Number of Sales	Mean Tax Payment (3)	Effective Tax Rate (3)/(1) x 100 (%)
All Properties	Residential	Residential Four Family Platte	16	127,169	*n.i.*	*n.i.*	*n.i.*	140,000	1	3,412	2.6827
		Residential One Family < 10AC	5,783	85,934	*n.i.*	*n.i.*	*n.i.*	154,268	86	803	0.9350
		Residential One Family Platted	16,871	94,179	*n.i.*	*n.i.*	*n.i.*	132,854	446	1,022	1.0856
		Residential Two Family Platted	224	83,563	*n.i.*	*n.i.*	*n.i.*	110,622	6	1,848	2.2118
		Mobile Home Platted Lot	14,513	16,895	*n.i.*	*n.i.*	*n.i.*	72,319	62	308	1.8210
		Residential Vacant Land	5,591	16,448	*n.i.*	*n.i.*	*n.i.*	63,523	81	202	1.2288
		Residential Vacant	7,264	17,716	*n.i.*	*n.i.*	*n.i.*	73,406	130	246	1.3902
	Commercial (a)		2,354	211,007	*n.i.*	*n.i.*	*n.i.*	652,591	91	5,416	2.5666
	Other (b)		2,538	126,460	*n.i.*	*n.i.*	*n.i.*	452,503	75	2,894	2.2886
	Total or Weighted Average (100%)		**55,154**	**61,466**	***n.i.***	***n.i.***	***n.i.***	**189,999**	**978**	1,047	1.7030
Properties with Ratio <1	Residential	Residential Four Family Platte	16	127,169	*n.i.*	*n.i.*	*n.i.*	140,000	1	3,412	2.6827
		Residential One Family < 10AC	5,783	85,934	*n.i.*	*n.i.*	*n.i.*	154,268	86	803	0.9350
		Residential One Family Platted	16,871	94,179	*n.i.*	*n.i.*	*n.i.*	132,854	446	1,022	1.0856
		Residential Two Family Platted	224	83,563	*n.i.*	*n.i.*	*n.i.*	110,622	6	1,848	2.2118
		Mobile Home Platted Lot	14,513	16,895	*n.i.*	*n.i.*	*n.i.*	72,319	62	308	1.8210
		Residential Vacant Land	5,591	16,448	*n.i.*	*n.i.*	*n.i.*	63,523	81	202	1.2288
		Residential Vacant	7,264	17,716	*n.i.*	*n.i.*	*n.i.*	73,406	130	246	1.3902
	Commercial (a)		2,354	211,007	*n.i.*	*n.i.*	*n.i.*	652,591	91	5,416	2.5666
	Other (b)		2,538	126,460	*n.i.*	*n.i.*	*n.i.*	452,503	75	2,894	2.2886
	Total or Weighted Average (100%) (c)		**55,154**	**61,466**	***n.i.***	***n.i.***	***n.i.***	**189,999**	**978**	1,047	1.7030

Source: These data are a subset of a larger database from CoreLogic that has property tax information for all counties in South Carolina.
Note: The observations without information about the Appraised Value and/or the Capped Value and/or Tax Amount (missing values) have been removed from the analysis so they do not interfere with the computation of the average. Additionally, only properties with a non-zero tax amount (no exempt properties) were considered.
(a) This category was created by aggregating original county classifications. The main objective was to group several types of similar properties into a single category to simplify the comparison. This category comprises the following properties: 1) Arts & Crafts Bldg (School), 2) Auto Dealership, Complete, 3) Automobile, 4) Showroom, 5) Automotive Center, 6) Bag Fertilizer Storage, 7) Bank, 8) Bar/Tavern, 9) Barber Shop, 10) Bowling Alley, 11) Bulk Fertilizer Storage, 12) Bulk Oil Storage, 13) Cafeteria, 14) Car Wash, Automatic, 15) Car Wash, Drive-thru, 16) Car Wash, Self-serve, 17) Clubhouse, 18) Cocktail Lounge, 19) Cold Storage Facilities, 20) Comm Outbuilding, 21) Comm Shopping Ctr, 22) Convenience Market, 23) Departmental Store, 24) Discount Store, 25) Dist Warehouse, 26) Drugstore, 27) Equip Storage Bldg, 28) Equipment (Shop) Building, 29) Equipment Shed, 30) Fast Food Restaurant, 31) Fitness Center, 32) Florist Shops, 33) Fraternal Building, 34) Fruit & Nut Farm, 35) Greenhouses, 36) Hotel, 37) Hotel, Limited Service, 38) Office Building, 39) Other Comm, 40) Restaurant, 41) Restroom Building, 42) Retail Store, 43) Service Garage, 44) Service Garage Sheds, 45) Service Repair Garage, 46) Service Station, 47) Shower Building, 48) Skating Rink, 49) Snack Bar, 50) Storage Garage, 51) Storage Warehouse, 52) Supermarket, 53) Theatre, Cinema, 54) Warehouse Discount Store, 55) Warehouse Showroom Store, and 56) Commercial Vacant.

(b) The *Other* category was created by aggregating original county classifications: 1) Apartment, 2) Cemeteries, 3) Central Bank, 4) Church, 5) Church w/Sunday School, 6) City Club, 7) Community Center, 8) Condominium Unit, 9) Convalescent Hospital, 10) Cotton Gin, 11) Country Club, 12) Day Care Center, 13) Dental Office/Clinic, 14) Group Care Home, 15) Gymnasium (School), 16) Health Club, 17) High School (Entire), 18) Home for the Elderly, 19) Jail, 20) Kennels, 21) Laboratories, 22) Lagoon/Tile Field, 23) Laundromat, 24) Ligah Comm Utility Building, 25) Lumber Storage Horizontal, 26) Market, 27) Material Storage Building, 28) Medical Office, 29) Mini Warehouse, Hi-rise, 30) Mini-lube Garage, 31) Mini-mart, 32) Convenience Store, 33) Mini-warehouse, 34) Mixed Retail w/Res Units, 35) Mobile Home (< 10 Ac), 36) Mobile Home Park, 37) Mortuary, 38) Motel, 39) Motel Room (1-stry, dbl. row), 40) Motel, 41) Room (2-stry, dbl. row), 42) Multi Resid Assist Liv (low rise), 43) Multiple Resid (Low Rise), 44) Neighborhood Shopping Ctr, 45) Nurseries, 46) Outbuildings Only No House, 47) Parking Structure, 48) Post Office, 49) Poultry House, 50) Recreational Enclosure, 51) Regional Shopping ctr., 52) Rooming House, 53) Secondary School(Entire), 54) Shed Office Structure, 55) Transit, 56) Warehouse, 57) Truck Stop, 58) Utility Building and 59) Veterinary Hospital.
(c) The *Total* row only includes the properties that appear in the table, that is, the total of residential, commercial and *Other* property categories. Therefore, this total does not include industrial, farm use, and tax-exempt properties.

Sumter County

With a population of 106,512 Sumter is a smaller county and as with most other counties the assessment limit has had a minimal effect on the tax base; capped value is about 91 percent of the tax base (see table 3.10).

Table 3.10. Mean of Appraised Value, Capped Value, Sale Prices, Tax Payment and Ratios by County and Property Type, Sumter, South Carolina (2018)

	Type of Property	Number of Properties	Mean Appraised Value (1)	Mean Capped Value (2)	Ratio (2)/(1) x 100 (%)	Tax Base Reduction (1 – Ratio) x 100 (%)	Mean Sale Price	Number of Sales	Mean Tax Payment (3)	Effective Tax Rate (3)/(1) x 100 (%)
All Properties	Residential Land	48,126	84,631	82,296	97.2410	2.7590	160,775	1,620	767	0.9067
	Commercial Land	2,906	328,796	322,922	98.2134	1.7866	562,742	75	5,532	1.6825
	Other (a)	2,453	99,744	53,704	53.8417	46.1583	319,405	77	430	0.4309
	Total or Weighted Average (100%) (b)	**53,485**	**98,766**	**94,107**	**95.2832**	**4.7168**	**184,682**	**1,772**	**994**	**1.0063**
Properties w/Ratio <1	Residential Land	3,575	98,714	67,282	68.1582	31.8418	172,872	50	596	0.6041
	Commercial Land	236	511,221	438,889	85.8513	14.1487	425,402	8	8,347	1.6328
	Other (a)	1,461	91,040	13,739	15.0912	84.9088	170,158	37	190	0.2086
	Total or Weighted Average (9.86%) (b)	**5,272**	**116,625**	**69,441**	**59.5418**	**40.4582**	**193,081**	**95**	**831**	**0.7128**

Source: These data are a subset of a larger database from CoreLogic that has property tax information for all counties in South Carolina.
Note: The observations without information about the Appraised Value and/or the Capped Value and/or Tax Amount (missing values) have been removed from the analysis so they do not interfere with the computation of the average. Additionally, only properties with a non-zero tax amount (no exempt properties) were considered.
(a) The *Other* category was created by aggregating original county classifications: 1) Airports-Private-Comm, 2) Barn, 3) Churches, 4) Clubs, Lodges, Union Halls, 5) Colleges-Gov Owned, 6) Communication Tower Site, 7) Condominium-Vacant, 8) Counties-Other, 9) County-Vacant, 10) Federal-Other, 11) Florist and Greenhouses, 12) General Purpose, 13) Warehouse, 14) Golf Course-Driving Range, 15) Homeowners Association, 16) Homes for Aged, 17) Institutional Land, 18) Leasehold Interest, 19) Lot Will Not Qualify for Lumber Yards-Sawmills, 20) Mining, 21) Mobile Home Lot, 22) Mobile Home Parks, 23) Mortuaries, Cemeteries, 24) Multi Family-10 or more, 25) Municipal-Other, 26) Municipal-Vacant, 27) Office Bldg-Multi Story, 28) Open Storage, Junk Yards, 29) Orphanages, 30) Parking Lots, 31) Race Tracks, 32) Reservoir and Pond, 33) Restaurants-Cafeterias, 34) Right of Ways-Streets, 35) SCTC Assessed Industr, 36) Schools-Public, 37) Schools, Colleges-Private, 38) Service Station, 39) Single Family, 40) Solid Waste, 41) Lagoon, 42) State-Other, 43) Swamp-Wooded, 44) Timber Site Index 50-less, 45) Timber Site Index 51–65, 46) Timber Site Index 66–75, 47) Timber Site Index 76–85, 48) Timber Site Index 86–95, 49) Truck Scales, 50) Utilities, RR, Canals, 51) Vacant Lot Multilot Disc, and 52) Waste Land, Marsh.
(b) The *Total* row only includes the properties that appear in the table, that is, the total of residential, commercial, and *Other* property categories. Therefore, this total does not include industrial, farm use, and tax-exempt properties.

Conclusion

Based on this evaluation, several observations can be offered.

- Each county has its own property classification system; there is no common statewide property classification standard. It is therefore difficult to compare and evaluate property tax bases and tax burdens across counties. Each county table required the inclusion of detailed notes on property

classifications. A valuable policy step would be to create a common statewide property classification system.

- While there are some effects of the assessment limit in some counties, in general the assessment limit has, to date, not caused significant tax base erosion. This is in part because rural counties have not experienced significant growth, and thus the cap has not affected many properties. In faster growing counties the cap effect is partially mitigated by revaluation when properties are sold. However, in counties where there has been some tax base erosion, commercial property owners have benefited more than residential property owners.
- Despite the assessment limit not having a large effect on the overall tax base, some property owners are receiving significant reductions in tax payments from the assessment limit. A case study approach of individual parcels might offer insight regarding the assessment process; however, additional analyses along these lines is beyond the scope of this project. See Appendix C for a summary of research on assessment limits and Appendix D for a description of four states and one county that have repealed assessment limits.

From this evaluation the following questions are answered:

- How do effective property tax rates vary by type of property and by county?
- How does the assessment limit affect equity in property tax burdens among different types of property owners and within individual types of property?
- To what extent has the property tax burden been shifted from residential taxpayers to business taxpayers?

How do effective property tax rates vary by type of property and by county?

Effective tax rates depend on four factors: 1) statutory tax rate; 2) the assessment rate; 3) the exemptions; and 4) the assessment limit. The focus in this chapter is on the assessment limit. Generally, we see that the assessment limit has not had a significant effect on effective tax rates to date. However, depending on the rate of property price growth in the future, it could have a larger effect. Residential properties benefited less from the assessment limit than commercial properties. However, some properties that had a reduced tax as a result of the assessment limit enjoyed substantial savings.

How does the assessment cap affect equity in property tax burdens among different types of property owners and within individual types of property?

As previously discussed, commercial properties have, to date, benefited more from the assessment limit than residential properties. Because of the classified property tax system in South Carolina, and as illustrated by the figures for York, Richland, and Edgefield counties, commercial properties pay a higher share of property taxes than their share of the property tax base. If the cap reduces property taxes paid by commercial property owners more than residential property owners, then this differential is reduced by the assessment limit.

Regarding differentials in effective tax rates between property owners within the same property class, the evaluation of York County demonstrated that higher valued properties had a greater likelihood of having a gap between appraised value and capped value. This suggests that owners of higher value properties benefit more from the assessment limit than owners of lower value properties. Within the category of residential properties, the assessment limit may undermine equity of the property tax by giving the most property tax relief to owners of higher value properties.

To what extent has the property tax burden been shifted from residential taxpayers to business taxpayers?

The lower assessment rate for primary residential properties as well as the exemption from paying taxes for school operating costs has resulted in a much lower effective tax rate for primary residential properties relative to other types of residential and commercial properties. However, the assessment limit seems to have helped lower the effective tax rate for commercial properties more than for residential properties. Thus, the cap has reduced average effective tax rates among commercial properties relative to residential properties. However, overall the tax savings generated from Act 388 is much larger for primary residential properties than for commercial property owners. Comparing the residential and commercial share of the property tax base to the residential and commercial share of property taxes paid reveals that in all of the counties for which we have data businesses are shouldering a greater share of the tax burden, relative to market value, than homeowners. Unfortunately, the data are for a single point in time, and thus do not precisely calculate relative changes in residential and commercial property effective tax rates before and after Act 388.

Appendix A
Utilities

The following table shows a brief analysis of the properties that we were able to identify as utilities. Specifically, a search for the term utility in the CoreLogic dataset identified utility-oriented properties in Charleston, Florence, Horry, Orangeburg, and Richland Counties. As shown in appendix table A1, effective tax rates varied from 0.05 percent in Horry County to nearly 2.3 percent in Orangeburg and Richland Counties. Also, note that the share of total appraised value and the share of property tax revenues is relatively small. This is an indication that not all utility properties were successfully identified in this evaluation. In addition, railroad properties do not appear to be included in the CoreLogic database.

Table A1. Mean of Appraised Value, Tax Payment, and Ratios for Utilities Properties by County, South Carolina (2018)

County	Utility Category Name (a)	Number of Properties	Mean Appraised Value (1)	Mean Tax Payment (3)	Effective Tax Rate (3)/(1) x 100 (%)	(Total Utilities Appraised Value/Total Appraised Value) x 100 (b) (%)	(Total Utilities Property Tax Revenue / Total Property Tax Revenue) x 100 (c) (%)
Richland	Pvt Util Electric	2	303,050	6,884	2.2716	0.0023	0.0032
Charleston	Electric/Utility	13	25,446	387	1.5216	0.0005	0.0008
Florence	Improved & Vacant Utility	46	33,395	587	1.7577	0.0207	0.0388
Horry	Electric, Sewer & Vacant Utility	536	126,181	62	0.0490	0.1612	0.0091
Sumter	Utilities, RR, Canals	27	38,953	210	0.5394	0.0190	0.0105
Orangeburg	Utility Building	9	117,030	2,685	2.2942	0.0233	0.0480
Total or Weighted Average		633	114,077	172	0.2633	0.1392	0.0117

Source: These data are a subset of a larger database from CoreLogic, which has property tax information for all counties in South Carolina.
(a) This table includes only the categories that explicitly have the word *Utility* in the name. In the case of Florence, Horry and Orangeburg, there is more than one category with that name. However, to simplify the analysis we have simplified a category for utilities.
(b) To calculate the value of this column we proceed as follows. The numerator *Total Utilities Appraised Value* corresponds to the multiplication between the number of properties and Mean Appraised Value only for utilities properties. The calculation for the denominator is the same, however, all county properties are included (except for tax-exempt properties and missing values).
(c) To calculate the value of this column we proceed as follows. The numerator *Total Utilities Property Tax Revenue* corresponds to the multiplication between the number of properties and Mean Tax Payment only for utilities properties. The calculation for the denominator is the same, however, all county properties are included (except for tax-exempt properties and missing values).

Appendix B
Additional Analysis of Residential and Commercial Properties for York County

The propensity for a parcel to have gap between appraised value and capped value is defined by the discrete variable G_i, equal to 1 if *appraised value > capped value* and 0 if *appraised value = capped value*. This variable is assumed to be determined for each parcel i by a set of variables discussed above that include appraised value in 2015 (in thousands of dollars), distance from Charlotte in miles,[61] and the number of years a property is continuously owned by the same person. The years of continuous ownership are restricted to 11 years because Act 388 took effect in 2007.[62] These variables are represented by Z_i, and a random component u_i. G_{it} is therefore defined as:

$$(1) \qquad G_{it} = \begin{cases} 1 \text{ if } \mathrm{Z}_{it}\tau + \mathrm{u}_{it} > 0 \\ 0 \text{ if } \mathrm{Z}_{it}\tau + \mathrm{u}_{it} = 0 \end{cases}$$

where τ is a vector of coefficients. The probit regression estimates of this equation are presented in Table B1 below. The coefficient estimates show that the probability of having a gap between appraised value and capped value in 2018 increases: 1) the greater is the appraised value in 2015; 2) the greater is the distance to Charlotte, 3) and the greater is the number of years since the date of last sale. Coefficient estimates from 1) and 3) are consistent with expectations. To gain a better sense of how these factors influence the probability of a primary residential property having a gap, consider figure B1. The graph shows the average marginal effects that are generated from the probit regression using primary residential property data. A property with $100,000 greater value has a 1.37 percent greater likelihood of having a gap. A property that is ten miles farther from Charlotte will have a 4.2 percent higher likelihood of having a gap. A property that was last sold ten years ago has a 1.5 percent greater likelihood of having a gap relative to a property that was sold in 2018. While we note that these relationships are statistically significant, the overall model fit as measured by the pseudo-R-square is low; this means that there are other important factors that we are unable to fully capture in this analysis.

Table B1. Probit Regression for Residential Improved Occupied (RIO) Properties in York County, SC

Independent Variable equals 1 if appraised value > capped value, and 0 if appraised value = capped value							
Dependent Variable	*Coef.*	*St. Err.*	*t-value*	*p-value*	*[95% Conf Interval]*		*Sig*
Market Value 2015	0.002	0.000	19.28	0.000	0.002	0.002	***
Distance to Charlotte	0.068	0.004	16.27	0.000	0.060	0.076	***
Years from the Last Sale	0.024	0.005	4.98	0.000	0.014	0.033	***
Constant	–3.891	0.111	–34.91	0.000	–4.110	–3.673	***

Mean dependent var	0.030	SD dependent var	0.169
Pseudo r-squared	0.102	Number of obs	23985.000
Chi-square	445.685	Prob > Chi-square	0.000
Akaike crit. (AIC)	5755.646	Bayesian crit. (BIC)	5787.987

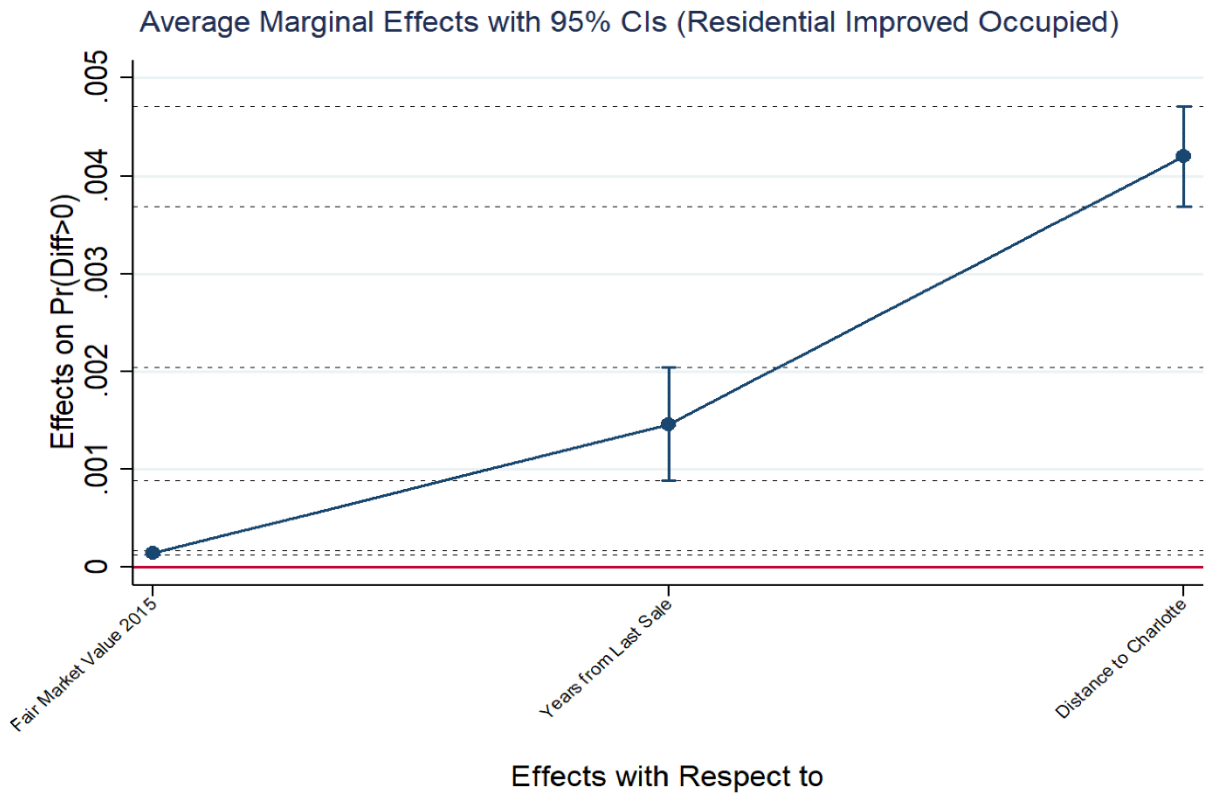
*** p<0.01, ** p<0.05, * p<0.1

Note: The dependent variable corresponds to a binary variable where "1" is assigned to the properties with a non-zero difference between the 2018 Market Value and the 2018 Capped value (Market Value 2018 – Capped value 2018 > 0). "0" is assigned to the properties with a zero difference between the 2018 Market Value and the 2018 Capped value (Market Value 2018 – Capped value 2018 = 0).

[61] The database uses georeferenced coordinates for each of the properties. Using these coordinates, the distance from each of the properties to Charlotte (Euclidean distance) was calculated, and these calculations were used as variables in the probit regression.

[62] Note that we are considering the year 2018 as the last year (assigning a value of 0).

Figure B1. Average Marginal Effects from the Result of Probit Model for Residential Improved Occupied Properties, York County, South Carolina (2018)



Source: These data are obtained from a subset of a larger database with information for all counties in South Carolina. This information comes from CoreLogic. The subset is York County.
Note 1: In the case of non-linear models such as the probit, the marginal effects vary with *x*. Hence, we compute the marginal effect for each property in the sample and then we average these marginal effects. This is known as the Average Marginal Effect (AME). Note that the marginal effect for continuous variables is given by

$$\frac{\partial P(y=1|\boldsymbol{x})}{\partial x_j} = g(\boldsymbol{x}\beta)\,\beta_j \quad \forall j$$

where g(.) is the standard normal Probability Density Distribution (PDF). The result of this calculation is a number between 0 and 1 and it has a probability interpretation. It is the average change in probability when *x* increases by one unit.

Commercial Properties

The probit regression estimates presented in Table B2 and figure B2 are analogous to the residential property estimates above except they examine commercial property. Results again show that parcels with a higher value, a greater distance from Charlotte, and with more years of continuous ownership are more likely to have a gap between appraised value and capped value.

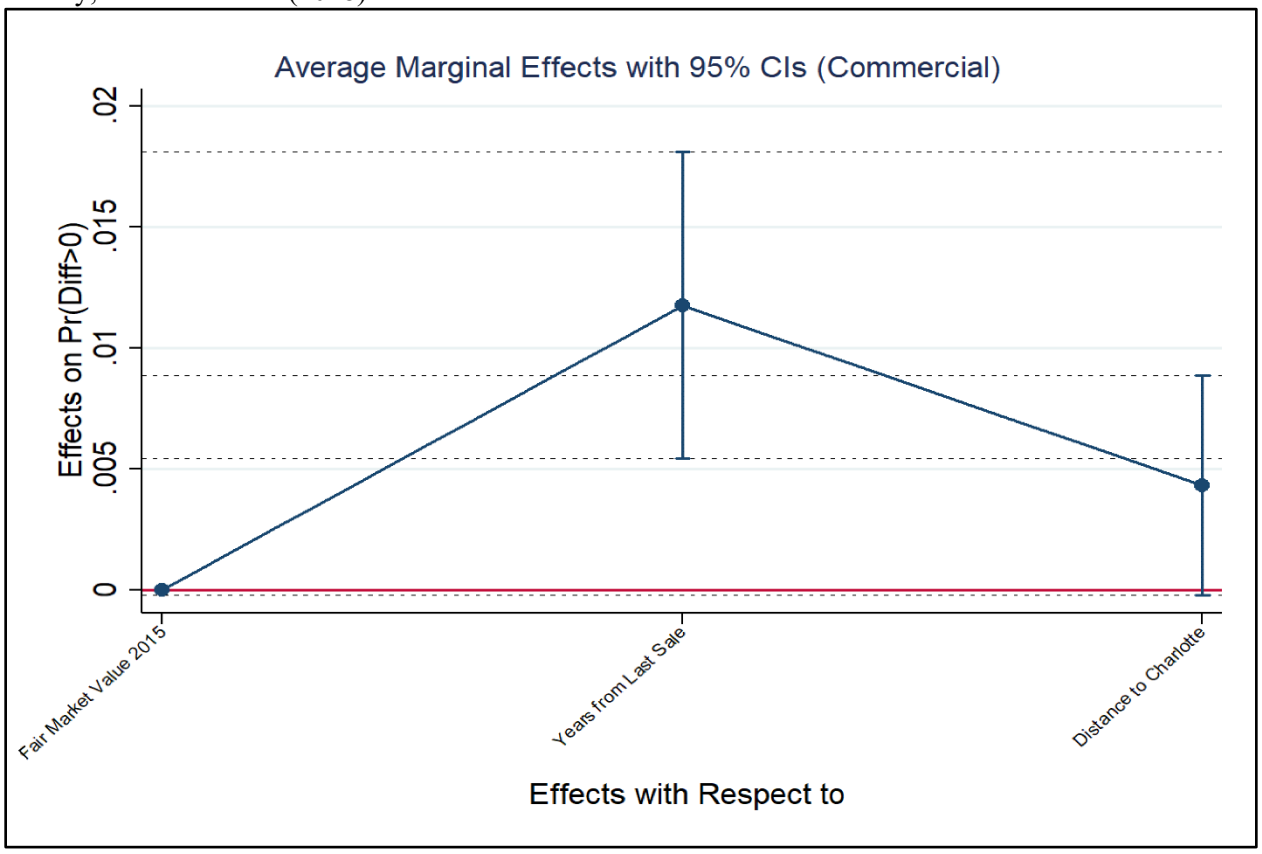
Table B2. Probit Regression for Commercial Improved (CI) Properties in York County, SC

Independent Variable equals 1 if appraised value > Capped value, and 0 if appraised value = Capped value									
Dependent Variable	*Coef.*	*St. Err.*			*t-value*	*p-value*	*[95% Conf Interval]*		*Sig*
Market Value in 2015	0.000	0.000			1.83	0.068	0.000	0.000	*
Distance to Charlotte	0.018	0.010			1.87	0.062	–0.001	0.037	*
Years from the Last Sale	0.049	0.014			3.59	0.000	0.022	0.075	***
Constant	–1.576	0.214			–7.36	0.000	–1.996	–1.157	***
Mean dependent var			0.162		SD dependent var		0.369		
Pseudo r-squared			0.019		Number of obs		1122.000		
Chi-square			18.349		Prob > chi^2		0.000		
Akaike crit. (AIC)			983.757		Bayesian crit. (BIC)		1003.848		

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Note: The dependent variable corresponds to a binary variable where "1" is assigned to the properties with a non-zero difference between the 2018 Market Value and the 2018 Capped value (Market Value 2018 – Capped value 2018 > 0). "0" is assigned to the properties with a zero difference between the 2018 Market Value and the 2018 Capped value (Market Value 2018 – Capped value 2018 = 0).

Figure B2. Average Marginal Effects from the result of Probit Model for Commercial properties, York County, South Carolina (2018)



Source: These data are obtained from a subset of a larger database with information for all counties in South Carolina. This information comes from CoreLogic. The subset is York County.
Note 1: In the case of non-linear models such as the probit, the marginal effects vary with *x*. Hence, we compute the marginal effect for each property in the sample and then we average these marginal effects. This is known as the Average Marginal Effect (AME). Note that the marginal effect for continuous variables is given by

$$\frac{\partial P(y=1|\boldsymbol{x})}{\partial x_j} = g(\boldsymbol{x}\beta)\,\beta_j \quad \forall j$$

where g(.) is the standard normal Probability Density Distribution (PDF). The result of this calculation is a number between 0 and 1 and it has a probability interpretation. It is the average change in probability when *x* increases by one unit.

Similar to the analysis of residential properties, table A3 and figure A2 show the average marginal effects of each variable for commercial properties that are generated from the probit regression. A property with $100,000 greater value has a 0.07 percent higher likelihood of having a gap between appraised value and capped value. A property that is ten miles farther from Charlotte will have a 4.3 percent higher likelihood of having a gap, and a property that was most recently sold ten years ago is 11.8 percent more likely to have a gap relative to a property that was sold in 2018.

Appendix C
Summary of Assessment Limit Research

This appendix summarizes findings from Haveman and Sexton's 2008 report *Property Tax Assessment Limits: Lessons from Thirty Years of Experience*. That study concludes assessment limits "are among the least effective, least equitable, and least efficient strategies available for providing property tax relief" (Haveman and Sexton, 37).

An assessment limit or assessment cap is a legal limit on annual increases in assessed values (or in South Carolina's case in appraised values) that either freezes such values or ties increases to an index or formula. Most assessment limits restrict growth in the assessed value of individual properties to a fixed percentage or some measure of inflation. Less commonly, states limit growth in the aggregate value of an entire class of property, such as residential. Although some states authorize local government limits or impose limits only in select geographic areas, most impose statewide, uniform assessment limits. In 2018, 19 states limited assessments in some way. Most of these states also imposed other caps, such as rate limits or levy limits (Significant Features of the Property Tax).

Most states with assessment limits freeze or limit a property's assessed value until it is sold, then start over with the new market value. This is known as an acquisition value based assessment system (State-by-State Property Tax at a Glance). In South Carolina, acquisition value is known as Assessable Transfer of Interest (ATI).

Impact on Local Government

The tax bases of local governments erode when assessment limits hold assessed values of properties below fair market value. The higher the growth in local property values, and the lower the allowable growth percentage, the more the limit will erode the property tax base. If local governments can raise property tax rates to offset the tax base loss, then revenues may remain stable, but most states with assessment limits also restrict property tax rates. When property tax limits restrict local revenues, governments may resort to alternative revenue sources or reduce local services. Increased reliance on state aid can hamper local autonomy (Haveman and Sexton 2008).

Equity and Efficiency Concerns

Often touted as a means of restraining property tax bills and reducing the burden of taxes on homeowners relative to businesses, assessment limits can actually alter tax burdens in a way that favors properties with appreciating values. Properties with the highest rate of appreciation receive the greatest tax reductions. Under an acquisition value assessment system, the limit can alter the burden in a way that disadvantages properties that are frequently resold (Haveman and Sexton 2008).

Acquisition value assessment also leads to horizontal inequities. A policy that resets property values to market value upon sale favors long-time property owners and shifts the burden of the tax to new homeowners creating a scenario in which owners of similar homes face very different property tax bills. This inequity can distort voter decision making when long-time homeowners pay substantially less for local services than they would if their property was assessed at market value (Haveman and Sexton 2008).

Resetting property values to market value upon sale can reduce mobility by discouraging property owners from moving to a new property. Homeowner decisions to remain in their homes rather than face a much higher effective tax rate to move to a new property can lead to a low supply of starter homes (e.g. when homeowners add on to their homes instead of moving to a larger home), inefficient resource allocation (e.g. when empty nesters decide not to downsize), and reduced welfare (e.g. when homeowners commute

longer rather than moving closer to their place of employment). This phenomenon is often referred to as the lock-in effect (Haveman and Sexton 2008).

Haveman and Sexton (2008) examine various alternatives for property tax relief including levy limits, homestead exemptions and credits, classification, circuit breakers, deferral, and truth in taxation. They suggest states consider truth-in-taxation measures along with property tax circuit breaker programs to provide targeted relief to taxpayers without hindering equity or efficiency.

Appendix D
Case Studies of Successful Assessment Limit Repeals

Although assessment limits or assessment caps are an inefficient and inequitable mechanism for property tax relief, 19 states have adopted them. Despite their flaws, homeowners tend to favor assessment limits and repeals are rare. Our research has identified only four states that have successfully lifted limits on property tax assessments. This appendix summarizes the history of repealed assessment limits in Idaho, Oregon, Minnesota, and Montana (phased assessment) and briefly describes the termination of a county assessment limit in Cook County, Illinois.

Idaho 1% Initiative

Idaho enacted an assessment limit in November 1978 to take effect in 1980. The "1% Initiative," modeled closely after Proposition 13, set assessed values at December 1978 market value, limited property taxes to 1 percent of a property's value, and capped assessment increases at 2 percent per year (Kuttner 1980 and Dornfest 2006). The citizen-initiated state statute (INIT 1 of 1978) passed, supported by 58 percent of Idaho voters (Ballotpedia).

The 1979 legislature subsequently enacted HB 166 to implement and clarify the 2 percent assessment limit.[63] The law stated:

> The 1978 market values for assessment purposes of real and personal property shall be adjusted from year to year to reflect the inflationary rate but at a rate not to exceed two percent (2% for any given year as shown in the consumer price index or comparable data for the area under the taxing jurisdiction).[64]

In 1981, the legislature struck the 2 percent limit from the law.[65] Beginning in 1982, property assessments returned to full market value.[66] The same year a citizen's initiative established a permanent homestead exemption, reducing assessed values of improvements by 50 percent, up to a $50,000 reduction (Dornfest 2006 and Ballotpedia).

The remainder of this section explains how Idaho came to adopt an assessment cap in the first place.

By common measures of tax burden, Idaho was an unlikely candidate for a tax revolt. In the late 1970s Idaho had low per pupil spending and low state and local taxes per capita. Property tax collections per capita were 40 percent lower than the U.S. average and property taxes as a percent of personal income had declined from 4.3 percent in 1967 to 3.7 percent in 1977 (Kuttner 1980).

However, the state experienced "one of the sharpest tax shifts of any state" in the 1970s (Kuttner 1980, 98). The residential share of the property tax base climbed from 24 percent in 1969 to 44.5 percent in 1978. Kuttner (1980) observed two causes for this shift:

(1) Residential properties were assessed far below market value prior to 1967. That year a group of utilities sued the state claiming their assessments, which were 30 percent above market value, violated the state's uniformity clause. The Supreme Court agreed with the plaintiffs and the legislature established a 13-year time frame for county assessors to equalize assessment ratios at 20 percent of market value.
(2) Idaho's preferential assessment of commercial and farm property was a second factor. These classes were valued using an income capitalization approach. This typically produced appraisals

[63] Idaho Session Laws 1979, Chapter 18 (HB 166)
[64] Idaho Session Laws 1979, Chapter 18, section 1, 63-923 (2)(b)
[65] Idaho Session Laws 1981, Chapter 224, Section 4 (amending Idaho Code 63-923 (2)(b))
[66] Idaho Session Laws 1982, Chapter 112 (HB 488), Section 2 (amending Idaho Code 63-923 (2))

at less than 50 percent of market value leading to assessed values dramatically lower than market values. One assessor reported farmland parcel appraisals at $500 to $600 per acre.

Elected assessors in three large counties failed to gradually equalize assessment ratios as directed by the legislature. Businesses responded by suing the state, an action that prompted the Idaho Tax Commission to order reassessments by a private firm. The reassessment led to dramatic jumps in residential market values – in some cases assessments doubled or tripled in a single year. In Ada County, residential property taxes increased by 50 percent on average. The county which had typically received 10 assessment appeals per year, received at least 7,000 appeal filings in 1976. Idaho did not have residential tax relief programs to absorb the impact on homeowners. The assessment firm reclassified some farmland and residential development land, leading to dramatically higher assessments for some farmers. The 1% initiative gained traction against this backdrop (Kuttner 1980).

Oregon Property Tax Relief Program

Oregon first enacted an assessment limit in 1979. Voters extended the limit by ballot in 1980, but the legislature repealed it in 1985. This was not the end of Oregon's experience with assessment limits, however. In 1997 Oregon passed its current assessment limit known as Measure 50 Maximum Assessed Value. The following paragraphs give a more detailed account of this history.

In 1979, during a period of historic revenue growth and rapid growth in property values, Oregon legislators passed an assessment limit as part of a tax relief package (HB 2540) that also introduced classification, established a state-funded homestead credit, expanded a homeowner and renter property tax relief program, and imposed revenue and expenditure limits (City Club of Portland 2002 and Oregon Legislative Revenue Office 2007). HB 2589, included with HB 2540 in a tax reform package, cut state income taxes. The legislature enacted these reforms for one year, with continuation contingent on voter approval by ballot. In 1980 Measure 5 to continue the property tax relief program (HB 2540) and income tax cuts (HB 2589) won the approval of over 90 percent of voters (Ballotpedia).

HB 2540 instituted the following reforms:

(1) Set a uniform date for which cash values must be established each year.
(2) Abandoned uniform taxation, splitting property into two classes: one class for homestead property, and a second class for all other property.
(3) Limited increases in total assessed value for each class to 5 percent per year. If statewide growth in either class exceeded 5 percent, the state must calculate an assessment ratio to bring assessments down to the 5 percent cap. Because residential values had been growing at a faster pace than non-residential values, the rationale for assessment limits by class was to constrain growth in residential values. A report by the City Club of Portland (1980) explains how the limit affected assessed values in the first year of the law:

> *In early 1980, the county assessors and the Department of Revenue conducted a study that found that the average increase in the true cash value of all homesteads in the state between January 1, 1979, and January 1, 1980, was 24.6%. Therefore, the true cash value of an average homestead in Oregon, on January 1, 1980, was 124.6% of what it was on January 1, 1979. However, since HB 2540 limits the average assessed value increase to 5% per year, the average assessed value on January 1, 1980, can only be 105% of what it was a year earlier. The ratio of 124.6% to 105% is 84.2%, and the latter figure has been certified by the Department of Revenue to all county assessors for use in determining 1980 assessed values. Thus, if a homestead anywhere in Oregon has a true cash value in 1980 of $50,000, the county assessor must fix its assessed value at $42,100 (i.e., 84.2% of $50,000).*

It is possible, of course, for the assessed value of any particular homestead to increase by more than 5% in any year, for it is the increase in total statewide assessed values (or seen from a different perspective, the increase in the average assessed value for the whole state) that is limited to 5%.

The Department of Revenue study also showed that the true cash value of all non-homestead property increased by an average of 19.8% between January 1, 1979 and January 1, 1980, resulting in a ratio of 87.6% (i.e., 105% divided by 119.8%). Thus, a business property that has a true cash value of $50,000 in 1980 will be assessed at $43,800 (i.e., 87.6% of $50,000).

(4) Established a homestead credit under which the state was to pay 30% of the homeowner's "qualified" property tax, up to a maximum payment of $800.[67]
(5) Expanded the existing Homeowner and Renter Relief Program (HARRP) program for low income homeowners and renters. HARRP provided tax refunds for low-income homeowners and renters for the remaining tax liability after the 30% state credit up to $375 for renters or $750 for homeowners in 1979 (City Club of Portland 1980). One analysis estimated that the homestead exemption coupled with the HAARP exemption would increase the percentage of homeowners paying no property taxes from 18 percent to 30 percent.

Though popular, the Property Tax Relief Program became difficult to fund particularly during the 1981-1982 recession. Amid budget shortfalls, state payments (homestead credits) gradually shrank from a maximum payment of $800 the first year to a maximum payment of $100 in 1985, the last year of payments. The Oregon legislature ultimately repealed the property tax relief program, including the assessment limit, in 1985. Assessments reverted to market value (true cash value).

The standard of assessment did not change dramatically again until Measure 50 (1997) which imposed a complex 3 percent annual assessment limit with no reassessment upon transfer. Measure 5 passed in 1990 restricted rates and eliminated HAARP (City Club of Oregon 2002 and Oregon Department of Revenue 2009).

Minnesota Limited Market Value

Minnesota has twice adopted and abolished a Limited Market Value (LMV) law to limit assessments. LMV caps assessments at the greater of a growth limit (for example, 15%) or a difference factor which is a percentage of the dollar amount difference between the previous assessment and estimated market value (EMV). The Minnesota Department of Revenue (2000) provides the following example of how LMV would apply to three different scenarios in the 1999 assessment year when the limit was 8.5 percent and the difference factor was 15 percent:

[67] Qualified property tax excludes property taxes for bond payments or voter-approved levies over the adjusted levy (previous year's levy adjusted for inflation).

Table D1. Limited Market Value Determination Examples

	Examples		
	A	**B**	**C**
Estimated Market Value Comparison			
1) 1999 Taxes Taxable Market Value	$100,000	$100,000	$100,000
2) 2000 Taxes Estimated Market Value*	$105,000	$112,000	$175,000
3) Market Value Increase (2-1)	$5,000	$12,000	$75,000
Percentage Increase	5.0%	12.0%	75.0%
Maximum Market Value Determination			
4) 108.5% of 1999 Taxes Taxable Market Value (1 x 108.5%)	$108,500	$108,500	$108,500
5) 1999 Taxes Taxable Market Value Plus 15% of Estimated Market Value Increase [(1 + (3 x 15%)]	$100,750	$101,800	$111,250
6) 2000 Taxes Maximum Market Value (Greater of 4 or 5)	$108,500	$108,500	$111,250
Limited Market Value Determination			
7) 2000 Taxes Limited Market Value (Lesser of 2 or 6)	$105,000	$108,500	$111,250
Percentage Increase	5.0%	8.5%	11.3%

Example A: Limitation does not apply.

Example B: 8.5 percent limitation applies.

Example C: 15 percent limitation applies

Source: Minnesota Department of Revenue, 2000

*Excluding the value of new improvements for pay 2000.

The state's legislature first enacted LMV in 1973.[68] In the first two years, the limit capped annual growth in assessments at 5 percent; from 1975 to 1978, the limit was the greater of 10 percent of the preceding assessment or a 25% difference factor.[69]

The Tax Court ruled the limit unconstitutional in 1979 and the legislature responded by repealing the limit; in 1979 Minnesota increased the difference factor to 50 percent as it phased out the limit.[70] The Minnesota Supreme Court reversed the Tax Court decision in 1980, after the repeal, ruling the limit was in fact constitutional (Baker and Hinze 1998).

Minnesota revived LMV in 1993 effective for six years, initially capping growth in assessments for residential property (up to 3 units), agricultural property, cabins, and timberland at the greater of 10 percent of the preceding assessment or a third of the increase over the preceding assessment.[71] The limit excluded value increases due to improvements or new construction (Baker and Hinze 2009). In 1997 and 1998, the assessment growth limit was the greater of 10 percent of the value for the preceding year or a quarter of the increase over the preceding year (Baker and Hinze 1998).[72] In 1999 and 2000, the limit was

[68] 1973, chapter 650, article 23, sections 1-4; 1974, Chapter 556, Section 14

[69] 1975 Chapter 437, article 8, section 4-6; 1976 Chapter 345, section 1; 1977, chapter 423, article 4, section 4

[70] 1979, chapter 303, article 2, section 7

[71] 1994, chapter 587, article 5, sections 3-5

[72] 1997, chapter 231, article 3, section 10

reduced to 8.5 percent and the difference factor was reduced to 18 percent (Minnesota Department of Revenue 2009).

The legislature acted in 2001 to phase out the limit over six years (2002-2007) and then extended the phase out by two additional years in 2005. During the phaseout the annual growth limit ranged from 10 to 15 percent of the preceding assessment (LMV) and the difference factor ranged from 15 to 50 percent of the difference between the preceding assessment and the property's market value (Baker and Hinze 2009). The program was fully repealed after the 2008 assessment year (2009 payable).

Montana Assessment Phasing

Between 1997 and 2009, the State of Montana limited assessments by phasing in reappraisals (State of Montana 2011).

Montana first began restricting valuation changes in 1997 when the legislature implemented a 50-year phase in for assessed value increases and decreases due to reappraisal (State of Montana 2011). In 2003 the legislature passed HB 461 establishing a six-year reappraisal cycle and implementing a six-year phase in of valuation increases. HB 461 also increased the homestead exemption and decreased the tax rate. (State-by-State Property Tax at a Glance 2018 and Montana Department of Revenue 2010).

In 2015, the state moved to a two-year reappraisal cycle for residential, commercial, industrial, and agricultural properties, effectively terminating phased assessment.[73] The law also modified assessment rates (Significant Features of the Property Tax).

Cook County (IL) Seven Percent Solution

In 2003 the Illinois legislature authorized the Cook County assessor to modify the homestead exemption to limit assessment growth for homesteads to 7 percent per year, up to a $20,000 reduction. Business taxpayers in Chicago, which lies in Cook County, organized an effort to keep the "Seven Percent Solution" from becoming permanent. The law had to be reauthorized for three-year periods and ultimately expired in 2014 (Youngman 2007 and 2016).

Observations/Lessons from Repeal Case Studies

The experiences of Minnesota, Idaho, Oregon, Montana, and Cook County (IL) demonstrate that repealing an assessment limit is achievable. These states and county successfully lifted restrictions on property tax assessments despite the popularity of the limits.

However, lifting an assessment can take time. Minnesota repealed the Limited Assessed Value law in 2001 via a six-year phase out which the 2005 legislature delayed an additional two years. When recession followed on the heels of Oregon's enactment of its first assessment limit in 1979, the state quickly faced fiscal consequences but did not achieve a repeal until 1985.

Minnesota's and Oregon's experiences illustrate that a successful repeal does not provide assurance against future limits. Minnesota repealed its Limited Market Value law in 1980 and then reenacted the law in 1993, only to repeal it again in the 2000s. Oregon enacted a more stringent assessment limit, which is still in effect, 17 years after repealing its first limit.

[73] Senate Bill 157

Chapter 4:

Effects of Act 388 on School Budgets

by

John E. Anderson, Ph.D.

With Appendix E by John Anderson and Bethany Paquin

With Appendices F and G by Alannah Shute

Introduction

Like the rest of the United States, South Carolina depends heavily on the property tax to fund its schools. Currently about one-third of K–12 school funding in South Carolina comes from the local property tax. The focus of this chapter is how Act 388 made significant changes in the property tax that have affected school funding.

First, Act 388 is summarized. Next, the difficulty of directly estimating the effects of Act 388 on schools and school funding is explained. The following section describes the twenty school districts within our 10 focus counties that are the focus of this chapter. After providing a state overview, data from the National Center for Education Statistics is used to describe how the budgets of those same school districts were affected in the following areas:

- Property tax revenue
- Total revenue per pupil
- Instructional expenditure per pupil
- Total expenditure per pupil

Two sections then examine trends among the school districts in pupil-teacher ratios and share of funding received from state aid. Finally, the question of the effect of school spending on student achievement is addressed.

Summary of Act 388

Appendix G provides a longer discussion of the components of Act 388 and their impacts, which are briefly summarized here. Act 388, passed in 2006, limited property tax revenue in three major ways:

- It eliminated property tax liability on primary residences for school operating costs known as the "O & M" (operation and maintenance) exemption. Homeowners are still liable for property taxes for school debt service. Since Act 388, non-homestead property owners bear the burden of school operating costs funded by property taxes. Act 388 raised the sales tax by one cent to offset the revenue loss, mandating state reimbursement of local government tax loss.
- It placed a 15 percent cap on the growth of appraised value of property tax over a five-year period unless the property is sold (assessable transfer of interest or ATI). If a property is sold, it is revalued at its fair market value.
- It placed a cap on the rate of growth of jurisdiction-specific property tax rates. The maximum millage cap limits increases in local millage rates for operating purposes. Under the law, a locality may not increase its millage rate by more than the increase in the consumer price index plus its population growth percentage in the previous year except in very limited conditions (*Significant Features of the Property Tax*).[74]

Act 388 provided for reimbursement to local school districts for the revenue lost from the O & M exemption. In the first year the state of South Carolina was required to reimburse local school districts dollar for dollar for operating revenue lost after the school property tax was eliminated for owner-occupied homes. After the first year, reimbursements were scheduled to increase at the rate of population growth plus inflation. The additional sales tax penny was designated as a means to fund the reimbursements to local school districts. However, this sales tax revenue has been insufficient, requiring the state to partially fund the reimbursement from the state's general fund.

[74] For example, the millage rate limitation may be overridden by a 2/3rd majority of the local council in the case of a natural disaster or if required to comply with a court order (S.C. Code Ann. § 6-1-320).

Challenges of Estimating the Effect of Act 388 on Schools

Unfortunately, for those who are interested in the effect that Act 388 had on schools in South Carolina, the housing market bubble burst just after Act 388 was implemented, and the economy fell into recession. The *Great Recession*, which occurred from December 2007 through June 2009, had major effects on state revenues, state funding of schools, and federal funding for schools across the United States. It may have also had some impact on property tax revenues.

Because Act 388 eliminated the obligation for owner-occupied homes to pay property taxes for school operating costs, falling housing values from 2008 to 2010 were unlikely to have directly affected school district property tax revenues. However, there were other effects resulting from the Great Recession. For example, the recession likely drove down market values for other types of property, which could have reduced property tax receipts. On the other hand, a national study of the impact of the Great Recession and public education found that, "the property tax fared much better than other state and local taxes" during that downturn (Evans, Schwab, and Wagner 2019, 306).

State and local tax revenue in total, however, was heavily impacted, particularly compared with the two previous recessions. According to Evans, Schwab, and Wagner (2019, 304), "It was not until eighteen quarters after the start of the recession that state and local tax revenues returned to pre-recession levels." One result of the decline in state revenue is that most states cut school funding (Leachman, Masterson and Figueroa 2017). South Carolina was no exception. Although the state kept its Act 388 reimbursement commitment, in the FY2009 year it cut other K-12 funding by $365 million (Ullrich 2012).

In addition, the American Recovery and Reinvestment Act (ARRA) of 2009 provided stimulus funds for state and local governments from 2008 to 2010; $100 billion of ARRA funding was dedicated for education (Evans, Schwab and Wagner 2019, 317).

Because of these influencing factors, we cannot directly attribute declines in school district revenue and expenditures to Act 388. Nevertheless, trends from 2008 to 2016 compared to those from 2002 to 2007 provide a broad estimate of the effect of Act 388 on K–12 school funding.

Districts Analyzed in This Study[75]

For the purpose of this study, South Carolina experts chose 10 counties for analysis to represent a broad range of counties in the state among which the impacts of Act 388 have varied. Twenty school districts lie within those counties. Table 4.1 reports basic characteristics of the selected districts in 2016-2017, illustrating their varying contexts. The Greenville School District is the largest in the study, with nearly 77,000 students. The Charleston and Horry districts are also relatively large, with over 40,000 students each. At the other end of the size distribution, the Florence 4 School District is the smallest, with just 692 students. Other small districts include Allendale, Florence 2, and Florence 5, which all have just over 1,000 students.

The composition of student bodies in each district is illustrated in the columns of the table reporting limited English-proficiency learners, free and reduced-cost lunch eligible students, and racial characteristics (Hispanic, Black, and White). Districts such as Greenville, Horry, Charleston, and

[75] In two cases, the districts in this analysis have been affected by mergers. First, note that Table 4.1 lists Orangeburg 3, 4, and 5 districts, which were created from eight districts via consolidation in the 1990s. Hence, there are no Orangeburg 1 and 2 districts listed. As of July 1, 2019, Orangeburg 3, 4, and 5 merged into one consolidated district. This merger does not affect the analysis in this report, however. Second, the Sumter district was created in 2011 by merging Sumter 2 and Sumter 17. Data in this report combine Sumter 2 and Sumter 17 for the years prior to the merger.

Richland 2 have large numbers of students with limited English proficiency. Greenville has the highest share of students with limited English proficiency as a proportion of the total student body, at nearly 11 percent.

Several districts have large numbers of students eligible for free and reduced-cost lunches, reflecting low-income households from which those students come; those districts include Greenville, Horry, and Sumter. Notably, nine districts—Allendale, Florence 2, Florence 3, Florence 4, Orangeburg 3, Orangeburg 4, Orangeburg 5, Richland 1, and Sumter— have all of their students eligible for free or reduced-cost lunches.

The racial composition of student bodies varies widely among districts, with several districts having large proportions of racial minorities. Nine districts are predominantly Black: Allendale, Florence 3, Florence 4, Orangeburg 3, Orangeburg 5, Richland 1, Richland 2, and Sumter. Notably, Allendale School District is nearly all Black.

The number of full-time equivalent (FTE) teachers is highly correlated with the total number of students. FTEs are largest for Greenville and Charleston districts, which have the greatest numbers of students. The average pupil-teacher ratio is 14.7, ranging from a low of 12.1 in Florence 4 School District to ratios over 16 in the Greenville, Horry, and Orangeburg 5 districts.

Expenditures per pupil vary widely, from a high of nearly $20,000 in York 2 (Clover) School District to much lower levels, near $10,000 per pupil, in the Greenville and Florence 5 districts. Allendale, Charleston, and Richland 1 districts are among the relatively higher spending districts.

Table 4.1 Public School District Characteristics, 2016-2017

District	Total Students, All Grades (Excludes AE)	Limited English Proficient (LEP) / English Language Learners (ELL) [District]	% LEP / ELL*	Free and Reduced-Cost Lunch Eligible Students	Hispanic Students	Black Students	White Students	Full-Time Equivalent (FTE) Teachers	Pupil/Teacher Ratio	Total Expenditure per Pupil ($ FY2016)
Allendale	1,243	18	1.4	1,243	24	1,172	30	86	14.39	15,336
Charleston	48,551	3,031	6.2	27,198	4,411	18,670	23,167	3,274	14.83	15,591
Edgefield	3,499	124	3.5	2,587	192	1,505	1,652	251	13.93	10,885
Florence 1	16,358	385	2.4	12,048	516	8,599	6,476	1,097	14.91	11,152
Florence 2	1,133	43	3.8	1,133	56	422	624	78	14.6	10,864
Florence 3	3,683	139	3.8	3,683	202	2,311	1,077	257	14.34	11,167
Florence 4	692	53	7.7	692	58	556	48	57	12.14	13,028
Florence 5	1,318	21	1.6	1,122	39	385	854	91	14.48	10,268
Greenville	76,918	8,189	10.6	40,799	11,817	17,629	42,184	4,684	16.42	10,297
Horry	43,991	3,165	7.2	28,716	5,126	8,489	27,113	2,705	16.26	12,619
Orangeburg 3	2,775	24	0.9	2,775	57	2,436	242	205	13.54	13,117
Orangeburg 4	3,751	105	2.8	3,751	157	1,685	1,778	256	14.64	11,018
Orangeburg 5	6,697	138	2.1	6,697	208	5,828	550	407	16.46	13,073
Richland 1	23,886	844	3.5	23,886	1,114	17,052	4,442	1,852	12.9	16,804
Richland 2	27,802	1,314	4.7	13,473	2,694	16,403	6,541	1,870	14.87	13,468
Sumter	17,136	369	2.2	17,136	673	10,448	5,328	1,087	15.77	10,560
York 1	5,159	192	3.7	3,240	419	956	3,472	351	14.71	11,499
York 2	7,535	177	2.3	2,433	407	726	5,928	526	14.34	19,928
York 3	17,795	840	4.7	10,735	1,478	7,015	8,156	1,150	15.47	10,865
York 4	14,024	458	3.3	2,489	1,160	1,427	10,091	910	15.41	13,127

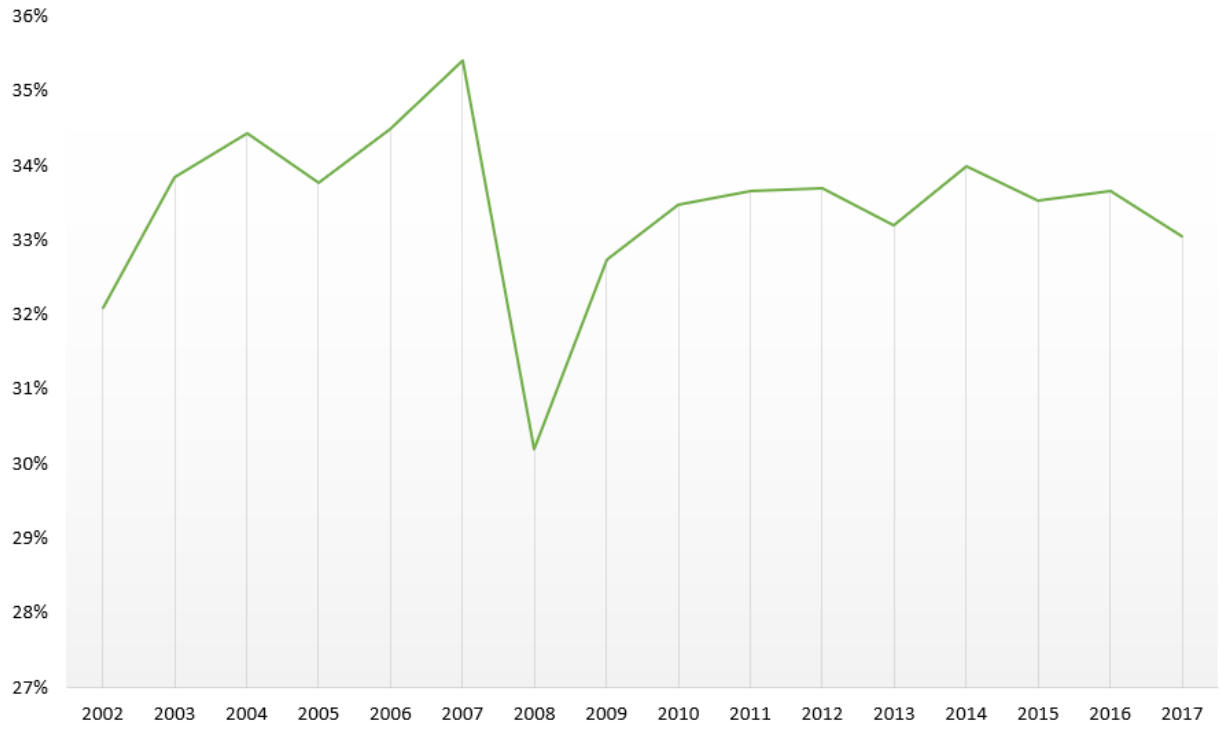
Source: National Center for Education Statistics

*This column is the percentage of Limited English Proficient/English Language Learners in each district

State Overview

Act 388 had a clear impact on reducing the share of funding from local property taxes in the year of implementation, FY2008, cutting that share from approximately 35 percent to 30 percent, as shown in Figure 4.1. Subsequently, that share rose and has fluctuated in the 33 to 34 percent range. That pattern is an aggregate view, however, and masks very different impacts across school districts, which we will explore in the rest of this chapter.

Figure 4.1 Percentage of South Carolina School Funding from Local Property Taxes, 2002-2017



Sources: U.S. Census, Annual Survey of School System Finances

School District Revenue Trends by District

In order to examine revenue trends since 2008, *total property tax revenues*, and *total revenue per pupil* were examined. Total revenue per pupil includes property tax revenue, non-property tax local revenue, state funding, and federal funding.

For each of the 20 districts in the 10 comparison counties, a time series trend estimate is computed for both property tax revenue and total revenue per pupil (from local, state and federal sources) and reported in Table 4.2. The year coefficient captures the overall annual trend in the revenue pattern while the Act 388 coefficient captures the change in the trend's intercept starting in 2008 and the Act 388-year interaction term captures the change in the slope of the trend starting in 2008. For example, the Allendale district has an overall 1.2 percent increase in its annual property tax revenue over the time period from 2002 through 2016. Act 388 had the effect of increasing the intercept of the trend by 2.1 percent, but it reduced the slope of the trend by three-tenths of one percent. Bold coefficients in the table are significantly different from zero at the 5 percent level or less.

Table 4.2 Revenue Trends and Act 388 Impacts

District		Year coefficient	Act 388 coefficient	Act 388-year interaction coefficient
Allendale	Property tax revenue	0.012	0.021	-0.003
	Total revenue per pupil	**0.045**	0.083	-0.018
Charleston	Property tax revenue	**0.115**	**0.397**	**-0.082**
	Total revenue per pupil	**0.088**	**0.232**	**-0.051**
Edgefield	Property tax revenue	**0.042**	-0.026	**-0.018**
	Total revenue per pupil	0.011	0.069	0.008
Florence 1	Property tax revenue	**0.083**	0.002	**-0.038**
	Total revenue per pupil	**0.051**	**0.23**	**-0.034**
Florence 2	Property tax revenue	**0.061**	0.055	**-0.047**
	Total revenue per pupil	-0.008	-0.101	0.018
Florence 3	Property tax revenue	**0.03**	**-0.265**	0.007
	Total revenue per pupil	**0.046**	**0.302**	**-0.042**
Florence 4	Property tax revenue	0.024	-0.204	0.002
	Total revenue per pupil	0.025	0.213	-0.016
Florence 5	Property tax revenue	0.02	-0.169	-0.015
	Total revenue per pupil	**0.029**	0.114	-0.024
Greenville	Property tax revenue	**0.035**	**-0.255**	0.012
	Total revenue per pupil	**0.041**	0.114	**-0.024**
Horry	Property tax revenue	**0.095**	**0.772**	**-0.102**
	Total revenue per pupil	**0.047**	**0.372**	**-0.041**
Orangeburg 3	Property tax revenue	**0.04**	**0.16**	**-0.027**
	Total revenue per pupil	**0.053**	**0.221**	**-0.036**
Orangeburg 4	Property tax revenue	0.012	-0.096	0.002
	Total revenue per pupil	**0.04**	**0.178**	**-0.029**
Orangeburg 5	Property tax revenue	**0.042**	**0.104**	**-0.034**
	Total revenue per pupil	**0.029**	0.129	-0.13
Richland 1	Property tax revenue	**0.07**	**0.366**	**-0.046**
	Total revenue per pupil	**0.063**	**0.381**	**-0.051**
Richland 2	Property tax revenue	**0.099**	0.136	**-0.042**
	Total revenue per pupil	**0.048**	**0.177**	**-0.023**
Sumter	Property tax revenue	0.043	0.018	-0.017

	Total revenue per pupil	**0.033**	**0.182**	-0.021
York 1	Property tax revenue	**0.038**	0.094	-0.004
	Total revenue per pupil	**0.036**	**0.198**	-0.015
York 2	Property tax revenue	**0.041**	0.058	-0.007
	Total revenue per pupil	**0.024**	**0.21**	-0.015
York 3	Property tax revenue	**0.049**	0.015	**-0.022**
	Total revenue per pupil	**0.035**	**0.156**	**-0.021**
York 4	Property tax revenue	**0.095**	-0.08	-0.007
	Total revenue per pupil	**0.039**	**0.21**	**-0.03**

Source: Author's computations based on NCES data.

Note: boldface estimates are statistically significant at the 5 percent level or less.

Two notable features are evident from the property tax revenue estimates in the table. First, the property tax revenue trend is generally positive for most districts over the period 2002-2016, despite Act 388 implementation in 2008. None of the estimated year trend coefficients are negative and significant. Property tax revenue has risen over the time period 2002-2016 generally in the range of two to four percent per year. The fastest rates of increase are found in Charleston (11.5 percent), Horry (9.5 percent), Richland 2 (9.9 percent), and York 4 (9.5 percent).

Second, the Act 388 interaction terms are generally negative, and many are significantly different from zero.[76] These results indicate that Act 388 had the effect of flattening the slopes of the property tax revenue trends. The largest reductions in slope occurred in Charleston (8.2 percent) and Horry (10.2 percent). For 10 of the districts, the interaction term is not significantly different from zero indicating no change in trend slope with Act 388 implementation (Allendale, Florence 3, Florence 4, Florence 5, Greenville, Orangeburg 4, Sumter, York 1, York 2, and York 4). Hence, Act 388 had the effect of significantly slowing the rate of growth in property tax revenue for half of the districts, doing so substantially in several districts.

These trends in property tax revenue are just one part of the overall public school funding picture. Property tax revenue is one component of public education funding, but it is combined with state and federal funding. Hence, to obtain a comprehensive view of the revenue side of budgets, state and federal funds must also be considered. The trends in total revenue per pupil, including local, state, and federal sources, are also reported in Table 4.2. From those results it is evident that the overall trends are positive over the period 2002-2016. The annual rates of increase are generally in the range of three to five percent. The strongest rates of increases are found in Charleston (8.8 percent) and Richland 1 (6.3 percent). On the other hand, the annual rates of increase are not significantly different from zero for Edgefield, Florence 2, and Florence 4 districts. The Act 388-year interaction coefficients indicate that Act 388 flattened the slope of the total revenue per pupil trends for most districts. The largest reductions in trend slope occurred in Charleston (5.1 percent) and Richland 1 (5.1 percent).

For context, these coefficients indicate the reduction in trend growth starting in the year of Act 388 implementation, relative to the overall trend growth. For example, in the Charleston School District while

[76] Four school districts have a positive interaction term, although the sum of the Act 388 coefficient and the interaction term is negative in these districts.

the overall trend growth over the period 2002-2016 was 8.8 percent, beginning in 2008 with Act 388 implementation the trend growth was reduced by 5.1 percentage points yielding a growth rate of 3.7 percent over the period 2008-2016. Similarly, in the Richland 1 School District, the overall growth rate in total revenue per pupil over the period 2002-2016 was 6.3 percent, but that rate was decreased by 5.1 percentage points starting in 2008, resulting in a post-Act 388 growth rate of 1.2 percent. The Act 388-year interaction terms are not significantly different from zero for nine of the districts indicating that the trend slopes were not significantly different after Act 388 implementation (Allendale, Edgefield, Florence 2, Florence 4, Florence 5, Orangeburg 5, Sumter, York 1, and York 2).

The revenue trends indicate that Act 388 clearly reduced property tax revenue for local public schools in 2008 and subsequently flattened the property tax trajectory for many districts.

School District Expenditure Trends by District

Two expenditure trends that were examined in this study are *instructional expenditure per pupil* and *total expenditure per pupil*. Total expenditure includes both operating and capital expenses.

On the expenditure side of the budget Table 4.3 reports estimates of trends for both instructional expenditure per pupil and total expenditure per pupil. Trends for instructional expenditures indicate that all but two districts experienced increasing trends over the period 2002-2016. The exceptions were Florence 4 and York 2 districts. Otherwise the overall trends in instructional expenditures were generally in the range of two to five percent. Districts with overall rates of growth in instructional spending of at least five percent included Florence 1 (5.0 percent) and Richland 1 (5.5 percent).

The effect of Act 388 on the intercepts of instructional expenditure trends was positive and significantly different from zero for 14 of the districts. In the remaining six districts the intercept effects were not significantly different from zero. Hence, Act 388 generally had the effect of increasing the trend intercepts.

Furthermore, the Act 388-year interaction coefficients are negative and significantly different from zero for all but seven of the districts indicating that Act 388 flattened the trend slopes. The largest reductions occurred in Florence 1 (4.4 percent), Orangeburg 5 (4.8 percent), and Richland 1 (5.0 percent). In these cases, the Act 388 negative effects nearly fully offset the positive growth trends in these districts. For example, in Florence 1 School District, the overall trend in instructional expenditure over the period 2002-2016 was 5.0 percent growth, but the Act 388 effect reduced that growth rate by 4.4 percent in the 2008-2016 period. In Orangeburg 5 School District the Act 388 negative effect resulted in a negative trend.

These results indicate that Act 388 generally reduced the rate of growth in instructional expenditure per pupil, and in some cases effectively resulted in zero or even negative growth.

Trend estimates for total expenditure per pupil are positive and significant for 10 of the districts over the period 2002-16. For half of the districts the trend estimates are effectively zero. Among the other half of the districts with positive trend estimates, growth rates are in the range of two to five percent. Exceptions with stronger growth rates include Greenville (8.3 percent), Richland 1 (10.8 percent), Richland 2 (7.9 percent), and York 3 (5.5 percent).

Table 4.3 Expenditure Trends and Act 388 Impacts

District		Year coefficient	Act 388 coefficient	Act 388-year interaction coefficient
Allendale	Instructional expenditure per pupil	0.013	0.135	-0.004
	Total expenditures per pupil	**0.05**	0.127	-0.029
Charleston	Instructional expenditure per pupil	**0.044**	0.117	**-0.025**
	Total expenditures per pupil	0.034	0.266	-0.015
Edgefield	Instructional expenditure per pupil	**0.022**	**0.156**	-0.011
	Total expenditures per pupil	-0.002	0.05	0.02
Florence 1	Instructional expenditure per pupil	**0.05**	**0.325**	**-0.044**
	Total expenditures per pupil	**0.045**	0.166	-0.019
Florence 2	Instructional expenditure per pupil	**0.039**	**0.208**	**-0.034**
	Total expenditures per pupil	0.024	0.169	-0.026
Florence 3	Instructional expenditure per pupil	**0.029**	**0.166**	-0.018
	Total expenditures per pupil	**0.034**	**0.291**	**-0.028**
Florence 4	Instructional expenditure per pupil	-0.019	-0.192	0.047
	Total expenditures per pupil	-0.004	0.178	0.005
Florence 5	Instructional expenditure per pupil	**0.028**	0.087	-0.013
	Total expenditures per pupil	**0.025**	**0.181**	-0.024
Greenville	Instructional expenditure per pupil	**0.032**	0.124	-0.02
	Total expenditures per pupil	**0.083**	0.203	**-0.078**
Horry	Instructional expenditure per pupil	**0.042**	**0.323**	**-0.035**
	Total expenditures per pupil	**0.049**	0.253	-0.043
Orangeburg 3	Instructional expenditure per pupil	**0.031**	**0.294**	**-0.032**
	Total expenditures per pupil	0.033	0.094	-0.024
Orangeburg 4	Instructional expenditure per pupil	**0.037**	**0.202**	**-0.027**
	Total expenditures per pupil	0.033	0.094	-0.024
Orangeburg 5	Instructional expenditure per pupil	**0.044**	**0.338**	**-0.048**
	Total expenditures per pupil	-0.011	-0.054	**0.023**
Richland 1	Instructional expenditure per pupil	**0.055**	**0.386**	**-0.05**
	Total expenditures per pupil	**0.108**	**0.581**	**-0.109**
Richland 2	Instructional expenditure per pupil	**0.041**	**0.222**	**-0.028**
	Total expenditures per pupil	**0.079**	**0.391**	**-0.07**
Sumter	Instructional expenditure per pupil	**0.039**	**0.275**	**-0.036**
	Total expenditures per pupil	**0.042**	**0.51**	**-0.051**
York 1	Instructional expenditure per pupil	**0.038**	**0.267**	**-0.033**
	Total expenditures per pupil	0.026	**0.921**	-0.061
York 2	Instructional expenditure per pupil	-0.002	-0.079	**0.024**
	Total expenditures per pupil	0.017	0.124	0.013
York 3	Instructional expenditure per pupil	**0.032**	**0.24**	**-0.025**
	Total expenditures per pupil	**0.055**	**0.417**	**-0.065**
York 4	Instructional expenditure per pupil	**0.029**	**0.257**	**-0.026**
	Total expenditures per pupil	0.061	0.418	-0.056

Source: Author's computations based on NCES data.

Note: boldface estimates are statistically significant at the 5 percent level or less.

The Act 388 coefficients for total expenditures per pupil are generally not significantly different from zero for most (13 of the 20) districts, indicating that the act did not shift trend intercepts. For seven of the districts, however, the Act 388 coefficient is positive and significant indicating that the trend intercept increased (Florence 3, Florence 5, Richland 1, Richland 2, Sumter, York 1 and York 3).

The Act 388-year interaction coefficients are negative and significant for six of the 20 districts indicating that the act had the effect of reducing the rate of growth in total expenditures per pupil in those districts (Florence 3, Greenville, Richland 1, Richland 2, Sumter, and York 3). Once again, those Act 388 growth reductions offset the overall growth rates, resulting in zero or even negative rates over the period 2008-16.

The expenditure trends indicate that Act 388 has had the effect of reducing the rate of growth in both instructional expenditure per pupil and total expenditure per pupil. In the hardest-hit districts, the reductions have resulted in zero or even negative growth rates in expenditures.

Appendix A to this chapter provides four charts for each public school district in the 10 counties examined in this study. In each case, the first chart illustrates the time trend of total property tax revenue received by the district. The second chart illustrates the revenue sources per pupil, including state, local, and federal revenues. The third chart illustrates the shares of revenues obtained from state, local, and federal sources. The final chart illustrates total expenditure per pupil over time.

Trends in Pupil-Teacher Ratios

One measure of the potential impact of Act 388 on school districts is the pupil-teacher ratio. Table 4.4 reports estimates of trends in the ratio over the period 2002-2017. The overall trend among districts over that period was a declining ratio (meaning fewer pupils per teacher), as indicated in the first column. In Charleston, Orangeburg 3, Orangeburg 5, and Sumter, the pupil-teacher ratios declined the most from 2002 to 2017.

Once Act 388 was implemented the trend of falling pupil-teacher ratios reversed, and pupil-teacher ratios jumped up as indicated in the second column. For all districts, the trends over the period 2008-2017 increased.[77] The largest increases in the ratio trend are in Charleston (0.824), Orangeburg 5 (0.935), and York 4 (0.842) districts. The estimated increases post-Act 388 in many cases are sufficiently large to undo previous progress in reducing the pupil-teacher ratio, as in Charleston, Orangeburg 5, Richland 2, and York 4. These estimates indicate that since Act 388 was implemented, pupil-teacher ratios have risen. These results indicate that Act 388 increased pupil-teacher ratios.

[77] Although the coefficients are imprecisely estimated, as reflected in the fact that just six of the coefficients are statistically significant at the usual 5 percent level, all of the estimated coefficients are positive. If an estimated relationship is statistically significant, we can be highly confident that it is caused by something other than chance.

Table 4.4 Pupil-Teacher Ratio Trends

District	Year Trend 2002-2017	Act 388 Impact 2008-2017
Allendale	-0.540	0.364
Charleston	**-0.786**	**0.824**
Edgefield	-0.520	0.382
Florence 1	-0.691	0.657
Florence 2	-0.289	0.390
Florence 3	-0.537	0.255
Florence 4	-0.529	0.514
Florence 5	**-0.569**	0.516
Greenville	-0.580	0.666
Horry	-0.477	0.505
Orangeburg 3	**-0.809**	0.792
Orangeburg 4	**-0.560**	**0.558**
Orangeburg 5	**-0.709**	**0.935**
Richland 1	**-0.494**	0.398
Richland 2	**-0.549**	**0.568**
Sumter	**-0.760**	0.632
York 1	-0.514	0.437
York 2	-0.306	0.106
York 3	-0.527	**0.612**
York 4	**-0.677**	**0.842**

Source: National Center for Education Statistics Universe Survey", 2016-17 v.1a.
Note: boldface estimates are statistically significant at the 5 percent level or less.

Trends in State Aid by District

The intent of Act 388 was to reduce reliance on the local property tax and replace that with increased reliance on state revenues. Revenues shares from local, state, and federal sources are illustrated in bar charts for each of the districts in this study in Appendix A. To gauge the extent to which the intended changes of Act 388 occurred, Table 4.5 provides a view of the changes in state revenue shares. The first column reports the average state revenue share of school district budgets over the period 2002 through 2007, prior to implementation of Act 388. The second column reports the state revenue share jump that

occurred in 2008 with the implementation of Act 388. The third column then reports the average state revenue share of school district budgets in the years after the initial year of implementation, 2009 through 2016. The fourth column reports the change in the state revenue share post-Act 388.

Table 4.5 State Revenue Shares

District	State Revenue Share Average 2002-2007 (%)	State Revenue Share Jump in 2008 (%)	State Revenue Share Average 2009-2016 (%)	Change in State Revenue Share Post-Act 388 (%)
Allendale	55.4	0.3	51.2	-4.2
Charleston	34	10.8	29.9	-4.1
Edgefield	55.7	2.2	51.2	-4.5
Florence 1	48.9	8.9	51.7	2.8
Florence 2	52.2	3.3	60.8	8.6
Florence 3	56.6	4	55.6	-1
Florence 4	55.6	3	47.3	-8.3
Florence 5	51.8	3.9	57	5.2
Greenville	44.4	8.8	49.1	4.7
Horry	36.9	3.7	34	-2.9
Orangeburg 3	51.1	0.8	44	-7.1
Orangeburg 4	51.2	0.8	44	-7.2
Orangeburg 5	50.3	2.6	46.3	-4
Richland 1	38.9	0.5	31.9	-7
Richland 2	44.1	11.1	48.6	4.5
Sumter	56	3.9	53.5	-2.5
York 1	53.6	5.4	50.3	-3.3
York 2	26.5	10.9	35.7	9.2
York 3	48.7	8.1	51.4	2.7
York 4	41.2	11.8	48	6.8

Source: Author's computations based on NCES data

Prior to Act 388, state revenue reliance ranged from a low of 26.5 percent in York 2 (Clover) School District to a high of 56.6 in Florence 3 School District. Act 388 implementation increased the state share of revenue for all 20 districts, with the largest increases experienced in York 4 (11.8 percent), Richland 2 (11.1 percent), York 2 (10.9 percent), and Charleston (10.8 percent). These four districts are relatively higher-income districts with smaller percentages of students eligible for free and reduced-price lunches. On the other hand, several districts experienced very little change in their state revenue share—less than one percent: Allendale (0.3 percent), Richland 1 (0.5 percent), Orangeburg 3 (0.8 percent), and Orangeburg 4 (0.8 percent). These districts are relatively low-income with all their students eligible for free and reduced-price lunches.

Following implementation of Act 388, state revenue reliance has increased for eight of the districts but declined for the other 12 districts. Hence, 40 percent of the districts in this study experienced the anticipated shift from local property tax reliance to state funding, but 60 percent of districts did not receive enough state support to offset the loss of local funding.

These data suggest that state aid has not been uniformly helpful across districts in meeting school funding needs. For a majority of the districts in this study, state funding as a share of total funding has been reduced since implementation of Act 388. Even for those districts that have experienced increased support from state aid, the counterfactual of what would have happened in the absence of Act 388 is not obvious. Although state aid increased as a share of the total revenue received in these districts, without Act 388 the property tax increases may have been larger and may have supported even more robust revenue trends. This study has not estimated what would have happened in the absence of Act 388.

Relationship between School Funding and Student Achievement

There have been over 100 studies of the impact of school spending on student achievement, but that research has produced mixed results. Some of those mixed results arise because of the difficulty of conducting empirical work in this area. For example, it is difficult to untangle the impact of school spending from the impact of family background. In addition, resources that impact student achievement play out over a number of years. That is, an excellent first grade teacher can set a student on a better path through high school. Appendix B provides an overview of this literature.

Unfortunately, there is no solid time series that measures student achievement in South Carolina school districts both before and after Act 388. Appendices B, C, and D discuss and present available data from the South Carolina High School Assessment Program, ACT tests, the Palmetto Achievement Challenge Test, and the Palmetto Assessment of State Standards. These achievement indicators present district-by-district measures, but do not provide a time trend for before and after Act 388.

There is one test which enables policy analysts and policy makers to compare educational performance among states: the National Assessment of Educational Progress (NAEP) exam, which is widely known as the *Nation's Report Card*. The NAEP is one of the most commonly cited measures of educational performance. In 2001, when the *No Child Left Behind Act* was reauthorized, the law mandated that every state participate in NAEP reading and mathematics evaluations for grades four and eight every two years. Appendix E presents NAEP scores for South Carolina compared to other states.

Conclusion

This chapter looks at various school district trends before and after implementation of Act 388 to try to determine the impact that act has had on school district budgets. However, because the economy fell into recession about the same time that South Carolina was implementing Act 388, which in turn affected state and federal aid to schools and local property tax receipts, we cannot directly attribute changes in school district budgets to Act 388. Comparing trends from 2008 to 2016 to those from 2002 to 2007 can only provide a broad estimate of the effect of Act 388 on school funding in South Carolina.

Since Act 388 was implemented many of the 20 school districts in our 10 focus counties experienced slower growth in property tax revenue, total revenue per pupil, instructional expenditure per pupil, and total expenditure per pupil.

Half of the 20 school districts experienced slower growth in property tax revenue and 11 school districts experienced slower growth in total revenue per pupil. Thirteen school districts experienced slower growth in instructional expenditure per pupil since 2008, and six districts experienced slower growth in total expenditure per pupil since 2008.

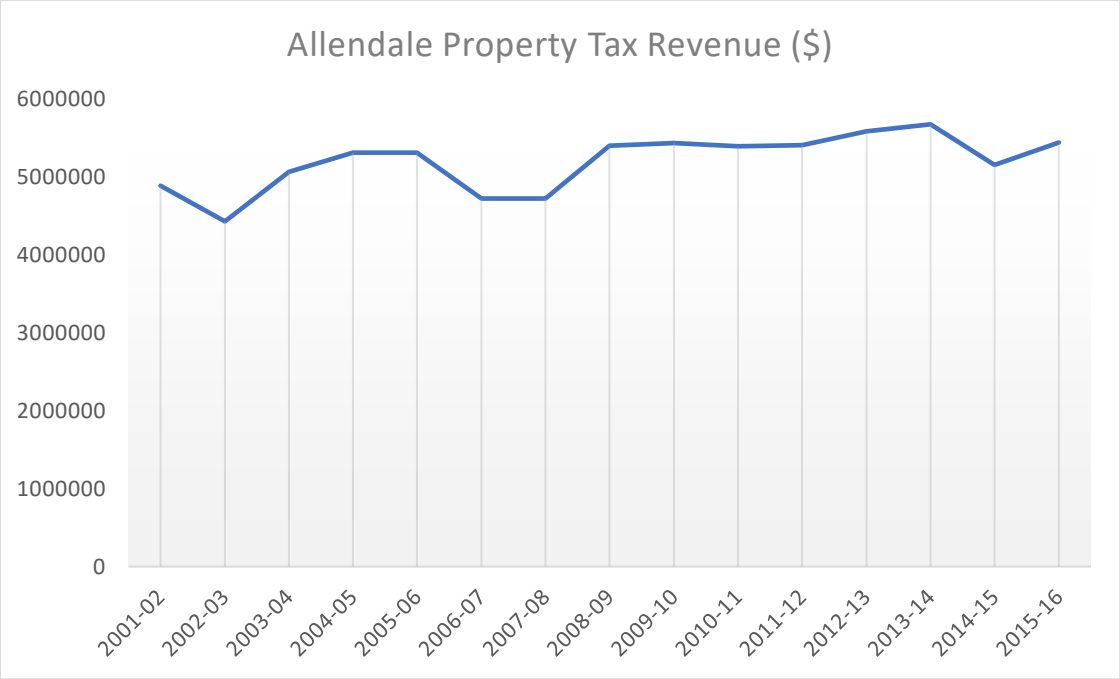
School districts in fast-growing counties were more likely to have a statistically significant decline in their total revenue per pupil after 2008. Richland 1, Richland 2, and York 3 (Rock Hill) all experienced declines in property tax revenue, total revenue per pupil, instructional expenditure per pupil, and total expenditure per pupil growth since 2008.

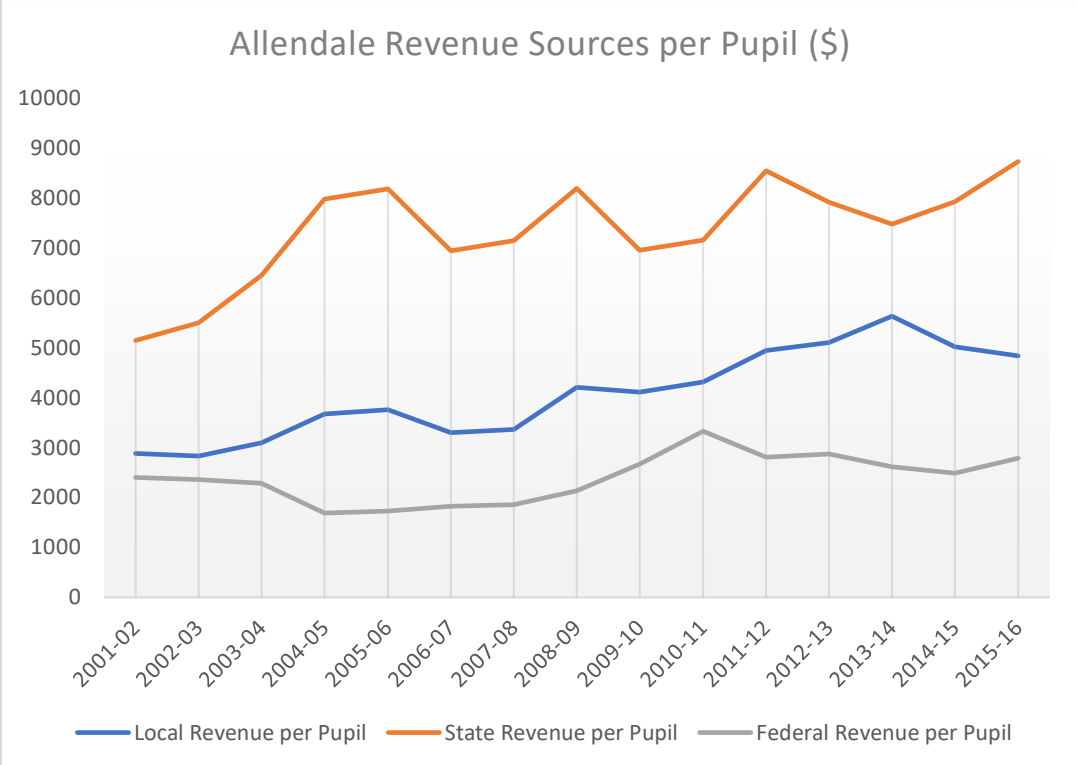
For a majority of the districts in this study, state funding as a share of total funding has declined since implementation of Act 388.

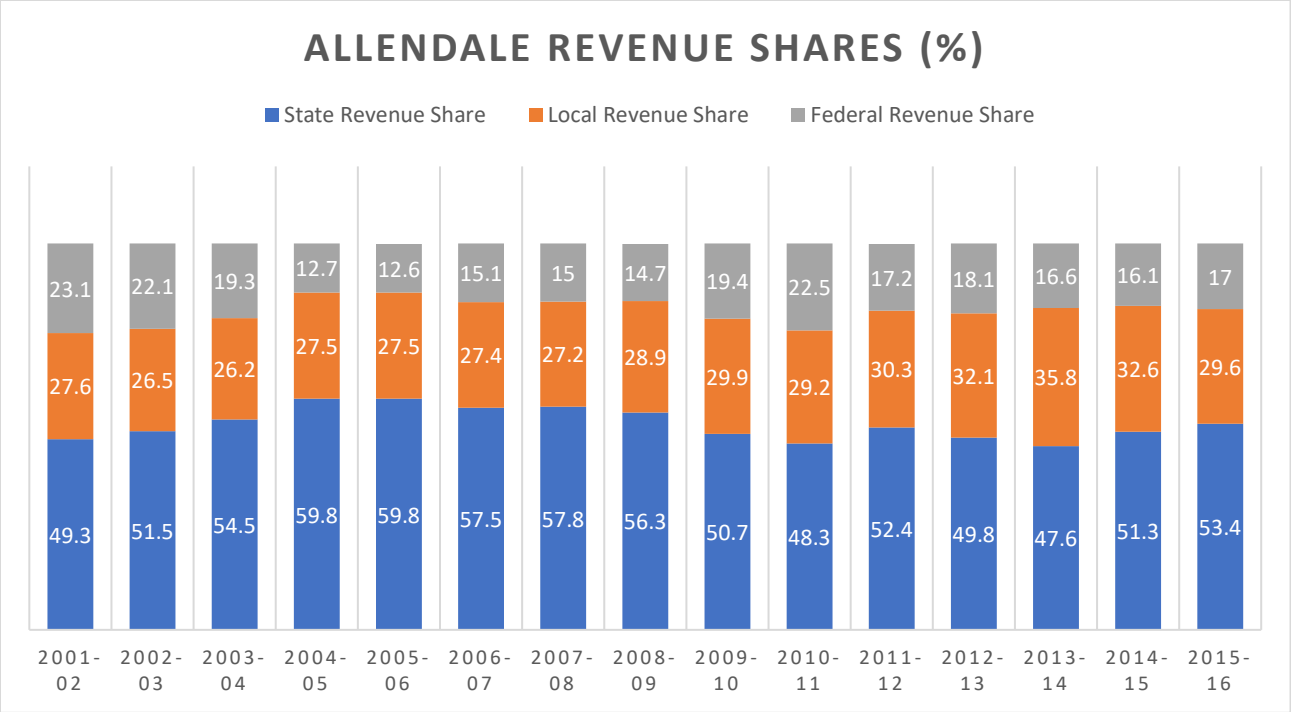
Appendix A
School District Funding

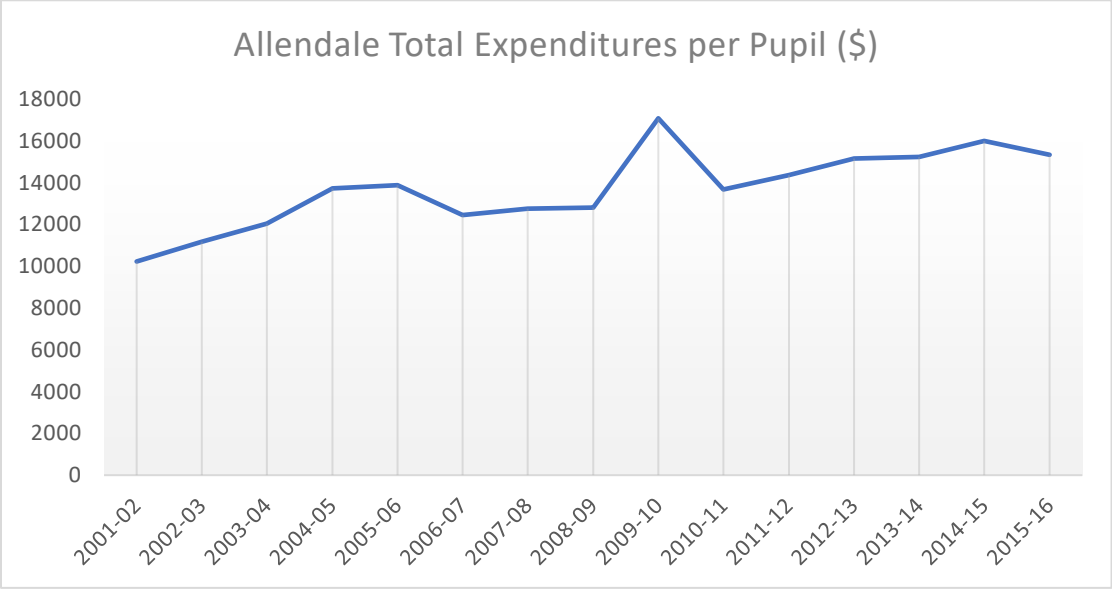
All data in Appendix A come from the National Center for Education Statistics.

Figures A1-A4
Allendale District

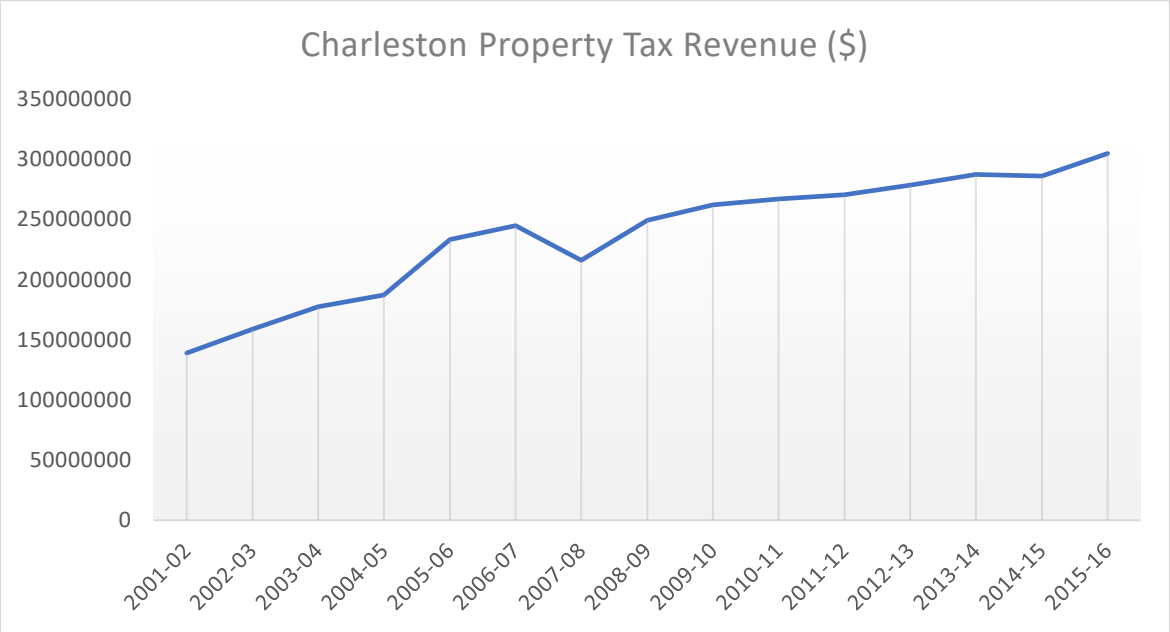


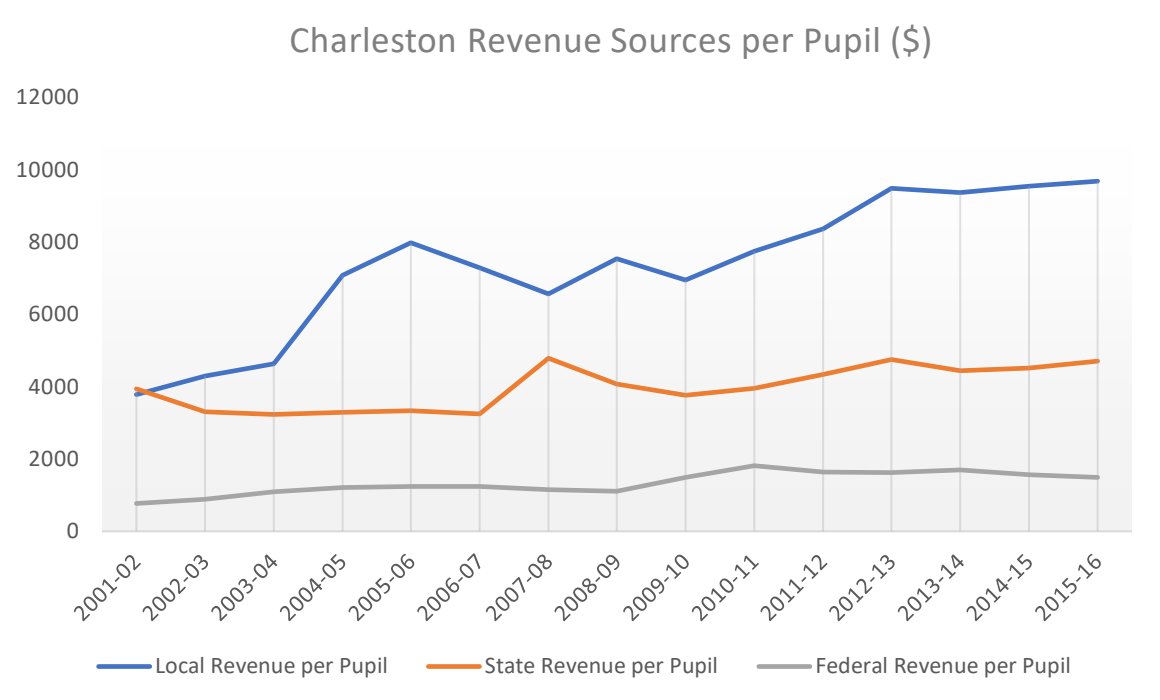


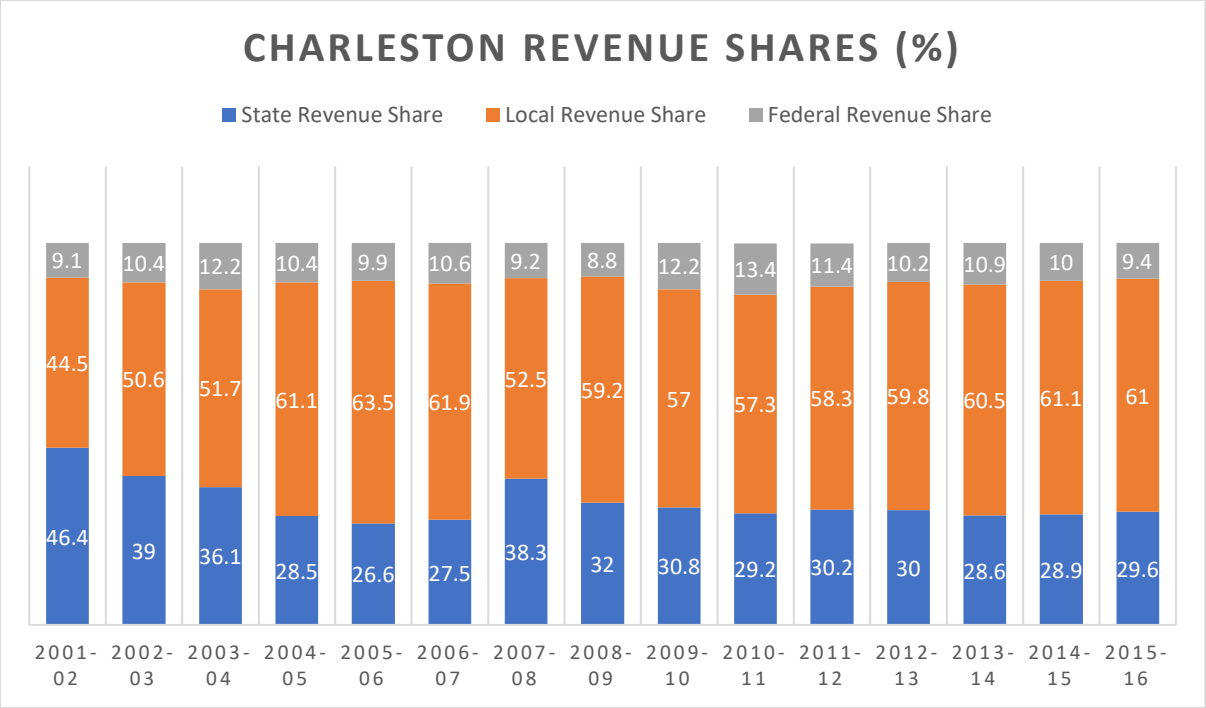

ALLENDALE REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
23.1
27.6
49.3
22.1
26.5
51.5
19.3
26.2
54.5
12.7
27.5
59.8
12.6
27.5
59.8
15.1
27.4
57.5
15
27.2
57.8
14.7
28.9
56.3
19.4
29.9
50.7
22.5
29.2
48.3
17.2
30.3
52.4
18.1
32.1
49.8
16.6
35.8
47.6
16.1
32.6
51.3
17
29.6
53.4
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16


Allendale Total Expenditures per Pupil ($)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A5-A8
Charleston District






CHARLESTON REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
9.1
44.5
46.4
10.4
50.6
39
12.2
51.7
36.1
10.4
61.1
28.5
9.9
63.5
26.6
10.6
61.9
27.5
9.2
52.5
38.3
8.8
59.2
32
12.2
57
30.8
13.4
57.3
29.2
11.4
58.3
30.2
10.2
59.8
30
10.9
60.5
28.6
10
61.1
28.9
9.4
61
29.6
2001-02
2002-03
2003-04
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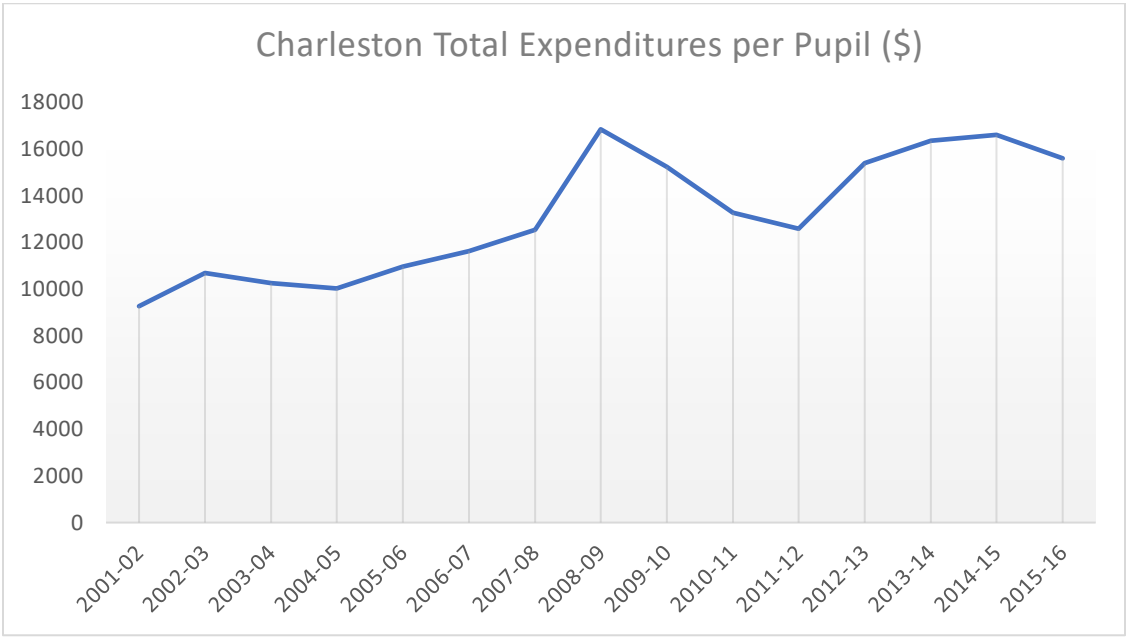
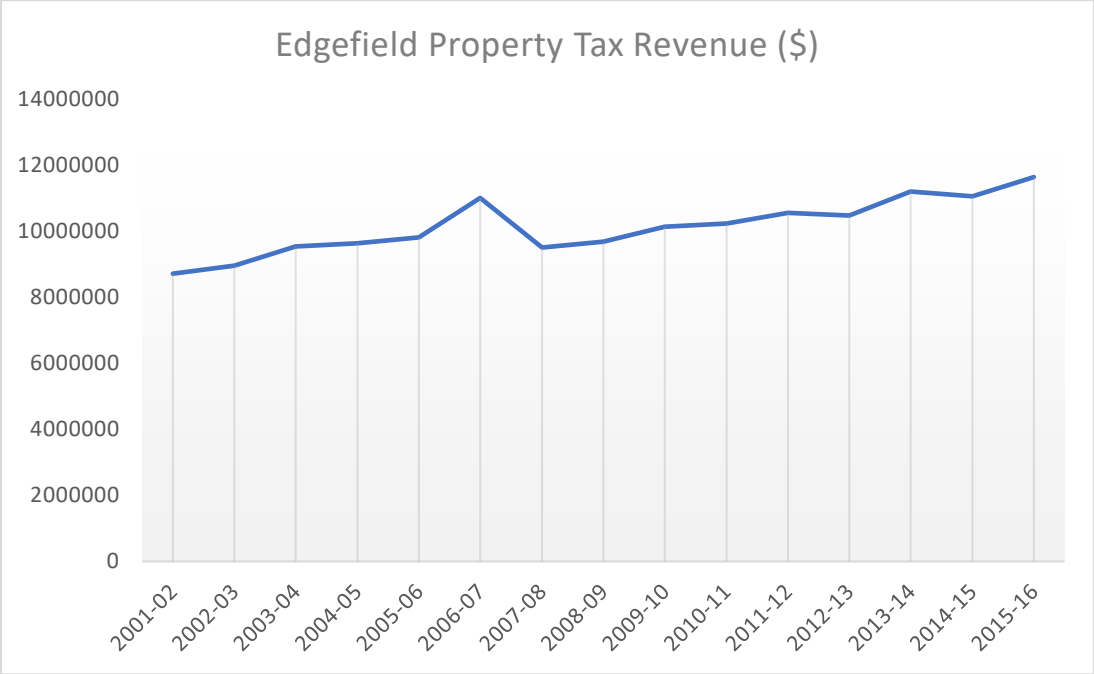
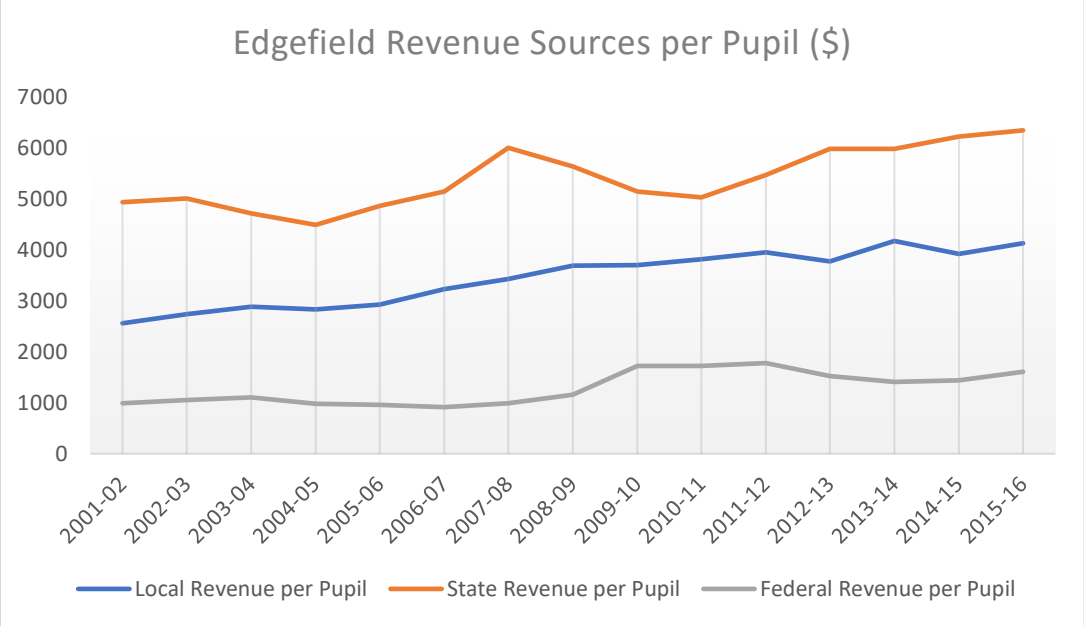
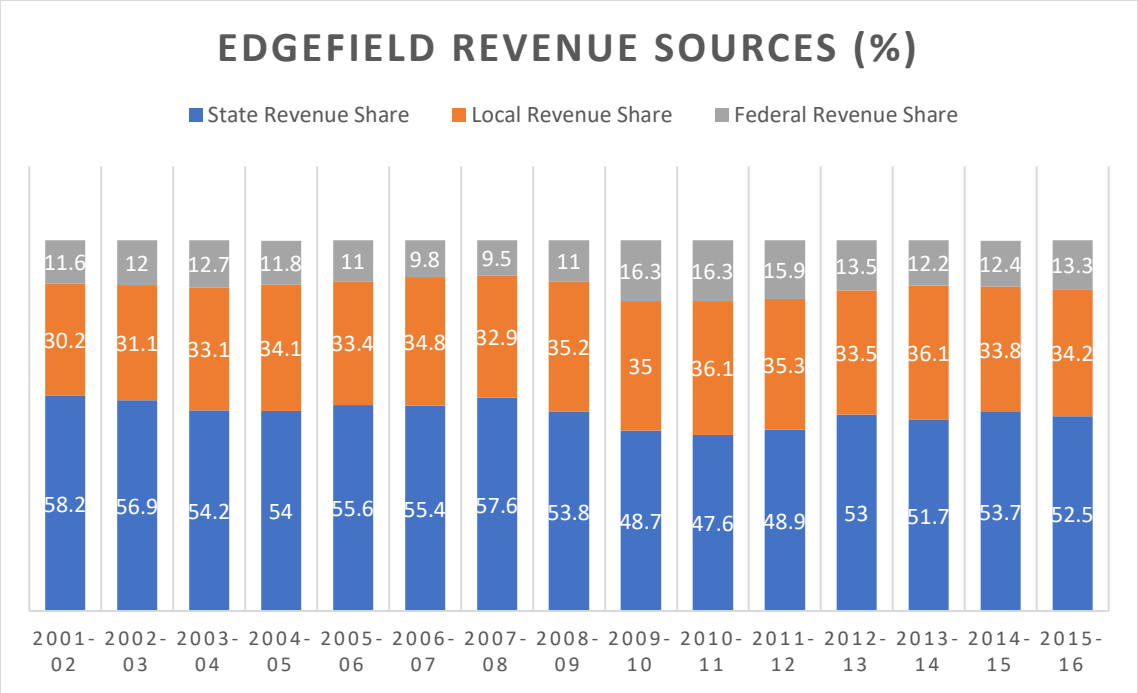
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16


Charleston Total Expenditures per Pupil ($)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A9-A12
Edgefield District






EDGEFIELD REVENUE SOURCES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
11.6
30.2
58.2
12
31.1
56.9
12.7
33.1
54.2
11.8
34.1
54
11
33.4
55.6
9.8
34.8
55.4
9.5
32.9
57.6
11
35.2
53.8
16.3
35
48.7
16.3
36.1
47.6
15.9
35.3
48.9
13.5
33.5
53
12.2
36.1
51.7
12.4
33.8
53.7
13.3
34.2
52.5
2001-02
2002-03
2003-04
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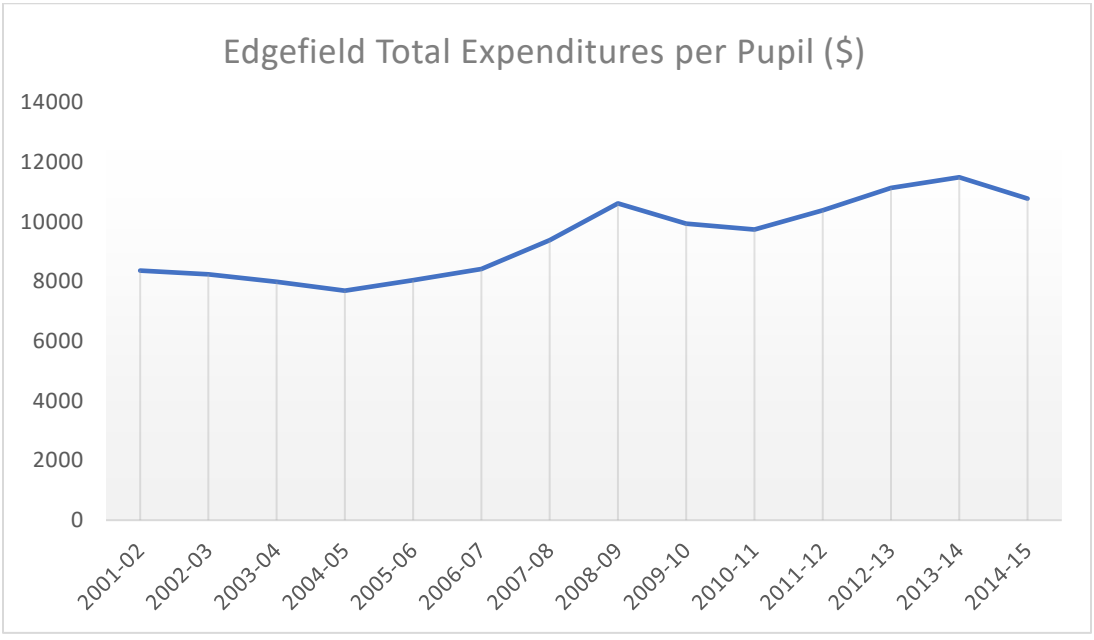
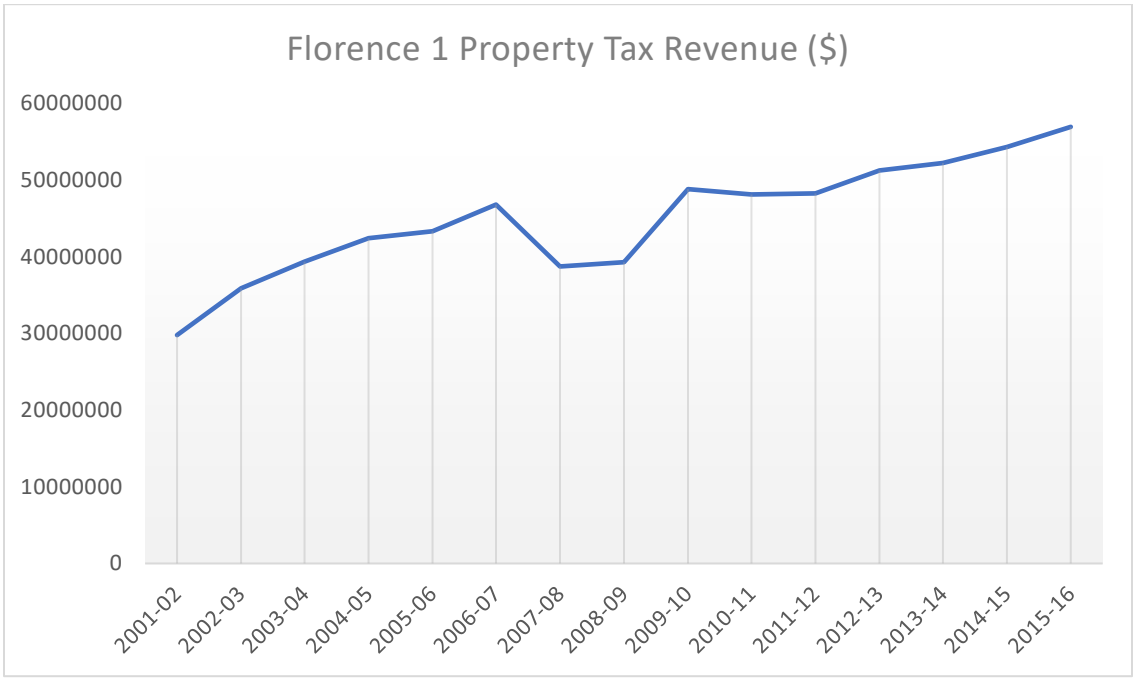
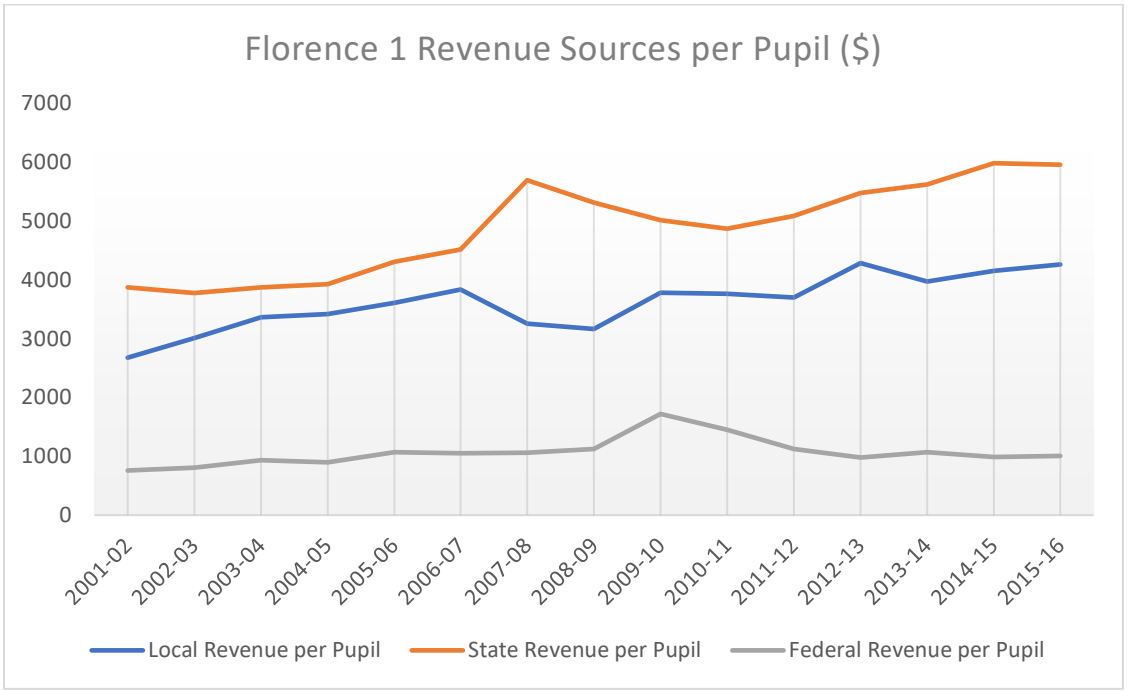
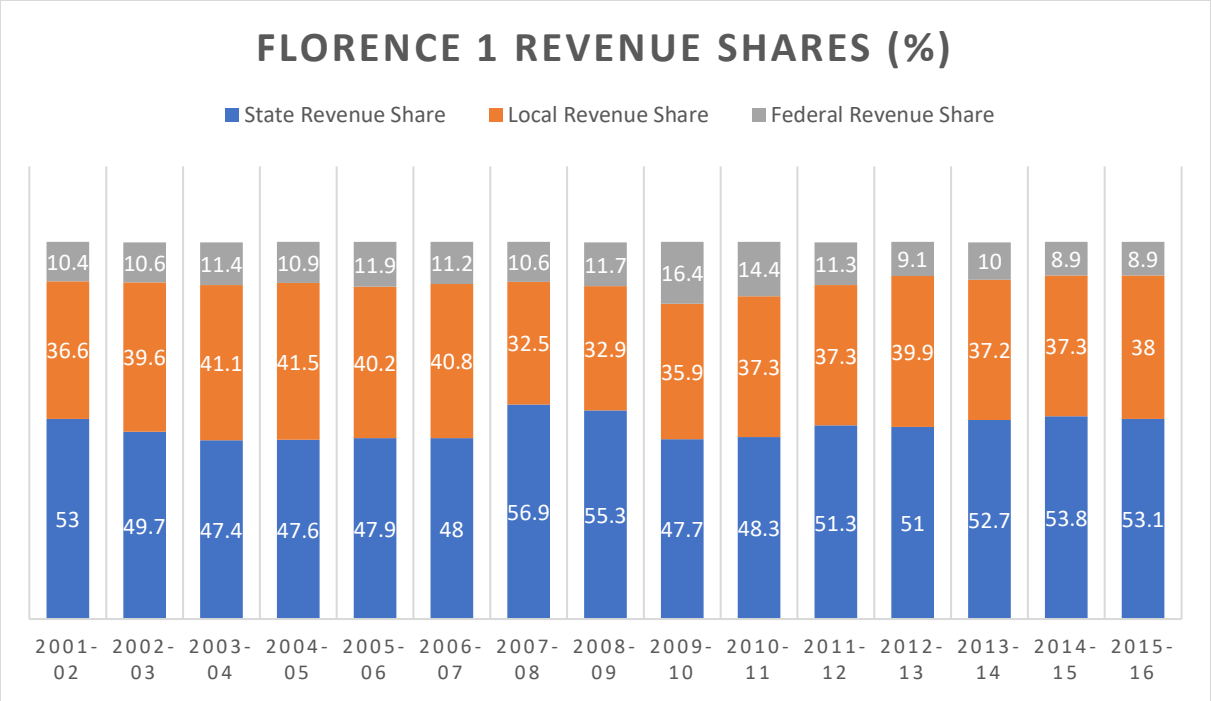
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16


Edgefield Total Expenditures per Pupil ($)
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15

Figures A13-A16
Florence 1 District






FLORENCE 1 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
10.4
36.6
53
10.6
39.6
49.7
11.4
41.1
47.4
10.9
41.5
47.6
11.9
40.2
47.9
11.2
40.8
48
10.6
32.5
56.9
11.7
32.9
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35.9
47.7
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9.1
39.9
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37.2
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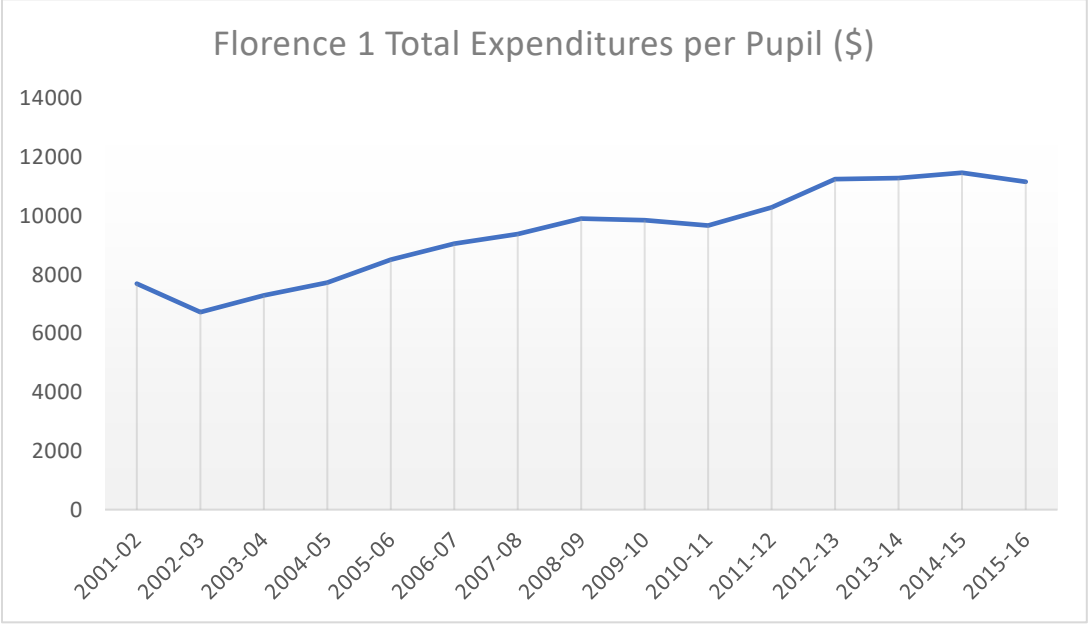
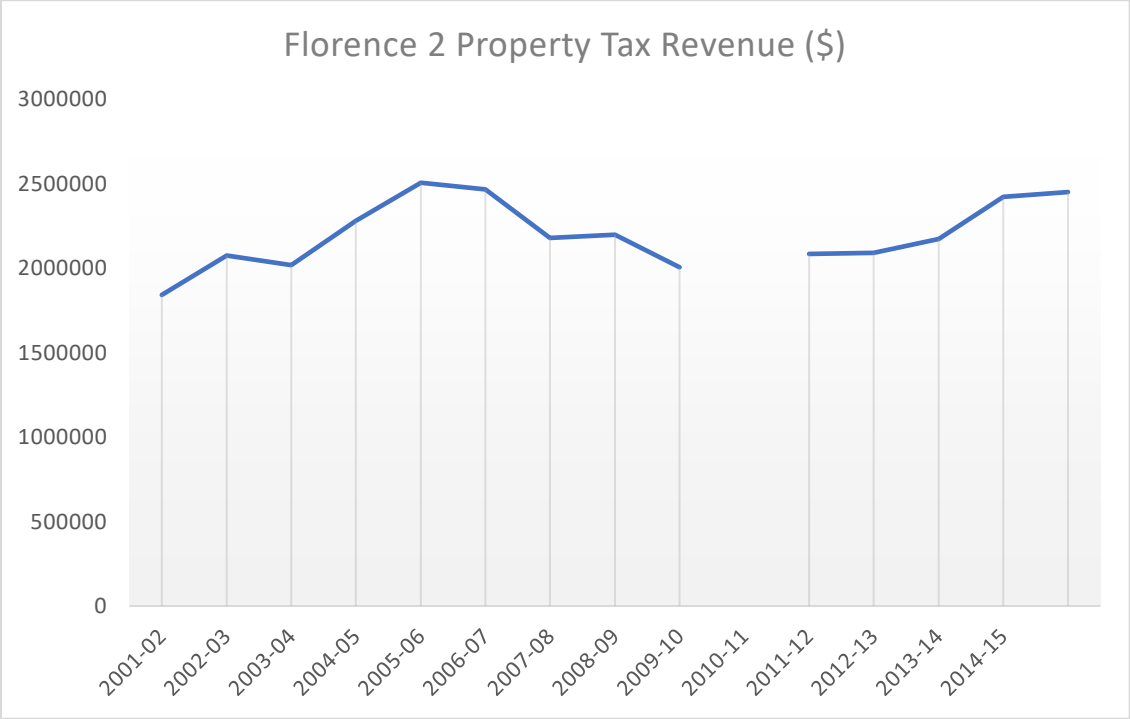
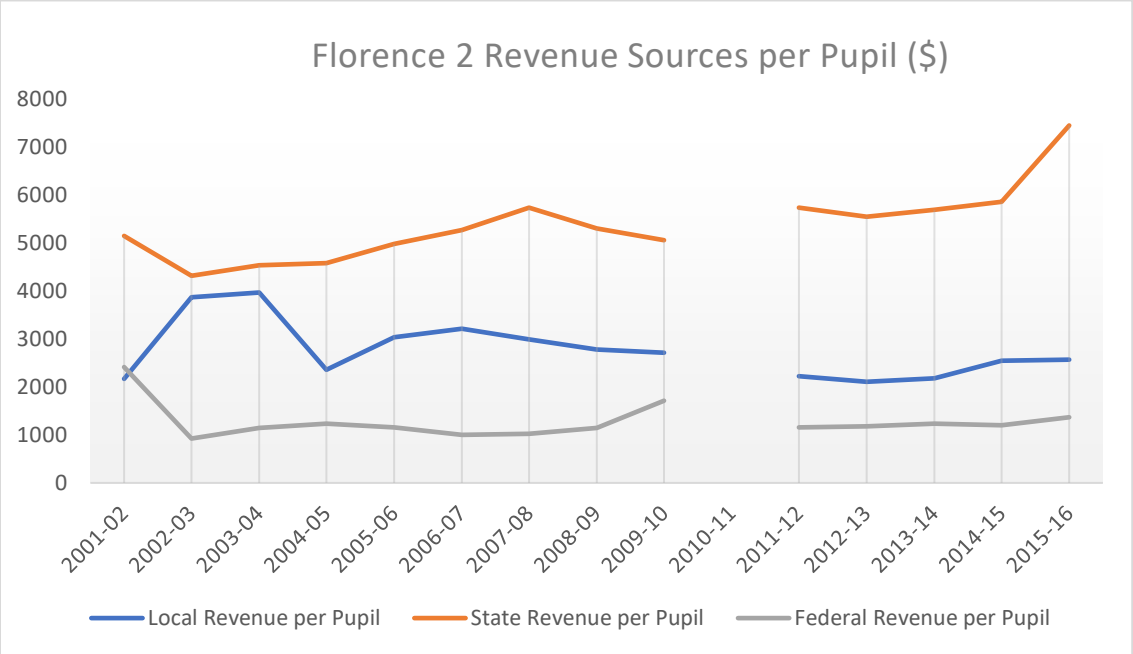
8.9
37.3
53.8
8.9
38
53.1
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

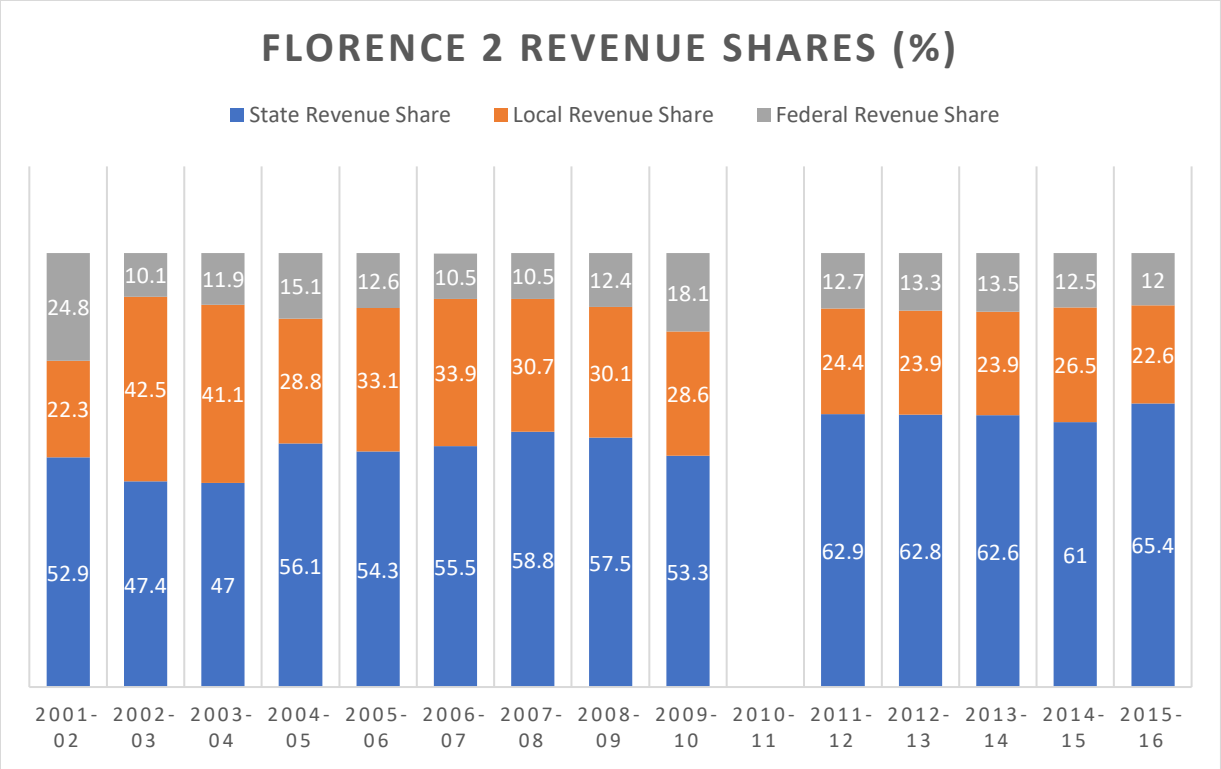

Florence 1 Total Expenditures per Pupil ($)
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

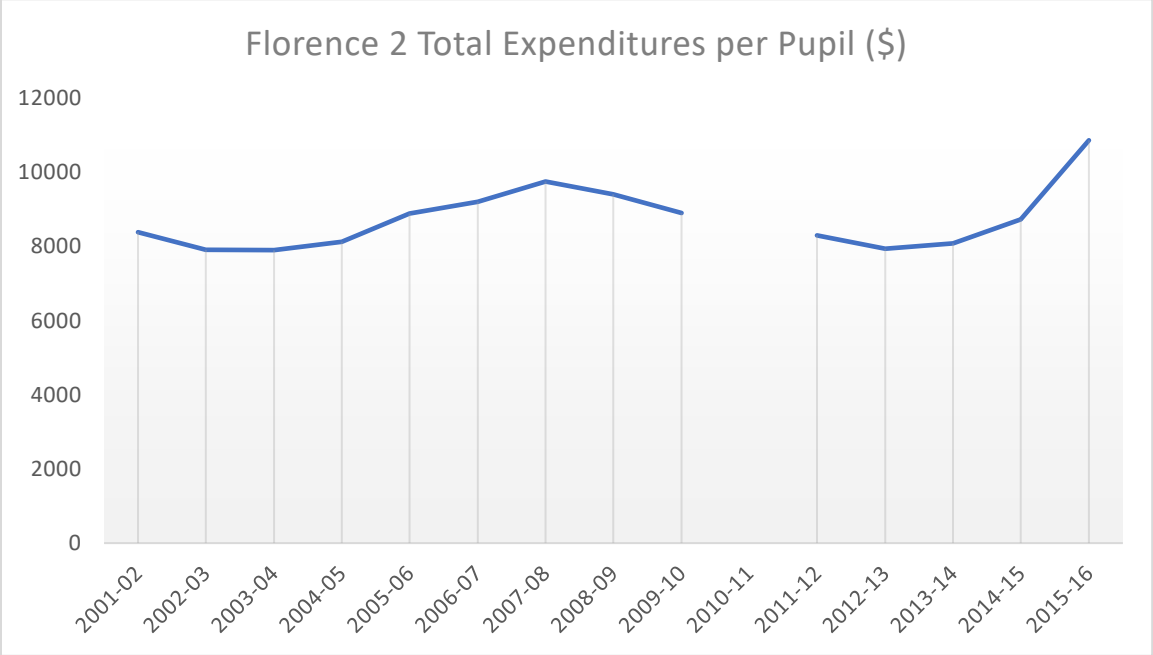
Figures A17-A20
Florence 2 District



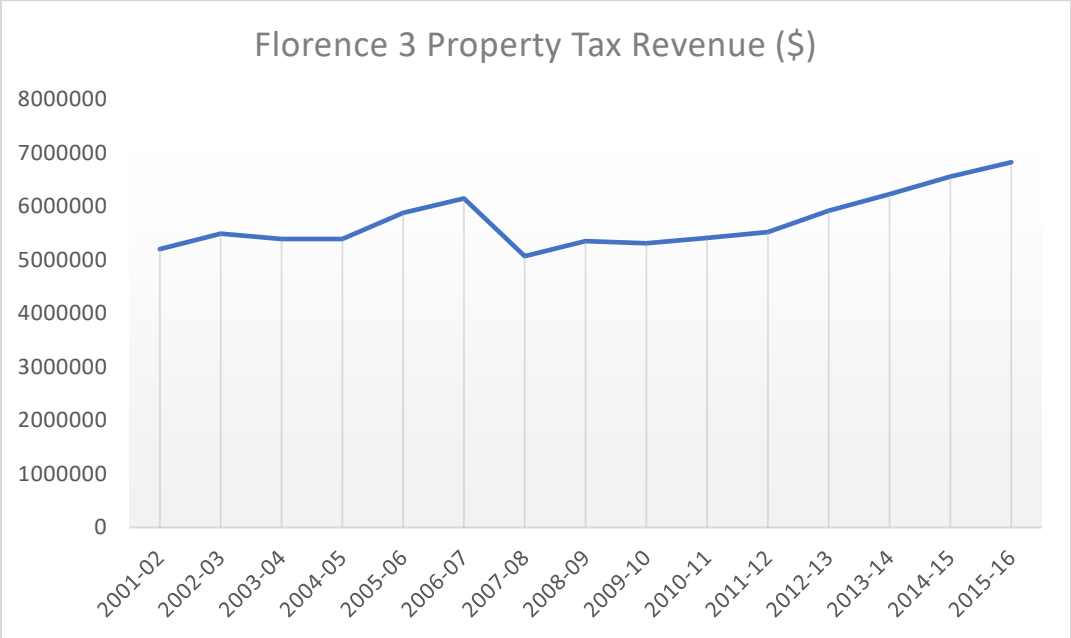
Note: Florence 2 data are unavailable for 2010-11

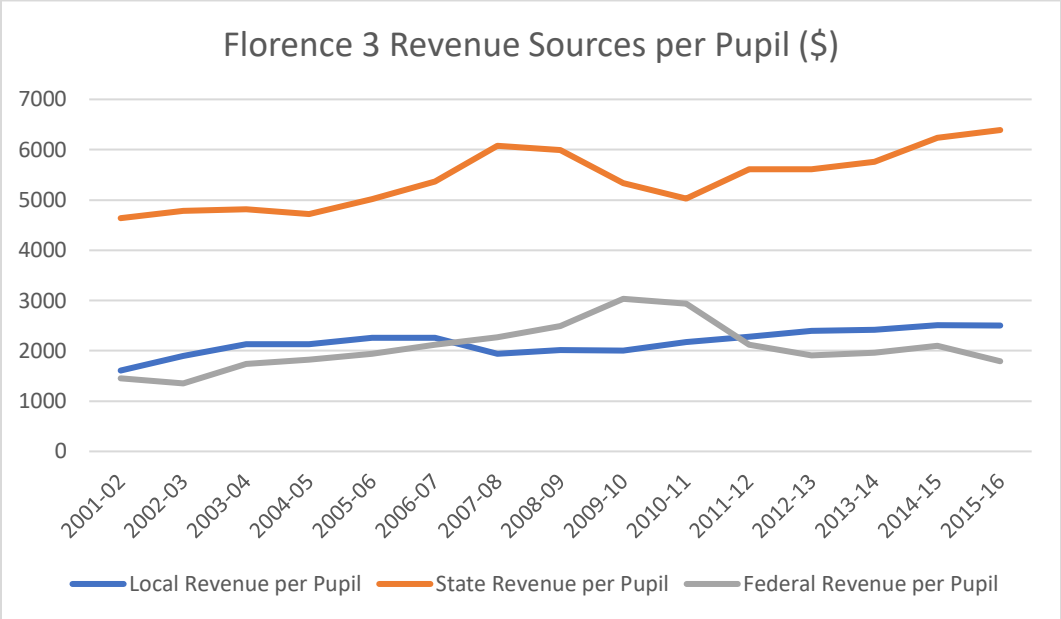


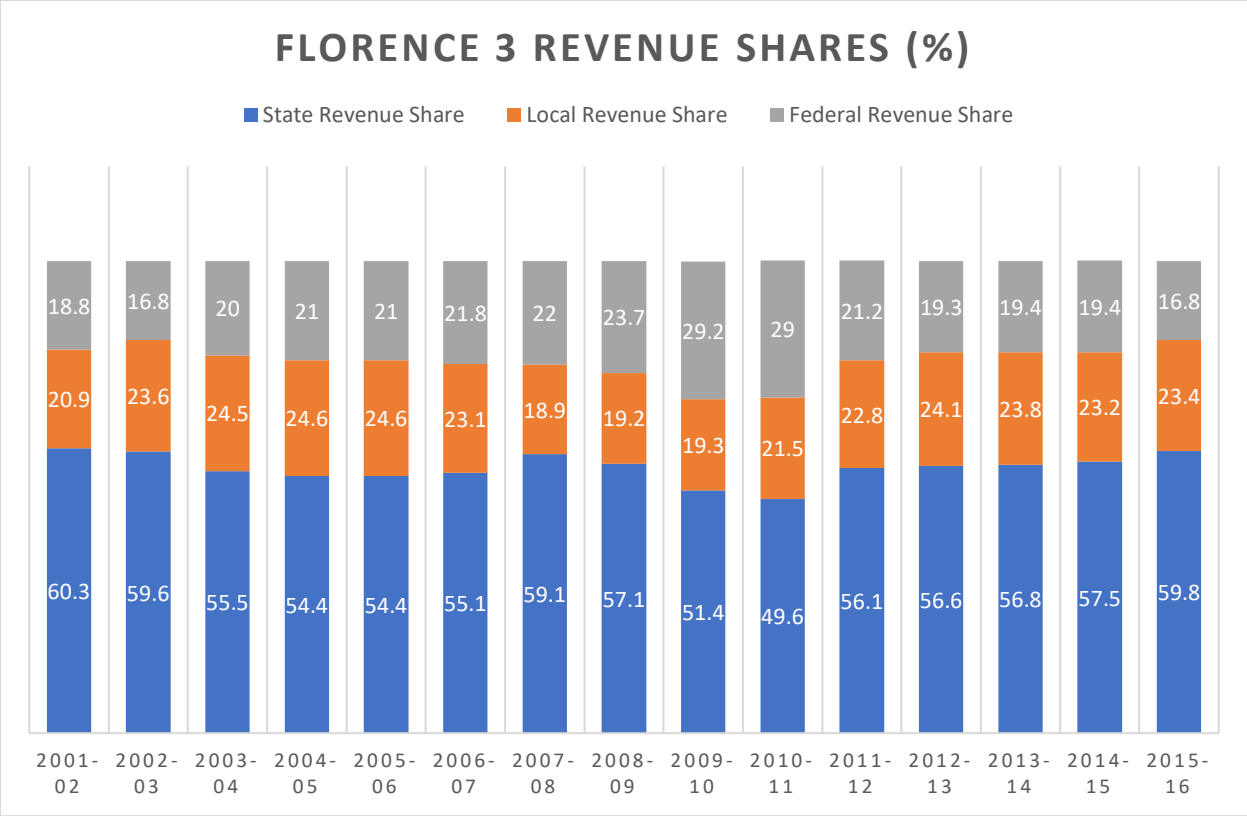

FLORENCE 2 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
24.8
22.3
52.9
10.1
42.5
47.4
11.9
41.1
47
15.1
28.8
56.1
12.6
33.1
54.3
10.5
33.9
55.5
10.5
30.7
58.8
12.4
30.1
57.5
18.1
28.6
53.3
12.7
24.4
62.9
13.3
23.9
62.8
13.5
23.9
62.6
12.5
26.5
61
12
22.6
65.4
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

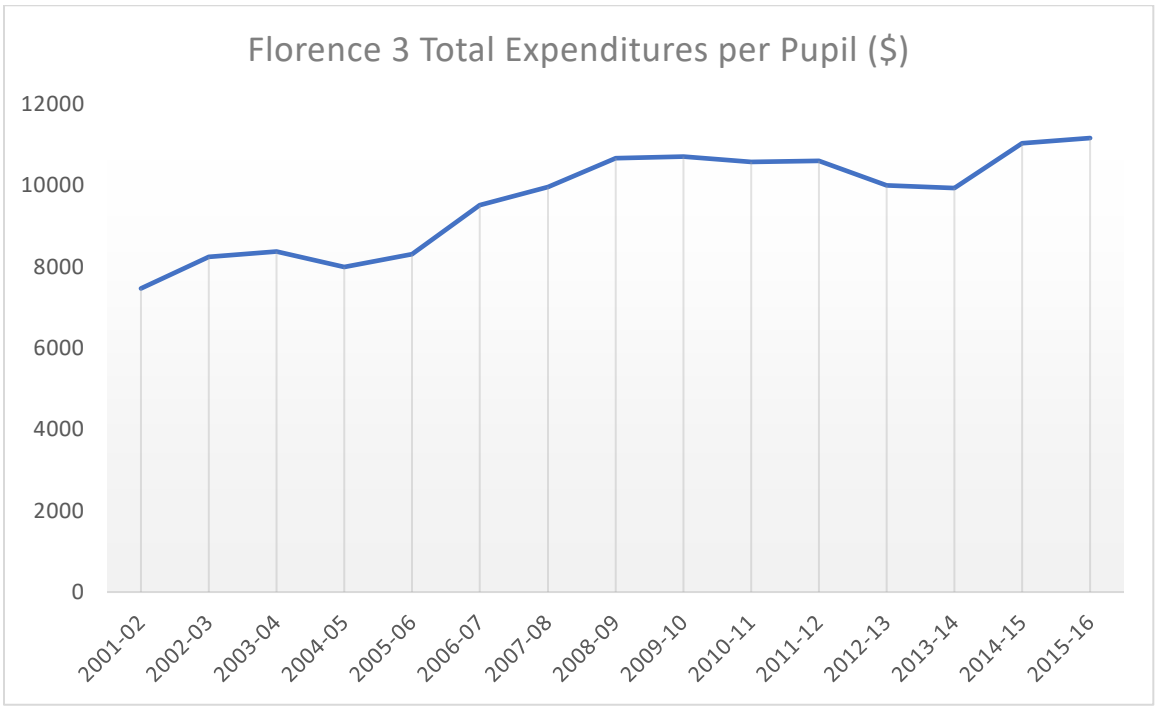

Florence 2 Total Expenditures per Pupil ($)
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A21-A24
Florence 3 District

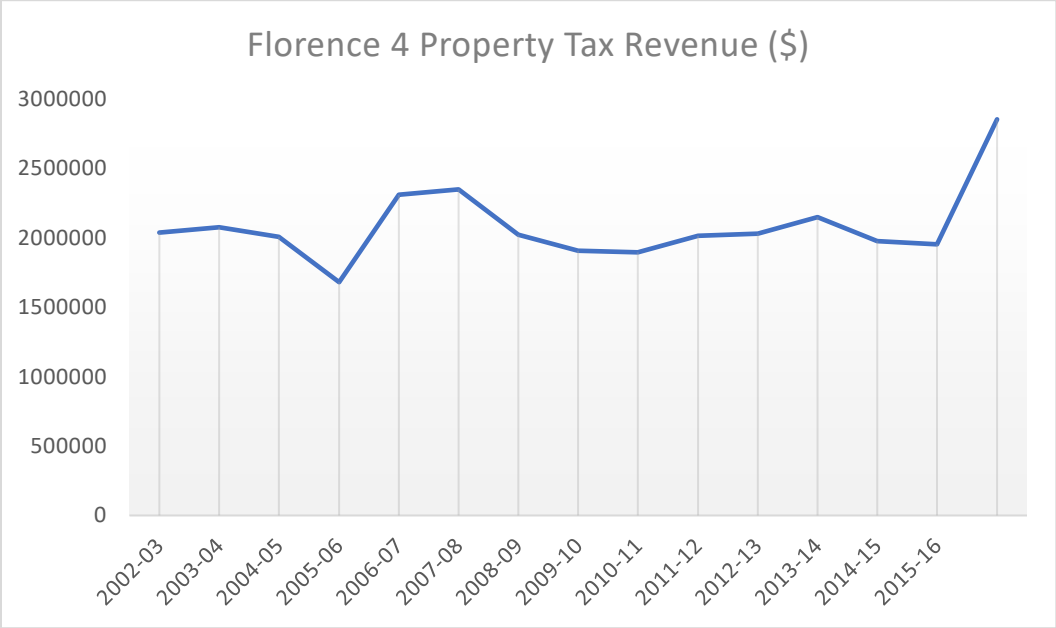


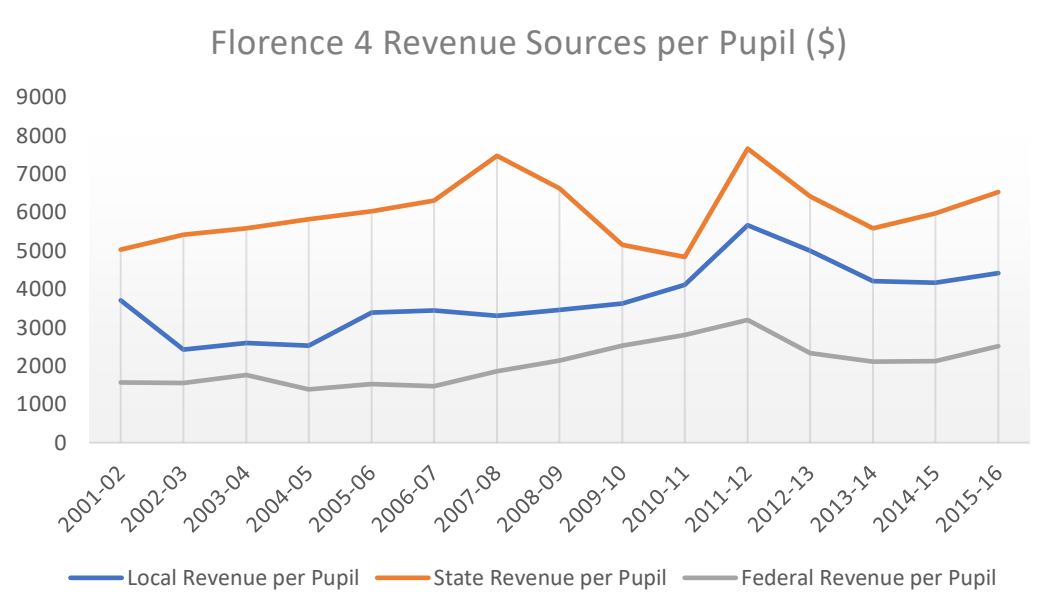


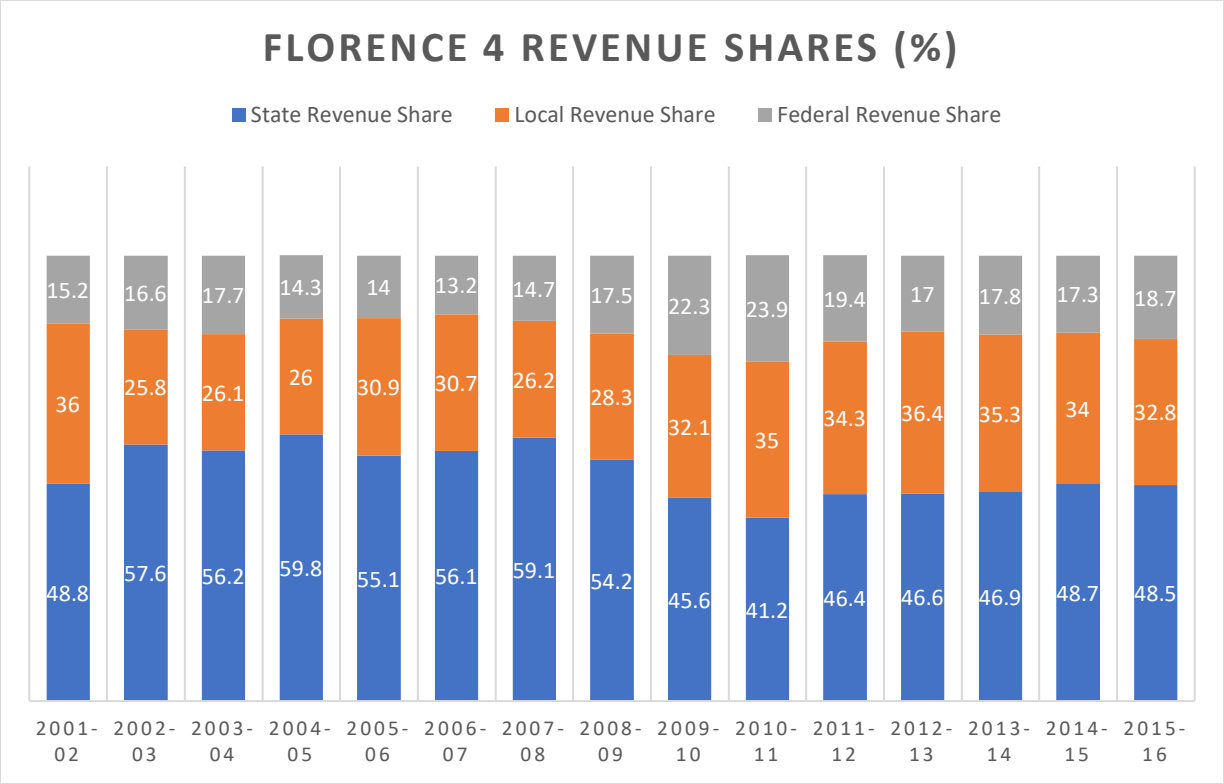

FLORENCE 3 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
18.8
20.9
60.3
16.8
23.6
59.6
20
24.5
55.5
21
24.6
54.4
21
24.6
54.4
21.8
23.1
55.1
22
18.9
59.1
23.7
19.2
57.1
29.2
19.3
51.4
29
21.5
49.6
21.2
22.8
56.1
19.3
24.1
56.6
19.4
23.8
56.8
19.4
23.2
57.5
16.8
23.4
59.8
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

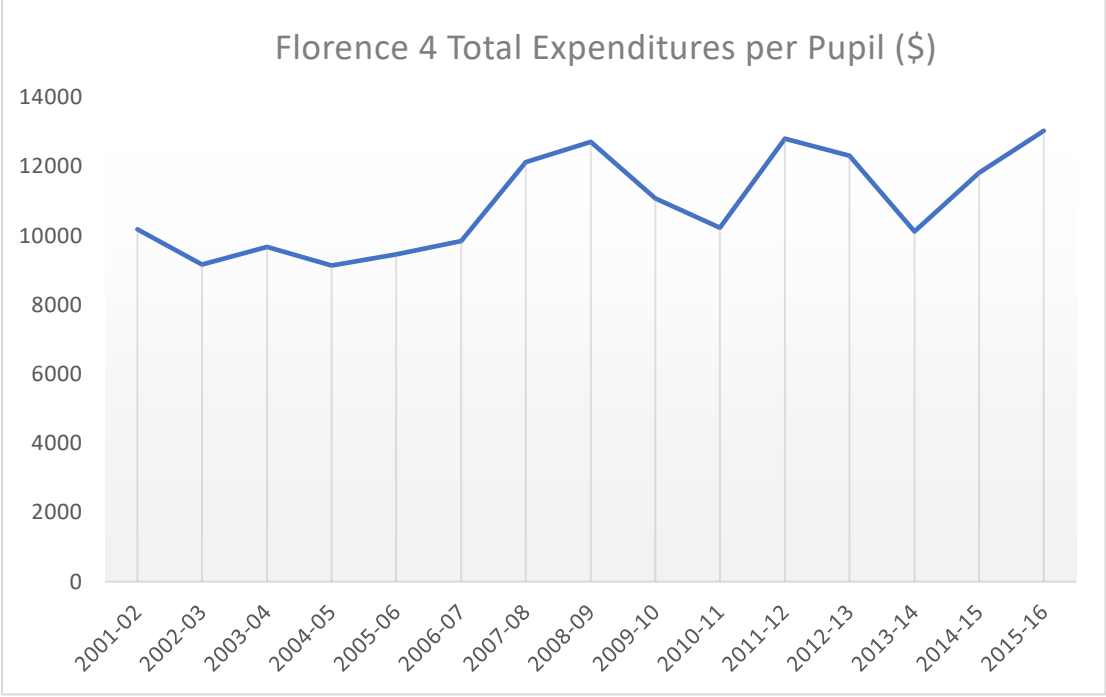

Florence 3 Total Expenditures per Pupil ($)
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A25-A28
Florence 4 District

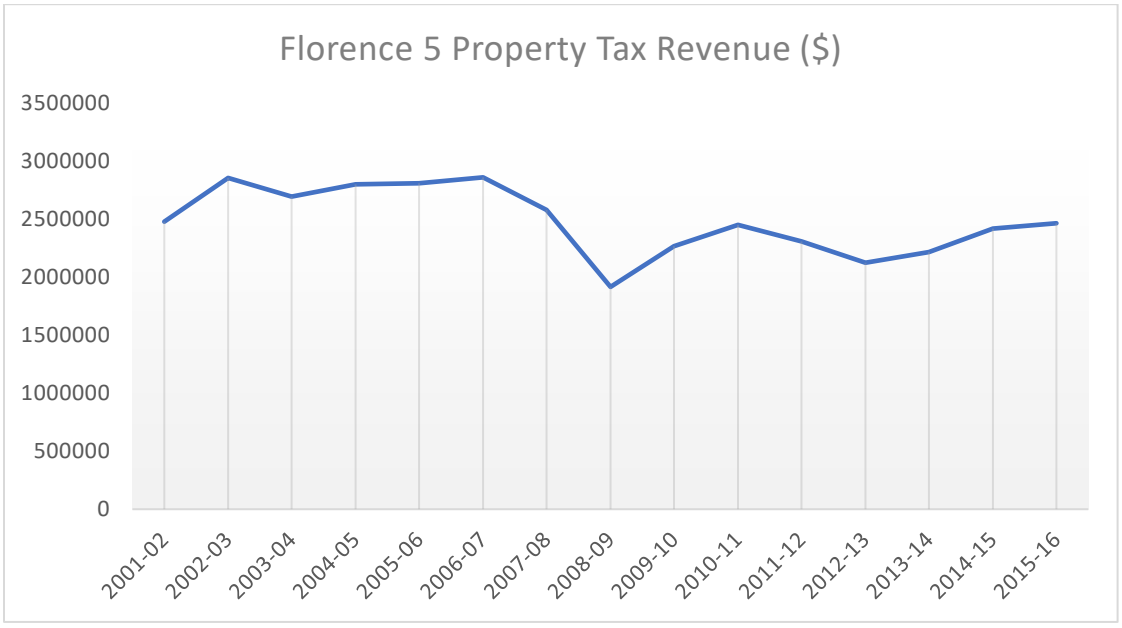


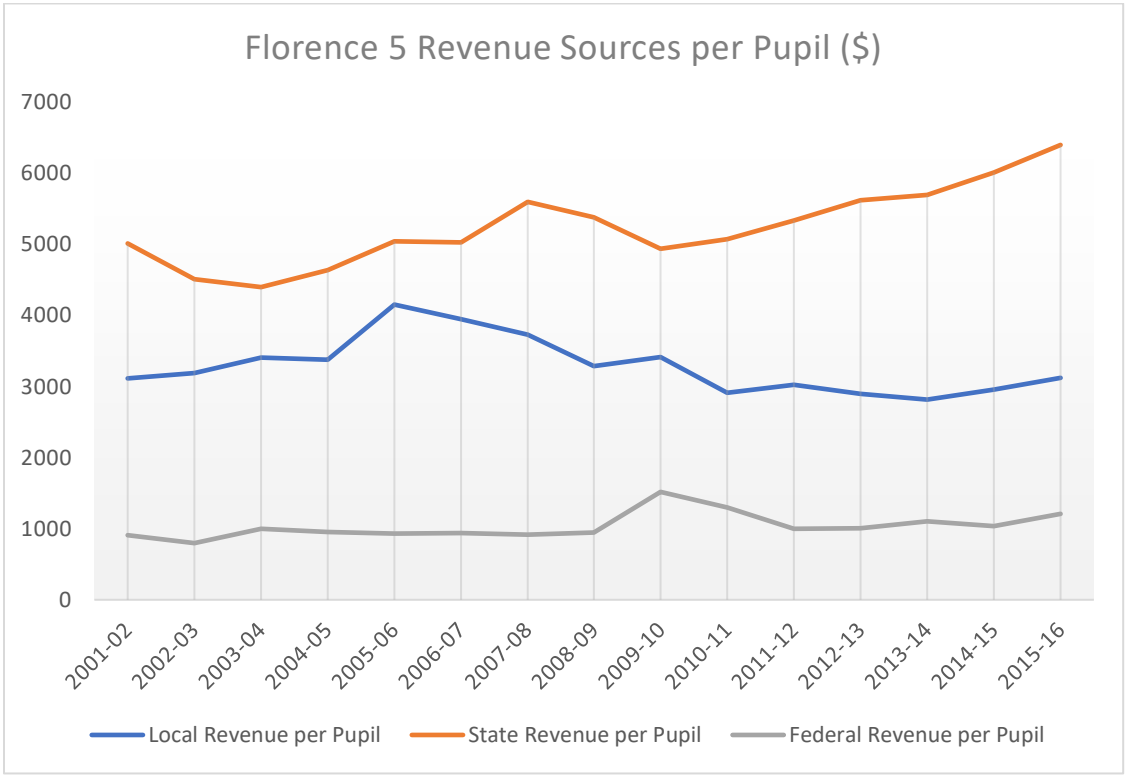


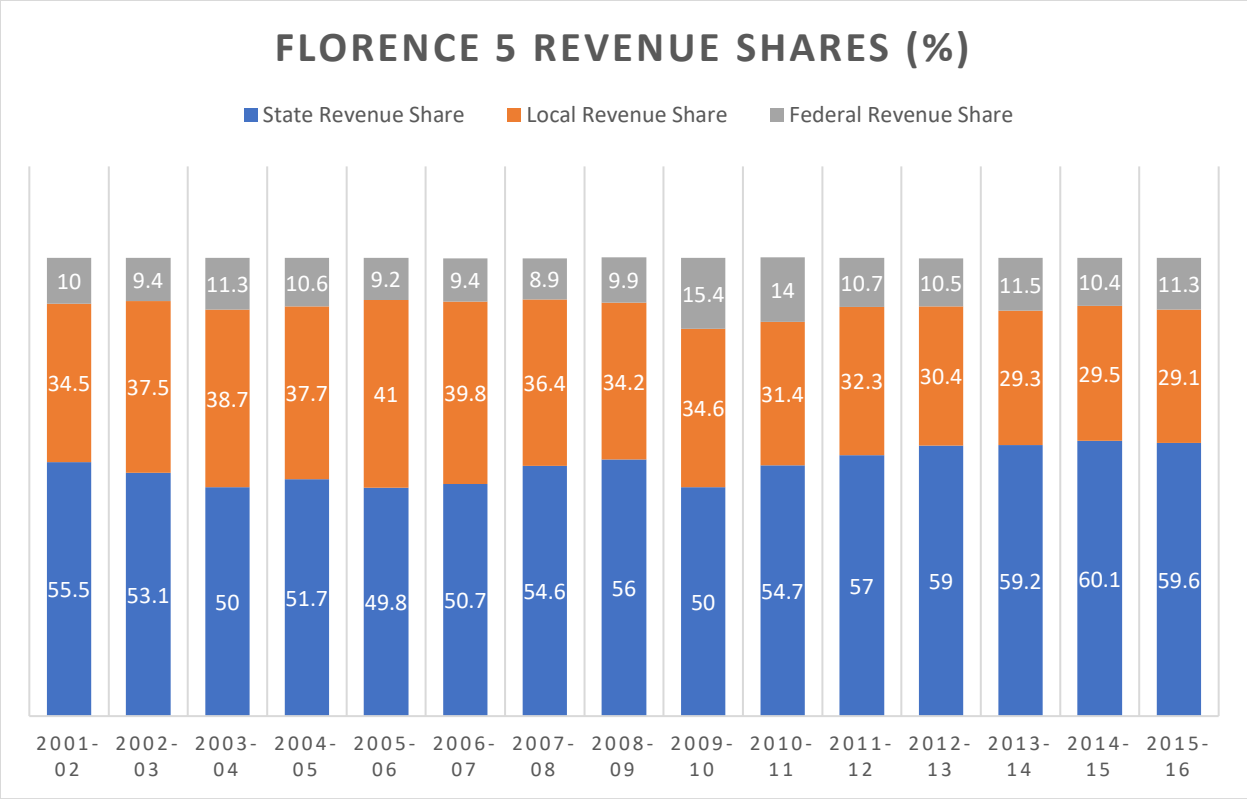

FLORENCE 4 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
15.2
36
48.8
16.6
25.8
57.6
17.7
26.1
56.2
14.3
26
59.8
14
30.9
55.1
13.2
30.7
56.1
14.7
26.2
59.1
17.5
28.3
54.2
22.3
32.1
45.6
23.9
35
41.2
19.4
34.3
46.4
17
36.4
46.6
17.8
35.3
46.9
17.3
34
48.7
18.7
32.8
48.5
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

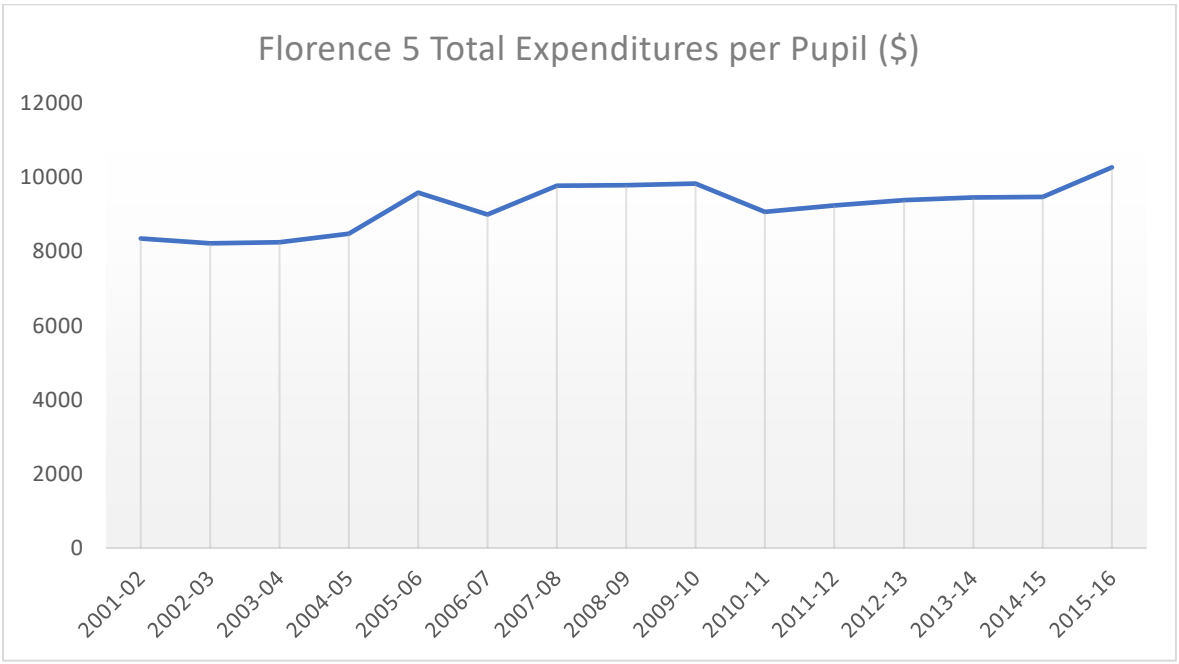

Florence 4 Total Expenditures per Pupil ($)
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A29-A32
Florence 5 District

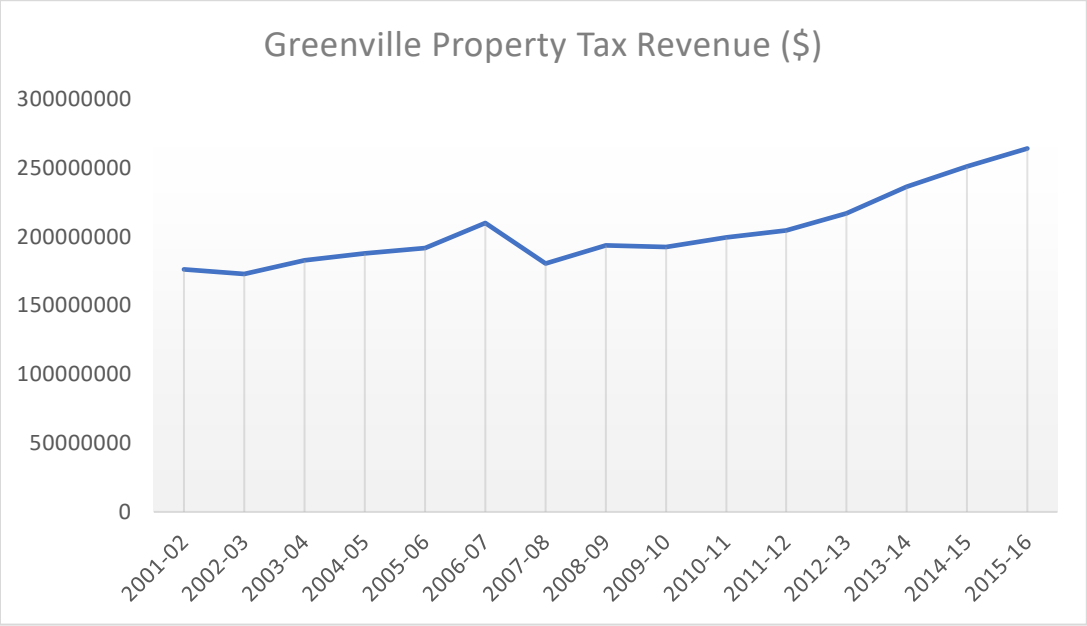


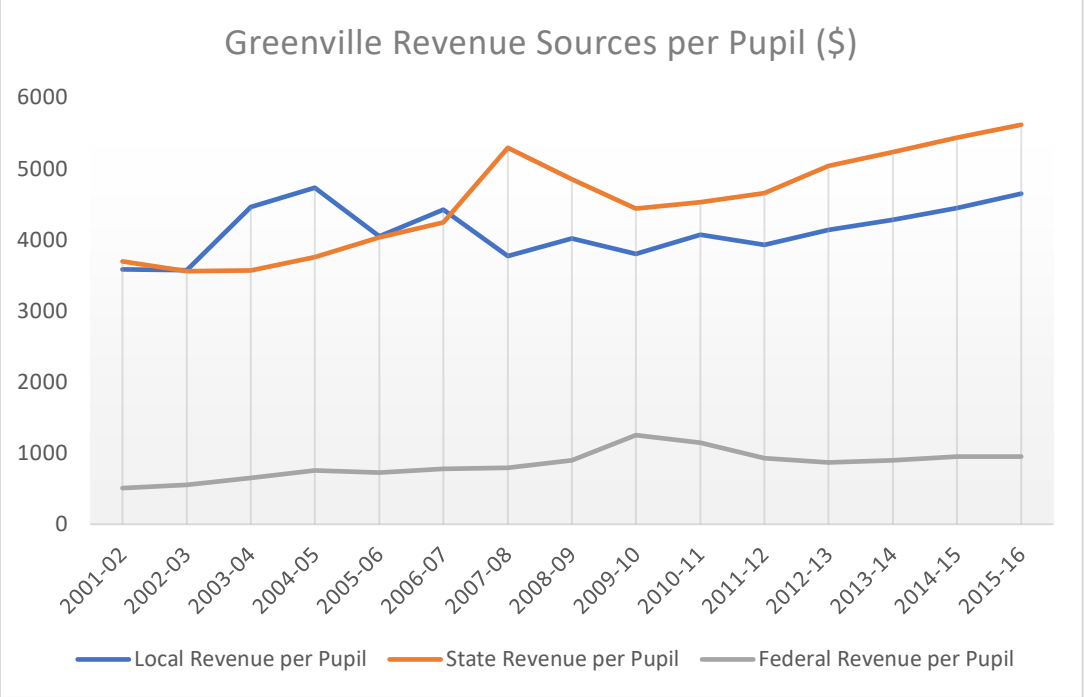


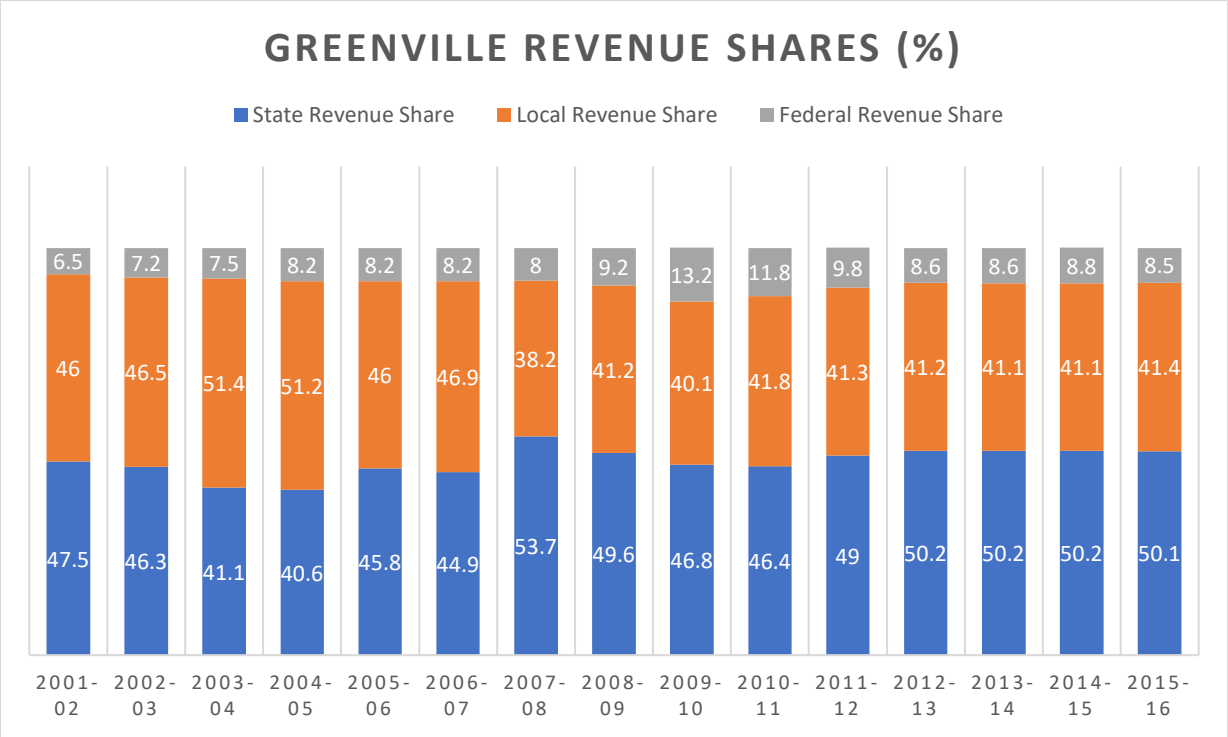

FLORENCE 5 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
10
34.5
55.5
9.4
37.5
53.1
11.3
38.7
50
10.6
37.7
51.7
9.2
41
49.8
9.4
39.8
50.7
8.9
36.4
54.6
9.9
34.2
56
15.4
34.6
50
14
31.4
54.7
10.7
32.3
57
10.5
30.4
59
11.5
29.3
59.2
10.4
29.5
60.1
11.3
29.1
59.6
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

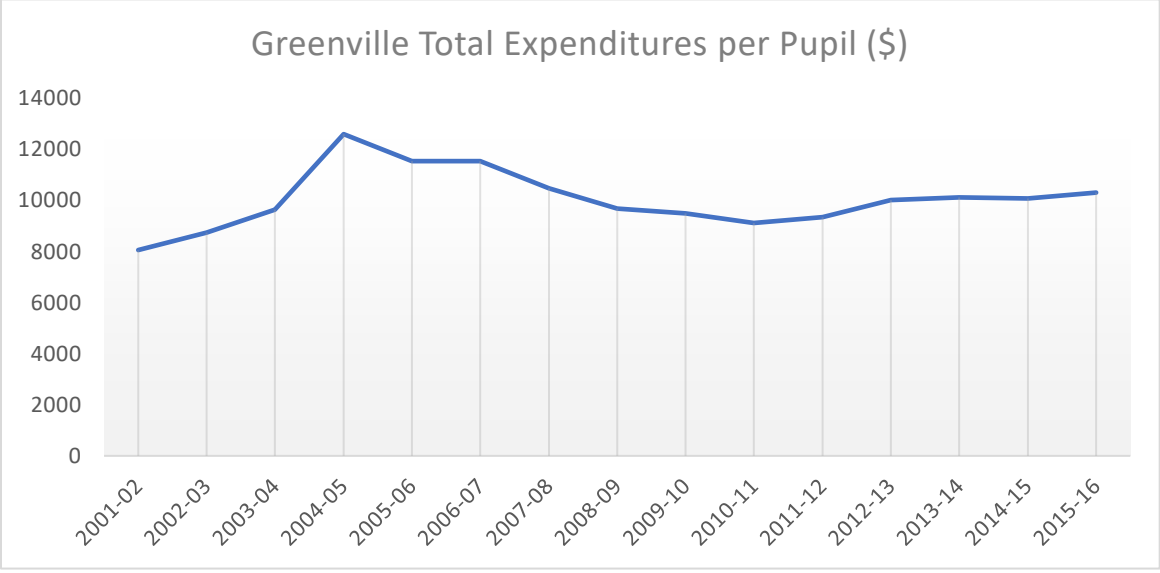

Florence 5 Total Expenditures per Pupil ($)
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A33-A36
Greenville District

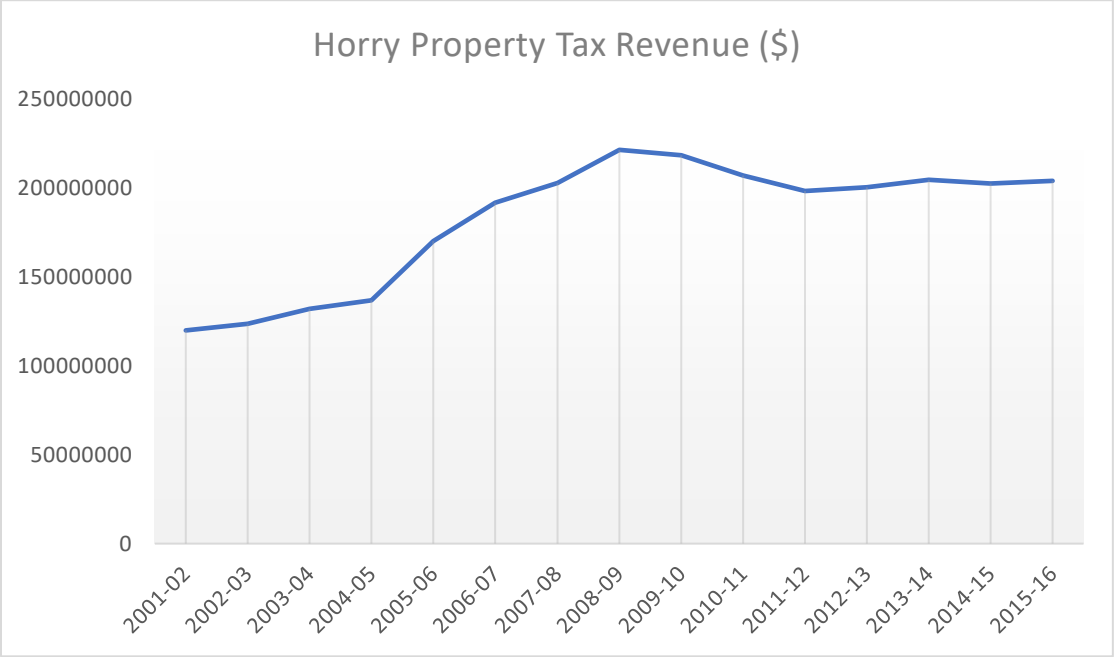


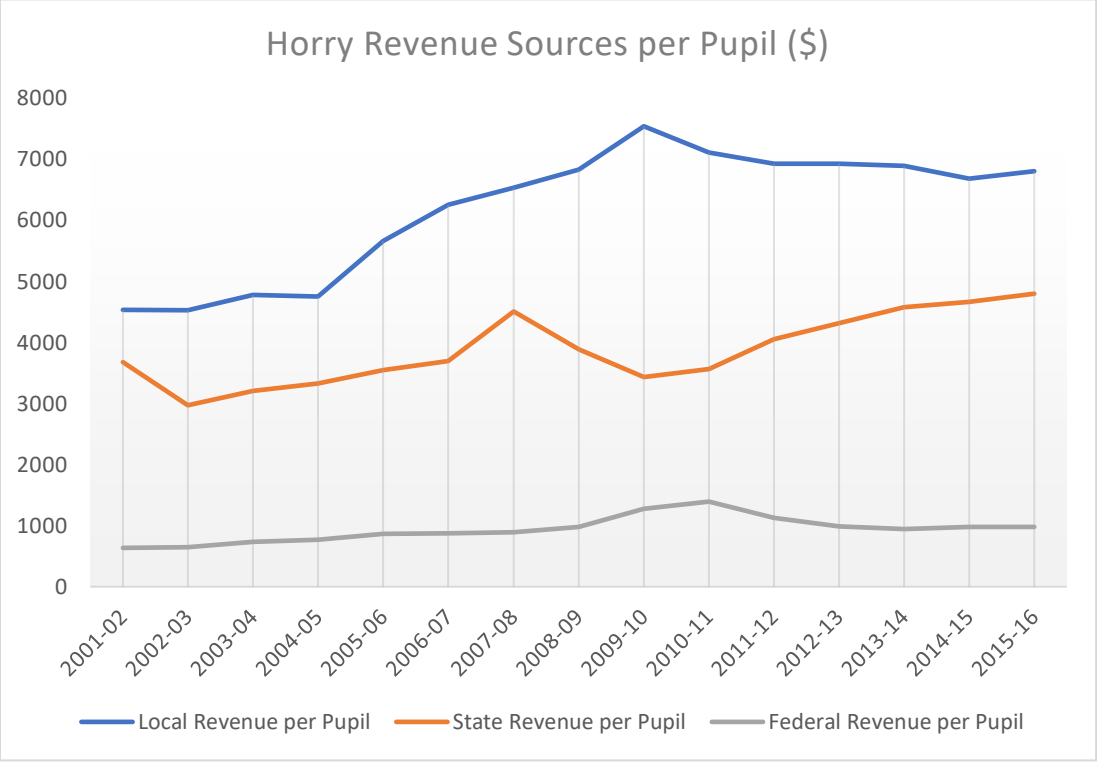


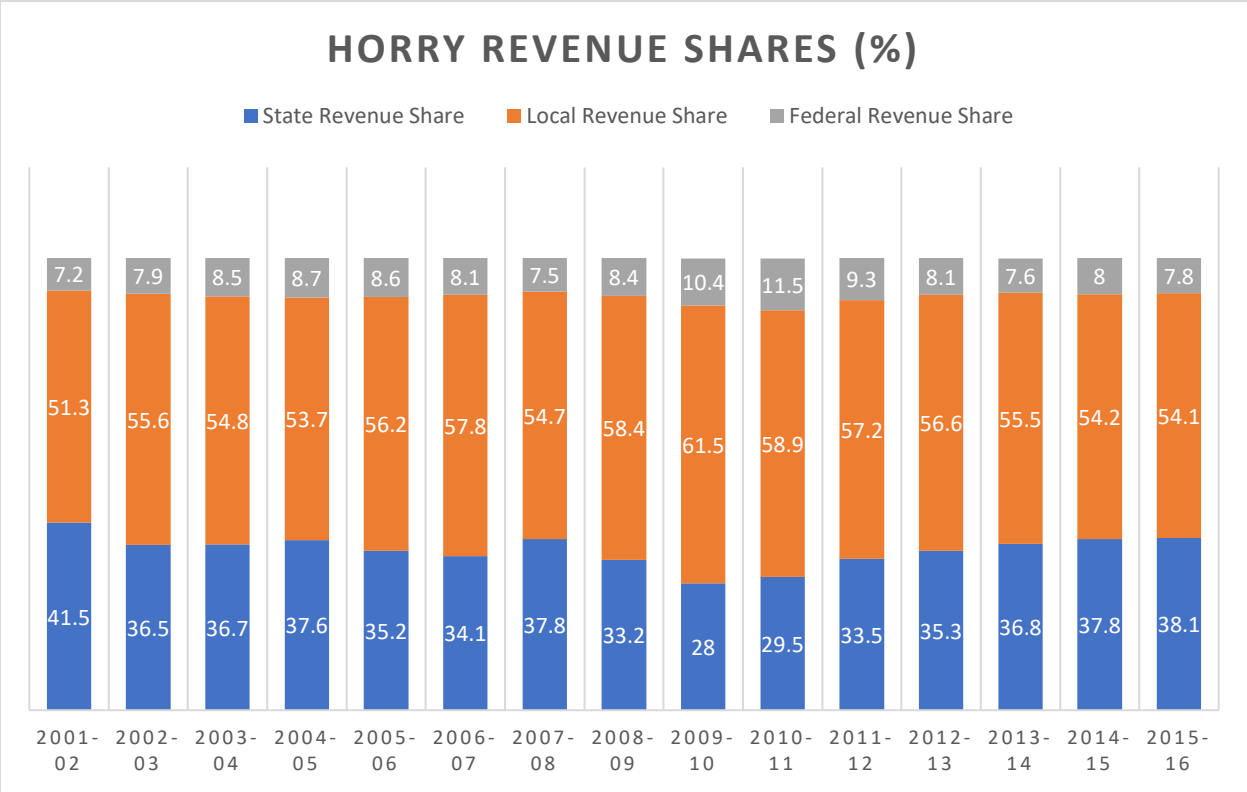

GREENVILLE REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
6.5
7.2
7.5
8.2
8.2
8.2
8
9.2
13.2
11.8
9.8
8.6
8.6
8.8
8.5
46
46.5
51.4
51.2
46
46.9
38.2
41.2
40.1
41.8
41.3
41.2
41.1
41.1
41.4
47.5
46.3
41.1
40.6
45.8
44.9
53.7
49.6
46.8
46.4
49
50.2
50.2
50.2
50.1
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

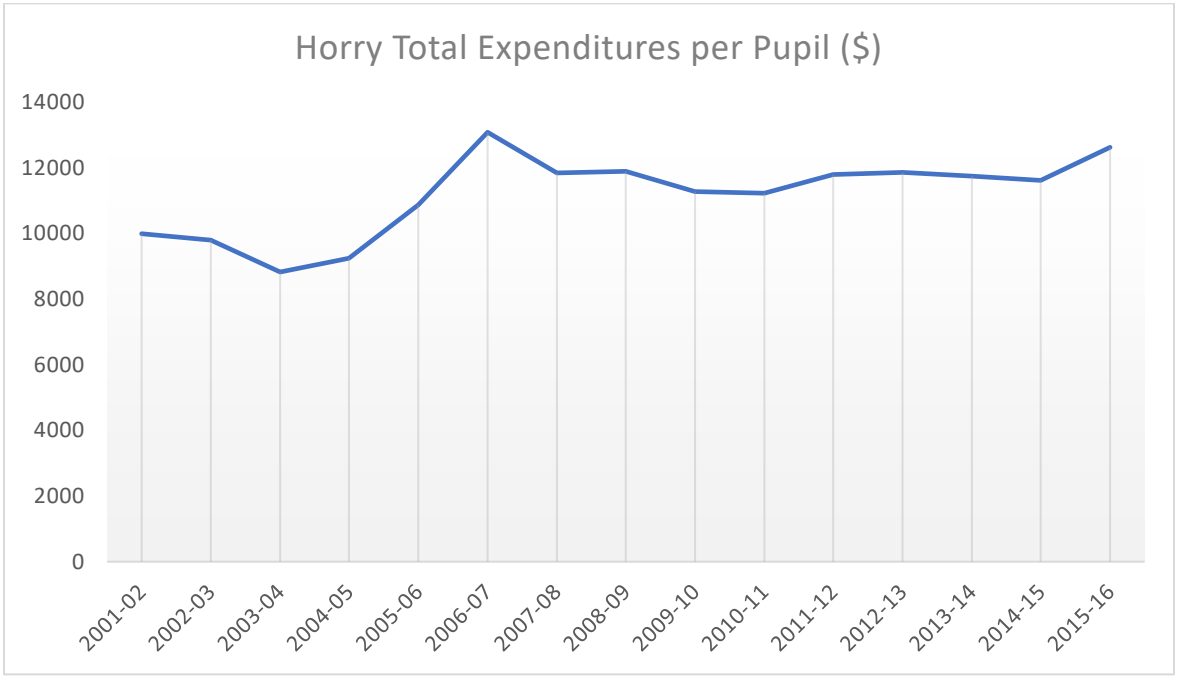

Greenville Total Expenditures per Pupil ($)
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A37-A40
Horry District

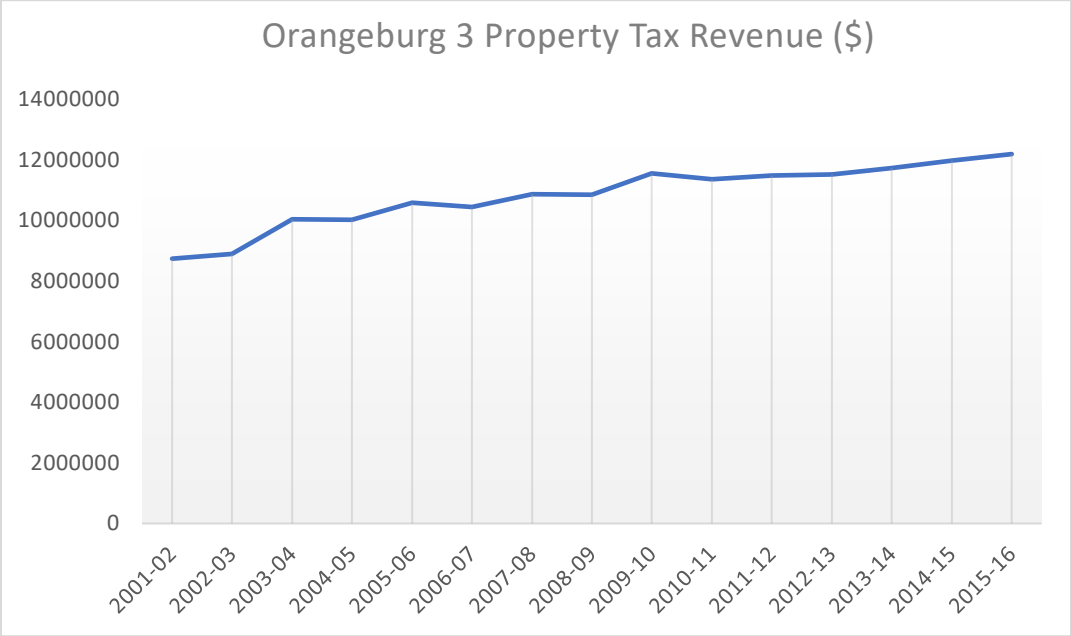


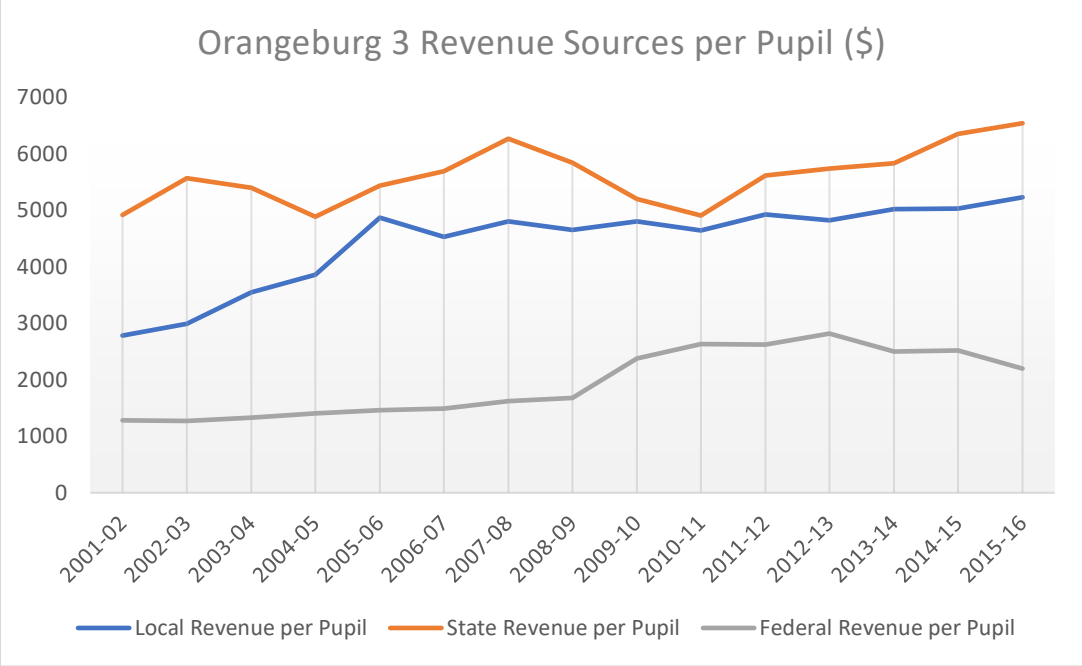


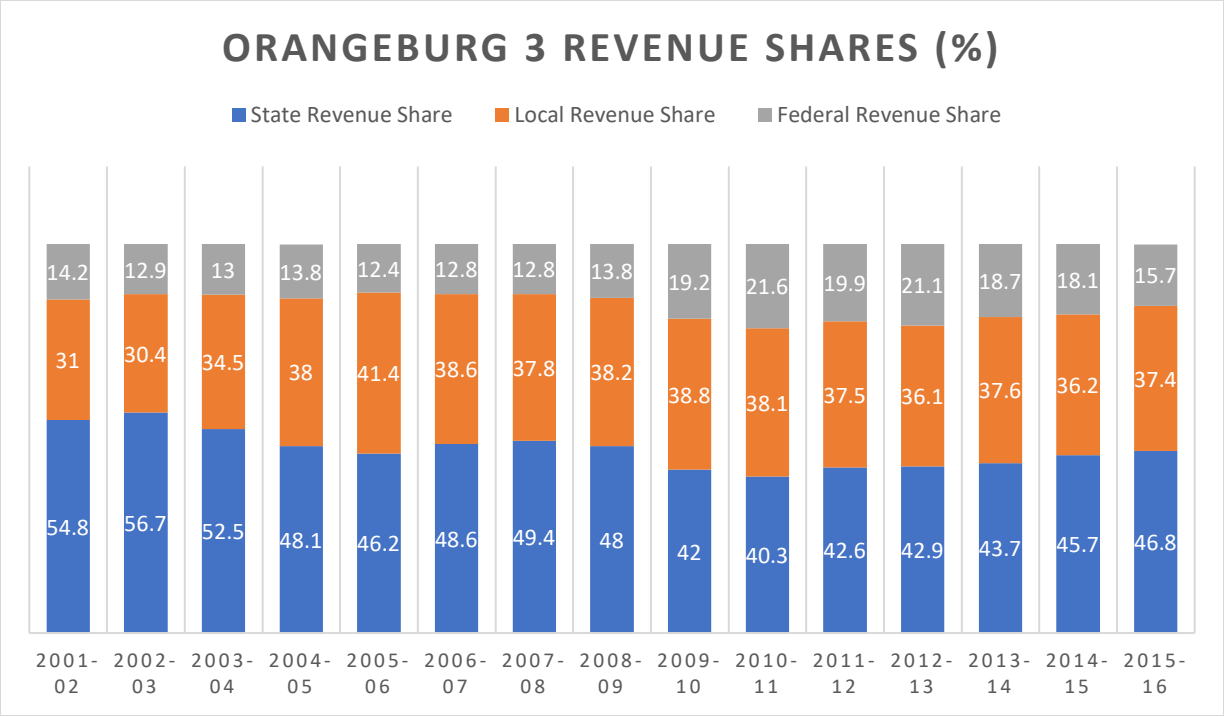

HORRY REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
7.2
51.3
41.5
7.9
55.6
36.5
8.5
54.8
36.7
8.7
53.7
37.6
8.6
56.2
35.2
8.1
57.8
34.1
7.5
54.7
37.8
8.4
58.4
33.2
10.4
61.5
28
11.5
58.9
29.5
9.3
57.2
33.5
8.1
56.6
35.3
7.6
55.5
36.8
8
54.2
37.8
7.8
54.1
38.1
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

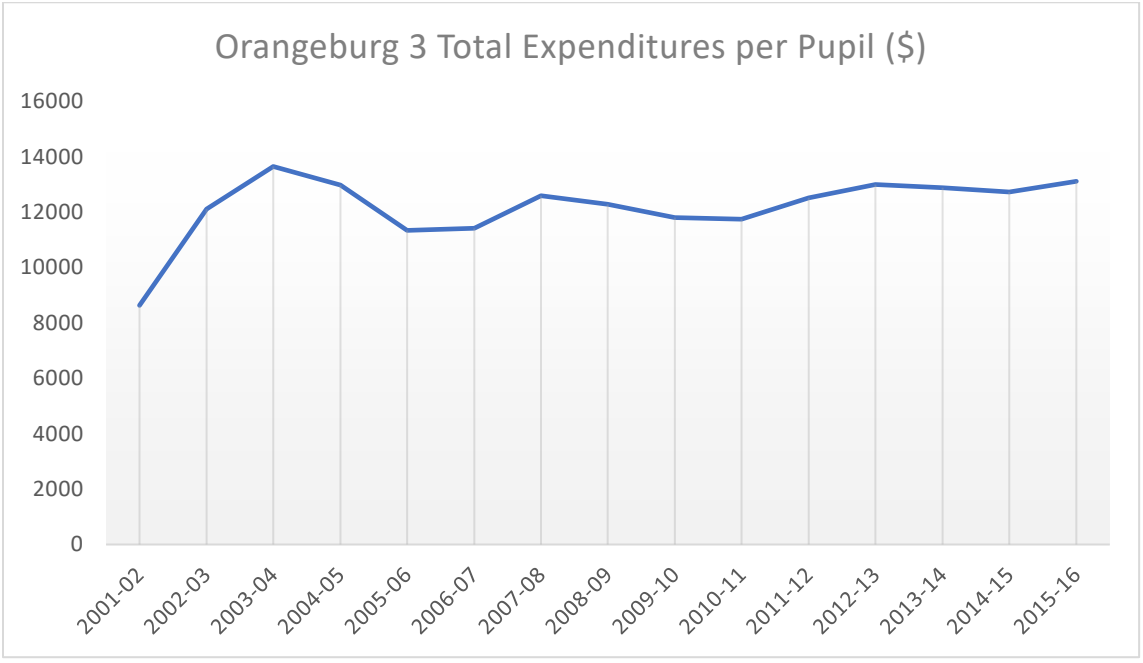

Horry Total Expenditures per Pupil ($)
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A41-A44
Orangeburg 3 District

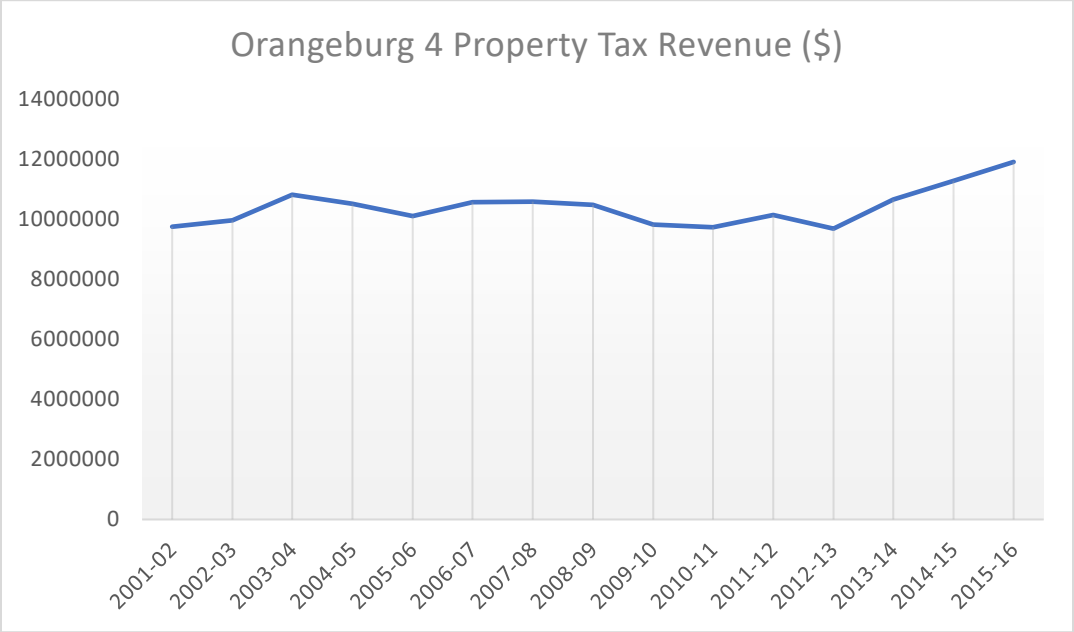


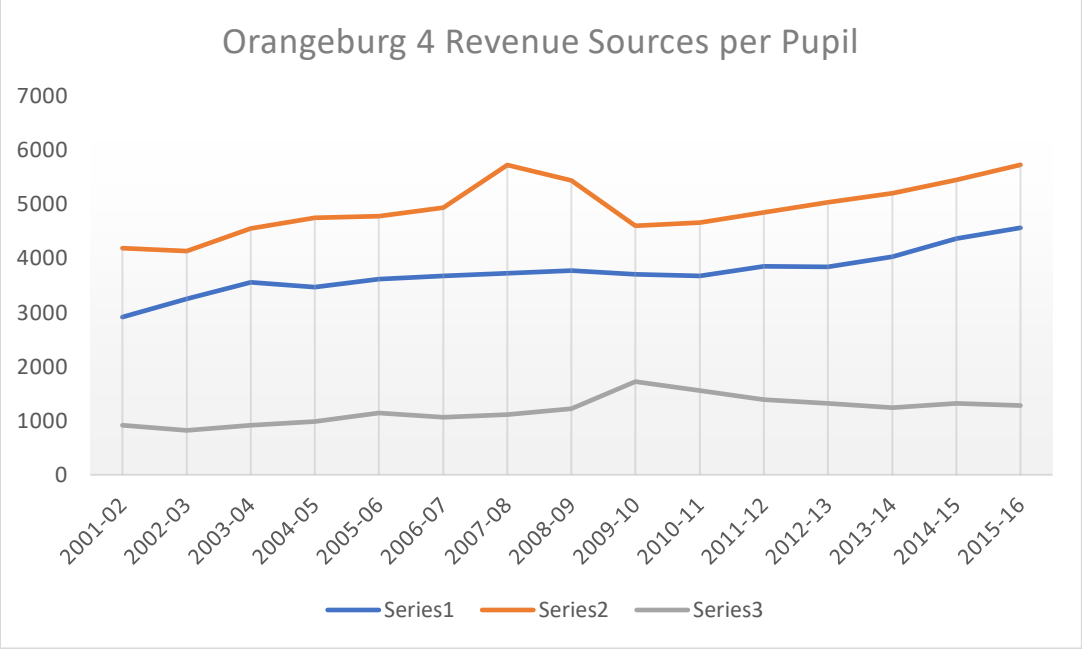


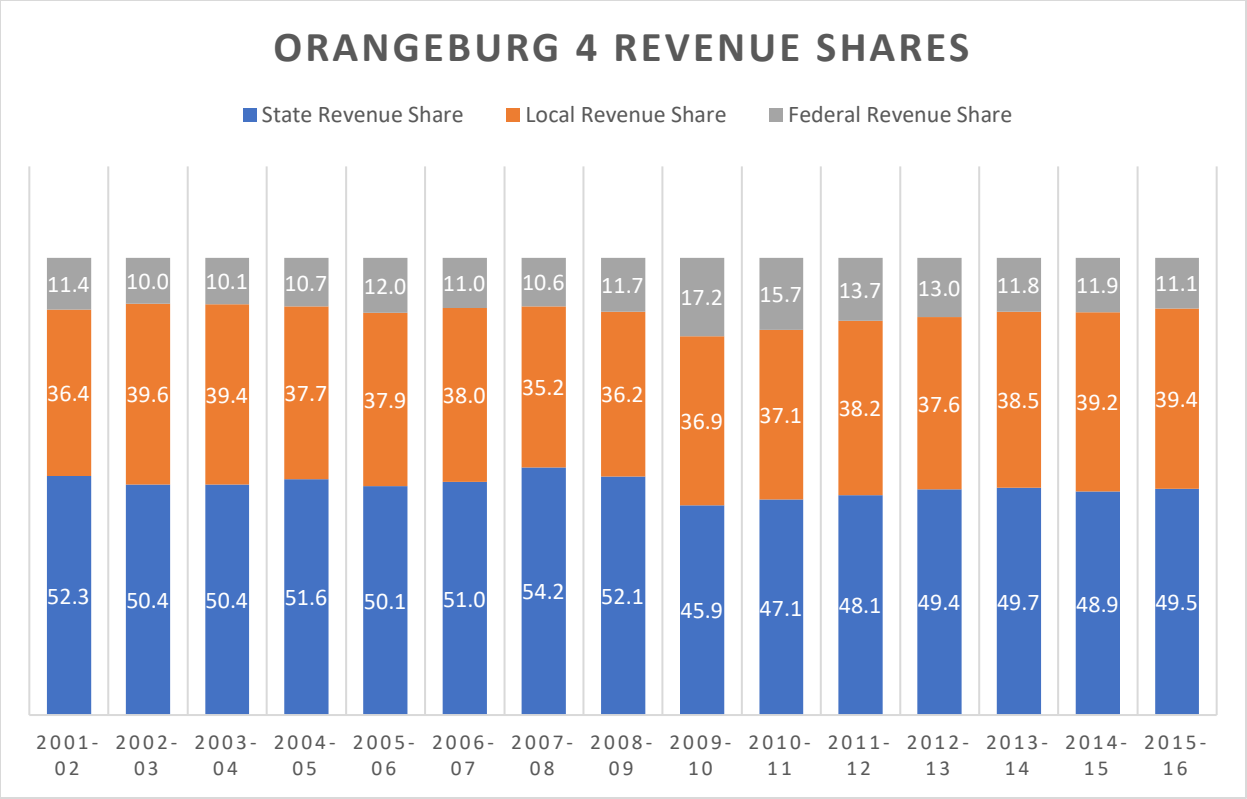

ORANGEBURG 3 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
14.2
31
54.8
12.9
30.4
56.7
13
34.5
52.5
13.8
38
48.1
12.4
41.4
46.2
12.8
38.6
48.6
12.8
37.8
49.4
13.8
38.2
48
19.2
38.8
42
21.6
38.1
40.3
19.9
37.5
42.6
21.1
36.1
42.9
18.7
37.6
43.7
18.1
36.2
45.7
15.7
37.4
46.8
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

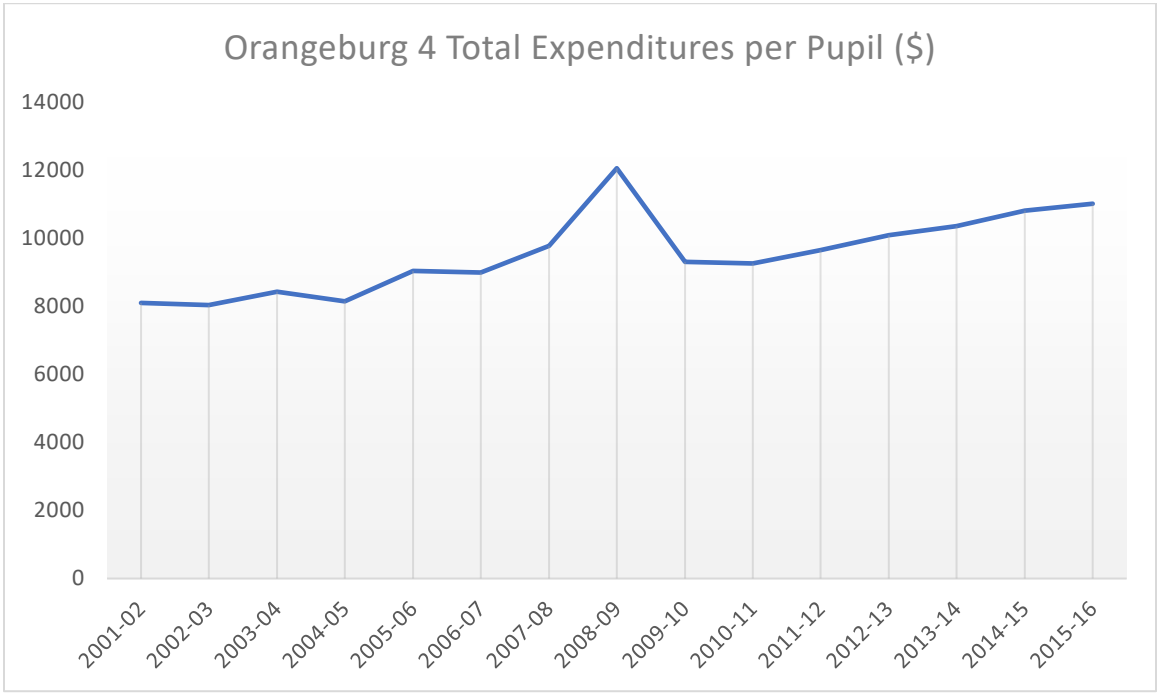

Orangeburg 3 Total Expenditures per Pupil ($)
16000
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A45-A48
Orangeburg 4 District

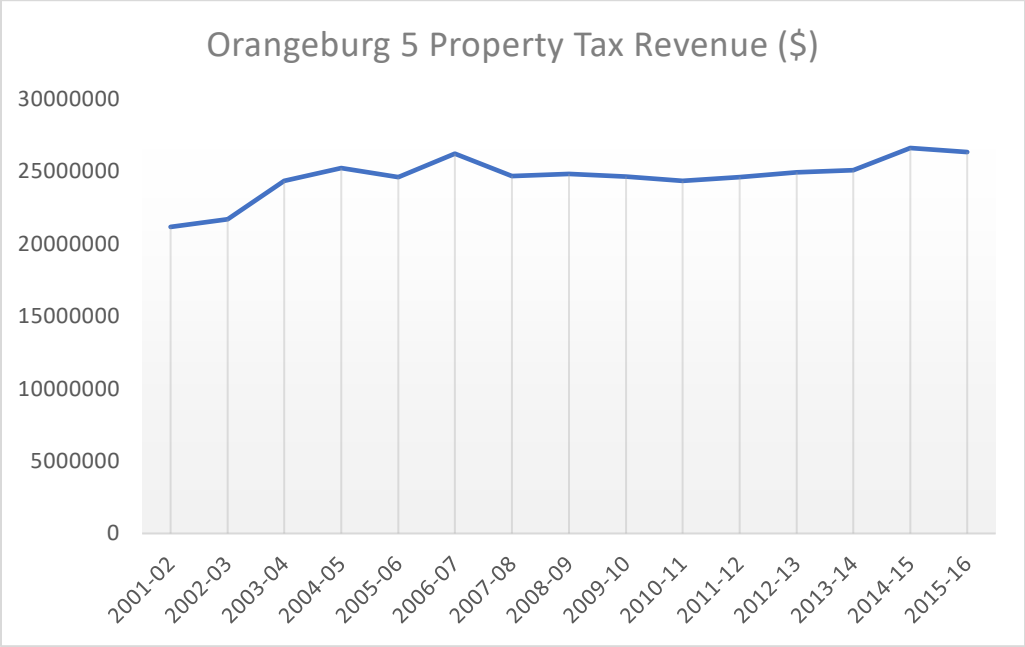


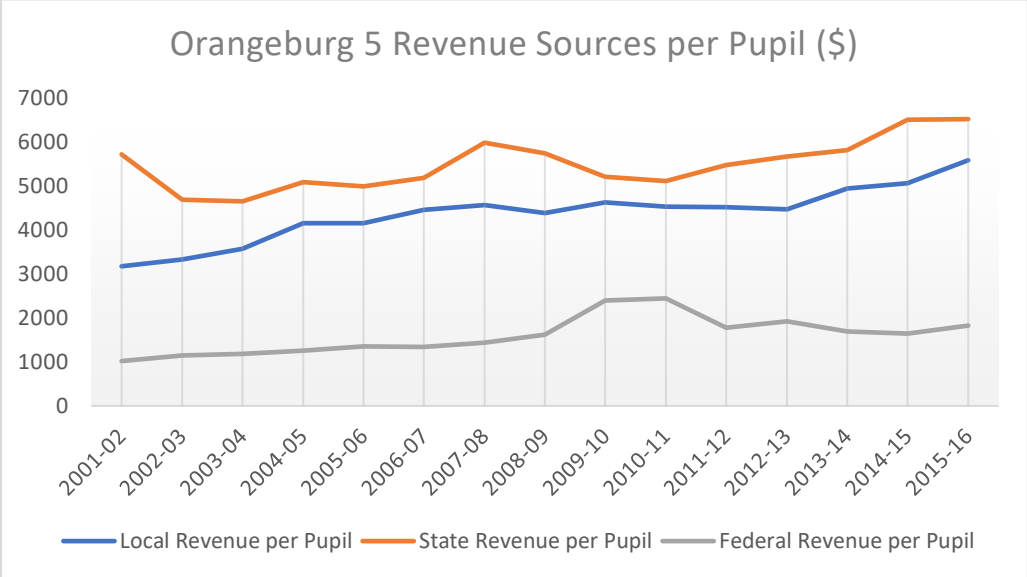


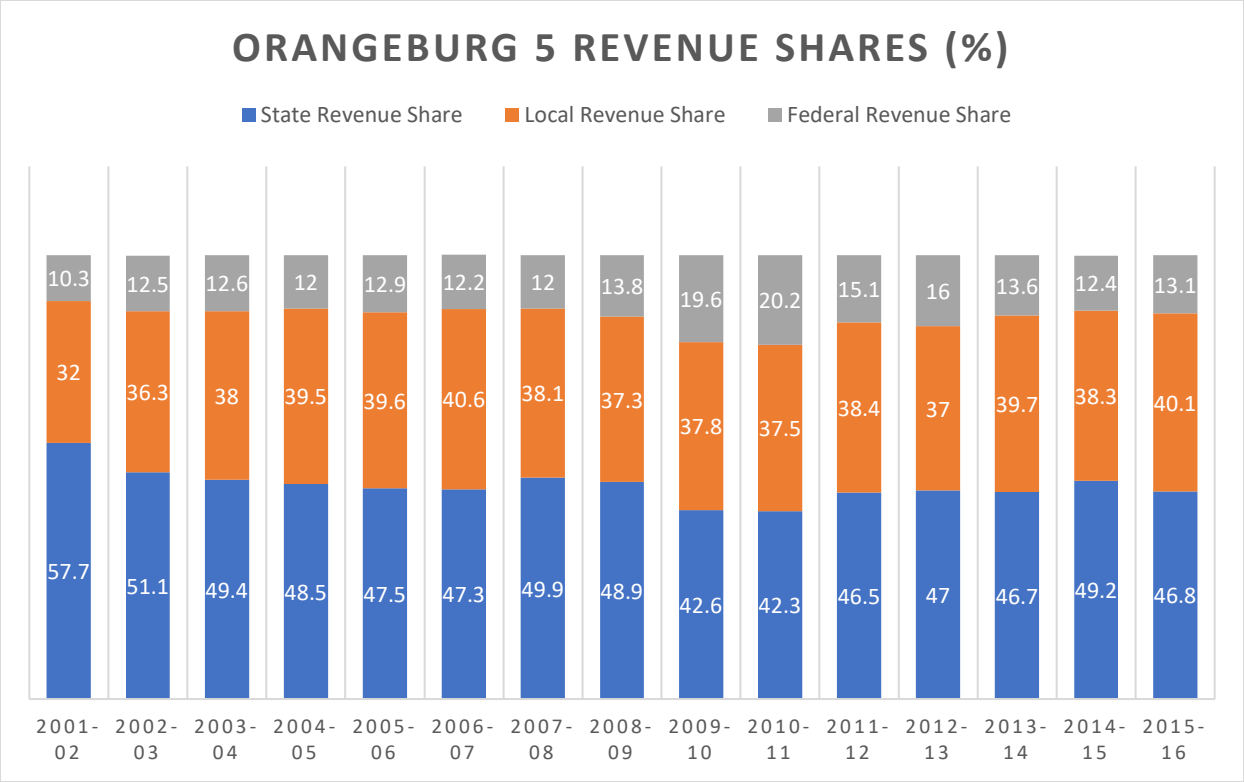

ORANGEBURG 4 REVENUE SHARES
State Revenue Share
Local Revenue Share
Federal Revenue Share
11.4 10.0 10.1 10.7 12.0 11.0 10.6 11.7 17.2 15.7 13.7 13.0 11.8 11.9 11.1
36.4 39.6 39.4 37.7 37.9 38.0 35.2 36.2 36.9 37.1 38.2 37.6 38.5 39.2 39.4
52.3 50.4 50.4 51.6 50.1 51.0 54.2 52.1 45.9 47.1 48.1 49.4 49.7 48.9 49.5
2001-02 2002-03 2003-04 2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 2015-16

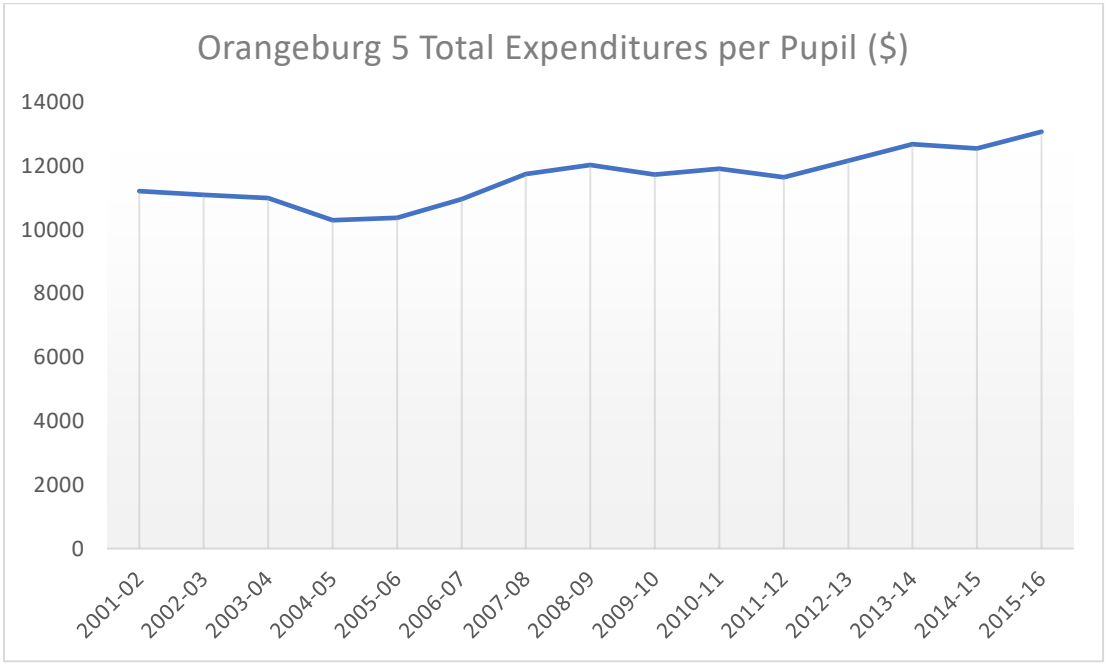

Orangeburg 4 Total Expenditures per Pupil ($)
14000
12000
10000
8000
6000
4000
2000
0
2001-02 2002-03 2003-04 2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 2015-16

Figures A49-A52
Orangeburg 5 District

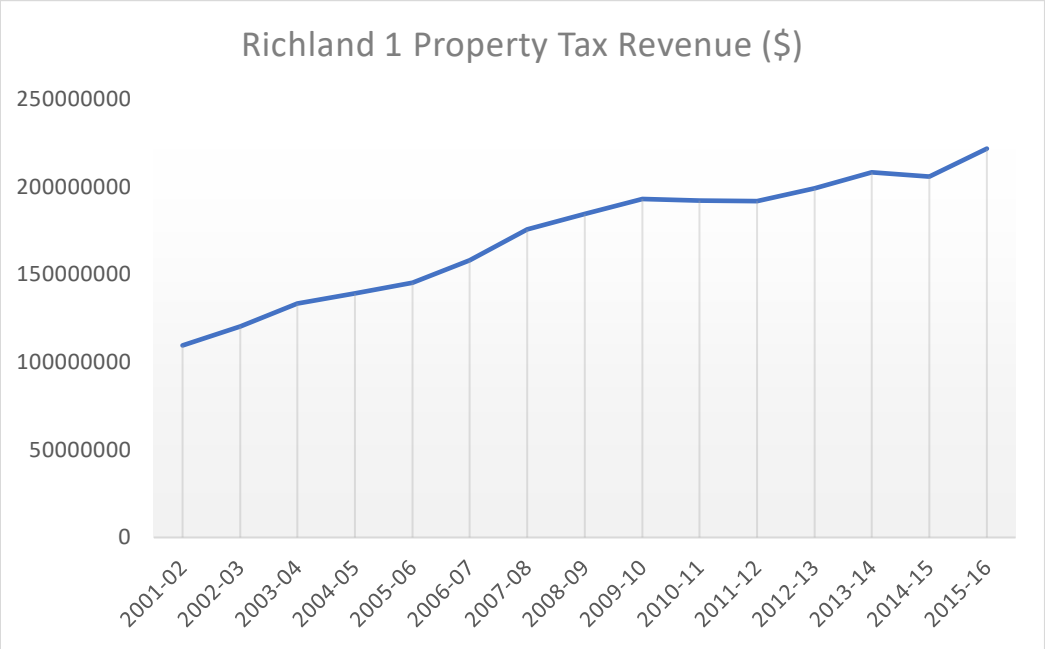


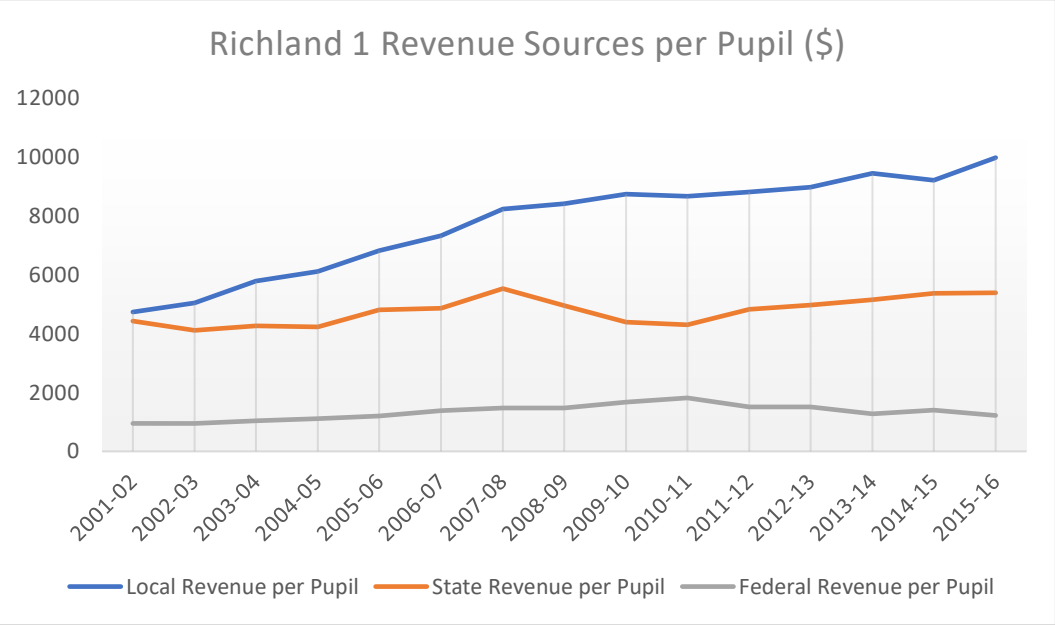


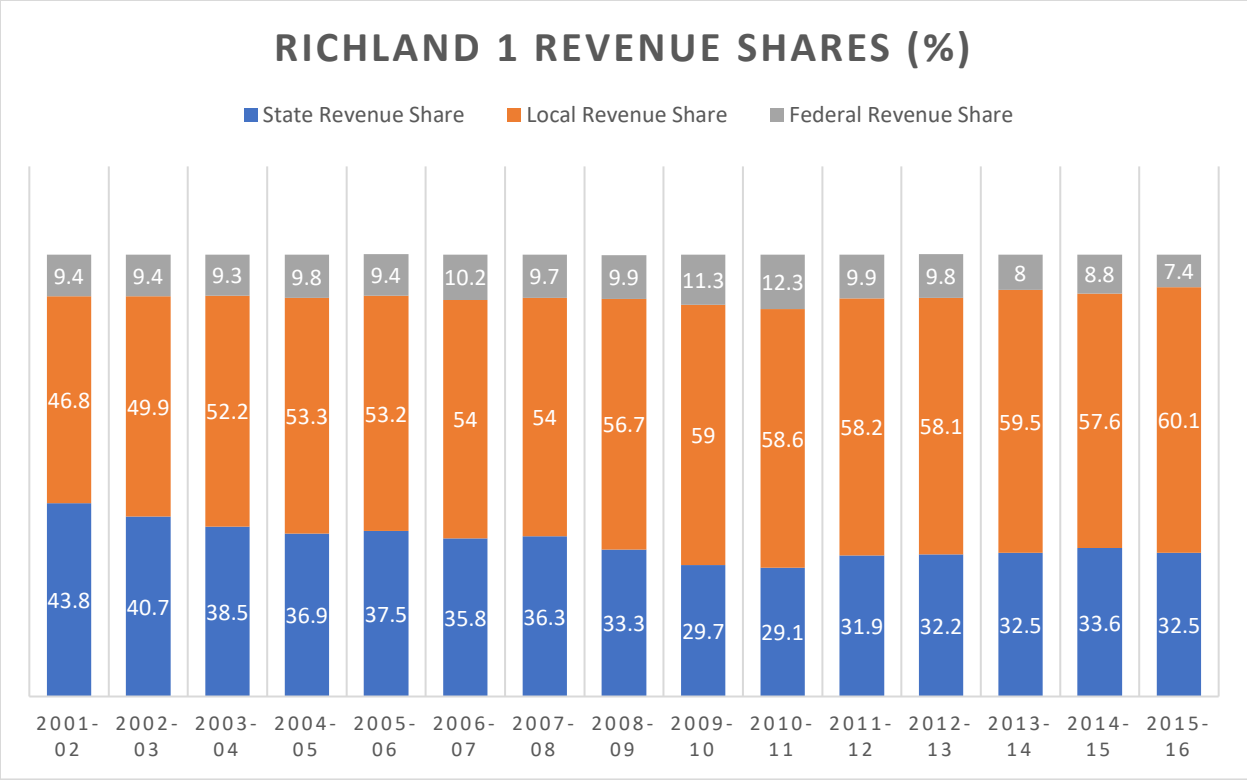

ORANGEBURG 5 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
10.3
32
57.7
12.5
36.3
51.1
12.6
38
49.4
12
39.5
48.5
12.9
39.6
47.5
12.2
40.6
47.3
12
38.1
49.9
13.8
37.3
48.9
19.6
37.8
42.6
20.2
37.5
42.3
15.1
38.4
46.5
16
37
47
13.6
39.7
46.7
12.4
38.3
49.2
13.1
40.1
46.8
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

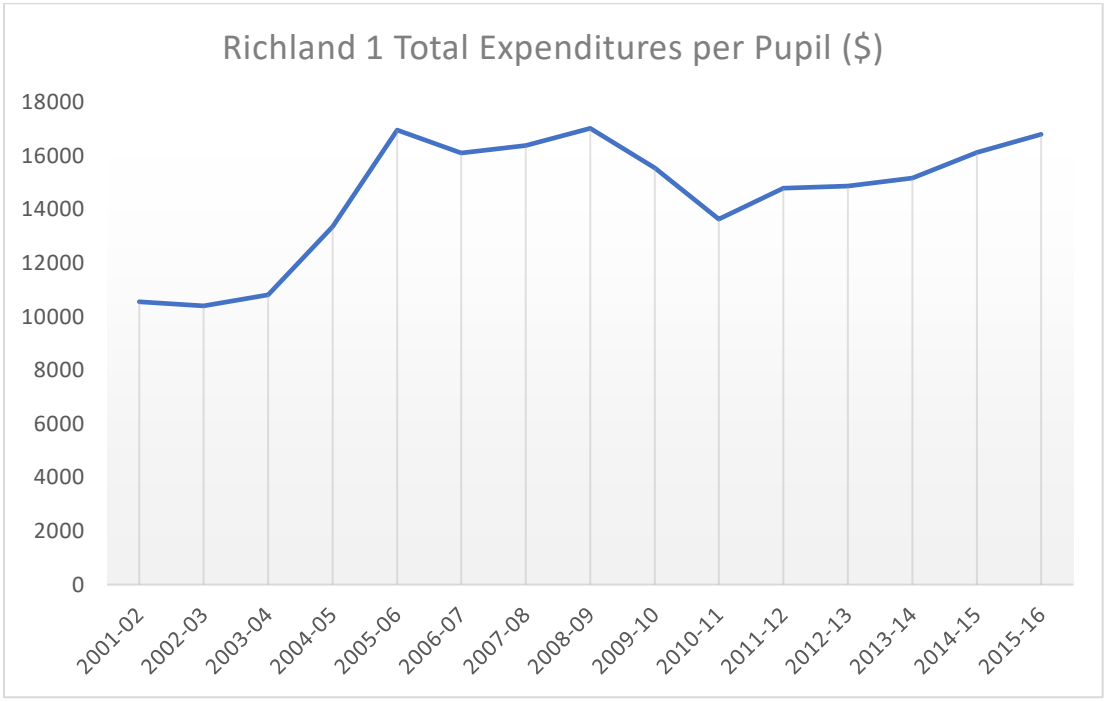

Orangeburg 5 Total Expenditures per Pupil ($)
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A53-A56
Richland 1 District

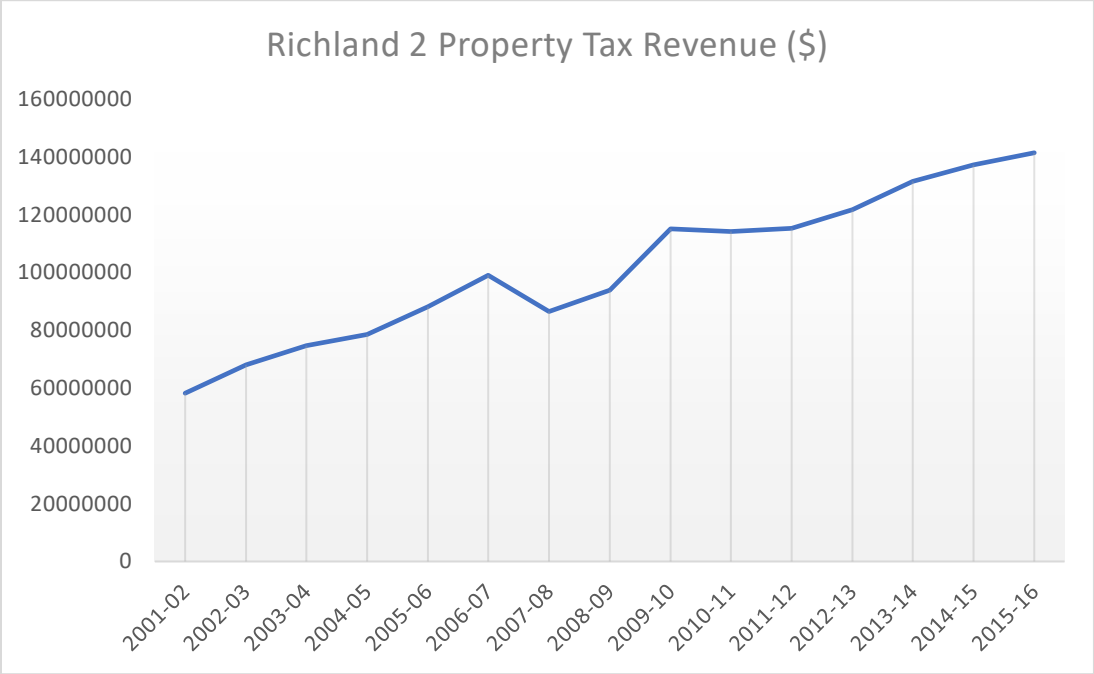


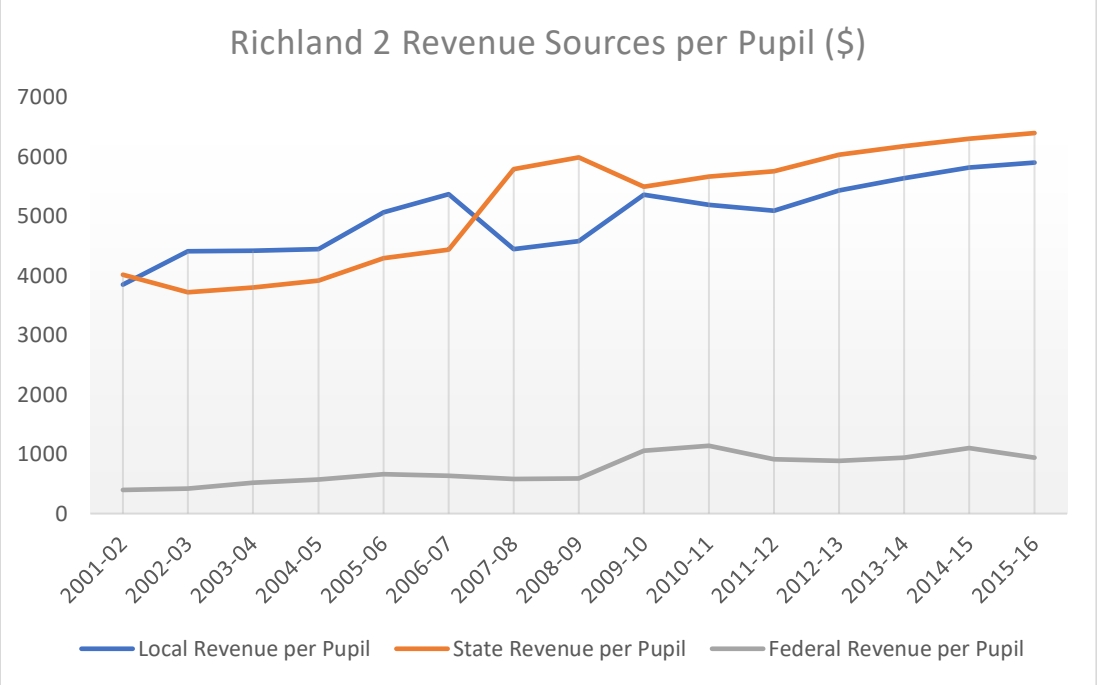


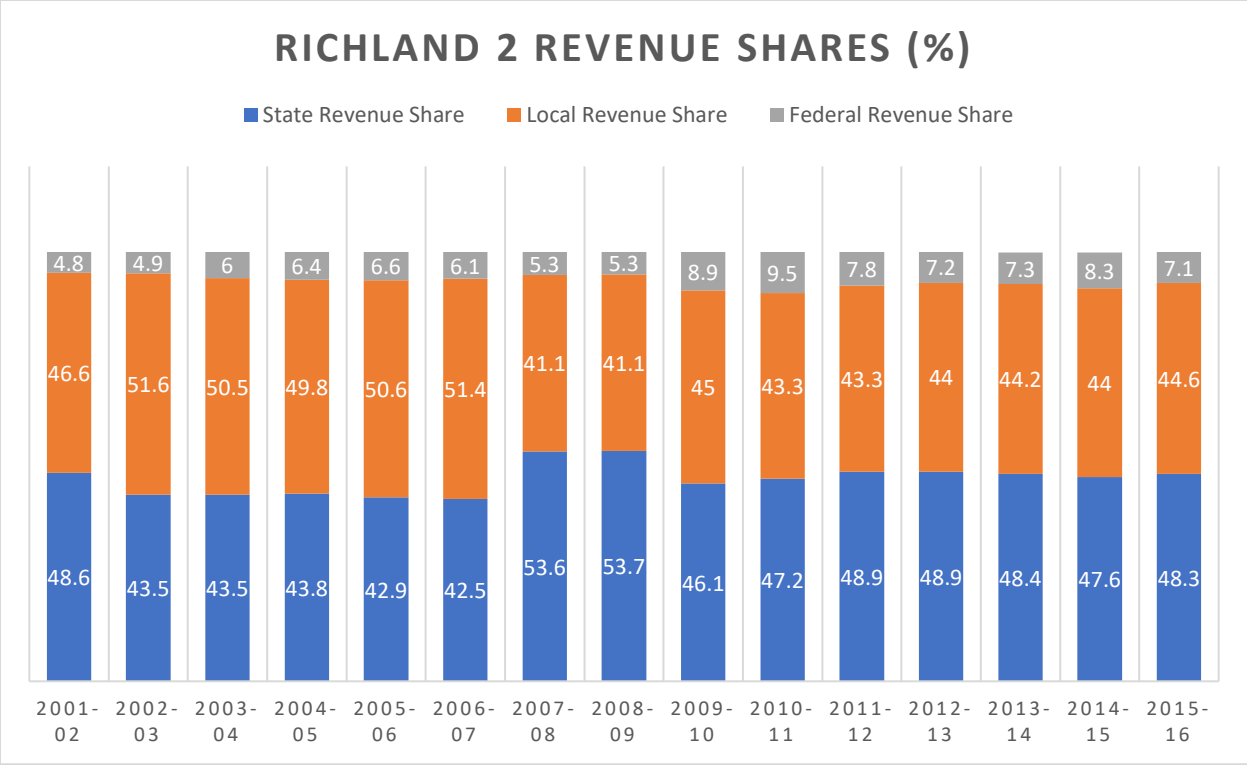

RICHLAND 1 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
9.4 9.4 9.3 9.8 9.4 10.2 9.7 9.9 11.3 12.3 9.9 9.8 8 8.8 7.4
46.8 49.9 52.2 53.3 53.2 54 54 56.7 59 58.6 58.2 58.1 59.5 57.6 60.1
43.8 40.7 38.5 36.9 37.5 35.8 36.3 33.3 29.7 29.1 31.9 32.2 32.5 33.6 32.5
2001-02 2002-03 2003-04 2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 2015-16

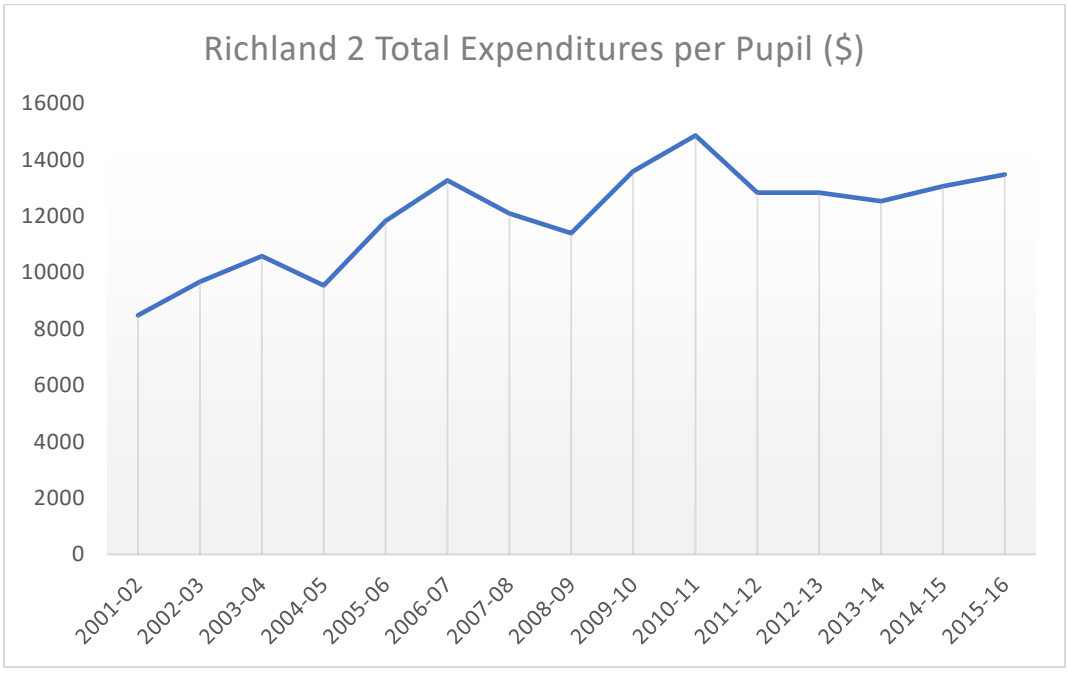

Richland 1 Total Expenditures per Pupil ($)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
2001-02 2002-03 2003-04 2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 2015-16

Figures A57-A60
Richland 1 District

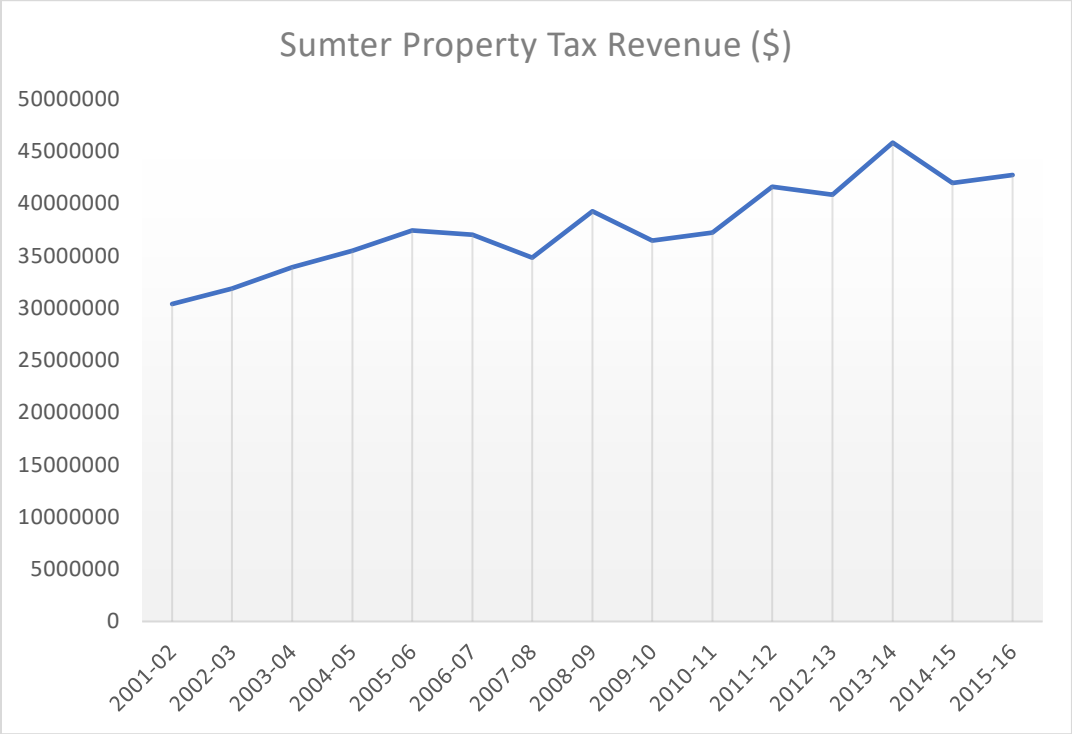


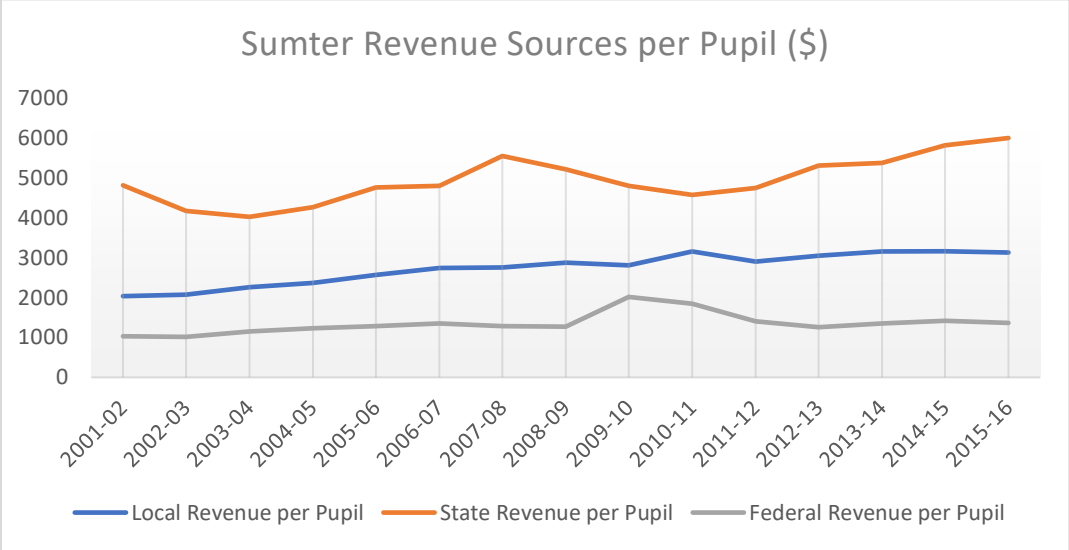


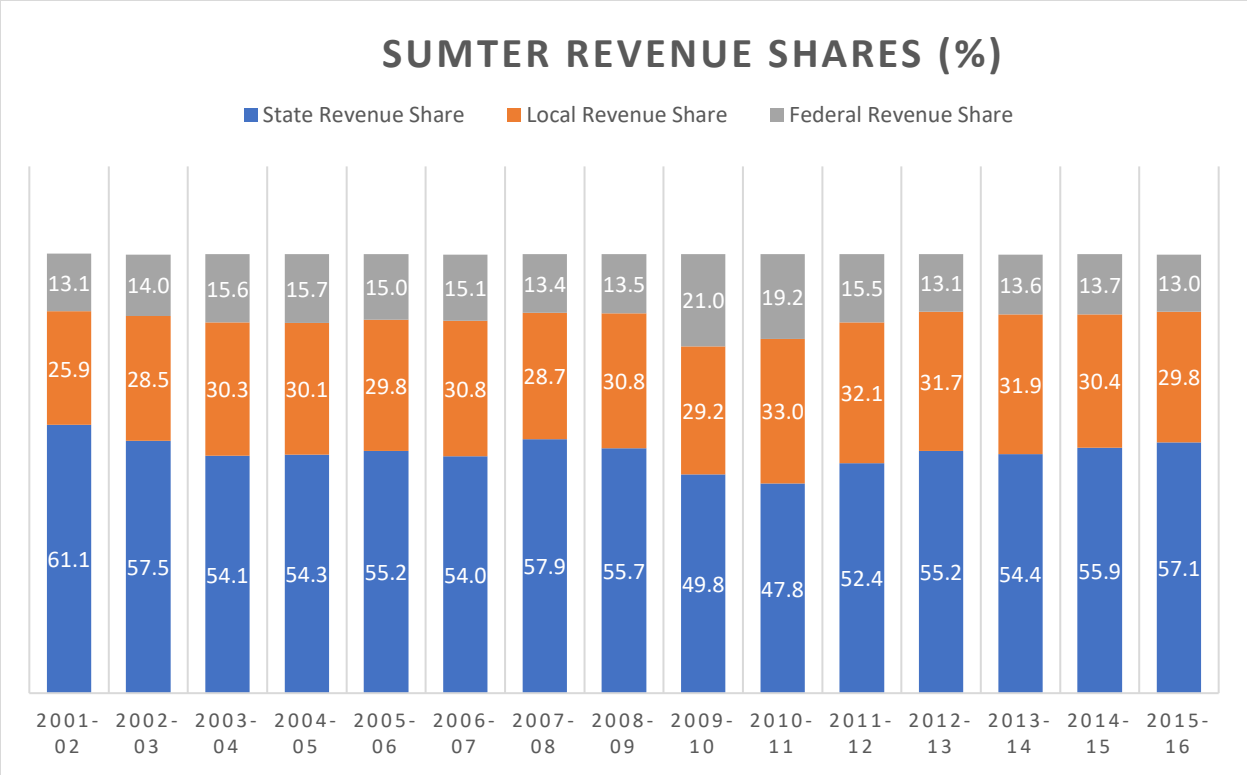

RICHLAND 2 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
4.8
46.6
48.6
4.9
51.6
43.5
6
50.5
43.5
6.4
49.8
43.8
6.6
50.6
42.9
6.1
51.4
42.5
5.3
41.1
53.6
5.3
41.1
53.7
8.9
45
46.1
9.5
43.3
47.2
7.8
43.3
48.9
7.2
44
48.9
7.3
44.2
48.4
8.3
44
47.6
7.1
44.6
48.3
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

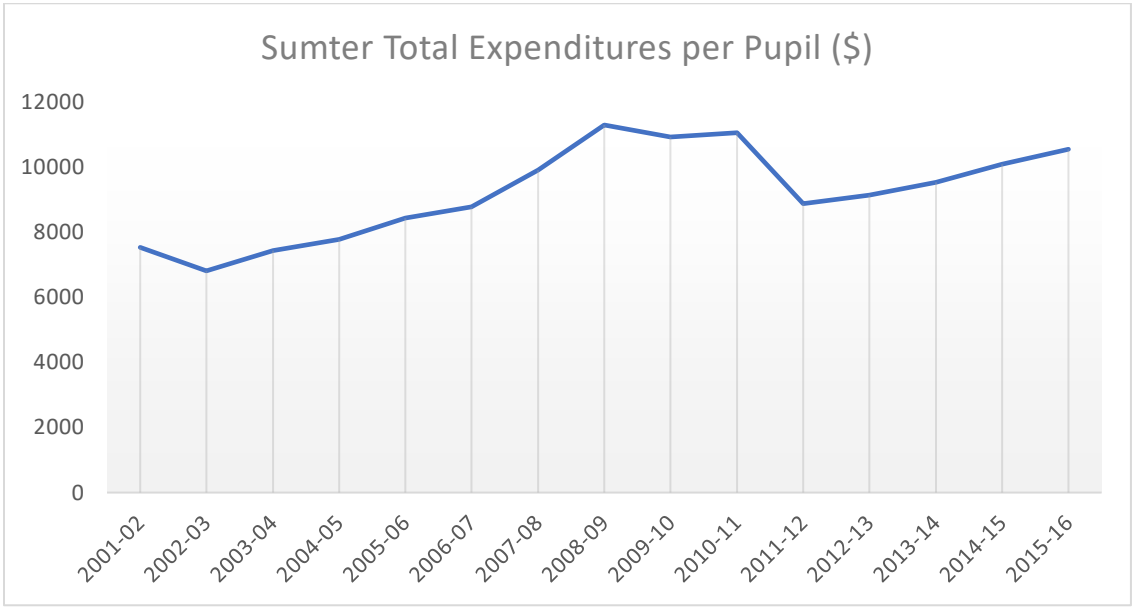

Richland 2 Total Expenditures per Pupil ($)
16000
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A61-A64
Sumter 1 District

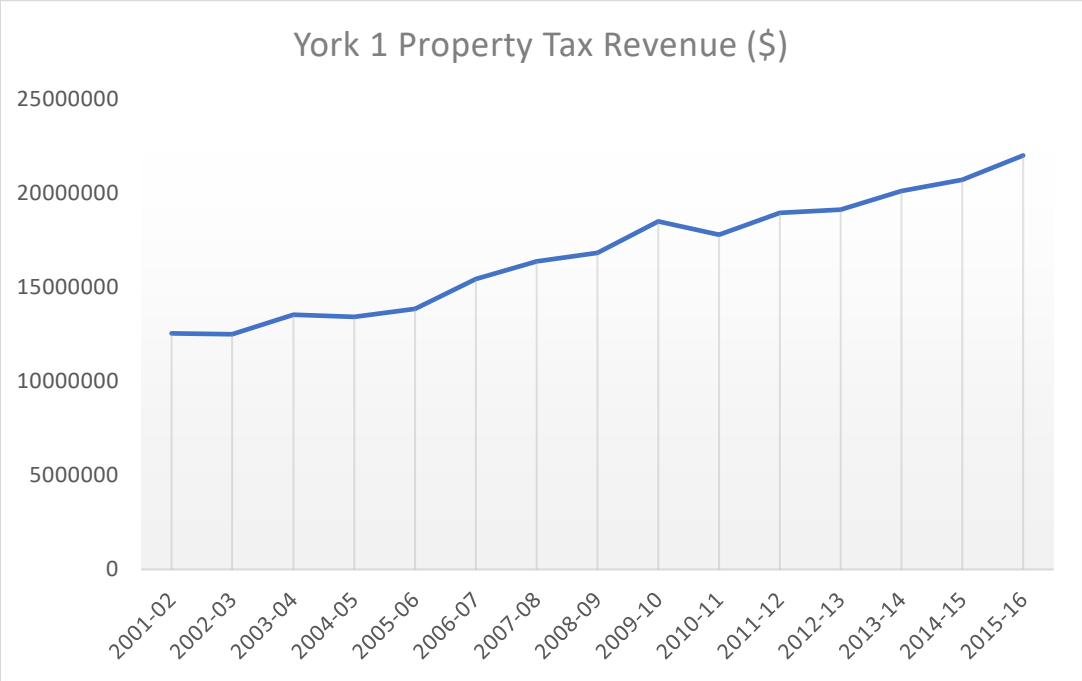


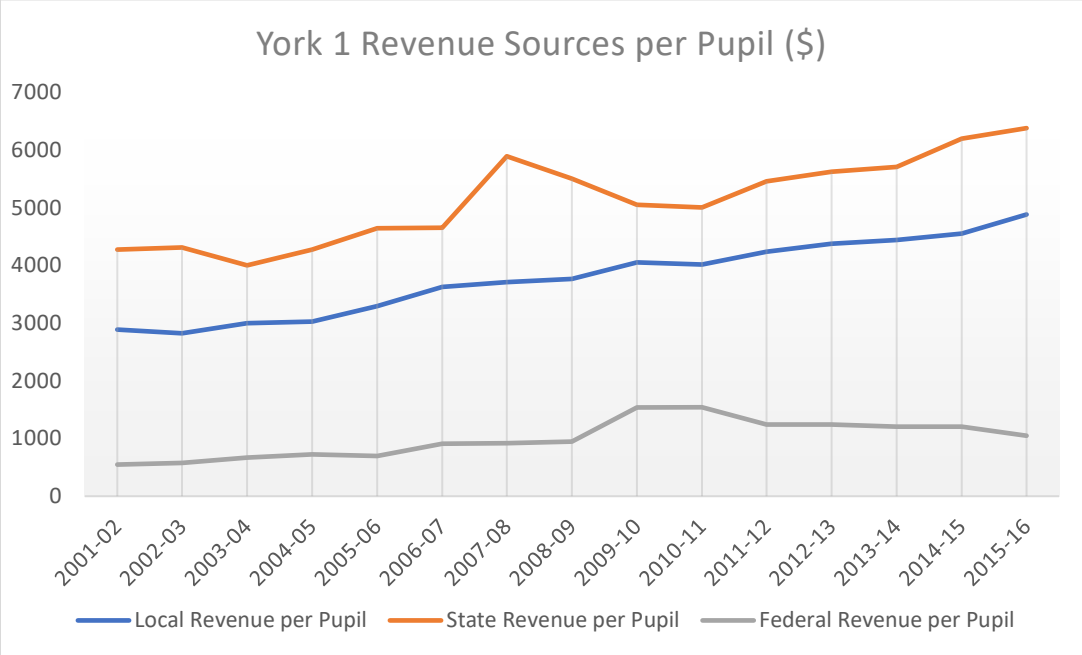


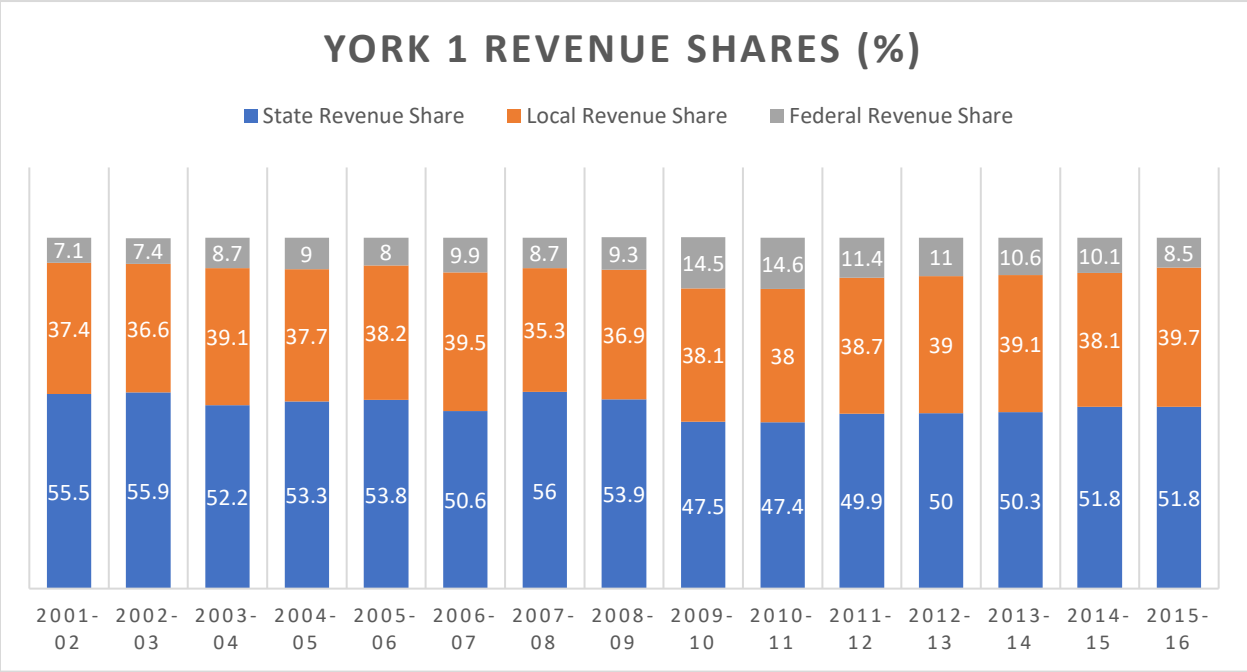

SUMTER REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
13.1
25.9
61.1
14.0
28.5
57.5
15.6
30.3
54.1
15.7
30.1
54.3
15.0
29.8
55.2
15.1
30.8
54.0
13.4
28.7
57.9
13.5
30.8
55.7
21.0
29.2
49.8
19.2
33.0
47.8
15.5
32.1
52.4
13.1
31.7
55.2
13.6
31.9
54.4
13.7
30.4
55.9
13.0
29.8
57.1
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

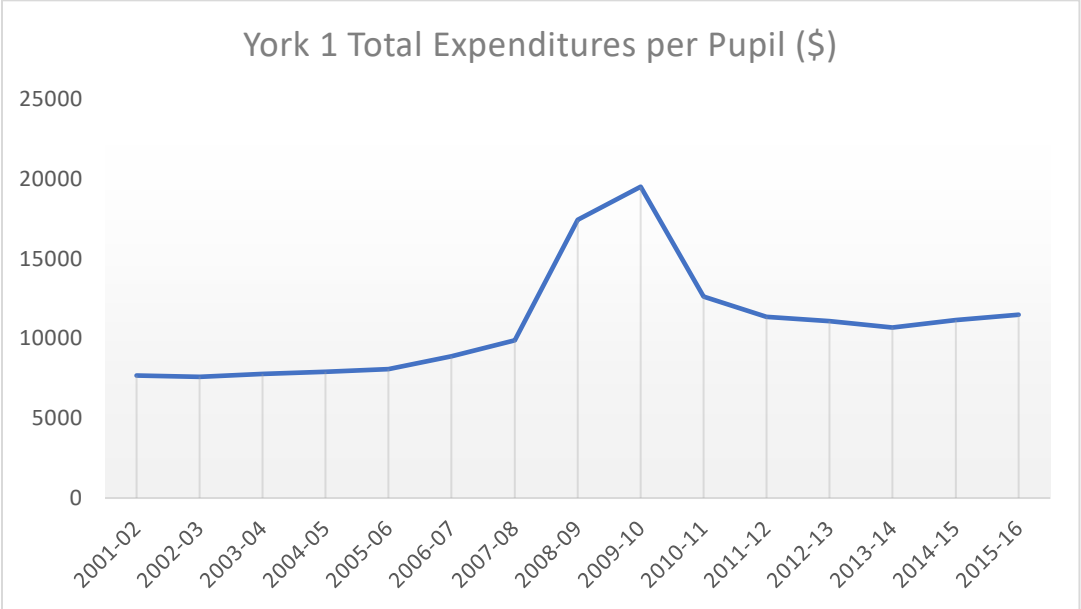

Sumter Total Expenditures per Pupil ($)
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A65-A68
York 1 District

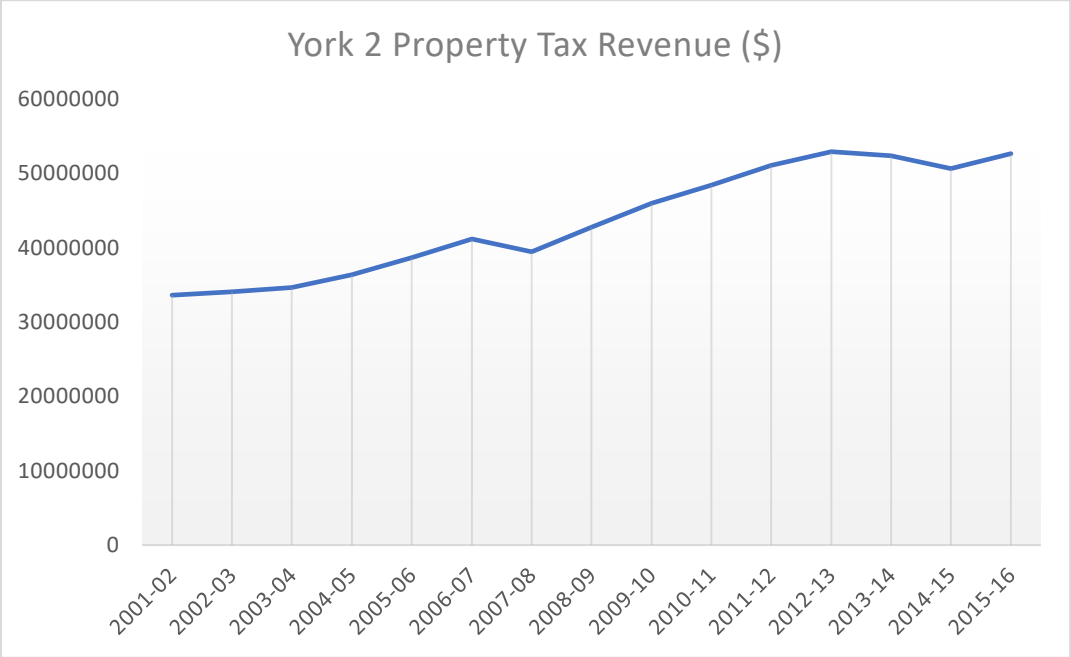


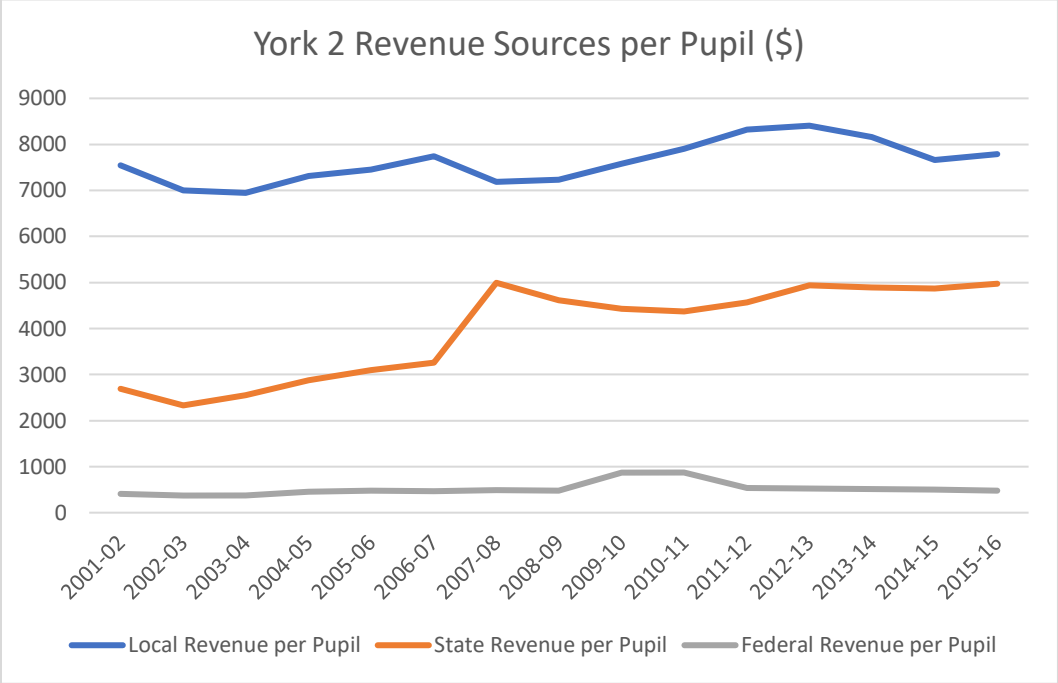


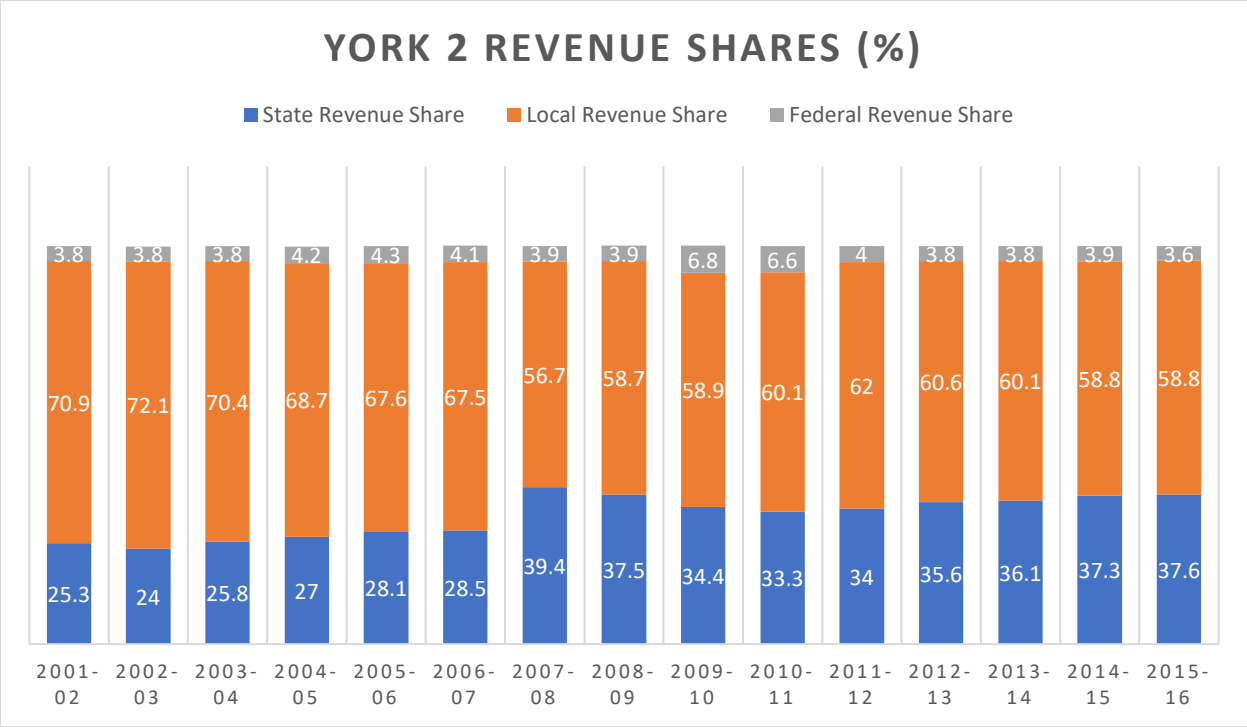

YORK 1 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
7.1
37.4
55.5
7.4
36.6
55.9
8.7
39.1
52.2
9
37.7
53.3
8
38.2
53.8
9.9
39.5
50.6
8.7
35.3
56
9.3
36.9
53.9
14.5
38.1
47.5
14.6
38
47.4
11.4
38.7
49.9
11
39
50
10.6
39.1
50.3
10.1
38.1
51.8
8.5
39.7
51.8
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

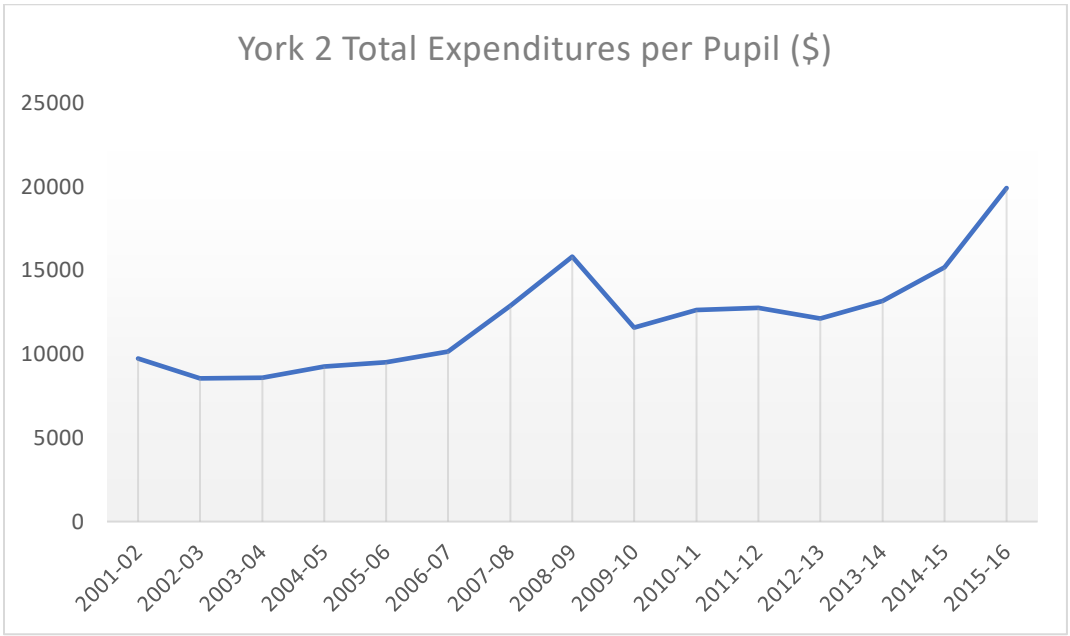

York 1 Total Expenditures per Pupil ($)
25000
20000
15000
10000
5000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A69-A72
York 2 District

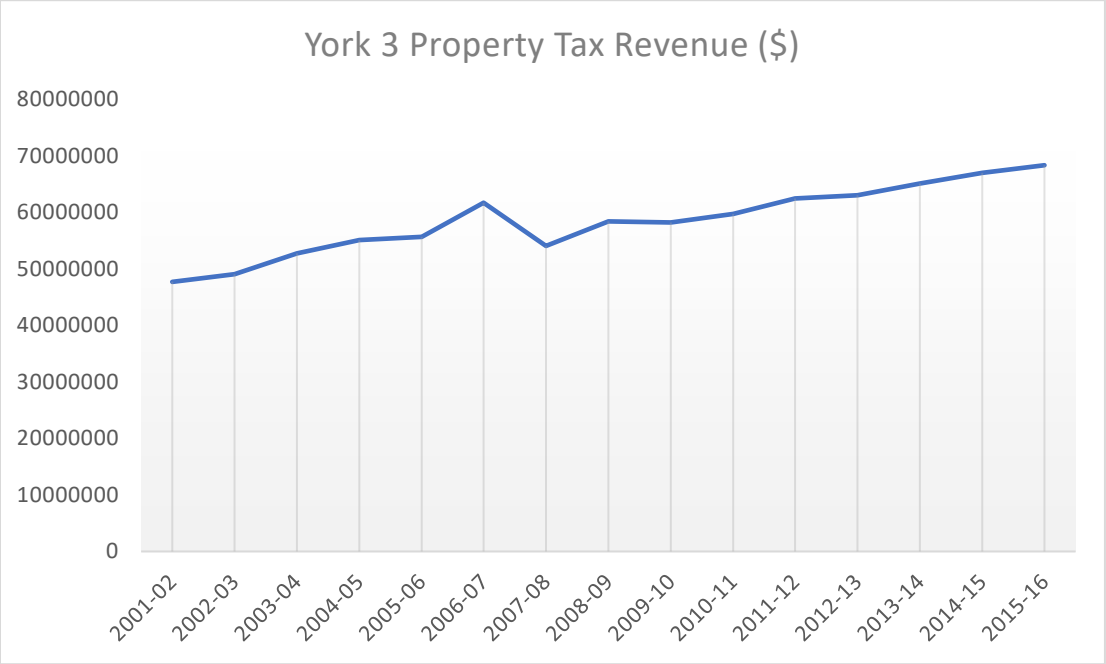


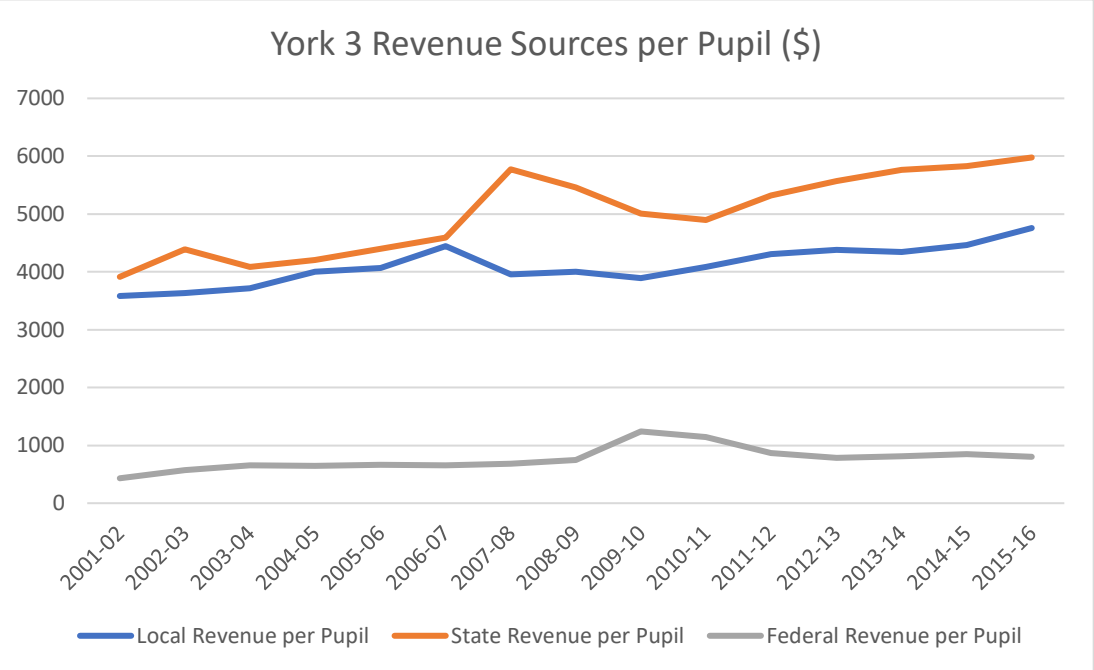


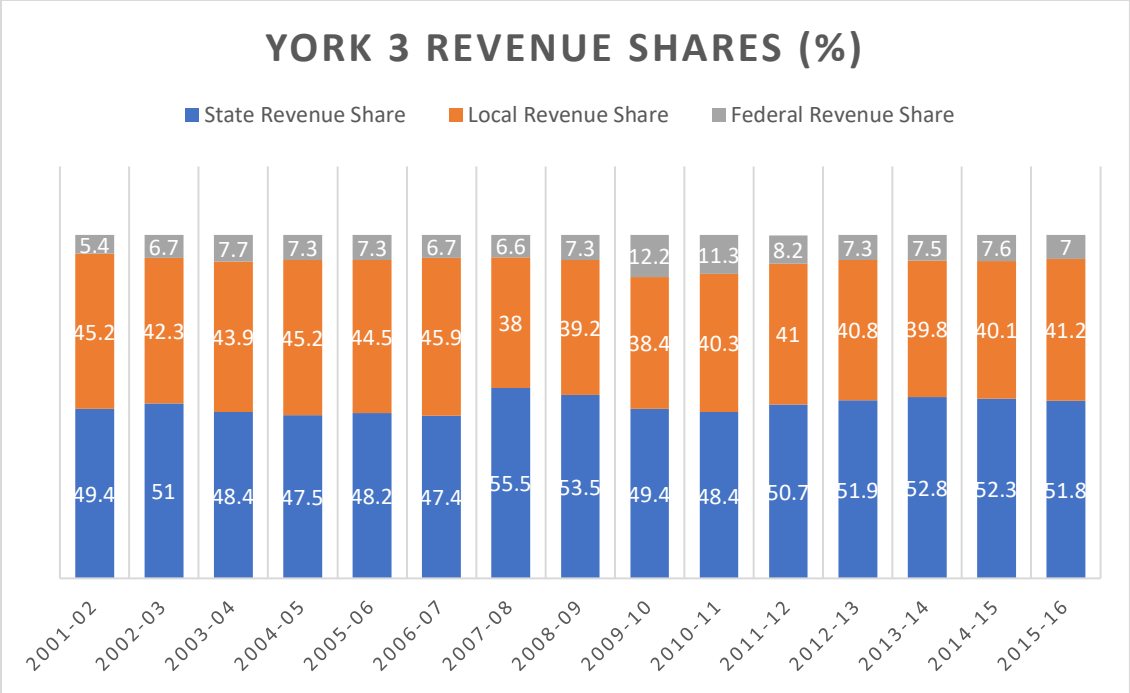

YORK 2 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
3.8 3.8 3.8 4.2 4.3 4.1 3.9 3.9 6.8 6.6 4 3.8 3.8 3.9 3.6
70.9 72.1 70.4 68.7 67.6 67.5 56.7 58.7 58.9 60.1 62 60.6 60.1 58.8 58.8
25.3 24 25.8 27 28.1 28.5 39.4 37.5 34.4 33.3 34 35.6 36.1 37.3 37.6
2001-02 2002-03 2003-04 2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 2015-16

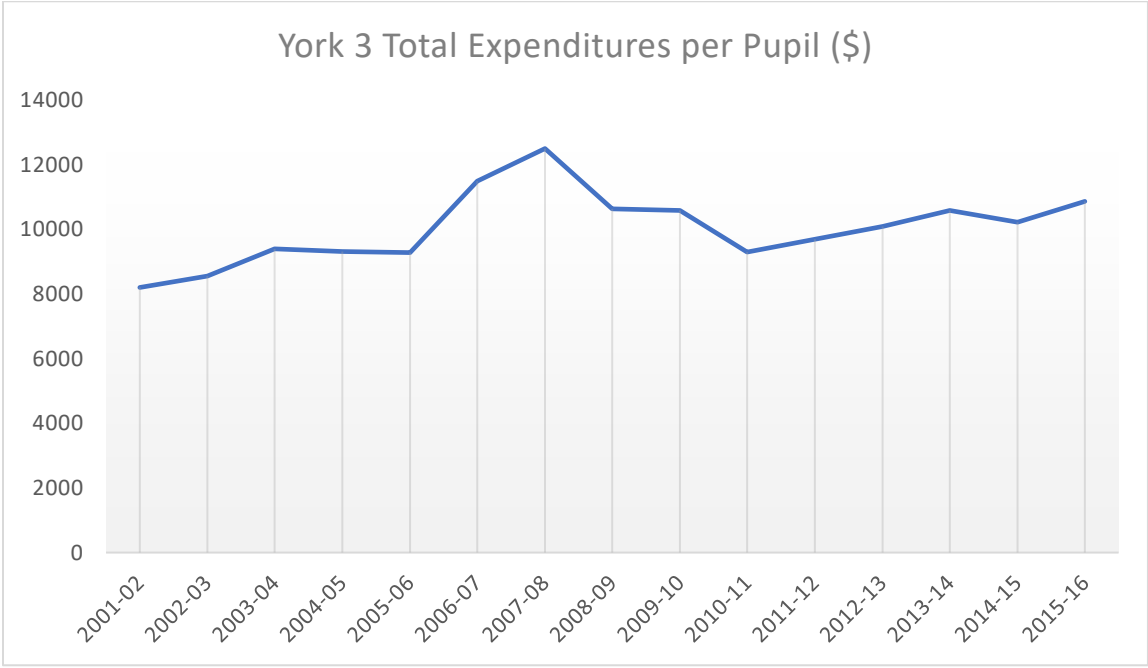

York 2 Total Expenditures per Pupil ($)
25000
20000
15000
10000
5000
0
2001-02 2002-03 2003-04 2004-05 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 2015-16

Figures A73-A76
York 3 District

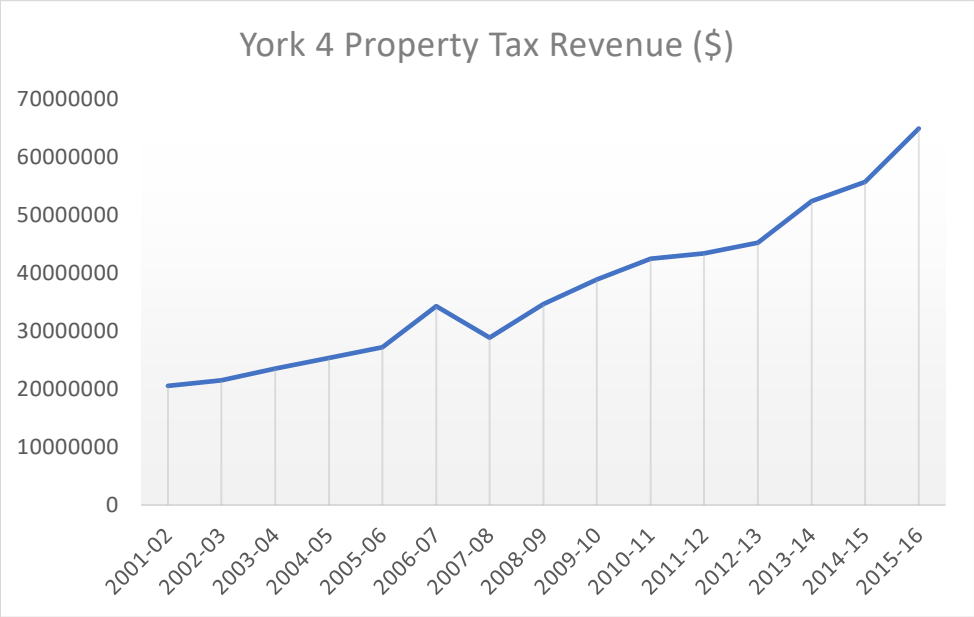


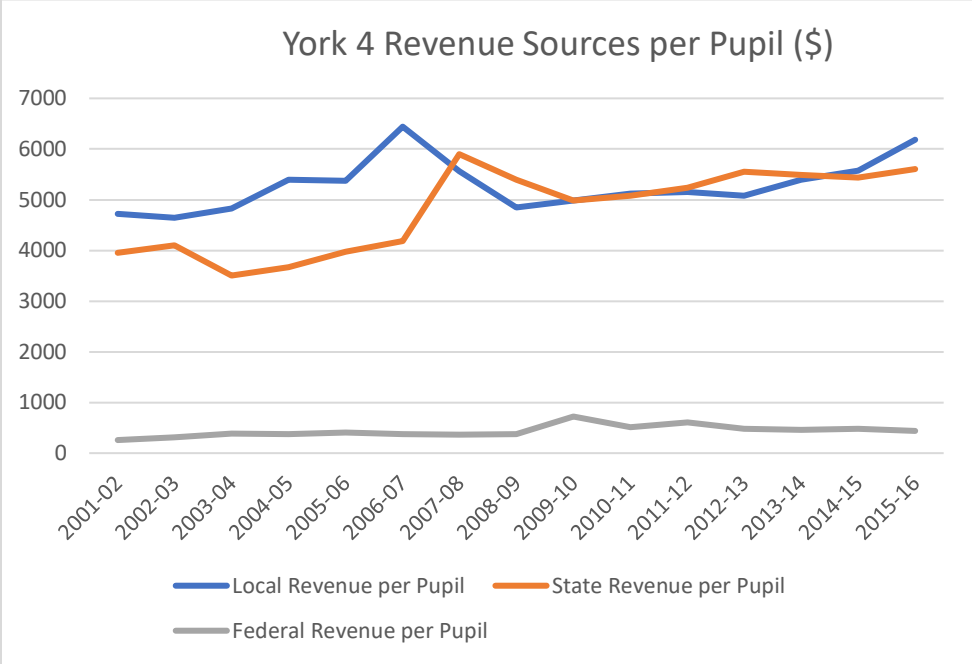


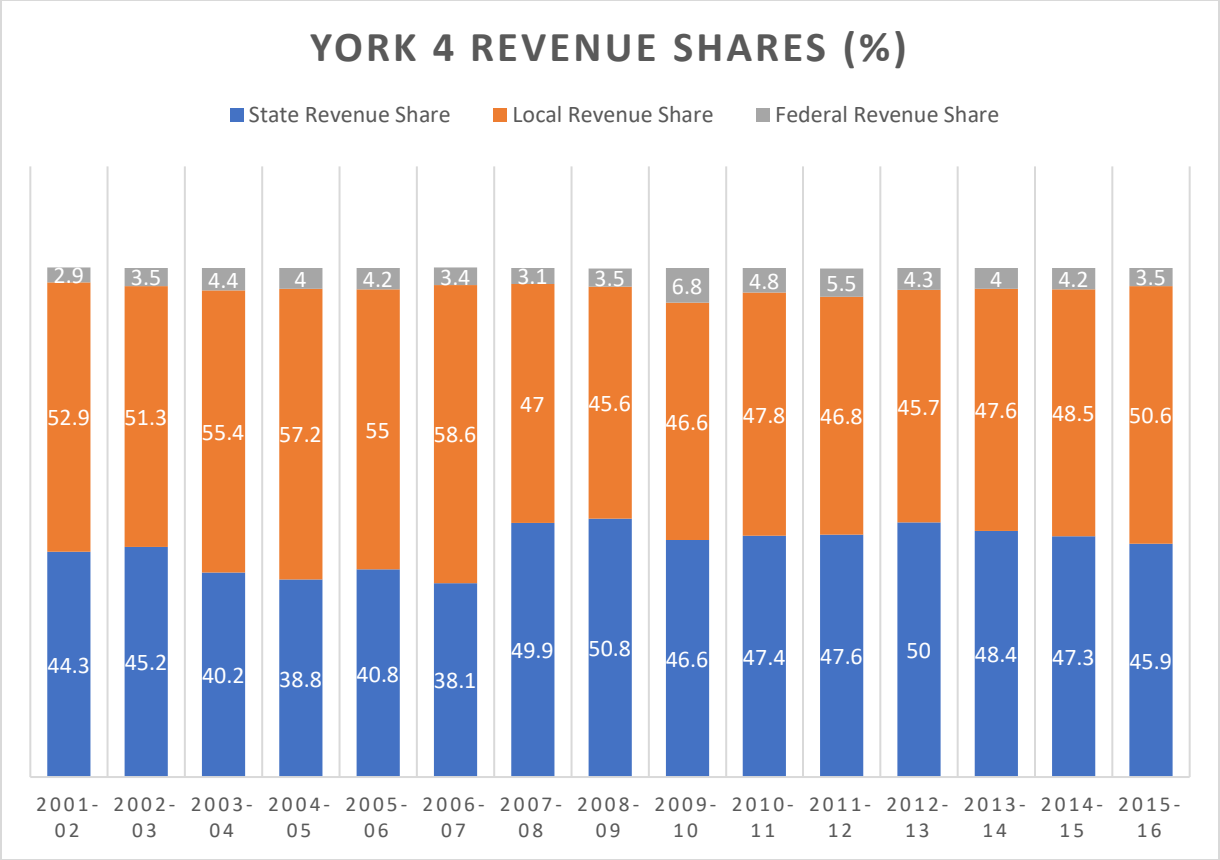

YORK 3 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
5.4
45.2
49.4
6.7
42.3
51
7.7
43.9
48.4
7.3
45.2
47.5
7.3
44.5
48.2
6.7
45.9
47.4
6.6
38
55.5
7.3
39.2
53.5
12.2
38.4
49.4
11.3
40.3
48.4
8.2
41
50.7
7.3
40.8
51.9
7.5
39.8
52.8
7.6
40.1
52.3
7
41.2
51.8
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

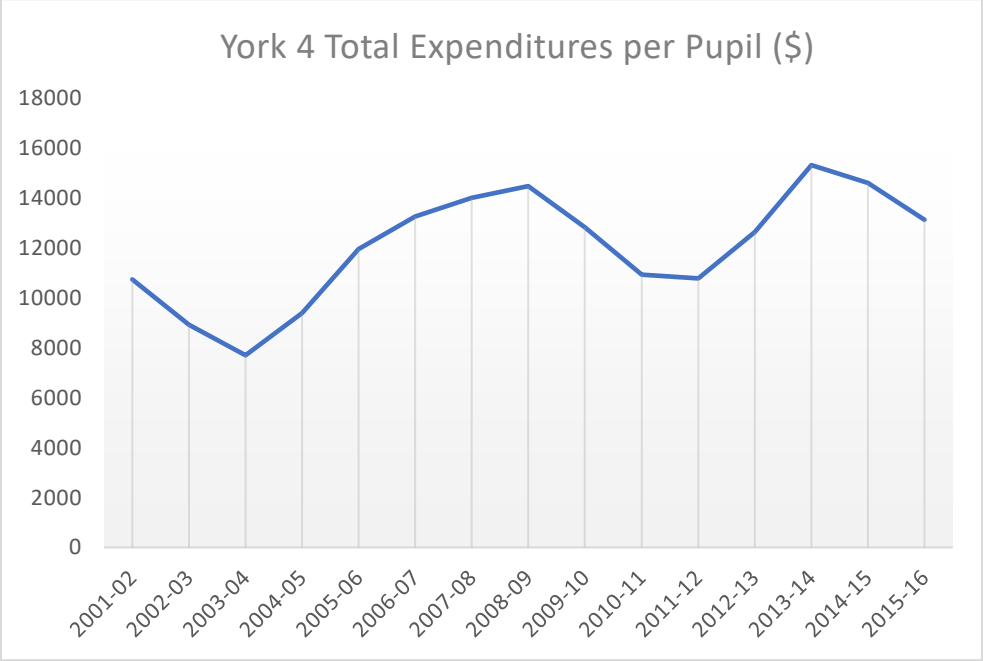

York 3 Total Expenditures per Pupil ($)
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Figures A77-A80
York 4 District






YORK 4 REVENUE SHARES (%)
State Revenue Share
Local Revenue Share
Federal Revenue Share
2.9
52.9
44.3
3.5
51.3
45.2
4.4
55.4
40.2
4
57.2
38.8
4.2
55
40.8
3.4
58.6
38.1
3.1
47
49.9
3.5
45.6
50.8
6.8
46.6
46.6
4.8
47.8
47.4
5.5
46.8
47.6
4.3
45.7
50
4
47.6
48.4
4.2
48.5
47.3
3.5
50.6
45.9
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16


York 4 Total Expenditures per Pupil ($)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16

Appendix B

District-Level Indicators of Student Achievement

Several sources of district-level data have been analyzed.

At the high school level, we analyze the South Carolina High School Assessment Program (HSAP) scores.

HSAP scores were used up until 2015 in the calculation of various ratings of South Carolina high schools, including absolute ratings, growth ratings, and Federal Accountability status (South Carolina Department of Education). The HSAP tests were developed following the South Carolina Education Accountability Act (EAA) of 1998, which required students to pass an exit examination to earn a high school diploma. Further, the Federal No Child Left Behind Act (NCLB) of 2001 included a mandate to assess high school student performance in the areas of reading, language arts, and mathematics. HSAP tests were developed in South Carolina to meet both of these mandates[78], and test results are available for the years 2007 through 2014. Starting in 2015, HSAP was no longer required. (Act 155 eliminated this requirement, making the 2014 HSAP scores the last available.)

In this analysis, we have examined HSAP tests that were composed of two subsets of questions: mathematics, and English language arts. The percentage of students who passed both subsets of HSAP is used as a measure of achievement in this analysis.

Table B1 reports the 2007 HSAP scores for each district along with the average HSAP scores for the years 2009 through 2014. Of the 20 districts, 13 experienced increases in their average HSAP score relative to the 2007 score. For four districts, the increase in HSAP scores was substantial (at least five points). Those districts were Florence 3, Greenville, Orangeburg 3, and York 3. Greenville School District is the largest district in the study; and while it has the largest proportion of limited English language proficiency students, it also has the fourth lowest proportion of students eligible for free and reduced-cost lunches, reflecting relatively higher-income families in the district. Florence 3 School District is a relatively small and low-income district with all of its predominantly Black students eligible for free and reduced-cost lunches. Orangeburg 3 School District is a small district with all of its students eligible for free and reduced-cost lunches. York 3 (Rock Hill) School District is an intermediate-sized district with approximately 60 percent of students eligible for free and reduced-price lunches.

Seven districts experienced reductions in their average score relative to 2007. Four of those districts had reductions that were substantial (at least five points). Allendale School District HSAP scores fell nearly nine points. That district is very small, nearly all Black, with 100 percent of students eligible for free and reduced-price lunches. Florence 2, Florence 4, and Florence 5 districts also had substantial reductions in HSAP scores. They are similarly small and low-income districts, with nearly all of their students eligible for free and reduced-price lunches.

Appendix C provides graphic illustrations of the HSAP scores for all districts over the full period 2007 through 2014.

[78] Further description of HSAP is available in annual technical reports, as in the 2013-2014 report https://ed.sc.gov/tests/tests-files/assessment-information/2013-14-hsap-technical-report/

Table B1 HSAP Scores by District (percent)

District	2007 HSAP Score	Average HSAP Score 2009-2014
Allendale	63.1	54.0
Charleston	77.8	79.6
Edgefield	76.1	78.0
Florence 1	72.8	75.3
Florence 2	81.6	70.0
Florence 3	58.7	72.3
Florence 4	73.9	58.7
Florence 5	84.2	78.9
Greenville	75.3	80.6
Horry	81.8	82.4
Orangeburg 3	62.8	68.4
Orangeburg 4	67.3	68.8
Orangeburg 5	68.7	71.7
Richland 1	66.0	69.9
Richland 2	81.1	80.1
Sumter	70.5	67.4
York 1	83.6	81.4
York 2	84.0	87.3
York 3	74.7	80.1
York 4	92.3	94.8

Source: South Carolina Department of Education
Note: HSAP scores here measure the percent of students in each district that passed both subsets of questions on the HSAP test.

This analysis also examines a second measure of student achievement at the high school level: district average ACT scores measuring student readiness for success after high school.[79] The ACT test is designed to measure essential skills and knowledge needed for college and career options after high school.

Table B2 reports 2007 district ACT scores, along with average district ACT scores over the period 2009 through 2014, after implementation of Act 388. Eight of the districts experienced increases in their average ACT scores after implementation of Act 388, while the remaining 12 experienced declines.

[79] For a description of the ACT test, its design, and intent for measuring high school student readiness for success, see: https://www.act.org/content/act/en/products-and-services/the-act-educator/the-act-test.html

Table B2 also reports 2007 district ACT scores relative to the national average, as a percent, and the average district ACT score relative to the national average over the period 2009 through 2014, also as a percent. The relative scores are quite revealing. In 2007, six districts were above the national average (Edgefield, Greenville, Richland 2, York 2, York 3, and York 4), with the remaining 14 districts below the national average. Over the period 2009 through 2014, 18 of the districts lost ground relative to the national average (exceptions were Florence 2 and Florence 4), leaving only two districts above the national average (York 2 and York 4).[80]

Appendix C illustrates district ACT scores relative to the national score for each year from 2007 through 2014. Although ACT scores rose for eight districts after Act 388, relative to the nation, most of the districts in this analysis lost ground.

[80] Unlike some states that began requiring all high school student to take the ACT exam in recent years, South Carolina does not make the ACT or SAT a requirement. Hence, we do not expect changes in ACT scores to be affected by a sample selection bias due to implementation of mandatory testing. For a description of the South Carolina ACT testing program, see: https://ed.sc.gov/tests/high/the-act-2018-19/

Table B2 ACT Scores by District and District Scores Relative to National Scores

District	2007 District ACT Score	2009-2014 Average District ACT Score	2007 District ACT Score Relative to National Average (%)	2009-2014 Average District ACT Score Relative to National Average (%)
Allendale	14.8	14.7	75.5	70.0
Charleston	19.5	20.4	99.5	96.9
Edgefield	20.0	19.5	102.0	92.6
Florence 1	18.9	17.9	96.4	85.0
Florence 2	16.9	18.9	86.2	89.8
Florence 3	16.1	16.6	82.1	78.8
Florence 4	14.2	15.9	72.4	75.8
Florence 5	19.2	17.8	98.0	84.6
Greenville	21.3	20.9	108.7	99.5
Horry	19.5	20.4	99.5	97.0
Orangeburg 3	16.8	16.6	85.7	78.9
Orangeburg 4	18.1	17.5	92.3	83.4
Orangeburg 5	16.7	16.6	85.2	78.8
Richland 1	17.7	18.3	90.3	87.0
Richland 2	20.7	20.2	105.6	96.1
Sumter	17.8	17.7	90.8	84.3
York 1	19.1	19.4	97.4	92.1
York 2	21.8	21.7	111.2	103.3
York 3	20.2	19.9	103.1	94.8
York 4	21.7	22.9	110.7	109.0

Source: South Carolina Department of Education, ACT

In recent years, South Carolina used several assessment tools at the elementary level. The Palmetto Achievement Challenge Test (PACT) was used for report cards until it was replaced by the Palmetto Assessment of State Standards (PASS), which tests students in grades 4, 6, and 8 in science and students in grades 5 and 7 in social studies. Given the discontinuity in assessment methods, however, there is no sufficiently consistent set of scores to analyze student achievement at the elementary level.

Nevertheless, South Carolina school district report card summaries are provided in Appendix D. In those report cards, absolute ratings measure overall proficiency of students in the district. Growth ratings measure student improvement over the previous year. In both cases, five rating categories are provided: Excellent, Good, Average, Below Average, and At-Risk.

Table B3 summarizes report card ratings. The first column reports numerical values for the 2007 absolute rating for each school district using a 5-point Likert scale, where 5 is excellent and 1 is at-risk. The average rating was 2.72, just below average (average = 3). The second column reports the average absolute rating over the period 2009 through 2012, following Act 388 implementation.

Those ratings indicate that 10 districts improved after Act 388 implementation, while three declined and five saw no change. The average absolute rating over the 2009-2012 period was 3.22. The third column reports the average growth rating over the period 2009 through 2012. Those ratings are intended to indicate improvement over the previous year. In this case, five districts had average growth ratings above their absolute average during the same time period, and 12 districts had average growth ratings below their average absolute ratings. By these measures, district absolute ratings generally improved after Act 388 implementation, although the rate of improvement was not strong.

Comparing scores in Table B2 with report card data in Table B3, we see that four districts have consistent results. Charleston, Florence 3, Horry, and York 4 all had increasing ACT scores (comparing 2007 district score to the average district score over 2009-2014) and increasing absolute report card ratings. For five districts, however, the results in the two tables are inconsistent. Florence 1, Florence 5, Richland 2, York 2, and York 3 all had falling ACT scores in Table B2 but higher report card ratings in Table B3.

Table B3 District Report Card Data

District	2007 Absolute Rating	2009-2012 average absolute	2009-2012 average growth
Allendale	1	1.00	3.50
Charleston	2	3.50	3.00
Edgefield	3	2.75	2.25
Florence 1	3	3.25	3.50
Florence 2	3	3.00	2.50
Florence 3	2	3.25	3.50
Florence 4	2	1.75	1.75
Florence 5	3	3.75	2.75
Greenville	3	3.50	3.00
Horry	3	3.75	2.75
Orangeburg 3	na	Na	na
Orangeburg 4	na	Na	na
Orangeburg 5	na	Na	na
Richland 1	2	2.00	3.25
Richland 2	3	4.00	3.00
Sumter	na	4.00	2.00
Sumter 2	3	3.00	2.00
Sumter 17	3	2.67	2.67
York 1	3	3.00	3.25
York 2	4	4.50	3.75
York 3	2	3.50	3.00
York 4	4	5.00	4.25

Source: South Carolina Department of Education

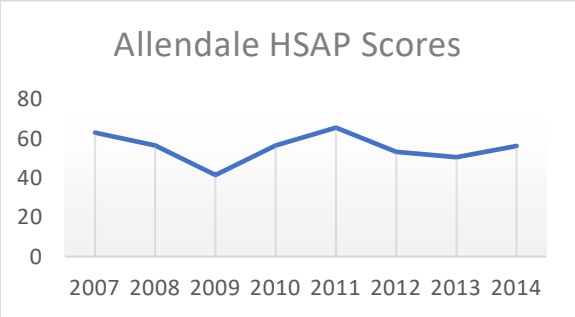
Notes: Report card ratings are converted into numerical scale as follows: Excellent = 5, Good = 4, Average = 3, Below Average = 2, and At-risk = 1.

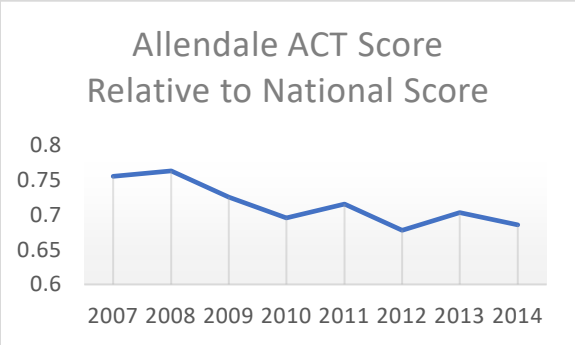
Sumter 2 and Sumter 17 districts were consolidated as Sumter in 2011.

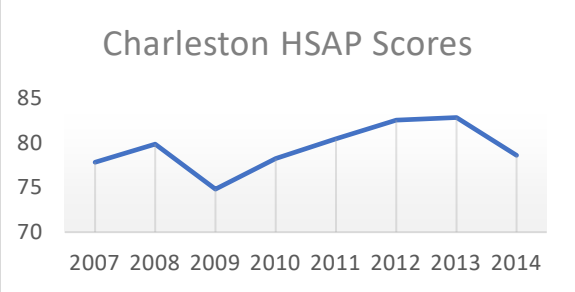
Appendix C

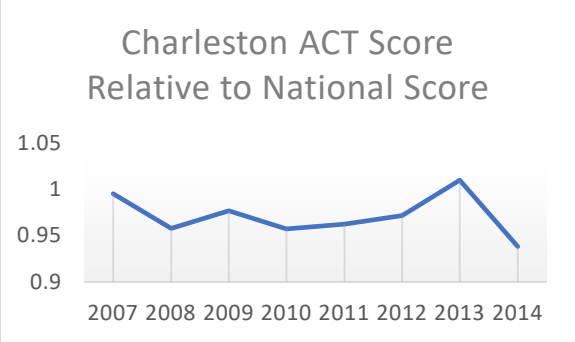
District HSAP Scores and ACT Scores Relative to National Scores

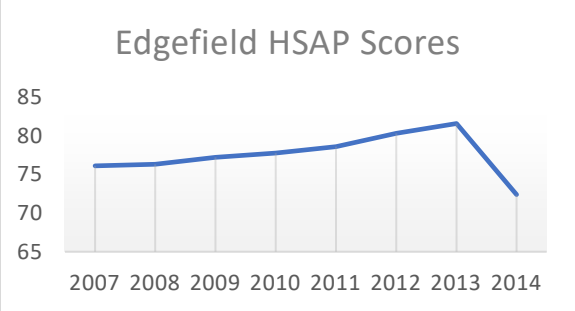
All data in Appendix C come from the South Carolina Department of Education.

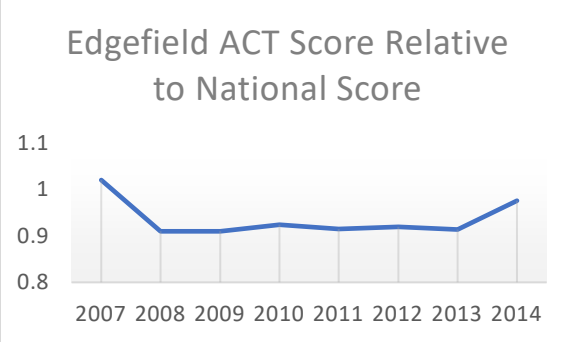


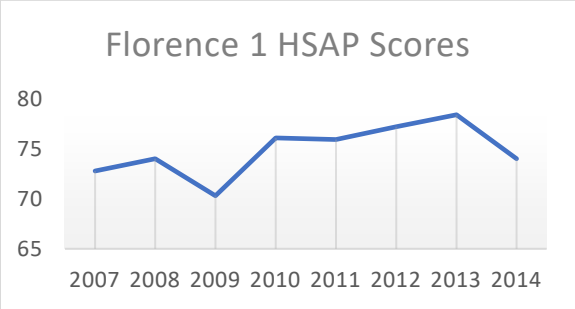


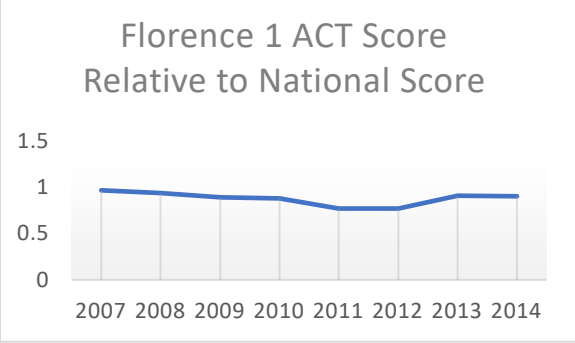


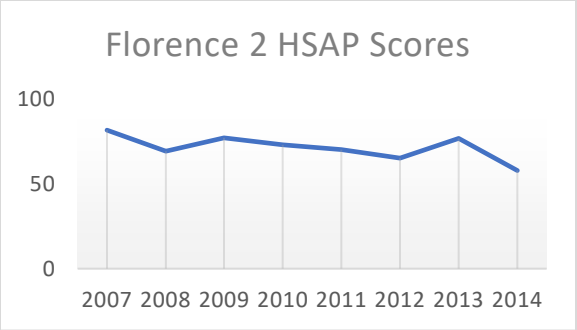


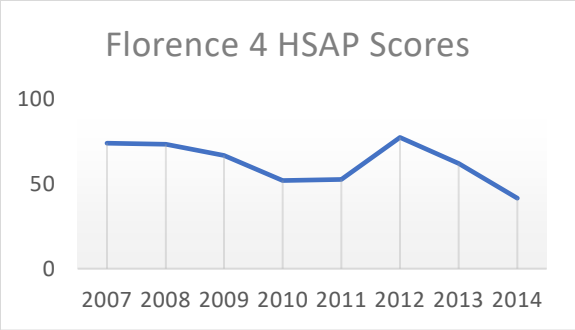


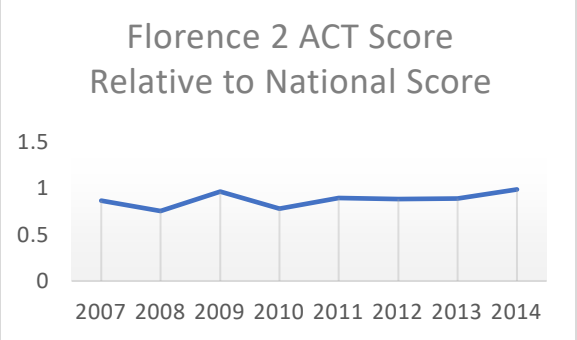


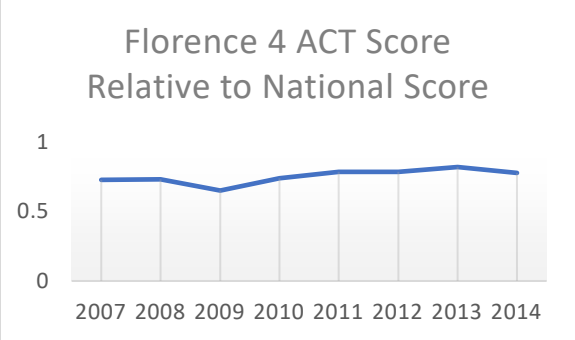


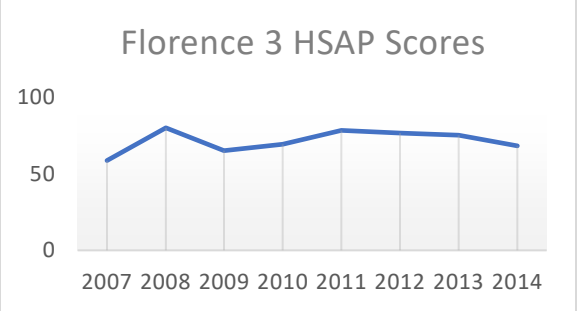


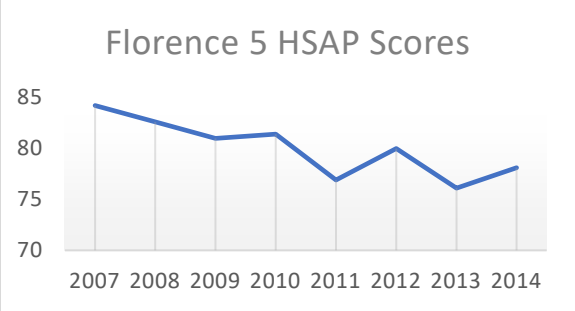

Florence 2 HSAP Scores
100
50
0
2007 2008 2009 2010 2011 2012 2013 2014

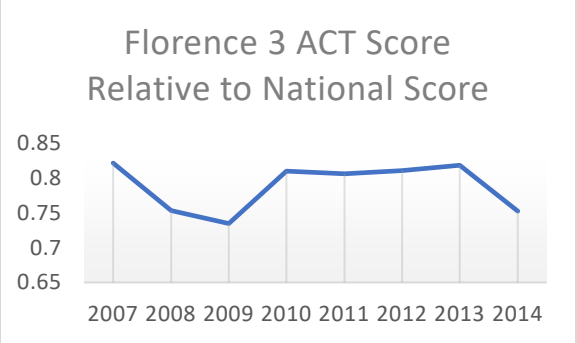

Florence 4 HSAP Scores
100
50
0
2007 2008 2009 2010 2011 2012 2013 2014

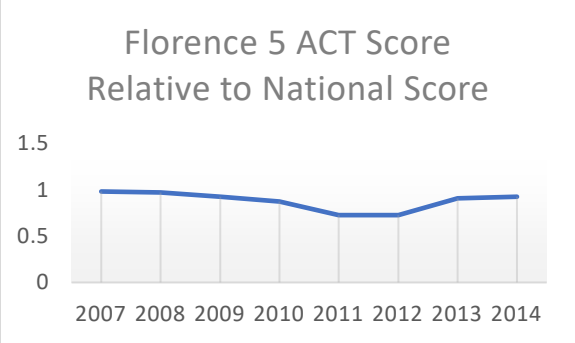

Florence 2 ACT Score
Relative to National Score
1.5
1
0.5
0
2007 2008 2009 2010 2011 2012 2013 2014

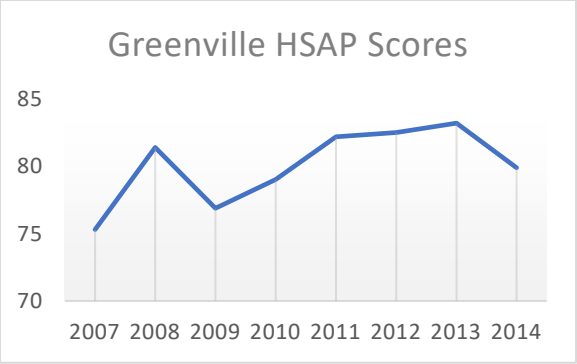

Florence 4 ACT Score
Relative to National Score
1
0.5
0
2007 2008 2009 2010 2011 2012 2013 2014

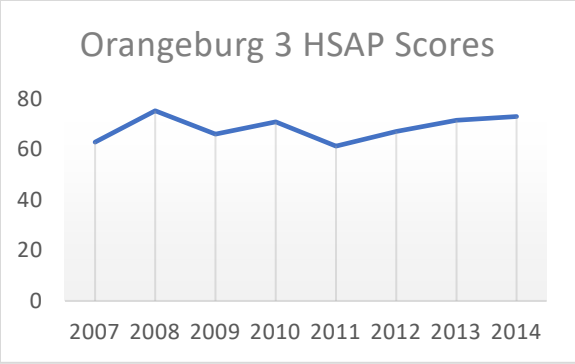

Florence 3 HSAP Scores
100
50
0
2007 2008 2009 2010 2011 2012 2013 2014

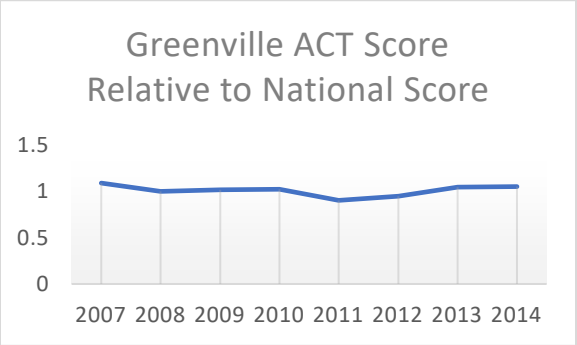

Florence 5 HSAP Scores
85
80
75
70
2007 2008 2009 2010 2011 2012 2013 2014

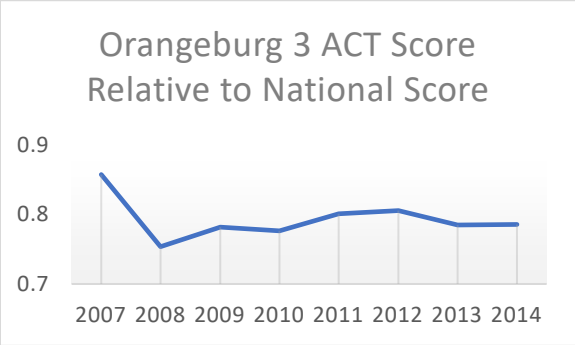

Florence 3 ACT Score
Relative to National Score
0.85
0.8
0.75
0.7
0.65
2007 2008 2009 2010 2011 2012 2013 2014

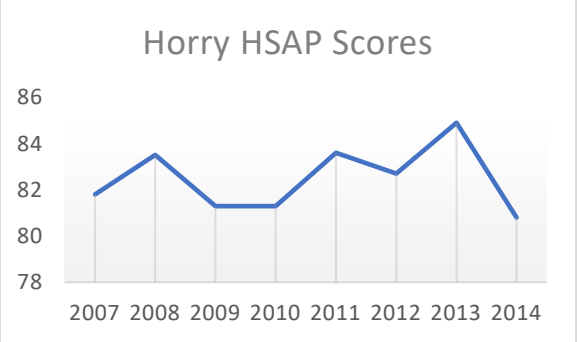

Florence 5 ACT Score
Relative to National Score
1.5
1
0.5
0
2007 2008 2009 2010 2011 2012 2013 2014

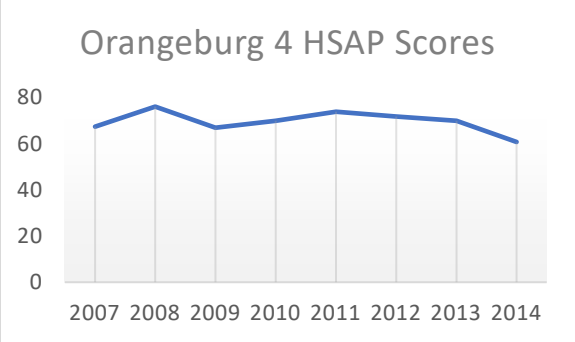

Greenville HSAP Scores
85
80
75
70
2007 2008 2009 2010 2011 2012 2013 2014

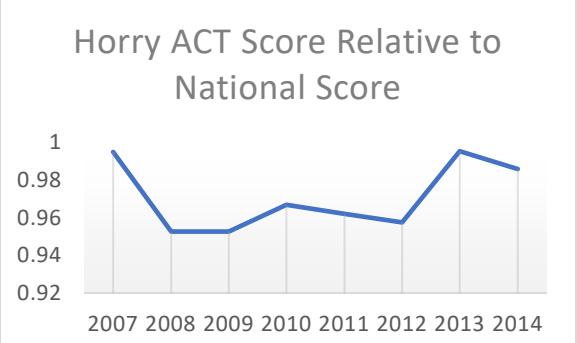

Orangeburg 3 HSAP Scores
80
60
40
20
0
2007 2008 2009 2010 2011 2012 2013 2014

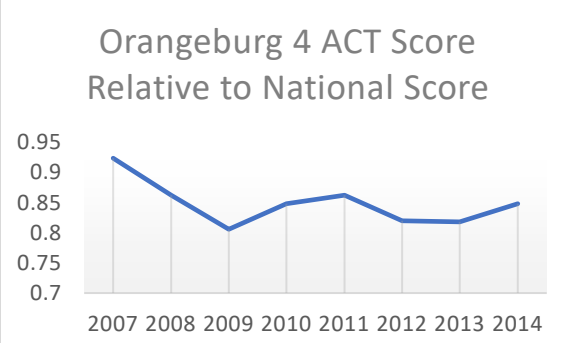

Greenville ACT Score
Relative to National Score
1.5
1
0.5
0
2007 2008 2009 2010 2011 2012 2013 2014

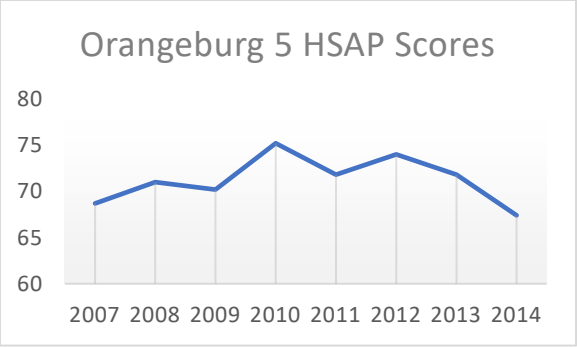

Orangeburg 3 ACT Score
Relative to National Score
0.9
0.8
0.7
2007 2008 2009 2010 2011 2012 2013 2014

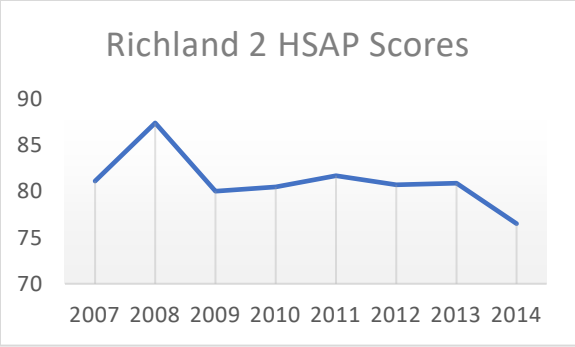

Horry HSAP Scores
86
84
82
80
78
2007 2008 2009 2010 2011 2012 2013 2014

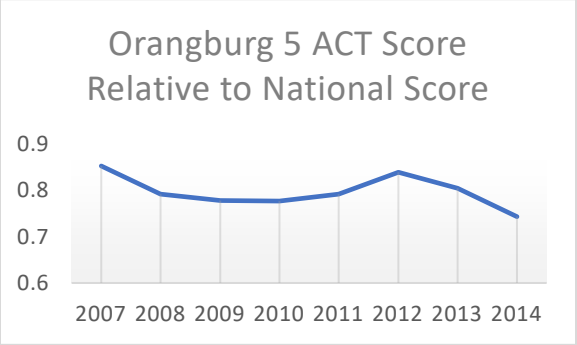

Orangeburg 4 HSAP Scores
80
60
40
20
0
2007 2008 2009 2010 2011 2012 2013 2014

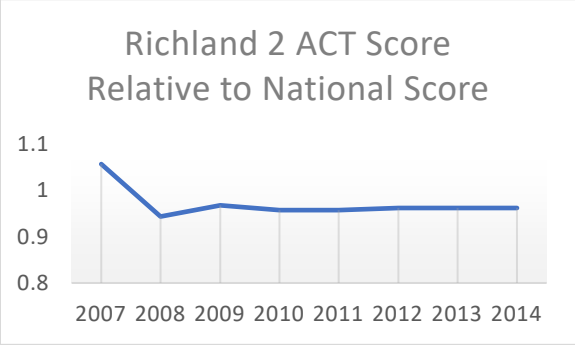

Horry ACT Score Relative to
National Score
1
0.98
0.96
0.94
0.92
2007 2008 2009 2010 2011 2012 2013 2014


Orangeburg 4 ACT Score
Relative to National Score
0.95
0.9
0.85
0.8
0.75
0.7
2007 2008 2009 2010 2011 2012 2013 2014


Orangeburg 5 HSAP Scores
80
75
70
65
60
2007 2008 2009 2010 2011 2012 2013 2014


Richland 2 HSAP Scores
90
85
80
75
70
2007 2008 2009 2010 2011 2012 2013 2014


Orangburg 5 ACT Score
Relative to National Score
0.9
0.8
0.7
0.6
2007 2008 2009 2010 2011 2012 2013 2014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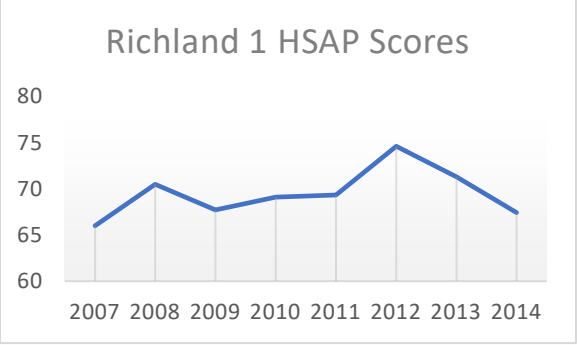
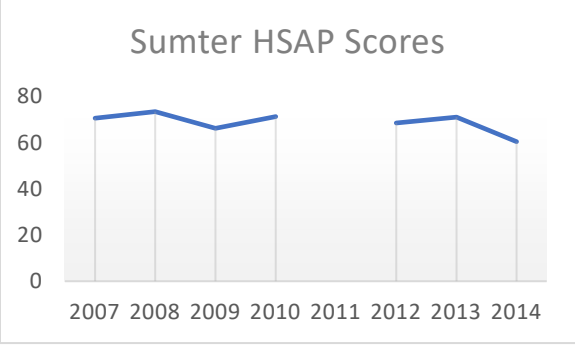
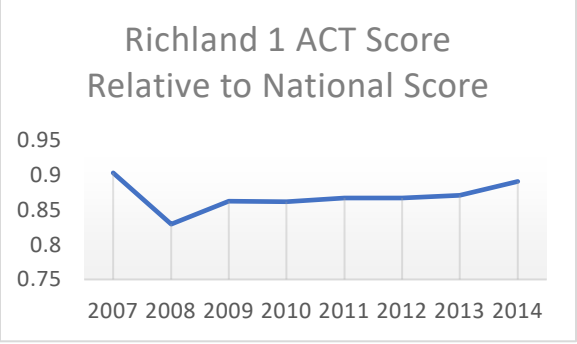
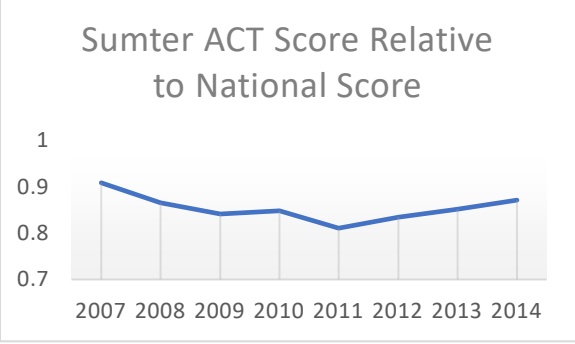
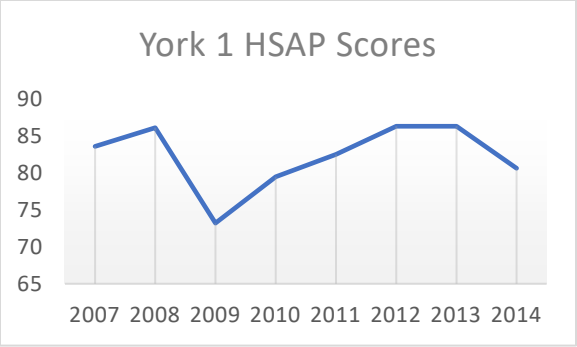
Relative to National Score
1.1
1
0.9
0.8
2007 2008 2009 2010 2011 2012 2013 2014

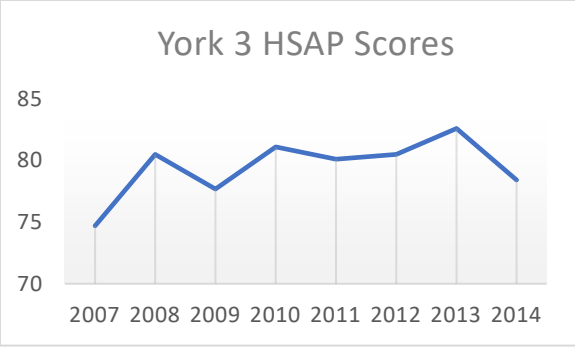

Richland 1 HSAP Scores
80
75
70
65
60
2007 2008 2009 2010 2011 2012 2013 2014

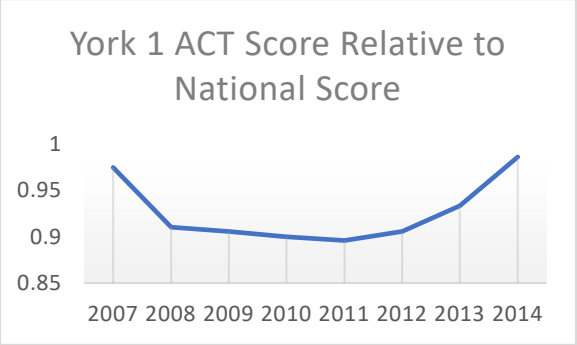

Sumter HSAP Scores
80
60
40
20
0
2007 2008 2009 2010 2011 2012 2013 2014

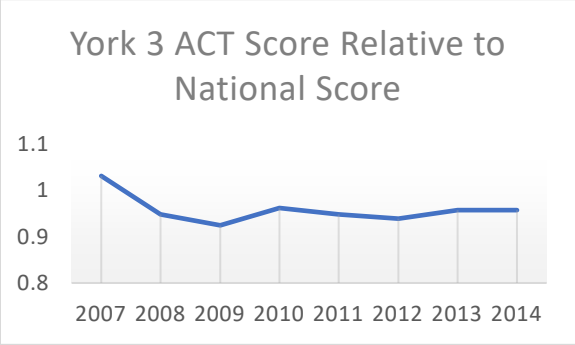

Richland 1 ACT Score
Relative to National Score
0.95
0.9
0.85
0.8
0.75
2007 2008 2009 2010 2011 2012 2013 2014

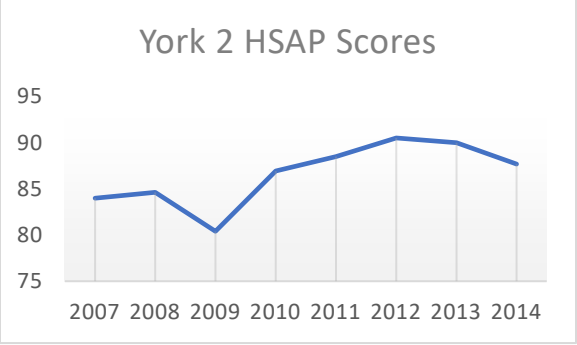

Sumter ACT Score Relative
to National Score
1
0.9
0.8
0.7
2007 2008 2009 2010 2011 2012 2013 2014

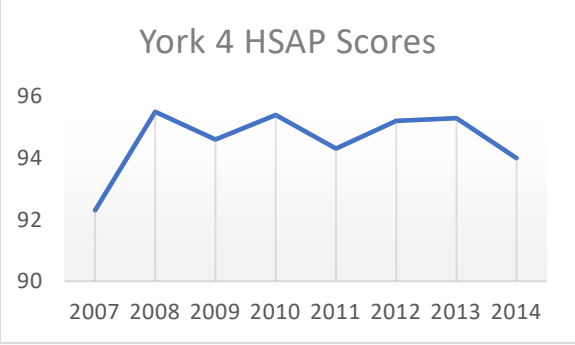

York 1 HSAP Scores
90
85
80
75
70
65
2007 2008 2009 2010 2011 2012 2013 2014

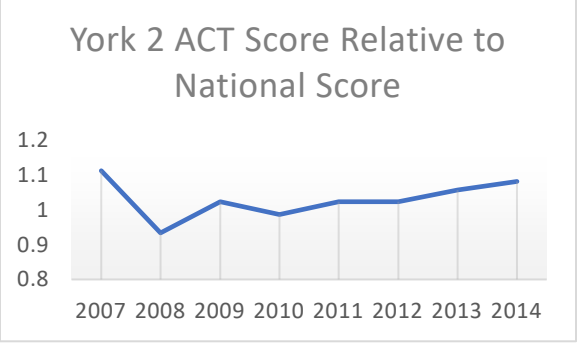

York 3 HSAP Scores
85
80
75
70
2007 2008 2009 2010 2011 2012 2013 2014

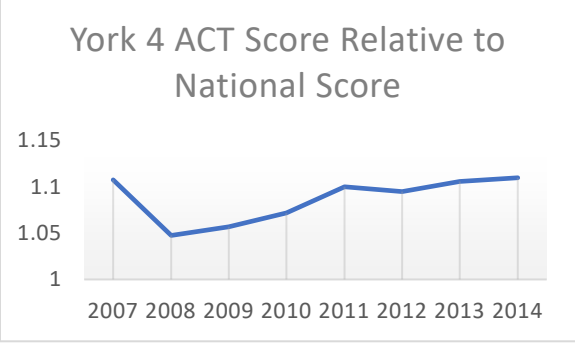

York 1 ACT Score Relative to National Score
1
0.95
0.9
0.85
2007 2008 2009 2010 2011 2012 2013 2014


York 3 ACT Score Relative to National Score
1.1
1
0.9
0.8
2007 2008 2009 2010 2011 2012 2013 2014


York 2 HSAP Scores
95
90
85
80
75
2007 2008 2009 2010 2011 2012 2013 2014


York 4 HSAP Scores
96
94
92
90
2007 2008 2009 2010 2011 2012 2013 2014


York 2 ACT Score Relative to National Score
1.2
1.1
1
0.9
0.8
2007 2008 2009 2010 2011 2012 2013 2014


York 4 ACT Score Relative to National Score
1.15
1.1
1.05
1
2007 2008 2009 2010 2011 2012 2013 2014

Appendix D: South Carolina School District Report Card Summary

Table D1 School District Report Card Absolute Rating

	Absolute Rating						
District	2006	2007	2008	2009	2010	2011	2012
Allendale	At-risk	At-risk	At-risk	At-risk	At-risk	At-risk	At-risk
Charleston	At-risk	Below Average	Average	Average	Average	Good	Good
Edgefield	Average	Average	Average	Below Average	Average	Average	Average
Florence 1	Below Average	Average	Average	Below Average	Average	Average	Excellent
Florence 2	Average	Average	Below Average	Below Average	Average	Average	Good
Florence 3	At-risk	Below Average	Below Average	Below Average	Average	Good	Good
Florence 4	Below Average	Below Average	At-risk	At-risk	Below Average	Average	At-risk
Florence 5	Average	Average	Average	Below Average	Average	Excellent	Excellent
Greenville	Average	Average	Average	Average	Average	Good	Good
Horry	Average	Average	Average	Average	Good	Good	Good
Orangeburg 3	na	na	na	na	na	na	na
Orangeburg 4	na	na	na	na	na	na	na
Orangeburg 5	na	na	na	na	na	na	na
Richland 1	Below Average	Below Average	Below Average	Below Average	Below Average	Below Average	Below Average
Richland 2	Average	Average	Average	Average	Good	Good	Excellent
Sumter	na	na	na	na	na	na	Good
Sumter 2	Average	Average	Below Average	Below Average	Average	good	na
Sumter 17	Average	Average	Below Average	Below Average	Average	Average	na
York 1	Average	Average	Average	Below Average	Average	Average	Good

York 2	Good	Good	Good	Average	Excellent	Excellent	Excellent
York 3	Average	Below Average	Below Average	Average	Average	Good	Good
York 4	Excellent	Good	Excellent	Excellent	Excellent	Excellent	Excellent

Source: South Carolina Department of Education, School District Report Cards

Table D2 School District Report Card Growth Rating

	Growth Rating						
District	2006	2007	2008	2009	2010	2011	2012
Allendale	At-risk	At-risk	Below Average	Good	At-risk	Good	Excellent
Charleston	At-rsk	Average	Excellent	At-risk	Below Average	Excellent	Good
Edgefield	Below Average	Below Average	Average	At-risk	Excellent	Below Average	At-Risk
Florence 1	At-risk	Excellent	Average	At-risk	Excellent	Average	Excellent
Florence 2	At-risk	At-risk	At-risk	At-risk	Average	Below Average	Good
Florence 3	At-risk	Excellent	Below Average	At-risk	Good	Excellent	Good
Florence 4	Good	Below Average	Below Average	At-risk	Average	Below Average	At-risk
Florence 5	Average	Below Average	Good	Below Average	Average	Below Average	Good
Greenville	Average	Average	Average	Below Average	Average	Average	Good
Horry	Average	Below Average	Average	At-risk	Good	Average	Average
Orangeburg 3	na	na	na	na	na	na	na
Orangeburg 4	na	na	na	na	na	na	na
Orangeburg 5	na	na	na	na	na	na	na
Richland 1	At-risk	Average	Excellent	Average	At-risk	Excellent	Good
Richland 2	Below Average	Good	Average	At-risk	Good	Average	Good
Sumter	na	na	na	na	na	na	Below Average
Sumter 2	At-risk	Below Average	Below Average	At-risk	Average	Below Average	na
Sumter 17	At-risk	Average	Below Average	Below Average	Average	Average	na
York 1	At-risk	Average	Below Average	At-risk	Good	Good	Good
York 2	Below Average	Average	Average	At-risk	Excellent	Good	Excellent

York 3	At-risk	At-risk	Average	Average	Average	Average	Average
York 4	Good	At-risk	Excellent	Good	Excellent	Good	Good

Source: South Carolina Department of Education, School District Report Cards

Appendix E

South Carolina NAEP Scores

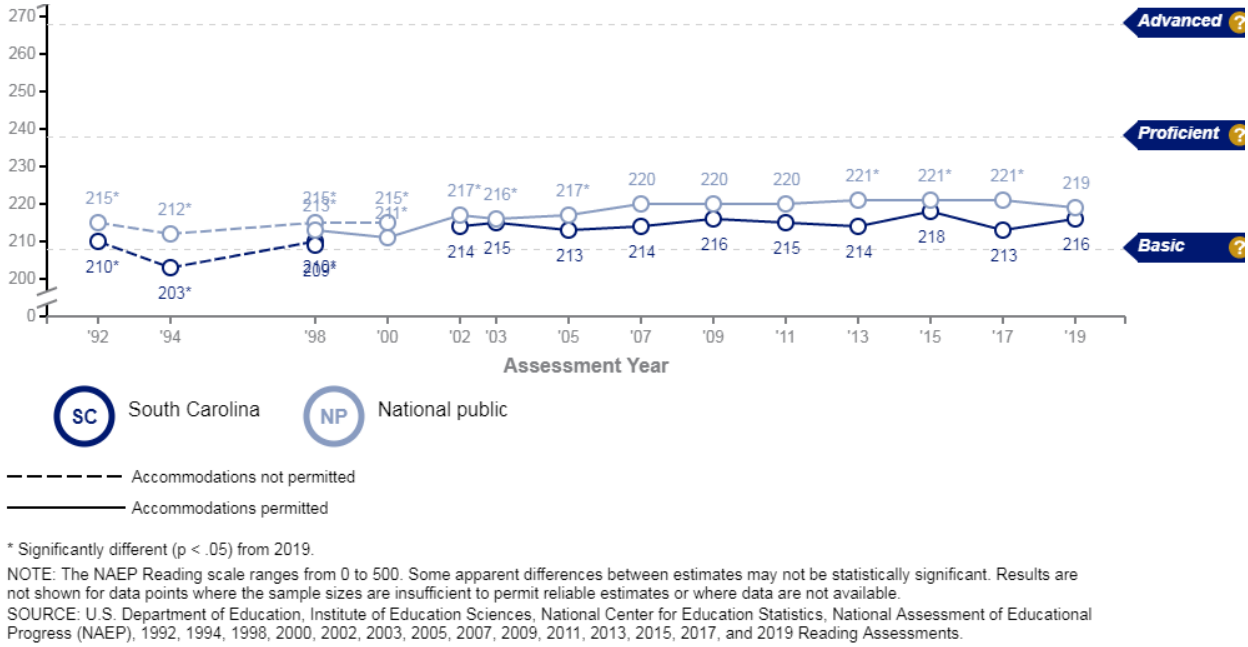
In this appendix we review the National Assessment of Educational Progress (NAEP) data for South Carolina in order to provide context on the educational achievements of the state system. For both reading and mathematics we present NAEP scores for fourth and eighth grade students in South Carolina, with comparisons to the nation as a whole for the time period from 1992 or 1998 (depending on data) through 2019.

Reading

In 2019, fourth-grade students in South Carolina scored an average of 216 on the reading examination, which was lower than the average of 219 scored by students across the nation. The South Carolina score is significantly lower than that in 24 states[81] and significantly higher than that of four states (not significantly different from the scores in 22 states). Thirty-two percent of South Carolina students are considered reading proficient and 8 percent are considered advanced. For Black students, the average score was 31 points below that for White students in 2019, which was not significantly different than the 29-point difference in 1998.

As illustrated in figure E1, South Carolina fourth graders scored six points below the national average in 2007. Subsequently, South Carolina scores have fluctuated from three points below in 2015 and 2019, to eight points below in 2017.

Figure E1 NAEP Grade 4 Reading Average Scale Scores, South Carolina and National Public, Selected Years, 1992 to 2019



* Significantly different ($p < .05$) from 2019.

NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant. Results are not shown for data points where the sample sizes are insufficient to permit reliable estimates or where data are not available.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1994, 1998, 2000, 2002, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017, and 2019 Reading Assessments.

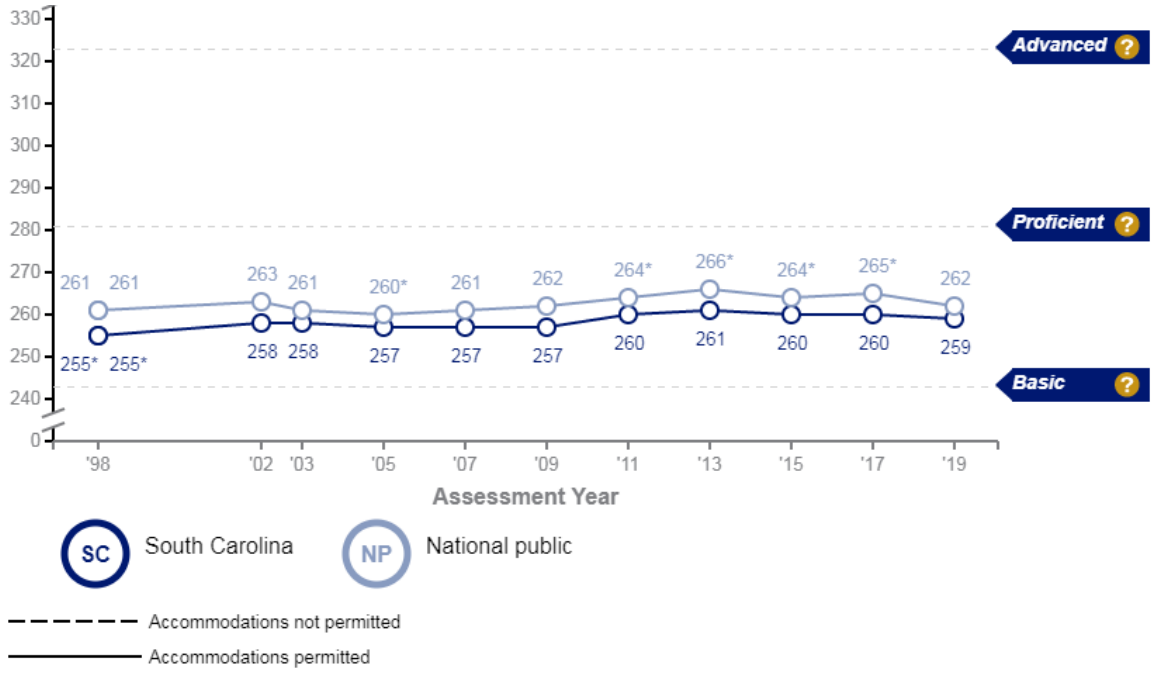
Source: National Center for Education Statistics, Nation's Report Card

[81] We have included the District of Columbia as a state in this appendix.

At the eighth-grade level in 2019, South Carolina students scored 259 on the reading examination, which is below the national average of 262. The South Carolina score is significantly lower than that in 33 states and significantly higher than that of five states (not significantly different from the scores in 12 states). At the eighth-grade level, 29 percent of South Carolina students are considered reading proficient and three percent are considered advanced. For Black students, the average score was 28 points below that for White students in 2019, which was not significantly different than the 25-point difference in 1998.

As shown in figure E2, South Carolina students scored four points below the national average in 2007. Subsequently, the gap between South Carolina and the nation as a whole has not narrowed, fluctuating between three to six points depending on the year.

Figure E2 NAEP Grade 8 Reading Average Scale Scores, South Carolina and National Public, Selected Years, 1998 to 2019



* Significantly different ($p < .05$) from 2019.

NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1998, 2002, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017, and 2019 Reading Assessments.

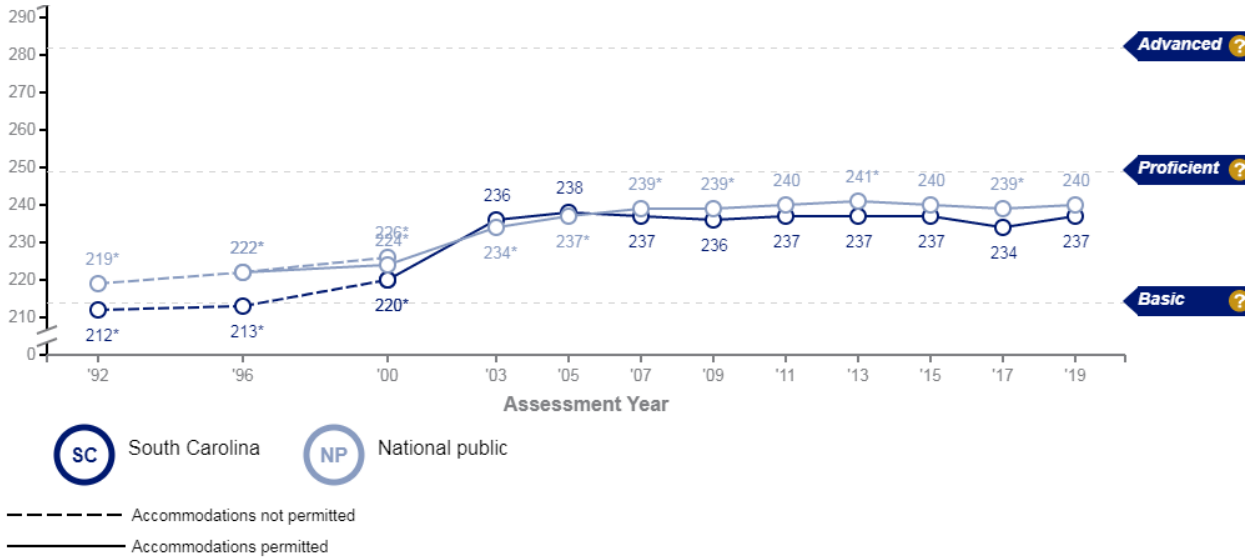
Source: National Center for Education Statistics, Nation's Report Card

Mathematics

In 2019 fourth-grade students in South Carolina scored an average of 237 on the mathematics examination, which was lower than the average score of 240 for students across the nation. The South Carolina score is significantly lower than that in 24 states and significantly higher than that of six states (not significantly different from the scores in 20 states). Thirty-six percent of South Carolina students are considered math proficient and 7 percent are considered advanced. For Black students, the average score was 29 points below that for White students in 2019, which was not significantly different from the 30-point difference in 2000.

As shown in Figure E3, South Carolina fourth graders scored just below the national average in 2007. Subsequently, South Carolina scores have fluctuated from three points below in 2009 and 2015, to five points below in 2017.

Figure E3 NAEP Grade 4 Mathematics Average Scale Scores, South Carolina and National Public, Selected Years, 1992 to 2019



* Significantly different ($p < .05$) from 2019.

NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant. Results are not shown for data points where the sample sizes are insufficient to permit reliable estimates or where data are not available.

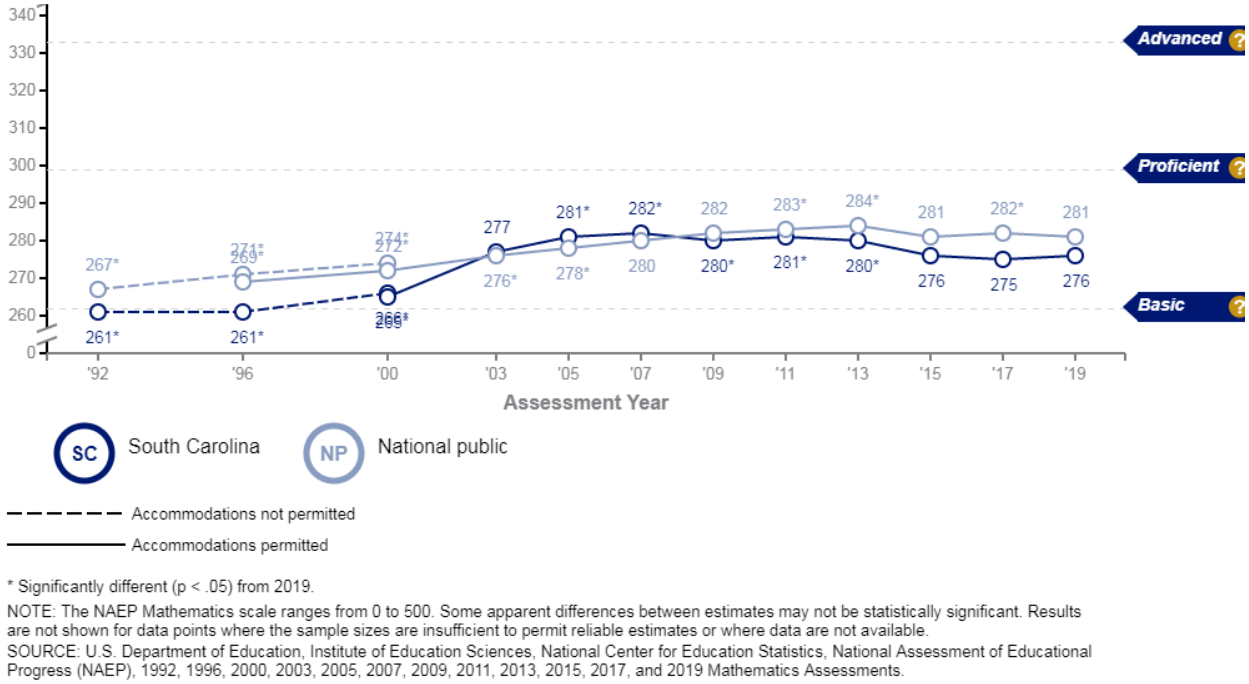
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1996, 2000, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017, and 2019 Mathematics Assessments.

Source: National Center for Education Statistics, Nation's Report Card

In 2019, eighth grade students in South Carolina scored an average of 276 on the mathematics examination, which was lower than the average score of 281 for students across the nation. The South Carolina score is significantly lower than that in 33 states and significantly higher than that of five states (not significantly different from the scores in 12 states). Twenty-nine percent of South Carolina students are considered math proficient and 8 percent are considered advanced. For Black students, the average score was 34 points below that for White students in 2019, which was not significantly different from the 30-point difference in 2000.

As shown in Figure E4, South Carolina eighth graders scored two points above the national average in 2007. Subsequently, South Carolina scores have lagged the nation, with the scores in 2019 five points lower.

Figure E4 NAEP Grade 8 Mathematics Average Scale Scores, South Carolina and National Public, Selected Years, 1992 to 2019



* Significantly different ($p < .05$) from 2019.

NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant. Results are not shown for data points where the sample sizes are insufficient to permit reliable estimates or where data are not available.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1992, 1996, 2000, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017, and 2019 Mathematics Assessments.

Source: National Center for Education Statistics, Nation's Report Card

Appendix F

An Overview of Literature Related to School Funding and Student Achievement

The Coleman Report cited family as the key determinant of educational outcomes and concluded that school expenditures have an insignificant impact on student performance (Coleman, et al. 1966). Since then, research about whether giving public schools more resources will improve student achievement has produced mixed results. This initially led to a focus on the quality of resources over the quantity, but recent literature has again focused on quantity of resources. One of the primary areas of interest in both old and new literature is teachers. This memo provides a brief overview of the literature and methodologies used.

Measuring Student Achievement

Some of the most frequently used measures of educational outputs are test scores, dropout rates, lifetime earnings, and poverty rates. Scholars use these measures to determine the impact of the quantity and the quality of educational inputs. Many studies measure inputs including classroom resources (such as teachers) and financial aggregates (such as expenditure per pupil).

Researchers have conducted studies using student-level data, district-level data, and state-level data, over both short and extended periods of time. Since the mid-1990s, however, scholars have favored data on student achievement that is measured over an extended period because of the cumulative nature of the educational process (Hanushek 2015). Student achievement is a reflection of the resources provided to students in both the past and present. By analyzing student achievement over time, scholars are able to see how resources, such as spending, at different stages influence student performance.

Additionally, there have been significant advances in econometrics. Frequently used methods include instrumental variables and regression discontinuity (Meghir and Rivkin 2010).

Quantity of Resources

A recent report includes information about 90 studies prior to 1995 that use 377 production function estimates to determine the effect of key resources on student performance (Hanushek 2015). There are varying results, but many are not statistically significant, and a handful suggest that student outcomes are worse with more inputs. However, frequently cited studies are those that have found a connection between resources and student outcomes:

- Hedges and Stock (1983) find that class size has a significant impact on pupil achievement and the only way to reduce class size is to properly fund schools.
- McGiverin, Gilman, and Tillitski (1989) perform a meta-analysis of the relation between class size and achievement to confirm that smaller class sizes are linked to better educational outcomes.
- Card and Krueger (1992) published two highly publicized reports that conclude smaller class sizes and other resource inputs have a significantly positive impact on wages later in life.
- Hedges, Laine, and Greenwald (1994) reanalyze data from earlier reviews on the relationship between resource inputs and school outcomes and find that there is a positive relationship between the two.
- Loeb and Page (2000) investigate the relationship between student outcomes and teacher wages to find that increases in teacher salaries have a negative impact on dropout rates.

Eric Hanushek, one of the most notable scholars researching the economics of education, has concluded that the literature on the topic indicates that "there is no clear, systemic relationship between resources and student outcomes" (Hanushek 2015). Yet one of the most recent studies in the field finds that in Texas, increasing per-pupil expenditure has a statistically significant impact on test scores, dropout rates, graduation rates, and college enrollment (Kreisman and Steinberg 2019).

Quality of Resources

After it was generally accepted that studying the quantity of resources will produce mixed results, many scholars shifted their focus. For example, rather than looking at the number of teachers, they studied the quality of teachers. Teacher quality can be linked to qualifications, characteristics such as attitude and expectations, practices, and effectiveness (Goe and Stickler 2008).

A policy brief that compiled literature related to teacher quality concluded that "with the exception of teachers' experience during the first five years of teaching and teachers' mathematics knowledge," scholars have not found a clear relationship between teacher quality and student achievement (Goe and Stickler 2008). The authors claim that this is largely due to the tools, measurements, and data sources available. However, some studies have indicated that there is a relationship between teacher quality and student achievement:

- Hanushek finds that effective teachers generate higher incomes for students and that replacing the worst teachers with just average teachers could dramatically improve U.S. math and science rankings (Hanushek 2011).
- Rice (2003) examines the extent to which teacher characteristics impact teacher effectiveness by analyzing empirical studies. Her major finding is that the research suggests teacher quality, including both experience and preparation, does matter.
- Aaronson, Barrow, and Sander (2007) estimate the importance of teachers in Chicago public high schools and find that improvements in math teacher quality increase student test scores.

Appendix G

The Impact of South Carolina's Property Tax Swap

South Carolina's Act 388 was passed in 2006, but its various parts, including a state-for-local tax swap, were not implemented until the following year. This tax swap removed school operation and maintenance (O&M) taxes from primary residential properties and replaced those taxes with a one-cent sales tax increase. Property taxes due for the 2007 tax year were subject to the changes made by Act 388, while the statewide sales tax increased from 5 to 6 cents on June 1, 2007. This memo describes the impact of the Act 388 tax swap.

The Swap

As mentioned above, primary residential property owners were exempt from paying any O&M taxes for schools when Act 388 was implemented in 2007. This significantly cut property taxes for primary residential homeowners since over half of all property tax revenue in South Carolina goes to schools. State-funded school property tax relief for primary residences increased by more than $500 million (table G1). The statewide sales tax was increased by just a penny in order to make up for the new exemption. Additionally, the sales tax on groceries was decreased to three percent. Local option sales taxes were not affected.

Table G1 Act 388 Tax Swap, First Year Changes

	Before	After
State-Funded Primary Residential Property Tax Relief	$333.7 million	$895.0 million
State Sales Tax	5 percent	6 percent
Sales Tax on Groceries	5 percent	3 percent

Source: Saltzman and Ulbrich 2012

Unfortunately, the sales tax is a less stable source of revenue than the property tax since it is heavily influenced by economic conditions. While property tax revenue may fluctuate slightly depending on home values, land is immobile and unaffected by changes in taxpayer behavior (Youngman 2016).

When the legislature passed Act 388 in 2006, it was unlikely that lawmakers expected the Great Recession that would shortly follow. However, the nation fell into a recession in December of 2007 and didn't emerge from it until June of 2009. This recession caused sales tax revenue to fall short of what the legislature expected when it passed the act. The first year of implementation was expected to generate an additional $84 million in sales tax revenue (Ullrich 2012). In 2008, the sales tax revenue shortfall was more than $34 million. Year-to-year sales tax receipts decreased by 11.7 percent from 2007 to 2008 and another 8.7 percent in from 2008 to 2009 (South Carolina Board of Economic Advisors).

Other states that have executed or contemplated a tax swap did so in a less ambitious fashion. Michigan, for example, removed the local school operations tax on homesteads (owner-occupied homes) when they passed Public Act 145 in 1993. Shortly thereafter, Proposal A replaced the tax with a two-cent sales tax increase. However, they also created a State Education Tax, increased the tax on cigarettes, and implemented a new Real Estate Transfer Tax (Michigan Department of Treasury 2002). While this is an example of a state-for-local tax swap, Michigan improved the stability of their revenue stream by including a statewide property tax in addition to the sales tax.

Pennsylvania has considered, but not yet passed, a bill that would eliminate school property taxes and replace them with increased income and sales taxes (Pennsylvania General Assembly). Texas and Nebraska both considered partial state-for-local tax swaps but failed to pass them.

Impact on Primary Residential Homeowners

Primary residential homeowners were the main beneficiaries of this tax swap. As noted above, the tax swap eliminated more than $500 million in property taxes. However, those who benefit the most from this tax swap are those who own homes with a market value greater than $100,000. Prior to Act 388, there was an exemption in place that eliminated O&M taxes for primary residential homeowners whose homes were valued below $100,000 (Saltzman and Ulbrich 2012). If someone owned a home under $100,000 at the time that the tax swap occurred, they received no additional benefit from the new exemption. In 2005, the median housing value of owner-occupied housing units in South Carolina was $113,100 (U.S. Census). The average home value of owner-occupied houses in our focus counties ranges from $74,000 in Orangeburg to $199,600 in Charleston (Table G2). Our three focus counties that had a median owner-occupied home value below $100,000 also had median incomes below the state average of $39,316.

Table G2 Median Owner-Occupied Home Values in South Carolina Focus Counties, 2005

County	Median Owner-Occupied Home Value ($)	Median Income ($)
Allendale	NA	NA
Charleston	199,600	43,213
Edgefield	NA	NA
Florence	93,100	37,066
Greenville	130,000	42,449
Horry	135,100	38,789
Orangeburg	74,000	30,195
Richland	130,500	43,463
Sumter	86,100	33,696
York	143,500	46,680
State Average	113,100	39,316

Source: U.S. Census Bureau

Impact on the State Budget

As mentioned above, the state budget was impacted by the Great Recession. The state's Board of Economic Advisors forecasted revenue for the 2008-2009 fiscal year, but the actual revenue fell short. General Fund revenue was nearly $130 million less than what they had anticipated, with sales tax revenue accounting for about $34 million of the shortfall (Table G3).

Table G3 State Tax Revenue, 2008-2009

	Estimated Revenue	Actual Revenue	Revenue Shortfall
Sales Tax	2,282,353,185	2,247,876,029	34,477,156
Sales and Income Tax	5,425,400,977	5,309,462,760	115,938,217
Total General Fund	6,171,251,608	6,041,464,093	129,787,515

Source: South Carolina Board of Economic Advisors

The additional sales tax revenue from the one-cent increase was diverted to the Homestead Exemption Fund, but the revenue fell short the first year, and has every year since then (Table G4). With a

commitment to reimburse school districts, the state has to make up for the revenue shortfall by dipping into General Fund revenue. This was especially difficult to do during the recession since General Fund revenue fell short of expectations. In the 2009-2010 fiscal year alone, $123 million of General Fund revenue had to be used for the Homestead Exemption Fund.

Table G4 Homestead Exemption Fund Shortfall, 2007-2019

Year	Revenue Shortfall ($)
2007-2008	14,545,708
2008-2009	58,810,827
2009-2010	123,710,826
2010-2011	91,935,792
2011-2012	107,462,098
2012-2013	116,908,662
2013-2014	110,397,500
2014-2015	90,710,964
2015-2016	75,783,000
2016-2017	47,986,000
2017-2018	32,557,000
2018-2019	17,322,000

Source: South Carolina Board of Economic Advisors

Impact on School District Budgets

State-for-local tax swaps are complex because the collection and distribution of revenue changes. In this case, the state must distribute the additional revenue generated from the increased sales tax. The state made a promise to maintain the same level of school funding for the 2007-2008 school year as the previous year using the additional sales tax revenue. Through a tiered system, the state provided a dollar-for-dollar reimbursement to school districts (Ullrich 2012). This was difficult without the expected revenue increase, but they kept their promise. However, the state did not make any agreements about state aid that was provided to localities that usually went to schools. After an initial increase in funding, the state actually cut K-12 funding by $365 million in the 2009 fiscal year (Ullrich 2012). It is not unusual for state governments to reduce aid during economic downturns, but the timing of Act 388 made the cut in state aid more severe.

In 2012, Saltzman and Ulbrich analyzed the impact of Act 388 on school district funding and found that the tax swap has had a significant impact on school funding across the state. Revenue from all sources increased at an average rate of 2.6 percent between the 2006-2007 and 2009-2010 school years, offsetting inflation and growth in student enrollment. The primary reason that funding increased at all was because of the American Recovery and Reinvestment Act of 2009. This federal aid package provided South Carolina schools with additional funding for the 2010 and 2011 fiscal years. Funding from state and local sources per pupil declined in 40 school districts between 2006 and 2010, while 45 school districts saw an increase. Of the districts that saw a decline in state and local revenue per pupil, 16 were classified as poor. Of the districts that saw an increase, 10 were classified as poor. (Saltzman and Ulbrich 2012)

Beaufort County School District also conducted a study on the impact of Act 388. The district found that before Act 388, local property taxes accounted for nearly 88 percent of the school district's General Fund and after Act 388, this dropped to 67 percent. State-funded school operating tax relief in Beaufort made up about 30 percent of General Fund revenue after the Act 388 (Salazar and Saltzman 2013).

While not always credited, consequences of the tax swap are likely still impacting school budgets years later. Charleston County School District anticipated a $43.5 million budget deficit for the 2021 fiscal year (Bowers 2018). Last year, Sumter School District was declared to have a "fiscal emergency" (WIS News 10 2019). The state had to take over Williamsburg County School District in 2018 due to financial and programmatic issues, as well as poor student academic performance (Brown 2018). Allendale County Schools were taken over by the state in 2017 for similar issues and are still being managed by the state today.

Impact on Businesses, Renters, and Second Homeowners

Act 388 increased the sales tax from 5 to 6 percent at the state level, but there are also 8 different local option sales taxes. The average local sales tax is 1.37 percent, making the combined average 7.37 percent. South Carolina has the 16th highest state sales tax rate, and the 18th highest combined state and local rate. South Carolina's neighbors, Georgia and North Carolina, rank 40th and 36th in state sales tax rates, respectively. For state and local sales taxes combined, Georgia ranks 20th and North Carolina ranks 24th. (Walczak 2018)

The sales tax is regressive because it takes a higher percentage of income from low-income taxpayers than it does from high-income taxpayers (Fisher 2016). By the end of 2007, however, the state eliminated the sales tax on groceries, which is one way of addressing the regressivity of the sales tax.

In addition to bearing a greater property tax burden due to the tax swap, businesses also have a greater sales tax burden. Businesses pay nearly 50 percent of all sales tax revenue in South Carolina. The estimated increase in sales taxes paid by businesses in 2008 was about $250 million (Ullrich 2012). The other groups of taxpayers with a greater burden are non-primary residential property owners and renters. While gaining no benefit from the new property tax exemption, they face a higher sales tax.

Chapter 5:

Property Tax Abatements, Focusing on FILOTs

by

David Merriman, Ph.D. and Daphne A. Kenyon, Ph.D.

Introduction

As noted previously, South Carolina's effective business property tax rates—particularly manufacturing and utility--are high relative to homestead property taxes and neighboring states' business property taxes.[82] These relatively high taxes are largely the product of two factors:

(1) South Carolina's system of classification, which assesses manufacturing and utility parcels at 10.5 percent of market value (effectively a bit lower for manufacturing due to recently passed legislation), other business properties at six percent of market value, and owner-occupied homes at four percent of market value and;

(2) Act 388, which exempts the primary residences of homeowners from property taxes for school operating costs.

Together these two factors have the effect of shifting the responsibility for property tax payments away from homeowners and toward business—especially manufacturing and utilities.

Certain provisions of South Carolina law make it possible for local governments to level the playing field to an extent by reducing the property tax liabilities of firms operating in the state. South Carolina has prepared a number of publications that describe the many business tax incentives that may be available.[83] Here we briefly summarize some of the property tax incentives described in these publications before providing an extended discussion of the most widely used business tax abatement, known as a fee-in-lieu of property taxes or FILOT.

Property tax exemptions or abatements allowed by South Carolina law include:

1. Several categories of business personal property are exempted from taxation. These include inventories, intangible properties, and pollution control equipment.
2. Recent legislation exempts 14.3 percent of manufacturing property from property taxation which will reduce the effective assessment rate on manufacturing property to 9 percent. This reduction will be phased in over six years and faces certain limitations. Also, the reduction does not apply to manufacturing property benefiting from FILOT.
3. There are specific credits for renovation of sites formerly used as textile mills but currently abandoned. These credits can significantly lower property taxes owed on activity at those sites.
4. There are additional credits available for the renovation of any abandoned building if significant investments are made. The required investment varies with the population of the municipality in which the abandoned structure is located and ranges from $75,000 to $250,000 per building.
5. South Carolina provides a five-year exemption or abatement from county property taxes for the facilities of all new enterprises engaged in manufacturing, research and development activities, new corporate headquarters, corporate office facilities, distribution facilities, and all additions to existing corporate headquarters, corporate office facilities, or distribution facilities. There are minimum investment and, in some cases, job creation requirements to qualify for the credits. The abatement does not include the school portion of the local millage. Beginning in year six the abatement terminates. Also, the reduction does not apply to property benefiting from FILOT.

[82] See Chapter 1 for extensive data on how effective property tax rates for manufacturing compare to those for homesteads.

[83] See South Carolina Department of Commerce 2019a, 2019b and 2019c, South Carolina Department of Revenue 2018 and South Carolina Department of Revenue 2015 for more detail. See also Lincoln Institute of Land Policy's property tax database *Significant Features of the Property Tax*.

6. South Carolina allows a local taxing entity to give a property tax credit to a taxpayer who installs a new or existing fire sprinkler system in a new or existing commercial or residential structure if the system is not required by law, regulation, or code.
7. South Carolina Code allows two or more counties to establish a joint industrial or business park, referred to as a multicounty industrial park (MCIP). Property in the industrial park is exempt from the property tax but property owners in the park must pay a fee that is equal to the amount that would have been due in property taxes unless a fee-in-lieu of property taxes has been negotiated.[84]
8. Special Source Revenue Credits (SSRCs) are a discretionary property tax abatement tool used by counties, often in conjunction with MCIP and FILOT, to reimburse companies for costs related to infrastructure, real estate, and personal property.[85]
9. Tax increment finance, which is more of an earmarking device than a tax exemption or abatement device, is also used to promote economic development.[86]

While a number of publications carefully explain these provisions of South Carolina law, it is difficult to tell how widespread their use is, as we could not locate any comprehensive data source documenting use. Our phone interviews with individuals working in the economic development and property tax administration fields in South Carolina suggested that the most widely used and important business property tax incentive was the FILOT sometimes combined with the multicounty industrial park and Special Source Revenue Credits.

Fees in Lieu of Taxes (FILOTs)

FILOT agreements make it possible for South Carolina county governments to reduce the property tax liability of firms that make new investments and create jobs in the state. In many cases, FILOT agreements require payment of a fee in place of the property tax payment and effectively reduce the assessment level of new manufacturing (and in some cases nonmanufacturing) property to six percent. FILOTs can also freeze the property tax millage rate for an extended period. Property subject to the fee usually consists of land, improvements to land, and/or machinery and equipment (excluding some mobile property) located at a project. An in-depth technical description of the rules for FILOT agreements is readily available elsewhere.[87]

A brief nontechnical description is provided for readers that may be unfamiliar with FILOTs. Although there are several flavors of FILOT the basic idea behind each of them is similar—a potential investor agrees to make a substantial new investment in productive capacity (generally, but not always, manufacturing) in South Carolina during a five-year period. The county where the new investment is located signs an agreement with the investor that lowers the assessment rate to six percent for a period of up to 40 years. The county and the investor may also agree to freeze the property tax millage on the new investment at its current level. For very large (so called "super") investments of $500 million or more the investment period may be lengthened to eight years, the assessment ratio may be lowered to four percent, and there is an added requirement that at least 1,000 jobs must be created.

Such an arrangement can significantly reduce the property tax liability of a firm. For example, under a FILOT agreement between York County and Oerlikon Balzers Coating Inc., dated March 7, 2016, the

[84] Multicounty industrial parks are described in more detail in Appendix C.
[85] Special source revenue credits are described in more detail in Appendix C.
[86] The use of tax increment finance in South Carolina is described in Appendix B.
[87] See for example South Carolina Department of Revenue (2018) *South Carolina Tax Incentives for Economic Development.*

investor agreed to invest at least $15 million and create 18 jobs by investing in an industrial park located in York County over the five-year period beginning the day the agreement was put into effect.[88] The county agreed that the assessment ratio would be lowered to six percent and the tax rate would be frozen at 391.6 mills for a period of 30 years.

To understand the significant benefits of such an agreement, a simplified example is provided. Assume the entire $15 million investment was committed to a project on the first day the agreement went into effect, and no further investments were made after that date. Under existing law, the $15 million investment would be assessed at 10 percent or $1,500,000.[89] Applying the tax rate of 391.6 mills the tax liability on the investment would be $587,400. If the assessment ratio were reduced to just 6 percent the assessed value would be $900,000 and, applying the millage rate of 391.6, the tax liability on the investment would be $352,440 saving the company $234,960 as shown in Table 5.1. If we assume that the firm would achieve these same savings in each year and assume that future savings are discounted at a rate of five percent the present value of 30 years of savings would be approximately $4 million. Therefore, in this simplified example, the FILOT mechanism has reduced the effective cost of the initial investment from about $15 million to about $11 million, a reduction of about 25 percent.

Table 5.1 Property Tax Calculation Example

	Normal Calculation	**Fee-in-Lieu Calculation (Simplified)**
Total Investment	$15,000,000	$15,000,000
Assessment Ratio	10.0%	6%
Assessed Value	$1,500,000	$900,000
Millage	391.6	391.6
Tax Due	$587,400	$352,440
Savings Relative to Normal		$234,960

Source: Author's calculation

Of course, the example is simplified in a number of ways: the investor is unlikely to make the entire $15 million investment on the day the agreement is culminated. A delay in making the investment could reduce the investors' savings. The five percent discount rate may be either too high or too low to represent the real opportunities facing this investor. The frozen millage rate of 391.6 mills could change over time in the absence of the FILOT and the assumption—implicit in this calculation—that it does not, is likely to understate the benefit to the investor. It is, therefore, difficult to measure precisely the benefits of a FILOT agreement to an investor, but it is reasonable to suggest that, for many investors, FILOTs may reduce the cost of investment by as much as 25 percent.

[88] See Fee-in-Lieu of Tax Agreement by and among York County, South Carolina and Oerlikon Balzers Coating USA Inc., as Sponsor and Beacon Waterford LLC, as Sponsor Affiliate Dated as of March 7, 2016.
[89] Although the assessment ratio for manufacturing is nominally 10.5 percent, Act 40 of 2017 created a special exemption for manufacturing which reduces the effective assessment ratio, on a phased in schedule from 2018 to 2023. In 2019 the effective assessment ratio for manufacturing is 10 percent (SC Revenue Ruling #18-13).

See Table 5.2 for a comparison of the major features of the Simplified FILOT and the Enhanced Simplified FILOT. There are basically three types of FILOTs available in South Carolina: Big Fee, Little Fee, and Simplified Fee. But since each of the main types of FILOT can be turned into a Super or Enhanced FILOT, one might consider there to be six types of FILOTs. However, both interviews and data available from the Department of Revenue indicate that for our focus counties simplified FILOTs are the most often used.

Table 5.2 Key Features of Two FILOT Programs

	Simplified FILOT	**Enhanced Simplified FILOT**
Purpose	To help compensate for South Carolina's high property tax	
Industry Focus	Manufacturing	
Minimum Required Investment	$2.5 million or $1 million	$150 million plus 125 jobs or $400 million
Eligible Property	Land, improvements to land, machinery & equipment	
Assessment Ratio	No lower than 6%	No lower than 4%
Maximum Length of Agreement	50 years	65 years
Millage Rate 1st Year	No lower than cumulative property tax millage of all relevant taxing entities	
Millage Rate in Succeeding Years	Can be frozen or adjusted up or down every 5 years	
Valuation of Property 1st Year	Either original income tax basis without regard for depreciation or appraised value	
Valuation of Property in Succeeding Years	Either value is frozen or subject to reappraisal no more than once every 5 years	
Approved By	County commission	
School Board Notification or Approval Required?	No	
Accountability Mechanism	Unclear	
Grounds for Revocation	Investment not achieved within required time period	

Sources: Department of Revenue 2018, SC code Chapter 44

The original FILOT, enacted in 1976, is now known as "Big Fee." Under that program, a business receiving a fee-in-lieu of taxes had to transfer ownership of its property to the county and lease it back as well as issue bonds. The most recently enacted FILOT, known as Simplified Fee, was enacted in 1997. This FILOT structure eliminated the requirements to transfer title or to issue bonds.

Estimates of Property Taxes Abated

In 2015, the Governmental Accounting Standards Board issued GASB Statement No. 77 in order to provide more transparency around tax abatements. The first filings by local governments in South Carolina were expected in late 2017 (Klinger 2017). It is important to note, though, that not all tax abatements are covered under GASB 77 and the use of tax increment finance (TIF, which is typically a way to earmark funds for dedicated use rather than a tax abatement device) is not covered by GASB77. It is also important to note that preliminary reporting in local government CAFRs (Comprehensive Annual

Financial Reports) is spotty. This is the first time that many tax abatement programs throughout the country have had any estimates of tax revenue foregone.

Table 5.3 Property Tax Abatements, County Governments, 2018

County	Property Taxes Abated ($)	Total Property Tax Levy ($)	Amount Abated as a % of Total Property Tax
Allendale	NA	NA	NA
Charleston	3,061,712	126,556,746	2.4
Edgefield	89,073	27,926,438	0.3
Florence	948,780	34,850,908	2.7
Greenville	6,699,788	598,191,409	1.1
Horry	177,567	149,757,000	0.1
Orangeburg	4,100,000	39,438,463	10.4
Richland	4,249,673	769,604,459	0.6
Sumter	3,200,000	28,048,465	11.4
York	3,433,000	119,500,000	2.9

Source: County Comprehensive Annual Financial Reports

See Table 5.3 for reported property tax abatements for nine of the ten focus counties. Reported property taxes abated vary widely from $89,000 in Edgefield to $4.2 million in Richland. One reason for the variation in dollars reported may be a quirk of South Carolina property tax abatement features in combination with a perhaps peculiar interpretation of the GASB 77 requirement. As noted in the introduction, in the absence of FILOT, there is an automatic five-year abatement of county property taxes for many new investments. Apparently, some local government officials reasoned that by providing a FILOT instead of the automatic five-year abatement, the county could say that it raised property taxes rather than abated them (Wren 2018). This could account for some of the suspiciously low numbers in the "property taxes abated column."

The table also reports property taxes abated as a percentage of total property tax revenue. Again, the percentages vary widely. However, two counties report that 2018 property taxes abated exceeded 10 percent of total property taxes.

See Table 5.4 for estimates by school district. Several school districts did not report property taxes abated in their CAFRs or annual audit reports, and the reported numbers vary widely. However, it is of interest to note that the largest property tax abatement numbers in the school district table far exceed the largest property tax abatement numbers in the county table. Greenville School District and Charleston School District report over $30 million in property taxes abated in 2018. Some, but not all, of the difference in the reported property tax abatements for school districts compared to county governments can be explained by the fact that school district mills are about twice county government mills in our focus counties (South Carolina Association of Counties 2018).

Table 5.4 Property Tax Abatements, School Districts, 2018

County	School District	Property Taxes Abated ($)
Allendale	Allendale	NA
Charleston	Charleston	30,297,939
Edgefield	Edgefield	230,613
Florence	Florence 1	12,839,651
	Florence 2	NA
	Florence 3	NA
	Florence 4	NA
	Florence 5	7,874
Greenville	Greenville	37,542,000
Horry	Horry	502,846
Orangeburg	Orangeburg 3	NA
	Orangeburg 4	449,000
	Orangeburg 5	NA
Richland	Richland 1	11,529,903
	Richland 2	9,965,699
Sumter	Sumter	6,000,000
York	York 1	54,832
	York 2	436,000
	York 3	463,976
	York 4	873,198

Source: School District Annual Audit Reports and Comprehensive Annual Financial Reports

Growth in Use of FILOTs

FILOT has been a popular tool and the assessed value of property under FILOT has grown dramatically over time. Figure 5.1 shows the nominal assessed value of property in South Carolina that is assessed as manufacturing[90] and is assessed under FILOT.[91]

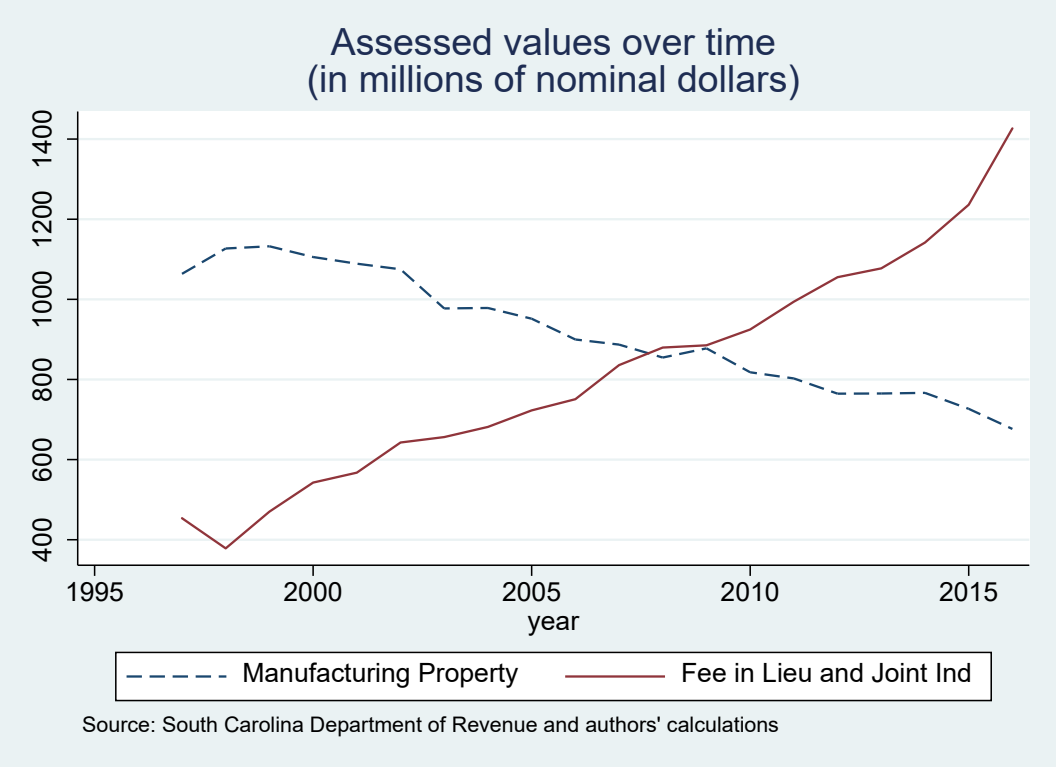
As shown in Figure 5.1, the assessed value of non-FILOT manufacturing property has fallen over time in South Carolina from about $1.1 billion dollars in 1997 to around $700 million in 2016 (most recent data available). During the same period, the amount of property assessed under FILOT has grown from a little over $400 million dollars in 1997 to more than $1.4 billion in 2016. The value of property under FILOT actually surpassed the value of manufactured assessed properties in 2008.[92]

[90] Non-manufacturing properties are sometimes included in FILOT arrangements. Unfortunately, we were unable to obtain any information about what share of FILOT properties are manufacturing versus non-manufacturing. Local informants told us that they believed most FILOT properties are manufacturing.

[91] The South Carolina Department of Revenue (DOR) determines assessments for properties subject to FILOT. The process for determining such assessments differs in substantial ways from the method of determining assessments for other properties of the same class (usually manufacturing) and may be related to the fair market value of the property in complex ways. Appendix A explains this in more detail. Another potential source of error in our FILOT time series is that it includes both FILOT and multicounty industrial parks. Many multicounty industrial parks use FILOT, however, we do not know how close to 100 percent that number is.

[92] The rate of growth in FILOT assessments was slightly greater after enactment of Act 388. The annual rate of growth from 1997 to 2006 was 6.3 percent, and from 2007 to 2016 was 6.7 percent.

Figure 5.1

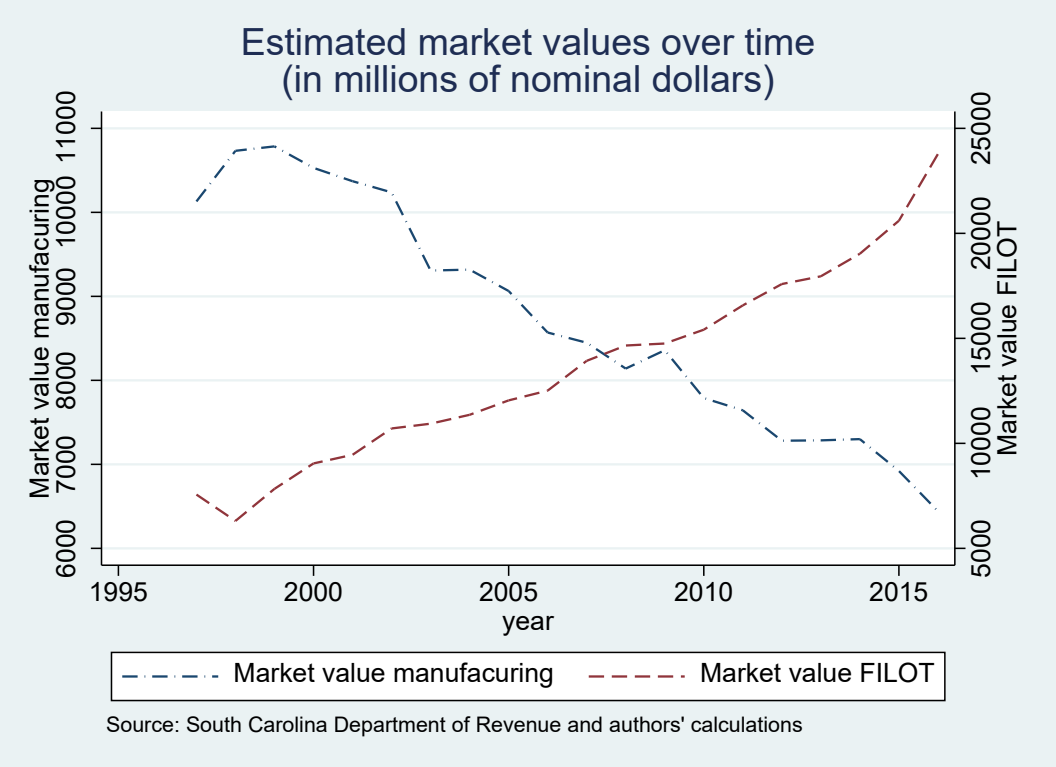


This graph may understate the relative change in market values of manufacturing and FILOT properties since during this period manufacturing parcels were generally assessed at 10.5 percent of market value while FILOT parcels were most often assessed at six percent or even four percent of market value.[93] Unfortunately, we do not know what share of FILOT parcels were assessed at each level. If we assume that all FILOT parcels are assessed at six percent of market value and all manufacturing parcels are assessed at 10.5 percent of market value, we obtain figure 5.2.

As shown in Figure 5.2 the market value of FILOT parcels may have exceeded the market value of manufacturing parcels as early as 2003 and by 2016 the market value of FILOT parcels may have been more than three and half times as large as the market value of manufacturing parcels and valued at more than $25 billion.

[93] As mentioned above, under current legislation the assessment level of non-FILOT manufacturing property will be gradually reduced to about nine percent but the calculations in Figure 5.2 represent the assessment level during the years prior to 2016. We were not able to obtain comprehensive data on the assessment levels used in FILOT agreements. Local informants told us that in the vast majority of cases assessment levels of six percent are used.

Figure 5.2



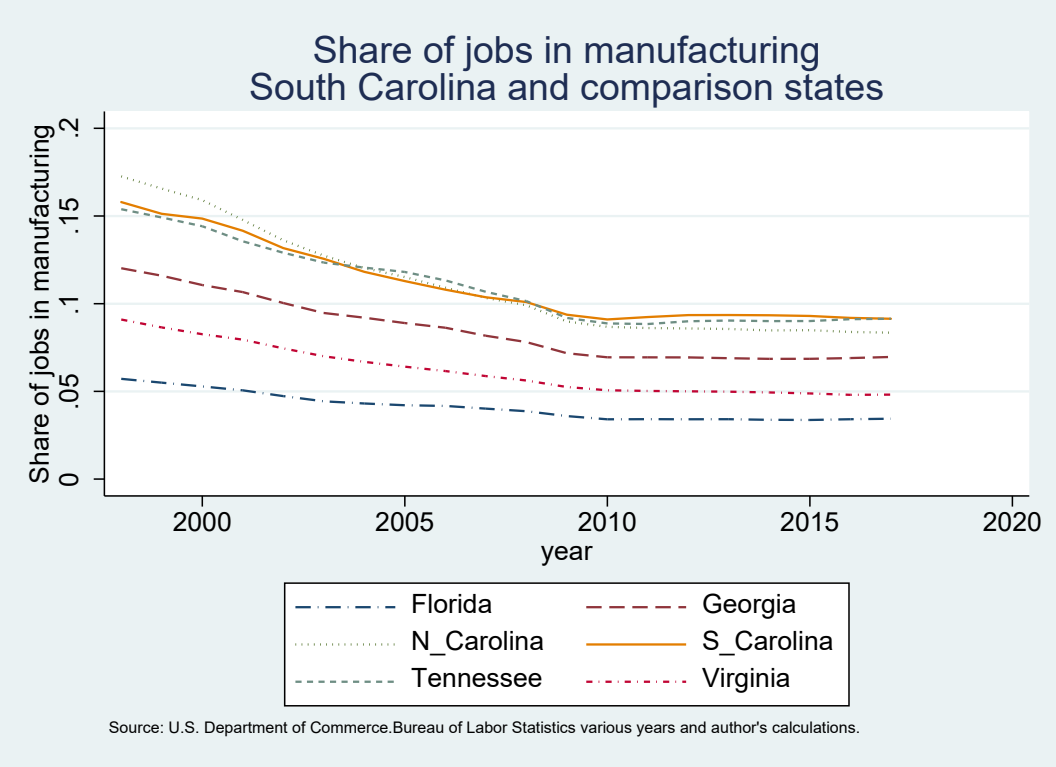
What Economic Effects Does Growth in FILOTs Have?

The FILOT program might be thought of as an attempt to counter South Carolina's relatively unfavorable property tax treatment of manufacturing activity.[94] One might ask whether the use of FILOTS has allowed South Carolina to "level the playing field" for economic development given its high statutory effective tax rates for business or whether the state's *growing* use of FILOTs has led to an improvement in South Carolina's ability to attract and retain economic activity. Although it is difficult to isolate a specific factor that is responsible for a state's economic environment, we can provide some relevant information by comparing South Carolina's economic performance to the economic performance of nearby states as follows: Florida, Georgia, North Carolina, Tennessee, and Virginia.

Figure 5.3 shows South Carolina's share of manufacturing employment over time and compares it to several other states.

[94] See Chapter 1 for extensive data on how effective property tax rates for manufacturing compare to those for homesteads.

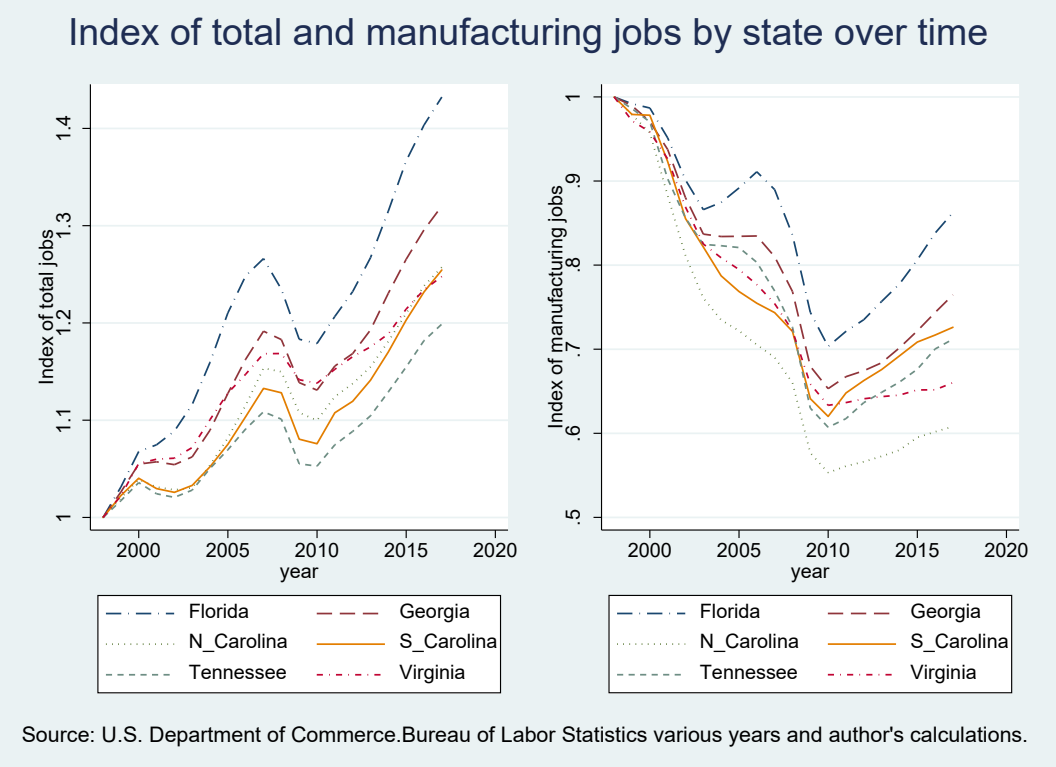
Figure 5.3



As shown in the figure, South Carolina has a very high share of its total employment in the manufacturing sector. Going back to 1997, the only comparison state with a higher share of employment in manufacturing was North Carolina. Consistent with national and international trends, all of the states have seen some decline in the share of employment in manufacturing but the decline in the share of jobs in manufacturing in South Carolina has not been very different from the declines experienced by North Carolina or Tennessee. In 2016, South Carolina has a share of jobs in manufacturing equal to that in Tennessee, and greater than Florida, Georgia, North Carolina, and Virginia.

The left-hand side of Figure 5.4 shows an index of total and manufacturing employment in South Carolina and comparison states. The growth of total employment in all of the states has been positive but was noticeably slowed by the recessions that began in 2001 and the great recession that began in 2007. South Carolina's total employment grew by about 25 percent between 1997 and 2016. This rate of growth placed it above Tennessee, about equal with Virginia and North Carolina, but below Florida and Georgia.

Figure 5.4



Source: U.S. Department of Commerce.Bureau of Labor Statistics various years and author's calculations.

The right-hand side of Figure 5.4 shows an index of manufacturing employment in South Carolina and comparison states. As noted above South Carolina's manufacturing employment has fallen like all of the comparison states. Again, South Carolina is in the middle of the pack and had less relative decline than North Carolina, Virginia and Tennessee but more decline than Florida and Georgia.

The bottom line when looking at these figures is that South Carolina's total and manufacturing employment performance looks very similar to its neighboring states. Macroeconomic factors such as recessions and recovery strongly influence all states' performance. These graphs are consistent with the hypothesis that FILOT, possibly together with other tax abatements, has allowed South Carolina to "level the playing field" despite high statutory business effective tax rates. The evidence in these graphs is not consistent with the hypothesis that growing use of FILOT has led to an improvement in South Carolina's ability to attract and retain economic activity.

We can also ask whether the use of FILOT has stimulated the growth of manufacturing jobs or the growth of total jobs in our ten focus counties. Figure 5.5 shows thousands of total jobs (right axis) and manufacturing jobs (left axis) over time in each county.

Figure 5.5

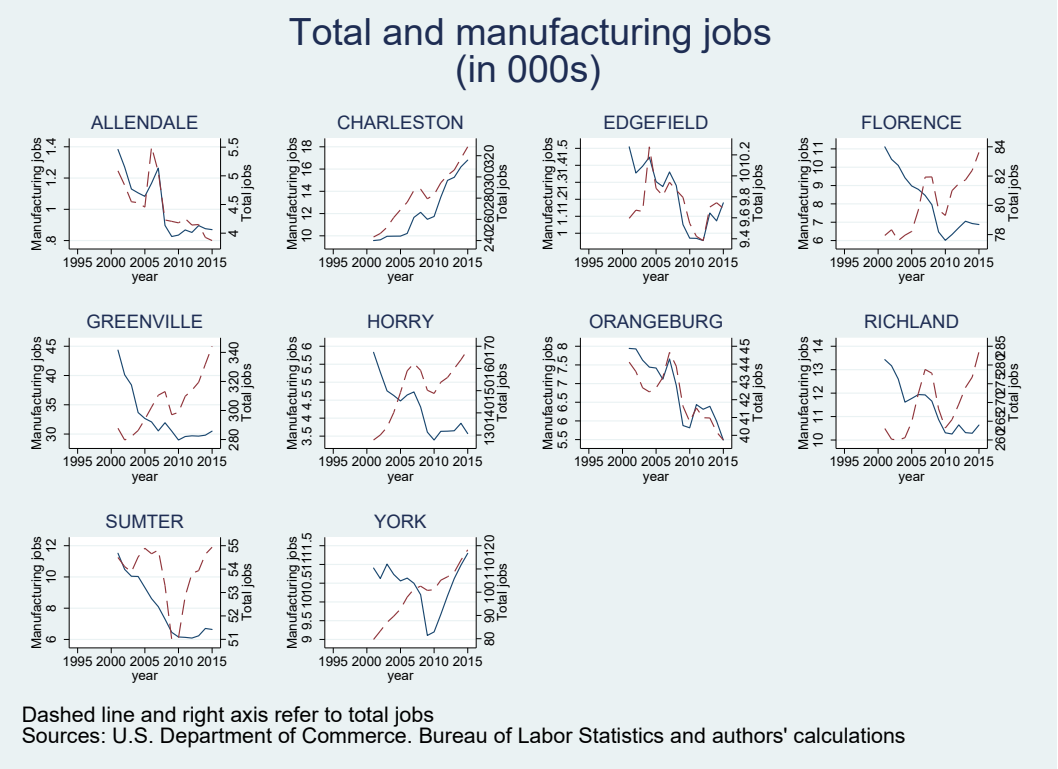


Figure 5.5 shows total and manufacturing jobs over time in each our focus counties.[95] Total jobs have risen in Charleston, Edgefield, Florence, Greenville, Horry, Richland, Sumter and York but fallen in Allendale and Orangeburg. Manufacturing jobs have fallen in both of the counties in which total jobs have fallen and also have fallen in Edgefield, Florence, Greenville, Horry, Richland and Sumter. The only counties that have gained manufacturing jobs have been Charleston and York.

To what extent are county-specific losses or gains in total and manufacturing jobs explained by the use of FILOT?

With the exception of Allendale, which has had constant FILOT assessments and Sumter which has had falling FILOT assessments since the mid-2000s each of our focus counties has had increasing FILOT assessments (figure 5.6). In Allendale the total number of jobs has fallen while in Sumter jobs rose substantially especially following the end of the great recession. Charleston, Edgefield, Florence, Greenville, Horry, Richland and York saw increases in both FILOT assessments and jobs, however, Orangeburg saw increases in FILOT assessments without increases in jobs.

[95] Larger versions of the graphs in Figure 5.5 are shown in Appendix D.

Figure 5.6

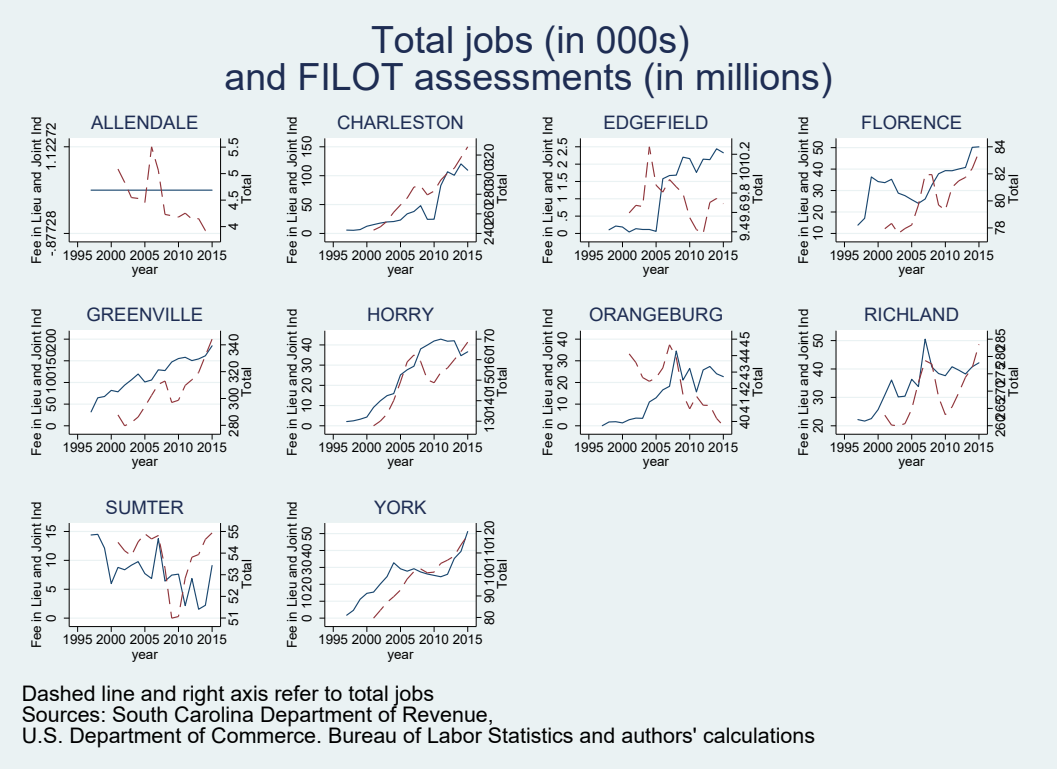
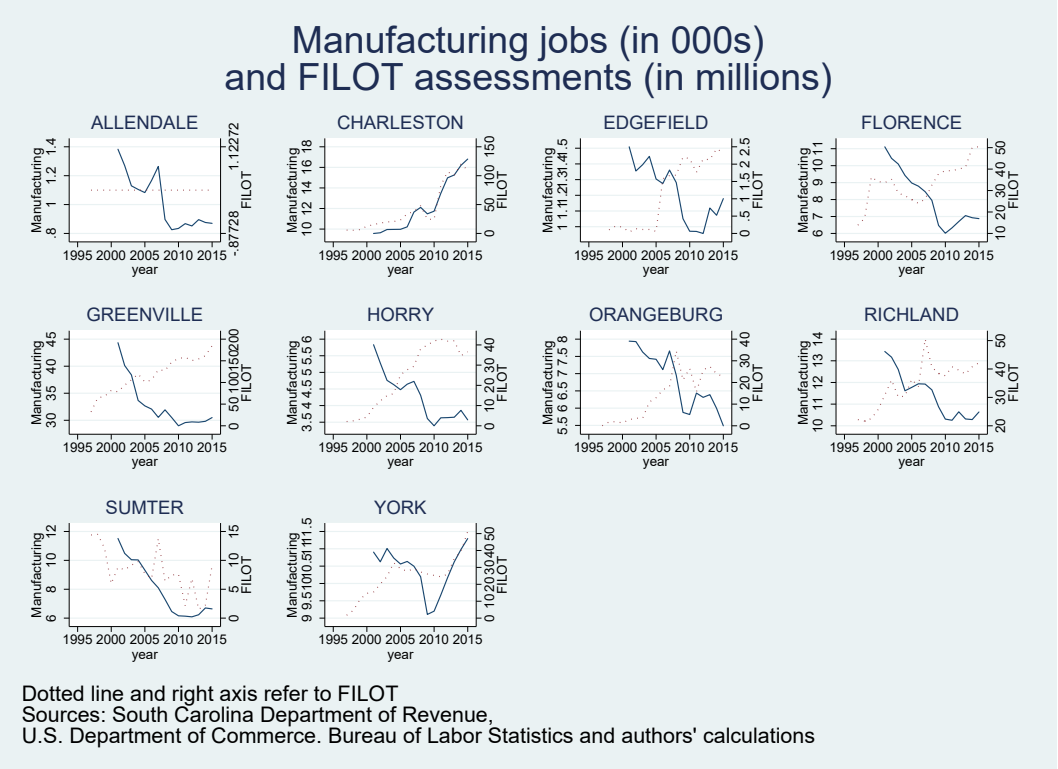


Figure 5.7 shows the same graph of FILOT assessments as the previous figure but substitutes manufacturing jobs for total jobs. Recall that manufacturing jobs are of particular interest here because FILOT is primarily used to attract manufacturing employment. As we saw above, only Charleston and York have gained manufacturing jobs and for these counties there does seem to be a close alignment between the increase in FILOT assessments and the growth in manufacturing jobs. For other counties the pattern is unclear. For example, Florence's and Greenville's FILOT assessments have risen rapidly but that has not stemmed the fall in manufacturing jobs. Even in counties that have had both increased FILOT assessments and increased manufacturing jobs it is not clear which is the cause and which is the effect. A firm wishing to increase manufacturing jobs in a county might obtain a new FILOT agreement so that the data would show increases in both FILOT and manufacturing jobs but that does not necessarily indicate job growth would not have occurred in the absence of FILOT. On the other hand, in counties seeing both increased FILOT assessments and declines in manufacturing jobs (e.g., Edgefield or Horry) the jobs stimulated by new FILOT agreements could simply be insufficient to replace jobs lost at other locations in the county.

Figure 5.7



In summary, South Carolina has seen a very large increase in FILOT assessments and a large decline in non-FILOT manufacturing assessments. While South Carolina has seen overall job gains this is not extraordinary and has mostly tracked other comparison states. South Carolina has a disproportionate share of its employment in manufacturing and has experienced declines in manufacturing employment that closely tracks comparison states. Eight of our ten focus counties have seen increases in total employment but eight have seen declines in manufacturing employment. There is no clear relationship between a county's increases in FILOT assessments and either total or manufacturing employment growth.

This information on relative job growth in South Carolina and comparison states is consistent with our hypothesis that FILOTs help the state "level the playing field" compared to the disadvantage South Carolina would have had if its estimated effective property tax rates were not offset by some property tax abatements. The evidence on job growth in our ten focus counties is not consistent with that hypothesis, but this may be because focus counties rely on other property tax abatements that we do not measure, or because some focus counties have other advantages that attract industry and jobs other than tax abatements.

Table 5.5 presents some additional information consistent with the hypothesis that FILOTS together with Special Source Revenue Credits help the state "level the playing field." In the course of one interview with the tax director of a large multistate company that does business in Alabama, Georgia, Indiana, North Carolina, and Oklahoma in addition to South Carolina we were able to obtain confidential information on that company's effective property tax rates in those states. As noted in the table, once FILOTs and SSRCs are taken into account, South Carolina's effective property tax rate is not out of line with its competitor states. South Carolina's effective property tax rate, taking SSRCs into account, is higher than the rate in Alabama, North Carolina, and Oklahoma, but lower than the rate in Georgia, and Indiana.

Table 5.5 Average Effective Property Tax Rates for a Large Multistate Company

State	Average Effective Tax Rate (%)
South Carolina*	1.42
Alabama	0.7
Georgia	1.62
Indiana	1.63
North Carolina	1.05
Oklahoma	1.09

Source: Confidential
Note: Effective tax rates are calculated by dividing property taxes by appraised value
*This includes FILOTs and SSRCs

Conclusion

South Carolina's effective business property tax rates are high relative to homestead property and neighboring states' business property taxes. Fee-in-lieu of property taxes or FILOT makes it possible for South Carolina county governments to reduce the property tax liabilities of firms that make new investments and create jobs. Because FILOTs are complex and involve more than a reduced assessment ratio, the property tax benefits they provide are not very transparent. Nevertheless, recent CAFRs provide some information on property tax foregone due to FILOT. In 2018, two counties reported property tax abatements exceeding 10 percent of total property taxes collected. FILOT has grown a great deal in recent years, with the assessed value of property under FILOT now surpassing the assessed value of manufacturing properties. Information on total and manufacturing job growth in South Carolina compared to its neighboring states is consistent with the hypothesis that FILOTs help the state to "level the playing field" in its efforts to attract business and jobs, despite high statutory effective property tax rates.

Appendix A

Assessed values of FILOT property and estimates of market value of FILOT property

The South Carolina Department of Revenue (DOR) determines assessments for properties subject to FILOT in the following manner. The auditor in the county in which the FILOT property is located reports the FILOT fee paid by the sponsor (owner) of the FILOT property and the millage that would have been charged on that parcel were it not subject to a FILOT agreement (*millage absent FILOT*). The DOR calculates *assessments* of FILOT property as

$$assessment = \frac{FILOT\ Fee}{millage\ absent\ FILOT} \quad (1)$$

Although no data source tracks the formula by which FILOT fees are calculated local informants told us that in their experience in most cases, the FILOT fee is equal to:

$$FILOT\ Fee = market\ value\ of\ investment * 6\% * negotiated\ tax\ rate \quad (2)$$

and that the *negotiated tax rate* is generally less or equal to the current millage on the property.

Equation (1) and (2) together imply that:

$$market\ value\ of\ investment = \frac{FILOT\ Fee}{6\% * negotiated\ tax\ rate} = \frac{assessment * millage\ absent\ FILOT}{6\% * negotiated\ tax\ rate} \quad (3)$$

Rewriting equation (3)

$$market\ value\ of\ investment = \left(\frac{assessment}{6\%}\right) * \left(\frac{millage\ absent\ FILOT}{negotiated\ tax\ rate}\right) \quad (4)$$

In the absence of data on the ratio $\left(\frac{millage\ absent\ FILOT}{negotiated\ tax\ rate}\right)$ our calculations (in figure 5.2) assume it is equal to one. Our discussions with local informants suggest that in some cases $\left(\frac{millage\ absent\ FILOT}{negotiated\ tax\ rate}\right) > 1$ so our estimates of *market value of investment* may understate the true market value of investments made under the FILOT program. Unfortunately, with available data we are unable to quantify the amount by which investment is understated.

Appendix B

Tax increment finance in South Carolina

Chapter 6 of Title 31 of South Carolina's Code of Laws provides for tax increment financing (TIF) for redevelopment projects.

In many respects, the basic setup of South Carolina's tax increment finance districts is quite similar to the set-up in other states (see Flynn 2017 and Lincoln Institute of Land Policy, 2019). South Carolina law authorizes municipalities (and counties) to adopt redevelopment plans for areas that are blighted, in need of conservation or agricultural areas. In South Carolina, like in other states, once the municipality adopts a redevelopment plan it can create a TIF district. The assessed value within the boundaries of the district at the time of the creation of the district becomes the base (or frozen) value of the district. Revenues from property taxation of this portion of the tax base continue to be allocated among overlapping governments according to their relative tax rates. However, like other states, the increment created by increases in value in the tax base of the TIF district are deposited into a special tax allocation fund.

However, in other ways South Carolina's TIF program is somewhat unusual. For one thing revenues deposited into a TIF district's special allocation tax fund cannot be used for redevelopment until after bonds (secured by TIF revenue) are issued. Furthermore, the revenues in this fund can only be used to service that debt and cannot be used on a pay-as-you-go basis. In addition, the TIF bonds must be issued within ten years of the adoption of the municipality's redevelopment plan. Even more significantly, South Carolina unlike many other states requires that overlapping taxing districts that would otherwise receive revenue from the increment must consent. Unlike many other states South Carolina law restricts the expenditure of TIF revenues to publicly owned projects.[96] Furthermore, unlike in many other states in South Carolina the municipality may not deviate from the originally proposed TIF budget and must rebate any excess funds to overlying governments. Any deviations from the original plan require formal legal amendments.

Compared to other states, South Carolina imposes these relatively onerous restrictions on the creation of TIF districts and the use of TIF funds. Despite these restrictions there were reported to be more than one hundred TIF districts in South Carolina in 2015.[97] Because South Carolina prohibits use of TIF funds to support private sector activity and because it gives overlying local governments the ability to opt out of TIF districts it is relatively less attractive for municipalities than in other states.

Despite these restrictions, both Greenville and Charleston South Carolina use TIF and have websites devoted to the TIF district in their city.[98] Greenville's TIF districts cover its central business district and other areas adjacent to downtown. All three of these districts are long standing—one has already expired and the other two were started in the late 1980s. Greenville's site does not include a comprehensive list of improvements but does enumerate several million dollars' worth of improvements to public parks and streets. Charleston's web site covers TIF districts created in 2016 and 2018 but provides little detail about the precise spending plans. Local informants told us that the ability of overlapping local governments to opt out of TIF had diminished its use in recent years, but we were not able to obtain comprehensive data about the use of TIF and could not independently verify that claim.

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[96] See Municipal Association of South Carolina 2017

[97] Merriman, Qiao, and Zhao 2018.

[98] See Greenville's web site at https://gvltoday.6amcity.com/tif-districts-greenville-sc/ 1/ and Charleston's at https://www.charleston-sc.gov/1492/West-Ashley-TIF-District

Appendix C

Special Source Revenue Credits and Multicounty Industrial Parks

Although there is no official state-wide data source that compares property taxes abated from FILOTs to those abated through Special Source Revenue Credits (SSRCs), both interviews and narratives in the CAFRs led us to believe that SSRCs are the second most important property tax abatement tool after FILOTs. Although some CAFRs assign property tax abatement amounts to multicounty industrial parks (MCIP) the main advantage of MCIPs appears to be greater flexibility in distribution of property tax receipts.

Special Source Revenue Credits

SSRC is a discretionary property tax abatement tool used by counties, often in conjunction with MCIP and FILOT. Although SSRCs are sometimes referred to as "infrastructure credits" they can actually be used for a wide range of purposes, including "for the purpose of paying the cost of designing, acquiring, constructing, improving, or expanding:

(a) the infrastructure serving the issuer or the project,
(b) for improved or unimproved real estate and personal property including machinery and equipment used in the operation of a manufacturing or commercial enterprise," or
(c) for expenses associated with certain qualifying aircraft projects.[99]

The county has discretion over the amount and the form of the credit. The credit can be a percentage, a flat dollar amount, or a percentage amount up to a specified cap. Although an agreement between the county and the company is not required, often a county will enter into an agreement with a company whereby the county agrees to provide a property tax credit for a period of years and the company agrees to meet certain investment or job creation targets.

According to a Nexsen/Pruet economic development seminar, two advantages of SSRCs are that they are an avenue for tax abatement on top of FILOTs and they allow high millage counties the flexibility to be competitive (Chikhliker 2016). Disadvantages that Nexsen/Pruet cites in connection with SSRCs are that clawbacks can be severe and SSRCs can be difficult to track and calculate.

Although most of the tax abatement sections of the nine-county government CAFRs we examined mentioned SSRCs, only two (Horry County and Richland County) report revenue loss from SSRCs separately from the revenue loss from FILOTs. In each case the reported revenue loss from SSRCs was much less than the amount attributed to FILOTs.

School district CAFRs in our focus counties had less complete information on estimated revenue loss from tax abatements. Thirteen of the twenty school districts had some tax abatement information in their CAFRs. Four of those mentioned SSRCs and three of them broke out revenue loss from SSRCs separately. In each case in which estimated revenue loss from SSRCs was stated, it was much less than the reported revenue loss from FILOTs.

[99] S.C. Code Ann. Sec. 4-1-175 and 4-29-68(A)(2)(i). Instead of providing SSRCs, the county can also directly fund such expenditures by issuing special source revenue bonds.

Multicounty Industrial Parks

Two or more contiguous counties can establish a MCIP.[100] When they do, property in the multicounty park becomes exempt from the property tax. The property owners are then required to pay a fee equal to the amount of property taxes that would have been due, unless the county and property owners agree to a FILOT (South Carolina Department of Revenue 2018). Given that stipulation, one might ask: why bother with a MCIP?

The main advantage of a MCIP appears to be the capability it extends to the county of allocating the fee revenue (which used to be property tax revenue) in a more flexible manner. Property taxes must be allocated by the county in proportion to the respective mill rates of the various governments levying the tax. But fee revenue can be allocated differently.

Consider a hypothetical MCIP and two ways in which property tax revenues can be reallocated as fees under a MCIP. In each case, assume that without an MCIP there would be $1 million in annual property tax revenue for the area, with the school district receiving $600 million and the county receiving $400 million.

Under the business incentives MCIP alternative allocation, the $1 million is reallocated as follows: partner county $10,000 (1%), SSRC $100,000, school district $534 million (60% of remainder), and county government $356,000 (40% of remainder) (Pope Flynn Group 2018).

Under the funding county economic development MCIP alternative allocation, the $1 million is reallocated as follows: partner county $10,000 (1%), county economic development fund $50,000, school district $564 million (60% of remainder), and county government $376,000 (40% of remainder) (Pope Flynn Group 2018).

Although the MCIP name might imply that the mechanism is used only for industrial development, it can be used more broadly as this news article of the Municipal Association of South Carolina describes:

> An often underutilized economic development tool for downtown or commercial development is designating property (or a group of properties) as a multicounty business park. While counties have been using the approach for years to promote industrial development, local governments are finding opportunities to use the multicounty approach to incentivize commercial development and fund public infrastructure projects to support commercial development (Municipal Association of South Carolina 2013).

If the MCIP is located within the boundaries of a municipality, the municipality has the power to consent to the MCIP. Apparently this power of consent does not extend to school districts or other taxing entities (Municipal Association of South Carolina 2013).

In addition to the increased revenue allocation flexibility, another advantage of a MCIP is that a business locating in a MCIP becomes eligible for an additional $1,000 job tax credit if it creates new full time jobs.

Another advantage of creating an MCIP concerns a special provision of the property tax code. Ordinarily converting property from agriculture to commercial or manufacturing use subjects the property owner to certain rollback taxes. However, if the property is in a MCIP it becomes exempt from the rollback taxes.

[100] S.C. Code Ann. Sec. 4-1-170 and Article VIII, Section 13(D) of the S.C. Constitution. A MCIP is also called a joint industrial park, a joint industrial or business park, a multi-county business park, or simply a multi county park.

Although MCIPs require participation by two or more counties, in practice a single county might account for 99 percent of the revenue and expenditures of a MCIP. In addition, despite the name, MCIPs should not be considered industrial parks in the traditional sense. Instead, a MCIPs should be considered "a property tax revenue-sharing agreement entered into between county governments" (Doerring 2016).

Appendix D

Figure 5.4a

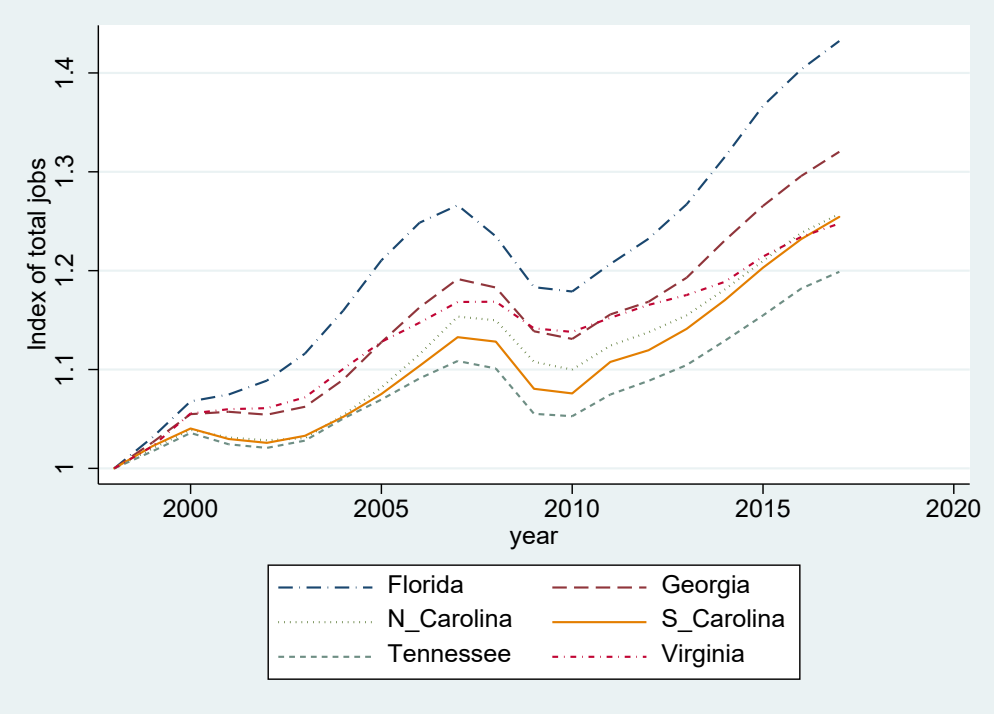


Figure 5.4b

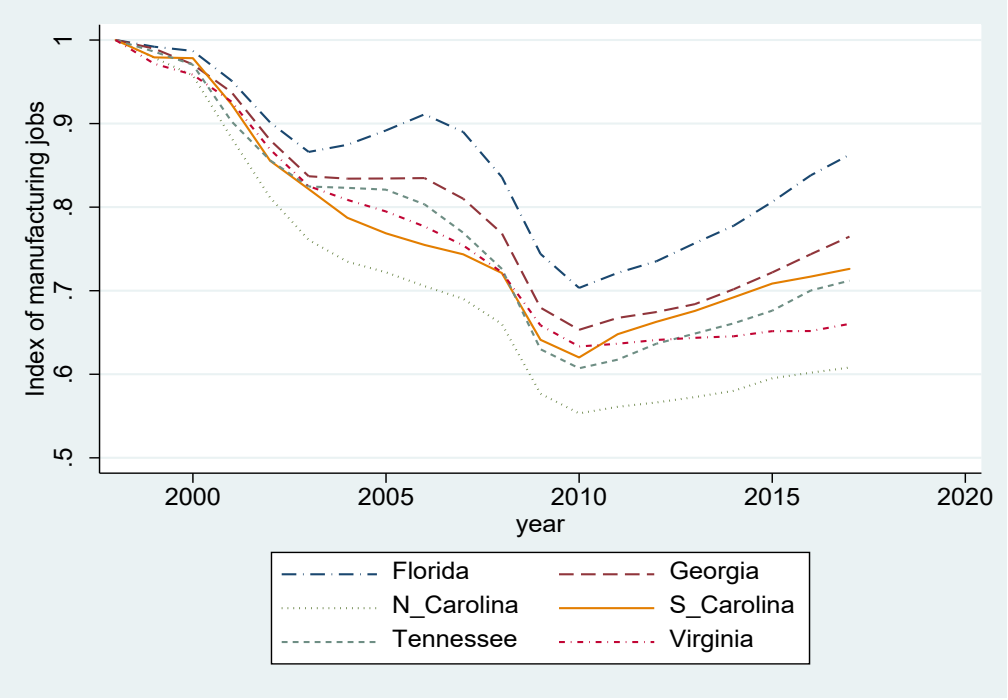
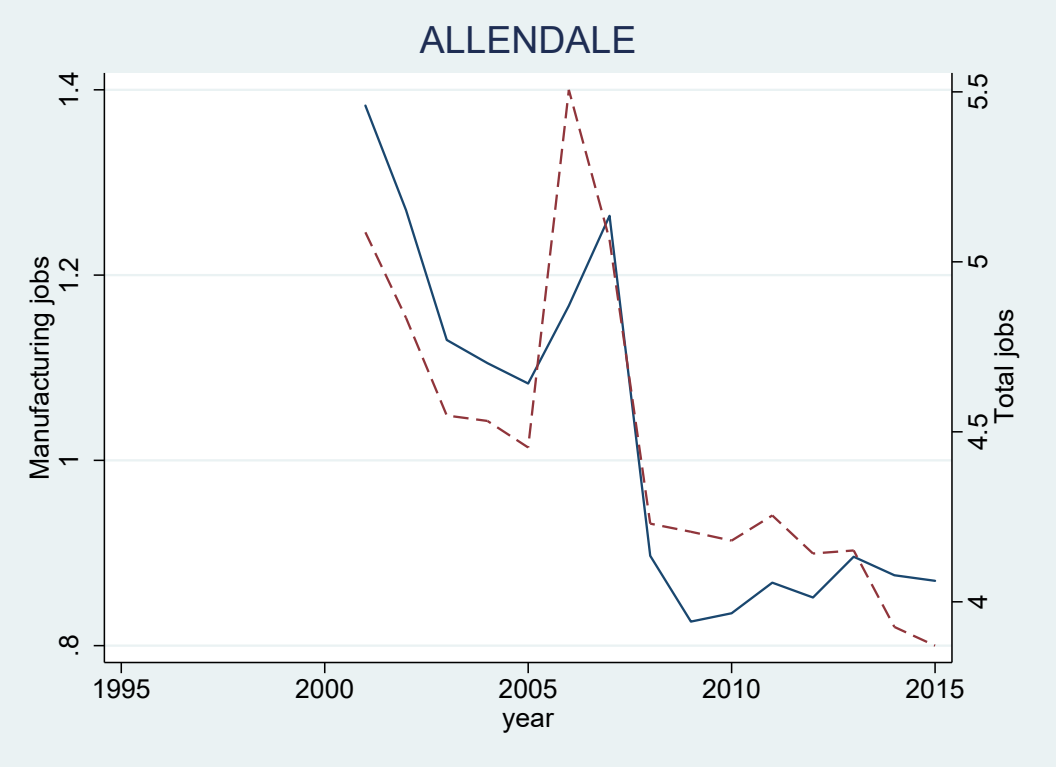
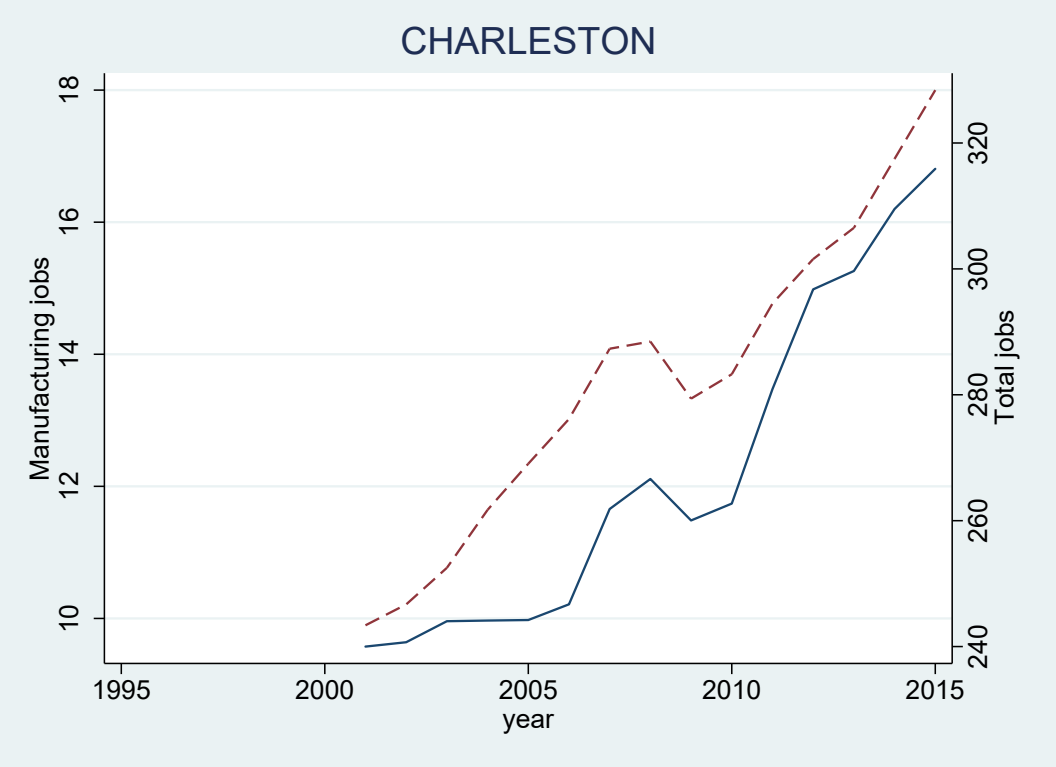
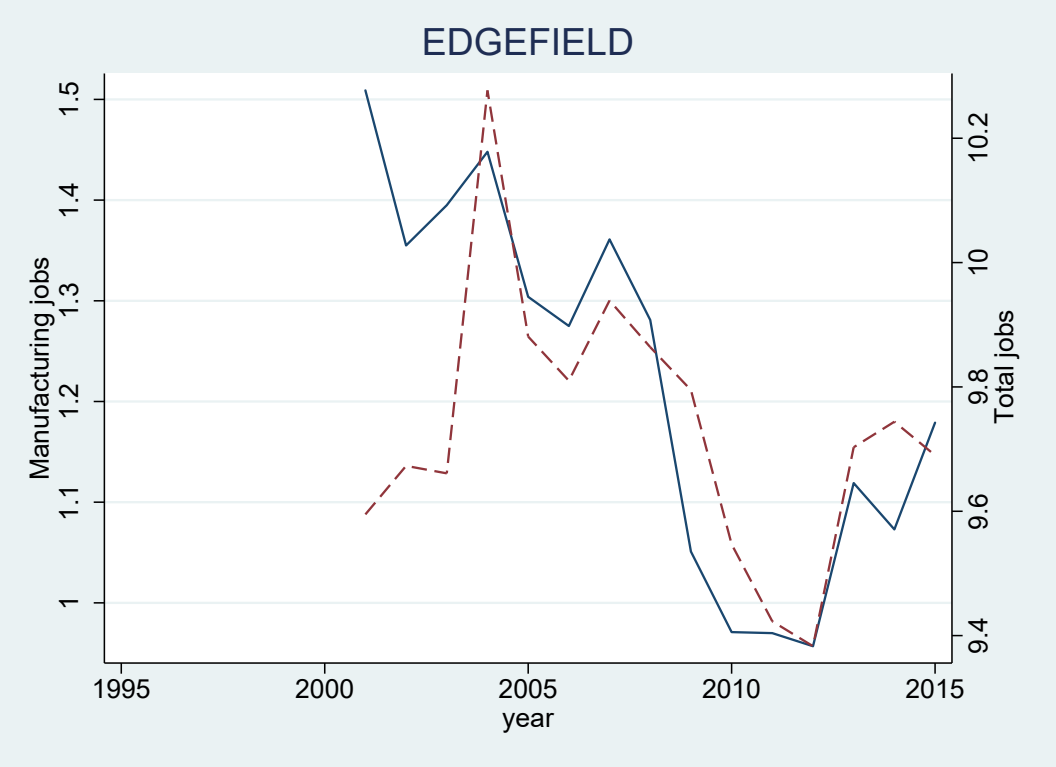


Figure 5.5 Individual Counties



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9.8
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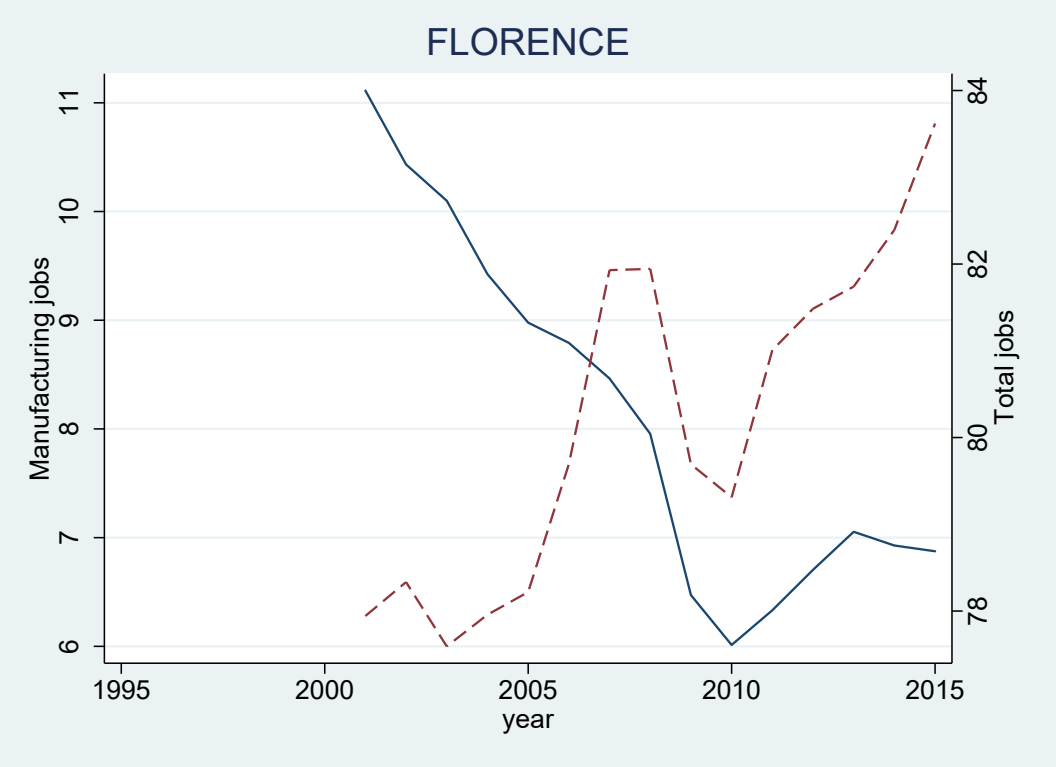
2010
2015
year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Total jobs
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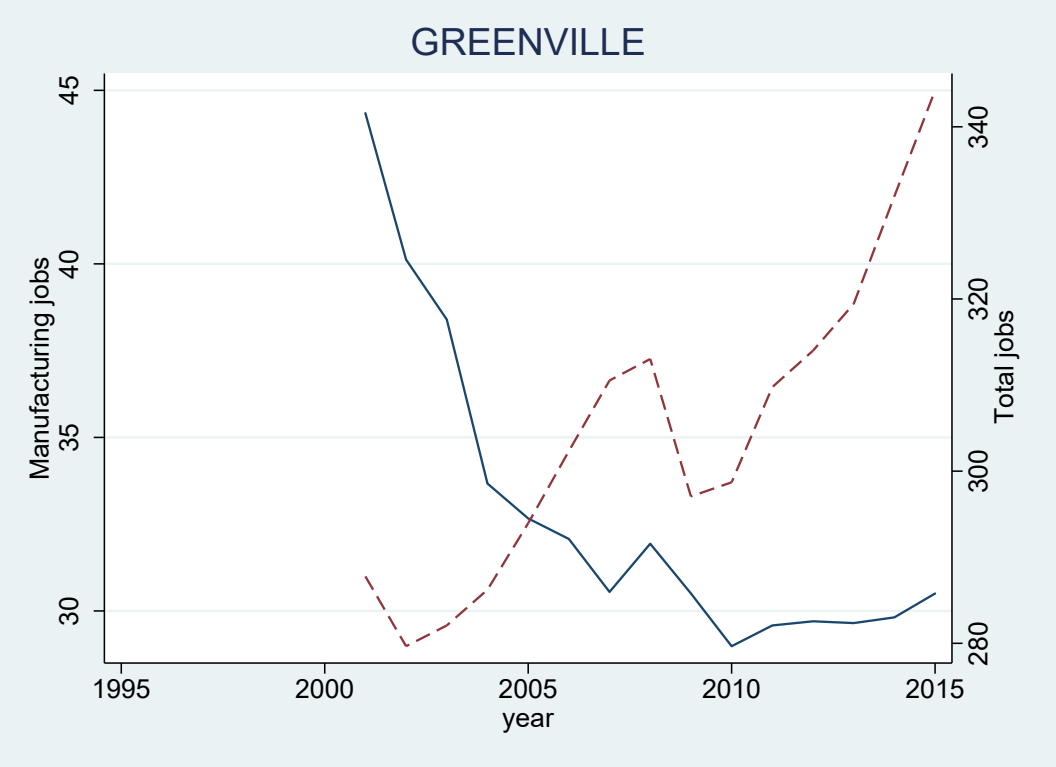
year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300
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1995
2000
2005
2010
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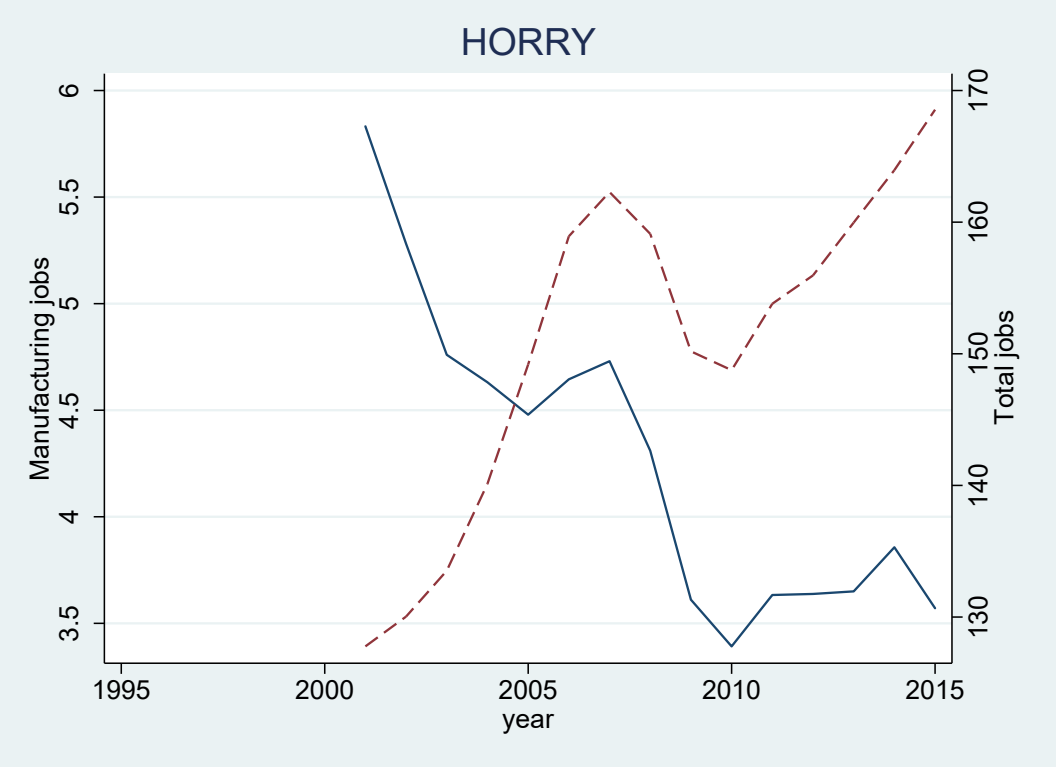
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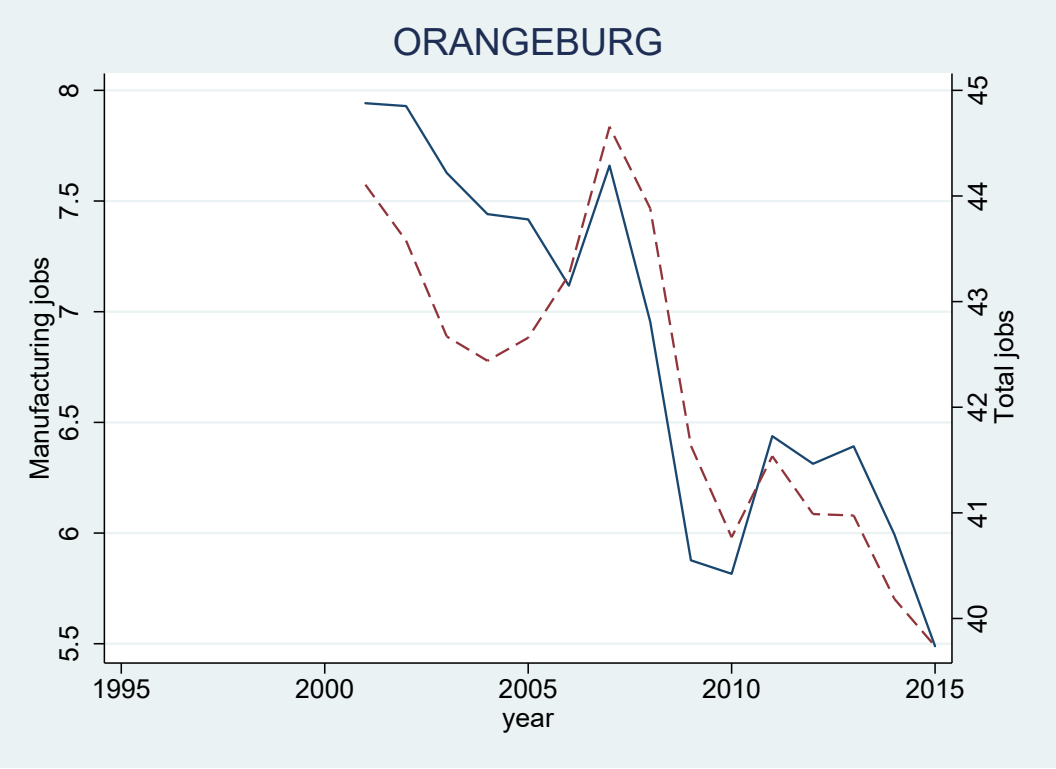
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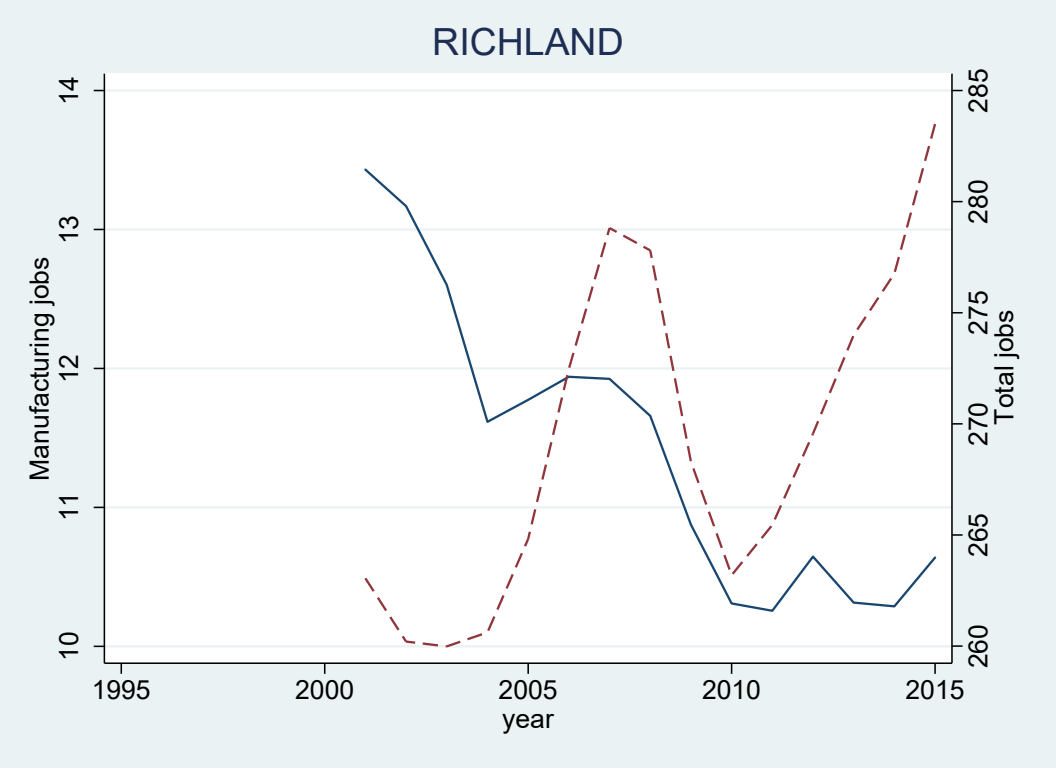
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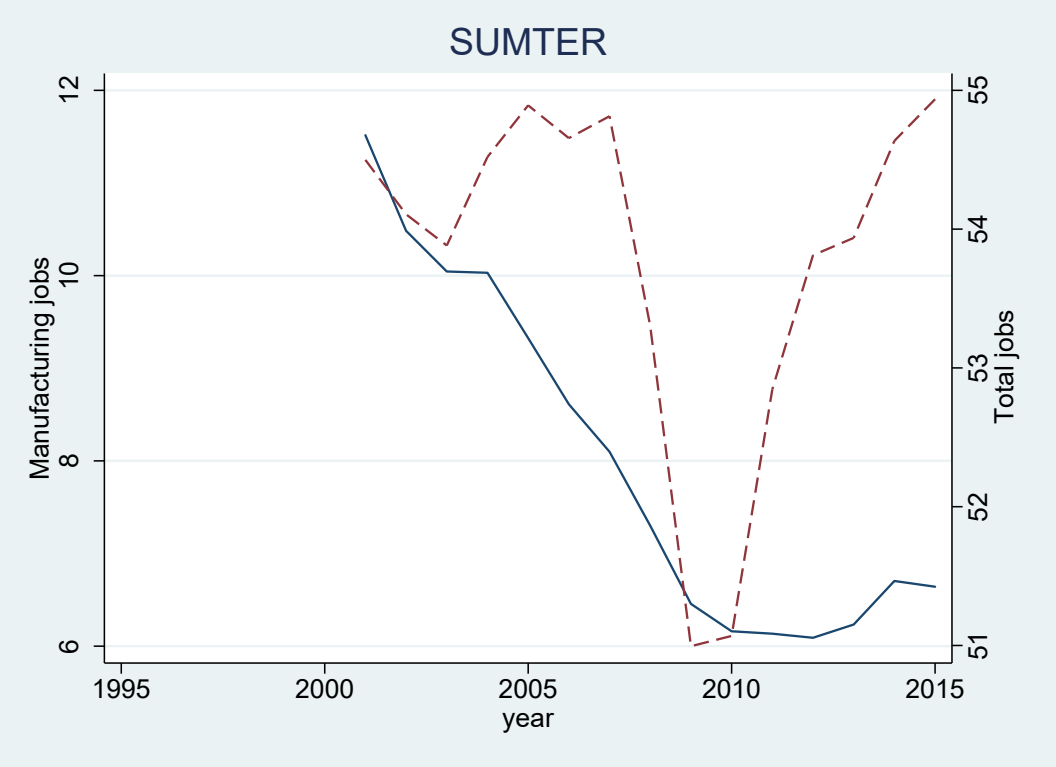
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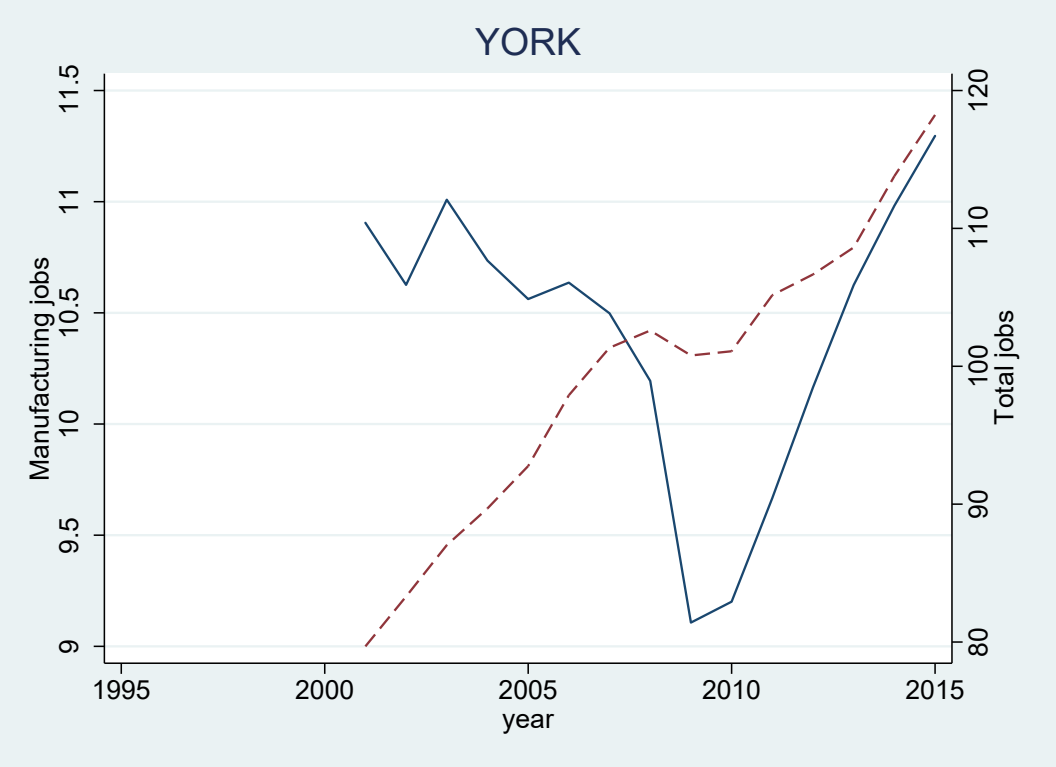
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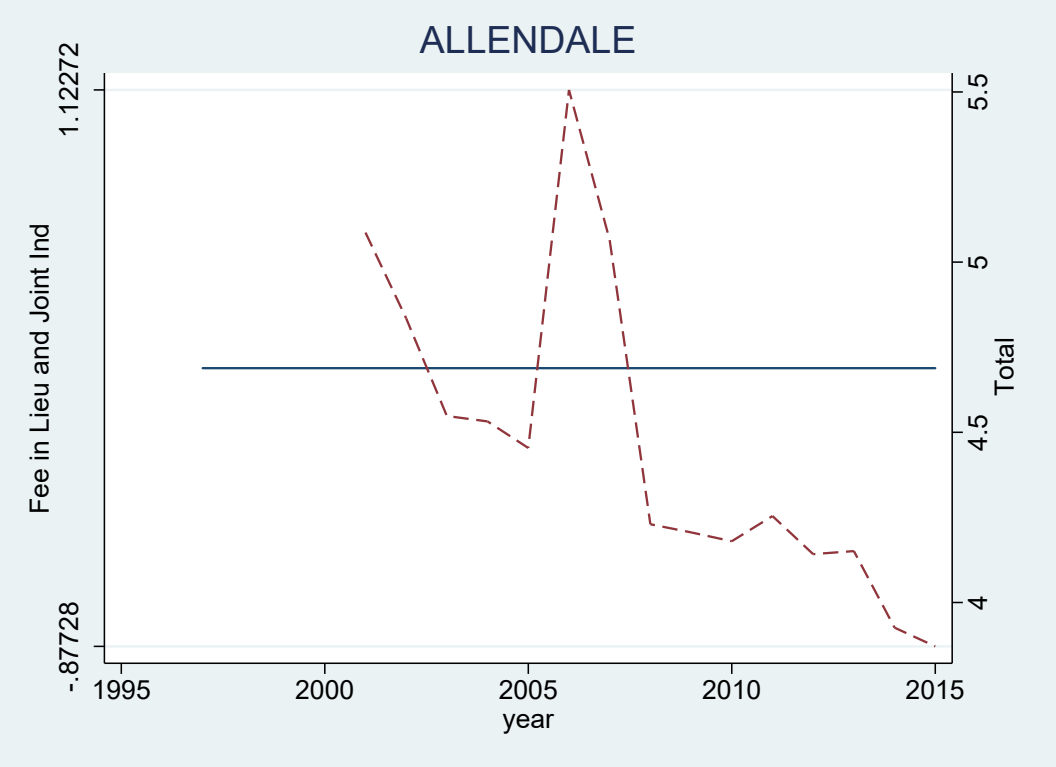
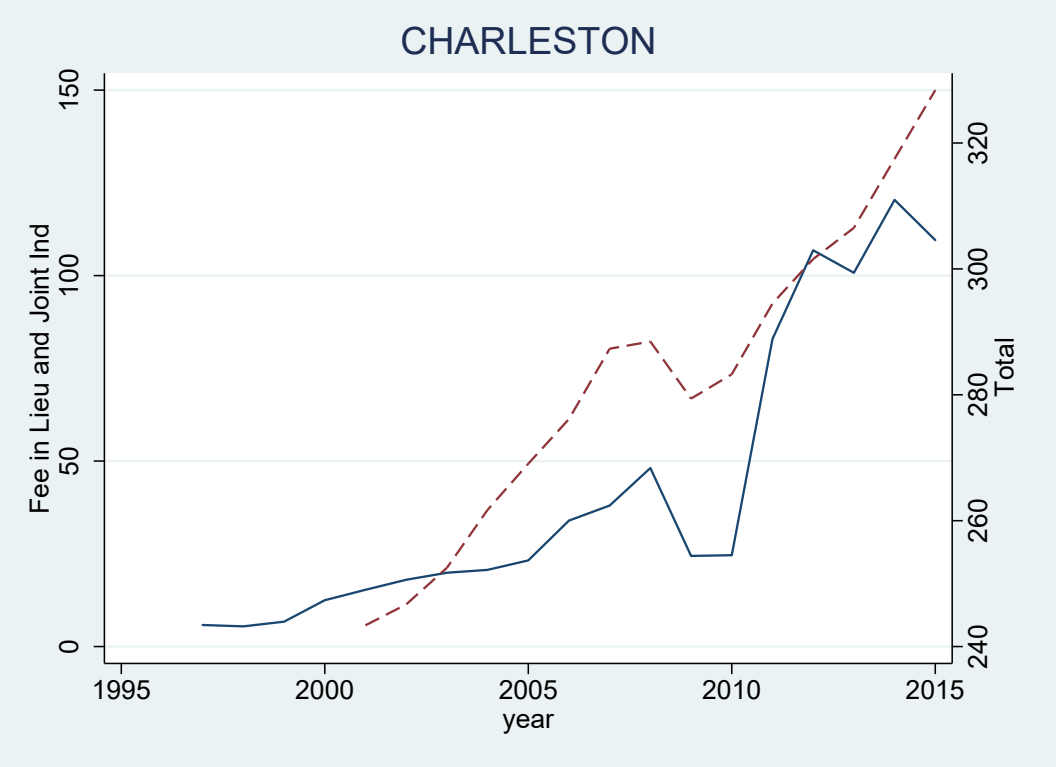
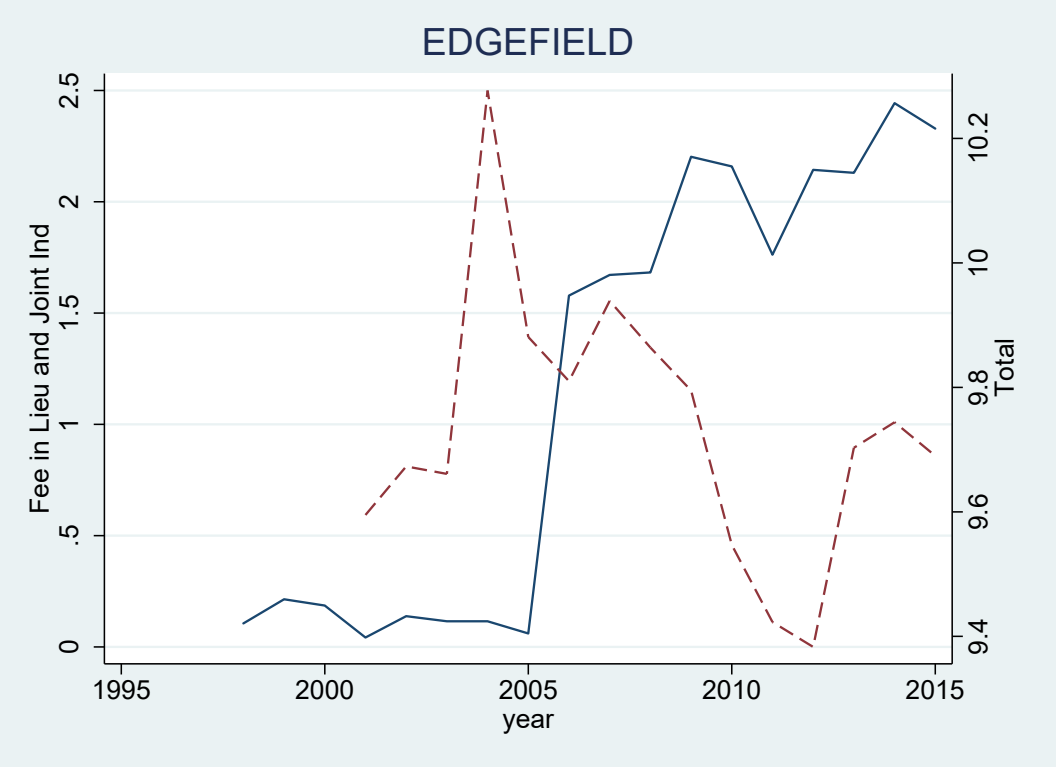
Figure 5.6 Individual Counties



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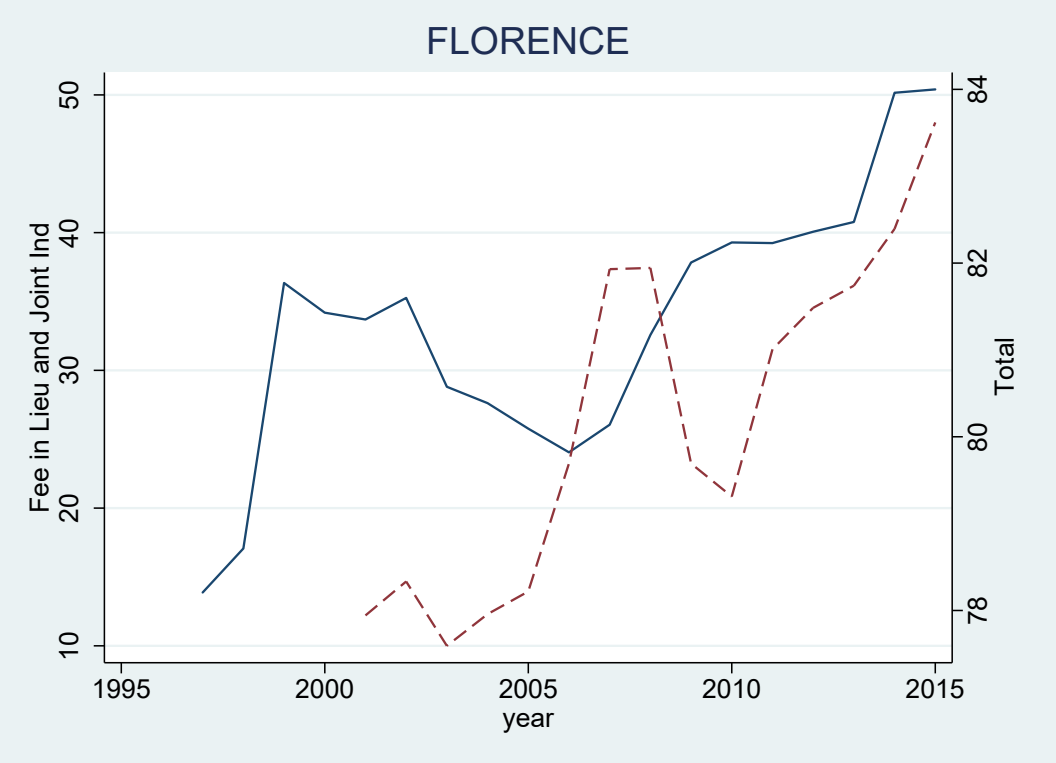
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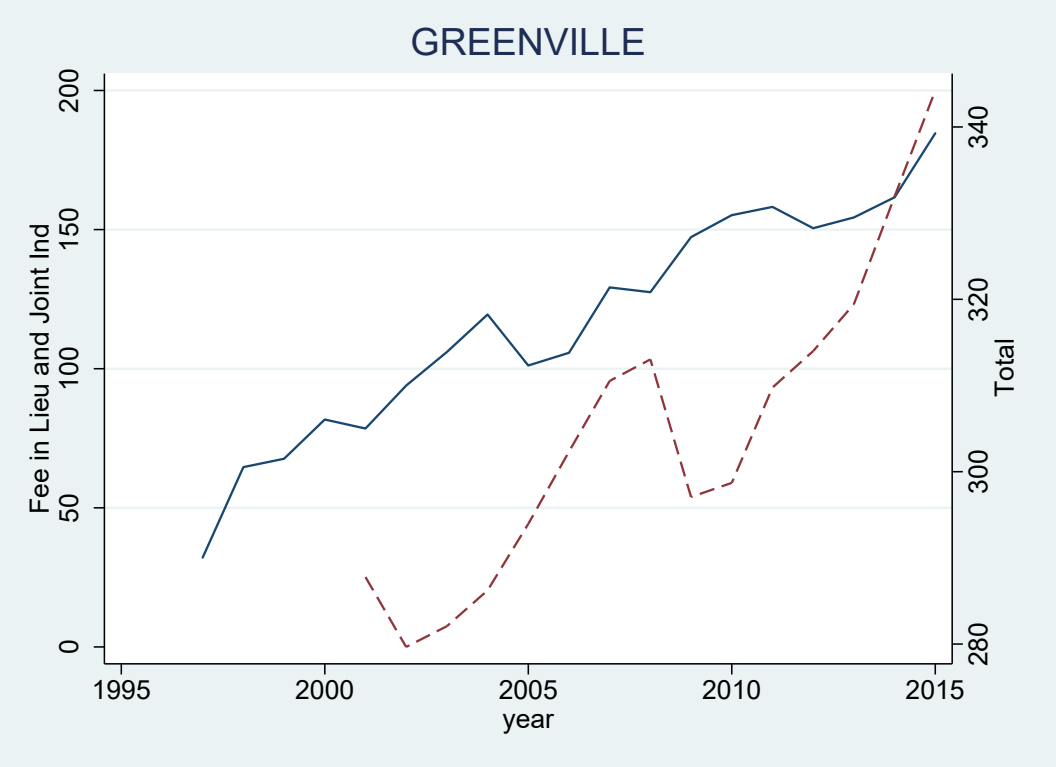
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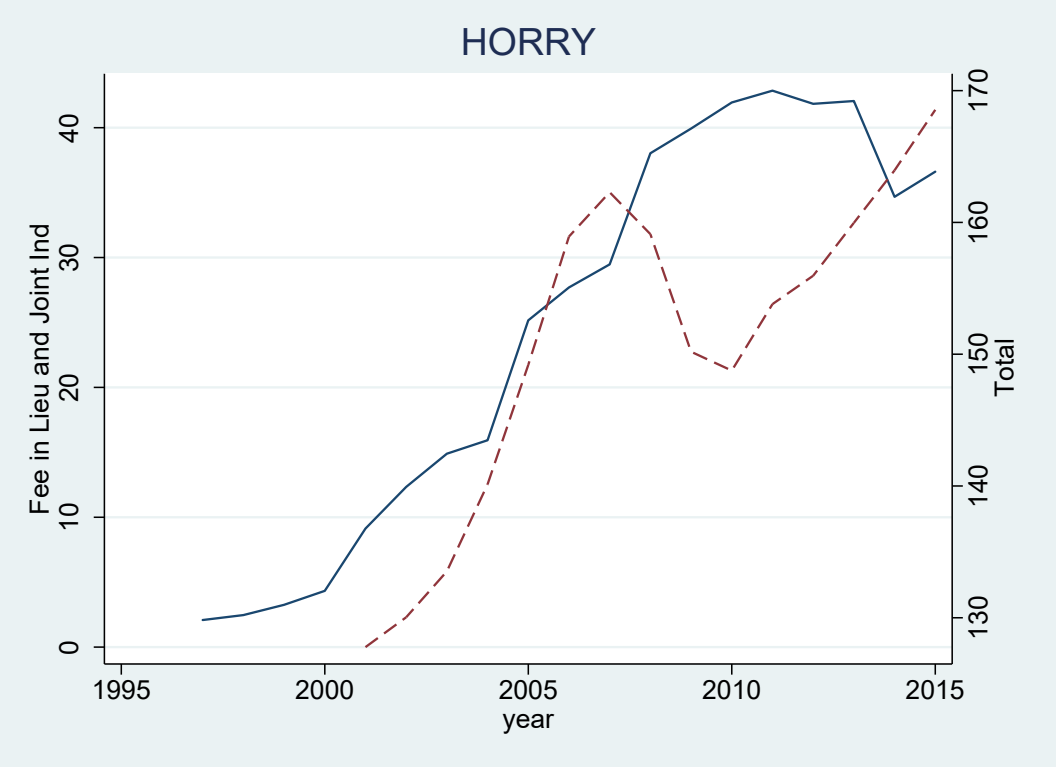
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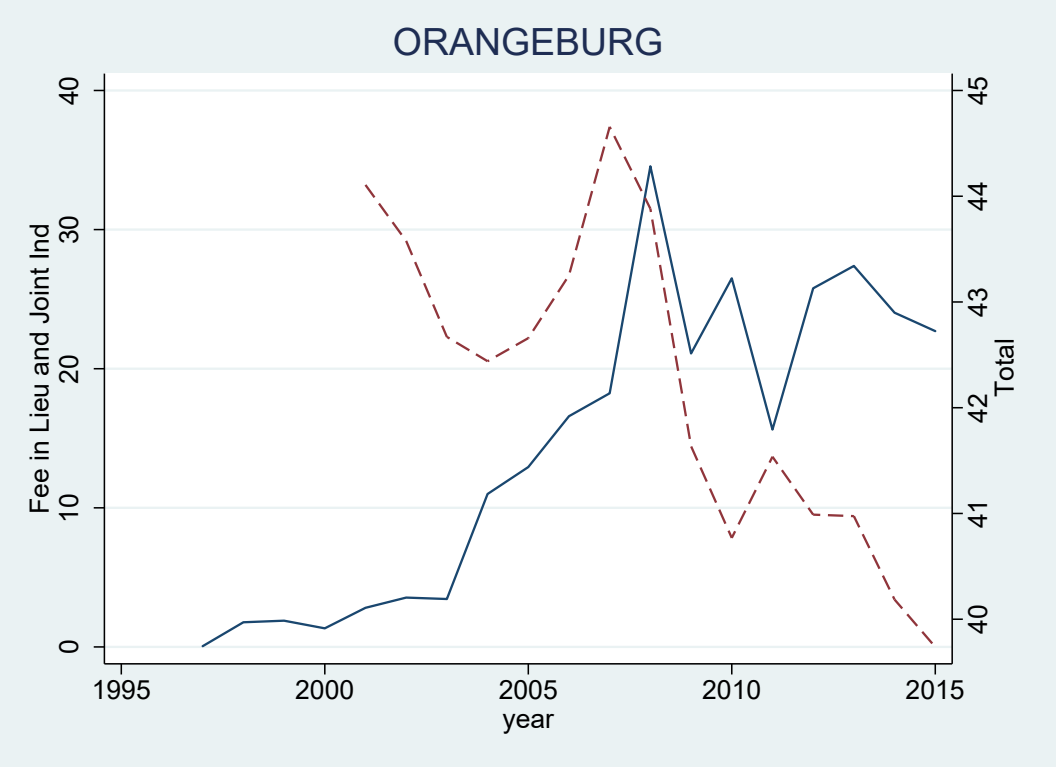
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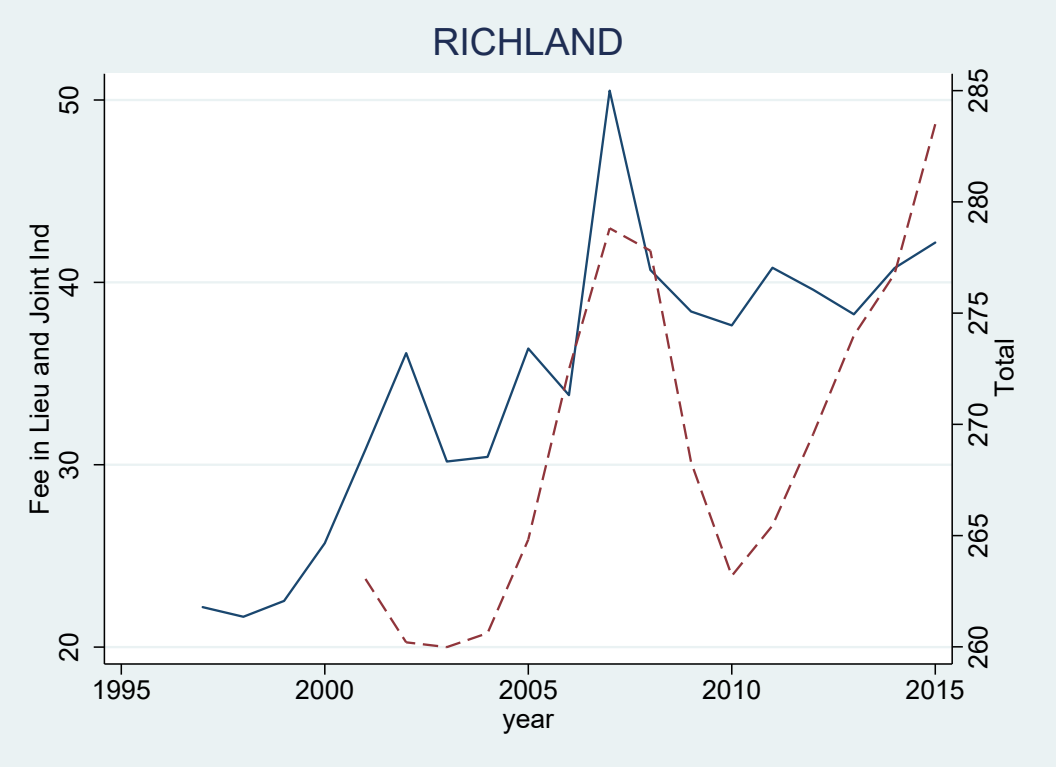
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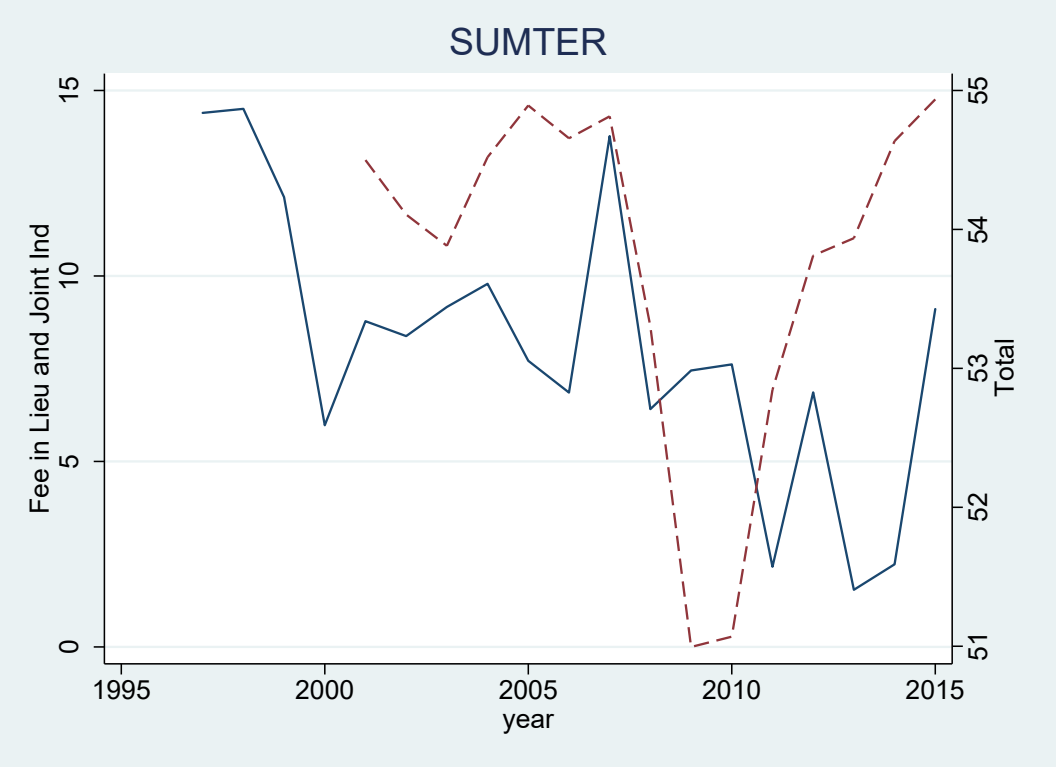
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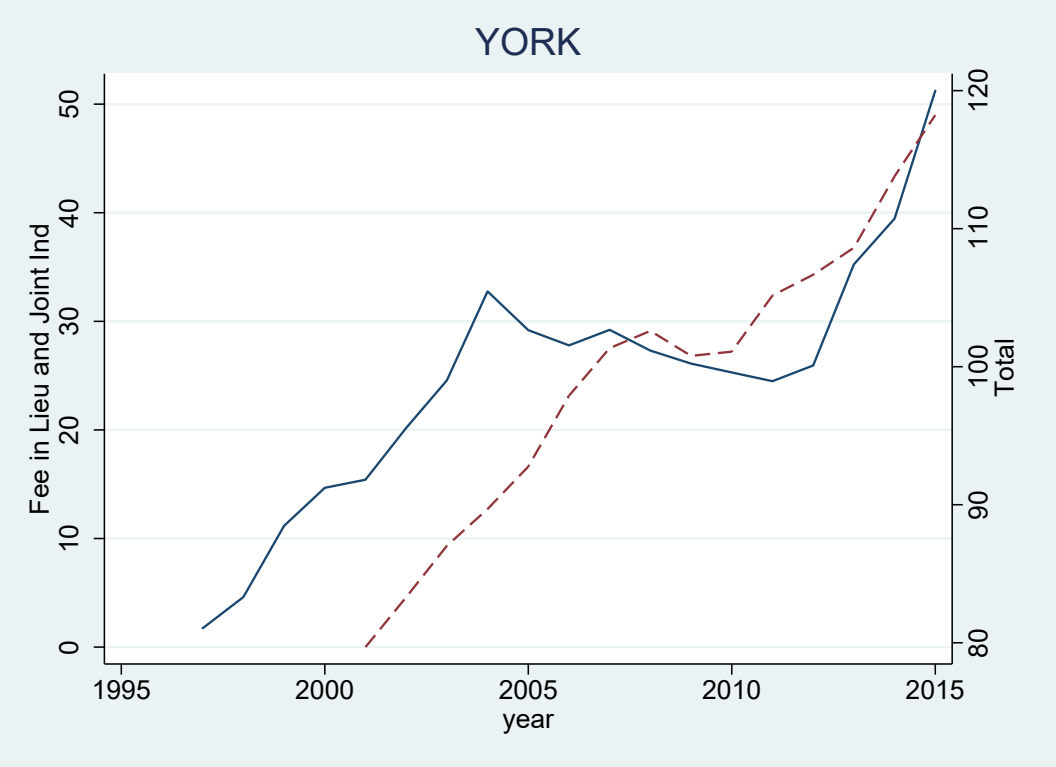
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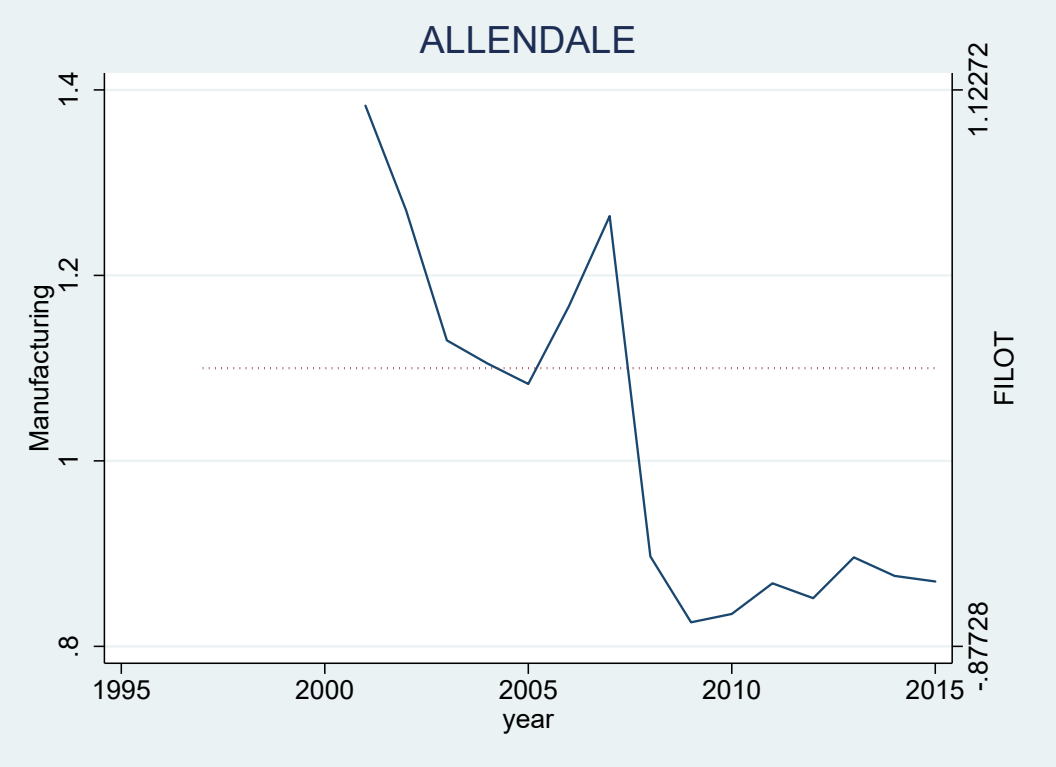
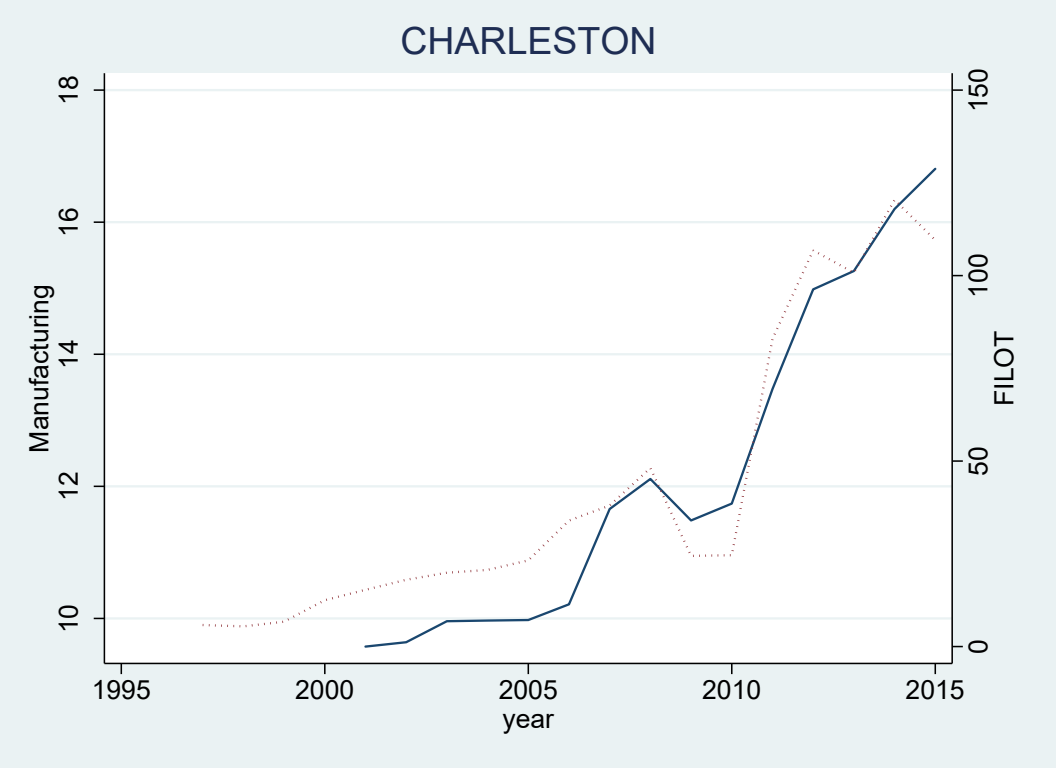
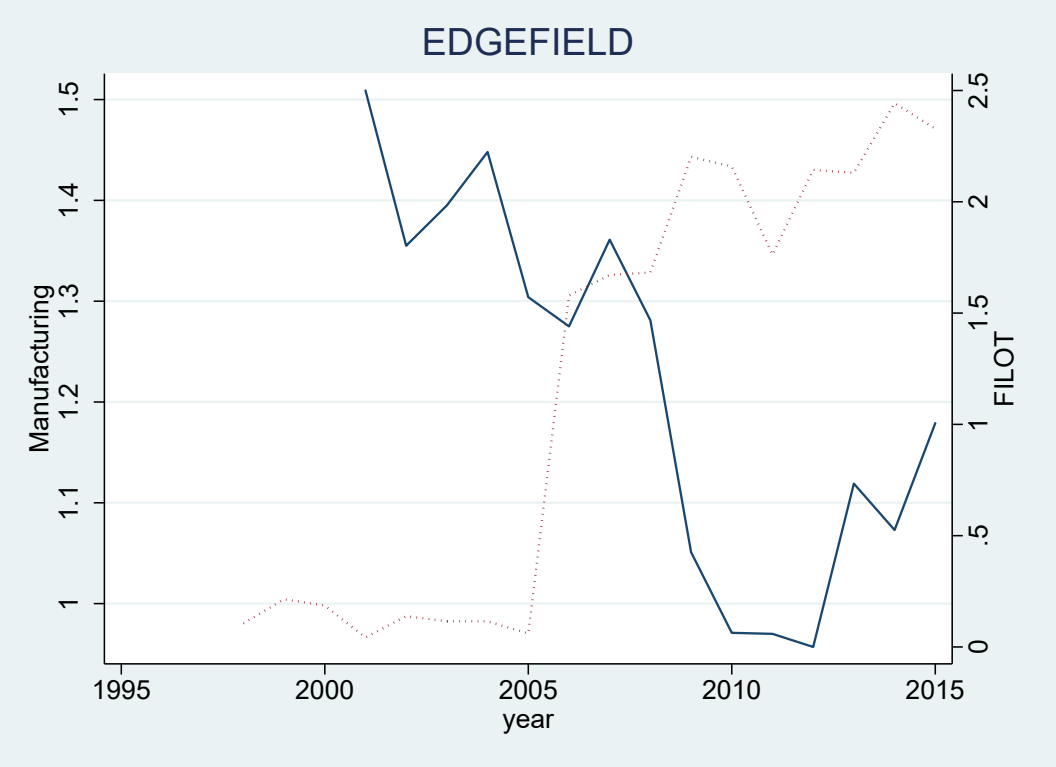
Figure 5.7 Individual Counties



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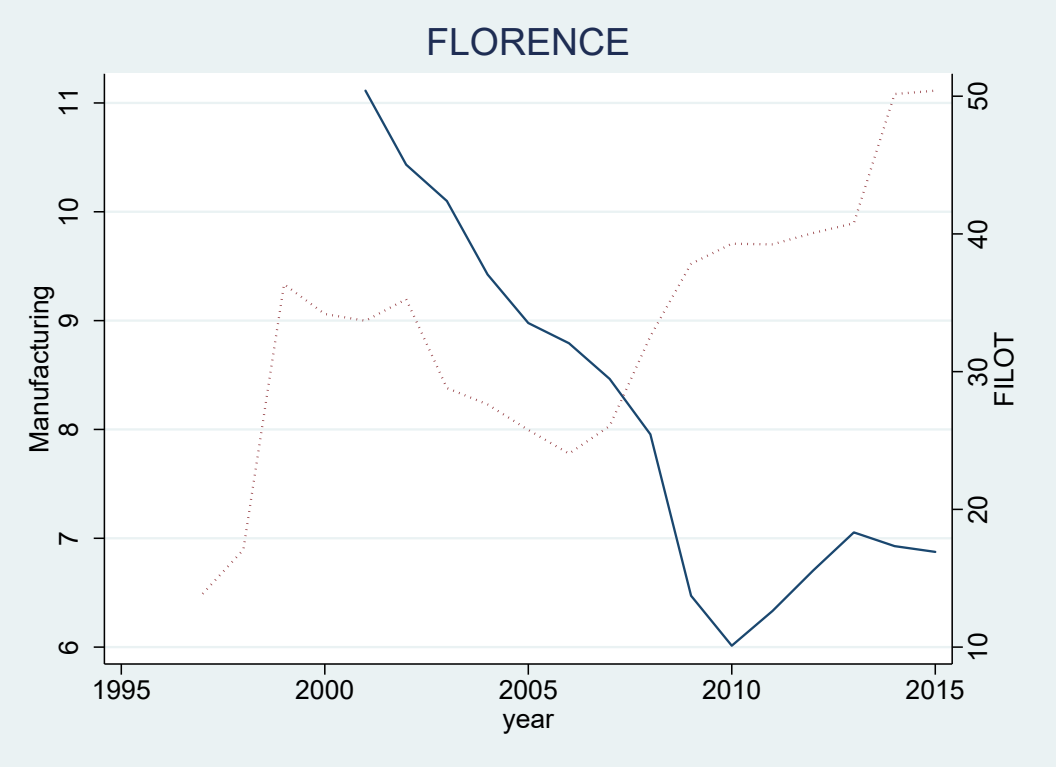
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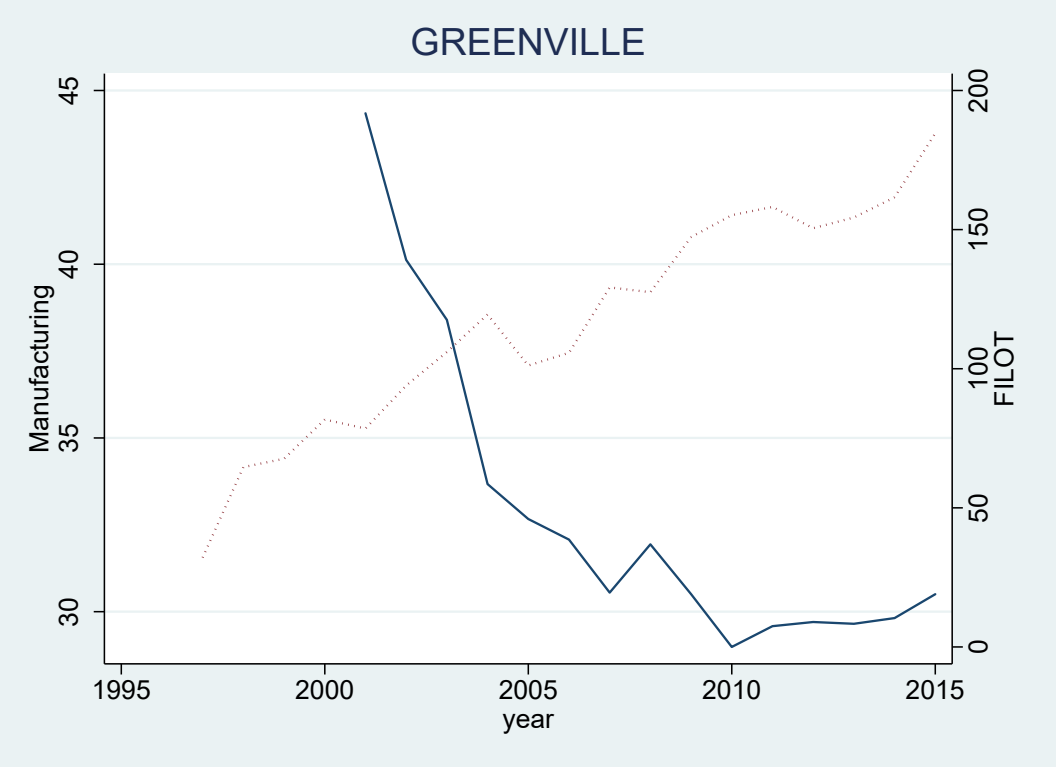
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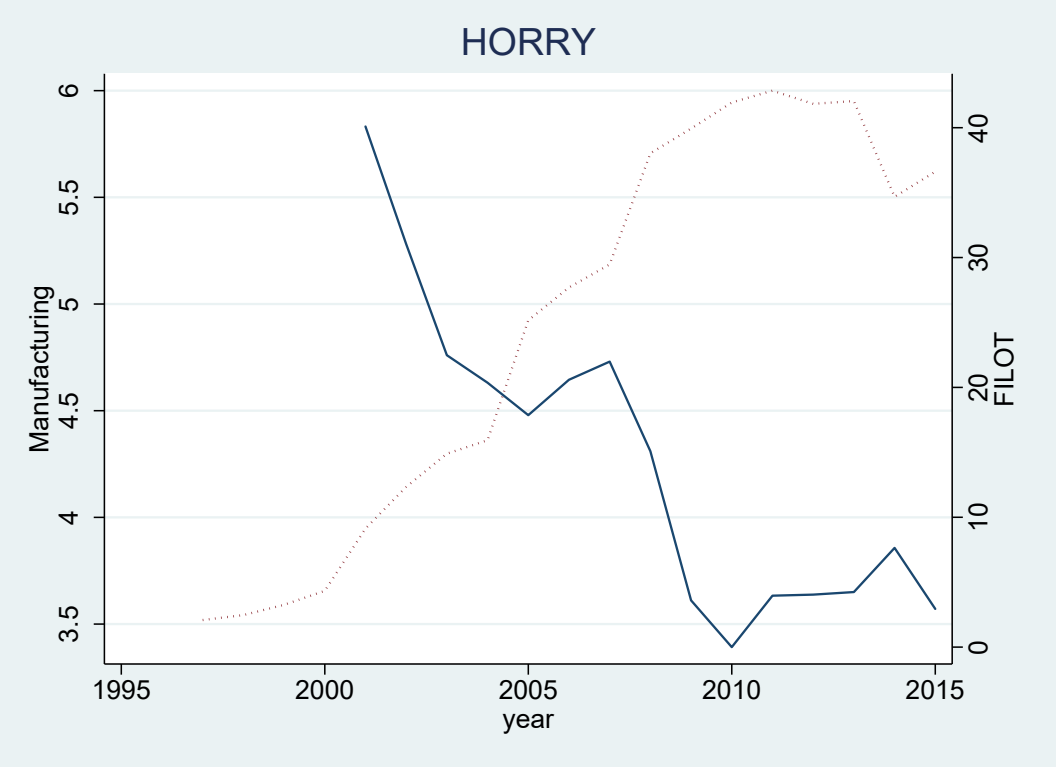
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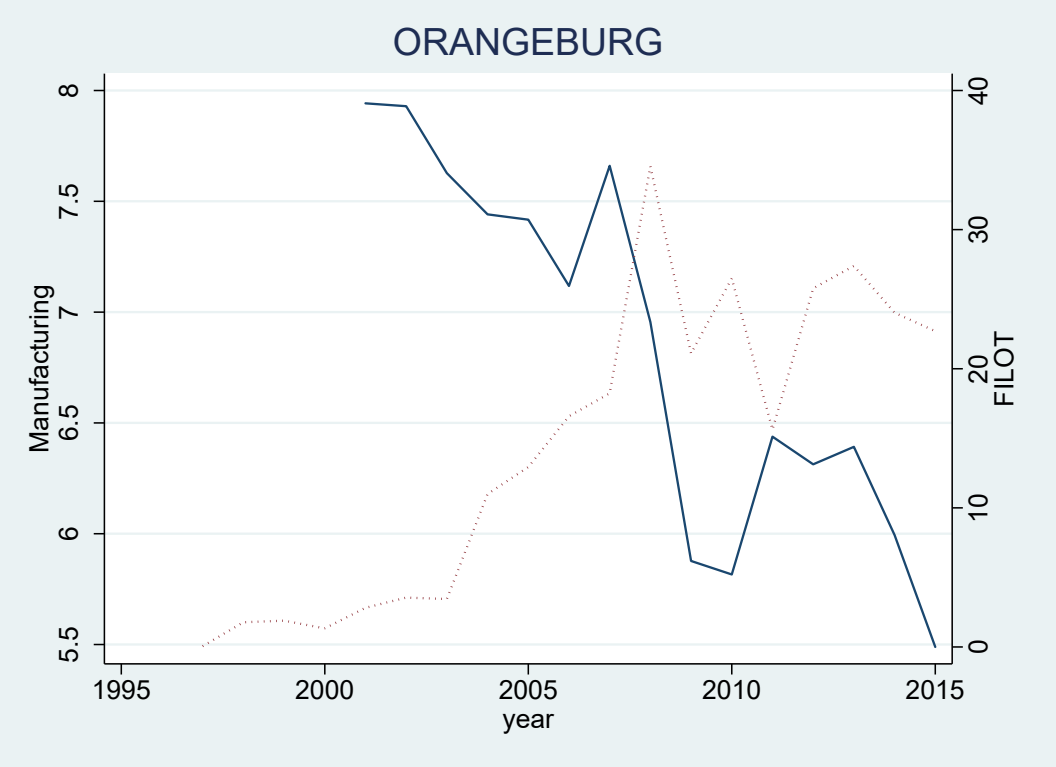
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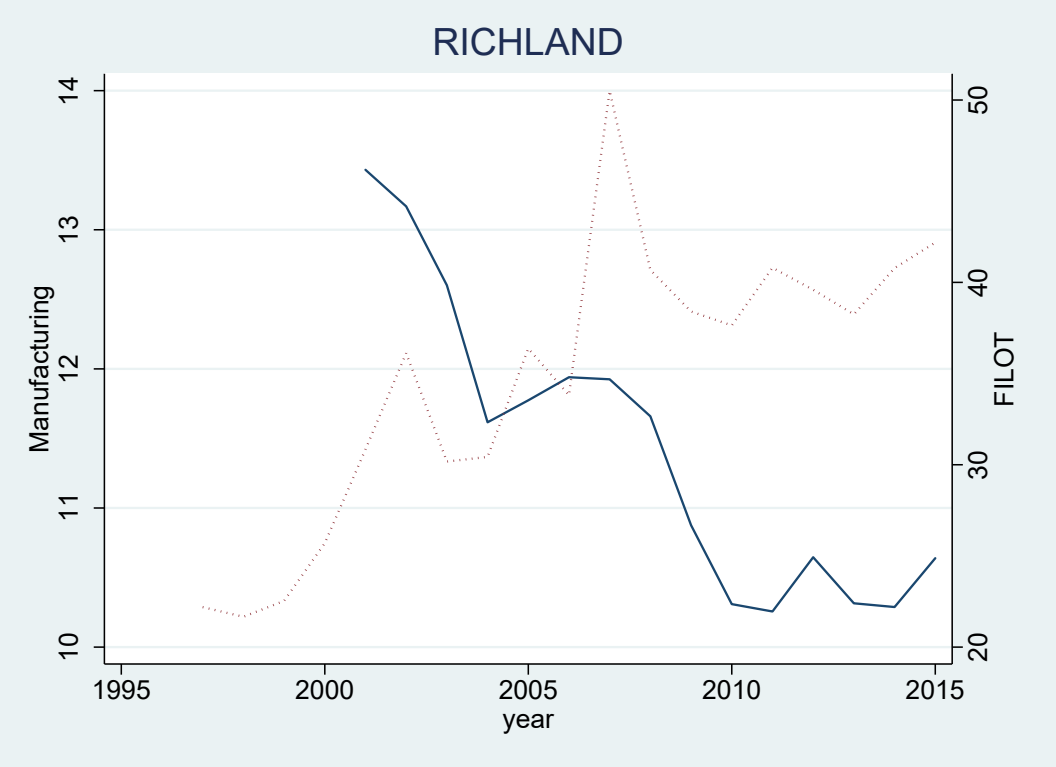
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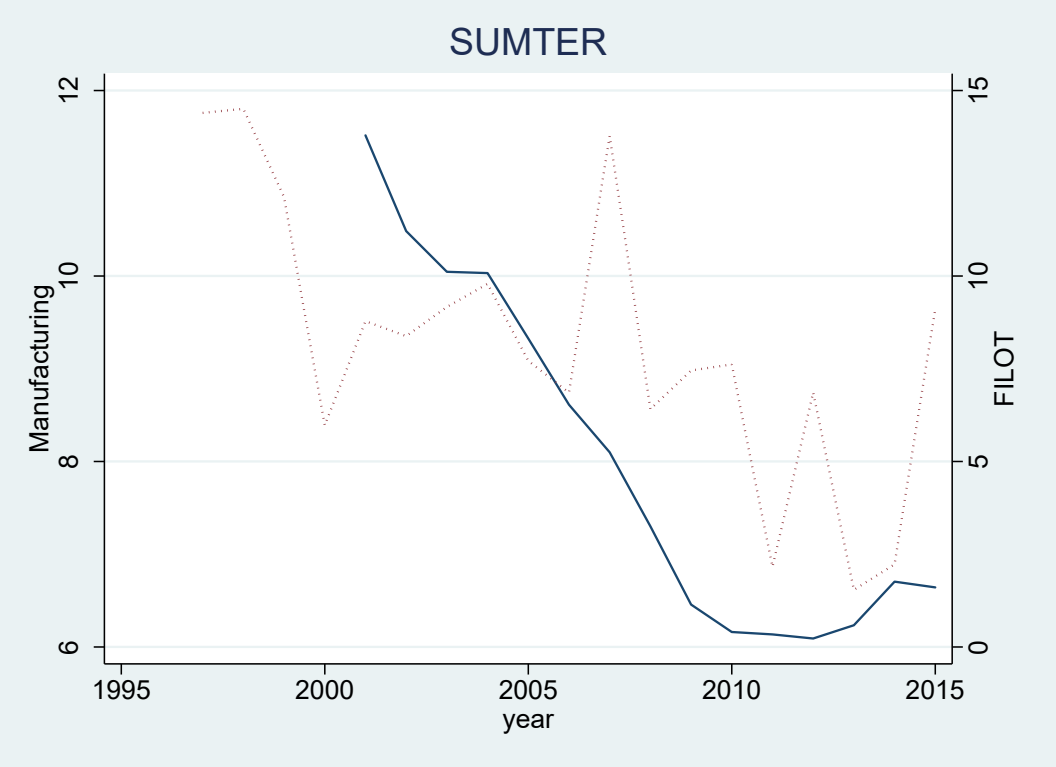
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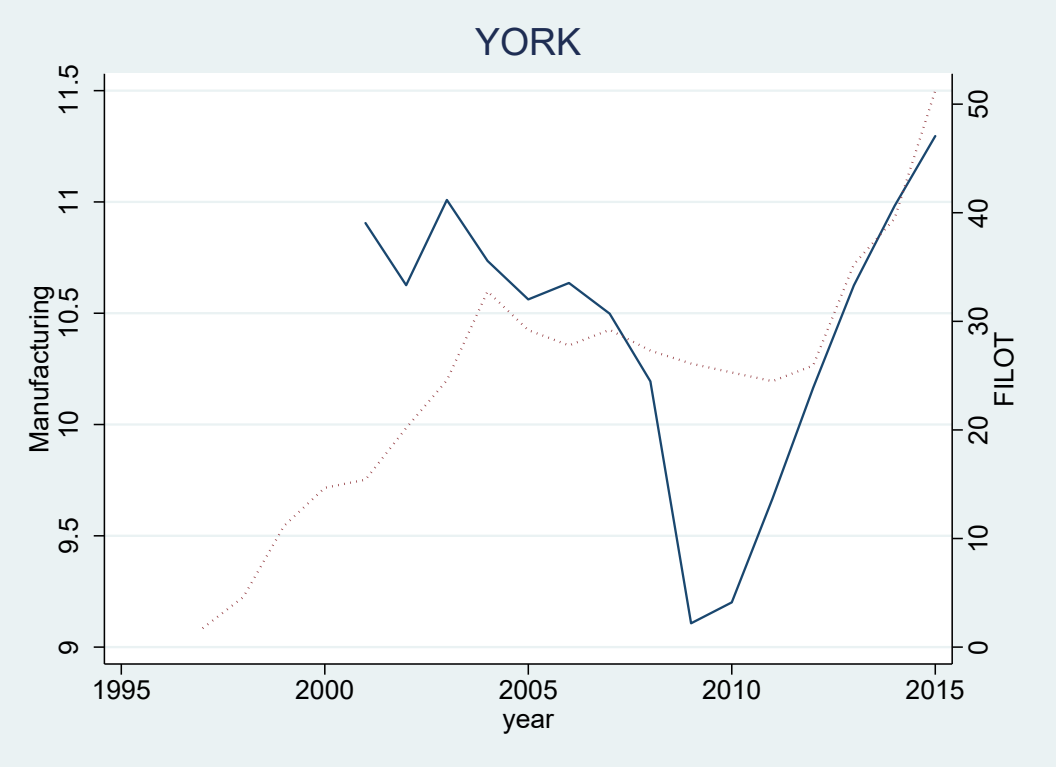
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Chapter 6:

Nonprofit and Government Properties Exempt from Real Property Taxes in South Carolina

by

Daphne A. Kenyon, Ph.D. and Semida Munteanu

Introduction

Chapter 6 concerns property that is exempt from property taxation because it is owned by government or nonprofits. This chapter looks at policies regarding tax exemption of federal and state-owned property but mostly focuses on property owned by nonprofits.

Governments can benefit when nonprofits provide services that might otherwise be the government's responsibility. Conversely, because nonprofits do not pay taxes, the cost of public services they consume (such as fire and police protection), falls to other property owners. The exemption can alter decisions about where a nonprofit locates and is concentrated among land-owning nonprofits. These issues have led to a growing interest in nonprofit payments in lieu of taxes (PILOTs). One municipality in South Carolina and neighboring states currently use this policy mechanism.

This chapter first summarizes property tax treatment of government and nonprofit property across the United States, and then it briefly describes South Carolina's practices. After describing issues that arise from tax exemption, this chapter explores various policies that offset the loss to local governments, including PILOTs and payments by state and federal governments. We also lay out policy recommendations for nonprofit PILOTs. Throughout this chapter, the focus is on real property; personal property, whether owned by individuals or business, will not be covered here.[101]

Table 6.1 State Exemptions from the Real Property Tax, 2017

Type of Exempt Property	States with Exemption*
Government	51
Religious	50
Charitable/Benevolent	50
Educational	49
Parks, Open Space, Cemeteries	50
Health and Care Facilities	48
Membership	41
Infrastructure, Transportation, and Communication Facilities	41
Housing for Vulnerable Populations	38
Art and Cultural	26
Emergency Protection Facilities	26
Literary	25
Scientific	24
Private Economic Activity**	19
Nonresidential Historic	15

Source: Significant Features of the Property Tax, https://www.lincolninst.edu/research-data/data-toolkits/significant-features-property-tax

*Includes District of Columbia

**Examples of private economic activity include concessions in municipal locations, facilities operated as multi-tenant business incubators that are owned by an exempt nonprofit corporation, and alcohol production facilities.

[101] Real property is generally considered to be land and permanent improvements to land such as buildings. Personal property is generally considered to be movable items that are not permanently affixed to or part of the real estate.

Tax Treatment of Government and Nonprofit Property: United States and South Carolina

Every state in the United States exempts government property and nonprofit property from real property taxes. Policies for taxing nonreligious nonprofits vary from state to state. Table 6.1 lists tax exemption categories from most to least common. As shown, most states exempt nonprofit charitable/benevolent associations; educational organizations; parks, open space, cemeteries; health and care facilities; membership organizations; and housing for vulnerable populations. About half the states exempt nonprofit property used for arts and cultural organizations, emergency protection facilities, literary organizations, and scientific organizations. Less than half the states exempt property for nonresidential historic properties. Some exempt property that is considered private economic activity, such as concessions in municipal locations. Of the categories listed, the only categories to which South Carolina does not extend property tax exemption are scientific organizations and private economic activity. Compared to the United States generally, South Carolina has a rather expansive tax exemption policy for nonprofits. However, it is important to note that even states that do not explicitly exempt all these categories in their constitutions or statutes, often exempt them in practice because the courts have broadly interpreted what constitutes a charitable/benevolent organization.

Section 3 of Article X of the South Carolina Constitution mandates exemption for government property, certain categories of nonprofits, and even specific organizations, such as The Boy Scouts of America and The Girl Scouts of America. These exemptions are codified in South Carolina Code 12-37-220. The Constitution names certain broad categories of property as tax exempt, for example, "all property of the State, counties, municipalities, school districts and other political subdivisions, if the property is used exclusively for public purposes," and "all property of all public libraries, churches, parsonages and burying grounds."

The Constitution is unusual in that it authorizes county and municipal governments to charge nonprofits fees for fire protection (Section 12-37-235) and to collect payments in lieu of taxes from nonprofit housing corporations (Section 12-37-240).[102]

Government and Nonprofit Property in South Carolina

Data on exempt property in South Carolina is difficult to find. In the absence of a centralized state database, a 2016 Clemson University dissertation was used (see Table 6.2). It provided data on exempt property in the 26 most populous South Carolina municipalities – this data was calculated by obtaining the total acreage of state and nonprofit property from government officials in these jurisdictions. The dissertation was used to analyze the importance of exempt property to South Carolina local governments in the focus counties (Keisler 2016). Among the 17 cities included in the Keisler analysis that were located in our focus counties, the share of land owned by state government, local governments, or nonprofit entities was substantial, exceeding 40 percent of all property in four cities. It is important to note that these figures do not include any acreage of federal government property that is also exempt from property taxes.

[102] Langley, Kenyon, and Bailey (2012) identified 11 other jurisdictions where housing authorities made PILOTs to local governments. These are based on a federal law that requires tax-exempt public housing authorities that receive federal funding to make PILOTs to the local governing body (42 U.S.C. Section 1437d).

Table 6.2 Percentages of Tax Exempt Land in Select South Carolina Municipalities, 2013*

Municipality	Percent of Land Property Tax Exempt (%)
Aiken	23.2
Anderson	15.06
Bluffton	47.5
Cayce	27.1
Charleston	33.5
Clemson	14.6
Columbia	42.3
Conway	NA
Easley	17.82
Florence	18.07
Goose Creek	36.4
Greenville	23.8
Greenwood	38.48
Greer	28.8
Hanahan	17.98
Hilton Head Island	16.1
Lexington	15
Mauldin	26.2
Mount Pleasant	23.67
Myrtle Beach	NA
North Myrtle Beach	NA
North Augusta	12.2
North Charleston	43.9
Orangeburg	NA
Rock Hill	44.56
Simpsonville	24
Spartanburg	26.19
Summerville	18.18
Sumter	40.56
West Columbia	28.11

Source: Keisler (2016)

*Cities shaded in gray are located in our focus counties. The City of North Charleston is located in three different counties, including Charleston.

Although assessors in some jurisdictions, like Boston, value property owned by tax-exempt entities, SC Code 12-43-330 explicitly exempts tax exempt property from the assessment process. Because South Carolina law does not require assessors to appraise tax exempt property, we received no information on

the value of exempt property from assessors except from Allendale County, the least populous of our focus counties.

Issues Raised by Exemption of Government and Nonprofit Property

Exemption of government and nonprofit property from the real property tax in the United States dates back to the beginning of the property tax. There are good reasons for this exemption. As Woods Bowman (2003) states, "Government-owned property traditionally has been exempt from taxation to avoid an empty ritual whereby the sovereign taxed itself…Exemptions for private, nonprofit entities grew out of the government exemption." Nonprofits often take on responsibilities that would otherwise be fulfilled by government, so if government is tax-exempt, one can argue that nonprofits should be exempt from the property tax as well.

Governments benefit when nonprofits provide services to the public that would otherwise be the responsibility of government. The nonprofit exemption can be viewed as a subsidy to encourage these activities. However, the property tax is used to fund services that benefit all properties—for example, public safety, fire protection, and street and road maintenance. When government and nonprofit properties fail to contribute funding for such services, other property owners bear an increased property tax burden. This is particularly problematic when a well-funded nonprofit, such as an elite college, is located in a city with many low-income residents. It may not seem fair for the low-income residents to pay higher property taxes because the college is exempt from property taxation, particularly if the college enrolls students from across the country or around the world.

When the exemption of nonprofits from the real property tax is viewed as a subsidy, one can raise questions regarding the efficiency of that subsidy. Because nonprofits are not liable for property taxes, they may be more likely to locate in areas where property is expensive, such as in city centers. Also, the exemption from real property taxation benefits only those nonprofits that own property, such as colleges and hospitals, and not small nonprofits, with meager budgets, that are more likely to rent, such as soup kitchens.

Nonprofits and PILOTs

To address the issues that arise from the nonprofit exemption, some local governments ask nonprofits to make voluntary payments in lieu of taxes, commonly referred to as PILOTs. The most recent comprehensive survey of PILOTs across the United States found that at least 218 localities in at least 28 states had received PILOTs from 2000 to 2012. Their annual value was estimated at $92 million (Langley, Kenyon, and Bailin 2012).

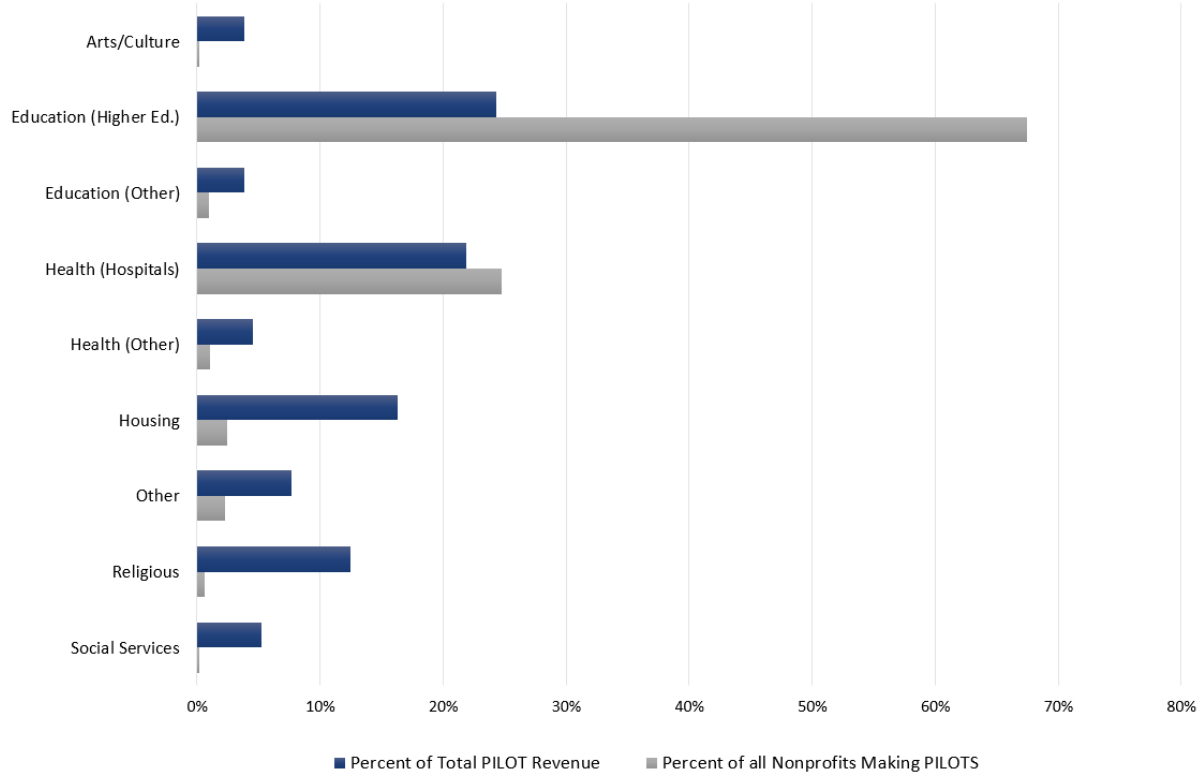
Table 6.3 U.S. Cities That Receive the Most PILOT Revenue

City	State	Year	PILOT Revenue		Number of Nonprofits Making PILOTs
			Total Revenue	% of General Revenue	
Boston	MA	2017	32,401,655	1.08	49
New Haven	CT	2018	8,133,664	1.06	8
Providence	RI	2018	7,506,799	1.54	7
Cambridge	MA	2018	7,820,725	1.18	15
Princeton	NJ	2018	4,310,000	6.63	4

Source: Information compiled from city budgets that are publicly available.

The five cities receiving the most PILOT revenue are all in the Northeast (Table 6.3). Boston, which has the longest standing and most revenue productive PILOT program in the United States, received a total of $32 million in PILOT revenue in 2017 from 49 different nonprofits, which contributed about one percent of the city's general revenue. Princeton, New Jersey received a lower dollar total (about $4 million), but this accounted for over 6 percent of the city's general revenue.

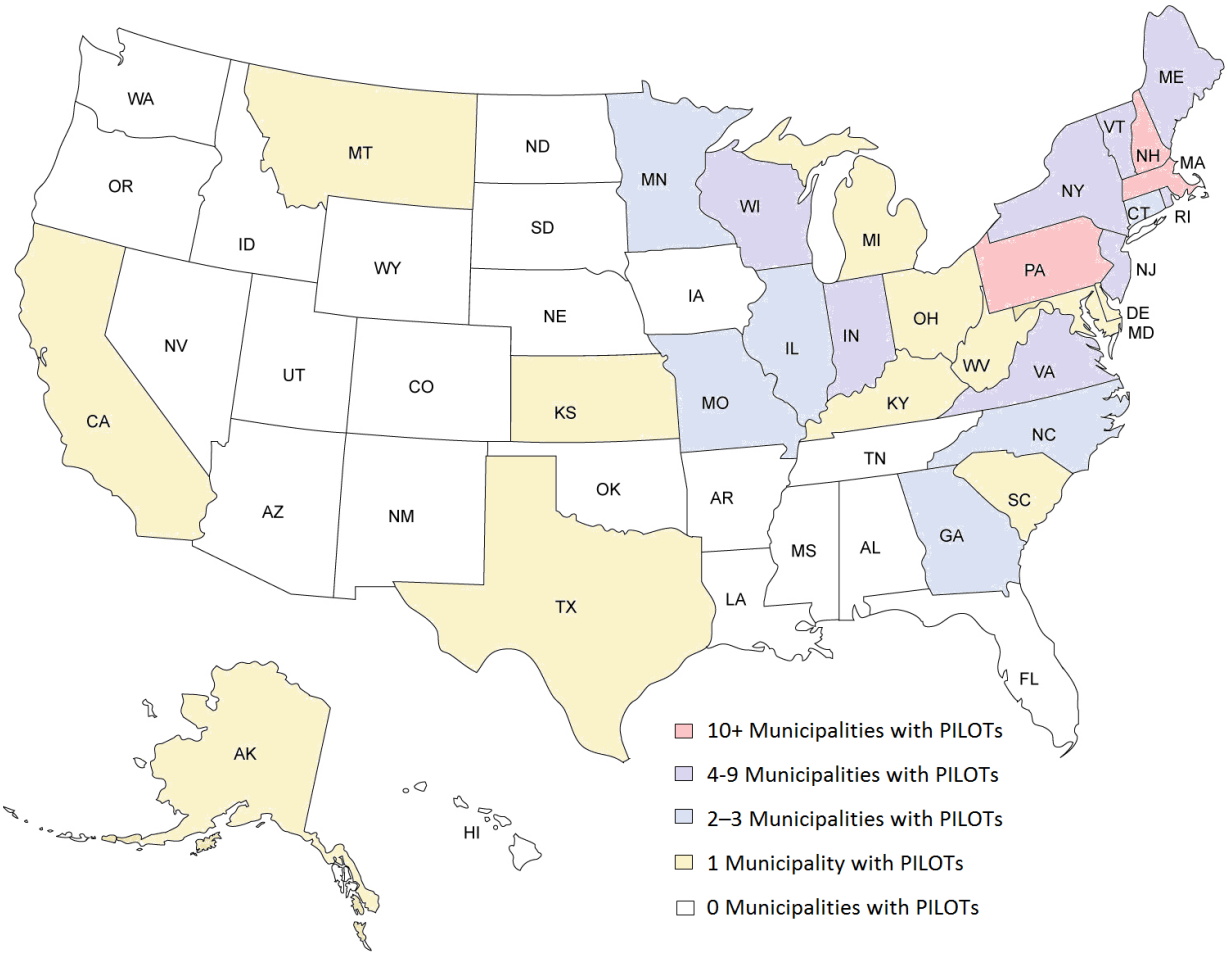
Figure 6.1 Types of Nonprofits that Make PILOTs



Source: Kenyon and Langley 2016

Figure 6.1 shows the types of nonprofits that make PILOTs across the United States. Colleges, universities, and hospitals are the types of nonprofits that most often contribute PILOTs; they are also the types of nonprofits that contribute the greatest percentage of total PILOT revenue.

Figure 6.2 PILOTs in Each State



Although the Northeast is the region with the greatest incidence of PILOTs, as Figure 6.2 shows, South Carolina has one city that receives PILOTs (Greenwood in Greenwood County), both Georgia and North Carolina have two municipalities that receive PILOTs, and three localities in Virginia receive PILOTs. Contributions by nonprofits in these three states range widely from $120 paid by the Shenandoah Arts Council to the city of Winchester, Virginia to a $2.5 million contribution by Emory University to DeKalb County Schools in Georgia (Table 6.4). The largest PILOT payments are from health and educational organizations.

To our knowledge Greenwood City is the only municipality in South Carolina that receives PILOTs from nonprofits (Cranney 2018). The city enacted a PILOT program in 2011. Currently, four health-related nonprofits contribute a total of just under $200,000 annually to help fund city services.[103]

[103] See Appendix A for a description of how and why Greenwood City enacted a PILOT program in 2011.

Table 6.4 PILOT Activity in South Carolina and Comparison States*

State	Locality	Nonprofit	Sector	Revenue ($)	Year
Georgia	Decatur	Clairemont Oaks	Housing	36,500	2018
	Decatur	Philips Towers	Housing	23,500	2018
	DeKalb County Schools	Emory University	Educational	2,500,000	2010
North Carolina	Davidson	Davidson College	Educational	45,000	2016
	Davidson	The Pines at Davidson	Housing	87,561	2012
	Durham	Duke University	Educational	400,000	2016
South Carolina	Greenwood	Carolina Health Centers	Health	9,500	2019
	Greenwood	Self Regional Healthcare	Health	175,000	2019
	Greenwood	Wesley Commons	Health	9,500	2019
	Greenwood	Greenwood Genetic Center	Health	3,000	2019
Virginia	Lexington	Washington & Lee University	Educational	132,021	2011
	Lexington	Virginia Military Institute	Educational	35,882	2011
	Lynchburg	Westminster Canterbury	Housing	52,900	2018
	Winchester	Crisis Pregnancy Center	Health	516	2011
	Winchester	Feltner Community Foundation	Social Services	180	2011
	Winchester	French & Indian War Foundation	Arts/Culture	326	2011
	Winchester	Habitat for Humanity	Housing	154	2011
	Winchester	Our Health	Health	3,187	2011
	Winchester	Shenandoah Arts Council	Arts/Culture	120	2011
	Winchester	Westminster-Canterbury of Winchester	Housing	45,876	2011
	Winchester	Valley Health System	Health	351,865	2011

Source: Langley, Kenyon, and Bailin (2012)

*The data in the original source has been updated based on information from city budgets that are publicly available.

Although Greenwood's PILOT program appears to be a successful one, not all analysts or policy makers would agree that instituting a PILOT program is a good idea. While one can argue that nonprofits, particularly those with substantial resources, should help pay for the public services they consume, there are good arguments against enacting a PILOT program. Three of the most important arguments against PILOTs are:

(1) PILOTs provide limited revenue. As previously described, even in successful, longstanding programs they provide a small fraction of the revenue needed to fund a local government;
(2) PILOTs could lead nonprofits to raise fees or to cut services. In other words, if a nonprofit provides valuable services in a community, it may not be a good idea to require a payment that will reduce those services.
(3) PILOT negotiations can be contentious, ad hoc, and secretive. While Greenwood appears to have enacted PILOTs through a win-win negotiation between municipal and nonprofit leaders, not all PILOT negotiations are so civilized or so productive (see Kenyon and Langley 2010).

Best Practices for Nonprofit PILOTs

While PILOTs provide compensation for revenue lost due to the charitable nonprofit exemption, they are not appropriate for all municipalities and not appropriate for all nonprofits. PILOTs are more appropriate for municipalities that are highly reliant on property taxes and have a high share of nonprofit property value. PILOTs are best applied to nonprofits that: own a large amount of property, are financially secure, and predominantly serve clients outside of the municipality where they are located. In any case, municipalities and nonprofits should work closely together to negotiate PILOT agreements that consider the individual financial constraints of each nonprofit.

Municipalities interested in developing PILOT programs that are efficient and equitable should consider the following recommendations. While small municipalities, such as Greenwood City, might find that individual agreements with nonprofit organizations are the most reasonable approach, large municipalities with a lot of nonprofit property would be best served to adopt a systematic, multi-year program. This should establish clear criteria for the type of nonprofits that would be invited to participate —either by identifying a list of general principles and targeting nonprofits that do not meet them, or by setting a threshold level of assessed value or operating revenues for inclusion in the program. Municipalities with strong PILOT programs have used different methods for calculating the PILOT amount; for example, Boston considers the assessed value of nonprofits, Cambridge uses square footage as the basis, and Baltimore relies on a nonprofit's operating income as a measure of ability to pay. If participating nonprofits can demonstrate that they provide specific community benefits to local residents, the PILOT amount should be reduced by the value of those services (Kenyon & Langley 2010, 38-40).

Since PILOT programs are not recommended for all municipalities, often it is best to consider alternatives such as state grants and user fees when seeking the best means of compensating for lost revenue (Kenyon and Langley 2010).

Both Connecticut and Rhode Island state governments have long made payments to municipalities to help compensate for exempt property owned by nonprofit medical and educational institutions. Sometimes these programs are referred to as GILOTs (grants-in-lieu-of-taxes) to distinguish them from PILOTs that nonprofits themselves pay.

Connecticut's program provides a payment in lieu of taxes for private colleges, general hospitals, and free-standing chronic disease hospitals. It aims to pay 77 percent of the real property taxes that these institutions would have paid if their property was not exempt from taxation. In recent years, these state payments have decreased because of budget problems. In FY2008, these payments totaled $122 million (Kenyon and Langley 2010). For FY2020 this program will distribute $110 million to 60 Connecticut municipalities (State of Connecticut 2019).

Arguments in favor of a state funded PILOT program such as Connecticut's are that the property tax exemption for nonprofits is created by the state and typically provides benefits to citizens beyond municipal borders. Also, a state-run program can be more systematic than local PILOTs paid by nonprofits themselves. On the other hand, as Connecticut's experience has shown, state-run PILOT programs are vulnerable to cuts when state budgets are tight.

The last option we will consider whereby nonprofits make some payments for municipal services is fees. These fees are of two kinds. One is user fees that are applied to all property owners, including nonprofits. The other is municipal service fees or parcel fees that are sometimes charged only to nonprofits.

Nonprofits are generally exempt from paying property taxes as described previously. However, they are not generally exempt from paying user fees for services like garbage collection, water, and sewer. Thus, a municipality can obtain more revenue from the nonprofit sector by shifting the financing of some services from the property tax, which nonprofits do not pay, to user fees, which nonprofits generally do pay. A survey of four types of nonprofits—child and family services, elderly housing and services, community and economic development, and arts and culture—found that about 42 percent of these nonprofits paid user fees to state or local governments (Salamon, Geller, and Sokolowski 2011).

The more controversial type of fee is the municipal service fee, which is rarely used because of legal challenges. For many years St. Paul, Minnesota levied a right-of-way fee paid by many nonprofits. This fee was used to "cover street sweeping, snow plowing, car towing during snow emergencies, sanding, tree trimming, street-light maintenance, [and] litter pick-up," among other city services (Melo 2016). But a suit was filed by two churches which paid over $10,000 annually in right-of-way charges. This suit went to the Minnesota Supreme Court, which found that the right-of-way fee was a tax, and not a fee, implying that it could not be levied on nonprofits (*First Baptist Church of St. Paul v. City of St. Paul 2016).*

The possibility for nonprofits to contribute to the financing of local services through a fee is of special interest in South Carolina due to the language in the state statutes concerning a fire service fee. This issue has come up in other states and rulings vary by state:

> In the case of fire protection fees, the highest court in West Virginia ruled that a fire and flood protection fee was not a tax, but the highest court in Massachusetts ruled a Boston fire protection fee to be an unconstitutional tax (Youngman 2016, 25-26).

It is unclear whether any fire protection fees are paid by nonprofits in South Carolina but a recent letter ruling provides some insight (Office of the South Carolina Attorney General 2014). This letter found that Greenville County could not permissibly levy a fire service fee on behalf of a special purpose district. Furthermore, the letter opined that it was an open question whether such a fire service fee was a tax or a fee and whether the South Carolina statute permitting such a fire service fee was constitutional.[104]

Payments in Lieu of Taxes on State and Federal Property

State Property

Tax-exempt state property also presents a revenue issue for local governments. There are various state programs that compensate local governments for the loss of their tax base due to state ownership of land. The most recent compilations of state PILOT programs across the United States were completed in 1990 and 1994. They are no longer accessible but were consolidated and described by the New York State Department of Taxation and Finance (1996). According to that report 34 states had some type of program to at least partially reimburse local governments for the revenue loss due to state-owned property. These programs fall into three categories: (1) state payment of property taxes such as Vermont's requirement that lands held by the Department of Natural Resources be subject to local taxation, (2) state payment of service costs incurred by local governments, such as Wisconsin's requirement that state facilities pay user

[104] Exempt organizations are generally required to pay special assessments that apply to all property owners in a given area. However, special fees imposed on exempt organizations alone, to cover services paid for by taxes in the cases of non-exempt property owners, can be characterized as a disguised tax. A fire protection fee is particularly vulnerable to this charge if it is not adjusted according to the need for services. Nevertheless, the explicit provision for "reasonable fees for fire protection" in Section 12-37-235 provides strong grounds for attempting to meet the legal requirements for a reasonable fee.

fees for water, sewer, electricity, garbage and trash collection, and (3) state payments in lieu of taxes (PILOTs or PILTs). We will focus on that third category.

The New York State Department of Taxation reports that at least 22 states had some sort of state PILOT program in the early 1990s. None of South Carolina's comparison states had such a program, but South Carolina was reported to have three state programs compensating local governments for state-owned property, with an annual cost of approximately $1.5 million (U.S. Advisory Commission on Intergovernmental Relations 1991, 143).[105]

According to the New York State Department of Taxation and Finance (1996):

> The range of specific [state] PILOT arrangements is also large, but the following features are commonly found:
>
> 1. Payment equals the taxes that would be due if the property were not exempt;
> 2. Payment equals the tax paid on the land before it was acquired;
> 3. Payment is initially the pre-acquisition tax, but is phased out over time;
> 4. Payment is made only if a threshold percentage of total acreage or value is state-owned;
> 5. Payment is at a flat rate per acre;
> 6. Payment is a lump sum, determined through negotiation or other method.

Through a web search we found evidence of current use of state PILOT or PILT programs in Connecticut, Massachusetts, Michigan, North Dakota, and Vermont. Brief descriptions of Connecticut's and Vermont's programs follow to give some idea of the variety in such programs.

In Connecticut, the state pays local governments a percentage of what they would have been paid if the state-owned property was not exempt from local property taxes (State of Connecticut). This payment applies to real property only and not personal property. The payment also excludes property used for highway purposes. The percentage reimbursement varies from 100 percent for correctional facilities, Mashantucket Pequot Tribal land, and towns in which more than 50 percent of all property in the town is state-owned real property, to 65 percent for the Connecticut Valley Hospital facility and 45 percent for all other property. But in recent years budget challenges have led the state to cut these PILOT payments. For example, New Haven's PILOT for state property has dropped by millions of dollars (O'Leary 2018).

Vermont's PILOT is meant to compensate municipalities for the inability to collect property taxes on state-owned buildings (Vermont Agency of Administration). The state-owned buildings are valued, and an adjusted municipal tax rate is applied to calculate a full PILOT. However, the full PILOT is then pro-rated based on available funding. In FY2019 the proration factor was 76 percent as full PILOTs totaled $10 million and available funding was only $8 million.

Federal Property

We now turn to the last type of exempt property we will consider, federal real property. The United States Supreme Court has recognized that the Supremacy Clause of the United States Constitution, which

[105] Experts that follow this literature indicate that there have been no comprehensive studies of state PILOT programs since the 1996 NY State Department of Taxation and Finance report cited here.

declares federal laws as "the supreme Law of the land"[106] implies immunity of federal property from state and local taxation.

The city most affected by the presence of federal property in the United States is likely Washington, DC. A study prepared for the DC Tax Commission estimated that in 2013 properties owned by the federal government in DC made up 18.6 percent of all properties and 53.9 percent of total property value, costing the District approximately $823 million in foregone tax revenue (Bell and Muhammad 2013). This raises the question of how the federal government compensates the District for the loss of property revenues on federal property. Although the federal government does not make PILOTs per se it has taken over responsibility for some services that would be typically provided by city governments (such as prisons, funding and administration of local courts, and liability for most of DC's unfunded public employee pension liabilities) amounting to approximately $247 million in FY2011.

The last comprehensive examination of payments in lieu of taxes on federal real property appears to have been a study by the U.S. Advisory Commission on Intergovernmental Relations published in 1981. That study noted that, "Congress has recognized a responsibility to some local governments for making some form of tax or in lieu of payment to account for the federal presence, but the result has been the creation of a patchwork of uncoordinated and ad hoc special tax payment programs which have developed over the years." At that time there were 57 different federal programs that could be characterized as payment in lieu of tax programs, divided into three different categories: (1) revenue or receipts sharing, such as sharing revenue from grazing land; (2) formula payments that attempt to compensate local governments for the cost of federal presence, such as the Education Impact Aid Program, and (3) payment in lieu of taxes programs that also attempt to compensate local governments for the presence of tax exempt federal programs within their boundaries. The most commonly known program in the last category is the Payments in Lieu of Taxes (PILT) program, managed by the U.S. Department of the Interior (DOI).

The federal government owns about 640 billion acres of land across the country and 95 percent of this land is managed by four agencies: the Bureau of Land Management, the National Park Service, the Fish and Wildlife Service within the DOI, and the Forest Service within the Department of Agriculture (Gorte and Corn 2012, 11). The DOI makes annual PILT payments for land managed by these agencies, as well as for federal water projects and some military installations. These annual payments are calculated based on a formula that considers population, revenue-sharing payments, and the amount of federal land within the local government. In FY2019, the DOI paid South Carolina $845,000 for approximately 800,000 acres of federal land through the PILT program.

As Table 6.5 shows, only half of our focus counties received funding in 2019 from the PILT program, and the amounts they received were small. The focus county receiving the most funding from PILT in 2019 was Charleston, with almost $127,000 received.

[106] U.S. Constitution, Article VI, clause 2.

Table 6.5 Federal PILTs to South Carolina, FY2019*

County	Payment ($)	Total Acres
Abbeville	37,733	46870
Aiken	0	9
Anderson	90,588	32728
Beaufort	7,854	0
Berkeley	197,076	197532
Charleston	126,961	68091
Cherokee	5,722	2067
Chester	4,954	12714
Colleton	0	26
Edgefield	12,576	32273
Fairfield	4,311	11061
Georgetown	764	276
Greenwood	4,642	11913
Hampton	0	0
Horry	260	94
Jasper	1,354	489
Laurens	8,163	20946
McCormick	89,366	89145
Newberry	22,964	58927
Oconee	114,835	117052
Pickens	15,434	5576
Richland	65,810	23453
Saluda	1,754	4501
Union	24,733	63466
Williamsburg	0	1
York	7,000	2529
TOTAL	844,854	801,739

Source: U.S. Department of the Interior, 2019

Note: These PILTs are administered by the U.S. Department of Interior. Other federal agencies such as the Department of Education and the Department of Energy administer different programs that also provide financial assistance to state and local governments to compensate for the presence of tax-exempt federal property in their jurisdictions.

*Cities shaded in gray are located in our focus counties.

Ferreting out data on the various types of payment in lieu of tax programs beyond the DOI PILT program was beyond the scope of this report, but two more issues of federal land use impact bear mentioning. Allendale, together with Aiken and Barnwell counties, is home to Savannah River Site, a nuclear plant built in the 1950s which now serves as a nuclear waste storage facility.[107] Congress is currently considering a bipartisan bill (S1985) that would compensate local governments storing nuclear waste that the federal government failed to move to a permanent disposal facility.[108]

A 2017 report on the economic impact of the Savannah River Site mentions the site's contribution to the local economy through the federal Payment in Lieu of Taxes (PILT) program. The federal government compensates local governments to offset lost property tax revenue from nontaxable federal land. In 2017, the federal government paid $6.5 million to Barnwell, Aiken, and Allendale counties. Allendale received $89,508 of the $6.5 million that was allocated to the counties (Tip Strategies 2017, 22). This amount is small compared to Barnwell and Aiken because Allendale only holds 4,211 of 198,000 Savannah River County acres. The total funding provided under this PILT has increased from $6.2 million to $6.5 million between 2010 and 2017, but it appears that the amount allocated to Allendale has not changed. Note that this PILT is a different type of federal PILT than the one described above – it is administered by the U.S. Department of Energy (DOE) which has been authorized to make PILTs to certain state and local governments under section 168 of the Atomic Energy Act of 1954. The DOE provides discretionary payments on a case-by-case basis to applicant jurisdictions that meet certain guidelines (DOE Directive 143.1, 2003).

Introduced in 2019, bipartisan bill S1985, known as the Stranded Act, would further compensate the counties that house the Savannah River Site by providing $15 per kilogram of spent nuclear waste to eligible communities. There are approximately 30,000 kilograms of spent nuclear waste being stored at the Savannah River Site (U.S. Nuclear Waste Technical Review Board 2017, 2). This means that if the bill were to pass, the counties would receive an additional $450,000 per year in federal funds.

The federal government also owns 59,129 acres of land for military bases in South Carolina, that accounts for 31 percent of the state's total land area. This places South Carolina as 25th in the country in terms of the share of military base land (Business Insider 2014). Five military bases are located in three of our focus counties: the Shaw Air Force Base in Sumter, the Coast Guard Base and the Joint Base in Charleston, and Fort Jackson and McEntire Joint National Guard Base in Richland (SCIWAY 2019). Military land is generally not eligible for the DOI PILT program because the military bases generally provide their own local infrastructure services. However, communities with military bases receive financial assistance for other local services, such as education. School districts that serve students in counties with military bases receive funding for the "financial burden" resulting from tax-exempt federal land and enrollment of the children of military employees (Gorte and Corn 2012, 23). The Impact Aid Program, administered by the U.S. Department of Education, provides funding for schools in Charleston, Richland, and Sumter counties. In 2018, Charleston County School District received $106,861, Richland School District 1 received $10,000, Richland School District 2 received $250,000, and Sumter School District received $330,000.

Conclusion

South Carolina does not tax property owned by the federal government, state government, religious nonprofits, and most other nonprofits. Because South Carolina does not maintain a centralized database of

[107] See Savannah River Site annual report for 2016 (2016 is the most recent year available on the SRS website)
[108] See Senate Bill 1985: https://www.govinfo.gov/content/pkg/BILLS-116s1985is/pdf/BILLS-116s1985is.pdf.

exempt property or require assessors to appraise exempt property, we know little about the effect of the exemption on local governments. However, among the focus counties, several have cities in which over 40 percent of property is exempt from taxation because the property is owned by state government, local government, or nonprofits. South Carolina has one municipality that receives payments in lieu of taxes from nonprofits. PILOTs, when designed properly, can address some issues arising from nonprofit tax exemption.

Appendix A: PILOTs in Greenwood, South Carolina

After the Great Recession, the City of Greenwood was strapped for cash. In 2011, the city council, city manager, and finance director got together to discuss how difficult it was to provide services and figure out a solution. One third of property within city limits is nontaxable and healthcare industry trends are exacerbating this problem (Cranney 2018). The local non-profit hospital has been buying up private practices, and the city loses tax revenue each time for-profit practices became nonprofit.

One option was to eliminate the current exemption from the business license tax for certain nonprofits. The city's legal team crafted a proposal establishing criteria for an expanded business license tax that would apply only to nonprofits that were in direct competition with for profit businesses. They presented this as a measure to level the playing field, in addition to raising new revenues.

After crafting this proposed business license tax ordinance, the city went to three large local health care and health-care related nonprofits – Self Regional Healthcare, Carolina Health Centers, and Wesley Commons – and told them they would prefer not to pass the ordinance, but they must do it in order to continue providing city services. The city invited the nonprofits in question to come to the table and contribute to the city budget in order to avoid passing the ordinance. Wesley Commons agreed to do this on the condition that all three healthcare-related nonprofits do it, but Self Regional Healthcare, the local hospital, did not want to contribute. The city proceeded to pass the first reading of the ordinance. On the day the city council was preparing to pass the second ordinance reading, they received an early morning call from the hospital. The three nonprofits agreed to jointly pay the city a total of $1 million over five years, with the expectation that by the end of that time the city would not need the extra revenue.

It is important to note that all Greenwood businesses are required to pay an annual business license tax based on gross receipts, with rates varying according to different types of businesses.[109] Currently, the state allows municipalities to apply the business license tax to nonprofits, but the majority of municipalities across the state have not done this.

The PILOTs that Greenwood received from these nonprofits are probably significantly lower than the tax on gross receipts the nonprofits would have paid if the city had passed the ordinance removing the business license tax exemption for nonprofits. The city doesn't know the exact amount the nonprofits would have paid under the tax because it was not able to obtain current financial records. But based on old financial records, the city estimates business license tax revenue would have been two to three times higher than the PILOTs the group of nonprofits are currently making.

After five years, the city's financial position had not improved so in 2016 the city reopened negotiations to extend the agreement and receive donations for another five years. The three nonprofits agreed with the condition that other nonprofits be brought on board. The city now has four participating organizations that are jointly paying $197,000 per year until 2021, with Greenwood Genetic Center joining the group. These institutions agreed that they were receiving city services they were not paying for. They felt that they also provided important community services, but they understood these were in direct competition with other for-profit entities that had to pay the business license tax. As the largest of the four nonprofits, Self Regional Healthcare is contributing the bulk of the total payment amount.[110]

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[109] See City of Greenwood Ordinances, Chapter 10, Article II – Business License Taxes.

[110] The city entered into a joint agreement with the three organizations in 2012, with higher payments in the first years (i.e. Year 1-$250,000, Year 2-$225,000, Year 3-$200,000, Year 4-$175,000, Year 5-$150,000). In 2016 the city entered into individual agreements with each of the four entities, for a combined total of $197,000 per year (Self

At the end of 2021 the city will need to negotiate again if there are no other changes. City officials are currently lobbying the county to put a local option sales tax referendum on the 2020 ballot, and if this passes it could potentially bring in revenues that would allow the city to lower the amount contributed by these four nonprofits.

Regional - $175,000; Carolina Health Centers - $9,500; Wesley Commons - $9,500; Greenwood Genetic Center - $3,000).

DEFINITIONS

Ad Valorem Tax— (Latin for "toward value") A tax imposed on properties in proportion to their values. The most common are the ad valorem taxes imposed on real and personal property.

Appraised Value—The estimate of the value of a property before application of any fractional assessment ratio.

Assessable Transfer of Interest (ATI) —A transfer of an existing interest in real property that subjects the real property to reappraisal. For purposes of this definition, an existing interest in real property includes a life estate interest.

Assessed Property Value—The amount of a property's value that is subject to be taxed, as determined by the assessor. To determine the assessed value, the property tax value (PTV) is multiplied by the appropriate assessment ratio as noted below.

- Owner-occupied and agricultural properties are assessed at 4 percent of their appraised value.
- Commercial and non-owner-occupied residential properties are assessed at 6 percent of their appraised value.
- Manufacturing properties are assessed at 10.5 percent of the appraised value (determined by the S.C. Department of Revenue).

Assessment—The official act of discovering, listing, and appraising property, usually by an assessor.

Assessment Ratio—The ratio applied to the appraised value of property depending on the use of the property. Assessment ratio qualifications are set forth by state law. Real property (excluding manufacturing and utility property) is assessed in South Carolina at either a 4 percent or 6 percent ratio.

Capped Value--See Property Tax Value.

Coefficient of Dispersion (COD)—The coefficient of dispersion is commonly used to measure horizontal uniformity. It calculates the variation in appraisal/sales ratios around the measure of central tendency by computing the variation of each parcel's appraisal/sales ratio from the median ratio and then expressing it as a percent of the median ratio.

Fair Market Value (FMV) —Value as defined by §12-37-930 which states that "All property must be valued for taxation at its true value in money, which in all cases is the price that the property would bring following reasonable exposure to the market, where both the seller and the buyer are willing, are not acting under compulsion, and are reasonably well informed of the uses and purposes for which it is adapted and for which it is capable of being used."

Horizontal Equity— Horizontal equity is the principle that people in similar circumstances should be treated the same by the tax system. In the context of the property tax, horizontal equity means that people with properties of similar value should pay similar property taxes. For example, in the context of horizontal equity, if two houses are each valued at $100,000, they should pay the same property tax, regardless if one is owner-occupied and the other is non-owner-occupied. (See discussion of Coefficient of Dispersion)

Market Value—The amount that property can reasonably be expected to sell for on the open market with a willing buyer and a willing seller.

Millage Rate—The number of mills levied in order to meet the budget of a school district, county, city, or other political subdivision. One mill equals 1/1000 of a dollar or 1/10 of a cent. If the tax rate is 501 mills, multiply .501 by the assessed value to determine the amount of property tax due.

O & M Exemption—The removal of the school operation portion of a primary homeowner's property tax bill. O & M is shorthand for "operations and maintenance."

Owner-occupied---In South Carolina, often used interchangeably with "primary residence." Otherwise, this term means "used as a dwelling by the owner." Outside of South Carolina, "owner-occupied" is not synonymous with "primary residence" or the legal term for primary residence which is "domicile."

Personal Property—All things other than real estate which have value such as cars, trucks, boats, motorcycles, and airplanes. Also, items used in a business such as furniture, fixtures, and equipment.

Price Related Differential (PRD)—A statistic used to measure vertical uniformity of appraisals. It is calculated by dividing the mean appraisal/sales ratio by the aggregate ratio for an entire group of properties.

Primary residence---That particular locality where a person is legally deemed to have his or her true home or place of abode. A person always has one, and only one, primary residence. Primary residence is synonymous with the legal term "domicile."

Property Tax Value (PTV) or Capped Value—"Each political subdivision shall value real property by a method in which the value of each parcel of real property, adjusted for improvements and losses, does not increase more than fifteen percent every five years unless an assessable transfer of interest occurs." Property Tax Value, according to §12-37-3155 means fair market value as it may be adjusted downward to reflect the limit imposed pursuant to Section 12-37-3140(B).

Reassessment—Process required by state law to determine the change in market value of property over a certain period of time in order to provide equity among taxpayers. Reassessment is a revaluation of real estate. Presently South Carolina state law requires each county to reassess every five years.

Real Property—All land and the buildings, structures, and improvements on that land.

Sales Ratio Study—A study of the relationship between appraised values and sales values. These studies focus on the level and uniformity of appraisals.

Tax Bill Number—A "Bill Number" identifies an individual tax bill issued for each Tax Year. The "Bill Number" is used to link the billing and payment records for each tax bill. The "Bill Number" appears twice on a tax bill: on the third line of the information listed at the top right corner of the bill, and at the left side of the third line down from the perforation (detach line) at the bottom of the bill.

Tax Year—The year that the tax bill is received, payable by January 15 of the next year.

TMS (Tax Map System), TMS—The "TMS" number links ownership and map location information. This information is maintained by the county assessor's office. This includes "tax maps" that show all the

parcels of land in the county, each labeled with its own TMS number that links to current ownership information for each parcel.

Vertical Equity—Vertical equity, in the context of the property tax, means that high- and low-valued properties should be appraised in the same relationship to actual sales prices. To the extent appraisal/sales ratios for high- and low-valued properties are not the same, vertical equity is undermined. (See discussion of Price Related Differential.)

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Individuals Interviewed

Adkins, Deborah, Real Property Services Manager, Greenville Assessor Office
Barfield, James, Assessor, Sumter County Assessor's Office
Berger, Anna, Director of Research and Training, SC Association of Counties
Boheler, Amy, Auditor, York County Auditor's Office
Brown, Ryan, Chief Communications Officer, SC Department of Education
Christ, Brock, Tax Director, Michelin North America
Cleland, Meredith, Deputy Director, Government Services Division, SC Department of Revenue
Cone, Thomas, Chief Counsel, SC House of Representatives
Dawkins, Hunter, Director of Development, Natural Resources Division, Johnson Development Associates
Epps, James, Superintendent, Fort Mill School District
Farris, Mark, President & CEO, Greenville Area Development Corporation
Glennon, Toy, Assessor, Charleston County Assessor's Office
Hardin, Edgar, Deputy Assessor, York County Assessor's Office
Hottel, Donald, Director of Research, SC House of Representatives
Jantzen, Richard, Assessor, York County Assessor's Office
Johnston, Robert, Chief Strategy Officer, The InterTech Group
Jolliff, Lisa, Division Manager, Fiscal Analysis, SC Revenue and Fiscal Affairs Office
Kibler, H. Haskell, Asset Manager, Wilson Kibler Commercial Real Estate
Kinsey, Bryan, Assistant Director, Tennessee Comptroller's Division of Property Assessments
Lockwood, David, Executive Vice President and Chief Operating Officer, Colliers International
Ludwig, Benjamin, Director of Community Relations and Economic Development, Southern Current
Maybank, Burnet, Tax Attorney, Nexsen Pruet
McDonald, Elizabeth, Assessor, Richland County Assessor's Office
McLean, James, Assessor, Orangeburg County Assessor's Office
Miller, Mary Katherine, Property Tax Specialist, SC Revenue and Fiscal Affairs Office
Mishoe, Michelle, FILOT Advisor, Property Division, SC Department of Revenue
Monroe, Cooper, Tax Director, Duke Energy
Morrell, Real Estate Broker, Stephen Cooley Real Estate Group
Paradice, William, Local Government Services Supervisor, Property Division, SC Department of Revenue
Parlock, Paul, Senior Tax Consultant, Dominion Energy
Phibbs, Bethany, Executive Director, SC Association of School Administrators
Powell, Allyn, Director of Budget Development, Fiscal Analysis Division, SC Revenue and Fiscal Affairs Office
Rhodes, Joshua, Deputy General Counsel, SC Association of Counties
Richardson, Wayne, Deputy Auditor, Richland County Auditor's Office
Roscoe, Lawrence, Assessor, Horry County Assessor's Office
Rouse, Harvey, Assessor, Allendale County Assessor's Office
Ruple, Amelia Furr, Training and Research Coordinator, Local Government Services, SC Department of Revenue
Russell, Jean, External Tax Policy Advocate, AT&T
Smith, Sandra, Executive Director, SC Association of School Business Officials
Smoak, Nancy, Lower State Property Field Supervisor, Property Division, SC Department of Revenue
Sosebee, Jane, South Carolina President, AT&T

Spinks, Steven, Chief Executive Officer, The Spinx Company
Stokes, Lisa T., Special Projects Coordinator, Local Government Services, SC Department of Revenue
Swenson, David, Director, York County Economic Development
Tecklenburg, Peter, Auditor, Charleston Auditor's Office
Turkopuls, Senior Research Associate, SC Association of Counties
Ulbrich, Holley, Professor Emerita of Economics, Clemson University
Wells, Tigerron, Director of Governmental Affairs, SC Municipal Association
Williams, William, President & and CEO, Economic Development Partnership
Winslow, Timothy, Executive Director-Elect, SC Association of Counties
Yarborough, Jonathan, Director of Governmental Affairs and Economic Development, Dominion Energy

Authors

Alvayay Torrejón, Camila, Graduate Research Assistant, Michigan State University
Anderson, John E., Baird Family Professor of Economics, University of Nebraska-Lincoln
Bell, Michael, President, MEB Associates, Inc.; Research Professor, George Washington Institute of Public Policy, George Washington University
Kenyon, Daphne A., Resident Fellow in Tax Policy, Lincoln Institute of Land Policy
Merriman, David, James J. Stukel Presidential Professor, Department of Public Administration and Institute of Government and Public Affairs, University of Illinois
Munteanu, Semida, Associate Director of Tax Policy and International Initiatives, Lincoln Institute of Land Policy
Paquin, Bethany P., Senior Research Analyst, Lincoln Institute of Land Policy
Shute, Alannah M., Research Assistant, Lincoln Institute of Land Policy
Skidmore, Mark, Professor and Morris Chair in State and Local Government Finance and Policy, Michigan State University

Reviewers

Bell, Michael, President, MEB Associates, Inc.; Research Professor, George Washington Institute of Public Policy, George Washington University

Harpel, Ellen, Founder and CEO, Smart Incentives

Langley, Adam, Associate Director of Tax Policy and Data Initiatives, Lincoln Institute of Land Policy

Rakow, Ronald, Fellow, Lincoln Institute of Land Policy; Former Commissioner, City of Boston Assessing Department

Reschovsky, Andrew, Professor Emeritus of Public Affairs and Applied Economics, University of Wisconsin-Madison

Ullrich, Laura, Regional Economist, Federal Reserve Bank of Richmond

Youngman, Joan, Senior Fellow and Chair, Department of Valuation and Taxation, Lincoln Institute of Land Policy