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FUNDING OUR CHILDREN FOR SUCCESS

A Strategy for Sustainable and Equitable K-12 Finance Reform in South Carolina

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EXECUTIVE SUMMARY

Over the forty years since the passage of the Education Finance Act (1977), South Carolina's K-12 education financing has evolved in a piecemeal fashion to become a complex spider web of funding. Since 2001, per pupil expenditures have grown faster than inflation, while student achievement has faltered. A new model that focuses on students instead of programs is necessary to ensure a stable, equitable system.

FRACTURED FORMULA

In November 2014, the South Carolina Supreme Court's decision in *Abbeville County School District, et al. v. The State of South Carolina* found the state's "educational funding scheme is a fractured formula denying students… the constitutionally required opportunity" to education and mandated the state to implement reform. This fractured formula fails students for several reasons:

1. **Expenditures are not directly tied to actual student costs.**
2. **Revenue Streams are unstable and unpredictable, causing significant year-over-year variation in funding.**
3. **Overly-complex funding formulas preclude transparency and disguise inefficiency.**
4. **The state/local cost-sharing formula does not effectively promote equity across districts.**

EFA 2.0

Our recommended K-12 finance model represents the collective body of national best practices applied to the original effective components of the state's education system. In effect, it is a modern restoration of the Education Finance Act—an ***EFA Version 2.0***. This "back-to-basics" model embodies the essential elements of a stable, equitable system. With the urgency of the *Abbeville* finding, along

"This K-12 Finance Model…is a modern restoration of the Education Finance Act—an EFA Version 2.0. This 'back-to-basics' model embodies the essential elements of a stable, equitable system."

with the state's continued underperformance in educational outcomes, now is the time to act boldly to fund our children for future success.

Our proposed funding model includes three key elements. The first two identify the level of funding required to be provided per student. The last defines the percentage the state and each local district must contribute.

FOUNDATION AID

The "foundation" amount required to educate a single typical student.

EXCEPTIONAL STUDENT WEIGHTING FACTORS

The additional funding amount required to educate students with exceptional needs, including 1.) poverty, 2.) limited English proficiency (LEP), 3.) gifted, 4.) vocational, and 5.) special needs (low, medium, and high severity).

STATE/LOCAL COST SHARING

The formula determining the local contribution amount requires each district raise a minimum amount by levying a state-defined minimum millage rate such that, on average, local districts contribute **1/3** and the state contributes **2/3** of K-12 funds determined by the formula. Local districts would be allowed to set a higher millage rate if desired. The myriad of current state funding streams would be merged (including EFA, EIA, EAA, Education Lottery, and Tier 1, 2 and 3 reimbursements) and distributed based on formula from a single source—the General Fund—which will guarantee transparent appropriations in a predictable manner every year.

IMPACT

Five scenarios for Foundation Aid and Student Weight combinations were developed to test the new formula. Table E1 displays the scenario input values as well as the funding levels under each. Funding levels shown are for state and local operations revenues only (i.e.-Federal and debt finance revenues are not shown).[1] The minimum millage shown equals the rate required to raise local funds equal to 1/3 of total formula funds, assuming the restoration of all currently exempted residential property to the tax base.

Table E1: Impact of K-12 Education Funding Formula for Five Scenarios

	Scenario					
	Current	1	2	3	4	5
Foundation Aid						
Foundation Aid		$7,324	$6,945	$6,799	$6,981	$7,812
Exceptional Student Weights						
Poverty		0.2	0.2	0.22	0.22	0.28
LEP		0.2	0.2	0.34	0.34	0.4
Gifted		0.15	0.15	0.25	0.25	0.1
Vocational		0.29	0.29	0.175	0.175	0.06
SN Tier 1		0.74	0.74	0.87	0.87	0.77
SN Tier 2		1.04	1.04	1.12	1.12	0.99
SN Tier 3		1.57	1.57	1.63	1.63	1.44
Per Pupil Model Impacts						
Operations Revenues	$9,710	$9,710	$9,207	$9,279	$9,528	$10,582
Local Share	$4,078	$3,237	$3,069	$3,093	$3,176	$3,527
State Share	$5,632	$6,473	$6,138	$6,186	$6,352	$7,054
Total Model Impacts (Billions of $)						
Operations Revenues	$6.96	$6.96	$6.60	$6.65	$6.83	$7.58
Local Share	$2.92	$2.32	$2.20	$2.22	$2.28	$2.53
State Share	$4.03	$4.64	$4.40	$4.43	$4.55	$5.05
Minimum Millage	0.100	0.095	0.095	0.098	0.109	0.100

Tiers 1, 2, and 3 represent three tiers of Special Needs by severity (low, medium and high). For a full description of scenario value development, assumptions, and results, see Appendix A.

TRANSITION

Re-inventing the K-12 education funding formula is a significant effort which will require a shift in the finance and accounting methods for both the state and local districts. A phase-in period of 5 to 8 years should be planned and implemented to facilitate smooth transition. Further, districts which stand to lose state funding could be held harmless during the phase-in period. Finally, annual auditing, evaluation, and updating is necessary to ensure the EFA 2.0 formula does not become obsolete, that targeted funds reach their destination, and that they are used effectively.

FOREWORD

THE FIRST STEP TO STUDENT SUCCESS: GETTING EDUCATION FINANCE RIGHT.

Since our founding, Palmetto Promise Institute has been a passionate advocate for proven, student-centered education policies that can unlock the door of opportunity for every child in our state to reach their full potential.

But in the course of our work, we keep returning to the idea that **finance reform is foundational to sustained, meaningful policy reform**. In any discussion of South Carolina education finance, two questions invariably arise:

1. Are the rural plaintiff school districts in the *Abbeville v. South Carolina* ruling ***underfunded***? Or more simply put, are South Carolina's lagging education outcomes generally due to not enough money in the system?
2. Does our current finance structure – specifically the **Education Finance Act** (EFA) (1977) – have any relevance for the funding of education in South Carolina in the 21st Century?

Palmetto Promise Institute engaged Dr. Rebecca Gunnlaugsson, South Carolina's premier independent economist, to thoroughly examine the data to answer these two questions. Her findings are deeply disturbing, if not exactly a surprise.

Using current data, she conclusively demonstrates that South Carolina's **expenditures** are in no way aligned to **actual student costs, revenue** streams are unstable and unpredictable, the current **formula** is overly complex and precludes transparency and disguises inefficiency, and the current **state/local cost share** does not promote equity across districts.

She also found that South Carolina **spends** more per student than demographically similar states for **worse student performance**, and demonstrates that while over **$9 billion** in federal, state, and local dollars will be spent in 2017-2018, the spending of it is simply not aligned to optimize student **outcomes**.

How do we fundamentally change these broken dynamics? We believe three core principles must guide the creation of the student-centered funding model of the future:

- ***Equity*** for students across rural and urban districts and between different education options.

- ***Autonomy*** for teachers and school leaders to innovate at the local level to meet the unique needs of their student population.
- ***Accountability*** for student outcomes – and taxpayers' investment – at the state level.

With these goals realized, principals and teachers in traditional public schools could be empowered to truly be the CEO's of their schools and classrooms, pushing **dollars down into the classroom** and decoupling them from the hodge-podge of well-intentioned but unproductive programs and their resulting state and district bureaucracies.

Through the power of choice and technology, parents could be empowered to truly customize a 21st century education experience that meets the unique needs of their child.

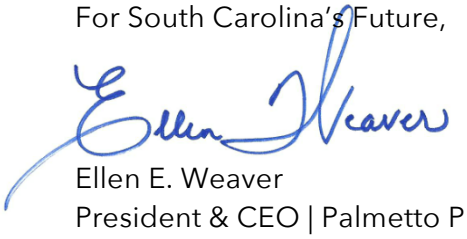
Education funding reform is intrinsically tied with the defunct mess that is South Carolina's system of taxation – another sad story of inequity, instability and lackluster outcomes. Interestingly, this report closely coincides with the public unveiling of an equally revolutionary **tax reform model** that we have also been working on for two years now with Dr. Gunnlaugsson.

The wheels of reform have been set in motion by people with the power to make it happen: **education funding reform** and **tax reform** are required to move South Carolina away from the antiquated systems of the past and into the 21st century. The question: will we be content to just put one more patch on a fundamentally broken status quo, or will we have the courage to be bold and make the big decisions needed to chart South Carolina's course towards a flourishing future?

In the next 50 pages, you will read the most comprehensive independent, expert analysis of how we finance schools in South Carolina. Our analysis is not a theory-laden exercise that peddles a political agenda. It is a professional, econometric examination of what is and what ought to be if are to see every child succeed no matter what his or her zip code.

Even as you study this meta-analysis, be aware that this is not the end of the education ideas that will flow from Palmetto Promise Institute. We expect to follow this finance study with an equally comprehensive look at what is working in policy in South Carolina, around the Southeast and across the nation. Look for it in due course.

For South Carolina's Future,



Ellen E. Weaver
President & CEO | Palmetto Promise Institute

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INTRODUCTION

Over the forty years since the passage of the Education Finance Act (1977), South Carolina's education financing has evolved in a piecemeal fashion to become a complex spider web of funding. Since 2001, per pupil expenditures have grown faster than inflation, while student achievement has faltered. Further, student outcomes vary at alarmingly disparate rates across the state according to geography, demographics, and social factors.

WHY NOW?

In November 2014, the South Carolina Supreme Court's decision in *Abbeville County School District, et al. v. The State of South Carolina* found the state's "educational funding scheme is a fractured formula denying students… the constitutionally required opportunity" to education. This decision further called on the state to develop a plan for structural and fiscal reform, that would rewrite the laws for state and local education finance and redefine the level of state funding to provide a "minimally adequate" education. Further, the court indicated that variance in revenue sources is not an acceptable reason to fail to develop a sustainable funding mechanism that produces reliable, consistent funding for the future.

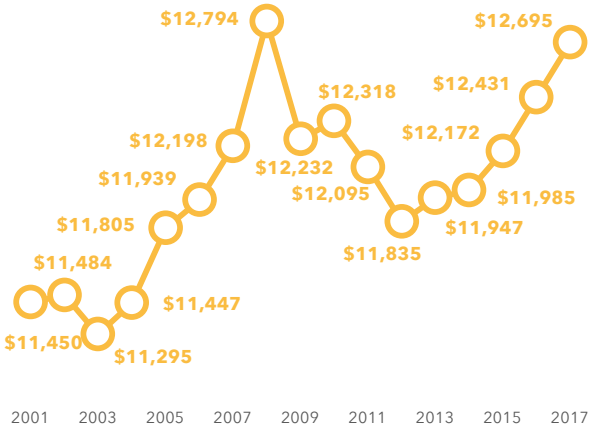
CURRENT FUNDING SITUATION

Since Fiscal Year 2001, inflation-adjusted revenues per pupil in South Carolina have risen and fallen with economic recessions, varying as much as $1,500 per student in 2016 US dollars (See Figure 1). This lack of stability is due to several factors, including economic recessions, multiple state funding streams tied to variable revenue sources (ex. – lottery ticket sales, sales tax revenues), and inconsistent year-over-year legislative appropriation methods. Ultimately, the

"South Carolina's educational funding scheme is a fractured formula denying students in the Plaintiff Districts the constitutionally required opportunity." – South Carolina Supreme Court

unpredictability prevents school districts from developing ongoing, sustainable budgets, and thus plans, for teachers, support staff, instructional materials, and overhead expenditures.

Figure 1: Inflation-Adjusted Per-Pupil Revenues in South Carolina, 2001 - 2017

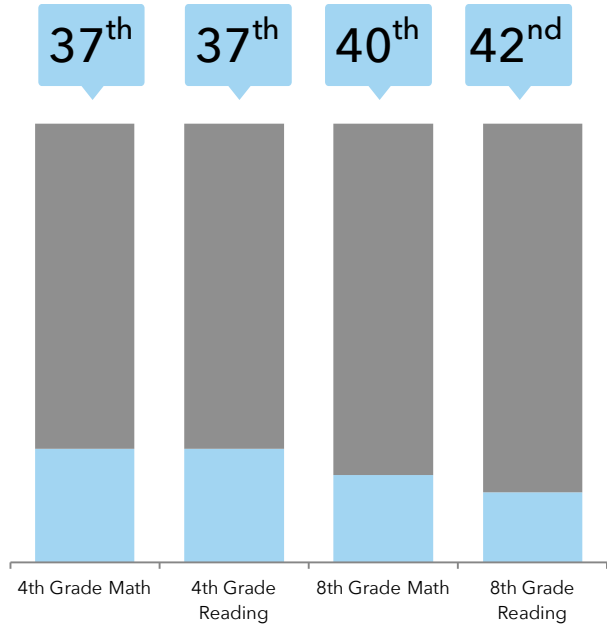


Source: "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue." South Carolina Revenue and Fiscal Affairs Office (RFA). Revised 10/6/2016.

Relative to other US states, South Carolina's per-pupil revenue levels rank just above the median for federal (rank = 24th) and local revenues (rank = 23rd). For state revenues, the state is in the 70th percentile (rank = 35th). For all revenues, South Carolina ranks 32nd (See Figure 2).

However, in achievement the state ranks further behind. On the National Assessment of Educational Progress (NAEP) – a national assessment test administered to all states – South Carolina ranks 37th in 4th grade reading and math, 42nd in 8th grade reading, and 40th in 8th grade math in 2015 (See Figure 3).[2]

Figure 3: South Carolina's Rank on the National Assessment of Educational Progress, 2015



Source: National Assessment of Educational Progress (NAEP) assessments in Math and English, Grades 4 and 8, 2015.

PROPOSAL GOALS

Ultimately, achievement issues are not wholly a matter of funding. Further, funding issues are not wholly a matter of "how much?" Educational expenditures do not directly equate to educational outcomes.[3] Further, South Carolina is not the only state to encounter the conundrum of dismal performance in spite of relatively considerable expenditures.[4] The findings in the *Abbeville* case highlight this distinction, noting that the state provided necessary inputs (monetary) to meet minimally adequate education,

Figure 2: South Carolina Per-Pupil Revenue Rank, 2014

Revenue Source	Amount Per Pupil	SC Rank	Amount Per $1,000 of Personal Income	SC Rank
Total Revenues	$11,524	32	$49.66	8
Federal Revenues	$1,114	24	$4.80	12
State Revenues	$5,351	35	$23.06	19
Local Revenues	$5,059	23	$21.80	16

Source: US Census, Public Elementary-Secondary Education Finance Data FY 2014.

but failed with regards to outputs (academic achievement as reflected in annual report cards, test scores, and graduation rates), and goes on to note, "…that South Carolina's educational funding scheme is a fractured formula denying students in the Plaintiff Districts the constitutionally required opportunity."[5]

This proposal addresses the key question of "how to fund?" It establishes a clear, simple funding formula to ensure that dollars are equitably distributed horizontally (to similar students across districts) and vertically (to students with varying learning needs) in a consistent manner that creates sustainability for schools and accountability to taxpayers.

While a new funding formula will provide stability and equity, it will not address all issues of deficient educational outcomes outlined in *Abbeville*. This research must also be combined with a menu of policy reforms that address the structure and implementation of education services. Thus, the following topics are outside the scope of the paper and will be addressed in separate future publications.

Recommendations for how money is spent. Even though expenditures alone do not equate to excellent outcomes, this proposal does not make recommendations for curricula, teacher training/methods, school organization, or cost savings. Some of these topics may include Pre-Kindergarten, vocational education, online learning, student-to-teacher ratios, teacher salaries, and student assessments.

Recommendations for school district reorganization, consolidation, or other economies of scale. The SC Supreme Court notes the disproportionate administrative costs in school districts with three or four schools and only 1,000 students.[6] While it is likely savings and efficiency may be achieved in the sharing of services (i.e.-transportation and technology) or the consolidation of staff, no evaluation is performed as part of this study.[7]

Analysis of federal revenue sources. As only 10% of total revenues flow from the federal government and are subject to factors not under the purview of state and local authorities, this proposal focuses on state and local revenues only.

Re-invention of a student cost-to-educate formula. While some studies have attempted to develop custom per-pupil costs from the ground up based on staffing and service models specific to individual districts, this proposal, instead, draws on work of previous studies and existing national best practices.

Analysis of capital costs and investments. While construction of facilities is critical for delivery of educational services, this proposal focuses on operational costs only.

Analysis of the SC State Department of Education (SDE). The proposal focuses solely on the funding to individual school districts and does not evaluate the performance or role of SDE or monies appropriated to it.

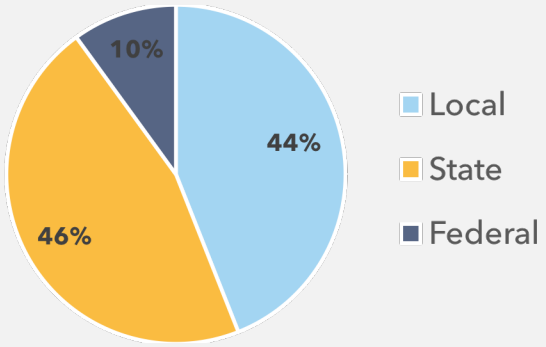
Analysis of Charter Schools. Although charter schools make up an important and ever-increasing portion of the state's public school students, their dissimilar funding and governance models require a separate analysis.

Despite numerous state studies, task forces, and hearings,[8] the state has failed to reform its funding formula. Student-centered funding is the foundation on which all other 21st century reforms must be built. The issues identified and the recommendations made in this study are a collection of national best practices and recommendations of previous South Carolina studies, paired with an in-depth econometric analysis of the state's current funding mechanism. With the urgency of the *Abbeville* directive, along with the state's continued underperformance in educational outcomes, now is the time to act boldly to fund our children for future success.

SOUTH CAROLINA'S CURRENT EDUCATION FUNDING SYSTEM

South Carolina's 81 public school districts receive funding from a combination of Federal, State, and Local sources. Federal funds account for an estimated 10% of total education revenues in School Year 2016-2017, while state funds make up 46%, and local funds comprise 44% (See Figure 4).[9]

Figure 4: South Carolina Revenue Funding Sources, 2016-17



Source: "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue." South Carolina Revenue and Fiscal Affairs Office (RFA). Revised 10/6/2016

STATE EDUCATION FUNDING COMPONENTS

The 81 public school districts in South Carolina receive revenues from no fewer than ten (10) state funding streams and five (5) local funding streams,[10] many containing separate funding allocations within (See Figure 5). For example, within the Education Improvement Act (EIA), 36 categorical funding programs were designated in Fiscal Year 2015.[11] Within the Lottery funds, ten (10) revenue streams existed in Fiscal Year 2016.[12]

While numerous laws have been enacted in South Carolina related to public eduction, this section defines the primary ones relevant to the current system of funding.

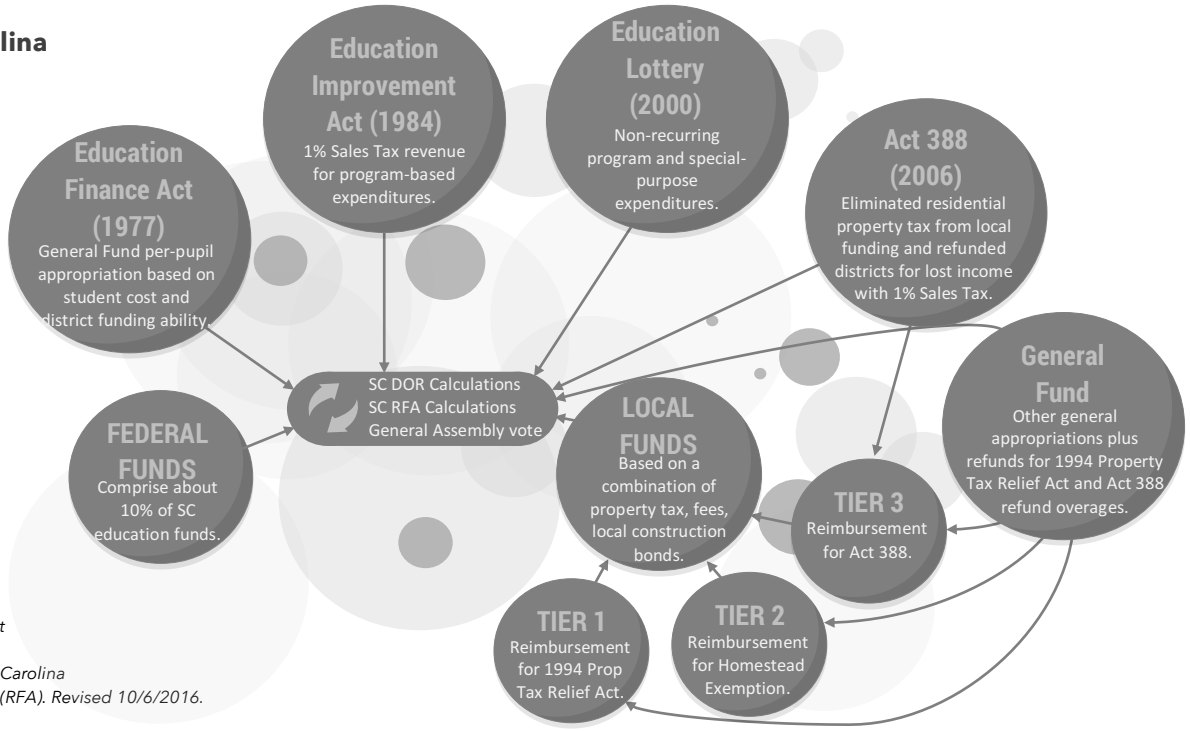
Education Finance Act (1977)

The Education Finance Act (EFA) established funding for a minimum level of education services based on a student's needs, and it defined a contribution amount required by local government based on its ability to pay, with the statewide average being 30% funded by local sources and 70% from the state.

The EFA established the base formula for defining the minimum "foundation program" through three components:

1. **Base Student Cost (BSC):** Originally developed in 1977, this formula derives the minimum cost to educate a student based on several factors, including teacher and administrative salaries, guidance services, media services, plant operations and maintenance, staff development, and other support functions. The formula did not include other factors such as facility construction, transportation, food services, instructional materials, and employee benefits.[13]

Figure 5: South Carolina Education Funding Components

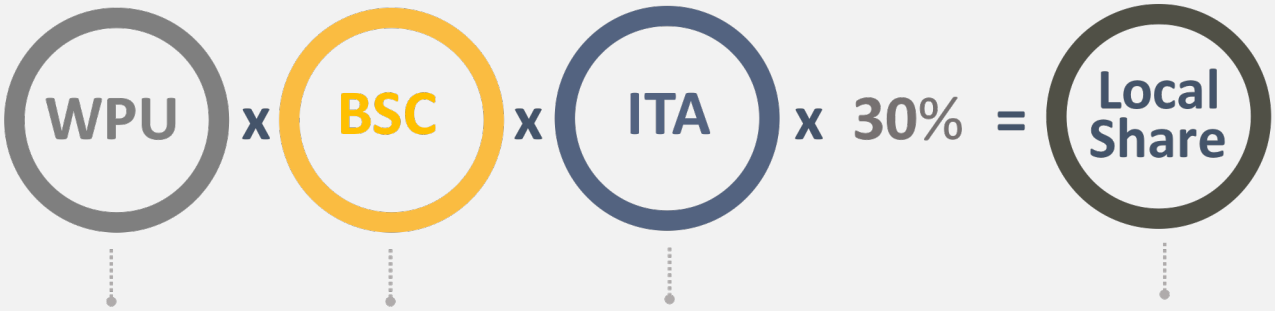


Source: "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue." South Carolina Revenue and Fiscal Affairs Office (RFA). Revised 10/6/2016.

2. **Weighted Pupil Unit (WPU):** To account for differences in educational needs based on various student populations, this index assigns weights based on grade level, vocational education, physical and emotional handicaps, learning disabilities, autism, and homebound. Developed in 1979, the weights did not originally foresee additional costs in educating students in poverty or with limited English proficiency, among other factors. Over time, some of these factors have been included as add-on weights. (See Appendix E for complete list of EFA weighting factors.)
3. **Index of Taxpaying Ability (ITA):** Dividing the value of all taxable property in a property in the state yields the district's ITA, which is used to develop the local share of education funding (See Figure 6).

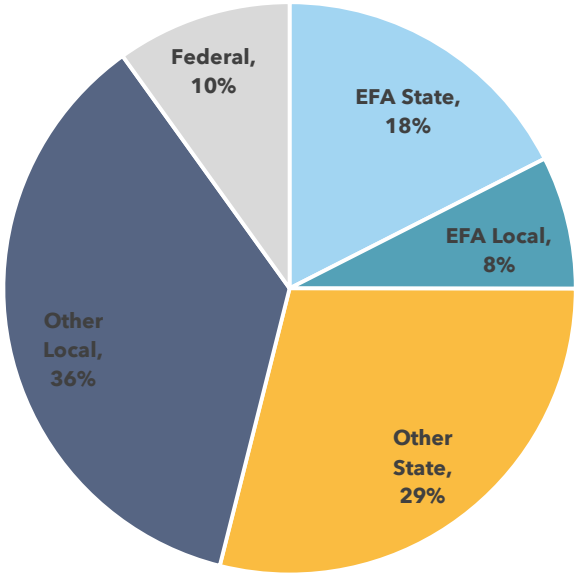
In Fiscal Year 2016, the EFA made up only 27% of total state and local funds. The state EFA portion

Figure 6: Calculation of the Education Finance Formula



makes up 37% of total state funds, and the local EFA portion represents 17% of all local funds (See Figure 7).

Figure 7: Education Finance Funds (EFA) as a Percentage of all Education Revenues, 2016-17



Source: Author's calculations based on "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue." South Carolina Revenue and Fiscal Affairs Office (RFA). Revised 10/6/2016 and 2016-17 Funding Manual. South Carolina Department of Education.

Education Improvement Act (1984)

With a focus on improving performance (teacher, student, school, and district) the Education Improvement Act (EIA):

1. Implemented a new 1% statewide sales tax (raising it from 4% to 5%) to be held in trust fund for EIA expenditures, and
2. Distributed these funds to local districts based on specific initiatives and categorical programs (rather than per student, like the EFA). Primary EIA expenditures include:
    - Teacher Salary Supplements
    - Students at Risk for School Failure
    - National Board Certification
    - Aid to Districts
    - Assessment/Testing
    - Allocations to Other Agencies & Entities
    - High Achieving Students
    - Transportation
    - Early Childhood Education
    - Instructional Materials & Textbooks
    - Adult Education
    - Teacher Supplies
    - Technology K-12 Partnership

Property Tax Relief Act (1994)

This act exempted the first $100,000 of owner-occupied homes from school district taxes. It guaranteed reimbursement to local districts for lost property tax revenues via reimbursement from the state General Fund (known as Tier 1 Tax Relief). Additionally, it includes reimbursements for lost property taxes due to the $50,000 Homestead Exemption for individuals over 65 (known as Tier 2 Tax Relief).

Education Lottery (2002)

Proceeds from the Education Lottery are appropriated annually by the General Assembly to supplement existing resources for educational programs.

Act 388 (2006)

Effective in Fiscal Year 2008, this act eliminated the remainder of property tax for school districts on owner occupied homes and:

1. Replaced it with a 1% state sales tax (increasing the state sales tax from 5% to 6%),
2. Established reimbursements to districts for lost property tax with proceeds from the sales tax plus proceeds from the state General Fund, if the sales tax does not adequately cover the deficit amount (known as Tier 3 Tax Relief),
3. Limited the frequency at which owner-occupied homes may be reassessed for tax purposes, and
4. Limited the amount millage rates (for property taxes) could be increased on an annual basis by the percent of population growth for each county plus inflation, per the Consumer Price Index (CPI).

ISSUES WITH OUR CURRENT EDUCATION FUNDING SYSTEM

Abbeville correctly identified the state's K-12 education finance system as "…a fractured formula." Having such a complex, unstable funding mechanism that evolves piecemeal over time results in significant problems for students and schools and calls for a new system of funding.

1 EXPENDITURES NOT DIRECTLY TIED TO ACTUAL STUDENT COSTS

The EFA was originally designed to be reflective of actual costs to provide a "minimally adequate" education, as well as to be the primary funding source for students. However, the funding it provides is low, and its share of total education funding has shrunk over time to only 27% of state and local funds. Further, over time, the gradual addition of funds from the EIA, Education Lottery, tax relief reimbursements, and other state and local appropriations, many of which have categorical use requirements, have effectively removed the link with funding and student costs. Rather than allocating funds by actual need, they are based on specific revenue streams, compete with other state budget priorities, and are subject to economic conditions.

2 UNSTABLE AND UNPREDICTABLE REVENUE STREAMS

State level K-12 education dollars flow from variable revenue sources and lack a mechanism to ensure consistent funding levels. As a result, school districts are unable to set reliable budgets based on predicable income. *Abbeville* makes it clear that education should not suffer the ups and downs of economic or political cycles.

1. EIA funds are limited to revenue from the 1% sales tax and are earmarked for specific categorical program mandates rather than school-level and student-level needs and associated costs.

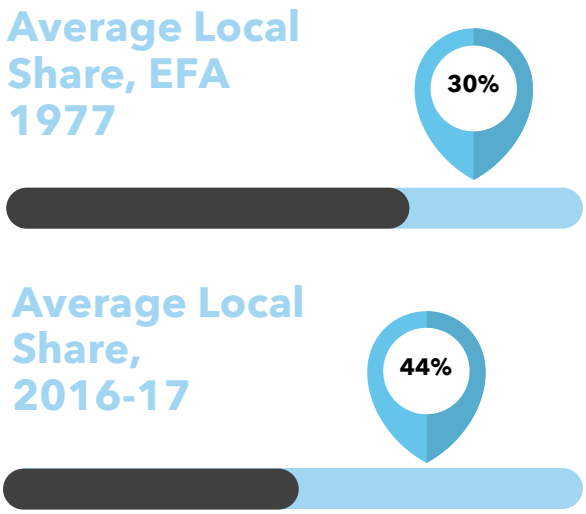
2. Education Lottery appropriations are non-recurring and fluctuate annually based on lottery ticket sales. K-12 lottery appropriations widely fluctuated between $102m in FY05 to $31m in FY12 to $67m in FY17,[14] yet they have historically been used to fund core programs including K-8 Reading, Math, Science & Social Studies programs.

3. The General Assembly exercises authority to cut education appropriations if "state funds do not allow." Since 1978, the General Assembly has only appropriated full EFA funds 8 times. In FY 2015-16, South Carolina Revenue and Fiscal Affairs Office (RFA) calculated the EFA at $2,801 per pupil, yet only $2,197 was appropriated.[15]

3 INEQUITABLE STATE/LOCAL COST-SHARING FORMULA

In 1977 the EFA established that an equitable cost sharing formula should require school districts, on average, to contribute 30% of total (state plus local) funds, with the state paying the remaining 70%. The EFA's Index of Taxpaying Ability (ITA) ensured districts with smaller property wealth bases would not be overly burdened with high property tax rates to achieve this split. The EFA has shrunk to 27% of total state and local funding. Thus, the real breakdown of operational costs between state and local has effectively become 56% to 44% (See Figure 8).[16] Over time, several piecemeal changes to the education funding formula have taken place which have further eroded cost sharing equity.

Figure 8: State/Local Operational Cost-Sharing Split, EFA (1977) Formula vs. 2016-17 Actual



Source: Author's calculations based on "Detailed Index of Taxpaying Ability by District." South Carolina Department of Revenue. 2017, and "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue," and "South Carolina Property Tax Rates by County, 2016." South Carolina Association of Counties. January 2017.

Exemptions Have Eroded Property Tax Base: The ITA originally assumed that all property in the district was taxable (as it was in 1977). Since that time, the local funding share formula has been eroded by tax exemptions, shifting the local property tax burden to fewer properties, particularly rental and commercial. Several law changes have enabled the continued property tax base erosion through the following exemptions: Business Inventories, Manufacturers Depreciation, Fee-in-Lieu-of-Taxes (FILOT), Homestead (Tier 2), Property Tax Relief $100,000 Owner-Occupied (Tier 1), Act 388 Full Owner-Occupied (Tier 3).

Under FILOT arrangements, the property owner pays a reduced tax rate for a set period (usually 20 to 30 years), typically at a set millage rate. Thus, school districts are unable to raise more revenues on FILOT properties by increasing millage rates, again shifting tax burden to other properties. Further, the full value of FILOT properties is not included in the calculation of the ITA,[17] reducing the local effort required of counties which grant more tax exemptions through FILOTs.

Act 388 Eliminated All School Operations Revenues from Owner-Occupied Property: Property tax is the primary source of school districts to raise money for schools. Yet, the 2006 act severely eroded the property tax base by eliminating property tax on owner occupied homes from school district taxes, replacing it with two "Tiers" of property tax reimbursement and creating the following disparities.

1. Property tax burden shifted from homeowners to commercial and renters (predominantly small businesses and lower income individuals), whose property taxes are, on average, **2.7** times more than homeowners.
2. Districts with larger growth of owner-occupied homes receive inadequate reimbursement, forcing increased millage rates on other properties, particularly renters and commercial property, as mentioned above. Reimbursements are not calculated based on actual growth of owner-occupied homes. Instead, it uses statewide population growth and inflation. Many districts are primarily residential and

serve students whose families work nearby in other districts. These districts who see large growth in population (and new homes) will not receive equitable reimbursement for the lost tax base. Districts who see declines in population growth will still see increases in their reimbursement amounts. Compared to the estimated revenues that would have been raised from district millage rates, reimbursement rates have not kept pace statewide on average, producing a gap of $227 million in 2015 (See Figure 9). This gap is wider in districts with large owner-occupied property growth, and the opposite in districts with declining population growth.

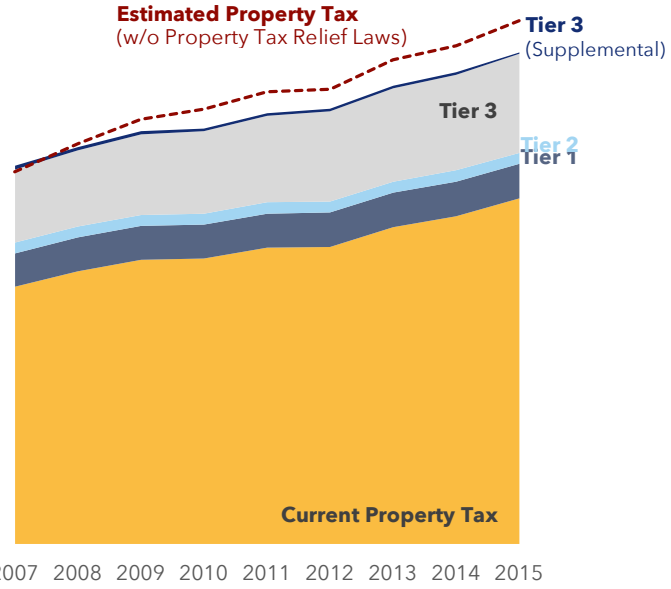
3. On average, 32% of assessed property value is owner-occupied across the state in 2015, yet this varies widely from county to county, ranging from 16% in Allendale and Fairfield to 45% in Lancaster, severely impacting the ability to raise funds across a broad base.[18]

Reimbursements for Exemptions Have Depreciated Over Time: The state reimburses school districts for lost property tax revenue due to exemptions via a multi-tiered reimbursement system. For many of the reimbursement streams, the state has capped the amounts,[19] resulting in smaller and smaller real reimbursement amounts each year.

Act 388 reimbursements come from a 1% sales tax, which falls short of required tax reimbursements and which must be made up from the General Fund. Though the shortfall was more than $110m annually between FY10 and FY14, since then, the gap has narrowed as the value of the Tier 3 reimbursements have eroded.

These developments have, ultimately, resulted in an unsustainable funding system, which results in increasing inequity of tax burden both across districts and across different property types. The current funding system fails, in many cases, to provide equity in funding for poorer districts. Figure 10 shows the negative relationship between districts' assessed property value and millage rate, highlighting the point that many poorer districts currently levy significantly higher millage rates to raise revenue.

Figure 9: Property Tax Reimbursements Versus Estimated Actual Property Tax Revenues

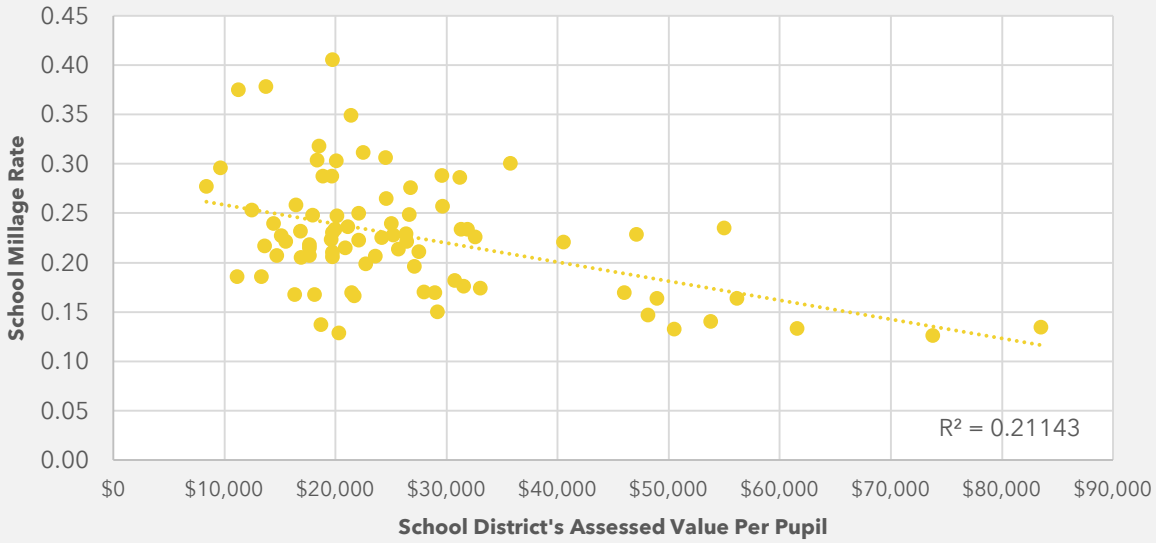


Source: Author's calculations based on "Detailed Index of Taxpaying Ability by District." South Carolina Department of Revenue. 2017.

Moreover, despite multiple property tax relief laws, district property taxes have increased 50% since FY03 and 22% since FY08. Annual school district millage growth rates have more than doubled since the passing of the cap in 2006 than in the 13 years before it. As property tax exemptions continue to grow, the base on which revenue can be raised will continue to shrink and tax rates will continue to increase.

Figure 10: Relationship Between Total Assessed Value Per Pupil and Millage Rate, 2015

Lower assessed value per pupil is often leading to higher millage rates as poorer districts seek revenue.



Source: "Detailed Index of Taxpaying Ability by District." South Carolina Department of Revenue. 2017.

4 OVERLY COMPLEX AND NON-TRANSPARENT

The numerous revenue streams, coupled with multiple reimbursement requirements and calculation factors, makes the current system incredibly complex resulting in three key problems.

1. Overly-burdensome administrative costs are required to calculate multiple funding mandates, including: Education Finance Act (EFA) inflation factors, Southeast teacher salary supplements, Tiers 1, 2, and 3 property tax reimbursements, EIA and Act 388 revenues/shortfalls, imputed assessed value of FILOT agreements, Index of Taxpaying Ability, and county millage increase limitations. (The funding manual for SDE is 198 pages.)

2. Complication leads to a lack of transparency, in that taxpayers, and even educators and lawmakers, are unable to follow money, verify calculations, and ensure it is being spent appropriately and efficiently. A simpler system would reduce governmental costs associated with administration, oversight, compliance, and fraud detection.

3. Inputs are not aligned to create excellent student outcomes. Instead, the state is funding a hodgepodge of programs that, taken in sum, are too often not creating what matters most: student success. (Student performance is beyond the scope of this study, but is available at www.palmettopromise.org and will be addressed in a separate study.)

A NEW FUNDING MODEL FOCUSED ON STUDENTS

South Carolina's experience, refined by national best practices, can deliver a new era of progress for schools and students through a new funding model.

KEY NEEDS OF A NEW FORMULA

1 SINGLE, COMPREHENSIVE STUDENT-CENTRIC FUNDING MODEL

The patchwork of education funding streams and formulas in South Carolina no longer appropriately measure the true "cost to educate" a student. Developing a comprehensive, accurate Cost to Educate formula will guarantee the necessary funds to achieve success. Funding students rather than programs or systems will improve autonomy and accountability of districts and schools, as well as equitability and outcomes of students.

2 SIMPLIFIED EDUCATION FUNDING FORMULA

Removing ties with multiple funding streams will eliminate volatility due to fluctuating revenue sources, like sales tax or lottery revenues. Instead, simplifying the funding structure by merging all current education revenue sources (including EFA, EIA, Education Lottery, and Tier 1, 2 and 3 reimbursements) and assigning state funds based on formula from a single source—the General Fund—will guarantee the ability to appropriate sufficient revenue in a predictable manner every year. Further, it will increase efficiency and transparency and lower the administrative burden.

3 EQUITABLE LOCAL AND STATE COST-SHARING MODEL

The displacement of the EFA as the primary revenue source, combined with increasing property tax exemptions, has transformed the cost sharing ratio, so that less wealthy districts are not assisted by the state as originally intended by the EFA. Requiring districts to levy a state-specified minimum millage rate (with the option for districts to levy higher rates if desired) is an effective means to achieve "ability to pay" for lower wealth districts. Reinstating property exempted in the Property Tax Relief Act of 1994 and Act 388 of 2006 would enable lower tax rates on a larger property tax base, preventing the shifting of tax burden from homeowners to renters and commercial/small businesses. Additionally, requiring future FILOTs to be subject to increases in school millages would further prevent the shifting of tax burden to other property owners.

4 PHASE-IN PERIOD AND HOLD HARMLESS PROVISIONS

Re-inventing the K-12 education funding formula is a significant effort which will require a shift in the finance and accounting methods for both the state and local districts. Abrupt changes (particularly in finance) can cause unnecessary disruption and inefficient use of funds. Rather, clear, reliable, predictable estimates of budget changes over a period of time can enable districts to properly plan and innovate. A phase-in period of 5 to 8 years is recommended to facilitate smooth transition. Further, districts which stand to lose state funding could be held harmless (provided funds to make up for the losses) during the phase-in period.

5 DATA ANALYSIS FOR ACCOUNTABILITY, EVALUATION, AUDITING AND FEEDBACK

Ensuring a sustainable funding formula requires continuous monitoring and updating from feedback of performance data. Annual evaluation is required not only to maintain and improve the system, but also to keep it from becoming obsolete. Such optimization includes annual inflation adjustments, re-benchmarking costs-to-educate and weights every few years, and analysis of per pupil spending by district by category and by student achievement. Further, regular auditing of revenue allocations ensures students are properly associated with weights and that targeted funds reach their intended destination.

THE NEW FORMULA

EFA 2.0

Similar to South Carolina's original Education Finance Act (EFA) of 1977, the proposed funding model—an EFA Version 2.0—requires three key elements be provided per student. The last defines the percentage the state and each local district must contribute.

1 FOUNDATION AID

Foundation Aid is the base or "foundation" amount required to educate a single typical student. Best practice levels of foundation aid are dependent upon weighting factors and other variables.

2 EXCEPTIONAL STUDENT WEIGHTING FACTORS

Exceptional Student Weighting Factors are the additional funding amount required to educate students with additional and/or exceptional needs. The set of recommended weighting factors includes the following categories, with Special Needs being divided into three sub-categories based on additional instructional needs.

1. Poverty
2. Limited English Proficiency
3. Gifted and Talented
4. Vocational
5. Special Needs (Low, Medium, and High)

3 STATE AND LOCAL COST SHARING

This component describes the formula determining the portion of the overall funding that should be contributed at the local level. The recommended formula determining the local contribution amount requires that each district raise a minimum amount by levying a defined minimum millage rate that is set by the state. That millage rate will be set (and revised annually) such that, on average, local districts contribute **1/3** (one-third) and the state contributes **2/3** (two-thirds) of K-12 funds determined by the formula. Local districts would be allowed to set a higher millage rate if desired.

Figure 11: Primary Elements of New Funding Formula

Total District Funding

The total amount established for each district under the proposed funding model would be calculated as:

Minimum Local Contribution

The amount required by the local district would be calculated as:

State Allocation

The amount allocated by the state to the local district would be calculated as:

DERIVING THE FORMULA: BACKGROUND AND METHODS

Using best practice methods described in this section, this study develops five scenarios for Foundation Aid and Student Weight combinations to test the new formula. These scenarios include the following:

1. *Effective Foundation Aid with EFA weights of all South Carolina districts,*
2. *Effective Foundation Aid with EFA weights of high-performing South Carolina districts (controlling for district characteristics),*
3. *Effective Foundation Aid and weights of comparable Southeastern US districts,*
4. *Effective Foundation Aid and weights of high-performing Southeastern US districts (controlling for district characteristics), and*
5. *Average Foundation Aid and weights of evidence-based recommendations.*

Values for each of the scenarios is shown in Figure 12. An overview of basic methods for developing Foundation Aid and Weight values is described here. A full description of each scenario, derivation method, and results is described in Appendix A.

Figure 12: Scenario Values for K-12 Education Funding Formula

	Scenario				
	1	2	3	4	5
Foundation Aid					
Foundation	$7,324	$6,945	$6,799	$6,981	$7,812
Exceptional Student Weights					
Poverty	.2	.2	.22	.22	.28
LEP	.2	.2	.34	.34	.4
Gifted	.15	.15	.25	.25	.1
Vocational	.29	.29	.175	.175	.06
Special Needs					
Tier 1	.74	.74	.87	.87	.77
Tier 2	1.04	1.04	1.12	1.12	0.99
Tier 3	1.57	1.57	1.63	1.63	1.44

Tiers 1, 2, and 3 represent three tiers of Special Needs by severity (low, medium and high). For a full description of scenario value development, assumptions, and results, see Appendix A.

Formula Element #1: Foundation Aid

Four common methods to estimate adequate student funding levels have emerged in the education finance literature.[20]

1. The **Professional Judgment** method utilizes a panel of educational experts (ex.–teachers, principals) to develop the optimal educational program to meet required educational outcome criteria. This method effectively builds a "model school" district from the ground up, specifying optimal numbers of schools, students, staff, support personnel, and resources.
2. In the **Evidence-Based** method, state and national research on best practices and "model schools" are used to identify recommended staff and resources and, thus, cost required to provide that level of educational service.
3. The **Successful Schools** approach distinguishes the top-performing school districts within a state or region, and then identifies the costs of delivering educational services within those districts. Additional costs to educate students with special needs are removed to identify a "foundation cost" per student. Typically, outlier districts are omitted to produce a reasonable level of spending that can produce effective outcomes.
4. Finally, the **Econometric** technique utilizes statistical methods to estimate district spending levels and they are affected by students with special needs or varying levels of student outcomes.

Each of these methods, naturally, have pros and cons. The Professional Judgment method is particularly expensive. Neither it, nor the Evidence-Based method, are directly tied to specific levels of student outcomes. The Successful Schools method can have difficulty in extrapolating results to all districts across states, where so many are not meeting state standards. Finally, the Econometric method does not evaluate whether the current levels of spending are adequate or not.

Formula Element #2: Exceptional Student Weighting Factors

Certain populations of students require additional funding to support their instructional needs, which is often calculated by using pupil weights. If a typical student has a value of 1, these weights for exceptional students are added to that value to increase the amount of funding allotted to the student. Different states have developed different weights for a range of categories including disability and special needs, gifted and talented, vocational, limited English proficiency, homebound or other residential learning, instructional arrangement, low-income or at-risk, geography, and grade level. The recommended set of weights was identified by applying current best practices of states and professional recommendations to South Carolina's existing EFA weighting system, resulting in the following weighting categories.

1. ***Poverty:*** The number of students in poverty as defined by the South Carolina Department of Education Funding Manual, 2016-17 for Education Finance Act funding.

2. ***Limited English Proficiency:*** The number of students "*who require intensive English language instruction programs and whose families require specialized parental involvement intervention,*"[21] defined by the South Carolina Department of Education Funding Manual, 2016-17 for Education Finance Act funding as well as for federally funded Language Instruction for Limited English Proficient and Immigrant Students, Title III.

3. ***Gifted and Talented:*** The number of students classified as "High Achieving" as defined by the South Carolina Department of Education Funding Manual, 2016-17 for Education Finance Act funding.

4. ***Vocational:*** The number of students in grades 9-12 classified as participating in a vocational program by the South Carolina Department of Education Funding Manual, 2016-17 for Education Finance Act funding.

5. ***Special Needs (Low, Medium, and High):*** Special education for students with disabilities or learning challenges is the most common weighting category used by states. Some states use a single weight for special education while others use many. South Carolina currently has nine as defined in the South Carolina Department of Education Funding Manual, 2016-17 for Education Finance Act funding. These nine categories represent four distinct weighting values. To achieve simplicity, the recommended model follows the lead of other professional recommendations[22] in consolidating them into three categories based on level of instructional need—low, medium, and high.

Formula Element #3: Local/State Cost Sharing Split

States attempt to identify the relative capacity to fund education within each district to determine how to divide the costs between state and local funding sources. Typically, this split is implemented through a formula that determines how much the district is able to pay, and the rest is contributed by the state. A larger proportion of funds being contributed by state sources provides higher level of equity in funding to districts with lower wealth and tax base.

Almost every state utilizes one of the following four measures of income and wealth to determine the local district's ability to pay.

1. District's property tax base only
2. District's property tax and sales tax base
3. District's property tax base plus some measure of household income
4. District's property tax base plus some measure of poverty

« A larger proportion of funds being contributed by state sources provides a higher level of equity in funding to districts with lower wealth and tax base. »

The property tax base is the most widely used measure to determine the split between state and local contributions to education funding. States who include measures of income and poverty often include per capita income for the district as well as the relative per capita income of the district compared to the wealthiest district in the state. Although some states use measures of income and poverty, most funding is typically derived from property tax alone.

Minimum Millage

Among states who utilize property tax to derive local effort amounts, seventeen (17) use a minimum state-specified millage rate to set minimum local funding requirements.[23] Under this method—the recommended EFA 2.0 approach—the state sets a ***uniform minimum millage*** rate that each district is required to levy. The state provides the remaining funds. The effect is to:

- Equalize tax burden across all districts,
- Ensure low-wealth districts receive equity in per-pupil funding, and
- Simplify cost sharing calculations.

Districts with lower levels of assessed property values will receive a larger share of their funding from the state; whereas wealthier property districts will receive less.

Among states, the percentage of funds provided at the state versus local level varies widely. Professional recommendations vary as well. The fewer funds provided by the state (and more at the local level), the more difficult it becomes to ensure funding equity across districts. This study recommends that local *operational* funds average **1/3** and state funds average of **2/3** of all formula funds. Under this ratio, the total effective split (including funding for capital expenditures) would be closer to 41% local and 59% state.

Local districts would be allowed to set a higher millage rate if desired. This proposal recommends the development of a statewide policy under which districts may qualify for a waiver to adjust the local millage rate higher at specified increments.

Tax Base

Finally, this study shows the effect of the state minimum millage rate applied to three different property tax base options, including alternatives with property previously exempted by the 1994 Property Tax Relief and 2006 Act 388 legislation. Three sets of minimum state millage rate values were developed for comparative purposes under each of the following assumptions:

Option 1: Restoring all exempt residential property to the base

Option 2: Restoring all exempt residential property, except the first $100,000 of fair market value to the base

Option 3: Maintaining all existing exemptions

Option 1—restoring all exempt residential property to the base—would result in the largest property tax base, the lowest millage rates, and the highest degree of equity across individual taxpayers and counties. ***Option 3***—maintaining all exemptions—maintains the status quo with its issues of inequity and unsustainability. Finally, ***Option 2***—restoring all exempt residential property, except the first $100,000 of fair market value—acts as a possible middle ground.

In 2015, South Carolina districts collected an estimated $2.49B in property taxes for school operations. Figure 13 shows the state total amount of property tax raised under various millage rates for each option.

A revenue-neutral minimum millage rate, applied to properties specified under each, would equate to the following state aggregated revenue neutral rates:

1. Option 1: 107 mils for all districts. Under this option, 21 districts would raise more property tax than current, and 60 would raise less.
2. Option 2: 126 mils for all districts. Under this option, 18 districts would raise more property tax than current, and 63 would raise less.
3. Option 3: 156 mils for all districts. Under this option, 21 districts would raise more property tax than current, and 60 would raise less.

Calculation methodology, as well as a complete listing of results under various millage rate levels, is shown in Appendix G.

Figure 13: Estimated School Operations Property Tax Revenues Under Various Uniform State-Specified Minimum Millage Rates, Tax Year 2015

Millage Rate	Estimated Taxes
Current (2015) School Operations Property Taxes	$2,491,167,453
Option 1. Restoring All Exempt Property	
0.095	$2,204,803,181
0.100	$2,320,845,454
0.107 *(Revenue Neutral)*	***$2,491,167,453***
0.110	$2,552,929,999
0.115	$2,668,972,272
Option 2. Restoring Exempt Property, Except the First $100K of Residential	
0.115	$2,268,029,568
0.120	$2,366,639,549
0.126 *(Revenue Neutral)*	***$2,491,167,453***
0.130	$2,563,859,512
0.135	$2,662,469,493
Option 3. Maintaining All Exemptions	
0.145	$2,318,881,983
0.150	$2,398,843,431
0.156 *(Revenue Neutral)*	***$2,491,167,453***
0.160	$2,558,766,326
0.165	$2,638,727,774

Source: Author's calculations based on "Detailed Index of Taxpaying Ability by District." South Carolina Department of Revenue. 2017, and "Homestead Exemption FMV Statistics Report, Fiscal Year 2015." South Carolina Department of Revenue.

IMPACT OF THE NEW FORMULA

Each of the scenarios will require different amounts of state and local revenue, as well as differing values of a state-specified minimum millage value to achieve the recommended split of an average of **1/3** local funding and **2/3** state funding. Figure 14 shows the total amount of state and local operations revenues required to be raised under each scenario. In addition to the recommended **1/3 local to 2/3 state** split, it also shows the formula under both a **20% local / 80% state** split as well as a **40% local / 60% state** split. Additionally, it shows the required state-set uniform minimum millage rate each district would be required to levy under each of the three property assessment options. In all scenarios, ***the minimum millage rate is less than the revenue neutral millage rate*** specified in Figure 13, meaning that, *on average*, districts would not have to raise as much in property tax revenue as they currently do. A full listing of impacts by district is shown in Appendix H. Scenario 1 was designed to be revenue neutral raising the same amount of state and local operations revenues as the current system. Scenarios 2, 3 and 4 (using data from SC and Southeast districts) require less state and local revenue funding than the current system. Finally, Scenario 5, the average of evidence-based studies (see Appendix D), recommends greater levels of state and local operations revenues.[24]

Figure 14: Proposed Funding Levels Under Five Scenarios*

		Scenarios				
	Current	1 All SC Districts	2 Top SC Districts	3 All Southeast Districts	4 Top Southeast Districts	5 Evidence Based Studies
Foundation Aid		$7,324	$6,945	$6,799	$6,981	$7,812
Exceptional Student Weights						
Poverty		0.2	0.2	0.22	0.22	0.28
Limited English Proficiency		0.2	0.2	0.34	0.34	0.4
Gifted Education		0.15	0.15	0.25	0.25	0.1
Vocational Education		0.29	0.29	0.175	0.175	0.06
Special Education						
Tier 1		0.74	0.74	0.87	0.87	0.77
Tier 2		1.04	1.04	1.12	1.12	0.99
Tier 3		1.57	1.57	1.63	1.63	1.44
Operations Revenues	***$6,955,923,349***	***$6,955,903,035***	***$6,595,681,031***	***$6,647,264,392***	***$6,825,202,636***	***$7,580,258,030***
Per Pupil	***$9,710***	***$9,710***	***$9,207***	***$9,279***	***$9,528***	***$10,582***
Local (20%) and State (80%) Allocation Amounts						
Local	$2,921,135,113	$1,391,180,607	$1,319,136,206	$1,329,452,878	$1,365,040,527	$1,516,051,606
State	$4,034,788,236	$5,564,722,428	$5,276,544,825	$5,317,811,514	$5,460,162,109	$6,064,206,424
Local (1/3) and State (2/3) Allocation Amounts						
Local	$2,921,135,113	$2,318,634,345	$2,198,560,344	$2,215,754,797	$2,275,067,545	$2,526,752,677
State	$4,034,788,236	$4,637,268,690	$4,397,120,687	$4,431,509,595	$4,550,135,091	$5,053,505,353
Local (40%) and State (60%) Allocation Amounts						
Local	$2,921,135,113	$2,782,361,214	$2,638,272,412	$2,658,905,757	$2,730,081,054	$3,032,103,212
State	$4,034,788,236	$4,173,541,821	$3,957,408,619	$3,988,358,635	$4,095,121,582	$4,548,154,818
Uniform Minimum Millage Rate Necessary to Achieve (1/3) to (2/3) Allocation						
Option 1 (Restore All Exempt Property)		0.100	0.095	0.095	0.098	0.109
Option 2 (Restore All But $100K of Residential)		0.118	0.111	0.112	0.115	0.128
Option 3 (Maintain Exemptions)		0.145	0.137	0.139	0.142	0.158

*Note: The comparison of South Carolina scenarios (Scenarios 1 and 2) to the Southeastern and evidence-based scenarios (Scenarios 3, 4 and 5) are somewhat apples-to-oranges in that South Carolina does not include Transportation funding in Operations Revenues. Rather, the state accounts for Transportation separately. Therefore, if Transportation were included, the effective Foundation Aid (per-student revenue) and Operations Revenue would actually be *higher* for South Carolina than presented in Scenarios 1 and 2.

CONCLUSION

In rendering its decision in Abbeville, the South Carolina Supreme Court noted, "…it is striking that the parties to the instant litigation have focused narrowly on a struggle between education expenditures and education outcomes while ignoring the overarching dilemmas emanating from the organizational structure of public education." Thus, the K-12 finance model presented here serves as only one step on the journey to restoring education quality in South Carolina. It is, however, a necessary first step to pave the way for other reforms.

EFA 2.0

This recommended K-12 finance model is not new. Rather, it represents the collective body of national best practices applied to the original effective components of South Carolina's education funding system. In effect, it is a modern restoration of the Education Finance Act—an ***EFA Version 2.0***. This "back-to-basics" model is designed to embody the essential elements of a stable, equitable system.

STUDENT FOCUS

Like the EFA, the EFA 2.0 funds students rather than countless programs or systems. Student-centric funding, using an updated version of the EFA's Foundation Aid and weighting factors, will improve autonomy and accountability of districts, as well as equitability and outcomes of students.

SIMPLE

Consolidating the myriad of funding streams (including EFA, EIA, Education Lottery, and Tier 1, 2 and 3 reimbursements) and assigning state funds based on a formula from a single source—the General Fund—will simplify the funding structure, increase efficiency and transparency, and decrease opportunities for allocation errors.

EQUITABLE

Requiring districts to levy a state-specified minimum millage rate (with the option for districts to levy higher rates if desired) rebuilds the EFA's intention to distributed funding based on an "ability to pay," ensuring funding equity for lower wealth districts. Further, it brings balance to taxpayers, both within and across districts.

EFA 2.0

*"The K-12 Finance Model…represents a modern restoration of the Education Finance Act—an **EFA Version 2.0**. This 'back-to-basics' model is designed to embody the essential elements of a stable, equitable system."*

TRANSITION

Re-inventing and restoring the K-12 education funding formula is a significant effort which will require a shift in the finance and accounting methods for both the state and local districts/ schools. A phase-in period of 5 to 8 years should be planned and implemented to facilitate smooth transition. Further, districts which stand to lose state funding could be held harmless during the phase-in period. Finally, annual auditing, evaluation, and updating is necessary to ensure the EFA 2.0 formula does not become obsolete, that targeted funds reach their destination, and that they are used effectively. Reform must be coupled with long-term accountability.

AFTERWORD

SCHOLARSHIP GUARANTEE AND IDEAS FOR FURTHER STUDY

Because Palmetto Promise Institute is committed to delivering the highest quality and most reliable research possible on South Carolina public policy issues, this publication was peer-reviewed. During that academic review process, a number of recommendations of a purely policy nature were offered. As this paper concerns itself with finance only, they will not be considered here, but a number of these suggestions are worthy of future research:

- Investigating the use of a single weight for special education students in our new EFA 2.0. This recommendation was addressed in the paper, but will be studied further by Palmetto Promise.
- Using South Carolina Department of Education (SCDE) In$ite data. The In$ite system, developed under Superintendent Dr. Barbara Neilsen, tracks school and district *expenditures*. While this study concerns itself with an analysis of *revenues,* InSite data was still used through its incorporation in the SCDE's "FY2015-16 District Report Cards." The In$ite data is now up to date on the SCDE website and is highly recommended.
- Rolling transportation and textbooks into state funding to provide flexibility to districts. This recommendation is long overdue.
- Requiring the SCDE *Funding Manual* to be updated with changes flowing from EFA 2.0. If it is not in the *Manual*, it will not be policy.
- Preventing the General Assembly from undoing EFA 2.0 by passing new categorical funding proposals. This challenge will be difficult. Without some discipline, we will be back to where we are now, even with the passage of EFA 2.0.
- Considering the role of family life and family formation on education outcomes. A host of data on this issue has been and currently is being developed and studied.

Then there were three recommendations we consider the most urgent:

1. Developing a consistent funding formula for **Charter** schools following the principles of EFA 2.0. We touch on Charters in this paper, but the current funding disparity for Charter schools begs for additional research.

2. Looking at **teacher** recruitment, retention and quality. No better predictor of learning progress exists than the quality of the teaching in the classroom. A new funding formula that would shift dollars from programs to classrooms and students would revolutionize the teaching profession.
3. Studying the feasibility of **consolidating** districts to provide economies of scale and better outcomes. This subject is the topic of our next paper to be released. Look for it before the end of the year.

About Palmetto Promise Institute

Palmetto Promise Institute is an independent, nonpartisan, nonprofit, 501(c)(3) educational organization. The Institute conducts public policy research dedicated to creating a free and flourishing South Carolina, where every individual has the opportunity to reach their full potential. The Institute does not perform contract research and does not accept government grants. Permission to reprint material in this publication is granted provided that the Institute is properly cited. Nothing written here is to be considered an attempt to aid or hinder the passage of any specific legislation.

APPENDIX A: PROPOSED FUNDING MODEL SCENARIOS

This section describes each of the scenarios and methods as well as the results of the proposed model under each of the five scenario values.

SCENARIO 1: REVENUE-NEUTRAL EFFECTIVE FOUNDATION AID OF ALL SOUTH CAROLINA DISTRICTS, WITH EFA WEIGHTS

Model

Given that South Carolina's current per pupil funding is not egregiously out of line with peer states that demonstrate better outcomes, the Econometric method of identifying an appropriate Foundation Aid is employed in this research. Under this method, both effective Foundation Aid and exceptional pupil weights are identified for South Carolina school districts using the following basic model which estimates the funding per student as a function of the number and types of students within each district as well as district qualities.

$$FUND_i = \beta_0 + \beta_1 ADM_i + \beta_2 POVERTY_i + \beta_3 LEP_i + \beta_4 GIFTED_i + \beta_5 SPECIAL_i + \beta_6 VOCATIONAL_i + \beta_6 X_i + \varepsilon_i$$

For school district ***i***, $FUND_i$ is the total average state and local operations funding per student enrolled in the district. ADM_i is the 135-Day Average Daily Membership (ADM) enrollment count used by the state is determining funding levels. $POVERTY_i$ is the 135-Day ADM count of Pupils in Poverty. LEP_i is the 135-Day ADM count of Limited English Proficiency Students. $GIFTED_i$ is the 135-Day ADM count of High Achieving students. $SPECIAL_i$ is a vector of the 135-Day ADM counts of Special Needs students, aggregated into 3 levels of severity—Low, Medium, and High. $VOCATIONAL_i$ is the 135-Day ADM count of Vocational Students. X_i is a vector of district-level characteristics.

Data for the 2015-16 school year on South Carolina school district funding were obtained from the South Carolina Revenue and Fiscal Affairs Office (RFA) in their annual "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue"[25] as well as the SC Department of Education's "FY2015 - 2016 District Revenue Information" report.[26] Data for 135-Day ADM pupil counts were obtained from the SC Department of Education Office of Finance's "FY15-16 135-Day Financial Requirements Report."[27] Control data for school district characteristics was obtained from the SC Department of Education's "FY2015-16 District Report Cards."[28] These District Report Cards incorporate data from the In$ite system, which tracks school and district expenditures.

Results

The estimated model to identify effective Foundation Aid and exceptional weight values in South Carolina was designed to emulate the EFA funding formula. While the EFA only makes up 27% of state and local funding, it was hypothesized that additional funding streams would still be allocated in such a way that per-student relationships could be extracted. However, the results of the model showed both

the intercept and the explanatory variables (Foundation Aid and student weights) to be insignificant in all specifications. (Regression results shown in Table A1.) In other words, *overall state and local funding has no relationship to students or student characteristics*. Allocation of these funds is driven by other factors, instead.[29]

Several variations of the model were conducted, including examining the effect of Foundation Aid and student weights on state and local operations funds along with the following district control variables:

1. Staffing and expenditure
2. Financial capacity
3. Geographic location (categorical variables for urban versus rural)

Several interesting results from the regressions included the following:

1. ***Total Property Assessed Value*** was significant and positive on the level of per-pupil operations revenues. Districts with greater property value per student have higher local funding per student.
2. ***Teachers Per Student*** was also significant and positive on the level of per-pupil operations revenues as well. Districts with more teachers per student have higher state and local funding per student.
3. ***Other Staff Per Student*** had a significant and positive effect on per-pupil funding. The larger the number of school administrators per student, as well as guidance counselors per student, the higher the funding. The number of LEA administrators per student was slightly significant and positive in two specifications.

All model estimation results for Scenario 1 are found in Table A1.

As a result of the insignificance of the Foundation Aid and weights in overall funding, Scenario 1 was modified to utilize current EFA weights to identify a revenue-neutral Foundation Aid for all South Carolina districts. Results are shown in Figure A1.

Figure A1: Revenue-Neutral Effective Foundation Aid with EFA Weights for South Carolina School Districts, 2015-16

Category	Effective Value
Foundation Aid	$7,324
Exceptional Student Weights	
Poverty	0.20
Limited English Proficiency	0.20
Gifted	0.15
Vocational	0.29
Special Needs - Tier 1	0.74
Special Needs - Tier 2	1.04
Special Needs - Tier 3	1.57

Source: Author's calculations based on "Detailed Index of Taxpaying Ability by District." South Carolina Department of Revenue. 2017, and "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue," and FY15-16 135-Day Financial Requirements Report, Office of Finance, SC Department of Education

SCENARIO 2: REVENUE-NEUTRAL EFFECTIVE FOUNDATION AID OF HIGH-PERFORMING SOUTH CAROLINA DISTRICTS, WITH EFA WEIGHTS

Model

Scenario 2 employs the same econometric methods and data from Scenario 1 on the top-performing districts in the state. These top performers included the top 20 districts based on a performance index comprised of graduation rate, SC Ready scores, ACT scores, and end-of-course scores for the 2015-16 school year. See Appendix B for performance index methodology and a full list of districts and performance index values.

Results

The results of the regression model of Scenario 2 was like that of Scenario 1 — no relationship was

identified between funding levels and students or student characteristics.

Like Scenario 1, the Foundation Aid and student weight variables were examined alone and combined with other control variables. Interesting results from the regressions included the following:

1. ***Special Needs Students*** had a slightly significant and positive effect on per-student funding levels in five of the specifications that did not control for district staffing levels.
2. ***Total Property Assessed Value*** was also significant and positive on the level of per-pupil operations revenues in specifications that did not control for district staffing levels. Districts with more teachers per student have higher state and local funding per student.
3. ***Staffing Per Student*** had a significant and positive effect on per-pupil funding in a single specification—the one that controlled for district property values and urban/rural location. Here, a higher number of teachers, school administrators, and guidance counselors per student all increased the per-student level of state and local revenues.

Model estimation results for Scenario 2 are found in Table A2.

Due to the insignificance of the Foundation Aid and weights in overall funding, Scenario 2—like Scenario 1—was modified to utilize current EFA weights to identify a revenue-neutral Foundation Aid for the top 20 performing South Carolina districts. ***These top 20 districts spend, on average, $379 per student less than the average South Carolina district in state and local funds.*** Results are shown in Figure A2.

Figure A2: Revenue-Neutral Effective Foundation Aid with EFA Weights for South Carolina Top-Performing School Districts, 2015-16

Category	Effective Value
Foundation Aid	$6,945
Exceptional Student Weights	
Poverty	0.20
Limited English Proficiency	0.20
Gifted	0.15
Vocational	0.29
Special Needs - Tier 1	0.74
Special Needs - Tier 2	1.04
Special Needs - Tier 3	1.57

Source: Author's calculations based on "Detailed Index of Taxpaying Ability by District." South Carolina Department of Revenue. 2017, and "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue," and FY15-16 135-Day Financial Requirements Report, Office of Finance, SC Department of Education

SCENARIO 3: AVERAGE EFFECTIVE FOUNDATION AID OF SOUTHEASTERN DISTRICTS IN SIX STATES

Model

This scenario is similar to the first two, but uses a multi-state sample from Louisiana, Mississippi, Missouri, North Carolina, South Carolina, and Tennessee. These six states were selected due to their requirements that all high school students take the ACT and the availability of their data for comparison.[30] Data elements used to estimate weights vary slightly from the South Carolina sample, due to the use of a standard national dataset. Scenario 3 uses the following model to estimate funding per student as a function of the number and types of students within each district as well as district qualities. Of particular note, the 135-Day ADM is replaced with enrollment figures. Special need students are consolidated into a single category. Poverty, LEP, and Disability categories all use slightly different student counts as well. Finally, the funding data is based on the national dataset values as well.

$$FUND_i = \beta_0 + \beta_1 ENROLLMENT_i + \beta_2 FREELUNCH_i + \beta_3 LEP_i + \beta_4 DISABILITIES_i + \beta_5 X_i + \varepsilon_i$$

For school district ***i***, $FUND_i$ is the total average state and local funding per student enrolled in the district. This is different from Scenarios 1 and 2, which use operations revenues only. $ENROLLMENT_i$ is the enrollment count reported in national data. $FREELUNCH_i$ is the number of students receiving either free or reduced lunch. LEP_i is the number of Limited English Proficiency Students. $DISABILITIES_i$ is the number of students classified as having an individual education plan (IEP) in federal data. X_i is a vector of district-level characteristics. Gifted and vocational counts of students were not provided.

Data for this estimation covers the 2014-15 school year and was obtained from the "Local Education Agency (School District) Universe Survey Directory Data" of the Common Core of Data published by the National Center for Education Statistics.[31]

Results

Each of the specifications of the regression equation using the southeastern school district dataset showed significant results for many of the explanatory variables. In particular:

1. ***Special Needs Students*** were significant and positive in all specifications, indicating districts with more students with disabilities do receive higher state and local revenue amounts.
2. ***Free and Reduced Lunch*** was significant and ***negative*** in every specification. Intuitively, this model should be bound at zero.[32] That the coefficient is negative may be a symptom of low overall district wealth, which impedes the ability to raise revenues for schools. And, because the dataset does not contain district wealth, the model cannot control for that element.
3. ***Staffing Per Student*** was significant in most specifications. Teachers per-student and Guidance Counselors per-student were positive and significant in all four specifications, School Administrators per-student were positive and significant in the two specifications that did not include finance variables. Finally, LEA Administrators per-student were negative and significant in one specification only.
4. ***Percent of Expenses on Instruction*** had a negative and significant effect on total state and local revenue funds per student, indicating that more efficient districts have a greater percentage of total expenditures going to instruction, have overall lower state and local funds per student.
5. ***ACT Scores*** were significant and positive in five of the specifications that included district staffing and finance variables. This finding could imply that students with higher ACT scores tend to reside in wealthier districts that can produce greater revenues.

Regression results for Scenario 3 are detailed in Table A3.

Figure A3: Revenue-Neutral Effective Foundation Aid with Average Weights for Southeastern School Districts, 2014-15

Category	Effective Value
Foundation Aid	$6,799
Exceptional Student Weights	
Poverty	0.22
Limited English Proficiency	0.34
Gifted	0.25
Vocational	0.175
Special Needs - Tier 1	0.87
Special Needs - Tier 2	1.12
Special Needs - Tier 3	1.63

Source: Author's calculations based on "National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey Directory Data", 2014-15. Note: Special Needs weights were developed from blended rates specified by each state's Education Department.

As a result of the inability of the model to identify an effective weighting system (provided one actually exists), Scenario 3 was modified to utilize the average weights across the six southeastern states to identify a revenue-neutral Foundation Aid for all the southeastern districts. Since the national dataset had no figures for gifted or vocational students, average values were imputed using current rates for South Carolina. Results are shown in Figure A3.

SCENARIO 4: AVERAGE EFFECTIVE FOUNDATION AID OF HIGH-PERFORMING SOUTHEASTERN DISTRICTS

Model

Scenario 4 employs the same econometric methods from Scenario 3 on the on top-performing districts in the six southeastern states. These top performers included the top 25% of districts based on an index of average ACT scores controlled for district poverty for the 2015-16 school year. See Appendix C for a detailed listing of states and characteristics.

Results

Like Scenario 3, several results were similar, including the significant and positive impact of the percent of expenditures on instruction, the positive impact of ACT scores in five of the specifications, and the positive impact of Teachers per-student in all specifications.

Unlike all districts in Scenario 3, results from the top 25% were different in the following aspects:

1. ***Special Needs Students*** were only significant and positive in specifications which used categorical variables to control for the state, indicating wide variations in the way the top 25% of districts fund special needs across states.
2. ***Free and Reduced Lunch*** was still significant and negative, but not as significant and not in every specification. While this result may indicate an association between higher wealth districts and per pupil levels of funding, it may also indicate the disparity is not as severe in top-performing districts (when measured controlling for poverty).
3. ***Staffing Per Student*** identified slightly different results for the top 25% of districts. In particular, guidance counselors per-student were not as significant across all specifications. School Administrators were no longer significant. Finally, LEA Administrators per-student was still negative but became significant in three specifications.
4. ***Percent of Expenses on Salaries*** had a negative and significant effect of total state and local revenue funds per student, unlike Scenario 3 with all districts.
5. ***Categorical State Variables*** were not as significant a factor among the top 25% of districts as they were for all districts in Scenario 3. Idiosyncratic state characteristics may not be as important in determining funding among the top-performing districts as it is among all other districts.

Regression results for Scenario 4 are detailed in Table A4.

Like Scenario 3, the model lacks the ability to identify any effective Foundation Aid or weighting system (provided one exists). Scenario 4 was modified to utilize the average weights across the six southeastern states to identify a revenue-neutral Foundation Aid for the top 25% of southeastern districts. Unlike the results for South Carolina districts, in which the top performing districts spent less per student, the top performing southeastern districts spent on average $190 more per student. This may be due to the lack of available performance statistics at the national level and the use of ACT composite score as a proxy for performance. Results are shown in Figure A4.

Figure A4: Revenue-Neutral Effective Foundation Aid with Average Weights for Top 25% Southeastern School Districts, 2014-15

Category	Effective Value
Foundation Aid	$6,981
Exceptional Student Weights	
Poverty	0.22
Limited English Proficiency	0.34
Gifted	0.25
Vocational	0.175
Special Needs - Tier 1	0.87
Special Needs - Tier 2	1.12
Special Needs - Tier 3	1.63

Source: Author's calculations based on "National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey Directory Data", 2014-15. Note: Special Needs weights were developed from blended rates specified by each state's Education Department.

SCENARIO 5: AVERAGE FOUNDATION AID OF EVIDENCE-BASED RECOMMENDATIONS

Model

This scenario, based on the Evidence-Based methods, aggregates recent recommendations of 3rd-party expert professional firms to other states regarding costs, and develops an average value of Foundation Aid as well as exceptional student weights. A full listing of professional studies and values is found in the Appendix. The average of Foundation Aid and weight values recommended by each of the five studies are show in Figure A5.

Results

The recommendations of five recent 3rd-party professional studies regarding foundation aid and exceptional student weighting factors were identified and summarized. Given that the studies pertained to various regions of the US with cost differentials, the Foundation Aid recommendations have been cost adjusted.[33] Not all studies provided recommendations for all weights. Some suggested lower Foundation Aid with more weights, while other suggested higher Foundation Aid with fewer and lower weighting factors. The average value of Foundation Aid and the weights (in studies which made recommendations for those weights) is shown in Figure A5. A full listing of professional studies and values is found in the Appendix.

Figure A5: Summary of Evidence-Based Professional Study Recommendations

Category	Effective Value
Foundation Aid	$7,812
Exceptional Student Weights	
Poverty	0.32
Limited English Proficiency	0.4
Gifted	0.05
Vocational	0.06
Special Needs - Tier 1	0.77
Special Needs - Tier 2	0.99
Special Needs - Tier 3	1.44

Source: See Appendix D for full listing of studies and recommendations.

Table A1: Scenario 1 - All South Carolina School Districts (Ordinary Least Squares Regression Results)

Dependent Variable: Per Pupil State and Local Revenues*

						With Rural/Urban Categorical Variables				
	EFA Student Characteristics (1)	Characteristics & Performance (2)	Characteristics, Performance & Staffing (3)	Characteristics, Performance & Local Finance (4)	Chars, Perf, Staffing & Local Finance (5)	EFA Student Characteristics (6)	Characteristics & Performance (7)	Characteristics, Performance & Staffing (8)	Characteristics, Performance & Local Finance (9)	Chars, Perf, Staffing & Local Finance (10)
pctGifted	-964	980	6484	-2076	4736	-5560	-3110	2616	-4671	957
	(4879)	(5132)	(4001)	(4432)	(3913)	(5365)	(5696)	(4140)	(4963)	(3985)
pctLEP	529	-178	4626	-3712	2055	-1937	-2842	2873	-6716 *	-337
	(4091)	(4122)	(2881)	(3592)	(2957)	(4240)	(4285)	(2995)	(3817)	(3092)
pctPoverty	792	-1240	-1119	-1585	-1305	-355	-2391	-2602	-2337	-2534
	(2433)	(2967)	(2079)	(2541)	(2003)	(2533)	(3009)	(2133)	(2616)	(2028)
pctVocational	-2232	-2331	-1051	310	-207	-1654	-2068	-271	-39	376
	(4081)	(4071)	(2914)	(3521)	(2825)	(4407)	(4402)	(3038)	(3851)	(2899)
pctSpecialNeeds	1006	893	927	5642	3130	-44	-790	383	3631	2495
	(6741)	(6723)	(4863)	(5825)	(4763)	(6701)	(6701)	(4815)	(5902)	(4645)
Performance_Index		-5577	-2353	-5192	-2613		2955	-3045	-6236	-3641
		(4686)	(3274)	(4013)	(3153)		(1239)	(3258)	(4052)	(3106)
Schools_perPupil			-255300		-337100 *			-257500		-344800 **
			(172100)		(168800)			(165100)		(160300)
Teachers_perPupil			84040 ***		66930 ***			72020 ***		61810 **
			(24690)		(24730)			(26020)		(25030)
Administrators_perPupil			514300 **		519300 ***			522000 ***		502800 ***
			(200600)		(193100)			(194900)		(185400)
LEAAdministrators_perPupil			165500		180700 *			152400		169700 *
			(107700)		(103900)			(103700)		(98790)
Guidance_perPupil			919700 ***		815300 ****			910400 ***		772100 ***
			(303000)		(294600)			(292900)		(283300)
AvgAdminSalary_perPupil			6.87		7.85			4.48		4.90
			(8.10)		(7.81)			(8.17)		(7.77)
pctExpensesOnTeacherSalaries			8.09		4.35			3.39		-2.74
			(14.46)		(13.99)			(17.23)		(16.54)
AssessedVal_perPupil				0.059 ****	0.025 **				0.054 ****	0.027 **
				(0.011)	(0.010)				(0.012)	(0.010)
Constant	9393 ****	(14146) ***	-160	12142 ***	1205	11018 ****	(16051) ***	3090	14120 ***	4290
	(2465)	(4690)	(3745)	(4033)	(3645)	(2487)	(4751)	(4023)	(4152)	(3850)
Observations	80	80	80	80	80	80	80	80	80	80
R-squared	-0.04	-0.04	0.54	0.24	0.57	0.08	0.09	0.59	0.31	0.63

Note: Significant at *10%, **5%, ***1%, ****0.1% level. Standard errors are shown in parentheses. Urban/rural categorical variables not shown. Fairfield School District omitted due to outlier funding data. Mid-sized city districts (Charleston and Richland 1) were significant and positive in specifications 6, 7, 8, and 9. Fringe town districts (Anderson 2, Cherokee and Spartanburg 4) were significant and positive in specifications 8 and 10. Distant town districts were significant and negative in specifications 6 and 7.

Table A2: Scenario 2 - Top 20 South Carolina School Districts (Ordinary Least Squares Regression Results)

Dependent Variable: Per Pupil State and Local Revenues*

						With Rural/Urban Categorical Variables				
	EFA Student Characteristics (1)	Characteristics & Performance (2)	Characteristics, Performance & Staffing (3)	Characteristics, Performance & Local Finance (4)	Chars, Perf, Staffing & Local Finance (5)	EFA Student Characteristics (6)	Characteristics & Performance (7)	Characteristics, Performance & Staffing (8)	Characteristics, Performance & Local Finance (9)	Chars, Perf, Staffing & Local Finance (10)
pctGifted	7003	11205	24310	-2810	5821	1541	-346	34009	-6288	10470
	(9500)	(13054)	(16270)	(10830)	(18000)	(10722)	(17517)	(29095)	(13480)	(28330)
pctLEP	442	28	6220	-572	3480	-126	-37	8898	-321	6583
	(6717)	(6961)	(6724)	(5298)	(6110)	(6894)	(7223)	(8597)	(5498)	(7351)
pctPoverty	8068	5723	-511	2004	1894	8975	9901	-12969	1831	-13140
	(5215)	(7220)	(8794)	(5610)	(7832)	(5465)	(8736)	(19938)	(7174)	(16730)
pctVocational	3771	2860	-19150	3358	-1786	6193	6653	-14519	5499	10670
	(8088)	(8527)	(16930)	(6487)	(18070)	(8625)	(9583)	(28573)	(7304)	(28480)
pctSpecialNeeds	23000 *	24472 *	8216	17860 *	14520	23925 *	23328	20207	21420 *	31210
	(11318)	(12029)	(16200)	(9374)	(14670)	(12607)	(13829)	(25979)	(10550)	(22810)
Performance_Index		-8536	-12760	-894	-313		3026	-46907	977	-42160
		(17587)	(16870)	(13580)	(16520)		(21610)	(51809)	(16460)	(43570)
Schools_perPupil			-1912000		-539700			-927066		1106000
			(1226000)		#########			#########		#########
Teachers_perPupil			-66010		68850			3473 ***		205100
			(146500)		(151300)			(248723)		(242300)
Administrators_perPupil			1842000		254600			658915 ***		-1813000
			(1399000)		#########			#########		#########
LEAAdministrators_perPupil			348700		125800			-130575		-686900
			(638800)		(574900)			#########		#########
Guidance_perPupil			2416000		415200			2867924 ***		537000
			(1390000)		#########			#########		#########
AvgAdminSalary_perPupil			46.26		3.85			33.85		-18.14
			(38.59)		(42.18)			(49.13)		(52.03)
pctExpensesOnTeacherSalaries			59.68		-32.03			111.30		28.94
			(61.20)		(76.48)			(105.90)		(102.10)
AssessedVal_perPupil				0.074 ***	0.061				0.077 **	0.067
				(0.023)	(0.036)				(0.026)	(0.041)
Constant	-1586	(5194)	5481	4003	-407	-2467	-(4957)	31149	3000	30630
	(5990)	(15269)	(15770)	(11620)	(14250)	(6205)	(18928)	(39861)	(14650)	(33450)
Observations	20	20	20	20	20	20	20	20	20	20
R-squared	0.11	0.06	0.28	0.45	0.45	0.07	-0.01	0.04	0.41	0.33

Note: Significant at *10%, **5%, ***1%, ****0.1% level. Standard errors are shown in parentheses. Due to small sample size, urban/rural categorical variables (not shown) modified to account for Suburban, Town, and Rural. They were not significant in any specification.

Table A3: Scenario 3 - School Districts of 6 Southeastern States (Ordinary Least Squares Regression Results)

Dependent Variable: Per Pupil State and Local Revenues*

						With Rural/Urban Categorical Variables				
	Student Characteristics (1)	Characteristics & Performance (2)	Characteristics, Performance & Staffing (3)	Characteristics, Performance & Local Finance (4)	Chars, Perf, Staffing & Local Finance (5)	EFA Student Characteristics (6)	Characteristics & Performance (7)	Characteristics, Performance & Staffing (8)	Characteristics, Performance & Local Finance (9)	Chars, Perf, Staffing & Local Finance (10)
pctLEP	1445	938	4544 ****	3495 **	7102 ****	2877 *	2092	4396 ****	3595 **	5471 ****
	(1525)	(1544)	(1349)	(1456)	(1209)	(1531)	(1535)	(1271)	(1479)	(1211)
pctSpecialNeeds	5165 ***	4744 ***	251	7605 ****	3285 ***	6386 ****	6125 ****	2248 *	7566 ****	3559 ***
	(1643)	(1654)	(1415)	(1560)	(1269)	(1497)	(1495)	(1232)	(1440)	(1178)
pctFree&RedLunch	-2302 ****	-2517 ****	-1545 ****	-3588 ****	-2624 ****	-1419 ****	-1060 **	-1325 ****	-1778 ****	-1863 ****
	(319)	(443)	(383)	(426)	(347)	(331)	(459)	(375)	(447)	(360)
avg_ACT_Composite		-43	15	104 **	144 ****		38	94 ***	120 **	160 ****
		(43)	(37)	(42)	(34)		(43)	(35)	(42)	(34)
Schools_perPupil			3790		-38901			-20336		-44922
			(33266)		(29666)			(28862)		(27630)
Teachers_perPupil			38078 ****		59690 ****			41898 ****		53715 ****
			(6105)		(5585)			(5234)		(5119)
Administrators_perPupil			135550 ****		49598			105247 ***		53513
			(41017)		(36762)			(36243)		(34842)
LEAAdministrators_perPupil			-30141		-145230 ****			26979		-35452
			(36093)		(33155)			(35775)		(34555)
Guidance_perPupil			232907 ****		202361 ****			278139 ****		223761 ****
			(5462)		(45173)			(44017)		(42243)
pctExpensesOnTeacherSalaries				-642	-3813 ***				42	-1076
				(1535)	(1255)				(1498)	(1217)
pctExpensesOnInstruction				-15997 ****	-16774 ****				-12869 ****	-11725 ****
				(1446)	(1238)				(1449)	(1241)
Categorical_Louisiana						360	250	238	323	213
						(249)	(261)	(219)	(257)	(214)
Categorical_Mississippi						-1830 ****	-1933 ****	-1897 ****	-1711 ****	-1657 ****
						(208)	(214)	(179)	(207)	(172)
Categorical_Missouri						-463 **	-536 ***	-1541 ****	-107	-1109 ****
						(180)	(184)	(159)	(183)	(158)
Categorical_North Carolina						-1621 ****	-1622 ****	-1956 ****	-1008 ****	-1357 ****
						(209)	(208)	(171)	(212)	(174)
Categorical_Tennessee						-1824 ****	-1999 ****	-2160 ****	-1184 ****	-1484 ****
						(205)	(225)	(190)	(233)	(193)
Constant	9598 ****	10595 ****	5451 ****	17854 ****	14603 ****	9748 ****	8924 ****	4725 ****	14739 ****	10478 ****
	(273)	(1051)	(948)	(1338)	(1102)	(315)	(995)	(851)	(1316)	(1093)
Observations	913	913	913	913	913	913	913	913	913	913
R-squared	0.05	0.05	0.33	0.18	0.47	0.26	0.27	0.52	0.33	0.56

Note: Significant at *10%, **5%, ***1%, ****0.1% level. Standard errors are shown in parentheses.

Table A4: Scenario 4 - Top 25% of School Districts of 6 Southeastern States (Ordinary Least Squares Regression Results)

Dependent Variable: Per Pupil State and Local Revenues*

						With Rural/Urban Categorical Variables				
	Student Characteristics (1)	Characteristics & Performance (2)	Characteristics, Performance & Staffing (3)	Characteristics, Performance & Local Finance (4)	Chars, Perf, Staffing & Local Finance (5)	EFA Student Characteristics (6)	Characteristics & Performance (7)	Characteristics, Performance & Staffing (8)	Characteristics, Performance & Local Finance (9)	Chars, Perf, Staffing & Local Finance (10)
pctLEP	4054	4344	5531 .	8822 ***	9557 ****	4534	5123 *	6712 **	7818 ***	8680 ****
	(3391)	(3397)	(3084)	(3167)	(2624)	(2954)	(2926)	(2584)	(2801)	(2432)
pctSpecialNeeds	-2025	-2070	-2272	2113	1915	5653 *	5835 **	5342 **	6646 **	6008 **
	(3208)	(3205)	(2852)	(2987)	(2440)	(2922)	(2887)	(2472)	(2738)	(2316)
pctFree&RedLunch	-2103 ***	-842	-1478	-2952 **	-3427 ****	-2451 ****	-229	-2003 **	-1564	-2945 ***
	(771)	(1306)	(1176)	(1230)	(1008)	(723)	(1131)	(1011)	(1096)	(957)
avg_ACT_Composite		159	49	204 *	125		288 **	167 *	274 **	176 *
		(133)	(117)	(122)	(99)		(114)	(99)	(107)	(92)
Schools_perPupil			28800		-25443			47766		-5864
			(64772)		(54754)			(55964)		(53349)
Teachers_perPupil			64128 ****		84852 ****			65648 ****		74304 ****
			(12731)		(10921)			(11086)		(10459)
Administrators_perPupil			-24615		-98401			-128841		-130618 *
			(89456)		(75587)			(80117)		(75869)
LEAAdministrators_perPupil			-216743 **		-275174 ****			-148586		-162061 *
			(83899)		(72030)			(90761)		(84615)
Guidance_perPupil			99390		123558			186776 **		142985 *
			(99742)		(84186)			(85350)		(79959)
pctExpensesOnTeacherSalaries				-8372 ***	-11261 ****				-8702 ***	-6194 **
				(2997)	(2442)				(2990)	(2571)
pctExpensesOnInstruction				-14137 ****	-15035 ****				-10502 ****	-10964 ****
				(2788)	(2312)				(2695)	(2312)
Categorical_Louisiana						-1384	-1407	-1403	-1111	-1055
						(1296)	(1280)	(1095)	(1220)	(1033)
Categorical_Mississippi						-3780 ***	-3853 ***	-3606 ***	-3076 **	-2837 ***
						(1298)	(1282)	(1092)	(1221)	(1029)
Categorical_Missouri						-2227 *	-2303 *	-3416 ***	-1272	-2353 **
						(1292)	(1276)	(1090)	(1220)	(1032)
Categorical_North Carolina						-2213	-2272	-3162 ***	-1067	-2016 *
						(1423)	(1406)	(1199)	(1345)	(1135)
Categorical_Tennessee						-3444 ***	-3577 ***	-3849 ****	-2311 .	-2613 **
						(1295)	(1280)	(1093)	(1238)	(1046)
Constant	10434 ****	6444 *	4462	19654 ****	18192 ****	12238 ****	5106	4493	16574 ****	13748 ****
	(581)	(3388)	(3105)	(3676)	(2987)	(1424)	(3146)	(2818)	(3669)	(3124)
Observations	223	223	223	223	223	223	223	223	223	223
R-squared	0.03	0.04	0.28	0.20	0.49	0.30	0.32	0.51	0.39	0.58

Note: Significant at *10%, **5%, ***1%, ****0.1% level. Standard errors are shown in parentheses.

APPENDIX B: SOUTH CAROLINA PERFORMANCE INDEX, 2015-6

For South Carolina districts, a Performance Index was developed of four equally-weighted elements that are measured consistently across all districts annually. These district measures include:

1. Four-year Graduation Rate
2. Composite ACT Score (out of a possible 36)
3. Percent of students passing all End-of-Course exams
4. Percent of students scoring "Meets Expectations" or above on the SCReady Math and Reading tests

To examine the relationship of district characteristics on the Performance Index, the following linear model was estimated, controlling for district size and other characteristics.

$$PERF_i = \beta_0 + \beta_1 FUND_i + \beta_2 STUD\_CHAR_i + \beta_3 DIST\_INPUT_i + \beta_4 X_i + \varepsilon_i$$

For school district ***i***, $FUND_i$ is the total average state and local funding per student enrolled in the district. $STUD\_CHAR_i$ is a vector of student characteristics in the district specified in Scenario 1 (poverty, LEP, gifted, vocational, and special needs). $DIST\_INPUT_i$ is a vector of district level staffing and finance inputs. X_i is a vector of district-level binary variables indicating level of urban/rural characteristics.

Conducting the estimation under multiple specifications, the primary district factors affecting the Performance Index values included:

1. ***Poverty*** was significant and negative under all specifications. Districts with greater poverty have lower performance.
2. ***Gifted*** was significant and positive under all specifications. Districts with a greater percentage of gifted students have higher performance.
3. ***Career Tech Enrollment*** was slightly significant and negative, although the percentage of ***Vocational*** students defined for EFA purposes was not.
4. ***LEA Administrative Support Staff Per Student*** was significant and negative under all specifications. No other level of staffing per student (teachers, guidance, administrators) revealed significance in any specification.
5. ***Percent of Expenditures on Instruction*** was significant and positive.
6. ***Percent of Expenditures on Teacher Salaries*** was significant and negative.
7. ***Rural versus Urban*** location was not significant under any specification.

In all specifications of a linear regression of district characteristics on Performance Index, district poverty and gifted rates were significant. Regression results are shown in Table B1.

Table B1: Ordinary Least Squares Regression Results

Dependent Variable: Performance Index	Without Per Pupil Revenues		With Per Pupil Revenues							
	Poverty & Gifted Only		Revenues Only		EFA Student Characteristic		CCD Student Characteristic		District Inputs	
perPupilRevenues			-0.00001		-0.000003		0.00000		0.00000	
			(0.000)		(0.000)		(0.000)		(0.000)	
pctPoverty	-0.369	****			-0.362	****			-0.306	****
	(0.056)				(0.060)				(0.061)	
pctGifted	0.326	***			0.345	****			0.267	**
	(0.116)				(0.120)				(0.113)	
pctLEP					-0.125				-0.106	
					(0.100)				(0.095)	
pctVocational					-0.025				-0.052	
					(0.100)				(0.093)	
pctSpecialNeeds					-0.017				-0.068	
					(0.165)				(0.154)	
pctPoverty_CCD							-0.369	****		
							(0.052)			
pctGifted_CCD							0.341	***		
							(0.118)			
pctLEP_CCD							-0.182	*		
							(0.099)			
pctCareerTech_CCD							-0.156	*		
							(0.091)			
pctDisabilities_CCD							-0.040			
							(0.107)			
LEAadminSupportStaff									-3.692	***
									(1.189)	
PupilTeacherRatio									-0.044	
									(0.055)	
AverageAdminSalary									0.094	*
									(0.053)	
pctExpensesOnInstruction									0.008	*
									(0.004)	
pctExpensesOnTeacherSalaries									-0.007	*
									(0.004)	
Constant	0.847	****	0.688	****	0.884	****	0.883	****	0.859	****
	(0.058)		(0.056)		(0.066)		(0.059)		(0.075)	
Observations	80		80		80		80		80	
R-squared	0.77		0.02		0.76		0.79		0.80	

Note: Significant at *10%, **5%, ***1%, ****0.1% level. Standard errors are shown in parentheses. Urban/rural categorical variables not shown. Fairfield School District omitted due to outlier funding data. Two sets of student characteristic data were tested: 1.) from SC Education Finance Act appropriations and 2.) from NCES Common Core of Data (denoted as CCD).

Using the results of the model specified with Poverty and Gifted only, ***predicted*** Performance Index values were generated. To identify the top performing districts controlling for district characteristics of poverty and gifted, the difference between the actual and predicted Performance Index values was calculated. Those districts outperforming their predicted Performance Index values were ranked the highest. (The top 20 districts were then used in estimations of Foundation Aid and weights for top performing districts in Scenario 2.).

The Predicted Performance Index, along with the actual Performance Index, are shown in Figure B2, sorted by districts who ***outperform*** their Predicted Performance Index.

Figure B2: Predicted Vs. Actual Performance Index Values, Sorted by Outperformance, 2015-16

School District	Performance Index	Rank	Predicated Performance Index	Rank	Out-Performance	Rank
Abbeville School District	0.685	9	0.583	50	0.103	1
Spartanburg School District 4	0.706	7	0.622	28	0.084	2
Anderson School District 3	0.679	12	0.604	39	0.075	3
Clarendon School District 1	0.569	57	0.507	74	0.062	4
Calhoun School District	0.602	45	0.542	64	0.060	5
Dillon School District 4	0.582	51	0.523	70	0.059	6
Florence School District 5	0.647	21	0.599	42	0.048	7
Spartanburg School District 1	0.708	6	0.663	13	0.045	8
Barnwell School District 29	0.591	50	0.549	63	0.042	9
Darlington School District	0.623	36	0.581	51	0.042	10
Bamberg School District 1	0.625	35	0.584	47	0.042	11
Dorchester School District 4	0.581	52	0.540	65	0.041	12
York School District 1	0.651	18	0.610	36	0.041	13
Horry School District	0.675	13	0.636	24	0.039	14
Saluda School District	0.600	46	0.567	57	0.032	15
Bamberg School District 2	0.526	68	0.494	79	0.031	16
Dillon School District 3	0.626	34	0.599	43	0.027	17
Greenwood School District 52	0.650	20	0.624	27	0.026	18
Anderson School District 1	0.716	4	0.692	6	0.024	19
Berkeley School District	0.644	24	0.620	30	0.023	20
Anderson School District 4	0.684	10	0.665	11	0.018	21
Spartanburg School District 2	0.671	14	0.654	18	0.017	22
Laurens School District 55	0.595	48	0.578	55	0.017	23
Spartanburg School District 3	0.634	27	0.619	31	0.015	24
Marion School District	0.527	67	0.512	71	0.015	25
Lexington School District 2	0.629	32	0.614	34	0.015	26
Chesterfield School District	0.609	42	0.596	45	0.013	27
Oconee School District	0.646	23	0.633	25	0.012	28
Edgefield School District	0.619	38	0.607	37	0.012	29
Lexington School District 3	0.614	41	0.603	41	0.010	30
Clarendon School District 2	0.540	65	0.531	68	0.009	31
Barnwell School District 45	0.574	55	0.565	58	0.009	32
Greenwood School District 51	0.591	49	0.583	49	0.008	33
Spartanburg School District 7	0.622	37	0.615	33	0.007	34
Aiken School District	0.634	28	0.627	26	0.007	35
Spartanburg School District 5	0.671	15	0.666	10	0.005	36
Dorchester School District 2	0.696	8	0.691	7	0.005	37
Florence School District 1	0.616	39	0.611	35	0.004	38
Laurens School District 56	0.580	53	0.579	54	0.001	39
Fairfield School District	0.558	61	0.557	59	0.001	40
McCormick School District	0.510	71	0.510	73	0.000	41
Hampton School District 1	0.555	62	0.557	60	-0.002	42

School District	Performance Index	Rank	Predicated Performance Index	Rank	Out-Performance	Rank
York School District 2	0.741	2	0.745	3	-0.004	43
Colleton School District	0.563	59	0.568	56	-0.004	44
Georgetown School District	0.616	40	0.621	29	-0.005	45
Orangeburg School District 3	0.497	74	0.502	77	-0.005	46
Greenville School District	0.680	11	0.686	8	-0.006	47
Chester School District	0.576	54	0.583	48	-0.007	48
Newberry School District	0.598	47	0.605	38	-0.007	49
Orangeburg School District 5	0.519	69	0.526	69	-0.007	50
Anderson School District 2	0.652	17	0.661	14	-0.009	51
Kershaw School District	0.635	26	0.644	20	-0.009	52
South Carolina	0.633	29	0.644	21	-0.011	53
Beaufort School District	0.647	22	0.659	15	-0.012	54
Lee School District	0.484	78	0.496	78	-0.012	55
Pickens School District	0.651	19	0.665	12	-0.014	56
Florence School District 2	0.564	58	0.580	53	-0.016	57
Lexington School District 1	0.711	5	0.728	4	-0.017	58
York School District 3	0.632	30	0.649	19	-0.017	59
Williamsburg School District	0.488	75	0.506	75	-0.018	60
Charleston School District	0.671	16	0.693	5	-0.022	61
Clarendon School District 3	0.630	31	0.655	17	-0.025	62
Barnwell School District 19	0.485	77	0.510	72	-0.025	63
Richland School District 2	0.643	25	0.671	9	-0.027	64
Anderson School District 5	0.627	33	0.657	16	-0.030	65
Florence School District 3	0.506	72	0.537	66	-0.031	66
Lancaster School District	0.606	43	0.638	22	-0.033	67
Orangeburg School District 4	0.518	70	0.551	62	-0.033	68
Spartanburg School District 6	0.604	44	0.638	23	-0.033	69
York School District 4	0.800	1	0.834	1	-0.034	70
Cherokee School District	0.563	59	0.598	44	-0.034	71
Union School District	0.535	66	0.581	52	-0.046	72
Greenwood School District 50	0.572	56	0.618	32	-0.046	73
Allendale School District	0.444	80	0.492	81	-0.048	74
Sumter School District	0.545	64	0.593	46	-0.048	75
Marlboro School District	0.487	76	0.537	67	-0.050	76
Richland School District 1	0.553	63	0.604	40	-0.051	77
Lexington School District 5	0.724	3	0.774	2	-0.051	78
Lexington School District 4	0.501	73	0.555	61	-0.054	79
Jasper School District	0.448	79	0.502	76	-0.054	80
Hampton School District 2	0.419	81	0.492	80	-0.073	81
Florence School District 4	0.368	82	0.488	82	-0.120	82

APPENDIX C: SOUTH CAROLINA DISTRICT STATISTICS

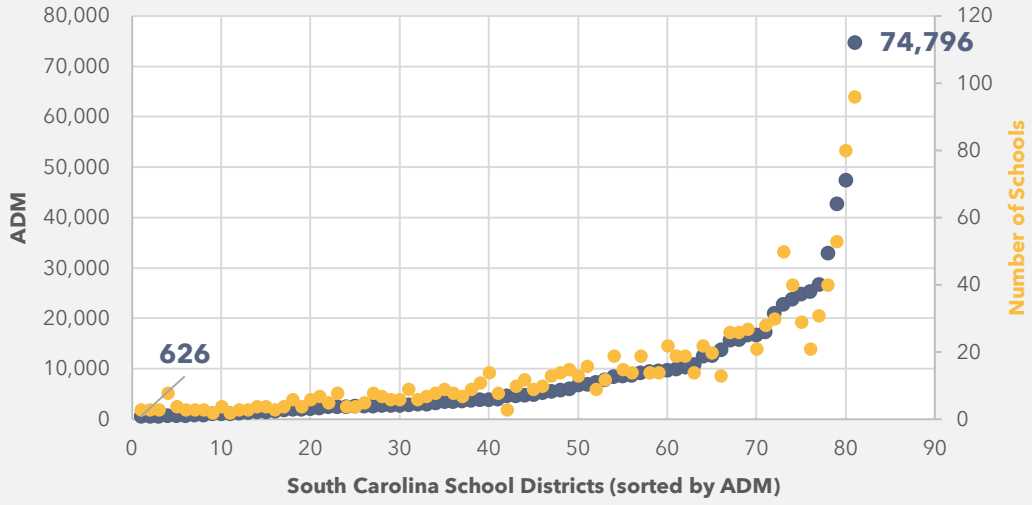
This section provides a data-based overview of South Carolina school districts as well as school districts from the six comparative southeastern states.

SOUTH CAROLINA SCHOOL DISTRICT OVERVIEW

Students and Schools: The 81 state school districts vary in size from 626 students (Barnwell 19) to 74,796 (Greenville), with the median having 4,015 students. Eight districts have fewer than 1,000 students. Nine districts have between 1,000 and 2,000. 43 districts have between 2,000 and 10,000. The number of schools per district vary in size from 3 (10 districts) to 96 (Greenville). The graph of district enrollment and number of schools in Figure C1 shows a generally proportional relationship of schools to students, with several variations—both to the low side and high side—in several districts. For a complete listing of South Carolina school districts and characteristics, see the Appendix.

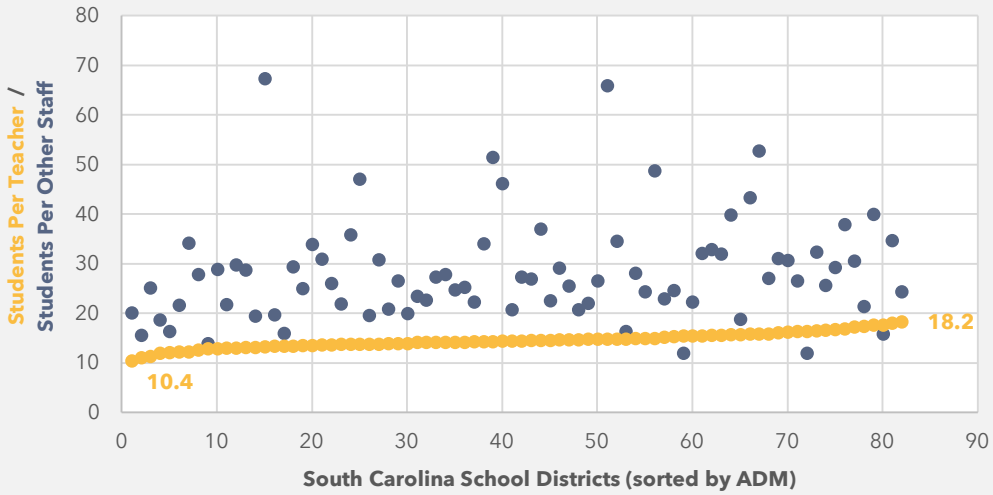
Teachers and Staff: The student to teacher ratio varies across state school districts, from a low of 10.4 (Fairfield) to 18.2 (Saluda), with a median value of 14.5 students per each teacher (see Figure 14). The ratios of students to all other staff (including administrators, guidance, media specialists, instructional aides, and support

Figure C1: Average Daily Membership (ADM) by School District, 2016-17



Source: Revenue Per Pupil Report by School District for 2016-17." South Carolina Revenue and Fiscal Affairs Office (RFA). Revised 10/6/2016. U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey Directory Data", 2014-15

Figure C2: Student Per Teacher and Student Per Other Staff by School District, 2015-16

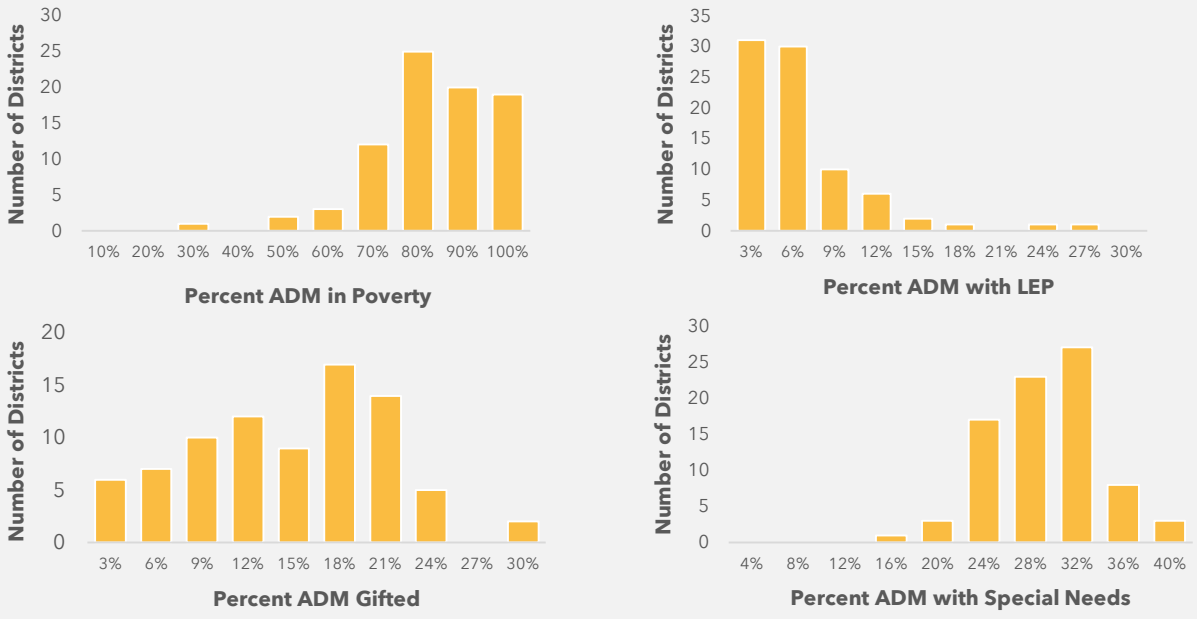


Source: Revenue Per Pupil Report by School District for 2016-17." South Carolina Revenue and Fiscal Affairs Office (RFA). Revised 10/6/2016. U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey Directory Data", 2014-15

services staff) are shown alongside student to teacher ratios in the same graph. They do not exhibit obvious relationships to the student to teacher ratio. They vary from a low of 11.9 (Hampton 2) to a maximum of 67.3 (Spartanburg 5), with a median value of 26.6.

Student Characteristics: Figure C3 shows the distribution of four categories of student characteristics across districts—poverty, limited English proficiency (LEP), gifted, and special needs. Poverty ranges from a low of 26% (York 4) to a high of 99% (Allendale). The distribution is skewed toward the high end, with a median of districts to 26% (Jasper). Their presence in districts

Figure C3: South Carolina School District Characteristics Comparison, 2015-16



Source: FY15-16 135-Day Financial Requirements Report, Office of Finance, SC Department of Education.

is skewed toward the lower end with a median of 4%. Students classified as gifted make up as much as 30% of one district (Lexington 5) and as little as 0% in another (Florence 4). Finally, students with special needs (low, medium, or high) make up between 15% and 38% of districts' students, with a median value of 27%.

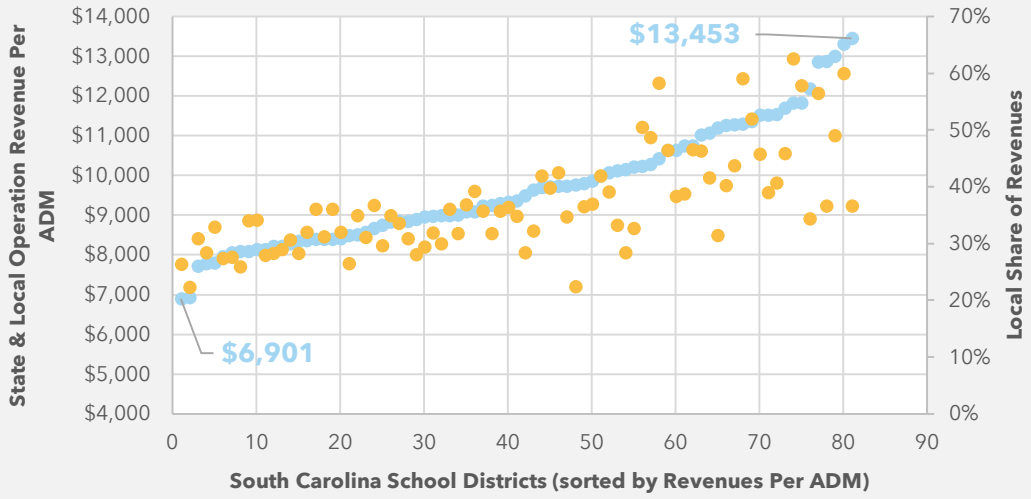
Student Performance: Student outcome data used in this study includes a district's 4-year graduation rate, it's average ACT score, the percentage of students who pass all End-of-Course tests, and the percentage of students scoring "Meets Expectations" or above on the SCReady exam. District graduation rates ranged from a low of 59% in Florence 4 to a high of 95% in Darlington, with the district median being 84%. District ACT scores varied between 13.2 (Allendale) and 21.6 (York 4), with a median value of 17.4. The median district End-of-Course pass rate was 73%, ranging from 31% (Hampton) to 95% (York 4). Finally, the percentage of students scoring "Meets Expectations" or above on the SCReady exam fell between 6% (Florence 4) and 71% (York 4). The median district scored 35%.

Figure C4: South Carolina School District Performance Comparison, 2015-16

Source: FY15-16 Report Card data by District, SC Department of Education.

Revenues: State and local revenues per ADM are shown in Figure C5. Since local revenues are used for both operational expenses as well as for debt expenses, the estimated local revenues for debt was omitted to obtain revenues for operations only. State and local operations revenues vary from $6,901 in Dillon 3 to a high of $13,453 in McCormick.[34] The median per student revenue amount was $9,428. The percentage of those revenues raised by local sources also varies widely by district, from a low of 22% (Dillon 4 and Lee) to a high of 63% (Charleston). The median district pays 35% of operations funds itself. Aggregating all students and revenues up to a state level the average local share is 42% statewide.

Figure C5: Per-Student State and Local Operations Revenues, 2015-16



Source: Revenue Per Pupil Report by School District for 2016-17." South Carolina Revenue and Fiscal Affairs Office (RFA). Revised 10/6/2016. "Detailed Index of Taxpaying Ability by District." South Carolina Department of Revenue. 2017.

SOUTHEASTERN SCHOOL DISTRICT OVERVIEW

Six southeastern peer states were selected due to their similarities, requirements that all high school students take the ACT, and the availability of their data for comparison.

Students and Schools: The six southeastern states are as different from each other as are South Carolina's districts. Missouri has a particularly large number of districts that encompass fewer than 5 five schools each on average. North Carolina has the largest average number of schools per district at just over 21. South Carolina has 14.6 (See Figure C6). North Carolina also has the largest number of students as well as average students per district, while Mississippi has the smallest number of students.

Teachers and Staff: South Carolina has the highest average student-to-teacher ratio reported, at 15.4 students per teacher, as well as a particularly outlying ratio of students to all other staff. South Carolina is slightly below the median levels for expenditures on instruction, salaries, and benefits.

Student Characteristics: Both North and South Carolina have larger percentages of LEP students than other states in the sample. The percentage of students with an Individualized Educational Plan (IEP), identifying those with disabilities or special needs, is relatively consistent across all states, with the exception of Louisiana which approximately is two points lower. South Carolina is close to median levels of average percentage of students with Free and Reduced Lunch. The average percent of Free Lunch students within districts varies from only 41.4% in Missouri to 64.6% in Mississippi. The average South Carolina district has 51.1%.

Student Performance: The only available measure of student performance (the reason for which these states were chosen) is ACT scores.[35] These states require all students to take the ACT (except Tennessee which requires either ACT or SAT). The average district composite scores are shown in Figure C7. Tennessee's scores are the highest at 19.6, while South Carolina's are the lowest at 17.1.

Revenues: Local revenues per student range from only $2,448 in North Carolina to $5,966 in Missouri, with South Carolina at $4,398. State revenues per student range from $4,208 in Missouri to $9,464 in Tennessee, with South Carolina at $5,611. As a share of state and local revenues, is higher than three of the states with a district average of 44%. Missouri's is at the high end at 59%, while North Carolina's is at the low end at 28%.

Figure C6: Average District Values of Sample of Six Southeastern States, 2013-14

Students and Schools

State	Total Districts	School Per District	Total Students	Students Per District
Louisiana	70	18.5	665,441	9,506
Mississippi	144	7.3	490,103	3,403
Missouri	450	4.8	887,855	1,973
North Carolina	115	21.2	1,441,391	12,534
South Carolina	81	14.6	729,386	9,005
Tennessee	129	14.3	988,260	7,661

Teachers and Staff

State	Student Teacher Ratio	Student Staff Ratio	Instruction Exp. Per Student	Salaries Exp. Per Student
Louisiana	15.0	14.3	$6,316	$6,185
Mississippi	14.9	13.9	$4,750	$4,963
Missouri	12.5	16.5	$6,005	$6,110
North Carolina	14.5	16.0	$5,556	$5,689
South Carolina	15.4	31.2	$5,395	$5,805
Tennessee	14.5	16.7	$6,959	$8,294

Student Characteristics

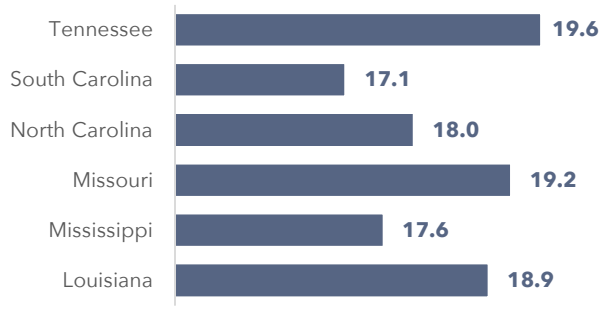
State	Percent LEP	Percent IEP	Percent Free Lunch	Percent Reduced Lunch
Louisiana	2.2%	11.1%	58.3%	6.8%
Mississippi	1.3%	13.2%	64.6%	7.4%
Missouri	2.8%	13.4%	41.4%	7.4%
North Carolina	6.5%	13.0%	48.1%	6.6%
South Carolina	5.5%	13.3%	51.1%	6.4%
Tennessee	3.5%	13.1%	50.8%	6.7%

Revenues

State	Local Per Student	State Per Student	Federal Per Student	Local Share
Louisiana	$5,555	$5,467	$2,724	50%
Mississippi	$3,054	$4,751	$1,632	39%
Missouri	$5,966	$4,208	$1,160	59%
North Carolina	$2,448	$6,183	$1,263	28%
South Carolina	$4,398	$5,611	$1,415	44%
Tennessee	$5,403	$9,464	$1,161	36%

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey Directory Data", 2014-15

Figure C7: Average District ACT Composite Scores, 2015-16



Source: Individual states' education department websites.

APPENDIX D: SUMMARY OF RECOMMENDATIONS FROM EVIDENCE-BASED STUDIES

Five recent 3rd-party professional studies were identified that made recommendations regarding foundation aid and exceptional student weighting factors.

1. ***Recommendations for Improving School Funding in Mississippi***. EdBuild. January 16, 2017. (online: http://www.legislature.ms.gov/Documents/Final%20EdBuild%20Recommendation.pdf)
2. ***Full Report and School Case Studies for the Evidence-Based Approach to Estimating Base Spending Level and Pupil Weights for Maryland***. Picus Odden & Associates. November 30, 2016. (online: http://picusodden.com/wp-content/uploads/2013/09/1c-EB-MD-Report-Final-11-30-16.pdf)
3. ***Cost of Student Achievement: Report of the DC Education Adequacy Study***. The Finance Project and Augenblick, Palaich and Associates. December 20, 2013. (online: https://dme.dc.gov/page/dc-education-adequacy-study)
4. ***Michigan Education Finance Study***. Augenblick, Palaich and Associates. June, 2016. (online: https://www.michigan.gov/documents/budget/Michigan_Education_Finance_Study_527806_7.pdf)
5. ***Maryland Adequacy Study***. Augenblick, Palaich and Associates. September 2016. (online: http://marylandpublicschools.org/Documents/adequacystudy/AdequacyStudyDraftReport09302016.pdf)

Table D1 summarizes Foundation Aid and weighting factors recommended in each of the studies. Summary values represent averages of studies that provided recommendations. Some studies omitted special needs recommendations. Special needs were often broken down into levels of severity, ranging from low (1) to high (4). The special needs weight of 1.07 represents a blended average of multiple tier levels. The summary values consolidate tiers 3 and 4. Note, Study 1 considers "At Risk" and "Poverty" Categories to be one in the same.

Table D1: Recommendations from Evidence Based Professional Studies

CATEGORY	STUDY 1	2	3	4	5	SUMMARY
Foundation Aid	$4,840	$10,551	$10,557	$8,667	$10,880	$9,099
Cost-Adjusted[36]	$5,723	$8,214	$6,921	$9,732	$8,470	$7,812
Weights						
Poverty	0.25	0.3				0.32*
Limited English Proficiency (LEP)	0.2	0.38	0.61	0.4	0.4	0.4
Gifted	0.25					0.05
Vocational	0.3					0.06
Rural	0.1					0.02
At Risk			0.37	0.3	0.35	0.32*
Special Needs						1.07
Tier 1	0.6	0.7	0.88		0.91	0.77
Tier 2	1.25	0.7	1.08			0.99
Tier 3	1.7	-	1.77			1.44
Tier 4			3.13			
Pre-K			0.15		0.29	0.22

*Note: Given the overlap between Poverty and At Risk categories, these were averaged together to develop a single weight.

APPENDIX E: EDUCATION FINANCE WEIGHTING FACTORS

Table E1: EFA Weighting Factors, 2016-17[37]

CATEGORY	WEIGHT
Full Weights	
Kindergarten	1.00
Primary	1.00
Elementary	1.00
High School	1.00
Trainable Mentally Handicapped	2.04
Speech Handicapped	1.90
Homebound	1.00
Emotionally Handicapped	2.04
Educable Mentally Handicapped	1.74
Learning Disabilities	1.74
Hearing Handicapped	2.57
Visually Handicapped	2.57
Orthopedically Handicapped	2.04
Vocational (Grades 9–12)	1.29
Autism	2.57
Add-on Weights	
High Achieving	0.15
Limited English Proficiency	0.20
Academic Assistance	0.15
Pupils in Poverty	0.20
Dual Credit Enrollment	0.15

Full weights are assigned to a single student (no student may be counted more than once in the list of full weights). Add-on weights may be assigned to multiple students.

APPENDIX F: SOUTH CAROLINA SCHOOL DISTRICT DATA, 2015-16

Table F1: South Carolina School District Characteristics, 2015-16

School District	ADM	Schools	Location	ADM Per Teacher	ADM Per Other Staff	ADM in Poverty	LEP ADM	Gifted ADM	Vocational ADM	Special Needs Tier 1	Special Needs Tier 2	Special Needs Tier 3
Abbeville	2968	9	Rural: Distant	13.9	25.0	80%	2%	9%	10%	13%	1%	1%
Aiken	23845	40	Suburb: Large	15.7	28.9	73%	6%	15%	16%	9%	1%	1%
Allendale	1171	4	Rural: Fringe	12.8	15.9	99%	2%	2%	16%	9%	1%	1%
Anderson 1	9469	14	Suburb: Large	18.0	31.1	60%	4%	20%	23%	10%	1%	1%
Anderson 2	3717	7	Town: Fringe	17.6	34.5	70%	1%	22%	23%	16%	1%	1%
Anderson 3	2519	5	Rural: Fringe	14.6	34.0	81%	2%	18%	22%	13%	1%	1%
Anderson 4	2784	6	Rural: Fringe	14.8	27.8	69%	3%	22%	20%	14%	1%	1%
Anderson 5	12456	22	Suburb: Small	14.2	32.1	71%	5%	22%	7%	11%	1%	1%
Bamberg 1	1356	3	Rural: Fringe	13.2	21.4	79%	1%	9%	15%	11%	1%	0%
Bamberg 2	664	3	Town: Distant	11.1	19.5	98%	2%	2%	18%	11%	1%	1%
Barnwell 19	657	3	Rural: Distant	12.2	15.6	95%	2%	5%	18%	14%	0%	0%
Barnwell 29	907	3	Rural: Distant	13.8	21.6	86%	0%	6%	18%	12%	0%	2%
Barnwell 45	2183	4	Town: Distant	14.5	18.8	84%	3%	8%	0%	14%	1%	1%
Beaufort	20745	30	City: Small	14.1	20.9	69%	18%	20%	17%	8%	0%	1%
Berkeley	32177	40	Suburb: Large	16.2	32.0	73%	7%	13%	13%	10%	1%	1%
Calhoun	1672	3	Rural: Distant	14.4	24.6	91%	3%	10%	16%	12%	0%	1%
Charleston	46149	80	City: Mid-size	13.5	26.6	63%	7%	24%	11%	6%	1%	1%
Cherokee	8546	19	Town: Fringe	13.8	30.5	81%	5%	15%	12%	10%	0%	1%
Chester	4984	12	Rural: Fringe	13.6	30.7	83%	1%	13%	11%	12%	1%	1%
Chesterfield	7057	16	Rural: Distant	14.4	26.6	83%	4%	17%	24%	8%	0%	1%
Clarendon 1	744	4	Rural: Distant	14.2	20.1	98%	1%	7%	15%	15%	1%	1%
Clarendon 2	2838	6	Town: Distant	17.3	28.7	92%	3%	7%	11%	16%	1%	1%
Clarendon 3	1184	2	Rural: Distant	15.5	32.9	70%	6%	20%	14%	12%	0%	1%
Colleton	5549	10	Rural: Distant	14.9	22.7	89%	5%	15%	13%	15%	1%	1%
Darlington	9941	22	Suburb: Small	15.2	24.3	83%	2%	13%	13%	11%	1%	2%
Dillon 3	1574	4	Rural: Distant	17.7	35.8	80%	1%	14%	16%	9%	1%	1%
Dillon 4	4076	8	Town: Distant	17.3	22.5	94%	4%	7%	5%	6%	1%	1%
Dorchester 2	24945	21	Suburb: Large	16.9	43.3	60%	4%	20%	15%	8%	1%	1%
Dorchester 4	2120	6	Rural: Distant	12.1	40.0	87%	3%	4%	13%	17%	1%	1%
Edgefield	3326	8	Rural: Fringe	13.3	26.9	75%	4%	12%	18%	12%	1%	0%
Fairfield	2598	8	Rural: Fringe	10.4	20.0	95%	1%	18%	16%	13%	1%	1%
Florence 1	15713	26	City: Small	14.1	19.7	74%	3%	12%	15%	14%	1%	1%
Florence 2	1133	2	Rural: Distant	14.8	51.5	79%	4%	8%	21%	16%	0%	1%
Florence 3	3561	9	Town: Distant	13.8	22.3	94%	4%	11%	14%	20%	1%	1%
Florence 4	685	3	Rural: Fringe	12.6	20.7	97%	6%	0%	9%	14%	1%	1%
Florence 5	1307	3	Rural: Distant	15.3	33.9	76%	1%	10%	14%	20%	1%	1%
Georgetown	9298	19	Town: Distant	13.5	37.9	76%	4%	16%	15%	11%	1%	1%
Greenville	74187	96	Suburb: Large	16.4	27.1	62%	11%	21%	12%	10%	1%	1%
Greenwood 50	8756	14	Town: Distant	16.6	21.9	77%	11%	16%	12%	11%	0%	1%
Greenwood 51	899	3	Rural: Distant	13.3	22.3	84%	4%	14%	22%	16%	0%	1%
Greenwood 52	1585	4	Rural: Distant	15.4	20.7	71%	1%	12%	22%	10%	0%	1%
Hampton 1	2290	7	Town: Remote	13.4	16.3	86%	1%	8%	20%	9%	0%	1%
Hampton 2	763	3	Rural: Distant	14.1	11.9	98%	4%	2%	18%	16%	0%	0%
Horry	41747	53	Suburb: Mid-size	15.5	26.0	75%	8%	20%	9%	12%	1%	1%
Jasper	2618	4	Rural: Fringe	14.7	16.0	96%	26%	3%	0%	9%	1%	1%
Kershaw	10376	19	Suburb: Large	15.8	34.1	71%	3%	18%	20%	10%	1%	1%
Lancaster	12420	20	Town: Distant	16.4	29.2	67%	6%	12%	15%	12%	1%	1%
Laurens 55	5699	13	Rural: Fringe	15.0	18.7	83%	9%	11%	21%	16%	0%	1%

School District	ADM	Sch-ools	Location	ADM Per Teacher	ADM Per Other Staff	ADM in Poverty	LEP ADM	Gifted ADM	Voca-tional ADM	Special Needs Tier 1	Special Needs Tier 2	Special Needs Tier 3
Laurens 56	2996	6	Rural: Fringe	15.8	25.1	85%	3%	14%	16%	16%	1%	1%
Lee	2047	6	Rural: Fringe	13.0	24.7	98%	2%	3%	18%	12%	1%	1%
Lexington 1	24418	29	Suburb: Large	14.2	27.9	52%	5%	22%	20%	10%	1%	2%
Lexington 2	8643	15	Suburb: Large	14.1	28.1	80%	13%	19%	17%	13%	1%	1%
Lexington 3	1926	4	Rural: Fringe	14.2	12.0	80%	9%	16%	14%	15%	1%	1%
Lexington 4	3103	7	Rural: Fringe	16.3	26.5	88%	9%	10%	18%	15%	1%	1%
Lexington 5	16622	21	Suburb: Large	13.6	19.6	46%	3%	30%	22%	11%	1%	1%
McCormick	750	8	Rural: Distant	12.0	13.9	92%	0%	1%	11%	14%	0%	1%
Marion	4719	3	Town: Distant	14.3	25.6	95%	2%	5%	12%	13%	1%	1%
Marlboro	3954	11	Town: Distant	13.8	16.4	94%	0%	11%	14%	13%	0%	1%
Newberry	5889	14	Rural: Distant	13.9	30.9	78%	9%	14%	14%	13%	0%	1%
Oconee	10056	19	Rural: Distant	12.9	25.5	73%	6%	17%	18%	14%	1%	1%
Orangeburg 3	2758	8	Rural: Distant	12.9	23.5	97%	1%	4%	20%	12%	0%	1%
Orangeburg 4	3647	8	Rural: Distant	15.0	52.8	86%	3%	6%	12%	11%	1%	1%
Orangeburg 5	6275	15	Town: Distant	14.8	21.8	93%	3%	7%	14%	10%	1%	1%
Pickens	16011	26	Suburb: Large	15.8	29.1	66%	4%	19%	16%	10%	1%	1%
Richland 1	23101	50	City: Mid-size	12.3	34.7	82%	4%	18%	13%	12%	1%	2%
Richland 2	26688	31	Suburb: Large	14.5	47.1	61%	5%	15%	14%	9%	1%	2%
Saluda	2628	5	Rural: Fringe	18.2	27.3	83%	23%	8%	16%	10%	1%	1%
Spartanburg 1	4787	10	Suburb: Mid-size	13.4	46.2	68%	9%	21%	16%	10%	0%	1%
Spartanburg 2	9662	14	Suburb: Mid-size	15.6	37.0	67%	11%	16%	10%	10%	1%	1%
Spartanburg 3	2796	7	Suburb: Mid-size	13.7	25.2	76%	5%	16%	15%	15%	2%	2%
Spartanburg 4	2635	4	Town: Fringe	16.7	65.9	75%	5%	16%	16%	11%	1%	1%
Spartanburg 5	7838	12	Suburb: Mid-size	14.6	67.3	66%	7%	19%	10%	11%	1%	2%
Spartanburg 6	10827	14	Suburb: Mid-size	15.6	29.4	74%	15%	19%	14%	12%	1%	1%
Spartanburg 7	6798	13	City: Small	11.4	39.9	79%	6%	18%	9%	10%	1%	1%
Sumter	16511	27	City: Small	15.8	24.4	83%	2%	16%	18%	13%	1%	1%
Union	3925	9	Town: Distant	14.8	29.8	82%	1%	11%	20%	12%	1%	0%
Williamsburg	4092	14	Rural: Distant	13.1	22.0	98%	0%	6%	20%	14%	1%	1%
York 1	4946	9	Rural: Fringe	14.8	32.3	75%	4%	12%	14%	13%	1%	1%
York 2	7078	9	Rural: Fringe	13.7	22.9	44%	3%	19%	14%	6%	1%	1%
York 3	17304	28	City: Small	14.6	48.8	68%	5%	16%	12%	12%	1%	1%
York 4	12970	13	Suburb: Large	16.0	30.8	29%	3%	28%	21%	7%	0%	1%
South Carolina	716358			14.5	27.3	70%	6%	17%	14%	11%	1%	1%

Table F2: South Carolina School Revenue and Performance Data, 2015-16

School District	Graduation Rate	End of Course Pass Rate	SCReady Meets Expectations	Average ACT	Performance Index	Federal Revenues Per Student	State Revenues Per Student	Local Revenues Per Student	Local Operations Revenues Per Student	Local Debt Revenues Per Student	Local Share of Operations
Abbeville	84%	81%	60%	17.8	0.685	$1,285	$6,119	$3,309	$2,733	$576	31%
Aiken	89%	79%	36%	18.1	0.634	$905	$5,476	$3,989	$3,192	$797	37%
Allendale	79%	44%	18%	13.2	0.444	$2,861	$8,157	$5,295	$4,718	$577	37%
Anderson 1	93%	85%	55%	19.2	0.716	$755	$5,230	$3,524	$2,574	$950	33%
Anderson 2	87%	79%	44%	18.2	0.652	$1,036	$5,751	$5,645	$5,010	$635	47%
Anderson 3	89%	83%	50%	17.8	0.679	$1,212	$5,878	$3,772	$2,972	$799	34%
Anderson 4	88%	81%	52%	18.9	0.683	$1,092	$5,913	$6,684	$5,122	$1,562	46%
Anderson 5	81%	78%	43%	17.7	0.627	$1,255	$5,530	$4,194	$3,568	$626	39%
Bamberg 1	84%	79%	35%	18.6	0.625	$1,614	$6,885	$4,695	$3,344	$1,351	33%
Bamberg 2	85%	56%	26%	15.3	0.526	$3,193	$7,676	$4,577	$3,526	$1,051	31%
Barnwell 19	85%	49%	17%	15.4	0.485	$3,384	$6,752	$4,271	$3,375	$896	33%
Barnwell 29	94%	73%	29%	14.8	0.591	$2,363	$5,904	$3,033	$2,671	$363	31%
Barnwell 45	80%	70%	34%	16.6	0.574	$2,249	$5,781	$2,675	$2,183	$493	27%
Beaufort	83%	78%	46%	18.4	0.646	$1,031	$4,341	$8,913	$6,083	$2,830	58%
Berkeley	82%	82%	43%	18	0.644	$1,149	$5,356	$4,681	$2,788	$1,893	34%
Calhoun	92%	66%	33%	18.1	0.602	$1,689	$6,245	$6,069	$5,282	$787	46%
Charleston	83%	82%	49%	19.5	0.671	$1,653	$4,420	$9,324	$7,414	$1,911	63%
Cherokee	80%	63%	34%	17.4	0.563	$1,225	$5,842	$4,536	$3,874	$662	40%
Chester	82%	71%	29%	17.5	0.576	$1,422	$6,098	$4,273	$3,263	$1,010	35%
Chesterfield	89%	72%	35%	17	0.609	$1,411	$5,737	$3,691	$3,092	$599	35%
Clarendon 1	82%	82%	21%	15.6	0.569	$3,654	$5,457	$7,927	$5,904	$2,024	52%
Clarendon 2	79%	64%	30%	15.7	0.540	$5,123	$5,721	$2,704	$2,704	$0	32%
Clarendon 3	80%	84%	39%	17.4	0.630	$1,201	$5,683	$2,685	$2,685	$0	32%
Colleton	85%	68%	26%	16.5	0.563	$1,662	$5,366	$4,472	$3,034	$1,438	36%
Darlington	95%	73%	34%	17.4	0.623	$1,527	$5,798	$4,856	$4,202	$654	42%
Dillon 3	88%	73%	43%	16.8	0.626	$1,243	$5,075	$1,919	$1,826	$93	26%
Dillon 4	88%	70%	29%	16.5	0.582	$1,740	$5,386	$1,663	$1,553	$110	22%
Dorchester 2	88%	83%	55%	19.2	0.696	$720	$5,570	$3,243	$2,219	$1,024	28%
Dorchester 4	86%	66%	36%	16.2	0.581	$1,846	$6,321	$6,185	$5,375	$810	46%
Edgefield	83%	73%	40%	18.5	0.619	$1,533	$6,215	$4,207	$3,645	$563	37%
Fairfield	90%	67%	27%	14.1	0.558	$2,001	$5,950	$12,528	$11,245	$1,283	65%
Florence 1	84%	74%	39%	17.7	0.616	$1,047	$6,216	$4,382	$3,591	$791	37%
Florence 2	71%	80%	29%	16.4	0.564	$1,323	$6,242	$2,763	$2,254	$509	27%
Florence 3	76%	59%	24%	15.5	0.506	$2,246	$6,400	$2,676	$2,496	$180	28%
Florence 4	59%	40%	6%	15	0.368	$2,327	$5,936	$4,661	$3,407	$1,254	36%
Florence 5	87%	87%	35%	18	0.647	$1,155	$6,305	$3,135	$2,699	$436	30%
Georgetown	90%	73%	36%	16.9	0.616	$1,322	$5,062	$6,885	$5,181	$1,703	51%
Greenville	87%	83%	49%	19.3	0.680	$1,024	$5,527	$4,440	$2,980	$1,460	35%
Greenwood 50	82%	62%	36%	17.6	0.572	$1,337	$5,740	$4,089	$2,546	$1,543	31%
Greenwood 51	77%	69%	42%	17.5	0.591	$1,392	$6,521	$3,397	$3,114	$283	32%
Greenwood 52	83%	81%	47%	17.8	0.650	$855	$5,734	$5,120	$3,355	$1,765	37%
Hampton 1	80%	64%	34%	16.1	0.555	$2,410	$6,325	$3,247	$2,641	$606	29%
Hampton 2	77%	31%	19%	14.5	0.419	$3,816	$7,998	$4,804	$4,192	$612	34%
Horry	81%	86%	52%	18.6	0.675	$1,068	$4,629	$7,169	$6,677	$491	59%
Jasper	80%	49%	10%	14.1	0.448	$2,287	$5,585	$7,272	$7,272	$0	57%
Kershaw	83%	81%	41%	17.7	0.635	$1,123	$5,774	$4,004	$2,631	$1,373	31%
Lancaster	81%	70%	42%	17.4	0.605	$1,193	$5,334	$3,921	$2,391	$1,530	31%
Laurens 55	85%	73%	35%	16.2	0.595	$1,348	$6,148	$3,671	$2,864	$807	32%
Laurens 56	80%	73%	32%	16.8	0.580	$3,100	$5,993	$3,768	$2,365	$1,403	28%
Lee	91%	50%	15%	13.4	0.483	$2,401	$7,575	$3,041	$2,195	$847	22%
Lexington 1	89%	89%	53%	19.6	0.711	$630	$6,580	$5,715	$4,179	$1,535	39%
Lexington 2	88%	77%	37%	18	0.629	$1,175	$5,866	$4,766	$2,283	$2,483	28%
Lexington 3	90%	74%	35%	17	0.613	$1,407	$6,846	$5,549	$4,702	$847	41%
Lexington 4	75%	63%	17%	16.6	0.501	$1,461	$7,277	$3,525	$2,887	$638	28%
Lexington 5	90%	86%	57%	20.5	0.723	$940	$7,028	$5,994	$4,500	$1,494	39%
McCormick	86%	54%	24%	14.3	0.510	$2,129	$8,520	$6,749	$4,934	$1,815	37%
Marion	81%	66%	20%	15.6	0.527	$1,839	$5,888	$2,330	$2,330	$0	28%
Marlboro	82%	50%	21%	14.8	0.486	$2,047	$6,310	$3,518	$2,949	$568	32%
Newberry	84%	69%	39%	16.9	0.598	$1,315	$6,127	$5,232	$3,945	$1,287	39%
Oconee	84%	80%	45%	17.9	0.646	$1,087	$5,268	$6,695	$5,012	$1,683	49%
Orangeburg 3	79%	59%	19%	15.5	0.497	$2,842	$6,351	$6,265	$4,938	$1,327	44%
Orangeburg 4	78%	61%	25%	15.7	0.518	$1,476	$5,591	$4,881	$4,139	$741	43%

School District	Graduation Rate	End of Course Pass Rate	SCReady Meets Expectations	Average ACT	Performance Index	Federal Revenues Per Student	State Revenues Per Student	Local Revenues Per Student	Local Operations Revenues Per Student	Local Debt Revenues Per Student	Local Share of Operations
Orangeburg 5	80%	61%	22%	15.8	0.519	$1,867	$6,736	$5,190	$4,534	$655	40%
Pickens	83%	79%	46%	18.9	0.650	$903	$5,337	$4,513	$2,766	$1,748	34%
Richland 1	78%	62%	34%	17	0.553	$1,543	$5,327	$10,097	$7,985	$2,112	60%
Richland 2	89%	78%	41%	18.1	0.643	$1,257	$6,560	$6,206	$4,081	$2,124	38%
Saluda	82%	80%	32%	16.4	0.600	$1,677	$5,842	$3,002	$2,381	$621	29%
Spartanburg 1	91%	89%	52%	18.4	0.708	$976	$6,791	$4,155	$2,704	$1,451	28%
Spartanburg 2	85%	85%	46%	18.7	0.671	$849	$6,150	$3,600	$2,603	$997	30%
Spartanburg 3	82%	79%	44%	17.5	0.634	$1,236	$6,461	$5,622	$4,618	$1,004	42%
Spartanburg 4	89%	86%	56%	18.2	0.706	$1,032	$5,977	$3,543	$3,327	$216	36%
Spartanburg 5	86%	87%	46%	17.7	0.671	$776	$5,693	$5,509	$4,943	$565	46%
Spartanburg 6	90%	69%	35%	17.3	0.604	$871	$5,750	$4,438	$3,255	$1,182	36%
Spartanburg 7	86%	77%	35%	18.5	0.622	$1,644	$6,622	$8,340	$6,392	$1,948	49%
Sumter	83%	60%	27%	17.1	0.545	$1,495	$5,830	$3,329	$2,226	$1,103	28%
Union	73%	60%	34%	16.9	0.535	$1,234	$5,998	$2,914	$2,099	$815	26%
Williamsburg	85%	52%	18%	14.5	0.488	$3,200	$6,108	$3,693	$2,868	$826	32%
York 1	90%	82%	39%	17.7	0.651	$1,346	$6,351	$4,912	$3,382	$1,530	35%
York 2	90%	88%	63%	19.9	0.741	$550	$4,983	$7,929	$6,853	$1,076	58%
York 3	83%	80%	41%	17.7	0.632	$924	$5,940	$4,657	$3,302	$1,356	36%
York 4	94%	95%	71%	21.6	0.800	$516	$5,372	$5,630	$3,035	$2,595	36%
South Carolina	83%	77%	43%	18.2	0.633	$1,233	$5,632	$5,411	$4,078	$1,333	42%

APPENDIX G: MINIMUM SCHOOL DISTRICT MILLAGE RATE CALCULATIONS

Scenario values of the state-specified minimum millage rate were calculated using school district-level property value data from the "Detailed Index of Taxpaying Ability by District, Tax Year 2015 (School Year 2017) as well as county-level property value data from the "Homestead Exemption FMV Statistics Report, Fiscal Year 2015." Both datasets were furnished by the South Carolina Department of Revenue.

In 2015, South Carolina districts collected an estimated $2.49B in property taxes for school operations, calculated by multiplying each district's assessed property value (for all property except residential) by the prevailing school operations millage rates, as defined by the South Carolina Association of Counties' "South Carolina Property Tax Rates by County, 2015."

Three sets of minimum state millage rate values were developed for comparative purposes under each of the following assumptions:

1. Option 1: Restore all exempt residential property to the base (*Preferred*)
2. Option 2: Restore all exempt residential property, except the first $100,000 of fair market value to the base
3. Option 3: Maintain all exemptions

Option 1: Restore All Exempt Residential Property This method adds back in the exempted assessed value of residential property (less the assessed value exempted under the Homestead Exemption) and calculates the statewide revenue-neutral rate, which equates to 107 mils for all districts. Under this value, 21 districts would raise more property tax than current, and 60 would raise less.

Option 2: Restore Exempt Residential Property, Except First $100,000 of Fair Market Value
This method estimates the value of residential property that would be exempt if the first $100,000 of each residential housing unit were exempt from school operating taxes (as legislated under the 1994 Property Tax Relief law). Because no dataset exists that specifically details that amount, estimates were developed using the "Homestead Exemption FMV Statistics Report, Fiscal Year 2015." This dataset provides the distribution of residential properties by fair market values for those aged 65 and over (and, thus, receiving the Homestead Exemption). Thus, it is assumed that the distribution of all residential property is symmetric to that of Homestead Exemption recipients. Further, the Homestead Exemption data is provided at the county level (not the district level), so it is assumed that districts take on the distribution of their larges county. The amount of assessed value over the first $100,000 is added back into the taxable property base, and the statewide revenue-neutral rate is calculated at 127 mils for all districts. Under this value, 18 districts would raise more property tax than current, and 63 would raise less.

Option 3: Maintain All Exemptions This method maintains the current exemption for all residential property and calculates the statewide revenue-neutral uniform rate, which is 156 mils for all districts. Under this value, 21 districts would raise more property tax than current, and 60 would raise less.

Figure G1 shows the estimated amount of property tax each district currently raises versus how much they would raise under property tax bases applied to a statewide revenue neutral millage rates.

Table G1: Estimated School Operations Property Tax Revenues Under Uniform State Millage Rate Scenarios, Tax Year 2015

School District	Current (2015) School Operations Millage Rate	Current Property Tax	Option 1: Restore All Exempt Residential Property	More than Current?	Option 2: Restore All But first $100K of Residential Property	More than Current?	Option 3: Maintain All Exemptions	More than Current?
Abbeville	0.189	$7,253,639	$5,924,069		$5,219,705		$5,975,259	
Aiken	0.142	$60,987,969	$70,339,840	✓	$68,989,593	✓	$67,092,379	✓
Allendale	0.256	$4,880,742	$2,265,817		$2,426,009		$2,969,875	
Anderson 1	0.176	$20,735,240	$21,027,865	✓	$18,724,198		$18,404,509	
Anderson 2	0.221	$8,477,838	$6,209,780		$5,911,585		$5,967,549	
Anderson 3	0.183	$5,594,710	$4,420,315		$4,457,922		$4,754,528	
Anderson 4	0.166	$12,447,795	$12,000,001		$11,322,905		$11,697,116	
Anderson 5	0.195	$43,576,209	$35,015,937		$33,473,101		$34,845,987	
Bamberg 1	0.273	$3,511,858	$1,803,946		$1,683,947		$2,005,325	
Bamberg 2	0.281	$2,642,277	$1,248,300		$1,223,283		$1,465,274	
Barnwell 19	0.170	$1,371,131	$1,089,408		$1,076,626		$1,259,347	
Barnwell 29	0.186	$2,109,405	$1,535,652		$1,505,069		$1,764,044	
Barnwell 45	0.184	$4,029,807	$3,207,893		$2,956,540		$3,411,605	
Beaufort	0.104	$135,855,034	$198,723,738	✓	$219,228,740	✓	$204,469,089	✓
Berkeley	0.160	$95,938,212	$95,584,684		$93,180,267		$93,462,078	
Calhoun	0.131	$8,894,154	$8,828,031		$9,225,389	✓	$10,576,102	✓
Charleston	0.101	$229,632,673	$364,021,186	✓	$394,491,950	✓	$355,219,246	✓
Cherokee	0.169	$25,384,094	$20,232,693		$20,173,246		$23,411,233	
Chester	0.195	$15,840,440	$11,261,898		$10,840,077		$12,653,915	
Chesterfield	0.176	$16,495,047	$13,050,866		$12,562,203		$14,566,233	
Clarendon 1	0.128	$3,232,071	$3,551,737	✓	$3,579,726	✓	$3,939,511	✓
Clarendon 2	0.131	$5,052,654	$5,750,740	✓	$5,578,788	✓	$5,989,858	✓
Clarendon 3	0.278	$1,740,276	$1,007,692		$943,201		$976,894	
Colleton	0.110	$14,715,913	$17,298,323	✓	$18,536,899	✓	$20,760,211	✓
Darlington	0.169	$30,098,965	$24,394,249		$24,177,114		$27,795,868	
Dillon 3	0.181	$2,444,361	$1,847,049		$1,787,572		$2,107,169	
Dillon 4	0.181	$7,464,712	$5,644,883		$5,458,449		$6,434,980	
Dorchester 2	0.179	$47,424,156	$51,746,674	✓	$46,166,579		$41,224,356	
Dorchester 4	0.224	$10,743,271	$6,580,768		$6,958,075		$7,461,043	
Edgefield	0.203	$10,046,601	$8,197,324		$7,574,688		$7,694,904	
Fairfield	0.203	$24,662,525	$15,159,626		$16,309,618		$18,915,590	
Florence 1	0.197	$56,487,931	$43,880,445		$41,535,128		$44,598,562	
Florence 2	0.216	$2,148,664	$1,445,482		$1,439,868		$1,548,122	
Florence 3	0.199	$8,178,650	$5,417,552		$5,689,904		$6,405,294	
Florence 4	0.135	$2,714,615	$2,526,310		$2,719,097	✓	$3,130,006	✓
Florence 5	0.243	$2,207,208	$1,324,659		$1,310,029		$1,416,661	
Georgetown	0.107	$43,398,341	$59,646,235	✓	$64,145,505	✓	$63,180,292	✓
Greenville	0.137	$199,828,300	$244,776,137	✓	$236,576,786	✓	$226,549,203	✓
Greenwood 50	0.180	$24,280,376	$19,704,894		$19,706,049		$20,989,056	
Greenwood 51	0.230	$2,047,945	$1,358,726		$1,347,534		$1,390,042	
Greenwood 52	0.179	$8,287,833	$5,158,336		$6,072,511		$7,204,357	
Hampton 1	0.198	$4,948,424	$3,548,185		$3,356,842		$3,893,086	
Hampton 2	0.299	$3,261,993	$1,431,199		$1,444,989		$1,699,433	
Horry	0.123	$196,300,595	$220,103,564	✓	$231,979,620	✓	$248,402,430	✓
Jasper	0.164	$16,385,369	$13,811,244		$14,663,073		$15,563,406	
Kershaw	0.163	$22,929,428	$23,820,244	✓	$21,992,621		$21,926,253	
Lancaster	0.150	$28,474,398	$35,596,381	✓	$33,340,160	✓	$29,669,186	✓
Laurens 55	0.168	$11,586,882	$10,283,798		$9,397,979		$10,775,664	
Laurens 56	0.168	$6,566,254	$5,501,043		$5,266,416		$6,106,539	
Lee	0.138	$3,766,587	$3,796,161	✓	$3,552,712		$4,254,770	✓
Lexington 1	0.298	$85,895,857	$56,433,127		$50,314,432		$44,889,651	

School District	Current (2015) School Operations Millage Rate	Current Property Tax	Option 1: Restore All Exempt Residential Property	More than Cur-rent?	Option 2: Restore All But first $100K of Residential Property	More than Current ?	Option 3: Maintain All Exemptions	More than Current ?
Lexington 2	0.146	$30,663,736	$28,976,818		$30,416,382		$32,613,568	1
Lexington 3	0.272	$8,081,382	$4,719,515		$4,681,640		$4,631,743	
Lexington 4	0.315	$7,036,240	$3,415,668		$3,444,790		$3,474,360	
Lexington 5	0.252	$64,824,523	$50,762,248		$45,132,261		$40,150,746	
McCormick	0.131	$3,508,085	$4,389,038	✓	$4,608,886	✓	$4,165,130	✓
Marion	0.168	$8,980,983	$7,780,096		$7,294,749		$8,327,351	
Marlboro	0.185	$10,684,171	$7,310,475		$7,485,204		$8,982,652	
Newberry	0.187	$18,898,003	$15,352,784		$15,120,449		$15,759,097	
Oconee	0.110	$44,628,269	$58,589,152	✓	$62,526,165	✓	$63,141,515	✓
Orangeburg 3	0.207	$10,001,404	$6,714,317		$6,701,260		$7,544,547	
Orangeburg 4	0.202	$11,027,158	$6,910,148		$7,309,851		$8,486,828	
Orangeburg 5	0.224	$28,431,576	$17,659,379		$17,473,950		$19,745,309	
Pickens	0.112	$33,336,413	$48,915,568	✓	$46,604,754	✓	$46,365,305	✓
Richland 1	0.250	$154,451,807	$88,767,412		$91,142,014		$96,237,706	
Richland 2	0.304	$92,219,946	$56,350,779		$51,425,840		$47,254,542	
Saluda	0.139	$4,274,885	$4,681,259	✓	$4,419,455	✓	$4,801,095	✓
Spartanburg 1	0.231	$12,082,242	$10,337,968		$8,618,258		$8,140,517	
Spartanburg 2	0.198	$22,037,737	$20,680,031		$17,709,673		$17,329,051	
Spartanburg 3	0.266	$12,860,890	$6,590,584		$6,788,617		$7,534,336	
Spartanburg 4	0.222	$6,765,319	$5,130,451		$4,685,763		$4,755,660	
Spartanburg 5	0.218	$44,548,837	$28,659,810		$28,699,100		$31,861,834	
Spartanburg 6	0.188	$35,723,220	$28,624,048		$27,524,539		$29,583,808	
Spartanburg 7	0.223	$34,129,236	$22,206,786		$21,929,599		$23,861,825	
Sumter	0.151	$30,392,995	$32,594,760	✓	$29,638,053		$31,353,702	✓
Union	0.120	$6,289,836	$7,155,448	✓	$6,887,868	✓	$8,171,699	✓
Williamsburg	0.129	$9,690,781	$9,669,987		$9,798,942	✓	$11,688,442	✓
York 1	0.212	$13,649,773	$10,411,602		$10,187,116		$10,024,830	
York 2	0.210	$48,874,099	$34,060,602		$34,363,657		$36,253,651	
York 3	0.177	$53,874,929	$48,422,593		$47,278,677		$47,306,996	
York 4	0.196	$36,219,547	$36,793,420	✓	$32,263,628		$28,756,518	
South Carolina	0.191	**$2,491,167,453**	**$2,491,167,453**	**21**	**$2,491,167,453**	**18**	**$2,491,167,453**	**21**

APPENDIX H: FORMULA IMPACTS BY SCHOOL DISTRICT

Figure H1: State and Local Operations Revenues Per Pupil for South Carolina Districts: Current Vs. Scenario Values, 2015-16

	Scenario Input Values				
Category	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 4**	**Scenario 5**
Foundation Aid	$7,324	$6,945	$6,799	$6,981	$7,812
Exceptional Student Weights					
Poverty	0.2	0.2	0.22	0.22	0.28
LEP	0.2	0.2	0.34	0.34	0.4
Gifted	0.15	0.15	0.25	0.25	0.1
Vocational	0.29	0.29	0.175	0.175	0.06
Special Needs					
Tier 1	0.74	0.74	0.87	0.87	0.77
Tier 2	1.04	1.04	1.12	1.12	0.99
Tier 3	1.57	1.57	1.63	1.63	1.44

	Per Pupil State and Local Operations Revenues					
School District	**Current**	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 4**	**Scenario 5**
Abbeville School District	$8,851	$9,725	$9,221	$9,262	$9,510	$10,702
Aiken School District	$8,668	$9,615	$9,117	$9,147	$9,392	$10,472
Allendale School District	$12,875	$9,864	$9,353	$9,290	$9,539	$10,873
Anderson School District 1	$7,805	$9,683	$9,182	$9,161	$9,406	$10,283
Anderson School District 2	$10,761	$10,097	$9,574	$9,601	$9,858	$10,758
Anderson School District 3	$8,850	$10,103	$9,580	$9,585	$9,842	$10,879
Anderson School District 4	$11,035	$9,950	$9,435	$9,482	$9,735	$10,661
Anderson School District 5	$9,098	$9,625	$9,127	$9,281	$9,529	$10,590
Bamberg School District 1	$10,229	$9,622	$9,124	$9,089	$9,332	$10,478
Bamberg School District 2	$11,202	$9,972	$9,456	$9,385	$9,636	$10,948
Barnwell School District 19	$10,127	$10,016	$9,498	$9,466	$9,720	$10,999
Barnwell School District 29	$8,574	$9,900	$9,388	$9,325	$9,575	$10,770
Barnwell School District 45	$7,963	$9,613	$9,115	$9,255	$9,502	$10,813
Beaufort School District	$10,424	$9,713	$9,210	$9,362	$9,613	$10,704
Berkeley School District	$8,145	$9,683	$9,182	$9,238	$9,485	$10,611
Calhoun School District	$11,527	$9,902	$9,389	$9,397	$9,649	$10,879
Charleston School District	$11,834	$9,375	$8,890	$8,992	$9,233	$10,202
Cherokee School District	$9,716	$9,703	$9,201	$9,277	$9,525	$10,684
Chester School District	$9,361	$9,729	$9,226	$9,268	$9,516	$10,681
Chesterfield School District	$8,829	$9,813	$9,306	$9,262	$9,509	$10,562
Clarendon School District 1	$11,361	$10,114	$9,591	$9,598	$9,855	$11,142
Clarendon School District 2	$8,425	$10,059	$9,538	$9,604	$9,862	$11,153
Clarendon School District 3	$8,368	$9,752	$9,247	$9,343	$9,593	$10,617
Colleton School District	$8,400	$10,159	$9,633	$9,738	$9,999	$11,189
Darlington School District	$10,000	$9,823	$9,314	$9,342	$9,592	$10,751
Dillon School District 3	$6,901	$9,706	$9,203	$9,191	$9,438	$10,531
Dillon School District 4	$6,939	$9,415	$8,927	$8,983	$9,223	$10,589

	Per Pupil State and Local Operations Revenues					
School District	**Current**	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Scenario 4**	**Scenario 5**
Dorchester School District 2	$7,789	$9,436	$8,947	$8,977	$9,217	$10,155
Dorchester School District 4	$11,696	$10,114	$9,591	$9,618	$9,875	$11,137
Edgefield School District	$9,860	$9,715	$9,212	$9,200	$9,446	$10,539
Fairfield School District	$17,195	$10,206	$9,678	$9,744	$10,005	$11,157
Florence School District 1	$9,807	$9,914	$9,401	$9,429	$9,681	$10,780
Florence School District 2	$8,496	$10,048	$9,528	$9,512	$9,767	$10,903
Florence School District 3	$8,896	$10,375	$9,838	$9,946	$10,212	$11,459
Florence School District 4	$9,342	$10,044	$9,524	$9,584	$9,840	$11,273
Florence School District 5	$9,004	$10,038	$9,518	$9,575	$9,832	$10,956
Georgetown School District	$10,244	$9,781	$9,275	$9,325	$9,575	$10,654
Greenville School District	$8,507	$9,609	$9,112	$9,257	$9,504	$10,529
Greenwood School District 50	$8,286	$9,760	$9,255	$9,388	$9,639	$10,795
Greenwood School District 51	$9,635	$10,208	$9,680	$9,705	$9,965	$11,066
Greenwood School District 52	$9,089	$9,558	$9,063	$8,975	$9,216	$10,229
Hampton School District 1	$8,966	$9,694	$9,192	$9,104	$9,348	$10,507
Hampton School District 2	$12,191	$10,078	$9,557	$9,538	$9,793	$11,131
Horry School District	$11,307	$9,782	$9,276	$9,442	$9,694	$10,802
Jasper School District	$12,857	$9,795	$9,288	$9,581	$9,837	$11,452
Kershaw School District	$8,406	$9,728	$9,225	$9,222	$9,468	$10,461
Lancaster School District	$7,726	$9,664	$9,164	$9,195	$9,441	$10,517
Laurens School District 55	$9,013	$10,187	$9,660	$9,704	$9,963	$11,121
Laurens School District 56	$8,358	$10,206	$9,678	$9,747	$10,007	$11,148
Lee School District	$9,769	$10,001	$9,483	$9,422	$9,674	$10,981
Lexington School District 1	$10,760	$9,570	$9,075	$9,091	$9,335	$10,167
Lexington School District 2	$8,149	$10,146	$9,621	$9,767	$10,028	$11,156
Lexington School District 3	$11,549	$10,133	$9,609	$9,747	$10,008	$11,155
Lexington School District 4	$10,164	$10,281	$9,749	$9,818	$10,081	$11,311
Lexington School District 5	$11,528	$9,618	$9,121	$9,152	$9,397	$10,089
McCormick School District	$13,453	$9,790	$9,283	$9,264	$9,512	$10,844
Marion School District	$8,218	$9,951	$9,436	$9,448	$9,701	$11,016
Marlboro School District	$9,259	$9,975	$9,459	$9,483	$9,737	$10,961
Newberry School District	$10,072	$9,855	$9,345	$9,443	$9,696	$10,856
Oconee School District	$10,280	$10,061	$9,541	$9,610	$9,867	$10,907
Orangeburg School District 3	$11,290	$10,003	$9,485	$9,407	$9,659	$10,932
Orangeburg School District 4	$9,730	$9,668	$9,168	$9,167	$9,412	$10,662
Orangeburg School District 5	$11,270	$9,828	$9,320	$9,314	$9,563	$10,845
Pickens School District	$8,103	$9,581	$9,086	$9,125	$9,370	$10,350
Richland School District 1	$13,313	$9,991	$9,474	$9,566	$9,822	$10,932
Richland School District 2	$10,642	$9,543	$9,049	$9,079	$9,322	$10,332
Saluda School District	$8,223	$9,985	$9,469	$9,626	$9,884	$11,220
Spartanburg School District 1	$9,496	$9,687	$9,185	$9,278	$9,526	$10,541
Spartanburg School District 2	$8,753	$9,594	$9,097	$9,235	$9,483	$10,591
Spartanburg School District 3	$11,079	$10,159	$9,633	$9,725	$9,986	$11,069
Spartanburg School District 4	$9,304	$9,837	$9,328	$9,377	$9,628	$10,708
Spartanburg School District 5	$10,637	$9,664	$9,164	$9,281	$9,529	$10,570
Spartanburg School District 6	$9,005	$9,929	$9,415	$9,592	$9,849	$10,976
Spartanburg School District 7	$13,014	$9,737	$9,233	$9,351	$9,601	$10,739
Sumter School District	$8,056	$10,035	$9,516	$9,542	$9,797	$10,887
Union School District	$8,097	$9,872	$9,361	$9,315	$9,564	$10,664
Williamsburg School District	$8,975	$10,256	$9,725	$9,675	$9,934	$11,183
York School District 1	$9,733	$9,773	$9,267	$9,307	$9,556	$10,680
York School District 2	$11,836	$8,988	$8,523	$8,511	$8,738	$9,587
York School District 3	$9,242	$9,690	$9,188	$9,263	$9,511	$10,567
York School District 4	$8,407	$9,082	$8,612	$8,600	$8,830	$9,435
South Carolina	**$9,710**	**$9,710**	**$9,207**	**$9,279**	**$9,528**	**$10,582**

ENDNOTES

[1] Federal share is not included in the model presented in this paper. The average district federal share for 2016-2017 was only $1,259 per student.
[2] The Urban Institute's "America's Gradebook: How Does Your State Stack Up?" project adjusts 2015 NAEP scores with controls for age, race/ethnicity, frequency of English spoken at home, special education status, free or reduced-price lunch eligibility, and English language learner status by state. When controlling for these factors, South Carolina ranks 16th in 4th grade math, 23rd in 4th grade reading, 31st in 8th grade math, and 36th in 8th grade reading.
[3] Hanushek, Eric A. "The Failure of Input-Based Schooling Policies," Economic Journal, 2003, v113 (485, Feb), F64-F98.
[4] Hanushek, E., & Lindseth, A. (2009). Front Matter. In Schoolhouses, Courthouses, and Statehouses: Solving the Funding-Achievement Puzzle in America's Public Schools (pp. I-Iv). Princeton University Press.
[5] *Abbeville County School District, et al. vs. The State of South Carolina.* Opinion No. 27466. South Carolina Supreme Court, November 12, 2014. (online: http://www.sccourts.org/opinions/HTMLFiles/SC/27466.pdf)
[6] ibid.
[7] See Phase 1 of the *School District Efficiency Review* conducted pursuant to Proviso 1.92 of the FY2016-17 General Appropriations Act by Alvarez and Marshal for recommendations for modernization and collaboration recommendations. April 1, 2017. (online: http://ed.sc.gov/data/reports/phase-1-efficiency-studies/)
[8] Includes the Task Force on Revenue for World Class Learning (2008). (Report online: http://www.scstatehouse.gov/Archives/CommitteeInfo/K12FundingSelectCommittee/ReportofTaskForceOnRevenue.pdf); Ulbrich, H. and Saltzman, E. (2009). Financing Education in South Carolina. Jim Self Center on the Future, Strom Thurmond Institute of Government and Public Affairs, Clemson University. (online: http://sti.clemson.edu/joomla/pdf/financing_education.pdf); Senate Select Committee on K-12 Funding (2010). (Archives online: http://www.scstatehouse.gov/Archives/CommitteeInfo/K12FundingSelectCommittee/092110TOC.php); The South Carolina Jobs, Education and Tax Act Proposal (2013). A proposal of the South Carolina School Boards Association, South Carolina Association of School Administrators, and South Carolina Association of School Business Officials. (online: http://scsba.org/advocacy/130830_SCJET_handout.pdf)
[9] "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue." South Carolina Revenue and Fiscal Affairs Office (RFA). Revised 10/6/2016. (online: http://rfa.sc.gov/files/Revenue%20Per%20Pupil%20Report%20FY%202016-17.pdf)
[10] *2015 Local Government Finance Report*. South Carolina Revenue and Fiscal Affairs Office (RFA). Revised 1/10/2017. (online: http://rfa.sc.gov/files/FY%202015%20Report%201-10-17.pdf)
[11] "FY2015 - 2016 District Revenue Information." South Carolina Department of Education. (online: http://ed.sc.gov/finance/financial-data/historical-data/district-revenue-information/)
[12] "SC Education Lottery Appropriations." South Carolina Education Lottery. Updated October 14, 2016. (online: http://www.admin.sc.gov/files/Lottery%20Appropriations%20Web%20Information%20Updated%20Oct.%2014%202016.pdf)
[13] *A Historical Analysis of Funding for South Carolina's Public Schools*. South Carolina's Council on Competitiveness. December 2005. (online: http://www.newcarolina.org/UserFiles/publications/School%20Funding%20Paper.Final.pdf).
[14] "SC Education Lottery Appropriations." South Carolina Education Lottery. Updated October 14, 2016. (online: http://www.admin.sc.gov/files/Lottery%20Appropriations%20Web%20Information%20Updated%20Oct.%2014%202016.pdf)
[15] "EFA Factor Computation."
[16] Author's calculations based on "Detailed Index of Taxpaying Ability by District." South Carolina Department of Revenue. 2017. (online: https://dor.sc.gov/lgs-site/LGS%20Reports/2017FinalCountyReport.pdf); "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue," and "South Carolina Property Tax Rates by County, 2016." South Carolina Association of Counties. January 2017. (online: http://www.sccounties.org/Data/Sites/1/media/publications/propertytax2016.pdf)
[17] Only the "effective" assessed value is included, defined as the tax raised from the property divided by the school district's prevailing operational millage rate. The remaining (untaxed) value is omitted.
[18] "Owner Occupied Property Percent of Total County Assessed Value Tax Year 2015." South Carolina Revenue and Fiscal Affairs Office. 2/28/17. (online: http://rfa.sc.gov/files/Assessed%20Value%20by%20Class%20by%20County%20Tables%20and%20Graphs%20TY15%2002-28-2017.pdf)
[19] Tier 1 was capped at $249m in FY01 Tier 2 was capped at $80.9m in FY08. Tier 3 Supplemental (a capped $2.5m minimum reimbursement to help poor counties with less than $25m in total assessed value) has eroded that over time, decreasing from $30,107,374 in FY07-08 (the first year implemented) to $13,354,026 in FY15-16.

[20] Hanushek, Eric. "The Alchemy of 'Costing Out' an Adequate Education." *School Money Trials: The Legal Pursuit of Education Adequacy*. Ed. Martin West, Ed. Paul Peterson. Washington, D.C.: Brookings Institution Press, 2007. 77-101. Print.
[21] 2016-17 Funding Manual. South Carolina Department of Education. (online: http://ed.sc.gov/finance/financial-services/manual-handbooks-and-guidelines/funding-manuals/fy-2016-2017-funding-manual/)
[22] See "Recommendations for Improving School Funding in Mississippi." EdBuild. January 16, 2017. (online: http://www.legislature.ms.gov/Documents/Final%20EdBuild%20Recommendation.pdf)
[23] Alabama, Alaska, Arkansas, Georgia, Kentucky, Michigan, Mississippi, Missouri, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Vermont, West Virginia and Wyoming. Source: "Funded: Expected Local Share Report." EdBuild. 2017. (online: http://funded.edbuild.org/reports/issue/local-share)
[24] When reviewing scenarios including data from other states, it is important to note variances in funding mechanisms to districts. For example, South Carolina provides transportation at the state level, not included as a part of district funding.
[25] "Revenue Per Pupil Report by School District for 2016-17 Excluding Bond Revenue."
[26] "FY2015 - 2016 District Revenue Information."
[27] "FY15-16 135-Day Financial Requirements Report," Office of Finance, SC Department of Education. (online: http://ed.sc.gov/finance/financial-services/budget-planning-for-upcoming-school-year/fy-15-16/fy-15-16-135-day-financial-requirements-final/)
[28] "FY2015-16 District Report Card," SC Department of Education. (online: https://ed.sc.gov/data/report-cards/state-report-cards/)
[29] The linear regression technique was selected because the base South Carolina formula—the Education Finance Act—is perfectly linearly defined, and it was assumed that additional funding, while programmatic, still followed a similar pattern of funding programs based on the size of the affected population. Though the published linear results showed no relationship between funding and the number of students, all other non-published regression methods (accounting for possible heteroscedasticity, error term correlation, and non-linear relationships) also showed no relationship. While data for multiple years was not collected as a part of this study, a possible future examination would include a fixed effects model on a set of longitudinal panel data of South Carolina school districts.
[30] These six states were selected due to their requirements that all high school students take the ACT and the availability of their data for comparison. (Tennessee actually requires students to take either the ACT or SAT).
[31] U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey Directory Data", 2014-15 v.1a; "Local Education Agency (School District) Universe Survey LEP Data", 2014-15 v.1a; "Local Education Agency (School District) Universe Survey Membership Data", 2014-15 v.1a; "Local Education Agency (School District) Universe Survey Special ED Data", 2014-15 v.1a; "Local Education Agency (School District) Universe Survey Staff Data", 2014-15 v.1a; "Public Elementary/Secondary School Universe Survey Free Lunch Data", 2014-15 v.1a. (online: https://nces.ed.gov/ccd/elsi/)
[32] In fact, when the same specifications were evaluated under a non-linear model with zero bounds, the coefficient on Free and Reduced Lunch students was zero and insignificant.
[33] "Cost of Living Data Series, 1st Q 2017." Missouri Economic Research and Information Center, Missouri Department of Economic Development. (online: https://www.missourieconomy.org/indicators/cost_of_living/)
[34] Fairfield actually had a value of $17,195, and was omitted from model calculations due to its extreme outlier status.
[35] ACT test score data obtained from each states' education department website: North Carolina Department of Public Instruction (online: http://www.ncpublicschools.org/accountability/act/); Tennessee Department of Education (online: https://www.tn.gov/education/topic/data-downloads); South Carolina Department of Education (online: http://ed.sc.gov/data/report-cards/state-report-cards/2016/data-files-for-researchers-2016/); Missouri Department of Elementary and Secondary Education (online: https://mcds.dese.mo.gov/guidedinquiry/District%20and%20Building%20Student%20Indicators/District%20ACT.aspx); Mississippi Department of Education (online: http://reports.mde.k12.ms.us/report1/r2015-16.aspx); and Louisiana Department of Education (online: http://www.louisianabelieves.com/resources/library/high-school-and-college-and-career-data-center)
[36] "Cost of Living Data Series, 1st Q 2017." Missouri Economic Research and Information Center, Missouri Department of Economic Development. (online: https://www.missourieconomy.org/indicators/cost_of_living/)
[37] 2016-17 Funding Manual. South Carolina Department of Education. (online: http://ed.sc.gov/finance/financial-services/manual-handbooks-and-guidelines/funding-manuals/fy-2016-2017-funding-manual/)