

# Public Education and Greenwood County

*A Benchmarking Tool*

by

Louis R. Lanier  
and  
Ellen Weeks Saltzman

December 31, 1999

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Prepared for the

Greenwood Partnership Initiative  
Greenwood Area Chamber of Commerce

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Louis R. Lanier  
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Ellen Weeks Saltzman

The Strom Thurmond Institute  
of Government and Public Affairs  
Clemson University  
Clemson, SC 29634

A companion volume entitled *South Carolina School District Profile Data* was prepared as a supplement to this report. It contains most of the data used in the preparation of this report and is available on the Institute's Web page:

<http://www.strom.clemson.edu>

The Strom Thurmond Institute  
of Government and Public Affairs  
Perimeter Road  
Clemson University  
Clemson, SC 29634-0125

Telephone: (864) 656-4700 Fax: (864) 656-4780

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Department of Economics  
Clemson University

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# **PUBLIC EDUCATION AND GREENWOOD COUNTY: A BENCHMARKING TOOL**

## **EXECUTIVE SUMMARY**

### **KEY FINDINGS**

#### **Academic Performance Indices**

- The three Greenwood County school districts have overall academic performances at or above the state median. Rankings on a total academic performance index place Greenwood School Districts 50, 51, and 52 at 31st, 44th, and 12th, respectively, out of 86 districts.
- Academic peer groups for each of the three Greenwood County school districts are identified using a total academic performance index.
- The state's top performing school districts are Lexington 5, Lexington 1, York 4, and Anderson 1. The average five-year combined SAT score in the top performers group is over 100 points higher than the state median. On average, these districts are larger, wealthier, and have a more educated populace than the median district in the state.

#### **District Size, Fiscal Authority, and Economic Development Competitors (EDCs)**

- All three Greenwood County school districts have below-average total revenues and spending per pupil (with and without debt service) when compared to groups of districts of similar size and districts with no fiscal authority.
- Greenwood 51 and 52 have much higher local shares of total revenue (34.5 and 47.7 percent, respectively) than other districts in their size class (under 2,000 pupils), on average (26.3 percent). In comparison, the districts with no fiscal authority averaged a 35.4 percent local revenue share, while the EDC districts averaged 37.2 percent.
- All of the Greenwood County districts had average annual growth in millage rates, local and total revenues per pupil, and spending per pupil below the averages for the groups of districts of similar size and with no fiscal authority.
- The group of 22 districts with full fiscal authority raised a higher share of total revenue from local sources and had higher local revenues per pupil on average (37.5 percent; \$1,987) than did the 31 districts with no fiscal authority (35.4 percent; \$1,925) and the 33 districts with limited fiscal authority (35.0 percent; \$1,760).
- Districts with no and full fiscal authority appear to be able to raise more revenue from a given tax base than do limited authority districts. The no-authority group has tax effort slightly above the state average, but an average ability index only about 65 percent of the state average. The limited authority group has tax effort at 90 percent of the state average, but above-average ability. The full authority group has both above-average tax effort and ability.
- When compared to the North Carolina and Georgia EDC districts, the group of South Carolina EDC districts had similar performance on the combined SAT (983 = 5 yr. avg.). All three Greenwood County school districts have combined SAT scores above the South Carolina non-EDC average (927) and below the SC EDC average.
- Based on SAT scores, the South Carolina EDC districts are relatively high-performing districts within the state; the North Carolina and Georgia EDC districts are average performers within their respective states.

- The North Carolina and Georgia EDC districts get more of their revenue from state (rather than local) sources than do the South Carolina districts. The North Carolina districts averaged a 59.2 percent state revenue share, and the Georgia districts averaged 57.7 percent. The South Carolina EDC districts averaged 53.8 percent state revenue.

### **Cluster Analysis**

- Anderson and Spartanburg counties are most similar to Greenwood County when several demographic and economic characteristics are considered.
- Florence 1 and 2 are close academic peers for Greenwood 50, while Darlington and Marion 2 are most similar in per pupil spending levels and patterns.
- Close academic peers for Greenwood 51 are Sumter 17 and Union, while Bamberg 1, Dillon 3, Hampton 1, and Orangeburg 4 make up its group of spending peers.
- Spartanburg 1, 2, and 5 are close academic peers for Greenwood 52, and Clarendon 3 is the only district considered very similar in per pupil spending.

### **Regression Analysis**

- Up to 90 percent of the variation in academic performance across districts can be explained by family and community background characteristics.
- Early-grade performance appears to be important in determining the ultimate success of a district in educating its students. Districts with high and low average elementary grade test scores exhibit different relationships between educational inputs and high school test performance.
- More experienced teachers may enhance student academic performance. After community background influences are taken into account, average teacher salaries and years of experience appear to be positively related to academic performance.
- Districts with full fiscal authority have a five percent higher share of local revenue on average than their assessed property values per pupil would predict.
- Barnwell 19 & 45, Clarendon 3, Dillon 2 & 3, Florence 5, Marion 1, and Spartanburg 7 define an second group of high performing school districts. These school districts are consistently high performers when compared to other districts with similar economic and demographic profiles.

## **SUMMARY NARRATIVE**

In this report, data are analyzed at the public school district level in an effort to reveal useful information for education policymakers in Greenwood County. Most of the data examined in this report is from the South Carolina Department of Education. The three questions listed below are addressed.

1. How do the Greenwood County school districts compare to the other school districts in South Carolina and selected districts in North Carolina and Georgia?
2. What districts are the most similar to the Greenwood districts?
3. What are the relationships among educational inputs and outcomes at the school district level in the South Carolina?

## **Greenwood County School Districts**

Greenwood County is served by three school districts: Greenwood 50, 51, and 52. Greenwood 50 is the largest school district in the county with a total enrollment in 1997-98 of 8,729. The district is nearly racially balanced, with 49.1 percent African-American and other minority pupils and 50.9 percent white pupils. Greenwood 51 and Greenwood 52 are much smaller school districts than Greenwood 50. Greenwood 51—also known as Ware Shoals School District 51—had total enrollment in 1997-98 of 1,221. The district is 77.1 percent white and 21.8 percent African-American and other minority pupils. Greenwood 52—or Ninety Six School District 52—is similar in size to Greenwood 51, with 1,590 pupils. The district is 73.7 percent white and 25.6 percent African-American and other minority.

Each of the Greenwood County school districts has seen growth in its student population in recent years. In the ten years since 1986-87, Greenwood 50's enrollment increased by 6.2 percent. Greenwood 51 saw a similar level of growth, 6.7 percent, and Greenwood 52 reported the highest growth in student population at 19.2 percent. Of the 46 counties in South Carolina, Anderson and Spartanburg counties are most similar to Greenwood County when several demographic and economic characteristics are considered at once.

All three Greenwood districts have total academic performances that are at or above the state median. An index was created for the purpose of comparing South Carolina school districts based on their students' performances across all major standardized tests and was used for this comparison.

Greenwood 50 ranks 31st out of 86 school districts in the total academic performance index. Greenwood 50 exhibits relatively low CSAB scores, while rebounding quickly with scores in the top one-third of the state on elementary grade tests. The middle and high school students, however, give up some ground to the rest of the state and end up scoring near the state median on ninth, tenth, and eleventh grade tests. SAT performance ranks in the top one-third of the state, as measured by an SAT performance index. Greenwood 50 had the seventh highest percentage taking the SAT in the state.

Greenwood 51 ranks 44th in the total performance index and is at the median—literally. Its pattern of test scores across grades suggests that improvement may be occurring as students progress from early into later grades. Specifically, while the district's CSAB scores are relatively high, third, fourth, and fifth grade standardized test scores fall off in comparison. However, high school level standardized test scores in Greenwood 51 rebound quite nicely, in most cases to well above the state median.

Greenwood 52 ranks 12th on the total performance index. Most of its standardized test scores are in the state's top quartile, while some even lie in the top ten percent. None of its test scores drops below a rank of 37 out of the 86 school districts in South Carolina, and only three of its scores out of the fourteen test performance indicators used in this report are ranked below 20th in the state.

Florence 1 and 2 are close academic peers for Greenwood 50, while Darlington and Marion 2 are most similar in per pupil spending—in total and across expenditure categories. Close academic peers for Greenwood 51 are Sumter 17 and Union; Bamberg 1, Dillon 3, Hampton 1, and Orangeburg 4 make up its group of spending peers. Spartanburg 1, 2, and 5 are close academic peers for Greenwood 52, and Clarendon 3 is the only district considered very similar in per pupil spending. There is no overlap between the per pupil spending and academic peer groups for each

of the Greenwood districts. Excepting Bamberg 1, a spending peer of Greenwood 51, the Greenwood County school districts academically outperform their spending peers.

Where district size is concerned, all three Greenwood County school districts have total spending per pupil (with and without debt service) and revenues per pupil below their respective size class averages. They also have lower spending per pupil in most categories than other districts of similar size. Districts 51 and 52, in particular, have total spending per pupil that is \$418 and \$439 below their size class averages, respectively. These two school districts also raise a higher share of local revenue (34.5 percent for Greenwood 51 and 47.7 percent for Greenwood 52) than their size class average (26.3 percent). Greenwood 52's local revenue share is unusually high, regardless of the comparison group. These observations reinforce a general trend in the results of the report that, while maintaining very respectable levels of academic performance, the three Greenwood districts often come in below average where per pupil revenues and expenditures are concerned.

Fiscal authority appears to affect the ability of a school district to raise revenue. The analysis indicates that South Carolina school districts with full fiscal authority get a greater share of their revenue from local sources than their per pupil assessed property values would predict. Also, the average tax raising effort in this group of districts is the highest. Districts with no fiscal authority, like the three in Greenwood County, have the second-highest level of tax effort. The lowest amount of tax effort comes from those districts with limited authority. All three Greenwood County school districts have below average total revenues per pupil and spend less in most categories than the group of districts with no fiscal authority.

There are 28 school districts in a group of seven South Carolina counties that are considered to be Greenwood County's economic development competitors (EDCs). These EDC districts academically perform right on par with five Georgia and nine North Carolina EDC districts. The Greenwood County school districts all have SAT scores below the EDC averages and above the average for districts in South Carolina not considered to be economic development competitors. (Greenwood 52 has a better total performance profile than the South Carolina EDC average.)

The Georgia and North Carolina EDC districts score near their state averages on the SAT, while the South Carolina EDC districts score well above the state average. These facts suggest that North Carolina and Georgia state averages and medians may be more appropriate benchmarks than those in South Carolina for policymakers striving to compete regionally for economic development.

Total expenditures per pupil in Greenwood 50 are higher than the average in the South Carolina EDC group. Some of this difference can be accounted for by the district's relatively high per pupil spending on instructional support. Total spending per pupil in Greenwood 51 and 52 is close to the EDC average. Growth in total spending per pupil averaged 6.4 percent per year since 1986-87 in Greenwood 50, higher than the average in the EDC group. Average annual spending growth of 5.9 percent in Greenwood 51 was somewhat below the EDC average of 6.1 percent per year, but spending growth in Greenwood 52 was much lower at only 4.9 percent per year.

Revenue profiles in Greenwood 50 and 51 are much closer to the EDC group than is Greenwood 52. The latter district's relatively high share of local revenue and low average annual revenue growth per pupil give it a distinctive profile. Both Greenwood 50 and 51 had assessed property value per pupil significantly below the EDC group average and these districts also saw much lower average annual growth in their tax bases since 1986-87.

The South Carolina EDC districts have higher average personal income and manufacturing employment, and lower teen pregnancy and child poverty than the non-EDC districts. Teen pregnancy and unemployment rates in Greenwood County are similar to those in the non-EDC group. The percentage of children in poverty and per capita personal income in the Greenwood districts is between the two group averages. The percent of manufacturing employment in Greenwood County (38.1 percent) is much higher than that of the economic development competitors (24.9 percent) and the non-competitors (21.8 percent). Average teacher salaries and teacher experience are higher on average in the better-performing EDC group. The three Greenwood County districts all have average teacher salaries and teacher experience lower than the EDC group average.

All of the school districts in Georgia that are considered competitors for industry with Greenwood County have full fiscal authority. In contrast, only one of the EDC districts in North Carolina has full fiscal authority; the rest have none. All of the out-of-state school districts get more revenue from state sources than do the South Carolina EDC districts, on average. The five Georgia districts received an average of only one and one-half percent of their total revenue from Georgia lottery receipts over the years 1995-96 to 1997-98.

### **Additional Observations**

Family and community background influences are by far the most important factors affecting academic performance and can explain up to 90 percent of the variation in performance across school districts. In spite of the overwhelming effects of the student background variables, teacher salaries and teacher years of experience are also positively linked to academic performance. This result suggests that policymakers strongly consider ways of raising teacher quality.

Another analysis suggests that academic performance in elementary school may have serious implications for the ultimate success of a school district in educating its students. Those students who perform well on early grade standardized tests may be in a better position later in their academic careers to take advantage of resources provided for them. In contrast, poor early performance may hinder students in later grades. If further investigation supports this finding, then an added emphasis on primary education may help reduce the overall costs of educating students.

Difficulties encountered when analyzing the relationships between major spending categories and academic performance make program-level spending evaluations imperative. The aggregated nature of the major spending categories blurs the effects of programs specifically meant to enhance academic performance.

Two groups of high performing school districts in South Carolina were identified. The first group consists of the four districts with the highest scores on the total academic performance index: Lexington 5, Lexington 1, York 4, and Anderson 1. These districts average over 100 points higher on the SAT than the median district and have 19 percent more students going to college. They also have higher average teacher salaries and average years of teacher experience than the median district.

The second group consists of the highest performing districts when economic and demographic effects are taken into account: Florence 5, Dillon 2 and 3, Barnwell 19 and 45, Clarendon 3, Marion 1, and Spartanburg 7. On average, these districts have more children in poverty, lower educational attainment, and lower CSAB scores than the average district in the state. These

school districts are consistently high performers when compared to other districts with similar economic and demographic profiles. Both of the high performing groups are potentially useful sources of information on the effectiveness of academic programs, curricula, and administrative arrangements.



## INTRODUCTION

In today's global business climate—in Greenwood County and elsewhere—the shift to computer-aided technologies and higher-technology industries requires a higher-skill labor force. The quality of local education is an important competitive issue. Two recent studies—*Critical Indicators: Measuring Greenwood County* and *Workforce Development Final Report*—address this issue. The latter highlights a belief among business and community leaders that Greenwood County is not producing enough workers for tomorrow with the necessary skills to be successful.

Responding to these studies and to reports that too many local high school graduates could not pass employment screening exams at some major local employers, the Greenwood Area Chamber of Commerce's Greenwood Partnership Initiative (GPI) turned its attention to the county's public education system. In 1999, the GPI asked researchers at Clemson University's Strom Thurmond Institute of Government and Public Affairs to take a closer look at how the three school districts in Greenwood County compare to other school districts, particularly on the bases of funding and academic achievement measures. The GPI requested that the Greenwood County school districts be compared to a small group of school districts in other counties in South Carolina, Georgia, and North Carolina that were identified as competitors for economic development. The GPI was also interested in identifying key factors in the public educational system that affect educational outcomes.

This report is designed to help policymakers to identify benchmarks for public education funding and academic performance in Greenwood County. Understanding the local public education system and how it compares to others in the state and around the nation is an essential first step in setting policy aimed at improving educational outcomes and advancing economic development. In this report, various county and school district data are examined to address the following questions:

1. How do the three Greenwood County school districts compare to districts in the rest of the state and selected districts in North Carolina and Georgia?
2. Which districts are most similar to the Greenwood districts?
3. What are the relationships among educational inputs and outcomes at the school district level in South Carolina?

### **Greenwood County and Its School Districts**

With an estimated 1998 population of about 63,600, Greenwood County is a moderate-sized, nonmetropolitan county. About 31 percent of the population is located in the county's largest city, Greenwood. Four other municipalities—Hodges, Ninety Six, Troy, and Ware Shoals—contain another seven percent of the population, while the remaining 62 percent live in the unincorporated part of the county. Population in the county is estimated to have grown 6.8 percent between 1990 and 1998, below the state average of 10.0 percent. The state's population growth in the 1990's was concentrated in the coastal counties, in the Columbia metro area, and along the I-85 corridor.

Greenwood County has benefited from significant economic development in the past two decades. The Greenwood County Economic Alliance reports that since 1986, Greenwood County has added over \$1.3 billion in manufacturing investments and over 3,400 new jobs. Just over 38

percent of the county's workforce is employed in the manufacturing sector, compared to the state average of 21.8 percent. Average weekly manufacturing wages in the county were about 95 percent of the state average in 1998. Originally anchored in textiles, today Greenwood County firms manufacture a wide variety of products, including film and photographic products, electronics, and health products.

Greenwood County's performance is less favorable on a number of social indicators. Greenwood County is above the state average in terms of infant mortality, teen pregnancies, unwed mothers, and mothers with less than a high school education. In educational attainment, a measure of labor quality, 34.2 percent of Greenwood County adults in 1990 had ended their education before completing high school. The state average is 30.5 percent. In 1997-98, the county also ranked 37th out of 46 counties in the percentage of students not passing the first grade readiness exam.

Greenwood County is served by three school districts: Greenwood 50, 51, and 52 (Appendix A). Greenwood 50 is the largest school district in the county with a total enrollment in 1997-98 of 8,729. The district serves the city of Greenwood, the towns of Hodges and Troy, and the central and southwestern portions of the county. The district is nearly racially balanced, with 49.1 percent African-American and other minority pupils and 50.9 percent white pupils.

Greenwood 51 and Greenwood 52 are much smaller school districts than Greenwood 50. Greenwood 51—also known as Ware Shoals School District 51—is located in the northwestern portion of the county and serves the town of Ware Shoals and small adjacent portions of Abbeville and Laurens counties. Total enrollment in 1997-98 was 1,221. The district is 77.1 percent white and 21.8 percent African-American and other minority pupils. Greenwood 52—or Ninety Six School District 52—is similar in size to Greenwood 51, with 1,590 pupils. The district is located in the northeastern part of the county and serves the town of Ninety Six and surrounding areas. Pupils in the district are 73.7 percent white and 25.6 percent African-American and other minority.

Each of the Greenwood County school districts has seen growth in its student population in recent years. In the ten years since 1986-87, Greenwood 50's enrollment increased by 523 students, or 6.2 percent. Greenwood 51 saw a similar level of growth, 6.7 percent, adding 77 students. Greenwood 52 reported the highest growth in student population, 19.2 percent, gaining 270 students. Descriptive statistics for the three districts can be found in Appendix B.

## **Education and Economic Development**

Behind the GPI's interest in understanding how the three Greenwood districts compare to other school districts and how educational inputs affect educational outcomes lies an important question: what is the relationship between education and economic development? Below is a very brief look at how researchers have addressed this question.

Education and economic development are closely linked. Both contribute to improving the overall quality of life in a community. Economic development encompasses both business growth (new establishments and existing business expansions) and population growth. A quality public education system contributes to economic development by improving the quality of the labor force, which makes the community more attractive to businesses. A more skilled labor force earns higher wages, which increases the income level in the community. And higher incomes mean that people are more likely to be able to provide for themselves and their families as well as support a reasonable level of community public services.

These factors, plus forward-thinking leadership, help to shape stable, well-functioning communities with a high quality of life. And, communities with a high quality of life are more attractive to new residents. For these reasons, improving the public education system can be an economic development strategy regardless of whether people follow jobs, or jobs follow people.

Firms make decisions on whether to locate their operations in a given area based on a number of criteria, including: the availability of product markets, the availability of land, the structure of state and local taxes, and access to major transportation corridors. Additional site location decision criteria are the quality, cost, and availability of the labor force and the level of public services (including education) provided by local governments, which are measures of the local quality of life.

And last but not least, economic development has its own impacts on public education. New jobs usually mean new residents, whose children enter local schools. These additional pupils place multiple demands on local schools, from new teachers to new bus routes and classrooms. The parents of these pupils may also move to the area with different views of how the local education system should be operated and funded. Yet along with higher demand for public education, economic development also brings revenues to schools through an increased tax base.

## **Report Structure**

Data from South Carolina's 86 school districts were analyzed to address the three questions posed above. Particular emphasis was given to how the three Greenwood County districts compare to groups of similar districts in South Carolina. Selected school districts outside the state were also examined. This report attempts to take into account some of the fundamental differences among school districts in order to make responsible comparisons between districts and groups of districts, and to identify the effects of policy-controlled educational inputs on outcomes. It does not examine school-level data or investigate specific programs and curricula that are in operation in particular schools or districts.

This report is organized by the methods used to analyze school district data. Each method reveals information about how the three Greenwood County school districts compare to other similar districts and/or the relationships among educational inputs and outcomes. In particular, the first three methods listed below are used to assess the relative standings of the school districts in Greenwood County on a number of margins, while the fourth method (regression analysis) is used to search for statistical relationships among education inputs and outcomes. These methods are summarized below:

- **Performance Indices.** Aggregate, multiyear indices of academic performance allow comparisons among districts based on measures of overall academic performance. These indices summarize information about district performance on multiple standardized tests in a single, numeric measure.
- **District Groupings.** Districts are grouped according to three characteristics likely to be related to education inputs and outputs: 1) size, 2) fiscal authority, and 3) Greenwood County economic development competitor status. Group averages are calculated on a wide range of financial, performance, and other district characteristics.
- **District Clusters.** A technique is employed to reveal those districts that are most similar to each other when considering several characteristics at once. District *clusters* are defined using: 1) demographics and economics, 2) scores on standardized tests, and 3) per pupil spending.

- **Regression Analysis.** Multivariate linear regression analysis, a common statistical tool, is used to examine the relationships between education inputs and outcomes among all South Carolina school districts. This technique allows the researcher to control for external influences in order to more accurately reflect the effects of policy variables such as spending levels.

Of course, these techniques cannot take into account all relevant considerations. Standardized test scores—a convenient measure of academic achievement and school performance—are less-than-perfect measures of real world performance skills and may vary for reasons beyond the influence of the school district. And high spending in a certain area, for example, may be related to special needs and programs that justify that spending. It also may be difficult to measure relevant factors that differentiate one district from another. For example, parental involvement plays a significant part in a child’s education but is difficult to measure and factor into a district- or school-level analysis.

## Data Sources

The State Department of Education’s (SDE) printed and Web-based education statistics were used extensively in the preparation of this report. They provide a wealth of information for persons interested in the function and performance of the state’s public education system. Primary sources of district-level data used include: *District Performance Profiles 1998*, *In\$ite*, and *Rankings of the Counties and School Districts in South Carolina*. This report uses the most current education data available, which means that school district finances are reported for 1996-97 and academic performance and other student and teacher characteristics for the next year, 1997-98. Some additional data, such as employment, income, and population characteristics, were only available at the county level. To find the most current data, a variety of sources were used, including the U.S. Census Bureau, U.S. Bureau of Economic Analysis, and the S.C. Employment Security Commission. Data sources used in this report are listed in Appendix C.

For this report, adjustments were made to 1996-97 school district finances in Greenwood and Orangeburg Counties. Spending shares in Greenwood 50 and 51 in 1996-97 were adjusted to correct accounting misallocations identified after financial data from those districts were reported to the SDE. Total 1996-97 expenditures and debt service remain unchanged, but dollars for general operations were distributed to the four remaining spending categories—instruction, instructional support, operations, and leadership—based on their shares in 1997-98. For this reason, per pupil spending detail presented in this report for Greenwood 50 and 51 will differ from that reported in SDE reports such as *In\$ite*.

Financial information from the Orangeburg County school districts presented a special challenge. The 1997-98 school year was the first year in which Orangeburg County had three consolidated school districts; prior to that time the county had eight. The SDE recalculated academic performance data for the three new districts for five years preceding 1997-98. However, the latest financial data was available for 1996-97, when the eight districts still were separate. For this report, the 1996-97 finances and pupils of the eight districts were added together to approximate the finances of the three new consolidated districts. Because of these two data adjustments, the state medians on education finance listed in this report will differ from those published by the SDE.

## ACADEMIC PERFORMANCE INDICES

South Carolina public school students take many standardized tests throughout their school careers. These tests measure student performance in a number of areas, including readiness for first grade, mathematics, language, reading, and science. Because tests are given in almost every grade and often in several parts, it is difficult to assess overall performance without some amount of aggregation. To this end, performance indices were created that reduce many different test scores into single, composite measures of academic performance. Academic performance indices based on the major public school test scores are used as the primary indicator of the academic achievement of a school district's students.

Academic performance indices are used to identify how the three Greenwood school districts perform relative to each other and other districts in the state. They are also used to identify the overall top performing districts in the state and the academic peers of the three Greenwood school districts. The academic peer groups are sets of similarly-performing districts against which the three Greenwood districts can track performance over time. Measurable changes in performance relative to these peer districts are more likely to occur in the short run than are significant gains relative to the top performing districts.

A performance index was created for each of the standardized tests: CSAB, BSAP, MAT7, and SAT.<sup>1</sup> The indices used in this report represent averages over five years: 1993-94 to 1997-98.<sup>2</sup> Multiyear averages were used to reduce the effect of year-to-year variations in each index. In addition, a composite index of total academic performance was created using all of the individual test indices. Methods used for calculating each performance index are described in Appendix D.

The numerical index scores are relative measures of standardized test performance and different indices should not be directly compared. Districts with similar scores should be regarded as equivalent performers. The wider the range of scores among districts on a particular index, the more confident one can be that the districts are different.

This report focuses on the total academic performance index, the average percentage passing the high school exit exam, the SAT index, and the average combined SAT score because these measures of academic performance best summarize achievement throughout the entire school career. Also, although the SAT is elective, it is one of very few test results that can be compared among states. Values of the performance indices for individual districts are listed in Appendix E.

### Academic Performance in Greenwood County School Districts

The three Greenwood County school districts are average to much-better-than-average academic performers among school districts in South Carolina (Tables 1 and 2; Appendix F). Overall, Greenwood 52 leads many districts in the state on many of the performance indices. The district ranks twelfth in the state on the total academic performance index, seventeenth on the SAT index, fourteenth on the BSAP index, and eighth on the MAT7 index. The district also ranked sixth in

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<sup>1</sup> Cognitive Skills Assessment Battery (CSAB), South Carolina Basic Skills Assessment Program (BSAP), Metropolitan Achievement Test, Seventh Edition (MAT7), and Scholastic Assessment Test (SAT). The high school exit exam is the 10th grade BSAP.

<sup>2</sup> In the case of the MAT7, only four years of data were available.

the state in the average number of students meeting the CSAB readiness standard and eleventh in the state in the average percent passing the high school exit exam.

Table 1.

GREENWOOD SCHOOL DISTRICT PERFORMANCE INDICES							
Performance Index	GWD 50	GWD 50 Rank	GWD 51	GWD 51 Rank	GWD 52	GWD 52 Rank	State Median
Total Performance Index	55.8	30	49.8	44	72.9	12	50.4
Combined SAT Score	949	34	945	36	967	21	919
% Taking SAT	62.7	7	44.6	59	59.0	14	49.8
SAT Index	65.2	23	57.7	40	69.6	17	52.5
BSAP Index	70.6	36	69.2	39	77.2	14	68.1
--Grade 3 Index	81.1	22	71.9	55	76.8	37	75.0
--Grade 6 Index	61.4	32	62.7	29	67.9	16	58.1
--Grade 8 Index	61.8	43	59.8	55	77.3	6	61.8
--Grade 10 (Exit) Index	78.2	55	82.4	31	86.9	11	80.4
MAT-7 Index	61.7	27	58.0	51	67.3	8	59.7
--Grade 4 Index	64.3	25	51.4	77	66.6	14	60.3
--Grade 5 Index	65.3	19	57.6	60	70.9	4	60.0
--Grade 7 Index	60.9	34	55.1	62	71.6	4	58.9
--Grade 9 Index	57.9	44	60.1	32	63.9	17	58.0
--Grade 11 Index	60.2	40	65.7	18	63.4	26	60.0
CSAB Index	69.5	66	78.4	19	84.0	6	73.3

Greenwood 50 and 51 are closer to the state median performance indices than Greenwood 52, but still rank above the median on many measures. Greenwood 50 ranks at or above the median on all performance indices except the CSAB index and the 10th grade BSAP index. Despite the district's low rank on the CSAB index, scores for the third, fourth, and fifth grade exam indices are among the top third in the state. Greenwood 50's five-year average combined SAT score is 30 points above the state median, and the district ranked seventh in the state in the average percent of seniors taking the test (62.7 percent).

Greenwood 51's total performance index was pulled down by the district's overall lower-than-median ranking on several of the BSAP and MAT7 indices, which comprise a large percent of the total performance index. However, Greenwood 51 shows an impressive grade-related increase in rank in the MAT7 index. The district ranked below the median on the fourth, fifth, and seventh grade MAT7 indices, but well above the median on the ninth and eleventh grade indices. The district's total performance index was also pulled down somewhat by its SAT index, which takes into account both the combined SAT score and the percentage of seniors in the district taking the exam. Only 44.6 percent of Greenwood 51's seniors took the SAT, compared to the state median of nearly 50 percent.

Patterns in the test scores across grades are easily seen in the bar charts provided in Appendix F. In these charts, general declines are evident in the elementary to middle grades for District 51, and in the middle to high school grades for District 50. Further investigations by district officials are necessary to determine specific explanations and remedies for these performance fluctuations.

Table 2.

ACADEMIC PERFORMANCE INDEX DISTRIBUTION	
Index	School District
95-100	Lexington 5
90-94.9	Lexington 1
85-89.9	York 4
80-84.9	Anderson 1, Spartanburg 6
75-79.9	Pickens, Richland 2
70-74.9	Dorchester 2, Greenville, <b>Greenwood 52</b> , Lexington 2, Spartanburg 1, 2 & 5, York 2
65-69.9	Aiken, Anderson 5, Florence 5, Spartanburg 3 & 4, York 3
60-64.9	Anderson 2 & 4, Barnwell 29, Horry
55-59.9	Abbeville, Anderson 3, Berkeley, Florence 1, <b>Greenwood 50</b> , Kershaw, Spartanburg 7, York 1
50-54.9	Bamberg 1, Barnwell 45, Beaufort, Charleston, Florence 2, Laurens 55, Lexington 3 & 4, Sumter 17
45-49.9	Cherokee, Clarendon 3, Dillon 3, Edgefield, Georgetown, <b>Greenwood 51</b> , Laurens 56, Orangeburg 4, Union
40-44.9	Barnwell 19, Chesterfield, Clarendon 2, Darlington, Hampton 1, Lancaster, Newberry
35-39.9	Marion 1, Richland 1, Sumter 2
30-34.9	Chester, Colleton, Dillon 1 & 2, Florence 3, Saluda
25-29.9	Marion 2 & 4, Orangeburg 5, Williamsburg
20-24.9	Calhoun, Dorchester 4
15-19.9	Fairfield, Hampton 2, McCormick, Orangeburg 3
10-14.9	Bamberg 2, Marlboro
5-9.9	Florence 4
0-4.9	Allendale, Clarendon 1, Jasper, Lee, Marion 3

Note: Academic performance index represents the 5-year average (1993-94 to 1997-98) of the CSAB, BSAP, high school exit exam, and SAT indices, and the 4-year average (1994-95 to 1997-98) of the MAT7 index. Index values are measures of the average performance of the district relative to other districts and are scaled to a range of approximately 0-100. Districts with similar index values should be considered similar in performance. Districts are listed alphabetically within ranges.

## South Carolina's Top Academic Performers

The academic performance indices identified the state's overall top performing districts for the period 1993-94 through 1997-98 as Lexington 5, Lexington 1, York 4, and Anderson 1. This group was identified by selecting the four top ranked districts on the total performance index. These four districts were also the only districts to rank in the top ten on the SAT index, the five-year average combined SAT score, and the average percentage passing the high school exit exam.

On average, these districts are larger, wealthier, and more educated than the median district. Per capita personal income in the top performers group averages \$3,350 higher than in the median district, and assessed property value per pupil averages \$2,500 higher. The percentage of school-aged children in poverty is very different: 7.7 percent on average in the top performers group and 25.8 percent in the median district. And the average educational attainment level of the adult population is 12.3 years in the top performers group, compared to the state median of 11.5 years.

With a possible range from 0-100, the values for the total academic performance index and the SAT index both average around 92 in the top performers group, compared to at or around 50 for the state median. The average SAT score in the top performers group is over 100 points higher than the state median even though a higher percentage of students in these districts take the SAT.<sup>3</sup> Nineteen percent more students in this group of districts go on to college, on average, than in the median district. The top performers group has a higher high school completion rate than the median district, but this difference may be enhanced by higher immigration in the four top performing districts.<sup>4</sup> This group also has higher average teacher salaries and teacher experience than the median district, and lower teacher turnover.

A look at per pupil spending in the top performers group quickly dispelled the myth that higher *total* spending necessarily means higher academic performance (Table 3). General operating expenditures per pupil (debt service and capital expenditure excluded)<sup>5</sup> in the top performing districts were \$123 lower on average than in the median district. Most of the difference came from lower spending on school operations and leadership. On instruction and instructional support combined, the top performing districts spent \$90 more per pupil on average than the state median.

Table 3.

TOP ACADEMIC PERFORMERS: EXPENDITURES PER PUPIL, 1996-97								
District	Pupils	Instruction	Instruct'l. Support	Operations	Leadership	Total w/o Debt Service <sup>1</sup>	Total w/ Debt Service <sup>1</sup>	Total Perf. Index
Top Perf. Avg. <sup>2</sup>	9,799	\$3,056	\$755	\$991	\$334	\$5,136	\$5,770	92.1
State Median	4,191	\$3,075	\$646	\$1,063	\$481	\$5,259	\$5,605	50.4

<sup>1</sup>Total expenditures also include legal obligations. Row detail may not sum to totals due to rounding.

<sup>2</sup>The state's top performing school districts are: Lexington 5, Lexington 1, York 4, and Anderson 1.

<sup>3</sup> A higher percentage of students taking the SAT would be expected to lower a district's average score.

<sup>4</sup> The high school completion rate measures the percentage of a given eighth grade class that goes on to complete high school. As new residents move into a district, new high school students add to the number of completers even though they were not present and counted in the eighth grade.

<sup>5</sup> In this report, a clear distinction is made between total district expenditures for general operations (where debt service is excluded) and total expenditures including debt service. School bonds are approved by voters and paid for through a separate millage levy. Debt service can also vary considerably year-to-year and district-to-district. All expenditure totals in this report exclude direct capital expenditures, in keeping with State Department of Education convention.



A detailed study of the programs and policies of these four top performing school districts is required to understand the complex factors that contribute to their students' academic success. These districts also have favorable characteristics (higher income and educational attainment) that contribute to students' academic performance. The effect of district economic and demographic characteristics on academic performance is discussed later in this report.

### Greenwood District Academic Peers

The total academic performance index was used to identify academic peer groups for the three Greenwood County school districts. These peer groups provide each Greenwood district with a set of districts against which to track performance over time. The peer groups are comprised of the four districts ranking just above and below each of the three Greenwood districts on the total academic performance index (Table 4). The districts in the peer groups can be regarded as approximately equivalent performers.

Table 4.

GREENWOOD DISTRICT ACADEMIC PEERS					
Greenwood 50 Peer Districts	Academic Performance Index	Greenwood 51 Peer Districts	Academic Performance Index	Greenwood 52 Peer Districts	Academic Performance Index
Berkeley	59.3	Barnwell 45	52.8	Spartanburg 2	74.9
Kershaw	58.8	Lexington 3	52.6	Lexington 2	73.8
Florence 1	58.1	Laurens 55	51.8	Dorchester 2	73.4
Spartanburg 7	57.1	Sumter 17	50.9	York 2	73.4
<b>Greenwood 50</b>	<b>55.8</b>	<b>State Median</b>	<b>50.4</b>	<b>Greenwood 52</b>	<b>72.9</b>
Abbeville	55.8	<b>Greenwood 51</b>	<b>49.8</b>	Spartanburg 1	72.3
York 1	55.4	Edgefield	49.3	Spartanburg 5	71.5
Anderson 3	55.0	Union	49.1	Greenville	70.1
Florence 2	55.0	Orangeburg 4	48.9	Florence 5	69.8
<b>State Median</b>	<b>50.4</b>	Dillon 3	47.3	<b>State Median</b>	<b>50.4</b>

At a 1996-97 enrollment of 1,682, Greenwood 52—the highest-performing district in Greenwood County—is much smaller than all but one of the districts (Florence 5; 1,422 pupils) in its academic peer group. The average size of its peer districts is 11,674. Greenwood 50's academic peer group ranges in size from a very small district (Florence 2; 1,208 pupils) to one of the state's largest districts (Berkeley; 26,957 pupils). Greenwood 51 is the smallest district in its peer group (1,221), although the average district size in its peer group (4,104) is much smaller than that for the Greenwood 50 and 52 peer groups.

There is considerable variation in per pupil spending in major categories among peer group districts (Table 5). Total spending per pupil (debt service excluded) ranged from \$4,682 (Berkeley) to \$6,443 (Spartanburg 7) in Greenwood 50's peer group, a difference of \$1,761. Greenwood 51's peer group had total spending per pupil ranging from \$4,703 (Laurens 55) to \$5,920 (Lexington 3). And spending in Greenwood 52's peer group ranged from \$4,609 (Dorchester 2) to \$6,338 (York 2). *Average* total spending figures per pupil in each peer group were much closer, however, ranging from a low of \$5,029 in Greenwood 52's peer group to \$5,109 (Greenwood 51) and \$5,136 (Greenwood 50).

Compared to their academic peer group averages, Greenwood 50 and 52 both have higher-than-average per pupil expenditures in some categories and lower per pupil expenditures in others. Greenwood 51 was the only Greenwood County school district to show below-average spending in most categories compared to its academic peer group.

Table 5.

GREENWOOD ACADEMIC PEERS: EXPENDITURES PER PUPIL, 1996-97								
District	Pupils	Instruction	Instruct'l. Support	Operations	Leadership	Total w/o Debt Service <sup>1</sup>	Total w/ Debt Service <sup>1</sup>	Total Perf. Index
Greenwood 50 <sup>2</sup>	8,951	\$3,045	\$774	\$990	\$442	\$5,250	\$5,413	55.8
50 Peer Avg.	9,121	\$2,979	\$638	\$1,067	\$424	\$5,109	\$5,321	57.8
Greenwood 51 <sup>2</sup>	1,221	\$2,934	\$599	\$957	\$617	\$5,108	\$5,183	49.8
51 Peer Avg.	4,104	\$3,004	\$633	\$1,029	\$468	\$5,136	\$5,445	50.5
Greenwood 52	1,682	\$2,987	\$640	\$859	\$574	\$5,088	\$5,369	72.9
52 Peer Avg.	11,674	\$3,057	\$616	\$961	\$395	\$5,029	\$5,534	71.5
<b>State Median</b>	<b>4,191</b>	<b>\$3,075</b>	<b>\$646</b>	<b>\$1,063</b>	<b>\$481</b>	<b>\$5,259</b>	<b>\$5,605</b>	<b>50.4</b>

<sup>1</sup>Total expenditures also include legal obligations. Row detail may not sum to totals due to rounding.

<sup>2</sup>Greenwood 50 and 51 expenditures were adjusted to correct for misallocated expenditures.

## **DISTRICT SIZE, FISCAL AUTHORITY, AND ECONOMIC DEVELOPMENT COMPETITORS**

This section identifies additional peer groups for comparison with the three Greenwood County school districts. The previous section grouped districts with similar academic performance. In this section, districts are grouped by district size, district fiscal authority, and Greenwood County economic development competitor (EDC) status. Appendix G lists each district's classifications.

Statistics for revenues, expenditures, academic performance indices, and other district characteristics were computed and used to describe the "average" district in each group.<sup>6</sup> These hypothetical districts were then compared with each other and the three Greenwood County districts. The analyses in this section reveal interesting similarities and differences among groups but cannot confirm or deny specific cause-and-effect relationships.

### **District Size**

One of the most obvious traits that varies widely across districts is the student population. The state's 86 school districts were divided into five size classes based on pupils in 1996-97: 2,000 and under (17 districts); 2,001 to 6,000 (35); 6,001 to 12,000 (20); 12,001 to 24,000 (8); and over 24,000 (6). The largest 14 districts include seven countywide districts, with Greenville and Charleston counties being the largest. Greenwood 50 is in the size class with 6,001 to 12,000 students; Greenwood 51 and 52 are in the smallest size class with under 2,000 students each.

In South Carolina, per pupil finances are related to school district size (Tables 6 and 7). Districts in the smallest size class had the highest average total revenues (\$5,450) and expenditures per pupil (\$5,526), while the largest size class averaged the lowest per pupil revenues (\$5,003) and expenditures (\$5,085). Higher revenues in the smaller districts result from higher state and federal revenues per pupil. Local revenues per pupil in the smallest size class were considerably lower on average than in the larger size classes; the largest four size classes were closer to each other in both revenue levels and revenue shares. These facts are likely related to tax base and personal income rather than the number of pupils itself.

The three Greenwood County school districts all reported total revenues per pupil below the averages in their respective size classes. Greenwood 50 has a typical division between local revenue and state and federal aid; Greenwood 51 and 52 have much higher shares of revenue from local sources (34.5 and 47.7 percent, respectively) than other districts in their size class, on average (26.3 percent). All three districts had average annual growth in assessed property value and millage rates below their respective size class averages.

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<sup>6</sup> Group averages are calculated as if each group represented a single district by using appropriate weights. For example, average per pupil spending in the different size classes is calculated by weighting per pupil spending in each district by its share of spending in the group and then adding up the weighted values. SAT scores are weighted by the district's share of the total seniors in the group that took the test.

Table 6.

DISTRICT SIZE: PER PUPIL REVENUES, 1996-97								
	District Size					Greenwood Districts		
	Under 2,000	2,001-6,000	6,001-12,000	12,001-24,000	Over 24,000	GWD 50	GWD 51	GWD 52
Revenues Per Pupil*	\$5,450	\$5,359	\$5,393	\$5,120	\$5,003	\$5,191	\$4,981	\$4,958
Local	\$1,434	\$1,834	\$1,927	\$1,941	\$1,855	\$1,810	\$1,720	\$2,365
State	\$3,285	\$2,977	\$2,961	\$2,872	\$2,712	\$2,922	\$2,901	\$2,275
Federal	\$731	\$548	\$505	\$308	\$435	\$459	\$359	\$317
Revenue Shares								
Local	26.3%	34.2%	35.7%	37.9%	37.1%	34.9%	34.5%	47.7%
State	60.3%	55.6%	54.9%	56.1%	54.2%	56.3%	58.2%	45.9%
Federal	13.4%	10.2%	9.4%	6.0%	8.7%	8.8%	7.2%	6.4%
Avg. Ann. Growth '87-'97								
Local Revenue per pupil	6.4%	5.9%	5.6%	4.1%	4.1%	4.5%	4.8%	3.8%
Total Revenue per pupil	6.2%	6.1%	6.1%	5.8%	5.5%	5.8%	5.6%	4.2%
APV per pupil	5.5%	4.5%	4.7%	4.0%	4.6%	3.6%	4.1%	4.9%
Millage	3.4%	4.0%	4.4%	3.1%	2.8%	4.1%	-2.1%	2.6%
Assessed Value Per Pupil	\$9,187	\$13,365	\$14,405	\$15,908	\$19,373	\$13,721	\$8,166	\$17,429

\* Revenues for capital projects and debt service are excluded from this analysis.

School district size also influences how funds are spent. Smaller districts exhibit higher average fixed costs than do larger districts. As the size of the district increases, average fixed costs such as leadership per pupil and school operations expenditures per pupil (such as transportation and facilities maintenance) tend to decline. Leadership's share of total spending (debt service excluded) declines from a high of 11.3 percent in the smallest size class to a low of 7.4 percent in the second-to-highest size class. For this reason, smaller districts have a lower percentage of total spending on instruction and instructional support combined than larger districts. All three Greenwood districts spend less per pupil in most categories than the average districts in their size classes.

Academic performance generally improves with size (Tables 8 and 9). The group of smallest districts has the lowest average personal income (\$18,052), educational attainment (11.4 years), average teacher salary (\$13,354) and teacher experience level (13.1 years). They also have the highest average unemployment rate (9.2 percent), percentage of children in poverty (33.5 percent), and average teacher turnover (12.1 percent). The larger, highest-performing size class has high average personal income (\$21,606) and educational attainment (12.4 years), and the highest average teacher salary (\$34,834). This group also has the lowest unemployment rate (4.5 percent) and teacher turnover rate (9.9 percent).

Table 7.

DISTRICT SIZE: PER PUPIL EXPENDITURES, 1996-97								
	District Size					Greenwood Districts		
	Under 2,000	2,001- 6,000	6,001- 12,000	12,001- 24,000	Over 24,000	GWD 50 <sup>3</sup>	GWD 51 <sup>3</sup>	GWD 52
Total Exp. w/o Debt Service <sup>1</sup>	\$5,526	\$5,356	\$5,411	\$5,166	\$5,085	\$5,250	\$5,108	\$5,087
Total Instruction	\$3,033	\$3,143	\$3,179	\$3,093	\$3,018	\$3,045	\$2,934	\$2,987
Face-to-Face Teaching	2,799	2,912	2,928	2,890	2,797	2,836	2,634	2,748
Classroom Materials	234	230	251	203	221	209	300	238
Total Instructional Support	\$694	\$626	\$699	\$678	\$627	\$774	\$599	\$640
Pupil Support	558	486	506	499	435	524	527	542
Teacher Support	101	101	151	131	134	206	33	85
Program Support	35	39	42	49	58	44	39	13
Total Operations	\$1,173	\$1,086	\$1,087	\$1,009	\$1,001	\$990	\$957	\$859
Noninstructional Pupil Services	551	510	477	414	439	413	374	401
Facilities	479	453	477	469	451	424	495	415
Business Services	143	123	133	126	111	153	87	43
Total Leadership	\$625	\$501	\$446	\$385	\$439	\$442	\$617	\$574
School Management	320	314	330	298	313	323	334	335
Program Management	139	77	52	33	53	61	106	46
District Management	166	110	64	54	73	58	177	193
Total Exp. incl. Debt Service <sup>1</sup>	\$5,743	\$5,746	\$5,730	\$5,834	\$5,568	\$5,413	\$5,183	\$5,369
Debt Service	217	390	319	668	483	163	75	282
Avg. Annual Growth, 1987-97 <sup>2</sup>	6.6%	6.6%	6.5%	6.2%	6.0%	6.4%	5.9%	4.9%

<sup>1</sup>Total expenditures may differ from the sum of the expenditures categories because of rounding error and because the total includes legal obligations, which are not enumerated above and were only reported by a few districts in 1996-97. Capital projects are excluded.

<sup>2</sup>Average annual expenditure growth was calculated using total operating expenditures published in the SC Department of Education's *Rankings of the School Districts and Counties of South Carolina*, 1986-87 and 1996-97. These figures exclude capital projects, debt service, and direct state support for instructional materials, testing, and transportation.

<sup>3</sup>Expenditures for Greenwood 50 and 51 were adjusted to correct accounting misallocations and differ from those reported by the State Department of Education. Totals and debt service are unchanged.

Greenwood 52's total academic performance index and SAT index are both far above its size class average. Greenwood 51 also performed well above its size class averages in most academic performance measures. Academic performance in Greenwood 50 is closer to its size class average than in the two smaller districts. The average teacher salary in Greenwood 51 was \$455 lower than the district's size class average, but the district also reported very low teacher turnover in 1997-98. Conversely, the average teacher salary in Greenwood 52 was nearly \$1,400 higher than the average district in its size class, but teacher turnover was relatively high. Greenwood 50 reported an average teacher salary over \$1,000 lower than its size class, with higher-than-average teacher turnover.

Table 8.

DISTRICT SIZE: ACADEMIC PERFORMANCE, 1997-98								
	District Size					Greenwood Districts		
	Under 2,000	2,001-6,000	6,001-12,000	12,001-24,000	Over 24,000	GWD 50	GWD 51	GWD 52
Total Performance Index	38.5	44.9	52.5	74.8	59.7	55.8	49.8	72.9
5 yr. avg. SAT Score	899	909	932	995	964	949	945	967
% Taking SAT	44.9%	48.2%	52.3%	61.8%	54.9%	62.7%	44.6%	59.0%
SAT Index	39.9	46.8	55.1	78.8	66.9	65.2	57.7	69.6
Exit Exam Index	75.6	78.2	79.8	85.8	82.2	78.2	82.4	86.9
BSAP Index	64.9	67.0	69.9	77.4	71.6	70.6	69.2	77.2
MAT-7 Index	56.0	58.0	60.3	67.4	62.6	61.7	58.0	67.3
CSAB Index	74.1%	73.9%	74.1%	78.4%	72.4%	69.5%	78.4%	84.0%
% age 5-17 in Poverty	33.5%	26.4%	23.2%	14.8%	22.7%	20.7%	18.3%	18.6%
Number of Districts	17	35	20	8	6	1	1	1

Table 9.

DISTRICT SIZE: CHARACTERISTICS								
	District Size					Greenwood Districts		
	Under 2,000	2,001 to 6,000	6,001 to 12,000	12,001-24,000	Over 24,000	GWD 50	GWD 51	GWD 52
Per Capita Personal Income 1996	\$18,052	\$19,651	\$19,177	\$21,606	\$21,786	\$19,727	\$19,727	\$19,727
Unemployment Rate, 1997	9.2%	5.9%	6.1%	4.5%	4.8%	7.1%	7.1%	7.1%
% Manuf. Employment, 1996	24.7%	27.0%	28.5%	15.0%	15.4%	38.1%	38.1%	38.1%
Avg. Educ. Attainmt.(Yrs.), 1990	11.4	11.6	11.6	12.4	12.4	11.7	11.7	11.7
Teen Pregnancy Rate, 1996	4.5%	4.3%	4.6%	3.5%	4.2%	6.2%	6.2%	6.2%
% Completers to College, 96-97	49.3%	50.7%	56.0%	65.2%	62.3%	63.0%	63.2%	59.2%
% Completers to Work/Other	46.7%	45.7%	40.4%	31.7%	34.6%	33.1%	36.8%	39.5%
% Completers w/ Dipl., 1996-97	73.3%	66.4%	68.9%	73.0%	68.5%	62.5%	72.4%	87.1%
H.S. Completion Rate, 1996-97	93.0%	92.8%	94.0%	94.4%	94.2%	93.0%	100.0%	97.4%
Pupil-Teacher Ratio, 1997-98	15.4	15.5	15.5	16.1	15.6	15.3	16.5	15.6
Avg. Teacher Salary, 1997-98	\$31,354	\$33,277	\$33,858	\$34,834	\$33,381	\$32,727	\$30,899	\$32,750
Teacher Exp. in Years, 1997-98	13.1	13.1	13.4	13.3	13.2	13.0	12.8	12.6
Teacher Turnover Rate, 1997-98	12.1%	10.6%	10.5%	9.9%	10.4%	11.5%	7.2%	15.6%
Number of Districts	17	35	20	8	6	1	1	1

### Fiscal Authority

A second comparison among districts was based on levels of fiscal autonomy. The South Carolina School Boards Association divides districts into three general classifications regarding fiscal authority: none, limited, and full. Greenwood's three districts all have no fiscal authority. One might expect that districts with full fiscal authority would raise more local revenue per pupil than districts with limited or no fiscal authority. This analysis and the regression analysis in the final section of this report appear to support that hypothesis (Table 10).

Districts with full fiscal authority raised a higher share of total revenue from local sources and had higher local revenues per pupil on average (37.5 percent; \$1,987) than did the districts with no fiscal authority (35.4 percent; \$1,925) and limited fiscal authority (35.0 percent; \$1,760). This group of districts also had the highest average annual growth in both total revenue (6.0 percent) and local revenue (5.1 percent) between 1986-87 and 1996-97. Total revenue per pupil was highest in the group of districts with no fiscal authority (\$5,437) and lowest in the group with limited authority (\$5,033).

Table 10.

FISCAL AUTHORITY & SC EDCs: PER PUPIL REVENUES, 1996-97								
	District Fiscal Authority			SC Economic Development Competitors		Greenwood Districts		
	None	Limited	Full	EDC No	EDC Yes	GWD 50	GWD 51	GWD 52
Revenues Per Pupil*	\$5,437	\$5,033	\$5,303	\$5,267	\$5,126	\$5,191	\$4,981	\$4,958
Local	\$1,925	\$1,760	\$1,987	\$1,851	\$1,909	\$1,810	\$1,720	\$2,365
State	\$2,932	\$2,836	\$2,902	\$2,886	\$2,868	\$2,922	\$2,901	\$2,275
Federal	\$580	\$437	\$414	\$529	\$349	\$459	\$359	\$317
Revenue Shares								
Local	35.4%	35.0%	37.5%	35.1%	37.2%	34.9%	34.5%	47.7%
State	53.9%	56.3%	54.7%	54.8%	56.0%	56.3%	58.2%	45.9%
Federal	10.7%	8.7%	7.8%	10.1%	6.8%	8.8%	7.2%	6.4%
Avg. Ann. Growth '87-'97								
Local Revenue per pupil	5.0%	4.8%	5.1%	5.0%	4.8%	4.5%	4.8%	3.8%
Total Revenue per pupil	5.9%	5.7%	6.0%	5.9%	5.8%	5.8%	5.6%	4.2%
APV per pupil	4.6%	4.7%	4.5%	4.5%	4.7%	3.6%	4.1%	4.9%
Millage	4.2%	3.1%	3.5%	3.9%	2.8%	4.1%	-2.1%	2.6%
Assessed Value Per Pupil	\$16,091	\$16,338	\$15,110	\$15,735	\$16,125	\$13,721	\$8,166	\$17,429

\* Revenues for capital projects and debt service are excluded from this analysis.

Along with relatively high revenue growth, the full authority districts had the lowest growth in assessed property value, on average, and the lowest assessed value per pupil. Millage rates grew at a rate of 3.5 percent per year in the full authority group between 1986-97 and 1996-97, compared to 4.2 percent in the no-authority group and 3.1 percent in the limited authority group. The limited authority districts had the highest assessed property value per pupil.

The State Department of Education's measures of district tax effort and ability<sup>7</sup> clearly show the differences between the three groups (Table 11). The no-authority group had an average tax effort slightly above the state average, but an average ability index only about 65 percent of the state average. The limited authority group had an average tax effort at 90 percent of the state average, but above-average ability. The full authority group had both above-average tax effort and ability. These observations suggest that districts with no and full fiscal authority are able to raise more revenue from a given tax base than are limited authority districts. It is difficult to say whether this

<sup>7</sup> The ability index is the assessed property value in the school district, adjusted for current market value, divided by the same figure for the entire state. The ability index measures a district's share of assessed value in the state. Tax effort is obtained by dividing district local property tax revenue by the product of its ability index and the state total of local property tax revenue. A tax effort greater than one means that the district is raising more local tax revenue than it would be expected to if all districts raised local revenue in direct proportion to their ability.

result is directly related to fiscal authority or the interests of the voters in those districts based solely on this analysis.

The three Greenwood County districts have very different revenue-raising abilities and tax efforts. Greenwood 50 has an ability index (.01299) and tax effort (.996) above or near the state averages. Greenwood 51 has a very low ability index (.00101) and a very high tax effort (1.681)—the fourth highest in the state in 1996-97. Greenwood 52 has an ability index below the state average (.00309) and tax effort above the state average (1.080).

Table 11.

TAX EFFORT AND ABILITY INDEX BY FISCAL AUTHORITY, 1996-97		
Fiscal Authority	Average Tax Effort*	Average Ability Index*
None	1.025	0.00765
Limited	0.903	0.01367
Full	1.121	0.01417
State Average	1.000	0.01162

\* Computed by authors using district tax effort and ability index values in *Rankings, 1996-97*.

As expected, total per pupil spending levels mirrored the revenue results. Total operating expenditures per pupil in the group of districts with no fiscal authority averaged \$5,525 in 1996-97, compared to \$5,302 in the full-authority group and \$5,082 in the limited-authority group (Table 12). Average per pupil spending on instruction and instructional support combined was nearly identical in districts with no and full authority and over \$200 less in the limited authority group. Average annual total expenditure growth was also highest in the no-authority group and lowest in the limited-authority group. All three Greenwood County districts reported total revenues and expenditures per pupil that were considerably lower than the no-fiscal-authority group averages (\$5,437 and \$5,525, respectively).

Average academic performance was lowest in the group with no fiscal authority and highest in the group with full fiscal authority. This group includes the Lexington and Spartanburg county districts, which are some of the highest-performing districts in the state. The group of districts with full fiscal authority had the highest average teacher salaries and teacher experience, and the lowest teacher turnover (Tables 13 and 14). The opposite was true for the group of districts with no fiscal authority. Average teacher salaries in the three Greenwood County districts were near or below the average for the group with no fiscal authority (\$32,713).



Table 12.

FISCAL AUTHORITY & SC EDCs: PER PUPIL EXPENDITURES, 1996-97								
	District Fiscal Authority			SC Economic Development Competitors		Greenwood Districts		
	None	Limited	Full	EDC No	EDC Yes	GWD 50 <sup>3</sup>	GWD 51 <sup>3</sup>	GWD 52
Total Exp. w/o Debt Service <sup>1</sup>	\$5,525	\$5,082	\$5,302	\$5,348	\$5,101	\$5,250	\$5,108	\$5,087
Total Instruction	\$3,154	\$3,029	\$3,159	\$3,119	\$3,070	\$3,045	\$2,934	\$2,987
Face-to-Face Teaching	2,926	2,821	2,903	2,885	2,851	2,836	2,634	2,748
Classroom Materials	228	208	256	234	219	209	300	238
Total Instructional Support	\$711	\$610	\$685	\$669	\$639	\$774	\$599	\$640
Pupil Support	510	458	489	480	481	524	527	542
Teacher Support	146	108	150	138	118	206	33	85
Program Support	55	44	46	51	41	44	39	13
Total Operations	\$1,153	\$1,003	\$1,033	\$1,081	\$992	\$990	\$957	\$859
Noninstructional Pupil Services	506	448	451	484	425	413	374	401
Facilities	499	439	467	466	457	424	495	415
Business Services	148	116	115	131	110	153	87	43
Total Leadership	\$504	\$439	\$424	\$478	\$400	\$442	\$617	\$574
School Management	335	308.8	310.2	328	293	323	334	335
Program Management	76	52.4	49.1	64	44	61	106	46
District Management	93	78.1	64.7	86	62	58	177	193
Total Exp. incl. Debt Service <sup>1</sup>	\$6,001	\$5,535	\$5,713	\$5,774	\$5,577	\$5,413	\$5,183	\$5,369
Debt Service	476	452	411	426	476	163	75	282
Avg. Annual Growth, 1987-97 <sup>2</sup>	6.5%	6.1%	6.4%	6.4%	6.1%	6.4%	5.9%	4.9%

<sup>1</sup>Total expenditures may differ from the sum of the categories because of rounding error and because the total includes legal obligations, which are not enumerated above and were only reported by a few districts in 1996-97. Capital projects are excluded.

<sup>2</sup>Average annual expenditure growth was calculated using total operating expenditures published in the SC Department of Education's *Rankings of the School Districts and Counties of South Carolina*, 1986-87 and 1996-97. These figures exclude capital projects, debt service, and direct state support for instructional materials, testing, and transportation.

<sup>3</sup>Expenditures for Greenwood 50 and 51 were adjusted to correct accounting misallocations and differ from those reported by the State Department of Education. Totals and debt service are unchanged.

Table 13.

FISCAL AUTHORITY & SC EDCs: ACADEMIC PERFORMANCE, 1997-98								
	District Fiscal Authority			SC Economic Development Competitors		Greenwood Districts		
	None	Limited	Full	EDC No	EDC Yes	GWD 50	GWD 51	GWD 52
Total Performance Index	45.2	58.2	63.6	48.8	70.8	55.8	49.8	72.9
5 yr. avg. SAT Score	926	951	967	927	983	949	945	967
% Taking SAT	51.9%	54.6%	54.1%	50.4%	59.6%	62.7%	44.6%	59.0%
SAT Index	51.6	62.3	66.2	53.2	74.4	65.2	57.7	69.6
Exit Exam Index	76.6	82.2	83.3	78.6	85.8	78.2	82.4	86.9
BSAP Index	66.1	71.5	74.1	68.1	76.2	70.6	69.2	77.2
MAT-7 Index	58.5	62.0	63.7	59.2	66.0	61.7	58.0	67.3
CSAB Index	71.8%	75.0%	75.2%	73.3%	76.1%	69.5%	78.4%	84.0%
% age 5-17 in Poverty	27.8%	21.7%	19.9%	26.0%	16.5%	20.7%	18.3%	18.6%
Number of Districts	31	33	22	58	28	1	1	1

Table 14.

FISCAL AUTHORITY & SC EDCs: CHARACTERISTICS								
	District Fiscal Authority			SC Economic Development Competitors		Greenwood Districts		
	None	Limited	Full	EDC No	EDC Yes	GWD 50	GWD 51	GWD 52
Per Capita Personal Income 1996	\$19,471	\$20,026	\$20,323	\$18,740	\$20,906	\$19,727	\$19,727	\$19,727
Unemployment Rate, 1997	7.1%	6.1%	4.9%	7.2%	5.0%	7.1%	7.1%	7.1%
% Manuf. Employment, 1996	20.0%	25.5%	24.1%	21.8%	24.9%	38.1%	38.1%	38.1%
Avg. Educ. Attainmt. (Yrs.), 1990	11.9	11.7	11.8	11.8	11.8	11.7	11.7	11.7
Teen Pregnancy Rate, 1996	4.3%	4.2%	4.2%	4.5%	4.1%	6.2%	6.2%	6.2%
% Completers to College, 96-97	55.5%	55.6%	59.2%	54.6%	64.9%	63.0%	63.2%	59.2%
% Completers to Work/Other	41.5%	36.9%	37.5%	42.2%	31.6%	33.1%	36.8%	39.5%
% Completers w/ Dipl., 1996-97	68.7%	69.3%	69.7%	67.8%	71.6%	62.5%	72.4%	87.1%
H.S. Completion Rate, 1996-97	92.0%	94.1%	94.9%	93.1%	95.2%	93.0%	100.0%	97.4%
Pupil-Teacher Ratio, 1997-98	15.5	15.8	15.4	15.5	15.9	15.3	16.5	15.6
Avg. Teacher Salary, 1997-98	\$32,713	\$33,617	\$34,460	\$33,210	\$34,513	\$32,727	\$30,899	\$32,750
Teacher Exp. in Years, 1997-98	12.7	13.4	13.5	13.0	13.6	13.0	12.8	12.6
Teacher Turnover Rate, 1997-98	12.5%	9.9%	9.6%	11.0%	9.4%	11.5%	7.2%	15.6%
Number of Districts	31	33	22	58	28	1	1	1

### Economic Development Competitors in South Carolina, North Carolina, and Georgia

A third comparison was made with those districts located in counties identified as direct economic development competitors (EDCs) with Greenwood County. The GPI identified seven EDC counties in South Carolina (Aiken, Anderson, Florence, Greenville, Lexington, Spartanburg, and York), four EDC counties in North Carolina (Catawba, Cleveland, Guilford, and Iredell), and five in Georgia (Banks, Clarke, Columbia, Richmond, and Troup). The South Carolina EDC

counties contain 28 school districts. The North Carolina counties contain nine districts and the Georgia counties contain five districts.

### **South Carolina EDCs**

Within South Carolina, the group of school districts located in EDC counties are better academic performers and have lower per pupil revenues and expenditures than the 58 remaining districts in the state, on average (Tables 10, 12, and 13). The only category in which the EDC group spent more per pupil than the non-EDC group was debt service (\$476 vs. \$426). In the EDC group, annual spending growth per pupil since 1986-87 averaged 6.1 percent per year, compared to 6.4 percent per year in the other group. Greenwood 50 spends \$150 more per pupil than the group of South Carolina EDCs. Greenwood 51 and 52 spend below the SCEDC group average.

The SCEDC group also averaged a higher share of local revenues and a lower share of state and federal revenues than the non-EDC group. This result was expected as these EDC districts are from larger, more urban counties with larger, more diverse tax bases and a greater ability to raise local revenue. On average, districts in the non-EDC group had to work harder to raise revenue than districts in the EDC group. Since 1986-87, local revenue per pupil grew slightly faster per year in the non-EDC group (5.8 percent), yet that group's tax base grew more slowly (4.5 percent) and its average millage more quickly (3.9 percent) than in the EDC group (4.7 and 2.8 percent, respectively).

The EDC group had high performance measures in all categories—not surprising as this group contains some of the best-performing districts in the state. Notably, Greenwood 52's performance profile is very similar to the EDC group performance averages. Greenwood 50 and 51's performance profiles are closest to the non-EDC group averages for the BSAP and MAT7 indices. However, these two districts also send about 63 percent of their high school completers to college—a level approaching the EDC average of 64.9 percent (Table 14). All three Greenwood districts had combined SAT scores above the non-EDC group average, and below the EDC average.

The EDC districts have higher average personal income and manufacturing employment, and lower teen pregnancy rates and child poverty than the non-EDC districts. Average teacher salaries and teacher years of experience are also higher in the better-performing EDC group, on average. Teen pregnancy and unemployment rates in Greenwood County are similar to those in the non-EDC group. The three Greenwood County districts all have average teacher salaries and experience lower than the EDC group average.

### **Out-of-State School Districts**

It was difficult comparing the out-of-state school districts directly with South Carolina school districts in many areas due to variations in reporting processes and testing procedures. Revenue and expenditure comparisons among the South Carolina and out-of-state districts were made using 1995-96 data from a nationwide database maintained by the U.S. Census Bureau.<sup>8</sup> These data do not correspond to any other school district finances presented in this report. Economic

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<sup>8</sup> U.S. Census Bureau, *Public Elementary-Secondary Education Finance Data*. [On-line]. Available: <http://www.census.gov/govs/www/school.htm>.

and demographic information was obtained from a variety of sources.<sup>9</sup> The only readily comparable standardized test was the SAT, which was obtained from each state's education department. SAT scores are reported as three and four-year averages to reduce year-to-year variability.

In both total and instructional spending per pupil, the South Carolina state medians and in-state EDC district averages are below those for North Carolina and Georgia (Table 15). The out-of-state EDC districts spend more per pupil overall than the median district in their respective states, while the South Carolina EDC districts have total spending per pupil well below the state median. Differences of more than \$300 in average total expenditures per pupil exist between the South Carolina EDC districts and the Georgia and North Carolina districts.

The out-of-state EDC districts get more of their revenue from state (rather than local) sources than do the South Carolina districts. And all of the EDC districts—in and out of South Carolina—get a lower percentage of state money than their respective state median districts. This fact is likely due to relatively higher property values in these districts. The Georgia school districts get a small percentage of their state revenue from lottery receipts. While amounts vary from year-to-year, the Georgia EDC districts received an average of 1.5 percent of their total revenues from this source.<sup>10</sup>

The Mooresville city school district is one of only two districts in North Carolina that have the authority to set millage rates. All other school districts in North Carolina require approval of budgets by county-level commissioners. Amounts of revenue disbursed to the school districts are set by the county commissioners on a per pupil basis, and every school district receives the same local revenue per pupil for operating expenditures as other school districts in the county. Capital needs are considered on a project-by-project basis. In Georgia, county-level school districts have full tax-levying authority.

The North Carolina and South Carolina EDC districts are very similar in average SAT performance, with a combined score of 982 in the North Carolina districts and 983 in the South Carolina districts. The Georgia districts lag behind slightly with an average score of 962. When compared to their state median SAT scores, however, a different picture emerges. The North Carolina and Georgia districts have average SAT scores at or below their state median scores, while the South Carolina EDC districts perform well above the South Carolina median. Based on the SAT, the South Carolina EDC districts are relatively high-performing districts within the state; the North Carolina and Georgia EDC districts are only average performers within their own states.

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<sup>9</sup> NC demographics: North Carolina Department of Commerce, Economic Policy and Research Division, *1998 County and Regional Scans*. NC education data: North Carolina Department of Public Instruction, *North Carolina Public Schools Infoweb* [available at: <http://www.dpi.state.nc.us/>]. GA demographics: Georgia Department of Labor, *Employment and Wages County 1998* [available at: <http://www.state.ga.us/lmi/files/ewcou98.pdf>]. GA education data: Georgia Department of Education, *Public Education Report Card*.

<sup>10</sup> Three-year average.

Table 15.

<b>NC &amp; GA ECONOMIC DEVELOPMENT COMPETITORS: FINANCES &amp; PERFORMANCE, 1995-96</b>					
<b>District</b>	<b>Total Spending Per Pupil</b>	<b>Instruct'l Spending Per Pupil</b>	<b>% Local Revenue</b>	<b>% State Revenue</b>	<b>Average Total SAT*</b>
<b>North Carolina State Median</b>	<b>\$4,855</b>	<b>\$2,999</b>	<b>26.8%</b>	<b>65.6%</b>	<b>982</b>
<b>NC EDC Weighted Average</b>	<b>\$4,994</b>	<b>\$3,108</b>	<b>35.3%</b>	<b>59.2%</b>	<b>982</b>
Catawba County	\$4,580	\$3,043	35.3%	60.4%	1001
Hickory	\$4,943	\$3,145	34.3%	59.2%	1021
Newton-Conover	\$5,216	\$3,362	38.2%	55.5%	961
Cleveland County	\$4,596	\$2,922	30.8%	63.2%	964
Kings Mountain	\$5,314	\$3,263	26.3%	63.1%	945
Shelby	\$5,181	\$3,245	35.0%	56.8%	969
Guilford County	\$5,226	\$3,197	37.6%	57.3%	983
Iredell-Statesville	\$4,655	\$2,886	31.1%	62.9%	968
Mooreville	\$4,536	\$2,695	34.6%	60.7%	1013
<b>Georgia State Median</b>	<b>\$4,864</b>	<b>\$2,972</b>	<b>26.8%</b>	<b>63.6%</b>	<b>975</b>
<b>GA EDC Weighted Average</b>	<b>\$4,868</b>	<b>\$2,957</b>	<b>34.9%</b>	<b>57.7%</b>	<b>962</b>
Banks County	\$4,264	\$2,565	35.3%	56.1%	955
Clarke County	\$5,824	\$3,441	44.5%	48.2%	987
Columbia County	\$4,288	\$2,781	35.8%	60.7%	1038
Richmond County	\$4,780	\$2,905	32.6%	57.8%	920
Troup County	\$5,192	\$2,978	31.2%	62.7%	953
<b>SC State Median</b>	<b>\$4,642</b>	<b>\$2,792</b>	<b>33.9%</b>	<b>57.1%</b>	<b>919</b>
<b>SC EDC Weighted Average</b>	<b>\$4,560</b>	<b>\$2,829</b>	<b>40.2%</b>	<b>53.8%</b>	<b>983</b>
Greenwood 50	\$4,845	\$2,836	36.2%	55.9%	949
Greenwood 51	\$4,686	\$2,567	34.5%	59.0%	945
Greenwood 52	\$4,892	\$2,939	49.6%	45.0%	967

\* SAT scores are multiyear averages. Scores for the Georgia districts are averaged over the period 1995-96 to 1997-98 and scores for the North Carolina districts are averaged over the period 1994-95 to 1997-98.

Demographic statistics for the economic development competitors show significant variations both within states and across state borders (Table 16). The following lists a few of the highlights from the demographic analysis:

- North Carolina and Georgia EDC districts are much larger on average than the South Carolina districts.
- Per capita income in the North Carolina EDC districts is significantly higher than in the South Carolina districts, which is in turn higher than in the Georgia districts. North Carolina's average is affected by relatively high income in the very large Guilford County school district, while South Carolina sees a similar effect with the Greenville County school district.

- Adjacent counties in Georgia—Columbia and Richmond—represent the extremes in the percentage of students eligible for free or reduced lunches at 18.5 percent and 64.9 percent, respectively.
- The North Carolina EDCs have a significantly higher percentage of workers employed in manufacturing than the Georgia EDCs, topped by 44.1 percent in Catawba County/Hickory. Richmond County, Georgia was at the low end, with only 12.5 percent of total employment in manufacturing.
- County unemployment rates show considerable variation, from a low of 2.8 percent in Iredell County, North Carolina, to a high of 7.3 percent in Richmond County, Georgia.

Table 16.

NC & GA ECONOMIC DEVELOPMENT COMPETITORS: DEMOGRAPHICS					
District	Students 1997-98	Free & Reduced Lunch Elig.*	Per Capita Income 1995	Unempl. Rate 1997	% Empl. in Manuf. 1996
<b>North Carolina:</b>					
Catawba County	15,303	24.0%	\$22,683	3.2%	44.1%
Hickory	4,278	42.1%	\$22,683	3.2%	44.1%
Newton-Conover	2,725	34.4%	\$22,683	3.2%	44.1%
Cleveland County	9,109	32.9%	\$18,647	5.4%	35.1%
Kings Mountain	4,322	34.8%	\$18,647	5.4%	35.1%
Shelby	3,288	47.2%	\$18,647	5.4%	35.1%
Guilford County	60,322	36.1%	\$25,462	3.0%	21.1%
Iredell-Statesville	15,986	31.2%	\$20,961	2.8%	32.4%
Mooresville	3,763	28.4%	\$20,961	2.8%	32.4%
<b>NC EDC Weighted Average</b>	<b>13,233</b>	<b>33.8%</b>	<b>\$23,238</b>	<b>3.3%</b>	<b>29.2%</b>
<b>Georgia:</b>					
Banks County	2,030	49.9%	\$17,009	5.2%	37.7%
Clarke County	10,864	55.9%	\$18,098	3.4%	17.1%
Columbia County	17,972	18.5%	\$17,810	4.4%	19.5%
Richmond County	35,750	64.9%	\$19,251	7.3%	12.5%
Troup County	11,031	48.8%	\$17,671	5.1%	35.2%
<b>GA EDC Weighted Average</b>	<b>15,529</b>	<b>50.2%</b>	<b>\$18,473</b>	<b>5.7%</b>	<b>18.6%</b>
<b>SC EDC Weighted Average</b>	<b>8,312</b>	<b>36.7%</b>	<b>\$20,808</b>	<b>4.8%</b>	<b>25.6%</b>
Greenwood 50	8,478	36.5%	\$19,727	7.1%	38.1%
Greenwood 51	1,209	47.2%	\$19,727	7.1%	38.1%
Greenwood 52	1,571	41.3%	\$19,727	7.1%	38.1%

\* NC figures represent free or reduced lunch applications. GA and SC figures are percents eligible for free or reduced lunches.

The quality of the local public education system is only one of many factors affecting industrial location decisions. South Carolina lags behind on the SAT, which is one of only a few academic performance measures available for state-to-state comparisons. Because Greenwood County is competing in a broad regional market for industry, community and business leaders in Greenwood County are well advised to continue monitoring the academic performances of school districts in other states.

## CLUSTER ANALYSIS

Additional peer districts for the three Greenwood County school districts were identified using a technique known as cluster analysis. This technique groups districts using many traits at once rather than a single trait, such as district size. The results of this analysis reinforce findings discussed earlier in this report.

Three categories of school district traits were examined in the cluster analysis: demographics and economics, academic performance, and per pupil expenditures. Twelve characteristics were used in both the demographic and test performance analyses, while nine per pupil spending categories were used in the spending analysis. The cluster analysis works by grouping—or clustering—the most similar districts first, and the least similar districts last. This analysis reports on the districts deemed most similar to the three Greenwood County districts.

### Demographics & Economics

*Greenwood, Anderson, and Spartanburg counties look similar in overall demographics and economics.*

Because most of the demographic and economic data are defined at the county level, the cluster analysis technique groups districts in the same county first. Other similar districts then join the cluster. The three Greenwood districts cluster with Anderson 1, 2, 3, 4, and 5 and Spartanburg 1, 3, 4, and 5.<sup>11</sup> This result indicates that Anderson and Spartanburg counties look a lot like Greenwood County when a number of socioeconomic factors are considered. These two counties also are considered Greenwood County's economic development competitors and also have some of the highest-performing school districts in the state.

### Academic Performance

*Some of the academic peers for the Greenwood County school districts that were identified earlier in the report appear in the academic performance clusters.*

The academic performance cluster analysis can be used to reinforce and refine the definitions of the academic peer groups for the Greenwood school districts. In an earlier section, academic peer groups were defined solely on the level of the total academic performance index. The cluster analysis identifies peer districts with similar levels *and* patterns of scores across multiple tests and grades (Table 17).

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<sup>11</sup> There was enough between-district variation in the demographic and economic clustering to exclude Spartanburg districts 2, 6, and 7 from the group including Spartanburg 1, 3, 4, 5, and the Greenwood districts.

Table 17.

ACADEMIC PEERS COMMON ACROSS THE INDEX AND CLUSTER ANALYSES		
District 50	District 51	District 52
Florence 1	Sumter 17	Spartanburg 1
Florence 2	Union	Spartanburg 2
		Spartanburg 5

### Per Pupil Expenditures

*Greenwood 50 is most like Darlington and Marion 2 in per pupil spending.*

The Darlington and Marion 2 school districts were more like Greenwood 50 in their per pupil spending levels and patterns than any other districts in the state, according to the cluster analysis.

*Greenwood 51 is most similar to Bamberg 1, Dillon 3, Hampton 1, and Orangeburg 4 in per pupil spending.*

Greenwood 51's close spending peers are Bamberg 1, Hampton 1, Dillon 3, and Orangeburg 4. Of these districts, only Bamberg 1 has a higher total academic performance index than Greenwood 51, by a margin of less than five points.

*Greenwood 52 is most like Clarendon 3 in per pupil spending.*

Clarendon 3 is the closest district to Greenwood 52 when per pupil expenditures are examined. Clarendon 3's total academic performance index score is 47.0, as compared to District 52's 72.9.

The large variation in academic performance index scores among districts with similar spending patterns reinforces observations made in the third section of this report, where no clear spending patterns were apparent among academic peers and even the top performers. Here, the reverse tends to hold—no clear test score patterns are evident in districts with similar per pupil spending.



## **EDUCATIONAL INPUTS AND OUTCOMES: KEY RELATIONSHIPS IN SOUTH CAROLINA SCHOOL DISTRICTS**

In this section, key relationships between educational inputs and outcomes<sup>12</sup> in South Carolina school districts are revealed. These include relationships between academic performance and family background and student readiness, teacher experience, and average teacher salaries. Other relationships examined include the effect of early-grade academic performance on late-grade performance, and the effect of district fiscal authority on local revenue shares. More high-performing districts are also identified. Linear regression analysis, a common statistical tool, is used to measure the strengths of these relationships (Appendix H).

This method of analysis differs from those used earlier in the report in that it attempts to discern which factors actually play a role in determining the academic performances of school districts.<sup>13</sup> The three earlier methods simply described the differences among districts on many margins without assigning any statistical significance to those differences in determining academic outcomes. While this analysis places no particular focus on the Greenwood County school districts, the results may have useful implications for policymakers in Greenwood County.

### **Family Background**

*Family and community background and student readiness for school are strongly related to academic success.*

Family and community background—as measured by the average educational attainment of the county adult populace, the percentage of students eligible for free or reduced lunches, the rate of passage of the CSAB first grade readiness test, and the percentage of minority students in the district—describes almost 90 percent of the variation in overall student academic performance in any given school district. In fact, when these variables were included in any analysis of the relationship between educational inputs and outcomes, most of the other factors being studied became insignificant.

Unfortunately, family background depends on many factors beyond the control of most school districts. However, other school district or community programs might produce desired effects. For example, programs that teach parents about the value of an education or emphasize early childhood education may help to improve the academic performance of a school district over the long run.

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<sup>12</sup> The total academic performance index is the performance measure used.

<sup>13</sup> For many years, a debate has raged among education and economic researchers about the relationship between spending on public education and student academic performance. Prior studies have been successful at uncovering positive relationships between spending on public education and future job success, as measured by wages and the present value of projected lifetime earnings. However, researchers have been largely unsuccessful at showing the same type of relationship between spending and academic performance, usually measured by scores on standardized tests such as the SAT. There is a large body of literature that addresses these issues. A good review is found in: Gary Burtless, ed. *Does Money Matter?: The Effect of School Resources on Student Achievement and Adult Success* (Washington, D.C.: Brookings Institution Press, 1996).

## **Per Pupil Expenditures at the School District Level**

*No statements can be made concerning statistical relationships between academic performance and the major spending categories examined in this report due to inherent difficulties encountered when analyzing broad spending categories.*

Per pupil expenditures measured at the district level are affected by many forces beyond the specific goal of increasing standardized test scores. Many of these other forces are impossible to incorporate into the analysis. In particular, the major spending categories examined in this report are too broad to make specific determinations of the effects of program spending meant to enhance academic performance. For this reason, accurate estimations of the effects of district-level spending on academic performance are difficult to achieve, and the results of the regressions performed using the major per pupil expenditure variables were not meaningful.

It should be noted that there is a distinction between making no statement about a statistical relationship and stating that there is no statistical relationship. This report does the former. Furthermore, this discussion says nothing about the effectiveness of spending on individual school-level programs. Program-level analyses, where spending goals are more narrowly defined, are much more likely to reveal useful information for policymakers. Since program evaluations are beyond the scope of this report, it is recommended that school districts assess spending effectiveness on an individual program basis.

## **Teacher Years of Experience and Average Teacher Salaries**

*Average years of teacher experience and average teacher salaries may be positively related to academic performance.*

Average years of teacher experience is the only educational input that remains a statistically significant determinant of academic performance after all of the student background effects mentioned above are accounted for. Teacher turnover rates and teacher-to-student ratios are statistically insignificant. However, average teacher salary shows a significant positive correlation with academic performance when the regression analysis is performed substituting the percentage of children below poverty for the percentage eligible for free or reduced lunches (both are measures of child and family economic status). The researchers were unable to determine why these two similar measures of family background produced different results.

In order to distinguish between salary and experience effects, further analysis was undertaken. Three other salary variables—salaries offered to teachers with a Bachelor’s degree and no experience, a Bachelor’s degree and ten years of experience, and a Master’s degree and seventeen years of experience—were also examined to determine their relationships to academic performance. The analysis showed no significant relationships among these variables. This result suggests that the positive correlation between average teacher salaries and academic performance is driven solely by the relationship between teacher years of experience and performance.

Average teacher salaries across districts are closely related to teacher experience. A policy designed to put emphasis on obtaining teachers with more years of experience would inevitably result in the paying of higher salaries, and so a distinction between the two may seem unnecessary. It appears as though the key asset to be obtained with higher salaries is greater experience, though it is hard to imagine that offering higher salaries to potential candidates would

not tend to attract higher quality teachers. Unfortunately, this analysis was unable to reveal any evidence of the latter effect.

Given the fact that family and community background characteristics account for almost 90 percent of the variation in district academic performance, it is surprising that either teacher experience or teacher salary exhibits a measurable relationship with academic performance. For this reason, these results suggest that teacher quality deserves serious consideration when evaluating school district policies.

## **Early Grade Performance**

*Early-grade academic performance may affect the ability of educators to influence academic outcomes.*

Given the recent emphasis on pupil readiness-to-learn and early childhood education in South Carolina and around the country, it seemed appropriate in this report to investigate whether or not “better-prepared” students exhibit different responses to educational inputs over their school careers than less-prepared students.

In this analysis, early-grade performance is used as an indicator of how well students are prepared to learn at higher grade levels. To simulate student preparedness, an early-grade performance index was created that measures the average performances of South Carolina school districts on third, fourth and fifth grade standardized tests. A second index of late-grade performance was also created using standardized test scores from ninth through twelfth grades. The state’s 86 districts were then divided into two groups depending on whether they had an early performance index score above or below the state mean (46 districts were above the mean and 40 districts were below).<sup>14</sup>

A statistical test determined that the above-average early performers have an educational input-performance relationship different from that of the below-average early performers. Specifically, the three inputs—average educational attainment in the district, average passage rate of the CSAB, and average years teacher experience—are more closely linked to late-grade academic performance among better early-performing districts than poorer early-performing districts. Thirty percent more variation (75% versus 45%) in the late performances of the better early performers is explained by the model.

When the districts’ early-grade scores were included as an explanatory variable in the model above, two more observations were made. First, for the group of below average early performers, the only significant explainer of late-grade performance was early-grade performance. The other factors had no statistically significant effects, suggesting that when early performance is low, relatively little can be done to change late-grade academic outcomes.

On the other hand, for the group of above average early performers, the addition of early-grade performance to the model explaining late-grade performance made no difference. Early-grade

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<sup>14</sup> Unfortunately, the data did not allow for the tracking of students across grades. Therefore, an assumption is made that the relative early performances of school districts in South Carolina over the past five years were consistent with their relative early performances over the five years preceding this data. If this assumption holds, then the students for whom late-grade performance is now available would have performed similarly to students for whom early-grade performance is now available. This assumption is needed in order to make inferences based on comparisons of early- and late-grade performance data used in this report.

performance was not significantly related to late-grade performance for this group. Instead, the other factors included in the model were highly correlated with academic outcomes, suggesting that when early performance is high, students may be better able to respond to other stimuli affecting their educations.

These results are consistent with the idea that students who perform poorly in the elementary grades may be hindered by their lack of preparedness throughout their school careers. Education inputs may not be as effective when students are not ready to use those resources provided for them. If further investigation supports this finding, then an added emphasis on primary education may help reduce the long-run costs of educating students.

### **District Fiscal Authority**

*The local share of total revenue in districts with full fiscal authority is higher than the assessed property values per pupil in those districts would predict.*

Assessed property value per pupil explains more than 80 percent of the variation in local revenue shares across South Carolina school districts. This is not surprising, as the amount of state revenue disbursed to school districts is inversely proportional to per pupil property value. In general, the share of revenue coming from local sources increases as property values increase, holding school enrollment constant.

When the fiscal authority of the school district to levy taxes is considered, the school districts with full fiscal authority show, on average, over five percent more revenue from local sources than their per pupil assessed property values would predict. This finding is consistent with other findings in this report that, on average, districts with full fiscal authority raise more local revenue for schools than those without full authority. Academic performance, on the other hand, does not appear to be statistically related to district fiscal authority. Instead, when student background differences across districts are taken into account, no correlation between fiscal authority and academic performance is observed.

### **More High Performing Districts: An Alternative Performance Definition**

*Eight South Carolina school districts are consistently high performers when economic and demographic differences are factored out of the equation.*

There is more than one way to define the success of a school district. Earlier in this report, academic “top performers” were defined as those with the highest overall levels of academic achievement, irrespective of their starting points. These top performing districts also tend to have higher educational attainment of the adult populace, lower percentages of children in poverty, and better prepared first graders, on average. From an alternative perspective, it is possible measure the performance of a district based on how well the students perform relative to other similar districts. By adjusting for economic and demographic differences among the districts, the playing field can be effectively leveled, and this type of comparison can be made. The total academic performance index is used in this analysis.

Academic performance is unquestionably linked to basic economic and demographic characteristics. They play a major role in determining how a child spends his or her time and consequently, the ability of the child to take advantage of instruction and other learning aids.

Regression analysis allows the measured relationships among these variables to be used to adjust school district performance indicators in order to directly compare districts with different economic and demographic profiles. It must be noted that factors beyond those included in this model are also responsible for academic outcomes. However, the factors used in this model—children in poverty, educational attainment in the county, and first-grade readiness—exhibit very strong relationships with academic performance.

Two steps are involved in comparing academic performances among districts with similar economic and demographic profiles. First, the average relationships between the economic and demographic characteristics mentioned above and academic performance are measured using data from all school districts. Second, these relationships are applied to all districts, which allows an adjusted performance index score to be calculated. This adjusted score can be considered the baseline for a district, from which any variation is due to something other than the economic and demographic influences included in this model. It is a reference point used to determine if a district has performed above or below average, given its basic characteristics. Using this methodology, the “average district” will have an actual performance equal to its adjusted performance. The higher a district’s actual performance is above the adjusted performance, the better the district is doing relative to other similar districts.

This alternative method of defining academic performance is used to identify a second group of eight high performing districts: Florence 5, Dillon 3, Clarendon 3, Barnwell 19, Dillon 2, Marion 1, Barnwell 45, and Spartanburg 7. These districts had actual total academic performance indices at least 15 points above their adjusted scores. The weighted average characteristics of this group of districts and the state are also shown (Table 18).

Table 18.

CHARACTERISTICS OF ALTERNATIVE HIGH PERFORMERS*		
	Alter. High Performer Group	State
Percent of Children Aged 5-17 Below Poverty Level	34.6%	22.1%
Average Educational Attainment of Persons 25 and Over	11.2 years	11.8 years
Average Percent Meeting 1 <sup>st</sup> Grade Readiness Standard	72.0%	74.3%
Local Tax Revenue Ability Index	0.003134	0.011623
Local Tax Effort	1.361	1.000
Total Academic Performance Index	49.2	57.0

\* The averages are weighted by the individual district memberships, so that each group of districts is treated as one large group of students.

Notice the significant difference in the percentages of children in poverty. Twelve and one-half percent more children are below the poverty line in this high performing group. Also, the 0.6 year difference in average educational attainment is a significant amount when compared to the full range of variation across the state. The 2.3 percent difference in the percent meeting the readiness standard is also significant, though not as striking. Despite these obstacles, these high performing school districts managed an average total academic performance index that was less than eight points below the state average.

Additional information pertaining to the fiscal capacity and tax effort of the group is also revealing. The average local revenue raising ability of these school districts is less than 30 percent of the state average, while the local tax effort for the group is 36 percent higher. These figures indicate the willingness of taxpayers in these districts to support quality public education. It is beyond the scope of this study to determine exactly why they have performed so well in the face of obstacles like those mentioned above. But clearly these districts deserve a closer look by those concerned with boosting the academic achievement of students.

### **Additional Observations**

The regression analysis allows some other observations to be made concerning educational inputs and outcomes.

- Teacher turnover is negatively related to average teacher salary. Teachers tend to stay longer in districts where they are paid more. Furthermore, after taking salary effects into account, teacher turnover tends to be higher in districts with higher percentages of minority students and lower in districts with higher percentages of students eligible for free or reduced lunches.
- High school completion rates across districts are closely positively related to academic performance. In fact, performance is the single best predictor of completion rate. When academic performance is included in the regression analysis, districts with higher percentages of minority students tend to have higher completion rates. Teen pregnancy rates, unemployment rates, and percentages of the labor force employed in agriculture are not significantly correlated with high school completion rates. There is a negative relationship between the local crime rate and the high school completion rate, although the causality may be reversed. In other words, the crime rate may be higher because of the lower completion rate, instead of the completion rate being lower because of the higher crime rate. Either, or both, could be true.
- A negative relationship between leadership spending per pupil and district size exists, suggesting that there are economies of scale in administration.

## CONCLUSION

In this report, data on education finance, academic performance, economics, and demographics were analyzed at the public school district level in an effort to reveal useful information for education policymakers in Greenwood County, South Carolina. Several different analytical methods—performance indices, district groupings, district clusters, and multiple regression analysis—were used to address the following three questions:

1. How do the Greenwood County school districts compare to the other school districts in South Carolina and selected districts in North Carolina and Georgia?
2. What districts are most similar to the Greenwood districts?
3. What are the relationships among educational inputs and outcomes at the school district level in the South Carolina?

Conclusions and key findings are set forth in the executive summary to this report. The executive summary brings together points made throughout the paper with a focus on the Greenwood County school districts. The methods used in this analysis could be extended to other school districts. Additional insight into the relationships between educational inputs and outcomes could also be obtained through more detailed school- and program-level analyses.

One of Greenwood County's strengths is its level of community support in areas such as education, health, and other social services. Another strength is the county's ability to attract quality industry. As the county moves into the next century, it is clear that these two areas will become more closely related. County policymakers are encouraged to use the peer group and top performer analyses, comparisons, and regression results in this report to set benchmarks for the school districts. In addition, some specific recommendations are listed below.

- Evaluate programs on an individual basis—instead of aggregated at the district-level—when making policy decisions concerning the use of funds.
- Investigate standardized test score fluctuations evident in Appendix F.
- Emphasize early grade performance.
- Make teacher quality a priority.
- Investigate curricula, programs, and administrative arrangements of both groups of high performing districts.
- Consider academic performances in other states in the region as reference points.

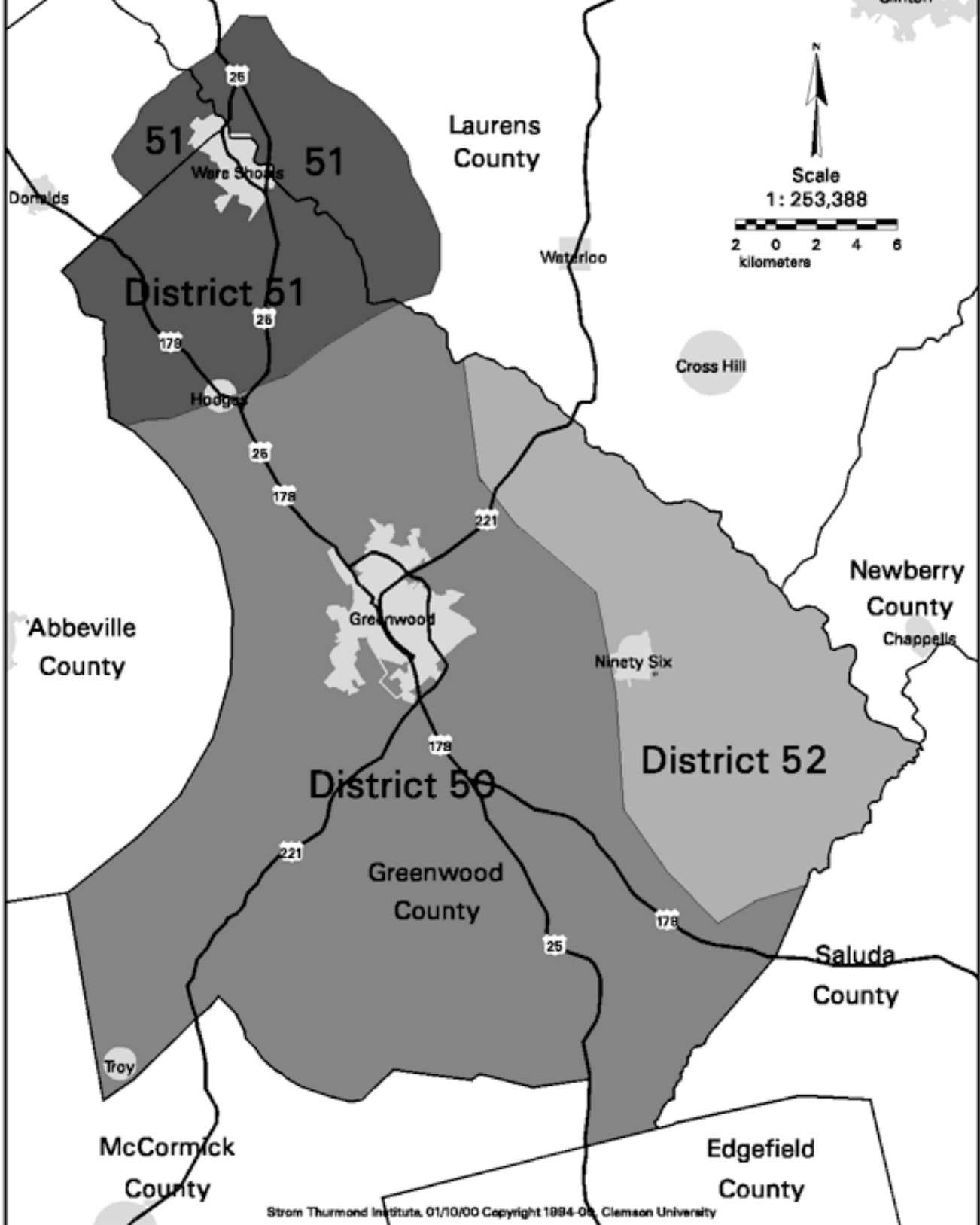
## **APPENDICES**



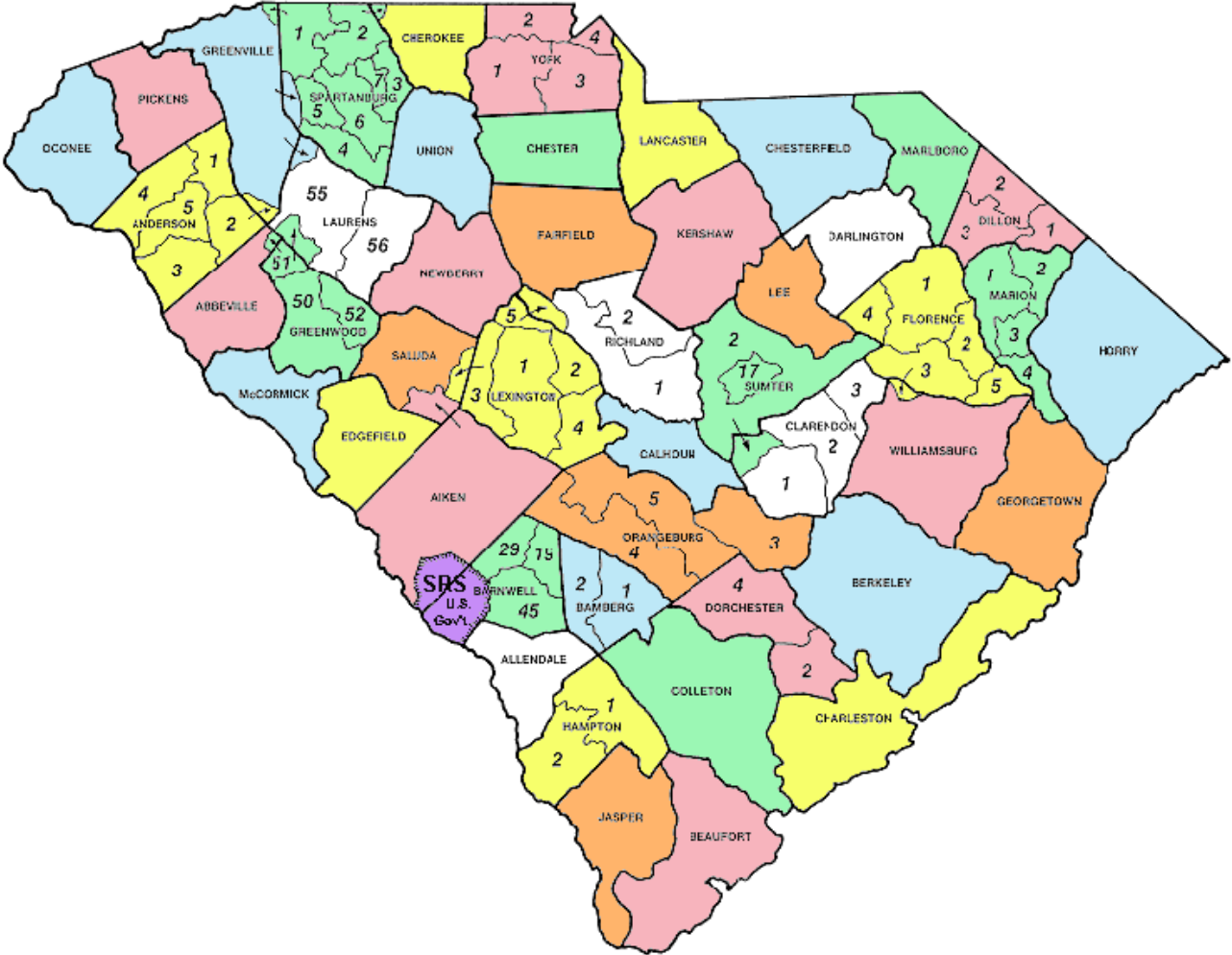
**APPENDIX A**

**Maps of School Districts in South Carolina and Greenwood County**

# Greenwood County School Districts



# SOUTH CAROLINA SCHOOL DISTRICTS



Source: SC Department of Education. Available: <http://www.state.sc.us/sde/distschs/websites/index.html> [November 1999].

**APPENDIX B**

**Greenwood School District Data Sheets**

# GREENWOOD 50

## DEMOGRAPHICS & ECONOMICS

### County<sup>a</sup>

Per Capita Personal Income	Net Migration	% Population Over 65
\$19,727	1,693	14.2%
Unemployment Rate	% of Labor Force in Manufacturing	Private School Enrollment
7.1%	30.1%	923
Educational Attainment	Teen Pregnancy Rate	Crime Rate (per 10,000 population)
11.7	6.2%	749.5

### Classifications<sup>c</sup>

<u>Size</u> 6,001-12,000
<u>Greenwood Competitor</u> No
<u>Fiscal Authority</u> None

### District<sup>b</sup>

Average Daily Membership '98	% African American	% Other Minority	% Eligible for Free or Reduced Lunch	% Aged 5-17 Below Poverty
8,478	43.7%	1.8%	47.2%	20.7%

## ACADEMIC PERFORMANCE & OTHER CHARACTERISTICS<sup>d</sup>

\* Standardized test scores are 4-year and 5-year averages. State medians are shown in (parentheses).

Academic Performance Index: 55.8      State Median Performance Index: 50.4

### SAT

Math	Verbal	Total	% Taking Test	Performance Index
475	474	949	62.7%	65.2
(459)	(463)	(919)	(50.0%)	(52.5)

### BSAP

3 <sup>rd</sup> Grade	6 <sup>th</sup> Grade	8 <sup>th</sup> Grade	Exit	Performance Index
81.1	61.4	61.8	78.2	70.6
(75.0)	(58.1)	(61.8)	(80.4)	(68.1)

### MAT-7<sup>e</sup>

4 <sup>th</sup> Grade Index	5 <sup>th</sup> Grade Index	7 <sup>th</sup> Grade Index	9 <sup>th</sup> Grade Index	11 <sup>th</sup> Grade Index	Performance Index
64.3	65.3	60.9	57.9	60.2	61.7
(60.3)	(60.0)	(58.9)	(58.0)	(60.0)	(59.7)

% Passing CSAB Readiness Test: 69.5%  
(73.3)

% of '97 Grads Who Attended College: 63.0%      Avg. Teacher Salary, '98: \$32,727  
State Median: 54.0%      State Median: \$33,104

% of '97 Grads Who Entered Work: 33.1%      Avg. Teacher Experience, '98: 13 years  
State Median: 41.6%      State Median: 13.3 years

5-yr. Avg. % Completed w/ Diploma: 93.0%      Student-to-Teacher Ratio, '97: 15.3  
State Median: 93.8%      State Median: 15.7

5-yr. Avg. High School Completion Rate: 62.5%      Teacher Turnover Rate, '98: 11.5%  
State Median: 68.9%      State Median: 10.8%

## EXPENDITURES, REVENUE & TAX EFFORT<sup>f</sup>

<u>Total LEA:</u>	\$48,455,065	<u>Face-to-face Teaching:</u>	\$25,388,618
Per Pupil:	\$5,413	Per Pupil:	\$2,817
State Median:	\$5,605	State Median:	\$2,822
<u>Class Materials:</u>	\$1,868,893	<u>Pupil Support:</u>	\$4,692,934
Per Pupil:	\$205	Per Pupil:	\$532
State Median:	\$219	State Median:	\$497
<u>Teacher Support:</u>	\$1,840,631	<u>Program Support:</u>	\$391,393
Per Pupil:	\$29	Per Pupil:	\$225
State Median:	\$106	State Median:	\$40
<u>Non-instructional Support:</u>	\$3,697,138	<u>Facilities Maintenance:</u>	\$3,792,226
Per Pupil:	\$451	Per Pupil:	\$481
State Median:	\$489	State Median:	\$448
<u>Business Services:</u>	\$905,256	<u>School Management:</u>	\$2,890,122
Per Pupil:	\$101	Per Pupil:	\$300
State Median:	\$112	State Median:	\$313
<u>Program Management:</u>	\$547,455	<u>District Management:</u>	\$515,675
Per Pupil:	\$56	Per Pupil:	\$53
State Median:	\$62	State Median:	\$94
Debt Service Expenditures:			\$1,459,964
Reported Capital Expenditure Needs, Fall 1998:			\$25,280,000
General Obligations Debt Outstanding, 6/30/97:			\$7,135,000

	1986-87	1996-97
Local Revenue:	\$9,849,630	\$16,203,421
Per Pupil:	\$1,169	\$1,810
State Median:	\$999	\$1,642
Share of Total:	39.7%	34.9%
State Revenue:	\$12,869,230	\$26,158,762
Per Pupil:	\$1,527	\$2,922
State Median:	\$1,609	\$3,070
Share of Total:	51.9%	56.3%
Federal Revenue:	\$2,087,657	\$4,105,761
Per Pupil:	\$248	\$459
State Median:	\$314	\$524
Share of Total:	8.4%	8.8%
Total Revenue:	\$24,806,517	\$46,467,944
Per Pupil:	\$2,943	\$5,191
State Median:	\$2,920	\$5,199

### Average Annual Growth Rates

	1976-77 to 1986-87	1986-87 to 1996-97	1976-77 to 1996-97
Local Revenue Per Pupil:	12.9%	4.5%	8.6%
Total Revenue Per Pupil:	11.6%	5.8%	8.7%
Assessed Value:	10.6%	3.6%	7.0%
Millage for Operations:	-0.1%	4.1%	2.0%
Total Expenditures Per Pupil:	11.5%	6.4%	8.9%
Total Local Revenue:	\$12,769,684	Ability Index:	0.01299
Equalized Revenue:	\$12,823,970	Local Tax Effort:	0.996

# GREENWOOD 51

## DEMOGRAPHICS & ECONOMICS

### County<sup>a</sup>

Per Capita Personal Income	Net Migration	% Population Over 65
\$19,727	1,693	14.2%
Unemployment Rate	% of Labor Force in Manufacturing	Private School Enrollment
7.1%	30.1%	0
Educational Attainment	Teen Pregnancy Rate	Crime Rate (per 10,000 population)
11.7	6.2%	749.5

### Classifications<sup>c</sup>

<u>Size</u> under 2,000
Greenwood <u>Competitor</u> No
<u>Fiscal Authority</u> None

### District<sup>b</sup>

Average Daily Membership '98	% African American	% Other Minority	% Eligible for Free or Reduced Lunch	% Aged 5-17 Below Poverty
1,209	20.3%	0.8%	41.3%	18.3%

## ACADEMIC PERFORMANCE & OTHER CHARACTERISTICS<sup>d</sup>

\* Standardized test scores are 4-year and 5-year averages. State medians are shown in (parentheses).

Academic Performance Index: 49.8      State Median Performance Index: 50.4

### SAT

Math	Verbal	Total	% Taking Test	Performance Index
469 (459)	477 (463)	945 (919)	44.6% (50.0%)	57.7 (52.5)

### BSAP

3 <sup>rd</sup> Grade	6 <sup>th</sup> Grade	8 <sup>th</sup> Grade	Exit	Performance Index
71.9 (75.0)	62.7 (58.1)	59.8 (61.8)	82.4 (80.4)	69.2 (68.1)

### MAT-7<sup>e</sup>

4 <sup>th</sup> Grade Index	5 <sup>th</sup> Grade Index	7 <sup>th</sup> Grade Index	9 <sup>th</sup> Grade Index	11 <sup>th</sup> Grade Index	Performance Index
51.4 (60.3)	57.6 (60.0)	55.1 (58.9)	60.1 (58.0)	65.7 (60.0)	58.0 (59.7)

% Passing **CSAB** Readiness Test: 78.4%  
(73.3)

% of '97 Grads Who Attended College:	63.2%	Avg. Teacher Salary, '98:	\$30,899
State Median:	54.0%	State Median:	\$33,104

% of '97 Grads Who Entered Work:	36.8%	Avg. Teacher Experience, '98:	12.8 years
State Median:	41.6%	State Median:	13.3 years

5-yr. Avg. % Completed w/ Diploma:	100%	Student-to-Teacher Ratio, '97:	16.5
State Median:	93.8%	State Median:	15.7

5-yr. Avg. High School Completion Rate:	72.4%	Teacher Turnover Rate, '98:	7.2%
State Median:	68.9%	State Median:	10.8%

## EXPENDITURES, REVENUE & TAX EFFORT<sup>f</sup>

<u>Total LEA:</u>	\$6,328,917	<u>Face-to-face Teaching:</u>	\$3,215,959
Per Pupil:	\$5,183	Per Pupil:	\$2,623
State Median:	\$5,605	State Median:	\$2,822
<u>Class Materials:</u>	\$366,703	<u>Pupil Support:</u>	\$644,054
Per Pupil:	\$178	Per Pupil:	\$501
State Median:	\$219	State Median:	\$497
<u>Teacher Support:</u>	\$39,694	<u>Program Support:</u>	\$48,183
Per Pupil:	\$36	Per Pupil:	\$59
State Median:	\$106	State Median:	\$40
<u>Non-instructional Support:</u>	\$456,895	<u>Facilities Maintenance:</u>	\$604,691
Per Pupil:	\$389	Per Pupil:	\$515
State Median:	\$489	State Median:	\$448
<u>Business Services:</u>	\$117,322	<u>School Management:</u>	\$408,387
Per Pupil:	\$96	Per Pupil:	\$333
State Median:	\$112	State Median:	\$313
<u>Program Management:</u>	\$129,340	<u>District Management:</u>	\$216,228
Per Pupil:	\$103	Per Pupil:	\$276
State Median:	\$62	State Median:	\$94
Debt Service Expenditures:			\$92,059
Reported Capital Expenditure Needs, Fall 1998:			\$1,973,900
General Obligations Debt Outstanding, 6/30/97:			\$820,000

	1986-87	1996-97
Local Revenue:	\$1,227,385	\$2,100,551
Per Pupil:	\$1,073	\$1,720
State Median:	\$999	\$1,642
Share of Total:	37.3%	34.5%
State Revenue:	\$1,813,943	\$3,542,711
Per Pupil:	\$1,586	\$2,901
State Median:	\$1,609	\$3,070
Share of Total:	55.1%	58.2%
Federal Revenue:	\$250,526	\$438,263
Per Pupil:	\$219	\$359
State Median:	\$314	\$524
Share of Total:	7.6%	7.2%
Total Revenue:	\$3,291,854	\$6,081,524
Per Pupil:	\$2,877	\$4,981
State Median:	\$2,920	\$5,199

### Average Annual Growth Rates

	1976-77 to 1986-87	1986-87 to 1996-97	1976-77 to 1996-97
Local Revenue Per Pupil:	10.5%	4.8%	7.6%
Total Revenue Per Pupil:	10.7%	5.6%	8.2%
Assessed Value:	4.3%	4.1%	4.2%
Millage for Operations:	2.1%	-2.1%	0.0%
Total Expenditures Per Pupil:	10.9%	5.9%	8.4%
Total Local Revenue:	\$1,676,073	Ability Index:	0.00101
Equalized Revenue:	\$997,091	Local Tax Effort:	1.681



# GREENWOOD 52

## DEMOGRAPHICS & ECONOMICS

### County<sup>a</sup>

Per Capita Personal Income	Net Migration	% Population Over 65
\$19,727	1,693	14.2%
Unemployment Rate	% of Labor Force in Manufacturing	Private School Enrollment
7.1%	30.1%	0
Educational Attainment	Teen Pregnancy Rate	Crime Rate (per 10,000 population)
11.7	6.2%	749.5

### Classifications<sup>c</sup>

<u>Size</u> under 2,000
Greenwood <u>Competitor</u> No
<u>Fiscal Authority</u> None

### District<sup>b</sup>

Average Daily Membership '98	% African American	% Other Minority	% Eligible for Free or Reduced Lunch	% Aged 5-17 Below Poverty
1,571	25.6%	0.6%	36.5%	18.6%

## ACADEMIC PERFORMANCE & OTHER CHARACTERISTICS<sup>d</sup>

\* Standardized test scores are 4-year and 5-year averages. State medians are shown in (parentheses).

Academic Performance Index: 72.9      State Median Performance Index: 50.4

### SAT

Math	Verbal	Total	% Taking Test	Performance Index
490 (459)	477 (463)	967 (919)	59.0% (50.0%)	69.6 (52.5)

### BSAP

3 <sup>rd</sup> Grade	6 <sup>th</sup> Grade	8 <sup>th</sup> Grade	Exit	Performance Index
76.8 (75.0)	67.9 (58.1)	77.3 (61.8)	86.8 (80.4)	77.2 (68.1)

### MAT-7<sup>e</sup>

4 <sup>th</sup> Grade Index	5 <sup>th</sup> Grade Index	7 <sup>th</sup> Grade Index	9 <sup>th</sup> Grade Index	11 <sup>th</sup> Grade Index	Performance Index
66.6 (60.3)	70.9 (60.0)	71.6 (58.9)	63.9 (58.0)	63.4 (60.0)	67.3 (59.7)

% Passing CSAB Readiness Test:	84.0% (73.3)		
% of '97 Grads Who Attended College: State Median:	59.2% 54.0%	Avg. Teacher Salary, '98: State Median:	\$32,750 \$33,104
% of '97 Grads Who Entered Work: State Median:	39.5% 41.6%	Avg. Teacher Experience, '98: State Median:	12.6 years 13.3 years
5-yr. Avg. % Completed w/ Diploma: State Median:	97.4% 93.8%	Student-to-Teacher Ratio, '97: State Median:	15.6 15.7
5-yr. Avg. High School Completion Rate: State Median:	87.1% 68.9%	Teacher Turnover Rate, '98: State Median:	15.6% 10.8%

## EXPENDITURES, REVENUE & TAX EFFORT<sup>f</sup>

<u>Total LEA:</u>	\$9,031,073	<u>Face-to-face Teaching:</u>	\$4,622,945
Per Pupil:	\$5,369	Per Pupil:	\$2,748
State Median:	\$5,605	State Median:	\$2,822
<u>Class Materials:</u>	\$400,751	<u>Pupil Support:</u>	\$912,176
Per Pupil:	\$238	Per Pupil:	\$542
State Median:	\$219	State Median:	\$497
<u>Teacher Support:</u>	\$143,204	<u>Program Support:</u>	\$21,528
Per Pupil:	\$85	Per Pupil:	\$13
State Median:	\$106	State Median:	\$40
<u>Non-instructional Support:</u>	\$674,143	<u>Facilities Maintenance:</u>	\$698,643
Per Pupil:	\$401	Per Pupil:	\$415
State Median:	\$489	State Median:	\$448
<u>Business Services:</u>	\$72,531	<u>School Management:</u>	\$563,332
Per Pupil:	\$43	Per Pupil:	\$335
State Median:	\$112	State Median:	\$313
<u>Program Management:</u>	\$77,367	<u>District Management:</u>	\$325,174
Per Pupil:	\$46	Per Pupil:	\$193
State Median:	\$62	State Median:	\$94
Debt Service Expenditures:			\$473,511
Reported Capital Expenditure Needs, Fall 1998:			\$2,728,000
General Obligations Debt Outstanding, 6/30/97:			\$1,625,000

	1986-87	1996-97
Local Revenue:	\$2,295,855	\$3,977,554
Per Pupil:	\$1,626	\$2,365
State Median:	\$999	\$1,642
Share of Total:	49.5%	47.7%
State Revenue:	\$2,053,517	\$3,827,102
Per Pupil:	\$1,454	\$2,275
State Median:	\$1,609	\$3,070
Share of Total:	44.3%	45.9%
Federal Revenue:	\$291,120	\$533,999
Per Pupil:	\$206	\$317
State Median:	\$314	\$524
Share of Total:	6.3%	6.4%
Total Revenue:	\$4,640,492	\$8,338,656
Per Pupil:	\$3,286	\$4,958
State Median:	\$2,920	\$5,199

### Average Annual Growth Rates

	1976-77 to 1986-87	1986-87 to 1996-97	1976-77 to 1996-97
Local Revenue Per Pupil:	12.8%	3.8%	8.2%
Total Revenue Per Pupil:	10.7%	4.2%	7.4%
Assessed Value:	2.9%	4.9%	3.9%
Millage for Operations:	0.9%	2.6%	1.7%
Total Expenditures Per Pupil:	10.6%	4.9%	7.7%
Total Local Revenue:	\$3,295,235	Ability Index:	0.00309
Equalized Revenue:	\$3,050,505	Local Tax Effort:	1.080

## NOTES

### County Level Demographic Data

- a. Per capita personal income is from October 1995. Net migration is measured over the years from 1990 to 1997. The percentage of population over 65 and private school enrollment are from 1997. The unemployment rate, percentage of the labor force employed in manufacturing, teen pregnancy rate, and crime rate are all from 1996. The educational attainment of adults over 24 is from the 1990 decennial census.

### District Level Demographic Data

- b. Average daily membership, percent African American, and percent other minority are from the 1997-98 school year. The percentage of students eligible for free or reduced lunches is from October 1997. The percentage of children aged 5 to 17 that are below the poverty line is from 1996.

### District Classifications

- c. The district size classification is based on the 1996-97 student population of the district. Aiken, Anderson, Florence, Greenville, Lexington, Spartanburg, and York counties are considered by the Greenwood Partnership Initiative to be economic development competitors with Greenwood County. There are 28 school districts in these counties. South Carolina school districts are classified as having one of three different levels of fiscal authority: none, limited, and full.

### Academic Performance & Other Characteristics

- d. Unless otherwise noted, academic performance data in this section consist of five-year averages from the 1993-94 school year to the 1997-98 school year.
- e. MAT7 data consist of four-year averages from the 1994-95 to 1997-98 school years.

### Expenditures, Revenue & Tax Effort

- f. Unless noted otherwise, all of the data on the second page for each district is from the 1996-97 fiscal year.

## **APPENDIX C**

### **Reference and Data Sources**

## Reference and Data Sources

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South Carolina. State Budget and Control Board. *South Carolina Statistical Abstract*. Columbia, S.C.: South Carolina State Budget and Control Board, Office of Research and Statistics, various years.

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NC education data:

North Carolina Department of Public Instruction, *North Carolina Public Schools Infoweb* [available at: <http://www.dpi.state.nc.us/>].

GA demographics:

Georgia Department of Labor, *Employment and Wages County 1998* [available at: <http://www.state.ga.us/lmi/files/ewcou98.pdf>].

GA education data:

Georgia Department of Education, *Public Education Report Card*.

U.S. Census Bureau, *Public Elementary-Secondary Education Finance Data*. [On-line]. Available: <http://www.census.gov/govs/www/school.htm>

The South Carolina State Department of Education web site is <http://www.state.sc.us/sde/>.

## **APPENDIX D**

### **Academic Performance Index Calculation Methods**

## **Academic Performance Index Calculation Methods**

The methods by which the academic performance indices were calculated are outlined below. While examining the performance index scores, readers should keep the following points in mind:

- No two different indices can be directly compared. To examine the performance of a district on different tests, each index must be compared to its state or group average or median. The district's performances relative to the state or group can then be compared across tests.
- None of the indices are perfect indicators of academic performance. It is impossible to perfectly characterize performance across different tests and subtests with one simple score. The indices are useful because of their simplicity in describing overall performance.
- The numerical index scores only have merit as relative measures of standardized test performance. Low and high scores do not represent the relative worth of the students or the values of the districts.
- Because of the imperfect nature of the indices, districts with similar scores should be regarded as equivalent performers. The wider the range of scores, the more confident one can be that the districts are different.

### **Cognitive Skills Assessment Battery (CSAB) Index**

The CSAB index is a five-year average of the percentage of first grade students in the district meeting the readiness standard.

### **Basic Skills Assessment Program (BSAP) Index**

The index for the BSAP is a general representation of the percentage of students passing the different sections of the exam in all grades in which the exam is given. The BSAP index averages the percentages passing each individual subtest (math, reading, science, writing) within each grade (3<sup>rd</sup>, 6<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup>), and then averages across the grades within each year. The final step averages across the five years. This index is not meaningful as a percentage because it represents an average over many different subtests. No differential weighting of different subtests or grades is used in computing the index. In other words, 50% passing the math section of the 8<sup>th</sup>-grade BSAP in 1997 is equivalent to 50% passing the 3<sup>rd</sup>-grade science section in 1995.

### **Metropolitan Achievement Test, Seventh Edition (MAT7) Index**

The index for the MAT7 is slightly more complex than the indices for the CSAB and BSAP, because exam results are reported as percentages of students scoring in quartiles of the distribution of scores from a nationwide sample. The four quartile percentages are reported for each of three subtests (language, math, and reading), and so 12 percentages (3 subtests by 4 quartiles) appear for each of the 5 grades in which the test is administered. That equals 60 numbers per year over four years, or 240 numbers, all summarized in one neat MAT7 index! Because it is based on percentages, this index ranges in value between 0 and 100.

The MAT7 index is calculated by weighting the quartile percentages. A percent in the lowest quartile gets a weight of 0.25, second quartile gets 0.50, third quartile gets 0.75, and the fourth



quartile gets a weight of 1.0. This weighting gives a single number for each subtest, which is then averaged across subtests, across grades, and across years. Because it is based on percentages, this index ranges in value between 0 and 100.

### **Scholastic Assessment Test (SAT) Index**

The SAT performance index is somewhat different from those for the other tests. This index takes into account the percentages of students taking the test as well as their average test scores. The idea behind the index is that it is unfair to assume that a district with a high average SAT but relatively few students taking the test is superior to a district with a slightly lower average SAT but many more students taking the test.

The SAT index was calculated by starting with the average total score (math + verbal) and adding a component determined by the percent taking the exam in the district. Specifically, the ‘percent-taking component’ was calculated using a two-step process:

1. A regression analysis was performed in which each district’s total SAT score was explained by its scores on the ninth and eleventh grade MAT7 exams, the Exit Exam, and the percentage of students taking the SAT. Over 91 percent of the variation in total SAT scores across districts was explained by this model. Furthermore, the effect of a higher percentage taking the exam was determined to be negative. (The coefficient on the percentage of students taking the test was negative.)
2. The negative effect of having a higher percentage of students taking the exam was added back to the original total SAT scores. The amount to be added back was simply the percent taking the exam multiplied by the absolute value of the coefficient on percent taking estimated in the regression.

This type of methodology creates what is called a “corrected” SAT score. The correction refers to the filtering out of the percent-taking effect. In other words, by using the corrected scores, the playing field is leveled so that the districts can be compared directly. The purpose of using this method is to eliminate the possibility of a district with high SAT scores and relatively few students taking the exam being ranked above a district with a slightly lower SAT score, but many more students taking the exam. The SAT index is adjusted so that the highest score equals 100.

### **Total Academic Performance Index**

An index to describe the overall academic performance of school districts was created. This index is simply a weighted average of the components of the individual exam indices, where slightly greater weight is given to scores on tests taken in later grades. The idea is that later test scores are representative of a greater cumulative experience in the school district. The older students have had more exposure to the educational system so it is assumed that their later school performances are more likely to have been influenced by the system than younger students.

The Total Academic Performance Index has 10 components. The 3<sup>rd</sup>- and 6<sup>th</sup>-grades BSAP and 4<sup>th</sup>- and 5<sup>th</sup>-grades MAT-7 each get weights of 7.5% each. The 7<sup>th</sup>-grade MAT-7 and 8<sup>th</sup>-grade BSAP get 10% weights, and the 9<sup>th</sup>- and 11<sup>th</sup>-grades MAT-7, High School Exit Exam, and SAT performance index each get 12.5% weights. The sum of the weights is 100%. Like the SAT index, the total academic performance index is adjusted so that its value in the highest-ranking district equals 100.

**APPENDIX E**

**District Academic Performance Measures**

## District Academic Performance Measures

District	Total Performance Index	SAT Performance Index	5-year Average Combined SAT
Abbeville	55.8	51.2	920
Aiken	69.6	73.1	978
Allendale	2.9	5.9	791
Anderson 1	83.4	76.6	1001
Anderson 2	62.0	54.1	934
Anderson 3	55.0	60.0	955
Anderson 4	60.3	64.5	960
Anderson 5	66.9	69.4	978
Bamberg 1	54.5	57.2	937
Bamberg 2	10.4	8.4	791
Barnwell 19	40.0	25.6	847
Barnwell 29	60.8	46.6	911
Barnwell 45	52.8	51.1	914
Beaufort	54.2	64.0	951
Berkeley	59.3	65.9	979
Calhoun	21.7	25.2	855
Charleston	54.0	59.4	934
Cherokee	45.1	46.0	905
Chester	31.1	37.1	883
Chesterfield	43.5	41.0	886
Clarendon 1	2.6	4.0	792
Clarendon 2	44.3	58.5	963
Clarendon 3	47.0	62.7	952
Colleton	32.3	36.0	870
Darlington	43.7	46.3	900
Dillon 1	33.8	33.9	871
Dillon 2	33.5	39.0	891
Dillon 3	47.3	58.0	957
Dorchester 2	73.4	75.7	992
Dorchester 4	20.7	15.6	813
Edgefield	49.3	41.7	890
Fairfield	19.2	24.5	843
Florence 1	58.1	62.3	936
Florence 2	55.0	53.0	913
Florence 3	33.0	33.9	861
Florence 4	6.7	13.7	816
Florence 5	69.8	76.9	998
Georgetown	46.2	47.9	910
Greenville	70.1	79.5	996
Greenwood 50	55.8	65.2	949
Greenwood 51	49.8	57.7	945
Greenwood 52	72.9	69.6	967
Hampton 1	41.0	38.9	881
Hampton 2	17.5	14.0	820

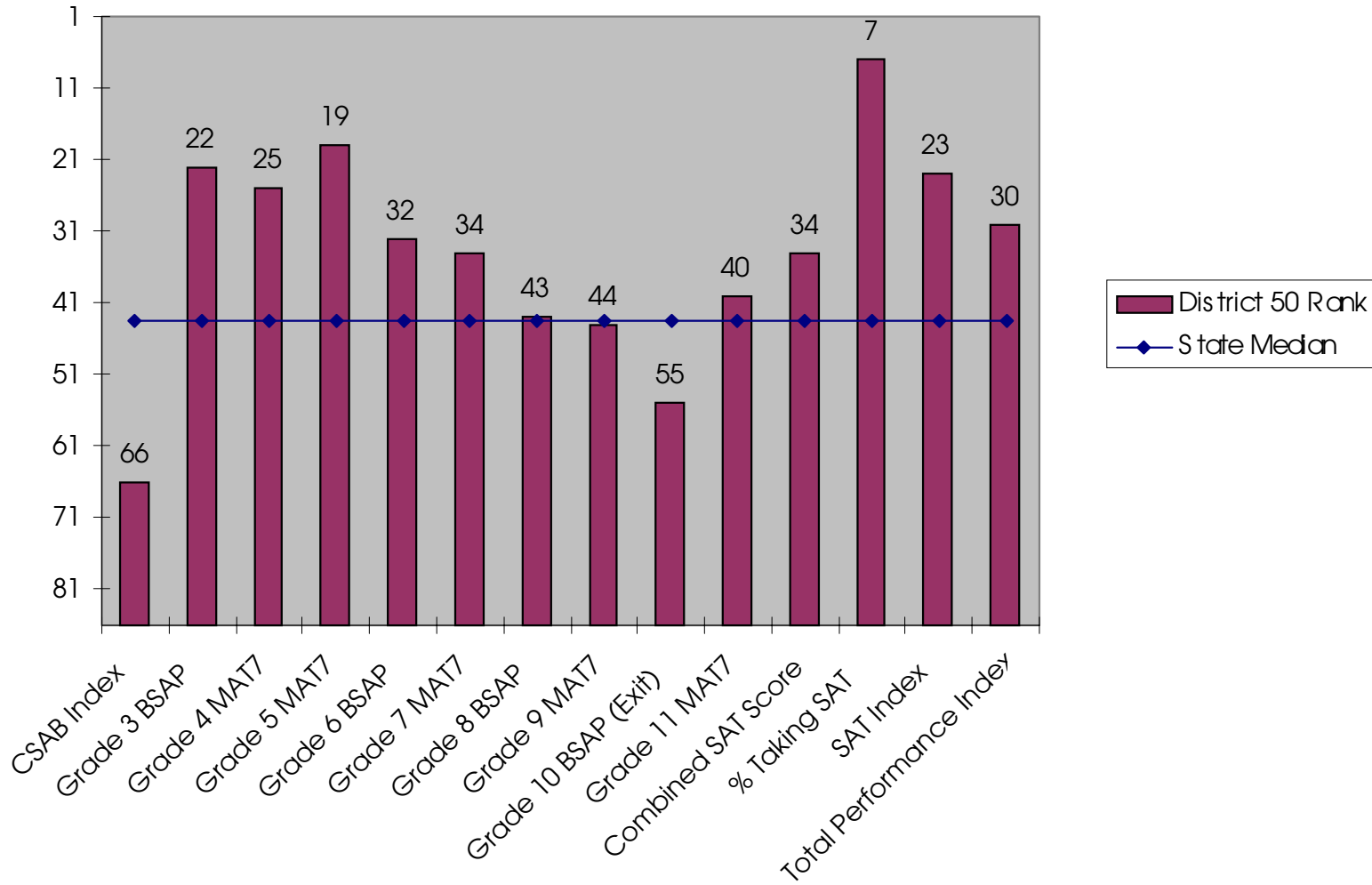
### District Academic Performance Measures, continued

District	Total Performance Index	SAT Performance Index	5-year Average Combined SAT
Horry	61.7	66.7	972
Jasper	2.9	0.9	764
Kershaw	58.8	64.3	957
Lancaster	44.3	48.1	902
Laurens 55	51.8	63.6	963
Laurens 56	45.7	62.1	961
Lee	3.9	4.2	775
Lexington 1	90.1	92.8	1033
Lexington 2	73.8	70.4	968
Lexington 3	52.6	49.5	907
Lexington 4	54.2	52.1	913
Lexington 5	100.0	100.0	1037
Marion 1	38.7	49.8	917
Marion 2	26.3	27.4	847
Marion 3	3.1	4.8	784
Marion 4	27.6	38.1	890
Marlboro	14.0	23.3	839
McCormick	16.8	17.2	819
Newberry	42.8	50.1	913
Oconee	67.7	70.1	973
Orangeburg 3	16.3	20.3	841
Orangeburg 4	48.9	45.7	909
Orangeburg 5	26.0	27.7	838
Pickens	75.5	79.5	1007
Richland 1	36.8	48.0	901
Richland 2	79.7	84.0	1007
Saluda	32.3	39.3	880
Spartanburg 1	72.3	61.8	943
Spartanburg 2	74.9	61.7	946
Spartanburg 3	65.1	63.6	962
Spartanburg 4	66.0	62.6	950
Spartanburg 5	71.5	61.0	939
Spartanburg 6	80.3	83.0	1014
Spartanburg 7	57.1	83.4	999
Sumter 17	50.9	66.3	966
Sumter 2	36.1	34.0	884
Union	49.1	45.6	899
Williamsburg	25.1	8.7	790
York 1	55.4	65.3	973
York 2	73.4	76.2	993
York 3	67.8	72.2	981
York 4	88.0	89.8	1013

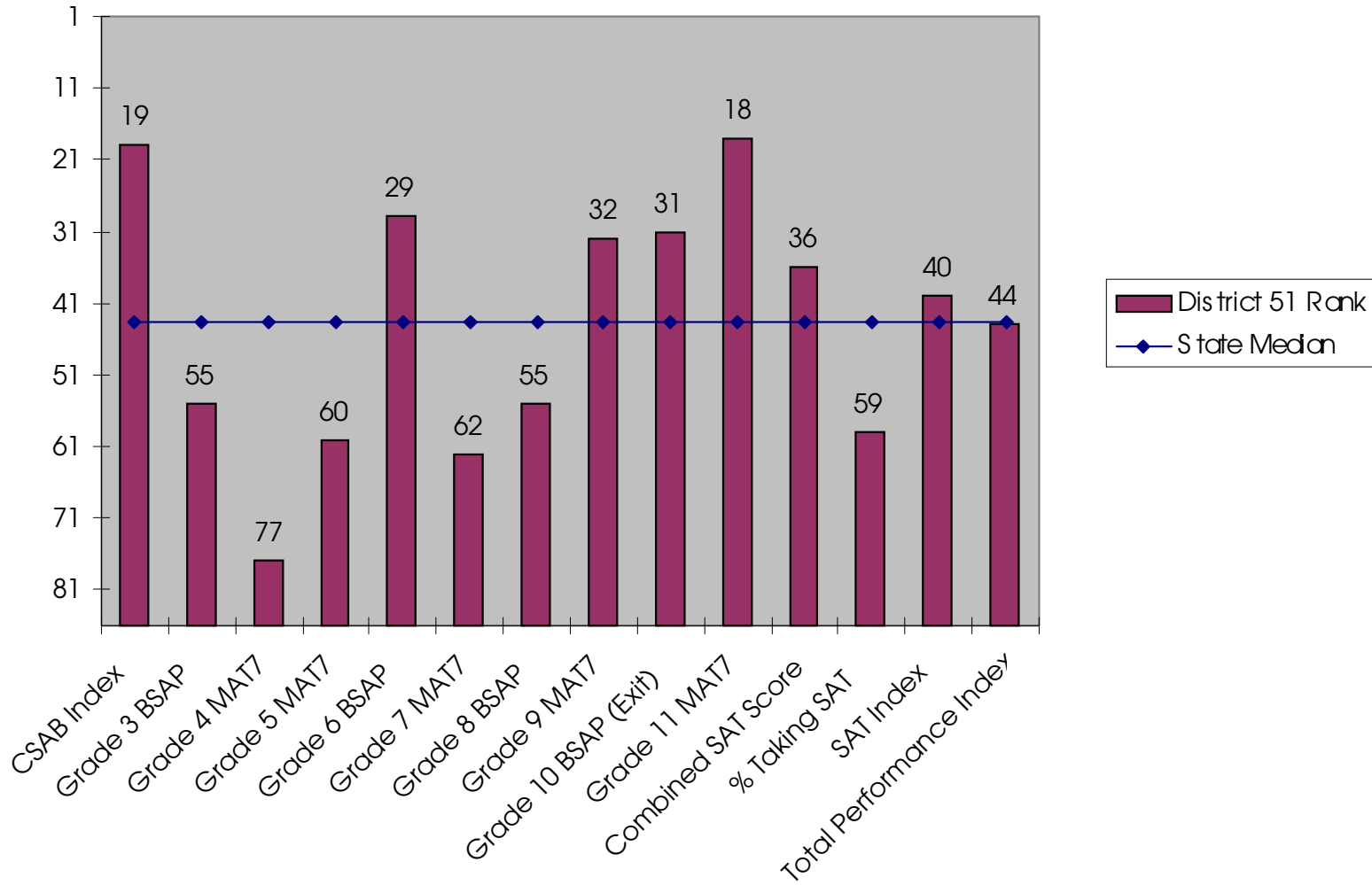
**APPENDIX F**

**Academic Performance Charts for Greenwood County School Districts**

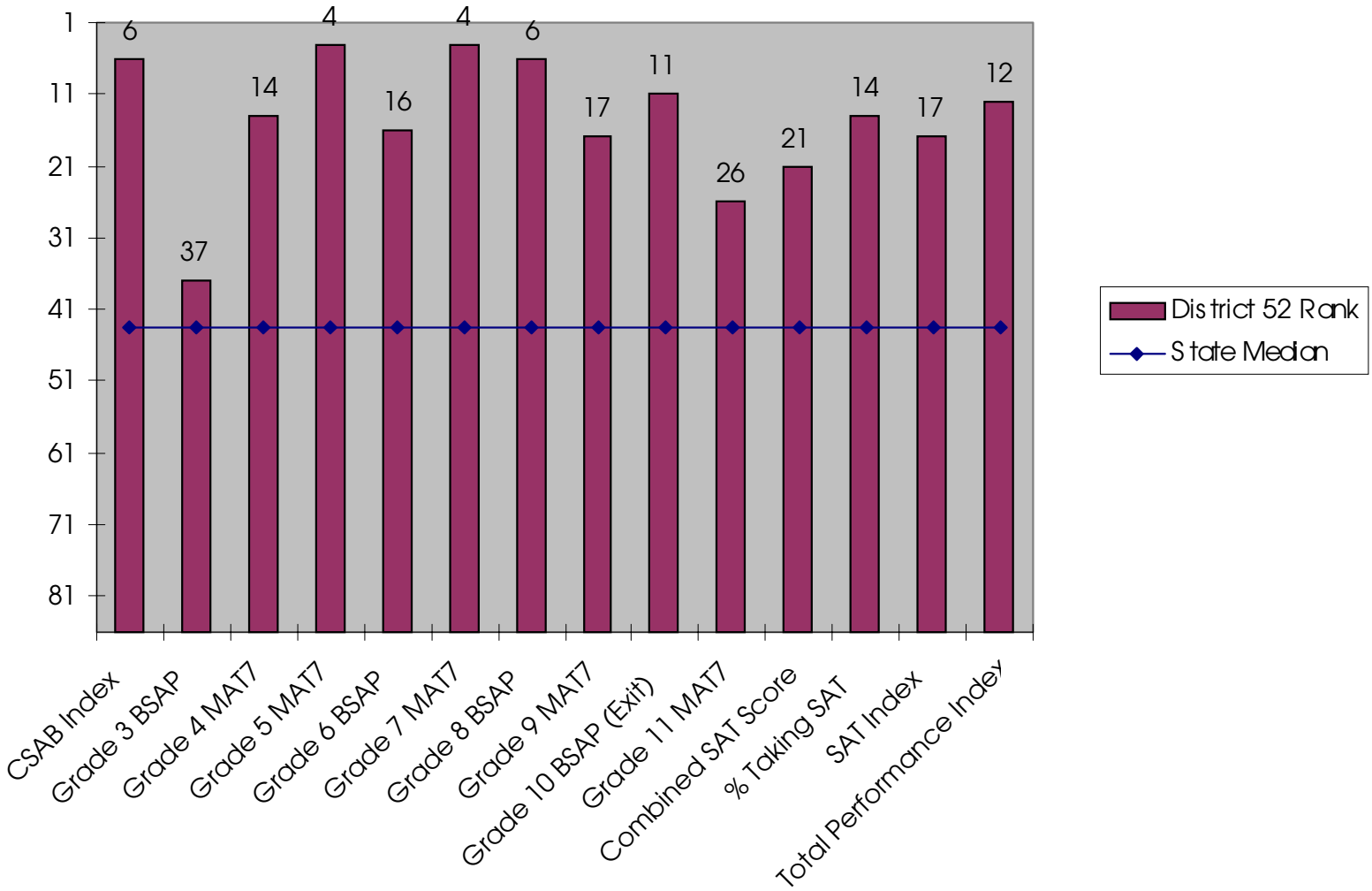
### District 50 Performance Index Rankings



### District 51 Performance Index Rankings



### District 52 Performance Index Rankings





**APPENDIX G**

**School District Classifications**

## School District Classifications

District	Economic Development Competitor	Fiscal Authority	Size Classification	District Office	Selected High School
Abbeville	No	Limited	2,001-6,000	Abbeville	Abbeville
Aiken	Yes	Full	over 24,000	Aiken	Aiken
Allendale	No	Limited	2,001-6,000	Allendale	Allendale-Fairfax
Anderson 1	Yes	Limited	6,001-12,000	Williamston	Wren
Anderson 2	Yes	Limited	2,001-6,000	Honea Path	Belton-Honea Path
Anderson 3	Yes	Limited	2,001-6,000	Iva	Crescent
Anderson 4	Yes	Limited	2,001-6,000	Pendleton	Pendleton
Anderson 5	Yes	Limited	6,001-12,000	Anderson	T.L. Hanna
Bamberg 1	No	Limited	under 2,000	Bamberg	Bamberg-Ehrhardt
Bamberg 2	No	Limited	under 2,000	Denmark	Denmark-Olar
Barnwell 19	No	Limited	under 2,000	Blackville	Blackville-Hilda
Barnwell 29	No	Limited	under 2,000	Williston	Williston-Elko
Barnwell 45	No	Limited	2,001-6,000	Barnwell	Barnwell
Beaufort	No	None	12,001-24,000	Beaufort	Beaufort
Berkeley	No	Full	over 24,000	Moncks Corner	Berkeley Senior
Calhoun	No	None	2,001-6,000	St. Matthews	Calhoun County
Charleston	No	Limited	over 24,000	Charleston	James Island
Cherokee	No	Full	6,001-12,000	Gaffney	Gaffney Senior
Chester	No	Full	6,001-12,000	Chester	Chester Senior
Chesterfield	No	Limited	6,001-12,000	Chesterfield	Chesterfield
Clarendon 1	No	None	under 2,000	Summerton	Scott's Branch
Clarendon 2	No	None	2,001-6,000	Manning	Manning
Clarendon 3	No	None	under 2,000	Turbeville	East Clarendon
Colleton	No	None	6,001-12,000	Walterboro	Walterboro Senior
Darlington	No	Full	6,001-12,000	Darlington	Darlington
Dillon 1	No	None	under 2,000	Lake View	Lake View
Dillon 2	No	None	2,001-6,000	Dillon	Dillon
Dillon 3	No	None	under 2,000	Latta	Latta
Dorchester 2	No	Limited	12,001-24,000	Summerville	Summerville
Dorchester 4	No	Limited	2,001-6,000	St. George	St. George
Edgefield	No	Full	2,001-6,000	Edgefield	Strom Thurmond
Fairfield	No	Limited	2,001-6,000	Winnsboro	Fairfield Central
Florence 1	Yes	Limited	12,001-24,000	Florence	South Florence
Florence 2	Yes	None	under 2,000	Pamplico	Hannah-Pamplico
Florence 3	Yes	None	2,001-6,000	Lake City	Lake City
Florence 4	Yes	None	under 2,000	Timmonsville	Timmonsville
Florence 5	Yes	None	under 2,000	Johnsonville	Johnsonville
Georgetown	No	Full	6,001-12,000	Georgetown	Georgetown
Greenville	Yes	Limited	over 24,000	Greenville	Greenville
Greenwood 50	No	None	6,001-12,000	Greenwood	Greenwood
Greenwood 51	No	None	under 2,000	Ware Shoals	Ware Shoals
Greenwood 52	No	None	under 2,000	Ninety Six	Ninety Six
Hampton 1	No	None	2,001-6,000	Varnville	Wade Hampton
Hampton 2	No	None	under 2,000	Estill	Estill
Horry	No	Full	over 24,000	Conway	Conway

### School District Classifications, continued

<b>District</b>	<b>Economic Development Competitor</b>	<b>Fiscal Authority</b>	<b>Size Classification</b>	<b>District Office</b>	<b>Selected High School</b>
Jasper	No	None	2,001-6,000	Ridgeland	Jasper County
Kershaw	No	Limited	6,001-12,000	Camden	Camden
Lancaster	No	Limited	6,001-12,000	Lancaster	Lancaster
Laurens 55	No	Limited	2,001-6,000	Laurens	Laurens 55
Laurens 56	No	Limited	2,001-6,000	Clinton	Clinton Senior
Lee	No	None	2,001-6,000	Bishopville	Bishopville
Lexington 1	Yes	Full	12,001-24,000	Lexington	Lexington
Lexington 2	Yes	Full	6,001-12,000	West Columbia	Brookland-Cayce
Lexington 3	Yes	Full	2,001-6,000	Batesburg	Batesburg-Leesville
Lexington 4	Yes	Full	2,001-6,000	Swansea	Swansea
Lexington 5	Yes	Full	12,001-24,000	Ballentine	Irmo
McCormick	No	None	under 2,000	McCormick	McCormick
Marion 1	No	None	2,001-6,000	Marion	Marion
Marion 2	No	None	2,001-6,000	Nichols	Mullins
Marion 3	No	None	under 2,000	Rains	Terrells Bay
Marion 4	No	None	under 2,000	Gresham	Brittons Neck
Marlboro	No	Full	2,001-6,000	Bennettsville	Marlboro County
Newberry	No	Limited	2,001-6,000	Newberry	Newberry
Oconee	No	None	6,001-12,000	Walhalla	Seneca
Orangeburg 3	No	Limited	2,001-6,000	Holly Hill	Holly Hill-Roberts
Orangeburg 4	No	Limited	2,001-6,000	Cordova	Edisto
Orangeburg 5	No	Limited	6,001-12,000	Orangeburg	Orangeburg-Wilkinson
Pickens	No	Limited	12,001-24,000	Easley	D.W. Daniel
Richland 1	No	None	over 24,000	Columbia	Dreher
Richland 2	No	None	12,001-24,000	Columbia	Richland Northeast
Saluda	No	None	2,001-6,000	Saluda	Saluda
Spartanburg 1	Yes	Full	2,001-6,000	Campobello	Chapman
Spartanburg 2	Yes	Full	6,001-12,000	Boiling Springs	Boiling Springs
Spartanburg 3	Yes	Full	2,001-6,000	Glendale	Gettys D. Broome
Spartanburg 4	Yes	Full	2,001-6,000	Woodruff	Woodruff
Spartanburg 5	Yes	Full	2,001-6,000	Duncan	James F. Byrnes
Spartanburg 6	Yes	Full	6,001-12,000	Spartanburg	Dorman
Spartanburg 7	Yes	Full	6,001-12,000	Spartanburg	Spartanburg
Sumter 17	No	None	6,001-12,000	Sumter	Lakewood
Sumter 2	No	None	6,001-12,000	Sumter	Sumter
Union	No	Full	2,001-6,000	Union	Union
Williamsburg	No	Limited	6,001-12,000	Kingstree	Kingstree Senior
York 1	Yes	Limited	2,001-6,000	York	York Comprehensive
York 2	Yes	Limited	2,001-6,000	Clover	Clover
York 3	Yes	Limited	12,001-24,000	Rock Hill	Rock Hill
York 4	Yes	Limited	2,001-6,000	Fort Mill	Fort Mill

## **APPENDIX H**

### **Educational Inputs and Outcomes: Regression Results**

## Regression Tables

The following pages contain tables of regression results cited in this report. All of the statistically significant relationships referenced in the report are included. Some of the generalizations made in the regression section of the report are based on overall impressions gained from many analyses not presented here.

The results from regressions involving per pupil expenditure categories have been omitted from these tables because the researchers believe endogeneity problems that could not be corrected biased the results of the analyses. Based on this belief, the conclusion from the analysis was that no relationships between per pupil spending and academic performance were discernible.

In the tables, two numbers are given for each relationship examined. The number on top is the parameter estimate, or estimated coefficient, and the number on the bottom in parentheses is the significance level of the parameter estimate. The lower the significance level, the stronger the relationship. For the purposes of this report, a significance level of 15%—0.15—was adopted as a threshold for determining statistical significance. (A significance level of 15% means that one can be 85% sure that the measured relationship exists.)

**Early-Grade and Late-Grade Test Performance Regressions  
(Dependent Variable = Total Academic Performance Index)**

Explanatory Variables	Early-Grade Index < 50		Early-Grade Index > 50	
	Model 1 R <sup>2</sup> = 0.45	Model 2 R <sup>2</sup> = 0.64	Model 1 R <sup>2</sup> = 0.75	Model 2 R <sup>2</sup> = 0.76
Intercept	-99.25 (0.2293)*	47.32 (0.5350)*	-129.02 (0.0075)	-132.10 (0.0065)
Avg. Pass Rate CSAB	0.965 (0.0858)	0.031 (0.9518)*	0.657 (0.0097)	0.569 (0.0336)
Adult Avg. Educ. Attainment	7.14 (0.1723)*	-2.53 (0.6031)*	10.66 (0.0006)	10.61 (0.0007)
% Children Below Poverty Line	-126.79 (0.0013)	-55.22 (0.1174)	-104.71 (0.0001)	-95.02 (0.0001)
Avg. Yrs. Teacher Experience	1.86 (0.3218)*	0.084 (0.9582)*	2.94 (0.0053)	2.88 (0.0063)
Early-Grade Test Performance Index	--	0.978 (0.0002)	--	0.133 (0.3365)*

\* Statistically Insignificant

**Student Background & Teacher Experience Regressions  
(Dependent Variable = Total Academic Performance Index)**

Explanatory Variables	Model 1 R <sup>2</sup> = 0.76	Model 2 R <sup>2</sup> = 0.88	Model 3 R <sup>2</sup> = 0.79	Model 4 R <sup>2</sup> = 0.88	Model 5 R <sup>2</sup> = 0.88	Model 6 R <sup>2</sup> = 0.90
Intercept	-88.13 (0.0159)	20.05 (0.4802)*	-128.98 (0.0006)	-5.30 (0.8638)*	-113.27 (0.0001)	-46.27 (0.1355)
Avg. Pass Rate CSAB	0.884 (0.0003)	0.362 (0.0423)	0.851 (0.0002)	0.379 (0.0311)	0.733 (0.0001)	0.502 (0.0030)
Adult Avg. Educ. Attainment	9.08 (0.0003)	4.71 (0.0094)	9.64 (0.0001)	5.25 (0.0038)	9.78 (0.0001)	7.06 (0.0001)
% Children Below Poverty Line	-1.31 (0.0001)	--	-1.22 (0.0001)	--	-1.67 (0.3307)*	--
% Eligible Free or Reduced Lunch	--	-0.942 (0.0001)	--	-0.901 (0.0001)	--	-0.486 (0.0003)
% Minority	--	--	--	--	-0.523 (0.0001)	-0.300 (0.0004)
Avg. Yrs. Teacher Experience	--	--	2.63 (0.0015)	1.18 (0.0574)	1.86 (0.0027)	1.37 (0.0192)

\* Statistically Insignificant

**Teacher Salary Regressions  
(Dependent Variable = Total Academic Performance Index)**

<b>Explanatory Variables</b>	<b>Model 1 R<sup>2</sup> = 0.77</b>	<b>Model 2 R<sup>2</sup> = 0.88</b>	<b>Model 3 R<sup>2</sup> = 0.79</b>	<b>Model 4 R<sup>2</sup> = 0.87</b>
Intercept	-126.96 (0.0017)	24.20 (0.4787)*	-131.90 (0.0009)	-107.30 (0.0005)
Avg. Pass Rate CSAB	0.728 (0.0030)	0.369 (0.0429)	0.831 (0.0007)	0.660 (0.0004)
Adult Avg. Educ. Attainment	8.07 (0.0011)	4.75 (0.0096)	9.47 (0.0002)	8.79 (0.0001)
% Children Below Poverty Line	-1.16 (0.0001)	--	-1.20 (0.0001)	-0.111 (0.5405)*
% Eligible Free or Reduced Lunch	--	-0.950 (0.0001)	--	--
% Minority	--	--	--	-0.537 (0.0001)
Avg. Yrs. Teacher Experience	--	--	2.47 (0.0200)	--
Avg. Teacher Salary	0.0018 (0.0306)	-0.0001 (0.8244)*	0.0002 (0.8078)*	0.0010 (0.0872)

\* Statistically Insignificant

**Teacher Starting Salary & Educational Attainment Regressions  
(Dependent Variable = Total Academic Performance Index)**

<b>Explanatory Variables</b>	<b>Model 1 R<sup>2</sup> = 0.76</b>	<b>Model 2 R<sup>2</sup> = 0.88</b>	<b>Model 3 R<sup>2</sup> = 0.76</b>	<b>Model 4 R<sup>2</sup> = 0.76</b>	<b>Model 5 R<sup>2</sup> = 0.76</b>
Intercept	-102.76 (0.0068)	25.15 (0.4116)*	-85.84 (0.1089)	-97.72 (0.0781)	-100.56 (0.0663)
Avg. Pass Rate CSAB	0.943 (0.0001)	0.340 (0.0664)	0.888 (0.0004)	0.870 (0.0005)	0.866 (0.0006)
Adult Avg. Educ. Attainment	8.83 (0.0004)	4.71 (0.0098)	9.12 (0.0004)	8.97 (0.0005)	8.92 (0.0005)
% Children Below Poverty Line	-1.20 (0.0001)	--	-1.31 (0.0001)	-1.29 (0.0001)	-1.29 (0.0001)
Starting Salary BA & No Exp.	--	--	-0.0001 (0.9530)*	--	--
Starting Salary BA & 10 Yrs.	--	--	--	0.0003 (0.8168)*	--
Starting Salary MA & 17 Yrs.	--	--	--	--	0.0004 (0.7584)*
% Staff w/ MA	0.329 (0.1542)	-0.079 (0.6451)*	--	--	--

\* Statistically Insignificant

**Completion Rate Regressions**  
**(Dependent Variable = High School Completion Rate)**

<b>Explanatory Variables</b>	<b>Model 1 R<sup>2</sup> = 0.10</b>	<b>Model 2 R<sup>2</sup> = 0.14</b>	<b>Model 3 R<sup>2</sup> = 0.14</b>	<b>Model 4 R<sup>2</sup> = 0.14</b>	<b>Model 5 R<sup>2</sup> = 0.15</b>	<b>Model 6 R<sup>2</sup> = 0.21</b>
Intercept	76.30 (0.0001)	52.78 (0.0001)	56.57 (0.0001)	52.13 (0.0001)	52.30 (0.0001)	58.20 (0.0001)
% Eligible Free or Reduced Lunch	-0.227 (0.0175)	--	--	--	--	--
% Minority	0.106 (0.1385)	0.116 (0.0562)	0.107 (0.0858)	0.112 (0.0728)	0.129 (0.0378)	0.116 (0.0479)
Academic Performance	--	0.215 (0.0021)	0.197 (0.0080)	0.218 (0.0022)	0.243 (0.0012)	0.237 (0.0005)
Teen Pregnancy Rate	--	--	-0.556 (0.4929)*	--	--	--
Unemployment Rate	--	--	--	0.089 (0.7619)*	--	--
% Employed in Agriculture	--	--	--	--	-0.002 (0.2908)*	--
Crime Rate	--	--	--	--	--	-0.012 (0.0085)

\* Statistically Insignificant



**Miscellaneous Regressions  
(Various Dependent Variables)**

Explanatory Variables	Dependent Variables				
	Local Rev. Share $R^2 = 0.82$	Leadership Per Pupil $R^2 = 0.53$	Teacher Turnover <sup>c</sup> $R^2 = 0.39$	Avg. Teacher Salary $R^2 = 0.72$	Combined SAT Score $R^2 = 0.92$
Intercept	0.151 (0.0001)	-675.38 (0.0232)	40.75 (0.0001)	19,657 (0.0001)	412.00 (0.0001)
Avg. Pass Rate CSAB	--	7.98 (0.0001)	--	--	--
Adult Avg. Educ. Attainment	--	28.71 (0.1501)	--	--	--
% Eligible Free or Reduced Lunch	--	4.96 (0.0001)	-0.111 (0.0305)	--	--
% Minority	--	--	0.116 (0.0007)	--	--
Assessed Value Per Pupil	0.00001 (0.0001)	--	--	--	--
Full Fiscal Authority Dummy	0.053 <sup>a</sup> (0.0001)	--	--	--	--
District Size	--	-0.003 <sup>b</sup> (0.0208)	--	--	--
Avg. Teacher Salary	--	--	-0.0009 (0.0004)	--	--
Avg. Yrs. Teacher Experience	--	--	--	398.46 (0.0001)	--
% Staff w/ MA	--	--	--	133.80 (0.0001)	--
% Staff w/ 6-yr. or Doctorate	--	--	--	175.16 (0.0001)	--
% Taking SAT	--	--	--	--	-109.71 <sup>d</sup> (0.0004)
9 <sup>th</sup> Grade MAT7	--	--	--	--	2.83 (0.0044)
10 <sup>th</sup> Grade Exit Exam	--	--	--	--	0.217 <sup>e</sup> (0.7748)*
11 <sup>th</sup> Grade MAT7	--	--	--	--	6.44 (0.0001)

\* Statistically Insignificant

<sup>a</sup> Districts w/ full authority have 5.3% higher local revenue share than property values per pupil predict.

<sup>b</sup> Negative coefficient illustrates economies of scale in leadership spending.

<sup>c</sup> Teacher turnover is expressed as a percentage, not a fraction (40% = 40, not 0.40).

<sup>d</sup> Negative coefficient shows partial effect of having more students take the exam. This regression was used to create the SAT performance index.

<sup>e</sup> This variable is insignificant due to collinearity w/ other two MAT7 scores.