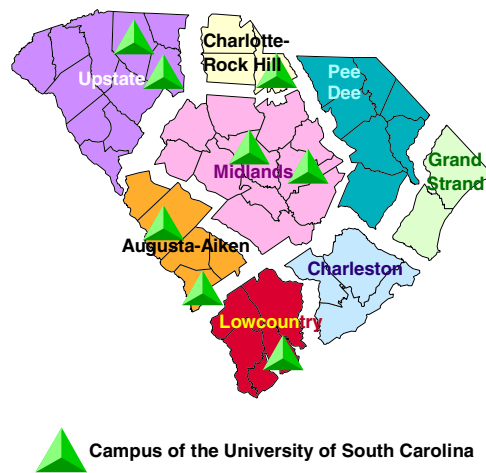


The Economic Impact of The University of South Carolina System



Division of Research
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The Economic Impact of The University of South Carolina System

Introduction

The University of South Carolina (USC) System plays a vital role in the South Carolina economy. Through eight regional campuses, millions of dollars are injected into local communities across the state. From research to sports, few institutions have such a broad and far-reaching impact on the state. While the primary mission of the university is to enhance the personal development and intellectual quality of South Carolina citizens, the economic effects should be recognized as well.

The aim of this study is to quantify USC's impact on South Carolina and local economies across the state. Combining the impact of alumni with the impact of the university and related spending, the study takes a broad look at the influence of the USC System on the state and local economies. The results are based on an analysis of the overall economic effects of USC for fiscal year 1998-99.

As the University of South Carolina enters its third century, the prospects for the state appear auspicious. The economy is the strongest it has ever been. The USC System plays a critical role in achieving this higher level of economic development. The potential is even greater, as other state university systems suggest; in particular those that have achieved Association of American Universities (AAU) status. Across the country, flagship state universities play leading roles in developing technology and spreading culture. Other studies show that linkages between leading state universities and local business generate billions of dollars for the economy.¹

Linkages between leading state universities and local business generate billions of dollars for the economy.

Beyond the typical economic impacts engendered by any business or government institution, flagship state universities develop human capital, defined as the accumulation of investment in the skills and knowledge of the population. Higher education is a critical investment that ensures the future well being of an area. It is well known that workers with more education on average earn far more than workers with less education. In fact, college graduates in the United States earn 84 percent more than those who end their education with high school. The gap is projected to grow over time, as firms will pay more for educated workers because they are more productive. This study will document that the effects of the university system on the increased earning power in South Carolina are significant.

The intent of this report, then, is to assess the economic impact of the USC System and USC graduates on the state and local economies. Although many citizens sense that a link between education and economic development exists, the connection is often not well understood. This study aims to present a clear and accurate assessment of the economic impact of the University of South Carolina and contribute to our understanding of the effects of the System on the well being of South Carolina.

A summary of the major economic impacts of the USC System is presented in the next sections of this report. These impacts include the effects of University operations and capital spending, student spending, sports, and the additional earnings of USC alumni who earn higher wages and salaries because of their education. While the University clearly enhances the state in a myriad of ways, it is not possible to quantify these other effects. However, we can document the many USC System programs that support the overall quality of life in South Carolina. The last section of this report discusses the qualitative, non-quantifiable aspects of USC involvement in state and local development.

Higher education is a critical investment that ensures the future well being of an area. . . . In fact, college graduates in the United States earn 84 percent more than those who end their education with high school.

The Economic Ripple Effect of the University System

Like other business and governmental institutions, the University of South Carolina's expenditures provide a source of jobs and income for residents throughout South Carolina. University spending consists of construction outlays, equipment and supply purchases, and spending by staff and students for locally supplied goods and services. These expenditures create an economic "multiplier effect." Local purchases by the institution and by students generate income for local residents. This leads to further spending and income for residents. Thus, the University's impact continues after the initial money is spent for goods and services. It supports many enterprises and individuals not directly connected to the System.

Broadly speaking, the multiplier effect of the university system spending is a combination of direct, indirect, and induced impacts on local economies. The direct impact is the economic activity generated by the System's purchases. Direct expenditures include everything from lab equipment to football helmets. These purchases generate further expenditures within the economy, termed indirect impacts. As suppliers and local vendors spend income received from USC, businesses benefit further upstream. Moreover, wages are paid to employees as a result of the direct and indirect expenditures. The wage income then exerts an increase in expenditures via the local consumption of goods and services locally. These effects are called induced impacts. The sum of the direct, indirect, and induced impacts is the total economic impact (see Figure 1).

The first step in the impact analysis was to calculate USC's direct dollar impact on the state and surrounding communities for the expenditures of the eight branches of the system (8 branches). Information requests were sent to all relevant offices that record expenditures for the USC system. The data collected included salaries, construction expenses, and student expenditures into the area, athletic expenditures, and non-construction expenditures. The data were then sorted into three separate categories, which together would yield impact measures. The categories are:

The University's impact continues . . . It supports many enterprises and individuals not directly connected to the System.

Figure 1. Impact Definitions

Direct Impact. *These are expenditures that are injected into the state's economy from the USC system. They are based on the survey of all campuses discussed earlier.*

Indirect Impact. *These are the ripple effects on other industries based on input-output analysis.*

Induced Impact. *These are impacts of household expenditures from wages and salaries.*

Total Impact. *The sum of the direct, indirect, and induced impacts.*

1. Operating Expenditures. These include salaries, construction-, and non-construction expenditures of USC.
2. Student Expenditures. These are the impacts of expenditures of students who are attending a particular campus. A full-time equivalent (FTE), rather than total number of students, was used to generate the number of students attending a particular school.
3. Athletic Expenditures. This includes expenditures by the Athletic Department at USC as well as the expenditures of fans who attend the games of the University of South Carolina.

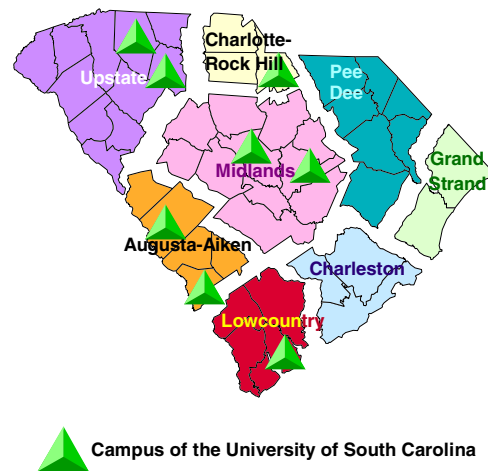
Given USC expenditures, the multiplier impacts on the state and regions were calculated using the IMPLAN model, a form of input-output analysis widely used across the United States. The impacts generated by IMPLAN produce the indirect and induced effects (see Figure 1). In tailoring the IMPLAN model for USC, every attempt was made to gauge the effects of the System with accuracy, using conservative assumptions.

Impacts were calculated for three categories that reflect the contribution of USC to the state and local economy.

1. Output. This is the contribution to overall economic activity.
2. Employment. This is the contribution to the job base.
3. Earnings. This is the contribution to wages and salaries.

Output, employment, and earnings impacts were calculated for each branch campus on the state and on local economies. The total impact of the branches on the state equals the system-wide impact on the state.

In the following pages, we discuss some specific findings about output, earnings, and employment for both the total System and for each campus. Presented first is the impact of the University System on the state economy. Following the discussion of the statewide impact is an overview of the impact of USC on regions within the state (shown at the right). The total economic impact of the University on economic output, earnings, and employment is broken out for



spending by the university, students, athletics, and research. Following this discussion is an analysis of USC graduates' incremental incomes and tax revenue generated for South Carolina. These effects represent an important contribution of higher education to the state—benefits that few other institutions can claim.

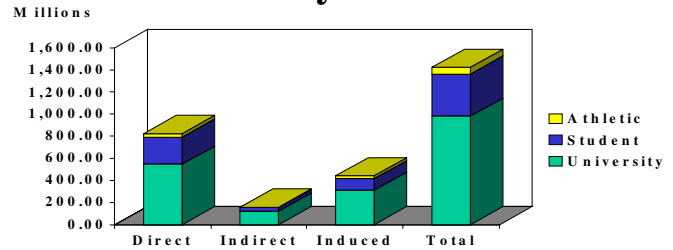
Results

The USC System Impacts

Multiplier Impact of USC Spending

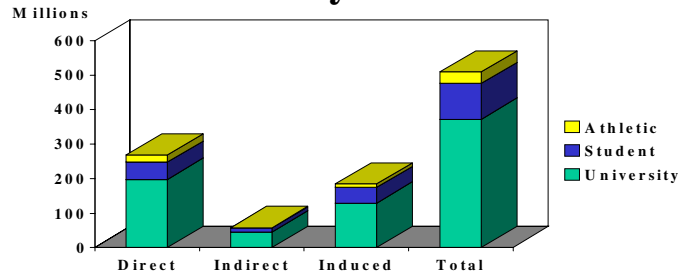
Overall, The USC System spent \$819.8 million during fiscal year 1998-99. Of this amount, \$546.6 million was operating expenditures, \$253.2 million was student spending, and \$30.1 million was athletics expenditures. This initial impact resulted in a total economic impact of \$1.4 billion (Figure 2). The total output impact for operating expenditures was \$980.5 million, for student spending was \$383.9 million, and for athletics spending was \$58.9 million. This spending generated an earnings impact of over \$510 million (Figure 3) and supported about 22,400 jobs (Figure 4) in the state. The breakdown for operations alone is \$371.3 million in earnings and 17,122 jobs. Student spending yielded \$105.7 million in earnings and 4,352 jobs. Athletics spending generated \$33.4 million in earnings and nearly 900 jobs.

Figure 2. Total Output Impact of the USC System



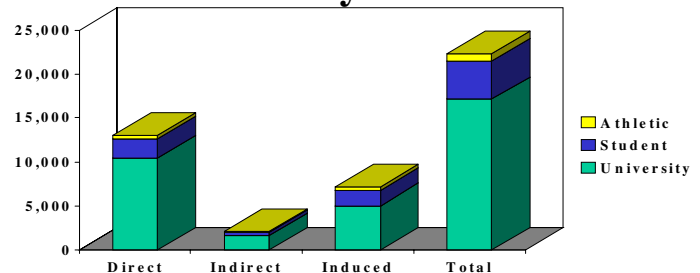
Million Dollars	Direct	Indirect	Induced	Total
University	\$546.6	\$123.4	\$310.5	\$980.5
Student	\$243.2	\$34.9	\$105.9	\$383.9
Athletics	\$30.1	\$2.7	\$26.1	\$58.9
Total	\$819.8	\$161.0	\$442.5	\$1,423.4

Figure 3. Total Earnings Impact of the USC System



Million Dollars	Direct	Indirect	Induced	Total
University	\$197.5	\$45.1	\$128.6	\$371.3
Student	\$48.8	\$11.7	\$45.2	\$105.7
Athletic	\$21.6	\$1.1	\$10.7	\$33.4
Total	\$267.9	\$57.9	\$184.5	\$510.3

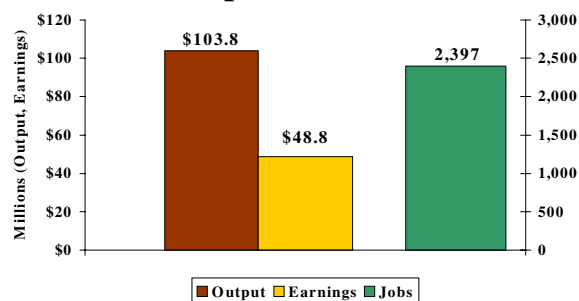
Figure 4. Total Jobs Impact of the USC System



	Direct	Indirect	Induced	Total
University	10,433	1,635	5,046	17,115
Student	2,178	440	1,734	4,352
Athletic	429	36	424	889
Total	13,041	2,112	7,204	22,358

The system's spending also includes capital projects. Capital expenditures by the USC System in 1998-99 was \$54.4 million (of which \$51.1 million entered the model as a direct impact after accounting for leakages from savings and imports from outside South Carolina (Figure 5). This amount generated a total economic impact of \$103.8 on the State of South Carolina. Of this, a total of \$48.8 million was in earnings. These expenditures supported 2,397 jobs.

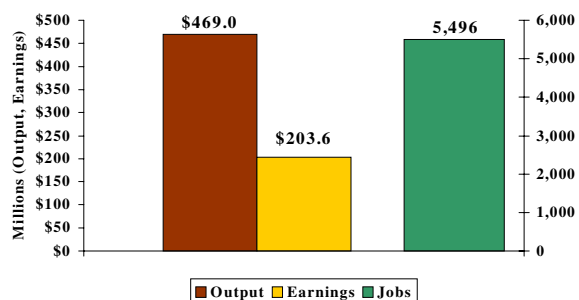
Figure 5. University System Capital Expenditures*



*Jobs plotted against right axis; output and earnings plotted against left axis.

In 1998-99, salary expenditures of the USC System were \$294.7 million, which resulted in a total output impact of \$469.0 million (Figure 6). This spending generated an earnings impact of \$203.6 million and supported 5,496 jobs.

Figure 6. University System Salary Expenditures*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Research and Athletics Impacts

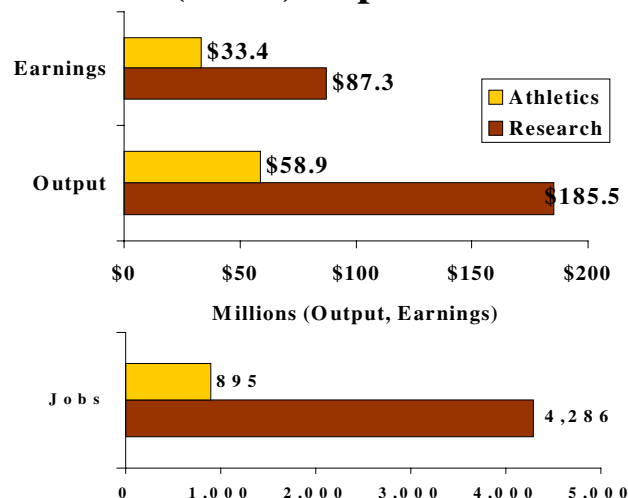
Part of the overall impact of the USC system is the economic ripple effect that stems from research and athletics. These impacts are included in the operations and capital impacts discussed already, but are interesting to break out separately.

An initial research expenditure of \$91.4 million more than doubles to \$185.5 for total output impact.

Associated with this is a total earnings impact of \$87.3 million and jobs impact of 4,286. Figure 7 compares the research and athletics expenditures impacts on the state of South Carolina.

The initial direct expenditures for athletics of \$30.1 million nearly doubles to a total impact of \$58.9 million. Associated with this is total earnings impact of \$33.4 million and 895 total jobs resulting from athletics expenditures.

Figure 7. Comparison of the Impact of Research Grants (Total) and Athletics (Total) Expenditures



The Return on USC Education to the State and Individuals

The most common means of evaluating an economic impact of any activity is the multiplier effect from expenditures. Yet, the influence of the USC system on the state's economy extends beyond those impacts related to its spending, student expenditures, sports, and research. Educational institutions have additional ef-

fects—unique and lasting impacts that no other form of activity can claim. Graduates attain a higher level of human capital and thus higher lifetime earnings. Many USC graduates stay in South Carolina. The increased earnings from the USC degree pays dividends not only to the graduate in terms of enhanced earnings potential, but also to the state in terms of increased tax revenue from higher wages and salaries over the course of the graduate’s lifetime.

Thus, in addition to the multiplier analysis of university-related spending, the return on education was estimated: future state revenue from additional taxes as a result of higher income from USC college degrees (discounted to present value) versus the cost of the degree to the state of South Carolina. The benefits can be compared to the cost of education using the concept of the internal rate of return. That is, what interest rate would the state have to attain to match the annual return it receives from its investment in education? To compute the internal rate of return on education for an individual attending a USC campus, it is first necessary to determine the direct costs (tuition, room and board, loss of income from not working). Next, these costs are compared to the discounted stream of incremental income earned over a graduate’s lifetime that may be attributed to attaining a degree. To compute the internal rate of return on USC education for the State of South Carolina, it is necessary to determine the direct costs (the state’s outlay for educating a USC student) and then look at the incremental tax revenue generated for South Carolina during a typical USC graduate’s working years. Further details and the assumptions used in these calculations can be found in an appendix.

The internal rate of return on education is based on the net benefits that accrue over time compared with an alternative risk-free investment. The calculations are in real terms (or inflation-adjusted returns) so they should be compared to the observed (nominal) interest rate less the rate of inflation. The return on a bachelor’s degree for the State of South Carolina is 3.45 percent. The return on graduate degree for the State of South Carolina is 6.79 percent. There are actually few risk-free investments that pay a real return of over 3 percent. This shows that South

The return on a bachelor’s degree for the State of South Carolina is 3.45 percent. The return on graduate degree for the State of South Carolina is 6.79 percent.

Carolina, in purely fiscal terms, gains from its investment in USC. The many other benefits of the USC graduates only bolster the positive return.

Individuals who graduate from the USC system benefit even more than the state government. For individuals the return on education—the student cost outlay compared with the payback in terms of increased lifetime earnings—is over 20 percent. The average student career differential earnings amount to \$639,830 compared with an average cost of \$42,625 to obtain the degree. This incremental income has a multiplier effect as well.

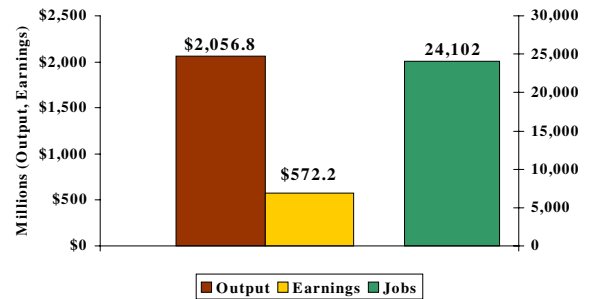
Given the estimated incremental income of USC alumni is \$1.3 billion, the total output generated by this is \$2.1 billion (Figure 8). Total earnings from the incremental income is \$572.2 million, and more than 24,000 jobs are supported.

Conclusion: The Statewide Impact

This study examined the impact of the USC system, taking a comprehensive approach that looks at the various ways in which the system influences the economic well-being of South Carolina citizens. When the various components of the University of South Carolina—campuses, operations, athletics, research, alumni—are summed with the alumni impact, the total impact is substantial. Total output—that is, the overall contribution to the state economy—amounts to \$3.8 billion. This level of economic activity supports 54,000 jobs, and provides \$1.3 billion in total earnings. These results suggest that few other institutions could match the almost \$4 billion magnitude.

Even so, the real value of the USC system to South Carolina is impossible to quantify in all its many dimensions. The university elevates the intellectual capabilities of citizens and enhances the cultural life of South Carolina communities. South Carolina’s flagship university system contributes to the quality of life of many communities across the state.

Figure 8. Impact of USC Alumni: Incremental Income*



*Jobs plotted against right axis; output and earnings plotted against left axis.

**Total impact of USC
(university-related
spending and alumni):
Output—\$3.8 billion
Jobs—54,000
Earnings—\$1.3 billion**

USC's Effects on Regional Economies across South Carolina

This section provides a detailed profile of the economic impact of USC's individual campuses and USC alumni on the regions of South Carolina. For each region, the campuses based within that region are described in both qualitative and quantitative terms. The discussion for each concludes with the impact of USC alumni's incremental income and a summary of the total impact on the region.

The Upstate Region

The Upstate Region is comprised of 11 counties in the northwest corner of the state (Figure 9). The campuses of USC Union and USC Spartanburg are situated in the Upstate Region.

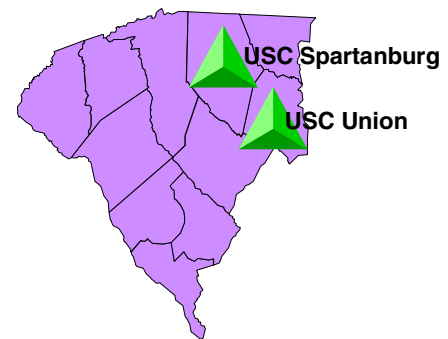
USC Union

The USC Union campus was founded in 1965 and is within easy commuting distance for most students in the upstate of South Carolina. USC Union offers most of the first two years of the University of South Carolina curricula. Recently, the historic Dawkins House, which served briefly as the South Carolina capital building during the Civil War, was donated to USC Union. Plans are underway to renovate the structure.

One of USC Union's programs is The Opportunity Scholars Program (OSP), which is an academic support service for students who qualify for significant amounts of financial aid and who represent the first generation of their families to attend college. The goal of the OSP is to help participants graduate from the University. Opportunity network programs are designed to improve retention and graduation rates of low income, first generation, and disabled college students each year. Students enrolled in the program receive tutoring, personal counseling, academic advice and assistance in obtaining financial aid. Specially designed workshops and basic skill instruction are also included in the program.

Direct (initial) expenditures at USC Union consisted of \$1,743,219 for the University and \$1,906,750 for students.² The impacts on South Carolina's Upstate

Figure 9. Upstate Region and USC Campuses



Region were \$2.6 million and \$2.6 million for the University and students, respectively, for a total output impact of \$5.3 million (Figure 10). The direct expenditures supported 81 jobs (55 for the University, 26 for students), and had total earnings impact of \$1.6 million (\$0.9 million for the University, \$0.6 million for students).

USC Spartanburg

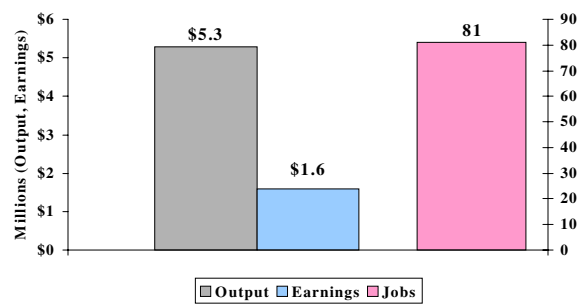
In 26 years, USC Spartanburg (USCS) has grown from a small, two-year campus into an important center of higher education for the entire metropolitan Upstate. In 1967, citizens concerned about the Spartanburg General Hospital's cessation of its diploma program asked that the campus be included in the USC system. As enrollment grew, operations expanded and, in 1969, the first building was opened on the permanent campus north of Spartanburg.

In the fall of 1975, the Spartanburg Regional Campus officially became the University of South Carolina-Spartanburg and the S.C. Commission on Higher Education approved the first twelve bachelor's degree programs. From its beginning, USCS has operated in partnership with school districts, health care institutions, businesses, and industries to develop academic and public service programs tailored to the needs of the region it serves.

USCS offers a number of organized community investment programs designed to improve the quality of life for Upstate residents. A sample of these programs follows.

- *Piedmont Math and Science Hub* Continuous improvement in math and science education is the goal of this organization that serves constituents in Cherokee, Spartanburg, and Union counties. Math and science specialists conduct workshops for teachers, consult with administrators in curriculum and facilities planning, and provide leadership in developing community-based educational efforts. Services are offered on both USC Spartanburg campus and school sites. Business and industry involvement is promoted through projects including the "Industry to Go Kit" initiative that allows companies to illustrate how math and science are integral to business.
- *Upstate Tech Prep Consortium*, in alignment with the *Piedmont Math and Science Hub*, supports school-based efforts to prepare students for entrance into the global economy through effective career education. Specialists in language arts and career guidance complement the math and science experts from the Hub, together offering a comprehensive team approach to address the needs of over 100 schools in the region. Continuing education for teachers and administrators focuses on instructional leadership to reach all students with individualized career preparation.
- *Achieve* is a federally-funded graduate equivalency diploma (or GED) and pre-employment training program for economically disadvantaged out-of-school youth, ages 16-21. The program serves approximately 65-80 clients each year in Spartanburg, Cherokee, and Union counties.
- *The Opportunity Network*, a Student Support Services program, is made possible by a federal TRIO grant from the U.S. Department of Education. A complete description of this program is provided in the USC Union section of this report.
- *Upward Bound* is a program made possible by a federal TRIO grant from the U.S. Department of Education. The program provides fundamental support to participants in their preparation for college entrance. The program provides opportunities for participants to succeed in pre-college performance and ultimately in higher education pursuits. *Upward Bound* serves high school students from low-

Figure 10. Impact of Union Campus on the Upstate Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

income families, high school students from families in which neither parent holds a bachelor’s degree, and low-income, first generation military veterans who are preparing to enter post-secondary education. The goal of *Upward Bound* is to increase the rates at which participants enroll in and graduate from institutions of post-secondary education. All *Upward Bound* projects provide instruction in math, laboratory science, composition, literature, and foreign language.

Expenditures to operate the Spartanburg campus totaled \$28.4 million, which resulted in an output impact of \$48.1 million in the Upstate region. Student expenditures amounted to \$18.3 million, which resulted in an output impact of \$27.7 million. Athletics expenditures of \$257,377 resulted in an output impact of \$506,430. The total output impact on the Upstate economy of the Spartanburg campus was \$76.3 million (Figure 11). These impacts generated earnings impacts of \$17.5 million in the case of campus operations, \$7.2 million in the case of student spending, and \$331,267 in the case of athletics spending. The total earnings impact was \$25.0 million. Athletics spending generated 8 jobs, student spending generated 294 jobs, and operations expenditures generated 870 jobs. The University contributed 1,172 jobs to the Upstate region.

USC Alumni in the Upstate

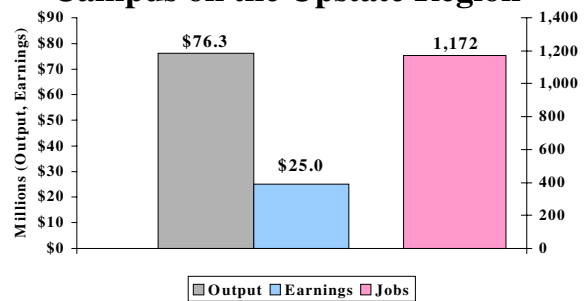
The estimated incremental income of USC alumni living in the Upstate is \$256.8 million, which has a total output impact of \$408.6 million (Figure 12). This spending generates \$113.7 million in total earnings and 4,788 jobs for the Upstate Region.

The incremental income of USC alumni living in the Upstate generates taxes. Though an important component of the total impact, the estimated taxes generated are not limited to the local area. The estimated taxes of USC alumni are \$37.2 million, which generates an output impact of \$68.9 million with earnings impact of \$43.5 million, and jobs impact of 1,508 *for the state*.

Summary Impact on the Upstate

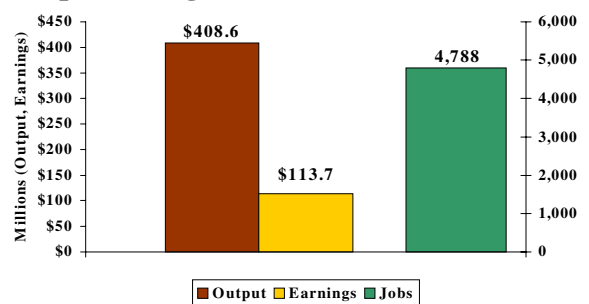
The total impact on the Upstate Region of the USC System—its two campuses and alumni in the Upstate

Figure 11. Impact of Spartanburg Campus on the Upstate Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Figure 12. Impact of USC Alumni in the Upstate Region: Incremental Income*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Region—is the sum of their impacts. Figure 13 shows the total output impact to be \$490.2 million, with earnings impact of \$140.3 million, and jobs impact of 6,041.

The Lowcountry Region

Four counties make up the Lowcountry Region (southern most area of South Carolina) (Figure 14). The Beaufort campus of USC is located in this region. The Salkehatchie campus, with a location in Allendale, has a satellite campus in Colleton County of the Lowcountry Region.

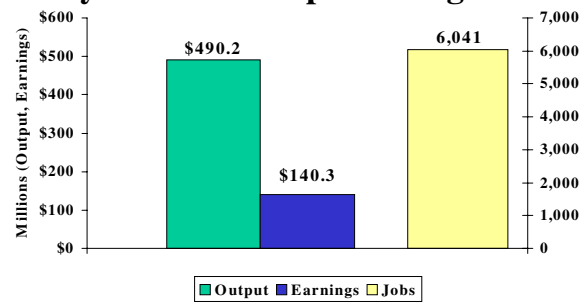
USC Beaufort

USC Beaufort’s history dates back to the original Beaufort College charter in 1795. From its beginning in 1959, USC Beaufort has grown to offer undergraduate and graduate regional studies courses to 1400 students. USC Beaufort holds off-site classes at the Parris Island Marine Corps Recruit Depot, at the Marine Corps Air Station, and on Hilton Head Island.

The Penn Center on St. Helena Island (S.C.) is home to an ongoing program of USC Beaufort partnered with USC Columbia: Early Childhood Education At-Risk Family Initiative. The program’s purpose is to help at-risk children and their families in the St. Helena Island district. This program continues the tradition of services provided by The Penn Center, which was begun in 1862 in an effort to educate freed slaves, and developed over time to provide services to the citizens of St. Helena Island.

The estimated expenditures of operating USC Beaufort were \$6.1 million; students spent an estimated \$5.5 million.³ These initial expenditures resulted in an output impact of \$10.7 million for operations and \$8.4 million for students, for a total of \$19.1 million (Figure 15). These impacts generated earnings of \$6.6 million for the Lowcountry region, and supported a total of 286 jobs in the area. Operating expenditures supported 190 jobs with \$4.2 million in earnings, while student spending yielded \$2.3 million in earnings and supported 96 jobs.

Figure 13. Total Impact of the USC System on the Upstate Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Figure 14. Lowcountry Region and USC Campuses

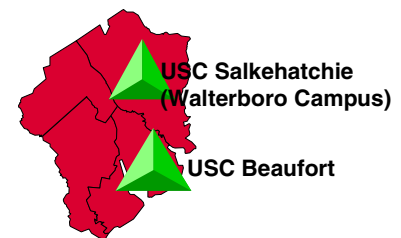
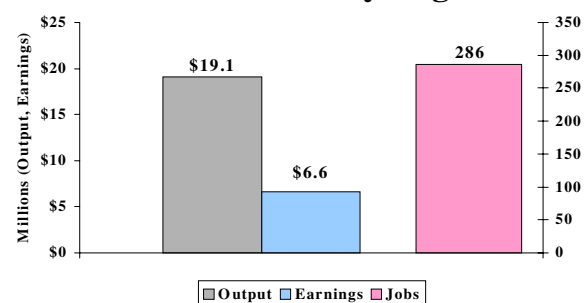


Figure 15. Impact of Beaufort Campus on the Lowcountry Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

USC Salkehatchie (Walterboro Campus)

In late 1964, residents from Allendale, Bamberg, and Hampton counties organized to create a regional campus of the University of South Carolina, and approval was granted in 1965. USC Salkehatchie's Walterboro campus offered courses beginning in 1978. The campus affords residents of Colleton County the convenience of earning associate degrees from the University of South Carolina.

USC Salkehatchie, a resource to the five-county area (Bamberg, Allendale, Barnwell, Hampton, and Colleton), serves as a focal point for cultural and intellectual development. Its Leadership Center is a principal part of this community commitment. A complete description of the Leadership Center is presented in the section on the impact of the university on the Augusta-Aiken region below.

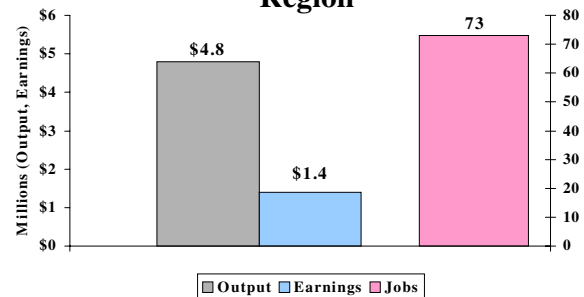
Of the five-counties served, Colleton and Hampton counties are in the Lowcountry region, and the remaining counties are in the Augusta-Aiken region. However, USC Salkehatchie does not maintain separate accounting for the two regions. Thus, a fair apportionment is two-fifths of the impact in the Lowcountry with the remainder of the impact in Augusta-Aiken. Given this, two-fifths of the annual expenditures by the University on operations were \$1.6 million, by students were \$1.7 million, and for athletics (including fans) were \$9,067. The impact on output of these expenditures on the Lowcountry region was \$4.8 million (Figure 16). Supported by the expenditures are 73 jobs, with earnings of \$1.4 million.

USC Alumni in the Lowcountry

Estimated incremental income of USC alumni living in the Lowcountry is \$48.6 million, which has a total output impact of \$77.4 million (Figure 17). This spending generates \$21.5 million in total earnings and 907 jobs for the Lowcountry.

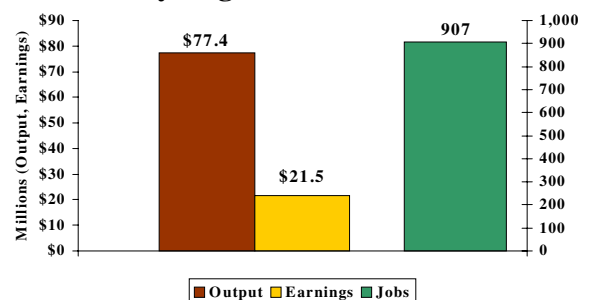
Taxes generated by the incremental income of USC alumni living in the Lowcountry are \$7.1 million, not necessarily for the local area. These taxes generate an output impact of \$13.0 million with earnings impact of \$8.2 million, and jobs impact of 286 for the state.

Figure 16. Impact of Salkehatchie (Walterboro) Campus on the Lowcountry Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Figure 17. Impact of USC Alumni in the Lowcountry Region: Incremental Income*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Summary Impact on the Lowcountry

The total impact on the Lowcountry Region of the USC System—its two campuses and alumni in the Lowcountry Region—is shown in Figure 18. The total output impact is \$101.3 million, with earnings impact of \$29.5 million, and jobs impact of 1,266.

The Charlotte-Rock Hill Region

The Charlotte-Rock Hill Region (mid-northern part of South Carolina) is composed of only three counties—Chester, Lancaster, and York (Figure 19). As seen on the map, the site for the USC Lancaster campus is Lancaster County.

USC Lancaster

Established in 1959, USC Lancaster was originally housed in an old residence in downtown Lancaster. Steady growth and excellent community support together with a tract of land acquired in 1965 moved the campus to its present site, just an hour from Columbia or Charlotte. USC Lancaster reflects a small college atmosphere, with close contact between faculty and students. USC Lancaster is easily accessible for students from several counties in South Carolina and North Carolina.

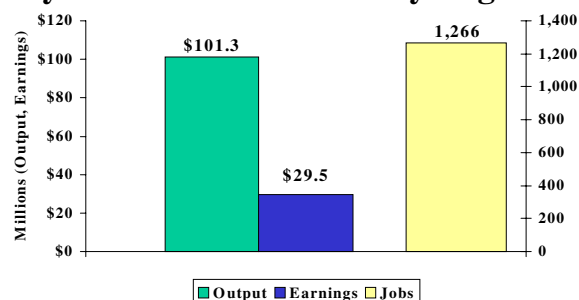
USC Lancaster seeks to attract outstanding secondary school graduates through academic scholarships and an honors program. To attract and serve the needs of non-traditional adult students, USC Lancaster offers a many evening and Saturday courses.

USC Lancaster is proud of its involvement in and service to the community. Senior faculty of USC Lancaster worked with private and public entities to design and implement a Strategic Plan for Lancaster County. The Plan fomented positive changes within government organizations and the creation of government-sponsored organizations including the Planning and Zoning Commission and the Health and Wellness Commission.

Another link between USC Lancaster and the community is the John Morrison White Clinic, a research, academic and service unit of the campus. Maintaining close and supportive ties to local physicians and other health professionals, the Clinic includes a well-equipped exercise physiology laboratory, which focuses on cardiorespiratory and pulmonary evaluation as well as nutrition and body composition and assessment. Through its close ties to local health professionals and local corporate organizations, the Clinic provides activities, projects, and services to community residents.

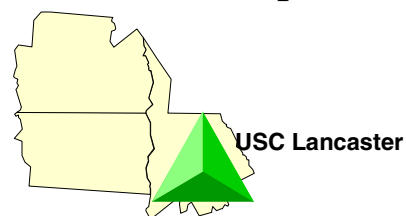
Recent evidence of the Lancaster community's commitment is its \$9 million contribution to the construction of the Bradley Arts and Sciences Building on the USC Lancaster campus. A major objective of the school is the provision and expansion of local educational opportunities. To achieve its objective, USC Lancaster offers the following programs.

Figure 18. Total Impact of the USC System on the Lowcountry Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

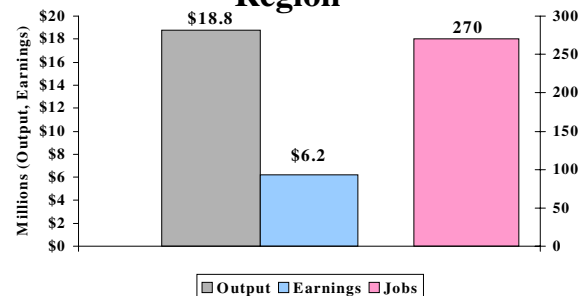
Figure 19. Charlotte-Rock Hill Region and USC Campus



- *The Child Development Center* The Center was established to contribute to the emotional and physical welfare of economically-deprived children, ages 2 through 4, from single parent homes. The Center serves the needs of these children by offering assistance and advice to parents, preparing and serving children a hot meal a day, fostering the development of important learning and social skills. By providing daily childcare, the program assists single parents in entering the job market and becoming economically independent.
- *USC Lancaster After School Program*, located at the Gregory Health and Wellness Center on the USC Lancaster campus, provides homework assistance, physical fitness, and recreation for local students, grades K-7.
- *Learn to Swim Program* was established in association with the Lancaster School District to provide swimming instruction to every fourth grader in Lancaster County schools. Students are bused to the Gregory Health and Welfare Center for swimming lessons.
- *Kids in College*, a program for upcoming 5th through 7th graders, offers exciting opportunities to have a “university experience” and expand learning frontiers during summer vacation. Faculty and other instructors provide short courses in technology, math, science, English, and social science. The goal of the program is to encourage students to return to school and take college preparatory courses needed to promote their university career.
- *Honors Day* recognizes academic excellence of high school honor society students. Scheduled events include a general knowledge “honors bowl” contest among local high schools and individual contests in math, speech, art, music, and others, with scholarships awarded to winners. On their special day, students tour the University and have the opportunity to speak with faculty and administrators.
- *Early Start* is a program for at-risk, soon-to-be college students. *Early Start* affords them the opportunity to have a strong beginning to their college career. In the summer semester, students take University 101, which offers them the opportunity to work on their learning and study skills while at the same time providing them with an introduction to college life.
- *The Case of Dexter Cook* is a program providing outreach services for child health care. The program is the brainchild of Dr. Dexter Cook who, while still in high school, began his college career at USC Lancaster taking courses for college credit. The program is now a pilot program used throughout the United States, and Dr. Cook spends much of his time speaking to audiences throughout the country.

The total expenditures at USC Lancaster were \$7.6 million by the University and \$4.9 million by students.⁴ University expenditures multiplied into a total impact of \$12.1 million in the Charlotte-Rock Hill region, while student expenditures multiplied into a total impact of \$6.6 million. The total output impact of the Lancaster campus on the Charlotte-Rock Hill economy was \$18.8 million (Figure 20). The earnings impact of operating the campus amounted to \$4.6 million. The earnings impact of student expenditures was \$1.6 million. The total earnings impact of the University in the Charlotte-Rock Hill region was \$6.2 million. These expenditures supported a total of 270 jobs in this region. Student spending supported 69 jobs, while the University expenditures supported 200 jobs.

Figure 20. Impact of Lancaster Campus on the Charlotte-Rock Hill Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

USC Alumni in the Charlotte-Rock Hill Region

USC alumni living in the Charlotte-Rock Hill Region have an estimated incremental income of \$60.9 million, which has a total output impact of \$97.0 million (Figure 21). This spending generates \$27.0 million in total earnings and 1,137 jobs for the Charlotte-Rock Hill area.

The incremental income of USC alumni living in the Charlotte-Rock Hill region generates \$8.8 million in taxes. These taxes *for the state* generate an output impact of \$16.4 million with earnings impact of \$10.3 million, and jobs impact of 358.

Summary Impact on the Charlotte-Rock Hill Region

Figure 22 shows the total impact on the Charlotte-Rock Hill Region of the USC System—alumni and USC Lancaster. The total output impact is \$115.8 million, with earnings impact of \$33.2 million, and jobs impact of 1,407.

The Midlands Region

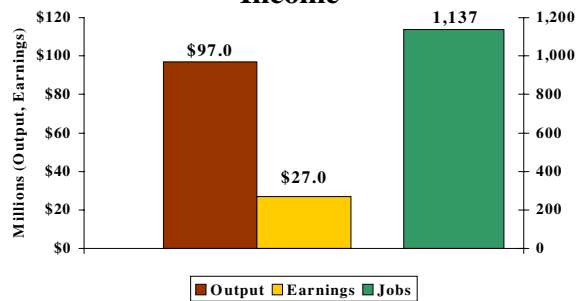
Eleven counties⁵ comprise the Midlands Region of South Carolina (Figure 23). Two campuses—USC Sumter and USC Columbia—are in the Midlands.

USC Sumter

Although initially USC Sumter was a campus of Clemson University (begun in 1965), operations were transferred to the University of South Carolina in 1973. In the fall of 1978, USC Sumter developed an evening program of courses designed to meet the needs of nontraditional students who are able to attend classes only at night. A similar program of courses is also offered for military personnel at nearby Shaw Air Force Base.

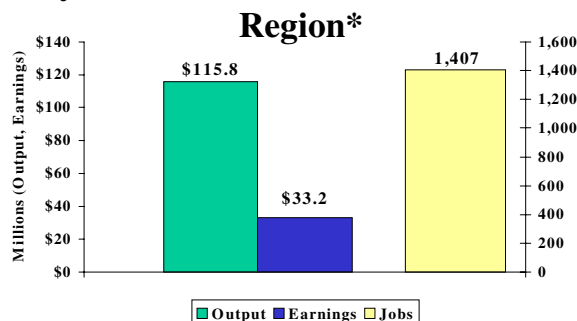
The Sumter campus had a \$13.4 million initial impact on the Midlands' economy (\$7.2 million for operations; \$6.3 for students). The total output impact of this spending on the regional economy was \$22.0 million (Figure 24), broken down into \$12.5 million from operations and \$9.8 million from student spending. The earnings impact was \$4.5 million from operations and \$2.6 million from student spending, for a total earnings impact of \$7.1 million. The total jobs

Figure 21. Impact of USC Alumni in the Charlotte-Rock Hill Region: Incremental Income*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Figure 22. Total Impact of the USC System on the Charlotte-Rock Hill Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Figure 23. Midlands Region and USC Campuses

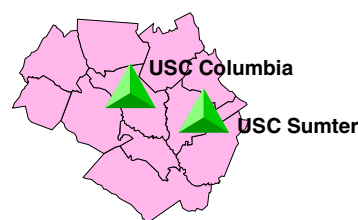
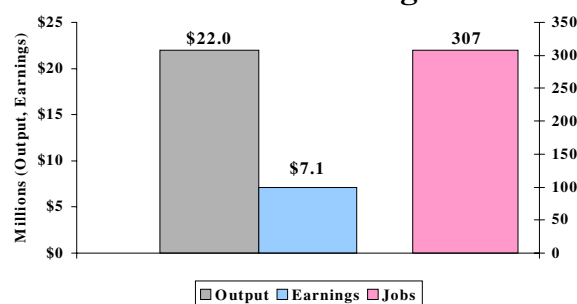


Figure 24. Impact of Sumter Campus on the Midlands Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

impact was 307, with 198 attributed to University operations and 109 attributed to student spending.

USC Columbia (including the Medical School)

Chartered in 1801 as South Carolina College, the University of South Carolina was the first state university to be supported continuously by annual state appropriations. In the years before the Civil War, it rapidly achieved a reputation for academic excellence in the classical tradition and was known as one of the best-endowed and most distinguished colleges in the United States. Buildings on campus were used for other purposes during the Civil War. The institution reopened in 1865 and underwent six reorganizations and name changes during the latter part of the 19th century.

Re-chartered in 1906 as the University of South Carolina with a graduate school, its objective was to furnish both liberal and professional education to the people of South Carolina. Though achievement of this objective was hampered in the first half of the century, fulfillment of the promise began in earnest in the fifties. Presently, USC Columbia encompasses the USC Medical School and is part of the statewide network of campuses offering diverse and innovative education programs. Many of the campus' programs earn national recognition, as evidenced by the following recent examples.

- The International Business Program, ranked 2nd in the nation by *U.S. News and World Report*
- The College of Library and Information Science, ranked 15th in overall excellence
- USC School of Law, moved up to the 2nd tier of American law school rankings
- Thomas Cooper Library, 52nd in Association of Research Libraries annual rankings
- USC, 32nd nationwide in attracting National Merit Scholars, 1998, by *The Chronicle of Higher Education*
- USC is home to four recipients of the Rotary International Ambassadorial Scholarship

USC Columbia serves the community in a variety of ways. The following is only a small sample of community-related activities.

- The USC Columbia Technology Incubator has been in existence since November 1998. Currently, there are three companies residing in the incubator: E811, Inc., Correlated Solutions, Inc., and NetGen, Inc. Three additional companies have submitted business plans for consideration and seven other companies are at various levels of pre-business plan discussions with the incubator's management.
- Prior to the existence of the USC Columbia Technology Incubator, two companies incubated within the College of Engineering and Information Technology. These were Vectra, Inc., of the Greenville-Spartanburg area, and Kryotech, Inc. Kryotech has had significant success, graduating from their college residences and moving to West Columbia where they now have about 50 employees and about \$5 million in annual sales.
- The College of Engineering and Information Technology has provided technical assistance for a number of small and large businesses over the years, primarily through programs like CMAT. CMAT maintains records on USC funds used to match industry funds and job creation/corporate growth.
- The Frank L. Roddey Small Business Development Center (SBDC), housed on the USC Columbia campus, is a consortium of 4 universities and 17 offices located through the state. These centers offer a variety of services and management training courses tailored to meet the needs of small- and medium-sized businesses. SBDC consultants at each site provide managerial and technical assistance to those wishing to start or expand an enterprise, general fee free. The SBDC served more than 2,000 clients in 1999.

- The Columbia campus also houses the National Advocacy Center, which annually hosts 15,000 federal attorneys and prosecutors from around the country.

The total operating expenditure for the Columbia campus was \$465.3 million. This resulted in an output impact of \$829.9 million on the Midlands' economy. Student expenditures total \$186.6 million, which resulted in a total impact of \$291.9 million on the Midlands. Athletics expenditures were \$29.5 million, which yielded a total impact of \$54.8 million. Thus, the total output impact of University expenditures was \$1.2 billion in 1998-99 (Figure 25). The University expenditures on operations generated an earnings impact of \$314.0 million in the Midlands. Student expenditures generated \$79.4 million, and athletics expenditures generated \$32.3 million. The total earnings impact for the Columbia campus was \$425.7 million. These impacts supported a total of 18,586 jobs. Operations supported 14,485 jobs, student spending supported 3,321 jobs, and athletics expenditures supported 781 jobs.

USC Alumni in the Midlands Region

The estimated incremental income of USC alumni living in the Midlands Region is \$595.6 million, which has a total output impact of \$948.0 million (Figure 26). For the Midlands Region, this spending translates into \$263.7 million in total earnings and 11,109 jobs.

Taxes generated by the incremental income of USC alumni living in the Midlands region is estimated at \$86.3 million. The total output impact resulting from these taxes is \$159.8 million with earnings impact of \$101.0 million, and jobs impact of 3,499 *for the state*.

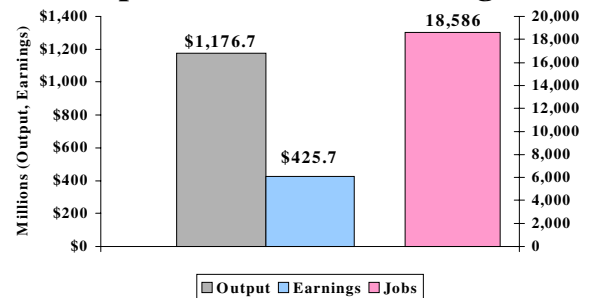
Summary Impact on the Midlands Region

The USC System—USC Sumter, USC Columbia, and USC alumni—has a significant impact on the Midlands Region (Figure 27). The total output impact is \$2.1 billion, with earnings impact of \$696.5 million, and jobs impact of 30,002.

The Augusta-Aiken Region

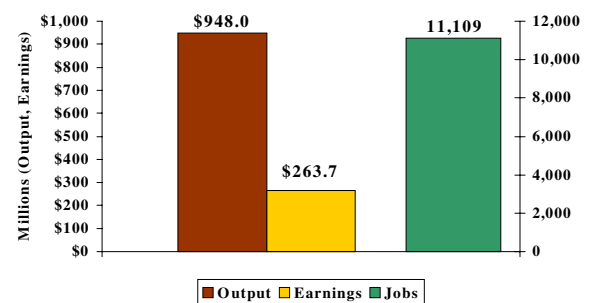
The west-central region, Augusta-Aiken, has 5 counties: Aiken, Allendale, Bamberg, Barnwell, and

Figure 25. Impact of Columbia Campus on the Midlands Region*



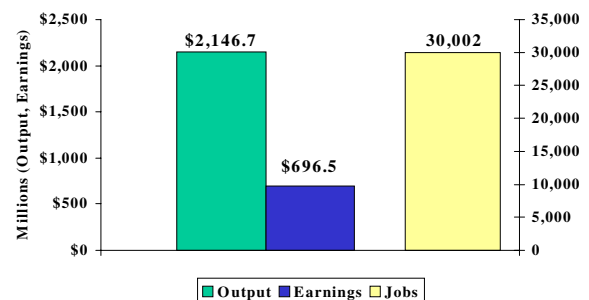
*Jobs plotted against right axis; output and earnings plotted against left axis.

Figure 26. Impact of USC Alumni in the Midlands Region: Incremental Income*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Figure 27. Total Impact of the USC System on the Midlands Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Edgefield (Figure 28). USC Aiken and USC Salkehatchie (the Allendale Campus) are located in this Region.

USC Salkehatchie (Allendale Campus)

Undergraduate enrollment increased more than 10-fold from its beginning in the fall of 1965 to the fall 1992. Courses, offered at campuses in Walterboro and Allendale, enable residents of those areas to complete most of the core curriculum general academic courses required by the University of South Carolina.

The Salkehatchie Consortium, comprised of USC Salkehatchie and school districts in surrounding counties, serves teachers and administrative personnel with graduate courses and staff development activities. This program, begun in the fall of 1989, enables teacher’s aides to become certified.

USC Salkehatchie Leadership Center offers development programs to the local community. A sampling of the variety of programs follows.

- Leadership Salkehatchie—provides advanced leadership training for county leadership in the USC Salkehatchie service area.
- Tri-County Leadership—develops active and informed leaders in the Tri-County area (Allendale, Bamberg, and Barnwell), focusing on regional growth and development issues.
- Junior Leadership—a youth development program for 10th and 11th graders with the objectives of (i) helping them make informed decisions and (ii) building leaders with good character.
- Grassroots County Leadership—a core of informed, committed, active citizens who can effectively address community issues and focus on community growth and development.
- Elected Officials Workshops—programs for elected officials to improve their understanding of responsibilities accruing to their offices.

As noted in the discussion for the Lowcountry Region above, 3 of the 5 counties served by USC Salkehatchie are in the Augusta-Aiken Region. Hence, three-fifths of the impact is anticipated to affect the Augusta-Aiken Region. Three-fifths of annual expenditures by the University were \$2.5 million and that by students was \$2.6 million. In addition, USC Salkehatchie reported expenditures for athletics (including fans) in the amount of \$13,600. The output impact of these expenditures in the Augusta-Aiken region was \$3.7 million, \$3.4 million, and 22,364, respectively. The total impact of the University was \$7.1 million (Figure 29). These expenditures generated a total earnings impact of \$2.0 million, of which campus operations accounted for \$1.3 million, student expenditures comprised \$0.8 million, and spending for athletics was \$15,749. The total expenditures (students,

Figure 28. Augusta-Aiken Region and USC Campuses

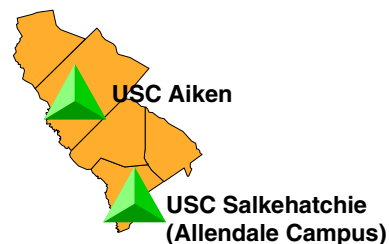
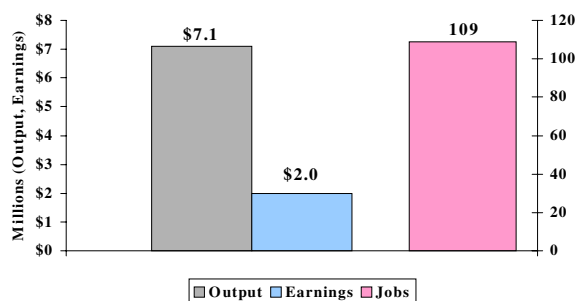


Figure 29. Impact of Salkehatchie (Allendale) Campus on the Augusta-Aiken Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

operations, and athletics) were responsible for 109 jobs in the region. University operations supported 75 jobs, student spending supported 34 jobs, and athletics expenditures supported no jobs.

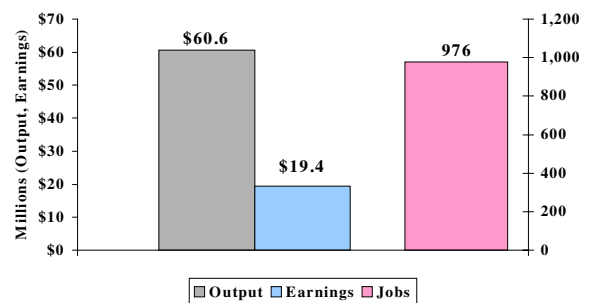
USC Aiken

USC Aiken is located near the city of Aiken, which is famous for its thoroughbred horses, its numerous parks and spacious avenues, and its stately winter homes built during an era when the city rivaled Palm Beach as one of the most renowned winter colonies in America. With the construction of the nearby Savannah River Plant in 1952, many highly trained scientists, engineers, and craftsmen from across the nation established their homes in Aiken and Aiken County.

Though established in 1961, USC Aiken quickly grew in number of students and degrees offered. The Pickens-Salley House, home of former S.C. Governor Francis W. Pickens, was re-located to the USC Aiken campus in 1987. In 1976, the USC Aiken campus was granted academic autonomy, and, in December 1977, became fully accredited as a senior college. Recently, USC Aiken's campus of 453 acres became the home of a new School of Nursing building.

Expenditures for University operations at USC Aiken in 1998-99 were \$26.2 million, which translated into a total output of \$39.6 million in the Augusta-Aiken region of South Carolina. The estimated annual expenditures by students attending USC Aiken was \$15.4 million, yielding a total impact of \$20.4 million in the Augusta-Aiken region. Athletics spending was \$343,728, which resulted in a total impact of \$565,200. The total economic impact of the Aiken campus on the local economy was \$60.6 million for 1998-99 (Figure 30). These initial expenditures generated an earnings impact of \$398,010 for athletics spending, \$4.5 million for student expenditures, and \$14.4 million for University operations, which sums to \$19.4 million. Spending by students generated 203 jobs, and athletics expenditures generated 5 jobs, while spending by the University supported 768 jobs, for a total of 976 jobs in the Augusta-Aiken region.

Figure 30. Impact of Aiken Campus on the Augusta-Aiken Region*



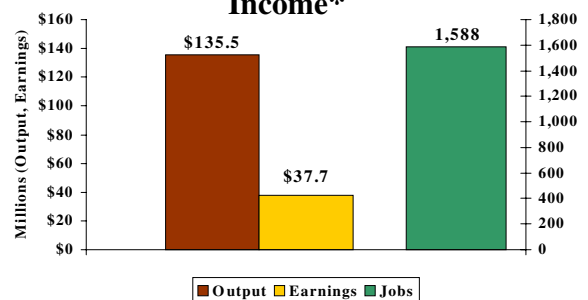
*Jobs plotted against right axis; output and earnings plotted against left axis.

USC Alumni in the Augusta-Aiken Region

USC alumni living in the Augusta-Aiken Region have an estimated incremental income of \$85.2 million, which has a total output impact of \$135.5 million (Figure 31). This incremental income supports \$37.7 million in total earnings and 1,588 jobs.

The incremental income of USC alumni living in the Augusta-Aiken Region generates taxes estimated at \$12.3 million. The total output impact resulting from these taxes is \$22.8 million with earnings impact of \$14.4 million, and jobs impact of 500 for the state.

Figure 31. Impact of USC Alumni in the Augusta-Aiken Region: Incremental Income*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Summary Impact on the Augusta-Aiken Region

The Augusta-Aiken Region receives a substantial economic impact from the USC System—USC Aiken, USC Salkehatchie (Allendale campus), and alumni (Figure 32). The total output impact is \$203.2 million, with earnings impact of \$59.1 million, and jobs impact of 2,871.

The Charleston Region

Along the southern coast of South Carolina, the Charleston Region is comprised of Berkeley, Charleston, and Dorchester counties (Figure 33). Unlike the regions discussed earlier, there is no campus of the University of South Carolina in the Charleston Region. Nevertheless, the region benefits from USC alumni who live there. As there is no campus in this region, this is the total impact on the region.

Figure 34 shows the impact of the incremental income of USC alumni living in the Charleston Region (which is the total impact). Beginning with incremental income of \$100.5 million for alumni living in the Charleston Region, a total output of \$159.9 million is generated. The total earnings output from this output is \$44.5 million, and 1,874 jobs are supported.

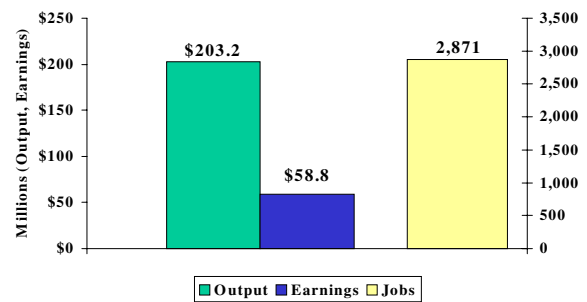
The incremental income of USC alumni living in the Charleston Region generates direct taxes of \$14.5 million. This, in turn, generates a total output impact of \$27.0 million, with earnings of \$17.0 million, and 590 jobs.

The Pee Dee Region

Like the Charleston Region, the Pee Dee Region in the northeastern part of the state has no campus of the University of South Carolina. The region is defined by seven counties⁶ (see Figure 35).

USC alumni living in the Pee Dee have incremental income of \$64.6 million. This generates an output impact for the region of \$102.9 million (Figure 36). The impact on earnings from this incremental income is \$28.6 million, and 1,205 jobs are supported. This is the

Figure 32. Total Impact of the USC System on the Augusta-Aiken Region*

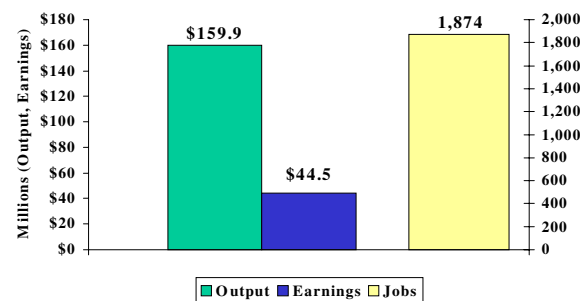


*Jobs plotted against right axis; output and earnings plotted against left axis.

Figure 33. Charleston Region

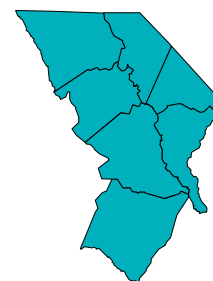


Figure 34. Total Impact of the USC System on the Charleston Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Figure 35. Pee Dee Region



total quantifiable impact of the university system on the Pee Dee region.

Taxes from the incremental income of USC alumni living in the Pee Dee are \$9.4 million, which results in a total impact of \$17.3 million. USC alumni taxes yield \$11.0 million in earnings and support 380 jobs *for the state*.

The Grand Strand Region

Georgetown and Horry counties comprise the Grand Strand Region, the 8th economic region in South Carolina (Figure 37). Like the Charleston and Pee Dee regions, there is no campus of the university within these two counties. Nevertheless, the University does impact the area.

The incremental income of USC alumni living in the Grand Strand Region is \$80.1 million. This generates a total output impact of \$127.5 million (Figure 38), with total earnings impact of \$35.5 million, and total jobs impact of 1,494.

Taxes on the incremental income of these alumni are \$11.6 million. The ripple effect of these taxes are total output of \$21.5 million, total earnings of \$13.6 million, and total jobs of 470 *for the state*.

Endnotes

¹ William A. Strang, David L. Funk, and M. Matthew Onofrio, "Economic Impact of the University of Wisconsin System," University of Wisconsin-Madison, School of Business, April 1997.

² USC Union had no expenditures for athletics.

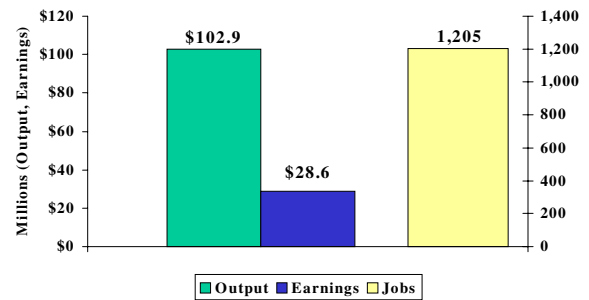
³ USC Beaufort reported no expenditures for athletics.

⁴ USC Lancaster reported no expenditures for athletics.

⁵ Calhoun, Clarendon, Fairfield, Kershaw, Lee, Lexington, Newberry, Orangeburg, Richland, Saluda, and Sumter.

⁶ Chesterfield, Darlington, Dillon, Florence, Marion, Marlboro, Williamsburg.

Figure 36. Total Impact of the USC System on the Pee Dee Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Figure 37. Grand Strand Region

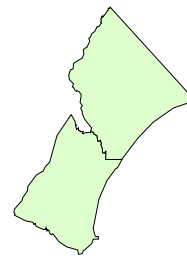
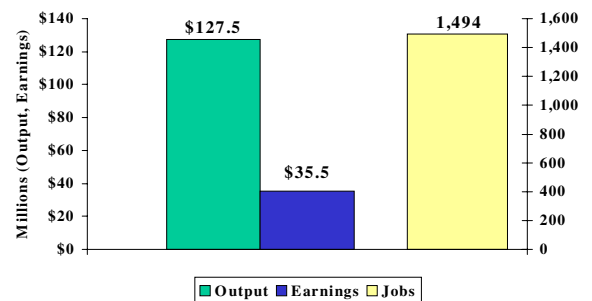


Figure 38. Total Impact of the USC System on the Grand Strand Region*



*Jobs plotted against right axis; output and earnings plotted against left axis.

Appendix

Assumptions Used in Calculating the Internal Rate of Return for Students and the State

Student Investment

- Tuition used was average in-state tuition for undergraduate students.
- Financial Aid is the average aid excluding Loans given to students at USC-Columbia derived from total aid divided by total enrollment.
- Student Earnings assumptions are stated in the table.
- Average years to graduation is based on the percentage of entering Freshmen who graduate at four years, five years, and six years. It was assumed that any who did not graduate within six years would not graduate. The result was 4.59 years.
- The IRR was calculated using figure denominated in 1999 dollars to exclude inflationary effects. For this reason, it is assumed to be a real rate of return over inflation. The IRR was based on a series of 45 cash flows, the first five being negative and the following forty being the positive incremental earnings of an average college graduate in South Carolina.

State Return

Bachelor's Degree

- Cost of degree was derived using the 1999 total state appropriation to the University system divided by the total enrollment of the University system, multiplied by 4.59 (see above average years to graduation).
- Incremental Income is based on 1990 census data for the state inflated to 1999 dollars.
- Tax Revenue:
 - › State income taxes were calculated by applying a 7% after a \$12,000 “deduction” as stipulated on the Department of Revenue web site.
 - › Federal income taxes were calculated using the tax tables found at the web site of the IRS.
 - › Sales taxes were calculated after deducting all income tax from average income for each category and assuming that fifty percent would be spent in state on goods which are taxes. Mortgages and other expenses would not be included in this figure so 50% of disposable income was selected as a proxy.
- The incremental revenue to the state was found simply by subtracting the amount of revenue paid by a high school graduate from the amount for the Bachelors category.
- IRR based on 45 cash flows as above.

Graduate Degrees

- A weighted-average of “Masters” and “Ph.D. and Professional” degrees was taken. Each category was divided by total enrollment of graduate students to find a percentage.
- IRR was based 43 cash flows, the first three being negative and the last forty being positive.