The Impact of Publicly Supported Higher Education on the Charleston, South Carolina Region

Produced for the community by
Charleston Regional Development Alliance
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About this Report

The consulting team of TXP, Inc. and MGT of America, Inc. prepared this report with the intent of accurately describing the four publicly supported higher educational institutions' contributions to improving the economy and quality of life of the Charleston, SC region.

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Executive Summary

In early 2012, the Charleston Regional Development Alliance began the process of commissioning a comprehensive study on the economic impacts of public higher education on the Charleston regional economy. For this effort, the CRDA partnered with the area's state supported schools that include The Citadel, College of Charleston, Medical University of South Carolina, and Trident Technical College. The project team of TXP, Inc. and MGT of America, Inc. performed the analysis.

The Charleston region has a long history educating the state's brightest high school graduates seeking a college degree and adults pursuing additional workforce skills. Not only have the Charleston area's higher education institutions improved the lives of students, these schools also have fulfilled important community development, economic development and social service missions that improve the quality of life for all citizens and contributed to Charleston's growing reputation as an international destination for tourism, historic preservation, talent and business. A better-educated population requires fewer social services, has a lower crime rate, and participates more in civic activities. The net result is cost savings for the public sector. The study's major economic impact findings include:

- The four publicly supported institutions of higher learning employ 16,300 faculty, staff, and medical professionals who teach approximately 33,300 students and provide healthcare services to South Carolina residents.

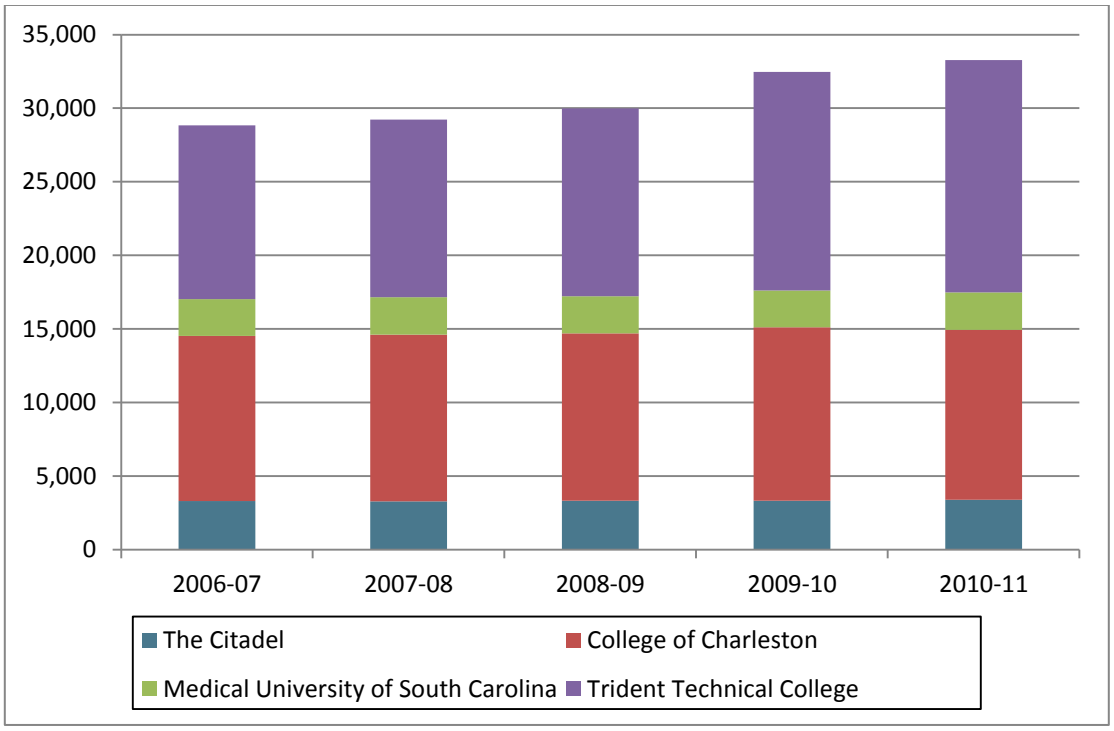
- In fiscal year 2010-2011, these schools awarded 6,100 degrees and certificates. Since 2006, the institutions have awarded over 28,000 degrees and certificates.

- In 2011, institution-related activity attracted more than 135,000 out-of-town visitors.

- Over 6,000 out-of-state students attend the publicly supported schools.

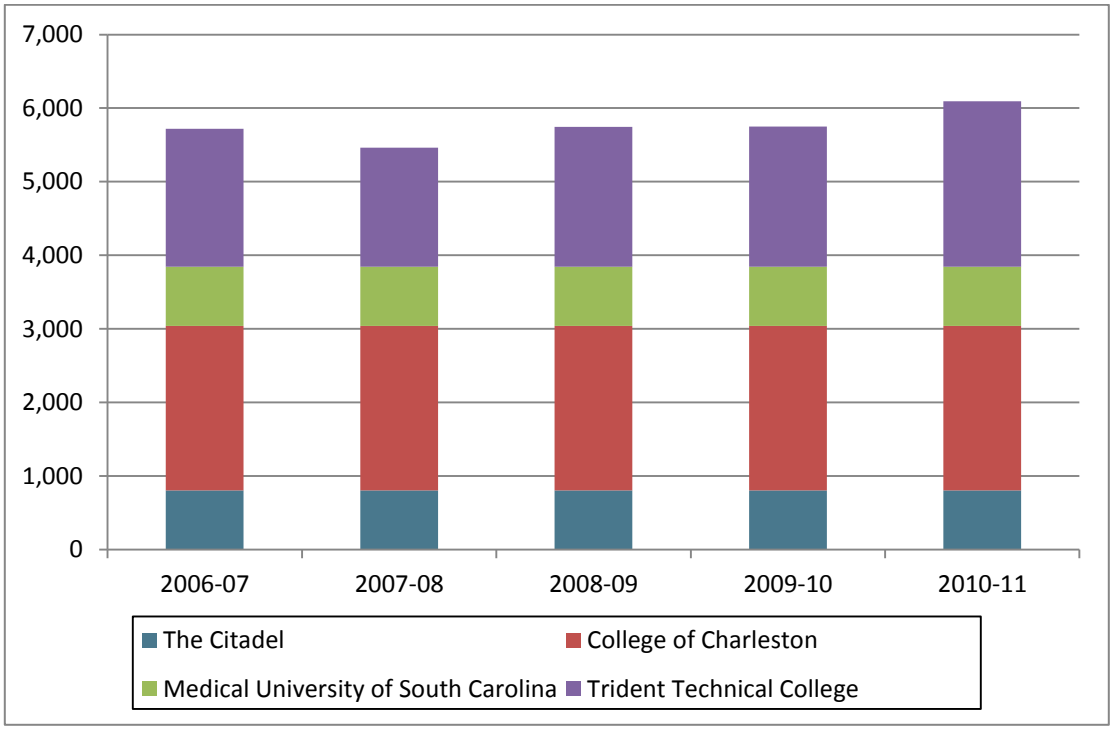
- The four institutions and associated activity generate an annual economic impact of $4.4 billion in business activity, 41,000 jobs, and $2.1 billion in labor income. This translates into $145.7 million in tax revenue for the State of South Carolina.

Figure 1: Annual Enrollment by Public Higher Education Institution



Source: National Center for Education Statistics IPEDS Fall Enrollment Surveys

Figure 2: Degrees Awarded by Public Higher Education Institution



Source: National Center for Education Statistics IPEDS Fall Enrollment Surveys

Table 1: Estimated Impact of Charleston Public Higher Education Institutions for FY 10-11[1]

Institution	Output	Value Added	Labor Income	Employment
The Citadel	$166,226,425	$125,684,988	$92,243,763	1,772
College of Charleston	$542,332,190	$385,428,058	$266,366,955	6,316
MUSC	$3,388,585,437	$2,264,958,844	$1,638,819,876	29,722
Trident	$276,021,178	$197,481,027	$136,051,787	3,388
Total	**$4,373,165,229**	**$2,973,552,917**	**$2,133,482,381**	**41,197**

Source: TXP, Inc.

It is important to note that, while this report is focused on the Charleston region's publicly supported higher education institutions, the Charleston region is also home to more than two dozen college and university campuses not included in the impact analysis.

Charleston Southern University (CSU) is one of South Carolina's largest accredited, independent and private universities with an enrollment of 3,300 undergraduate and graduate students, the majority of whom are from the Charleston region. In recognition of CSU's unique status and role in the community, an additional addendum is included detailing the university's economic impact using the same inputs and methodology as for the publicly supported institutions.

The project team also identified a number of issues that deserve further analysis and evaluation. Five potential challenges that require further consideration and five opportunities to build upon are presented. Preliminary solutions, next steps, and examples were included to add context to the discussion.

Potential Challenges

- The State of South Carolina reduced aggregate higher education appropriations to Charleston institutions by 41.3 percent between FY 2007 and FY 2011. South Carolina funding for higher education likely will not increase substantially in the near future. Nationally, states reduced higher education funding by 3.8 percent over the past five years. In South Carolina, the state legislature reduced funding 23.8 percent.

[1] [1] Economists use a number of statistics to describe regional economic activity. Four common measures are "Output" which describes total economic activity and is generally equivalent to a firm's gross sales; "Value Added" which equals gross output of an industry or a sector less its intermediate inputs; "Labor Income" which corresponds to wages and benefits; and "Employment" which refers to jobs that have been created in the local economy.

- The schools with main campuses in the downtown area have limited space to expand their physical footprint, making it difficult to meet the needs of a growing region.

- Over the long-term, growth in higher tuition paying out-of state students might be necessary to offset state funding cuts, but this can result in fewer in-state students.

- Lack of a comprehensive research institution located in the region limits certain research funding opportunities and degree programs offered.

- Regional employment opportunities for recent graduates are limited in many fields, requiring these students to either work in a different field or leave the region.

Immediate Opportunities

- Brand Charleston as a national higher education region.

- Expand collaboration among the Charleston-based schools to leverage research funding, grants, technology commercialization, and entrepreneurship programs.

- Request the State of South Carolina broaden the laws for funding endowed chairs and other industry-academic partnerships in targeted economic impact programs to include any comprehensive school.

- Encourage private sector scholarships designed to attract South Carolina's top high school students and link to local internships.

- Evaluate the connections, and the gaps, between Opportunity Next targets with higher education initiatives and take steps to address.

Introduction

Each year the citizens of South Carolina invest resources in higher education to improve workforce skills, enhance statewide economic development efforts, and foster the next generation of leaders. In addition to state funding, local communities provide financial support to technical colleges that offer affordable access to accredited courses, technical training, and certification programs. Not only does higher education benefit firms and their employees by improving labor force capacity and increasing earnings, a better-educated workforce more broadly enhances a region's economic development competitiveness.

Public policy and academic studies of the impacts of higher education providers typically describe these benefits in terms of economic activity, payroll, employment, and tax revenue directly linked to the schools, but the impacts go far beyond quantifiable measures. By retaining top high school graduates in the region, for example, higher education institutions promote entrepreneurship and small business start-ups. Numerous studies have demonstrated that a better-educated population reduces the demand for social services, which translates into cost savings for the public sector. Local residents also gain access to special programs and cultural events that would not be available but for the higher education institution and its facilities. Beyond appealing to the local citizenry, high-profile events attract tourists from outside the area.

The challenge facing South Carolina is that state funding is on the decline. State funding for public higher education decreased 40.0 percent from 2007 to 2012. While institutions have been resourceful in the short-term to adjust to the financial constraints, increases in higher education tuition and fees in the absence of increased state support threaten the state's long-term economic vibrancy and quality of life.

The Charleston region is home to four well-respected, high quality publicly supported institutions of higher learning, with approximately 33,300 students and employing 16,300 faculty and staff (including graduate teaching assistants and medical staff):

- The Citadel: The Military College of South Carolina
- College of Charleston
- Medical University of South Carolina (MUSC) – including the MUSC Medical Center
- Trident Technical College (Trident) – eight locations throughout the region

Collaborative partnerships such as the Lowcountry Graduate Center, readySC, the Charleston Digital Corridor, and SC Launch expand the opportunities for graduate education, technical training, and business development in the Charleston region.

Until now, the Charleston region has not undertaken a collective assessment of the economic and community impact of its four publicly supported institutions. In partnership with the Charleston Regional Development Alliance (CRDA), the four publicly supported institutions retained the project team of TXP, Inc. and MGT of America, Inc. to evaluate their total community impact, including:

- Economic activity tied directly to the institution
    - Operating budget
    - Student spending
    - Visitor spending
    - Construction budget
- Community impacts linked to prosperity and social service costs
- Growth in business start-ups and small businesses tied to graduates of local schools and certification programs
- Potential challenges and future opportunities to enhance regional economic growth

Included in the accounts of economic activity are the operations of the MUSC Hospital and University Medical Associates (physicians affiliated with the hospital). The symbiotic relationship between a medical university and its affiliated teaching hospital entails a greatly expanded scale and scope of operations relative to what would otherwise be present or possible. With a 700-bed medical center and six colleges that train approximately 2,600 health care professionals per year, MUSC is one of the nation's top academic health science centers. Since its founding in 1824, MUSC has been a cornerstone of the Charleston regional economy. While focusing on the quantifiable impact of current MUSC operations is appropriate since this is a collaborative study of four diverse institutions, it most likely leads to an understatement of MUSC's contribution to the region.

It was important to establish a well-documented and objective set of information to guide future stakeholder engagements and policy decisions. The study objectives were:

- Gather publicly available datasets
- Produce results for each school and the Charleston region as a whole
- Apply accepted methodologies and economic impact models
- When in doubt, use conservative estimates instead of overstating the results
- Identify benchmark communities and performance metrics
- Highlight key findings and strategic implications beyond the economic and tax revenue impact results for the Charleston region's higher education sector

Since the CRDA is a partner organization in this effort, the project team paid special attention to the economic development implications these schools offer the region. Site selection

surveys frequently rank access to skilled labor and higher education institutions as top factors for expanding and relocating companies. Therefore, the study's findings and analyses link workforce development and training rather than focusing strictly on the economic and tax results.

The Charleston region is also home to Charleston Southern University. Due to its unique status and impact as one of the largest independent and private schools in the state, with more than 3,300 students and 600 faculty and staff, Charleston Southern University's impact is calculated and included as an addendum to the study.

Throughout the report, the project team refers to Berkeley, Charleston and Dorchester Counties as the Charleston region, Charleston MSA, or CMSA to make tables, figures, and text more readable.

The study is divided into five sections. The first section describes the methodology and inputs used in the economic and tax revenue impact model. The second section presents information on each publicly supported higher education institution in the Charleston region and its economic impact. Because the study's primary audience is local stakeholders and South Carolina residents already familiar with each school, only a brief summary on each school is provided. The third section covers the social and community impact of public higher education, including how a better-educated population requires fewer social services, has a lower crime rate, participates more in civic activities and charitable organizations, and has reduced dependence on social welfare programs. The section concludes with brief examples that illustrate the connection between an institution's graduates and local entrepreneurship. The fourth section benchmarks the Charleston region against peer regions. The purpose of this assessment is to highlight five key metrics related to higher education, workforce skills development, and economic development competiveness. The final section summarizes the results into an overarching discussion on what can be done at the local level to improve the Charleston region's higher education sector.

Economic & Tax Revenue Impact of the Four Public Higher Education Institutions

Data Sources

A study objective was to use publicly available datasets so that the findings and results could be updated in the future. The two main datasets used for this study were:

- **Integrated Postsecondary Education Data System**[2] (IPEDS) is a system of interrelated surveys conducted annually by the U.S. Department of Education's National Center for Education Statistics. IPEDS gathers information from every college, university, technical, and vocational institution that participates in federal student financial aid programs.

- **American Community Survey**[3] (ACS) is an ongoing statistical survey of the Census Bureau of the U.S. Department of Labor that samples a small percentage of the population every year. The survey results provide broad social, economic, housing, and demographic profiles for different geographic areas.

  The project team collected historical data similar to the Charleston Regional Development Alliance's *Regional Economic Scorecard* to provide context for the current situation. A limitation to this approach is that the recent economic downturn had a noticeable impact on comparison data. The high unemployment rate in 2010, for example, was attributable to national economic forces, not a deficiency in the Charleston region. Cognizant of these issues, the project team collected and utilized two ACS datasets in this report:

  - 2006 ACS 1-Year – referred to as 2006 ACS
  - 2006-2010 ACS 5-year estimates – referred to as 2010 ACS

The project team also used a series of supplementary data sources to fill in missing information and to validate preliminary findings:

- **Individual partner institutions** provided detailed information from existing reports, including Consolidated Annual Financial Reports (CAFRs), in response to custom data requests from the project team, and through stakeholder input

[2] http://nces.ed.gov/ipeds/

[3] http://www.census.gov/acs/www/

- **Existing studies** highlighted the economic impact of other South Carolina higher education providers and spillover effects on the entire community

- **Interviews with local entrepreneurs and business leaders** described the linkages and opportunities provided by attending college in Charleston and starting new businesses in the region

- **Existing reports from the State Higher Education Executive Officers (SHEEO)** provided detailed financial information on national trends in higher education finance and enrollment

Model Inputs

The historical approach for conducting higher education economic impact studies was developed by Caffrey and Isaacs[4] for the American Council on Education in 1971. Researchers and economists have found that study to be a starting point for their research, but the methodology has limitations, especially when the included institutions are as diverse as the schools in the Charleston region. Some studies take a narrow approach that focuses on the operational impact of the institutions while other analyses include a variety of impacts ranging from alumni income to estimating the media value of collegiate sports teams. The project team took a measured approach that is easily understood by stakeholders. While the project team has made some subjective decisions regarding inputs, these assumptions are documented below. There are four main categories of inputs:

Normal Operational Expenditures – this represents the largest input to the economic impact model. The econometric model was adjusted for each institution based on the following inputs. Each institution, for instance, has a different spending pattern for faculty and a different average wage level.

- **Operations**: expenditures related to general operations and plant operations and maintenance
- **Payroll**: salaries, wages, and fringe benefits
- **Employment**: faculty and staff including graduate teaching or research assistants

[4] Caffrey, John and H.H. Isaacs. 1971. *Estimating the Impact of a College or University on the Local Economy.* Washington, DC: American Council on Education.

Table 2: Aggregate Public Higher Education Normal Operational Expenditures

Fiscal Year	Operations	Payroll	Employment
2006-07	$1,532,415,044	$899,144,477	14,202
2007-08	$1,709,573,363	$1,034,284,375	14,938
2008-09	$1,787,213,402	$1,075,826,125	15,378
2009-10	$1,850,290,335	$1,090,438,315	15,434
2010-11	$1,946,861,587	$1,161,564,297	16,276

Source: IPEDS Finance and Staff Surveys

Construction Spending – spending on buildings and construction excluding equipment. This input has the greatest variation. Total annual construction spending in the 2007-08 fiscal year (FY) surpassed $118.1 million but had declined to $104.7 million in FY 2010-11. Despite the fluctuations associated with construction spending, the project team included this dataset because it generates a significant level of economic activity for the Charleston region.

Table 3: Aggregate Public Higher Education Construction Spending

Fiscal Year	Construction
2006-07	$118,132,562
2007-08	$566,358,974
2008-09	$215,239,904
2009-10	$219,111,447
2010-11	$104,729,157

Source: IPEDS Finance Surveys

Student Spending – enrolled students have a positive impact on the local economy by supporting businesses such as restaurants, nightclubs, rental housing, and other retail establishments. For The Citadel, College of Charleston, and MUSC, the assumption is that all of these students would attend college elsewhere if not for the presence of the institutions. Thus, living expenses for all students are inputs to the economic impact model. For Trident Technical College, the assumption is that half of the students would attend college elsewhere if not for the institution's presence. Therefore, living expenses for half of Trident's students are inputs to the economic impact model.

The IPEDS dataset captures estimated costs of attendance for students from different regions. Off campus spending levels were adjusted based on the place of residence (on campus, off campus, or living with family).

Table 4: Estimated Student Spending

Fiscal Year	Spending
2006-07	$169,617,209
2007-08	$165,765,658
2008-09	$174,032,432
2009-10	$176,528,339
2010-11	$227,325,594

Source: IPEDS Finance and Enrollment Surveys

Tourism – parents visiting students, attendees at conferences, and fans at sporting events have a major impact on the local economy. Detailed statistics on these activities, however, are difficult to obtain. The project team relied on out-of-town visitor estimates from each institution. This information was combined with the average expenditure per visitor ($183 dollars per day) from the Office of Tourism Analysis at the College of Charleston and input from the Charleston Area Convention & Visitors Bureau. Since these data were challenging to obtain, the project team derived only a 2010-11 value.

For each economic impact section, the results are separated between the Charleston MSA and the rest of state. This approach allows a reader to better understand the implication for the Charleston area versus other parts of the state. In addition, when relying on findings or methodologies from other studies, these adjustments were included in the rest of state category. Included in the rest-of-state economic impact section is out-of-town spending related to the number of inpatient hospital stays at MUSC facilities. The assumption is that MUSC attracts a greater number of out-of-region patients than a non-teaching hospital. Based on the number of out-of-region students and mode of travel, other adjustments were made to the rest-of-state spending on traveling to and from the Charleston MSA.

The project team excluded three important categories because quantifiable datasets were not available:

- The increase in earnings associated with graduates from Charleston institutions
- Cost savings associated with free or reduced cost healthcare provide by MUSC
- Technology commercialization and business startups fostered by institutions and graduates

Economic Impact of Methodology

Economists use a number of statistics to describe regional economic activity. Four common measures are "Output" which describes total economic activity and is generally equivalent to a firm's gross sales; "Value Added" which equals gross output of an industry or a sector less its intermediate inputs; "Labor Income" which corresponds to wages and benefits; and "Employment" which refers to jobs that have been created in the local economy.

In an input-output analysis of new economic activity, it is useful to distinguish three types of expenditure effects: direct, indirect, and induced.

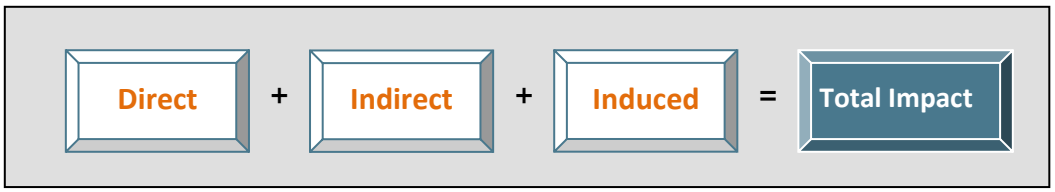
Direct effects are production changes associated with the immediate effects or final demand changes. The payment made by an out-of-town visitor to a hotel operator or the taxi fare paid for transportation while in town are examples of direct effects.

Indirect effects are production changes in backward-linked industries caused by the changing input needs of directly affected industries – typically, additional purchases to produce additional output. Satisfying the demand for an overnight stay will require the hotel operator to purchase additional cleaning supplies and services. The taxi driver will have to replace the gasoline consumed during the trip from the airport. These downstream purchases affect the economic output of other local merchants.

Induced effects are the changes in regional household spending patterns caused by changes in household income generated from the direct and indirect effects. Both the hotel operator and taxi driver experience increased income from the visitor's stay, as do the cleaning supplies outlet and the gas station proprietor. Induced effects capture the way in which increased income is spent in the local economy.

A multiplier reflects the interaction between different sectors of the economy. An output multiplier of 1.4, for example, means that for every $1,000 injected into the economy, all other sectors produce an additional $400 in output. The larger the multiplier, the greater the impact will be in the regional economy.

Figure 3: The Flow of Economic Impacts



For this study, the project teams used the MIG, Inc., IMPLAN System (data and software) economic impact model for the three county Charleston MSA region and South Carolina.

The Citadel: The Military College of South Carolina

The Citadel is an icon of the Charleston region and South Carolina history. Its mission to equip students has remained steadfast, "instilling the core values of The Citadel in a disciplined and intellectually challenging environment. The Core Values of The Citadel are: honor, duty, and respect…" Its Cadets have served in every American war since the Mexican War in 1846.

- The South Carolina legislature created The Citadel in 1842.
- *U.S. News and World Report* ranked The Citadel as the top public college in the south that awards master's degrees; #8 for best value in the south; highest rate of alumni giving at 30 percent; and ranked its School of Engineering #17 nationally.
- The institution gained accreditation by the Southern Association of Colleges in 1924, coinciding with an expansion of its curriculum beyond its traditional offerings of civil engineering, the sciences, and literary coursework. The Citadel currently is organized into five schools:
    - Business Administration
    - Education
    - Engineering
    - Humanities and Social Sciences
    - Science and Mathematics
- 2011 Fall enrollment was 3,390 students, including 2,157 within the Corps of Cadets.[5]
- The Citadel awarded more than 800 degrees during the 2010-11 academic year.
- Currently, The Citadel has an operating budget of $79.1 million and employs 632 faculty and staff.
- The State of South Carolina provided $9.4 million in state appropriations for the 2010-11 academic year which represented 10.8 percent of total revenues (excluding capital and additions to endowment).

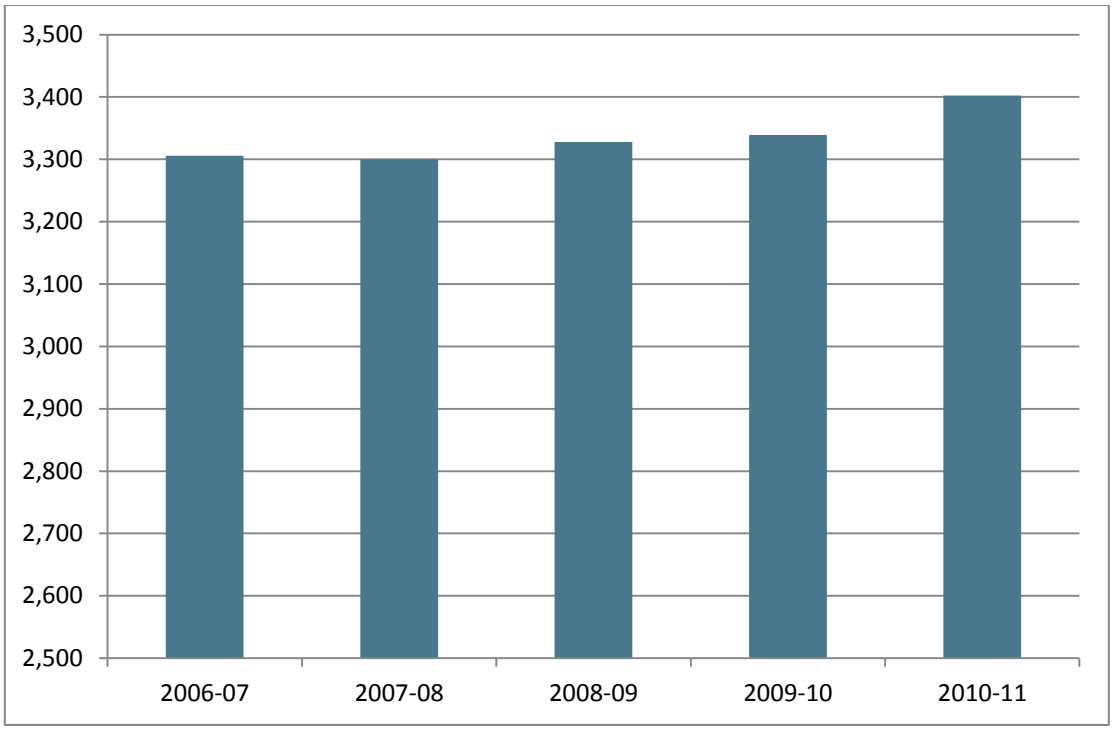
Table 5: The Citadel Economic Impact Model Inputs

Fiscal Year	Operations	Payroll	Employment	Construction	Student Spending
2006-07	$74,980,031	$43,425,608	631	$44,174,309	$4,744,678
2007-08	$78,358,696	$46,322,053	642	$14,524,051	$4,710,051
2008-09	$79,360,812	$48,238,536	665	$26,075,477	$5,224,670
2009-10	$79,107,284	$48,490,882	639	$7,790,683	$5,388,512
2010-11	$79,102,672	$49,738,638	632	$4,498,644	$6,386,490

Source: IPEDS Finance Surveys

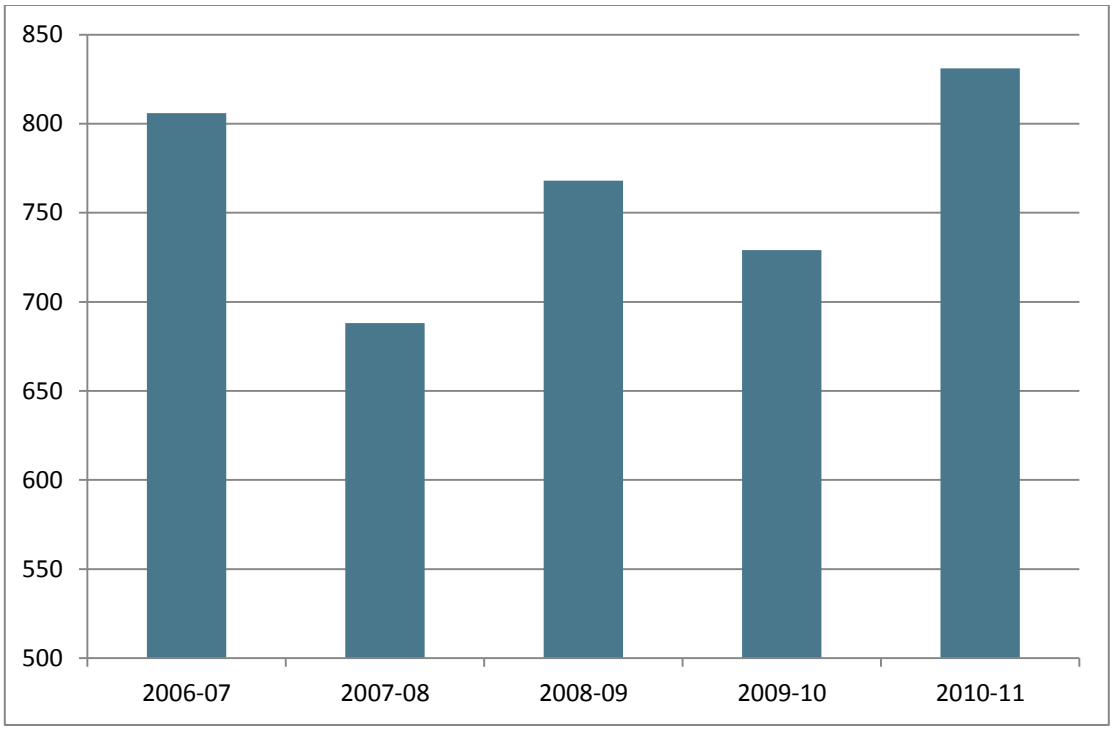
[5] Besides the Corps of Cadets, total enrollments include 5th year day students, off campus cadets enrolled in Citadel courses, veteran cadets, exchange students, active duty students, evening undergraduate students, graduate students, and transient students.

Figure 4: Annual Enrollment at The Citadel



Source: National Center for Education Statistics IPEDS Fall Enrollment Surveys

Figure 5: Annual Degrees Awarded/Certificates at The Citadel



Source: National Center for Education Statistics IPEDS Completion Surveys

For FY 2010-11, the estimated total economic output impact related to The Citadel was approximately $166.2 million. The increase in regional spending supported 1,772 total jobs with labor income in excess of $92.2 million.

Table 6: The Citadel Estimated Economic Impact FY 2010-11[6]

Region	Output	Value Added	Labor Income	Employment
Charleston MSA	$143,439,898	$111,849,775	$83,221,861	1,579
Rest of State	$22,786,527	$13,835,213	$9,021,902	193
Total	**$166,226,425**	**$125,684,988**	**$92,243,763**	**1,772**

Source: TXP, Inc.

Table 7: The Citadel Detailed Economic Impact by NAICS Sector

NAICS Sector	Output	Value Added	Labor Income	Employment[7]
Ag, Forestry, Fish & Hunting	$267,399	$128,541	$85,846	4
Mining	$106,079	$57,080	$18,810	1
Utilities	$1,831,695	$1,521,036	$306,599	4
Construction	$6,870,250	$3,081,653	$2,419,671	58
Manufacturing	$3,470,295	$814,233	$482,365	8
Wholesale Trade	$3,841,552	$2,880,022	$1,537,858	27
Retail Trade	$7,948,392	$5,205,977	$3,697,960	127
Transportation & Warehousing	$3,935,126	$2,472,937	$1,773,554	57
Information	$6,800,031	$3,564,910	$1,214,925	25
Finance & Insurance	$11,274,634	$4,603,241	$2,788,655	65
Real Estate & Rental	$17,316,848	$13,944,075	$1,262,146	72
Professional, Scientific & Tech Svcs	$9,399,171	$6,465,846	$5,489,142	87
Management of Companies	$453,870	$258,988	$226,474	3
Administrative & Waste Services	$6,509,379	$3,943,403	$3,138,847	102
Educational Services	$1,193,818	$624,959	$666,132	18
Health & Social Services	$10,798,392	$6,448,347	$5,932,876	114
Arts, Entertainment & Recreation	$2,209,265	$1,230,270	$738,702	47
Accommodation & Food Services	$7,566,159	$4,095,181	$2,588,754	123
Other Services	$5,012,290	$2,706,107	$2,520,962	120
Government & Non NAICs	$59,421,781	$61,638,183	$55,353,484	709
Total	**$166,226,425**	**$125,684,988**	**$92,243,763**	**1,772**

Source: TXP, Inc.

[6] Economists use a number of statistics to describe regional economic activity. Four common measures are "Output" which describes total economic activity and is generally equivalent to a firm's gross sales; "Value Added" which equals gross output of an industry or a sector less its intermediate inputs; "Labor Income" which corresponds to wages and benefits; and "Employment" which refers to jobs that have been created in the local economy.

[7] Note, direct employment at each school is within the Government & Non NAICs sector.

College of Charleston

The College of Charleston is an internationally renowned public liberal arts college dedicated to equipping students through "rigorous exposure to the arts, sciences and humanities, and from dedication to achievement in education, business and other professional careers." Students from all 50 states and 71 foreign counties have chosen the College for its unique programs, environment, and reputation. Built more than two centuries ago, the College is the 13th oldest institution of higher learning in the United States.

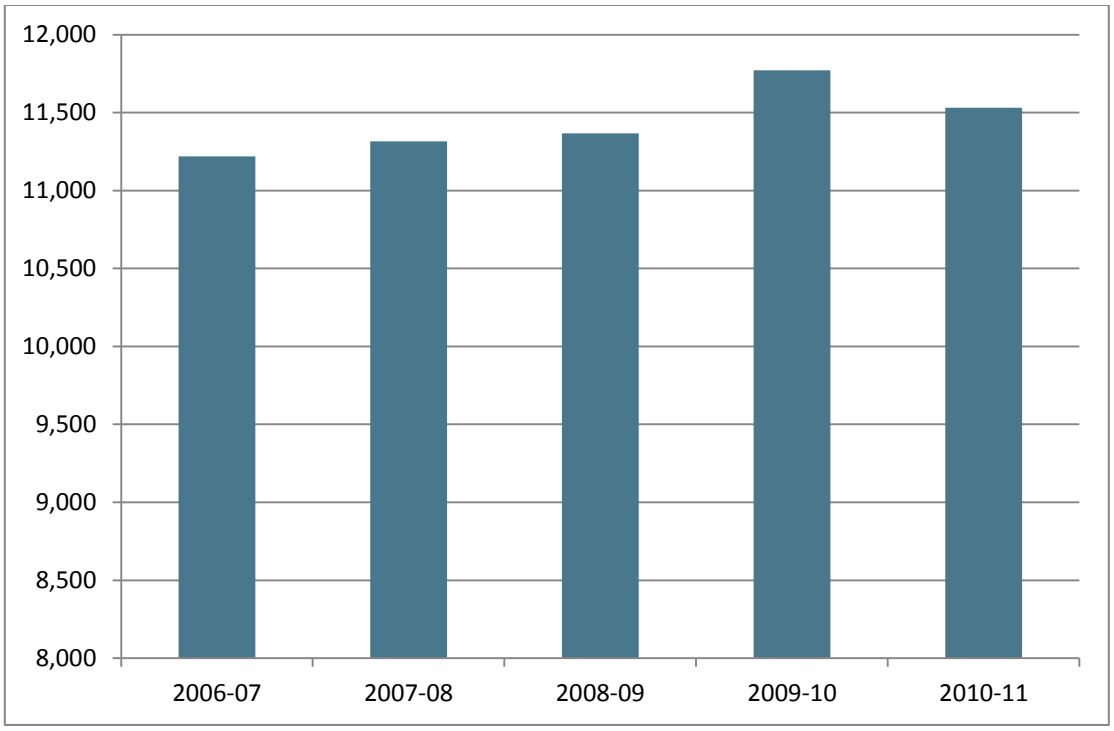
- The College of Charleston was founded in 1770.
- *Parade* magazine's *College A-List* named the College of Charleston one of the best small public schools in the nation. The school is home to the state's flagship Marine Biology program with both graduate and undergraduate programs and grant-funded research. Recognized as leaders in teaching, research and innovation, the College of Charleston faculty includes a dozen Fulbright scholars in subjects including education, communications, biology, history, English and academic experience.
- The College shifted between private and municipal ownership until 1970, when it became a state institution by legislative decree.
- Graduate programs were added in 1992 and enrollments have since grown to their current levels approaching 11,500 students. Currently, there are approximately 10,000 undergraduate and 1,500 graduate students at the College of Charleston.
- Its programs are organized around six schools: Arts; Business; Education, Health, and Human Performance; Humanities and Social Sciences; Languages, Cultures, and World Affairs; and Sciences and Mathematics.
- The College of Charleston awarded nearly 2,500 degrees and certificates in 2010-11.
- Currently, the College of Charleston employs nearly 2,200 faculty and staff and has an operating budget of $150.5 million.
- The State of South Carolina provided $19.8 million in state appropriations for FY 2010-11, which represented 9.1 percent of total revenues (excluding capital and additions to endowment).

Table 8: College of Charleston Economic Impact Model Inputs

Fiscal Year	Operations	Payroll	Employment	Construction	Student Spending
2006-07	$150,461,037	$97,923,773	1,962	$41,652,159	$89,421,650
2007-08	$165,121,923	$104,864,394	1,962	$179,131,697	$94,013,254
2008-09	$165,309,143	$109,387,050	1,998	$101,938,558	$91,963,226
2009-10	$166,989,614	$112,316,469	1,980	$117,102,492	$120,447,609
2010-11	$170,074,801	$113,724,645	2,143	$13,283,103	$119,558,370

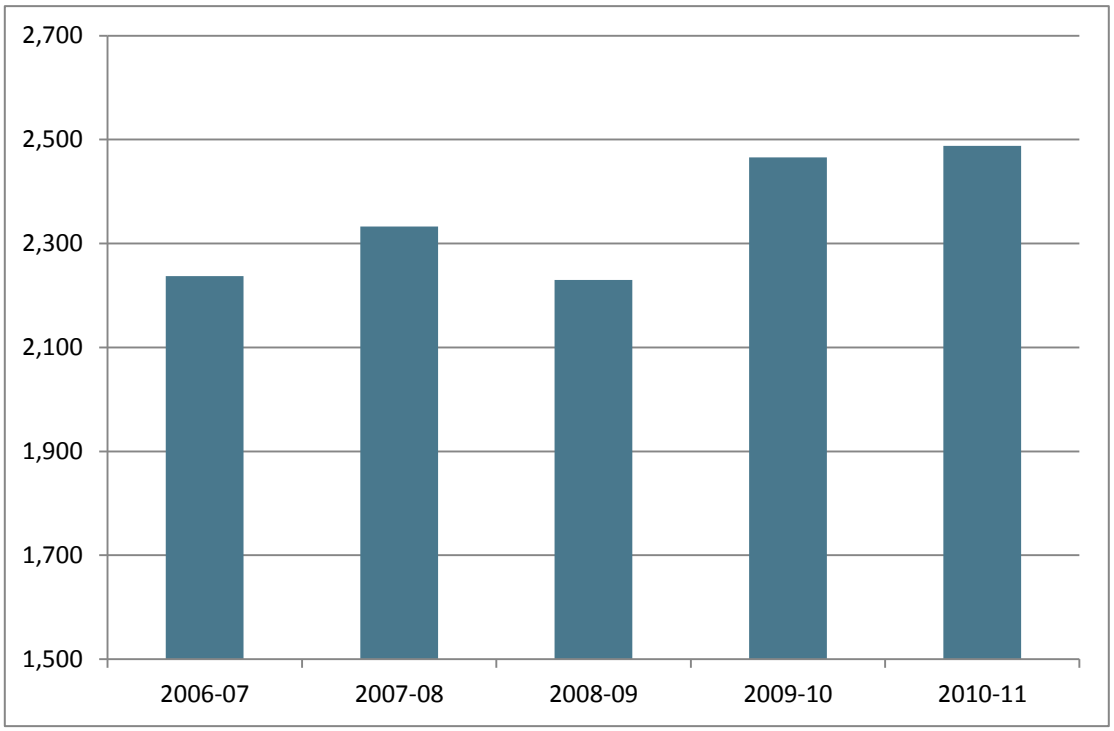
Source: IPEDS Finance Surveys

Figure 6: Annual Enrollment at the College of Charleston



Source: National Center for Education Statistics IPEDS Fall Enrollment Surveys

Figure 7: Annual Degrees/Certificates Awarded at the College of Charleston



Source: National Center for Education Statistics IPEDS Completion Surveys

For FY 2010-11, the estimated total economic output impact related to the College of Charleston was approximately $542.3 million. The increase in regional spending supported 6,316 total jobs with labor income in excess of $266.4 million.

Table 9: College of Charleston Estimated Economic Impact FY 2010-11[8]

Region	Output	Value Added	Labor Income	Employment
Charleston MSA	$457,442,014	$334,168,813	$233,428,443	5,623
Rest of State	$84,890,176	$51,259,245	$32,938,512	692
Total	**$542,332,190**	**$385,428,058**	**$266,366,955**	**6,316**

Source: TXP, Inc.

Table 10: College of Charleston Detailed Economic Impact by NAICS Sector

NAICS Sector	Output	Value Added	Labor Income	Employment
Ag, Forestry, Fish & Hunting	$1,050,065	$505,787	$331,341	14
Mining	$362,792	$195,150	$65,856	2
Utilities	$7,404,697	$6,169,960	$1,242,883	15
Construction	$20,471,040	$9,208,587	$7,246,870	170
Manufacturing	$12,037,865	$2,815,363	$1,651,169	28
Wholesale Trade	$12,371,450	$9,296,532	$4,976,543	85
Retail Trade	$30,373,746	$19,958,699	$14,206,598	477
Transportation & Warehousing	$11,267,826	$6,904,459	$5,010,913	150
Information	$21,615,324	$11,415,764	$3,881,997	78
Finance & Insurance	$47,088,646	$18,884,352	$11,500,340	265
Real Estate & Rental	$71,230,929	$57,738,478	$5,584,141	319
Professional, Scientific & Tech Svcs	$26,037,054	$18,221,908	$15,223,943	239
Management of Companies	$1,768,332	$1,011,618	$886,860	11
Administrative & Waste Services	$18,131,981	$11,029,478	$8,857,402	287
Educational Services	$5,741,798	$2,939,858	$3,089,928	83
Health & Social Services	$48,788,186	$29,071,456	$26,821,158	489
Arts, Entertainment & Recreation	$9,928,451	$5,587,830	$3,283,891	205
Accommodation & Food Services	$34,836,105	$18,955,071	$11,907,917	545
Other Services	$18,414,225	$9,859,627	$9,289,012	438
Government & Non NAICs	$143,411,679	$145,658,080	$131,308,195	2,415
Total	**$542,332,190**	**$385,428,058**	**$266,366,955**	**6,316**

Source: TXP, Inc.

[8] Economists use a number of statistics to describe regional economic activity. Four common measures are "Output" which describes total economic activity and is generally equivalent to a firm's gross sales; "Value Added" which equals gross output of an industry or a sector less its intermediate inputs; "Labor Income" which corresponds to wages and benefits; and "Employment" which refers to jobs that have been created in the local economy.

Medical University of South Carolina

The Medical University of South Carolina fulfills a unique and critical purpose in South Carolina's higher education system with its own extensive history of service to the citizens of the Charleston area. MUSC was the 10th medical school chartered in the United States and the first in the South, serving as the sole allopathic medical school in South Carolina until the opening of the University of South Carolina's School of Medicine in the 1970s. The University's stated purpose is "to preserve and optimize human life for the citizens of South Carolina and the nation through education of health care professionals and biomedical scientists, research in the health sciences, and provision of comprehensive health care."[9] Two other major, distinct entities operate under the University's governance: the Medical University Hospital Authority and University Medical Associates.

- The State of South Carolina assumed responsibility for MUSC in 1913.
- *U.S. News and World Report* ranks MUSC as the fifth most popular medical school in the U.S., with 11 professional and graduate degree programs in the top 100. The publication also ranks six of the clinical programs in the top 50. *Best Doctors in America* includes 300 MUSC physicians, the majority of those recognized in the state.
- MUSC is the most significant single educator of the healthcare workforce in the State. In addition to the medical school, MUSC also encompasses the College of Dental Medicine; College of Graduate Studies; College of Nursing; College of Health Professions; and the College of Pharmacy.
- Fall 2011 enrollment at MUSC was 2,600 students.
- MUSC awarded nearly 800 degrees and certificates over the course of the 2010-11 academic year, including nearly 400 doctorate awards.
- Currently, MUSC's operating budget is $1.6 billion and it employs approximately 12,200 faculty, medical staff, residents, postdocs and other professionals (full and part-time).
- South Carolina provided $81.7 million in state appropriations for FY 2010-11, which represented 15.4 percent of total revenues for the university component of MUSC.

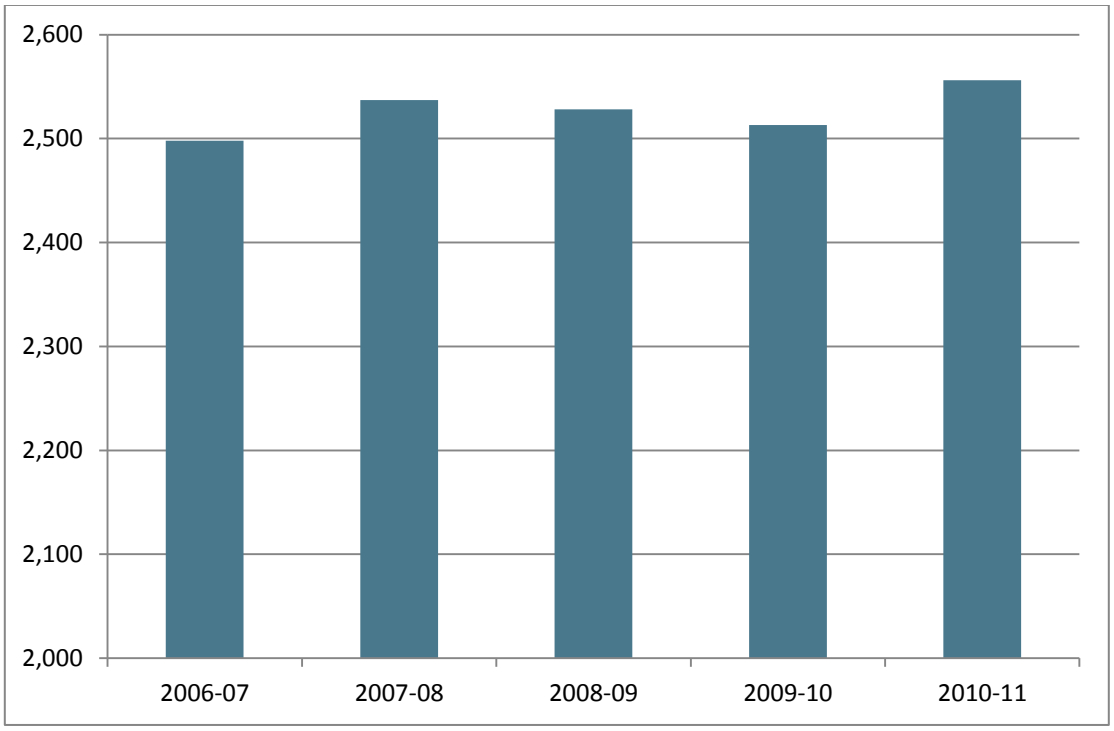
Table 11: MUSC Economic Impact Model Inputs

Fiscal Year	Operations	Payroll	Employment	Construction	Student Spending
2006-07	$1,239,318,00	$711,145,000	10,559	$29,444,512	$28,615,080
2007-08	$1,392,985,00	$832,133,000	11,254	$358,679,462	$30,300,953
2008-09	$1,464,160,00	$864,131,000	11,552	$78,598,749	$29,401,590
2009-10	$1,524,296,00	$875,607,000	11,641	$85,468,905	$33,266,498
2010-11	$1,610,080,00	$939,052,000	12,204	$84,371,727	$34,369,718

Source: IPEDS Finance Surveys

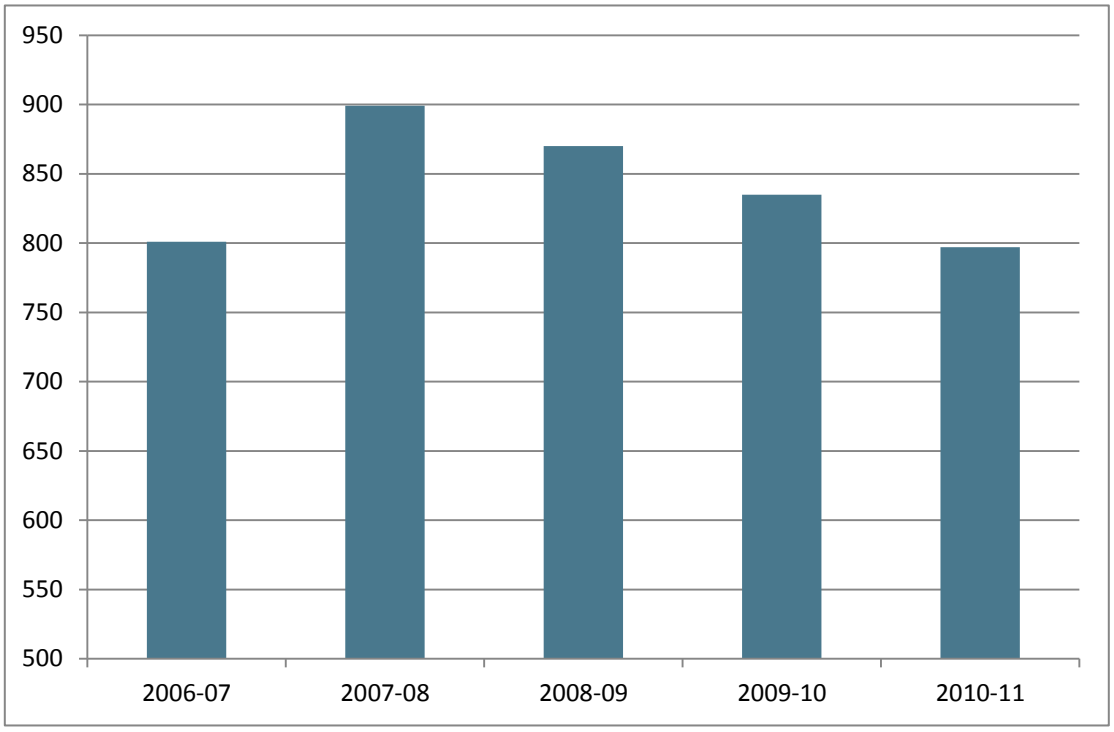
[9] Medical University of South Carolina, Certified Annual Financial Report, 2010-11.

Figure 8: Annual Enrollment at MUSC



Source: National Center for Education Statistics IPEDS Fall Enrollment Surveys

Figure 9: Annual Degrees/Certificates Awarded at MUSC



Source: National Center for Education Statistics IPEDS Completion Surveys

For FY 2010-11, the estimated total economic output impact related to MUSC was approximately $3.4 billion. The increase in regional spending supported 30,000 total jobs with labor income in excess of $1.6 billion.

Table 12: Medical University of South Carolina Estimated Economic Impact FY 2010-11[10]

Region	Output	Value Added	Labor Income	Employment
Charleston MSA	$3,193,358,241	$2,159,243,409	$1,570,342,155	28,258
Rest of State	$195,227,196	$105,715,435	$68,477,721	1,464
Total	**$3,388,585,437**	**$2,264,958,844**	**$1,638,819,876**	**29,722**

Source: TXP, Inc.

Table 13: Medical University of South Carolina Detailed Economic Impact by NAICS Sector

NAICS Sector	Output	Value Added	Labor Income	Emp.
Ag, Forestry, Fish & Hunting	$4,770,701	$2,183,221	$1,438,630	66
Mining	$1,667,276	$911,252	$311,188	10
Utilities	$39,743,879	$33,678,202	$6,930,883	85
Construction	$111,068,038	$50,597,983	$40,094,870	959
Manufacturing	$76,377,534	$19,052,987	$10,965,881	183
Wholesale Trade	$68,473,813	$52,284,618	$28,248,395	489
Retail Trade	$135,303,541	$90,048,537	$64,748,505	2,208
Transportation & Warehousing	$53,342,234	$32,576,853	$24,010,700	697
Information	$97,590,562	$52,390,126	$17,883,016	367
Finance & Insurance	$221,510,229	$94,291,858	$56,657,278	1,307
Real Estate & Rental	$409,566,813	$345,374,759	$37,360,090	2,384
Professional, Scientific & Tech Svcs	$136,630,104	$98,357,412	$82,230,016	1,306
Management of Companies	$20,893,485	$12,147,410	$10,739,833	134
Administrative & Waste Services	$112,410,346	$72,312,121	$61,538,625	2,033
Educational Services	$19,206,133	$10,286,016	$11,115,158	305
Health & Social Services	$1,307,447,883	$819,006,082	$758,826,718	9,585
Arts, Entertainment & Recreation	$22,166,102	$12,050,357	$8,127,360	502
Accommodation & Food Services	$79,376,616	$43,086,732	$28,848,920	1,471
Other Services	$87,110,200	$48,239,338	$45,487,715	2,162
Government & Non NAICs	$383,929,948	$376,082,979	$343,256,094	3,471
Total	**$3,388,585,437**	**$2,264,958,844**	**$1,638,819,876**	**29,722**

Source: TXP, Inc.

[10] Economists use a number of statistics to describe regional economic activity. Four common measures are "Output" which describes total economic activity and is generally equivalent to a firm's gross sales; "Value Added" which equals gross output of an industry or a sector less its intermediate inputs; "Labor Income" which corresponds to wages and benefits; and "Employment" which refers to jobs that have been created in the local economy.

Trident Technical College

Trident Technical College, the fourth public provider included in this analysis, may represent the most focused and prolific driver of workforce preparation and development for the area, offering both technical/vocational and transfer degree programming. Opening originally as the Berkeley-Charleston-Dorchester Technical Education Center in 1964 as part of a statewide initiative, the College merged with a private business college in the 1970s to become Trident Technical College. ***Trident Tech is now the second largest college in the state in terms of undergraduate enrollment***.

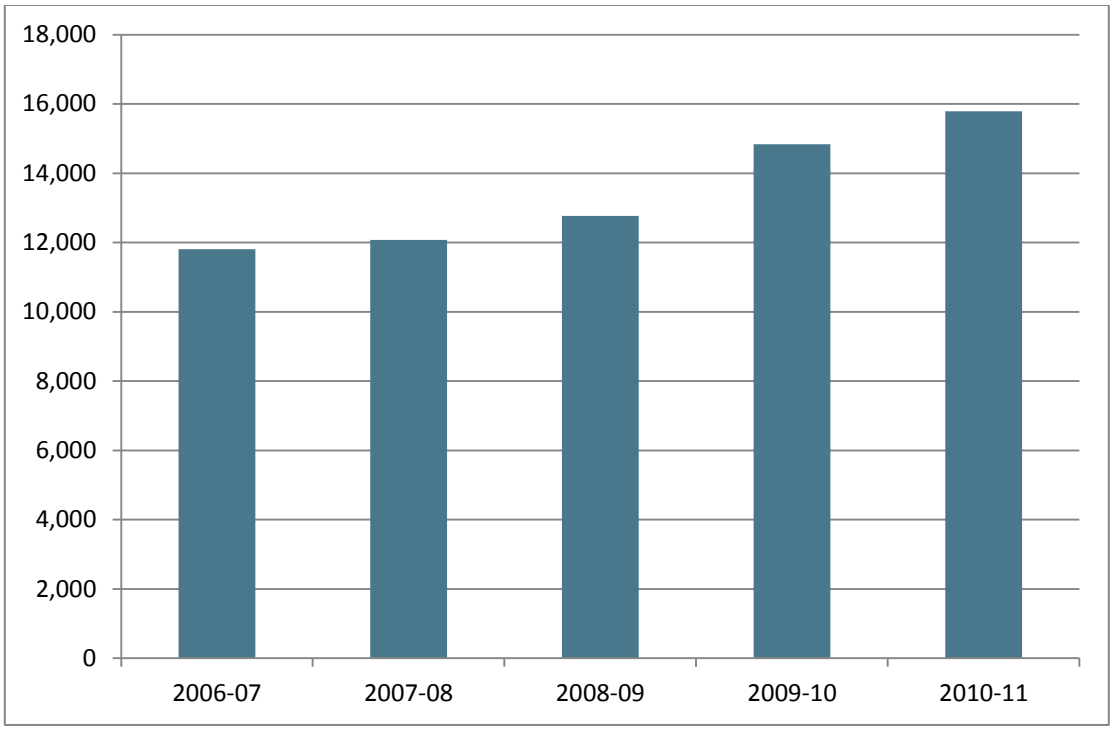
- Trident Tech was named to the Military Friendly Schools list by *Victory Media*, honoring the top 15 percent of colleges, universities, and trade schools. The school enrolls more African American students than any other college or university in South Carolina. Trident Tech had a 92 percent graduate placement rate in 2011.
- Students are enrolled in programs across 11 Divisions:
    - Aeronautical Studies
    - Business Technology
    - Community, Family and Child Studies
    - Culinary Institute of Charleston (Hospitality, Tourism & Culinary Arts)
    - Film, Media & Visual Arts
    - Health Sciences
    - Humanities and Social Sciences (Associate in Arts Transfer)
    - Industrial & Engineering Technology
    - Law-Related Studies
    - Nursing
    - Science & Mathematics (Associate in Sciences Transfer)
- Trident Tech's 2011 Fall enrollment was 16,781 students.
- Trident Tech awarded 2,251 certificates, diplomas and degrees to students in 2011.
- Currently, Trident Tech's operating budget is $87.65 million and the College employs approximately 1,300 faculty and staff (full-time and part-time positions)
- South Carolina provided $13.4 million in state appropriations for FY 2010-11. Local taxpayers provided $10.2 million in financial support.

Table 14: Trident Technical College Economic Impact Model Inputs

Fiscal Year	Operations	Payroll	Employment	Construction	Student Spending
2006-07	$67,655,976	$46,650,096	1,050	$2,861,582	$42,984,250
2007-08	$73,107,744	$50,964,928	1,080	$14,023,764	$45,008,175
2008-09	$78,383,447	$54,069,539	1,163	$8,627,120	$49,938,854
2009-10	$79,897,437	$54,023,964	1,174	$8,749,367	$68,222,975
2010-11	$87,604,114	$59,049,014	1,297	$2,575,683	$72,614,815

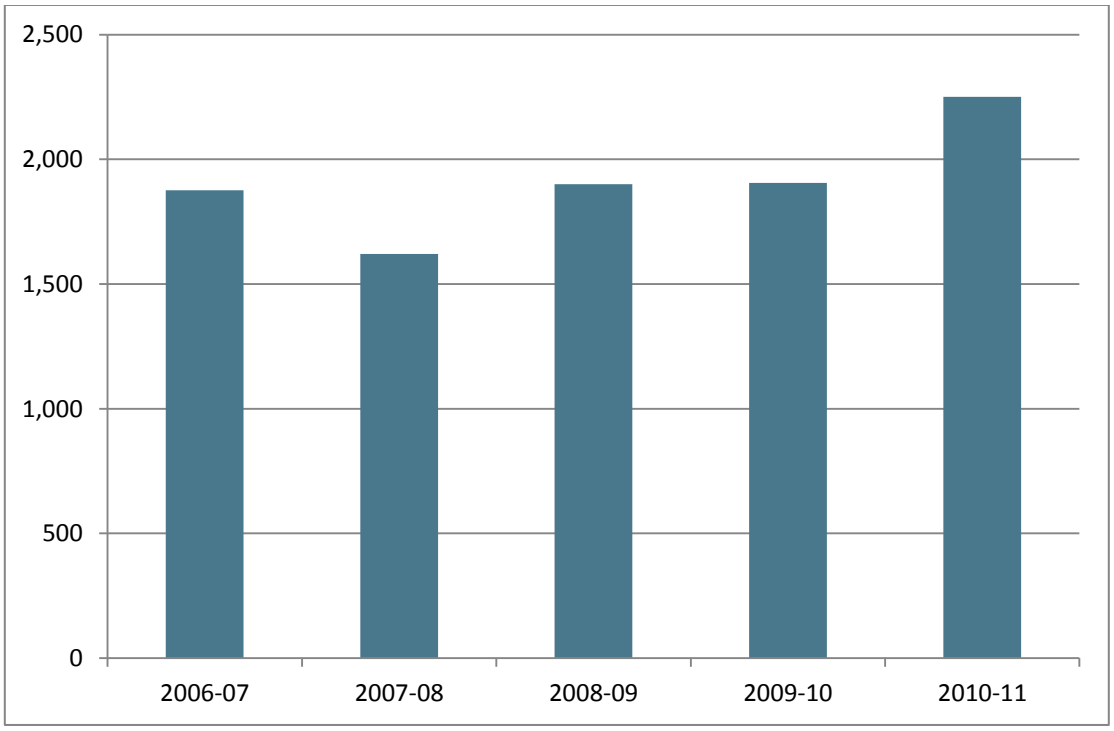
Source: IPEDS Finance Surveys

Figure 10: Annual Enrollment at Trident Technical College



Source: National Center for Education Statistics IPEDS Fall Enrollment Surveys

Figure 11: Annual Degrees/Certificates Awarded at Trident Technical College



Source: National Center for Education Statistics IPEDS Completion Surveys

For FY 2010-11, the estimated total economic output impact related to Trident Tech was approximately $276.0 million. The increase in regional spending supported 3,388 total jobs with labor income in excess of $136.0 million.

Table 15: Trident Technical College Estimated Economic Impact FY 2010-11[11]

Region	Output	Value Added	Labor Income	Employment
Charleston MSA	$241,366,416	$176,589,484	$122,321,497	3,151
Rest of State	$34,654,762	$20,891,543	$13,730,290	237
Total	**$276,021,178**	**$197,481,027**	**$136,051,787**	**3,388**

Source: TXP, Inc.

Table 16: Trident Technical College Detailed Economic Impact by NAICS Sector

NAICS Sector	Output	Value Added	Labor Income	Employment
Ag, Forestry, Fish & Hunting	$539,637	$262,691	$171,184	7
Mining	$185,832	$100,335	$34,124	1
Utilities	$3,924,252	$3,286,330	$664,752	8
Construction	$5,500,428	$2,542,580	$2,031,274	47
Manufacturing	$5,924,721	$1,350,660	$787,300	13
Wholesale Trade	$6,314,737	$4,768,369	$2,565,444	43
Retail Trade	$16,033,339	$10,587,067	$7,574,902	250
Transportation & Warehousing	$5,727,209	$3,521,587	$2,569,173	75
Information	$11,178,348	$5,935,682	$2,028,304	40
Finance & Insurance	$25,042,385	$10,064,066	$6,166,043	140
Real Estate & Rental	$37,866,895	$30,886,169	$3,004,222	170
Professional, Scientific & Tech Svcs	$12,848,609	$9,079,791	$7,586,243	118
Management of Companies	$916,252	$526,783	$464,207	6
Administrative & Waste Services	$9,223,583	$5,639,236	$4,552,947	145
Educational Services	$3,121,531	$1,601,965	$1,689,363	44
Health & Social Services	$26,356,285	$15,774,076	$14,628,417	262
Arts, Entertainment & Recreation	$5,199,142	$2,938,856	$1,738,984	107
Accommodation & Food Services	$18,234,191	$9,968,081	$6,299,783	284
Other Services	$9,672,474	$5,198,693	$4,928,806	229
Government & Non NAICs	$72,211,326	$73,448,009	$66,566,315	1,399
Total	**$276,021,178**	**$197,481,027**	**$136,051,787**	**3,388**

Source: TXP, Inc.

[11] Economists use a number of statistics to describe regional economic activity. Four common measures are "Output" which describes total economic activity and is generally equivalent to a firm's gross sales; "Value Added" which equals gross output of an industry or a sector less its intermediate inputs; "Labor Income" which corresponds to wages and benefits; and "Employment" which refers to jobs that have been created in the local economy.

Aggregate Economic Impact of Charleston's Public Higher Education Institutions

The total economic impact of the four publicly supported higher education institutions in the Charleston region was $4.4 billion in FY 2010-11. Of the total, the Charleston area captured the majority of the economic impact with the rest distributed throughout the state.

Value added consists of compensation of employees, taxes on production, and imports less subsidies. Value added represents an industry sector's contribution to gross domestic product (GDP). The 2011 GDP for the Charleston region was $28.0 billion. Direct value added attributable to publicly supported higher education institutions is 5.2 percent of regional GDP. If one includes the multiplier effects, these entities support 9.9 percent of Charleston's overall GDP.

The institutions also generated $2.0 billion in labor income for Charleston area residents and workers because of spending associated with schools, faculty, students, and visitors. Labor income includes salaries and wages plus benefits. The 2011 average annual wage in Charleston was $40,685. The total average wage for workers at Charleston's public higher education institutions was nearly 75.0 percent higher than this level, averaging $71,367. The average wage for each institution also was above the regional figure.

The Charleston region's publicly supported higher education institutions had a collective local employment impact of 38,600 jobs. With direct employment of 16,300 faculty and staff, an additional 22,000 jobs were created. To put these figures in context, ***if the four schools were a single entity, publicly supported higher education would be the second largest employer in the Charleston area behind Joint Base Charleston.*** The entity would represent 5.9 percent of total nonagricultural employment.

Table 17: Estimated Charleston Region Total Higher Education Economic Impact FY 10-11[12]

Region	Output	Value Added	Labor Income	Employment
Charleston MSA	$4,035,606,569	$2,781,851,481	$2,009,313,956	38,611
Rest of State	$337,558,660	$191,701,436	$124,168,425	2,586
Total	**$4,373,165,229**	**$2,973,552,917**	**$2,133,482,381**	**41,197**

Source: TXP, Inc.

[12] Economists use a number of statistics to describe regional economic activity. Four common measures are "Output" which describes total economic activity and is generally equivalent to a firm's gross sales; "Value Added" which equals gross output of an industry or a sector less its intermediate inputs; "Labor Income" which corresponds to wages and benefits; and "Employment" which refers to jobs that have been created in the local economy.

Table 18: Charleston Region Higher Education Detailed Impact by NAICS Sector

NAICS Sector	Output	Value Added	Labor Income	Emp.
Ag, Forestry, Fish & Hunting	$6,627,802	$3,080,240	$2,027,001	91
Mining	$2,321,979	$1,263,817	$429,978	14
Utilities	$52,904,523	$44,655,528	$9,145,117	111
Construction	$143,909,756	$65,430,802	$51,792,686	1,234
Manufacturing	$97,810,414	$24,033,243	$13,886,715	232
Wholesale Trade	$91,001,553	$69,229,541	$37,328,241	644
Retail Trade	$189,659,017	$125,800,280	$90,227,964	3,062
Transportation & Warehousing	$74,272,394	$45,475,836	$33,364,340	979
Information	$137,184,265	$73,306,483	$25,008,243	511
Finance & Insurance	$304,915,894	$127,843,517	$77,112,316	1,777
Real Estate & Rental	$535,981,485	$447,943,481	$47,210,599	2,945
Professional, Scientific & Tech Svcs	$184,914,938	$132,124,957	$110,529,343	1,750
Management of Companies	$24,031,940	$13,944,799	$12,317,375	153
Administrative & Waste Services	$146,275,290	$92,924,238	$78,087,821	2,567
Educational Services	$29,263,281	$15,452,798	$16,560,582	450
Health & Social Services	$1,393,390,746	$870,299,961	$806,209,169	10,450
Arts, Entertainment & Recreation	$39,502,959	$21,807,314	$13,888,937	860
Accommodation & Food Services	$140,013,072	$76,105,064	$49,645,373	2,423
Other Services	$120,209,188	$66,003,766	$62,226,495	2,949
Government & Non NAICs	$658,974,734	$656,827,250	$596,484,088	7,994
Total	**$4,373,165,229**	**$2,973,552,917**	**$2,133,482,381**	**41,197**

Source: TXP, Inc.

State of South Carolina Tax Revenue Impact

The most complex part of any economic impact study is to evaluate the tax revenue implications in terms of return on investment (ROI) and net fiscal impact. For a single business or industry sector, the tax revenue calculations are straightforward. The public sector costs such as those for K-12 education and public safety, however, are more subjective based on location, existing infrastructure, workers drawn to the region because of the project, and wage levels. Too often, the tax revenue estimates are overly aggressive to show a positive return.

With higher education, numerous quantitative and qualitative benefits that economic models do not capture accrue over decades. How should the study address the long-term value of higher wages associated with a better-educated labor force? Should the calculation factor in social service cost savings? While the institutions' property is tax exempt, surrounding properties typically command higher prices because of the proximity to the institution. Should federal grants and research contracts simply be added to the revenue side of the equation? Ultimately, tax revenue generation is not the primary criteria local and state governments consider when funding education.

For this study, the project team believes focusing on state tax revenue is the most relevant measure since, of the four area providers, the local public sector directly funds only Trident Tech. ***In FY 2006-07, state appropriations accounted for 24.6 percent of the Charleston region institutional revenues. By 2010-11, however, state appropriations had decreased by 41.3 percent and represented only 12.9 percent of revenue.*** To offset this decrease in state funding, tuition and fees now make up 27.2 percent of institution revenue compared to 20.8 in FY 2006-07. Because of the decrease in state funding for higher education, parents and students now pay higher costs to attend college.

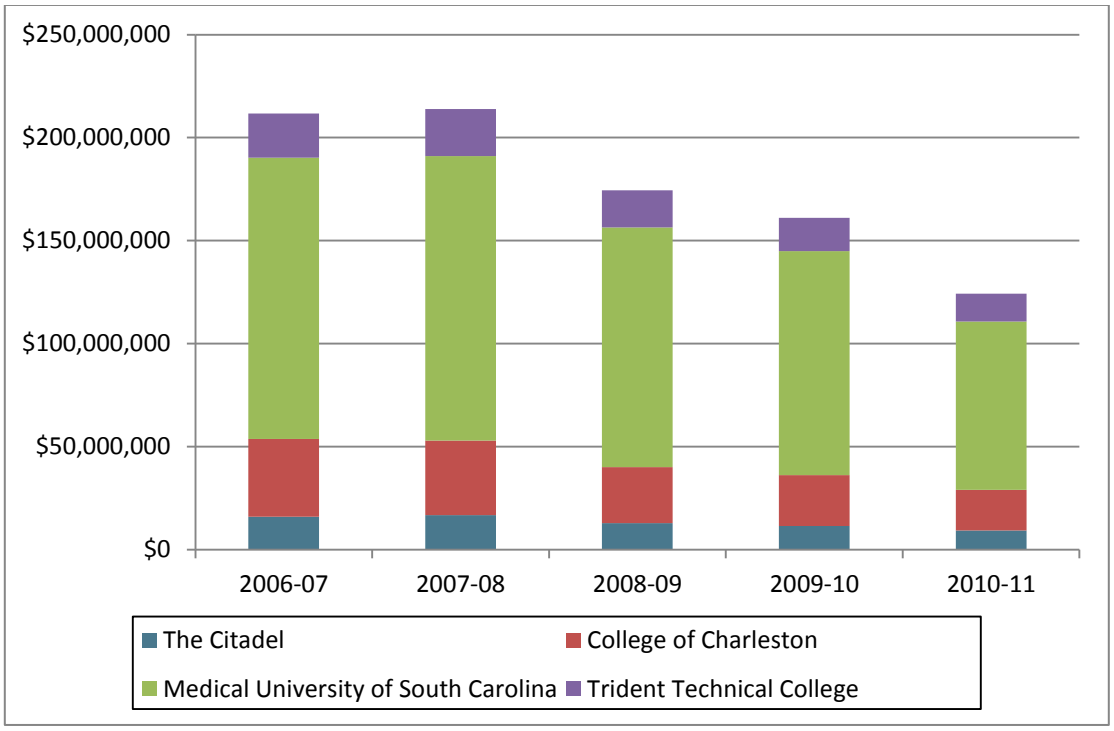
Table 19: State Appropriations as Percent of Total Revenues*

Fiscal Year	The Citadel	College of Charleston	MUSC	Trident Tech	Total
2006-07	19.5%	19.2%	27.8%	23.9%	24.6%
2007-08	18.9%	17.2%	26.3%	23.5%	23.2%
2008-09	14.4%	13.2%	21.7%	18.3%	18.8%
2009-10	12.3%	11.4%	19.4%	13.3%	16.2%
2010-11	10.8%	9.1%	15.4%	10.5%	12.9%

Source: IPEDS Finance Surveys

* Excluding capital and additions to endowment

Figure 12: State Appropriations by Institution



Source: IPEDS Finance Surveys

To provide an "order of magnitude" estimate for state tax revenue attributable to the Charleston region's publicly supported higher education institutions, the project team focused on the ratio of state government tax collections to state GDP. Two datasets were used to derive the ratio: 1) U.S. Department of Commerce Bureau of Economic Analysis GDP estimates by metropolitan area; and 2) the U.S. Census Bureau State Government Tax Collections (STC) report. A brief description of the STC data collection methodology follows:

> In this survey, "taxes" are defined as all compulsory contributions exacted by a government for public purposes, except employer and employee assessments for retirement and social insurance purposes, which are classified as insurance trust revenue. Outside the scope of this collection are data on the unemployment compensation "taxes" imposed by each of the state governments. However, all receipts from licenses and compulsory fees, including those that are imposed for regulatory purposes, as well as those designated to provide revenue are included.

Table 20: Tax Revenue as a Percent of State GDP

South Carolina	2007	2008	2009	2010	2011
Tax Revenue ($M)	$8,688.9	$8,435.6	$7,636.7	$7,312.5	$7,687.5
GDP ($M)	$158,041.0	$159,500.0	$158,786.0	$164,445.0	$165,785.0
Tax Rev as % GDP	**5.5%**	**5.3%**	**4.8%**	**4.4%**	**4.6%**

Source: U.S. Department of Commerce Bureau of Economic Analysis and U.S. Census Bureau

Over the past five years, the state tax revenue as a percent of state GDP was 4.9 percent. The decline for years 2009 and 2010 were related to the national economic recession.

Applying this percentage to total value added (or GDP) attributable to Charleston's publicly supported higher education institutions, the state received $145.7 million in tax revenue, calculated as:

value added x 4.9 percent = $145,704,093 in state tax revenue

For FY 2010-11, the state provided $124.2 million in appropriations to these schools. Without including the tremendous local tax impact of higher lifetime earnings of graduates, federal grants, economic development advantages, and lower social service costs, the State of South Carolina recouped over $20.0 million more than its investment. It is reasonable to assume that the public sector generates a return far greater than its contribution to these schools.

For example, the four schools generated over $227.9 million in federal contracts and grants in FY 2010-11. Directly and indirectly, these funds help support the overall mission and operations of the schools. Without these contracts and grants, state support and student tuition might need to increase to offset this source of revenue. In some fiscal impact studies, a portion of these funds are treated as "savings" or additional state tax revenue generated by the institutions. If a share of federal contracts and grants are included, the State of South Carolina receives an even greater return on investment.

Table 21: Federal Contracts and Grants

School	2006-07	2007-08	2008-09	2009-10	2010-11
The Citadel	$1,429,852	$1,558,474	$1,606,806	$4,838,310	$5,756,682
College of Charleston	$9,903,406	$15,124,933	$16,666,935	$15,467,904	$23,036,498
MUSC	$116,301,547	$117,751,459	$119,782,720	$128,151,975	$154,409,004
Trident Tech	$14,209,732	$15,230,785	$19,302,009	$36,477,195	$44,748,276
Total	**$141,844,537**	**$149,665,651**	**$157,358,470**	**$184,935,384**	**$227,950,460**

Source: National Center for Education Statistics IPEDS Financial Reports, and the institutions' Consolidated Annual Financial Reports for 2010-11

Social & Community Impact of Public Higher Education

Not only have the Charleston region's public higher education institutions produced significant direct economic impacts, these schools have fulfilled important community development, economic development and social service missions that improve the quality of life for all citizens. The primary reasons students attend school is to obtain knowledge, improve technical skills, and command a higher salary when entering the job market. The most visible contribution to the community is increased regional productivity and prosperity.

Fortunately, the benefits of post-secondary education in Charleston extend far beyond the individual. Beyond the direct economic impacts, it is clear that the Charleston of today – with a growing national and international reputation for hospitality and tourism, historic preservation, educational excellence, scientific research, business growth and quality of place – would not be the same community without the long-term presence and unique contributions of the higher education institutions.

College education improves a person's social engagement, community service, and environmental concerns. College graduates are more likely to vote and volunteer. Students, faculty, and staff of the four Charleston-area public institutions provide thousands of hours of community service each year, enhancing health, literacy, education, culture and overall quality of life in the region. These individuals play important leadership roles on planning committees, nonprofit organizations, economic development task forces, and business contact groups.

Higher education also is associated with a greater likelihood of starting a small business, a higher rate of business survival, and greater small business success. Higher education research activities, such as those at MUSC, include important discoveries that save and improve lives, plus patents and business start-ups resulting from university research. The College of Charleston also does important scientific research in science, math, social sciences and health and human performance, and interacts directly with firms and entrepreneurs by providing business planning and other technical services.

The higher education sector and Charleston's vibrant tourism sector have a unique relationship. The Office of Tourism Analysis at the College of Charleston estimated the tourism sector's economic impact at over $3.3 billion. Many college students need to work to pay for tuition, and the tourism sector is a natural fit. Special programs offered by Trident Tech such as the Culinary Institute of Charleston equip these students with specialized skills. Associate degrees and certificate programs in the culinary arts provide the talent required to meet the diverse training needs of the tourism industry. The College of Charleston was instrumental in inaugurating the Spoleto Festival USA in 1977, and has been an essential partner ever since. By providing event venues, rehearsal space, housing accommodations

and student, faculty, and alumni volunteers and performers, the College of Charleston has supported one of the world's major performing arts festivals.

Charleston is home to the oldest community-based historic preservation organization in the country and is known internationally for its rich history, well-preserved architecture, and historic landmarks. Much of the historic architecture in Charleston's urban core is due to the presence of the campuses and historic buildings of the four institutions as well as the historic nature of the schools themselves, in the case of the College of Charleston dating back to 1770. In addition, the College's undergraduate program of Historic Preservation and Community Planning is the only one of its kind in the country.

Visitors also come to Charleston because of conferences, student recruitment programs, alumni events, sporting events, cultural programs, and the availability of medical services. Out-of-town visitors help support cultural institutions and entertainment attractions that improve the quality of life for local residents who do not directly interact with the schools.

Higher Education's Impact on Regional Competitiveness

The Charleston region institutions collectively served over 33,000 students in fall 2011. Enrollment levels at three of the four area providers have remained stable over the last several years, with Trident Tech the exception – averaging almost 900 additional students per year over the period of analysis. It is common for postsecondary institutions – particularly community and technical colleges – to experience enrollment growth during periods of economic downturn as displaced or underemployed members of the workforce look to enhance their skills to better position themselves in the labor market.

The following table displays the educational attainment of the 25 years of age and older population (adult population) in 2010. ***The Charleston region is better educated than South Carolina or the U.S., with 59.3 percent of the adult population having at least some college.*** This compares favorably to 51.7 percent for all of South Carolina and 56.0 percent for the U.S.

Table 22: Educational Attainment for Adult Population (2010)

Educational Attainment	CMSA	South Carolina	United States
Less than 9th grade	4.1%	5.9%	6.2%
9th to 12th grade, no diploma	8.4%	11.1%	8.7%
High school graduate (includes equivalency)	28.2%	31.2%	29.0%
Some college, no degree	21.0%	19.5%	20.6%
Associate's degree	8.4%	8.3%	7.5%
Bachelor's degree	19.6%	15.5%	17.6%
Graduate or professional degree	10.3%	8.4%	10.3%

Source: U.S. Census Bureau, American Community Survey

A college-educated workforce is highly correlated to lower levels of unemployment and higher levels of workforce participation. Persons with less than a high school education are about five times as likely to be unemployed as individuals with a bachelor's degree or higher. ***In 2010, individuals in Charleston with a bachelor's degree had an unemployment rate of 3.2 percent, compared to 16.5 percent for those with less than a high school diploma.***

Table 23: Unemployment Rate by Educational Attainment for Adult Population

	2005			2010		
Educational Attainment	CMSA	S.C.	U.S.	CMSA	S.C.	U.S.
Less than high school graduate	10.6%	13.7%	10.6%	16.5%	16.6%	12.1%
High School Graduate	6.3%	7.6%	6.3%	8.0%	9.2%	8.0%
Some College, or Associates	4.1%	5.4%	4.1%	6.2%	6.8%	6.4%
Bachelor's Degree (or more)	2.7%	2.4%	2.7%	3.2%	3.4%	4.9%

Source: U.S. Census Bureau, American Community Survey

Citizens with higher education are much more likely to be employed, even during the economic downturn. Four out of five individuals with some college, a bachelor's degree, or more education participated in the labor force in Charleston in 2005 or 2010, compared to less than 60.0 percent of those without a high school diploma.

Table 24: Labor Force Participation by Educational Attainment for Adult Population

	2005			2010		
Educational Attainment	CMSA	S.C.	U.S.	CMSA	S.C.	U.S.
Less than high school graduate	56.0%	57.2%	62.8%	58.7%	55.9%	61.3%
High School Graduate	73.5%	75.3%	75.3%	75.8%	73.2%	74.8%
Some College, or Associates	79.8%	79.5%	80.1%	81.3%	79.9%	80.7%
Bachelor's Degree (or more)	83.3%	83.1%	84.5%	84.8%	84.7%	85.8%

Source: U.S. Census Bureau, American Community Survey

Based on local degree and certificate production, the Charleston region should remain above the state and national averages for educational attainment and labor force participation. The four institutions generate roughly 6,100 awards on an annual basis, including:

- 1,200 associate's degrees (exclusively through Trident Technical College)
- Over 2,900 bachelor's degrees (split between the Citadel, C of C, and MUSC)
- Over 700 master's degrees (through the same set of providers)
- Nearly 400 doctorate awards (through MUSC)

Table 25: Awards by Level and Provider, 2010-11 Academic Year

Award Level	Citadel	C of C	MUSC	Trident Tech	Total	Percent Total
Award of less than 1 academic year	0	0	0	909	909	14.3%
Award of at least 1 but less than 2 academic years	0	0	0	139	139	2.2%
Associate's degree	0	0	0	1,203	1,203	18.9%
Bachelor's degree	522	2,237	189	0	2,948	46.3%
Post-baccalaureate certificate	0	8	6	0	14	0.2%
Master's degree	269	243	217	0	729	11.4%
Post-master's certificate	40	0	0	0	40	0.6%
Doctor's degree - research/scholarship	0	0	96	0	96	1.5%
Doctor's degree - professional practice	0	0	289	0	289	4.5%
Degrees/certificates total	**831**	**2,488**	**797**	**2,251**	**6,367**	**100.0%**

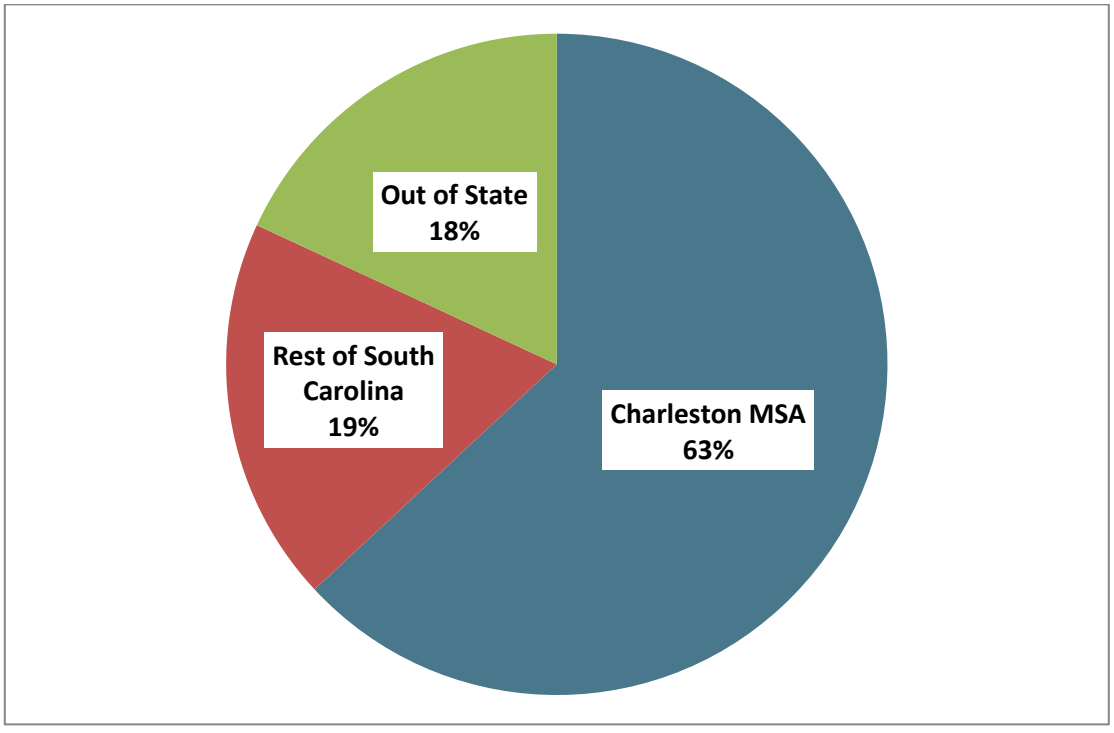
Source: IPEDS 2010-11 Completions Survey

Some program completers will continue to reside in the local area while others will relocate upon graduation. Anecdotal accounts from stakeholder interviews indicated that many of

these graduates would prefer to remain in the area. The abundance of skilled workers and limited employment opportunities in some sectors make it difficult for many to secure fulltime jobs in their field. The strategic implication is that Charleston higher education graduates may have to leave the area in search of employment opportunities.

Another issue that might influence the area's long-term educational attainment is the increase in out-of-state students. ***The four institutions are significant attractors and producers of young talent – over 12,000 students from outside the region in 2010 – a subject of increasing importance to economic development and regional prosperity.*** An appropriate blend of local, out-of-area, and out-of-state students is beneficial to the community, not only for its contribution to cultural diversity and richness, but also in terms of offsetting declining state funding with out-of-state students who pay higher tuition rates. Some of these students will permanently relocate to the area upon graduation, supplementing the supply of skilled workers in the area. The potential downside is that family and business ties to the area are not as strong, and the graduate might be more likely to move away. The combination of capacity constraints, additional nonlocal students, and regional population growth might require relatively more Charleston high school graduates to move outside of the region for college or post high school education.

Figure 13: Fall 2011 Distribution of Enrollments by Student Origin*



Source: IPEDS Fall Enrollment Surveys

*For The Citadel, includes only the Corps of Cadets.

Public Sector Savings Attributable to Education

National studies and empirical evidence indicate that higher education helps to reduce poverty, which in turn lowers state and local government costs. In 2010, approximately 28.8 percent of South Carolina's population without a high school degree lived in poverty, compared to only 3.6 percent of those with a college degree. In the Charleston region, only about 4.2 percent of those with a college degree lived in poverty, compared to about 28.3 percent without a high school degree. Of the 43,000 adults who live in poverty, 66.7 percent or 29,002 residents had not attended college.

Table 26: Poverty Rate by Educational Attainment for Adult Population

	2005			2010		
Educational Attainment	**CMSA**	**S.C.**	**U.S.**	**CMSA**	**S.C.**	**U.S.**
Less than high school graduate	25.0%	25.9%	23.6%	28.3%	28.8%	24.7%
High School Graduate	13.1%	12.9%	11.2%	12.7%	14.2%	12.0%
Some College, or Associates	7.3%	7.7%	7.7%	7.5%	9.0%	8.4%
Bachelor's Degree (or more)	3.0%	3.4%	3.5%	4.2%	3.6%	3.8%

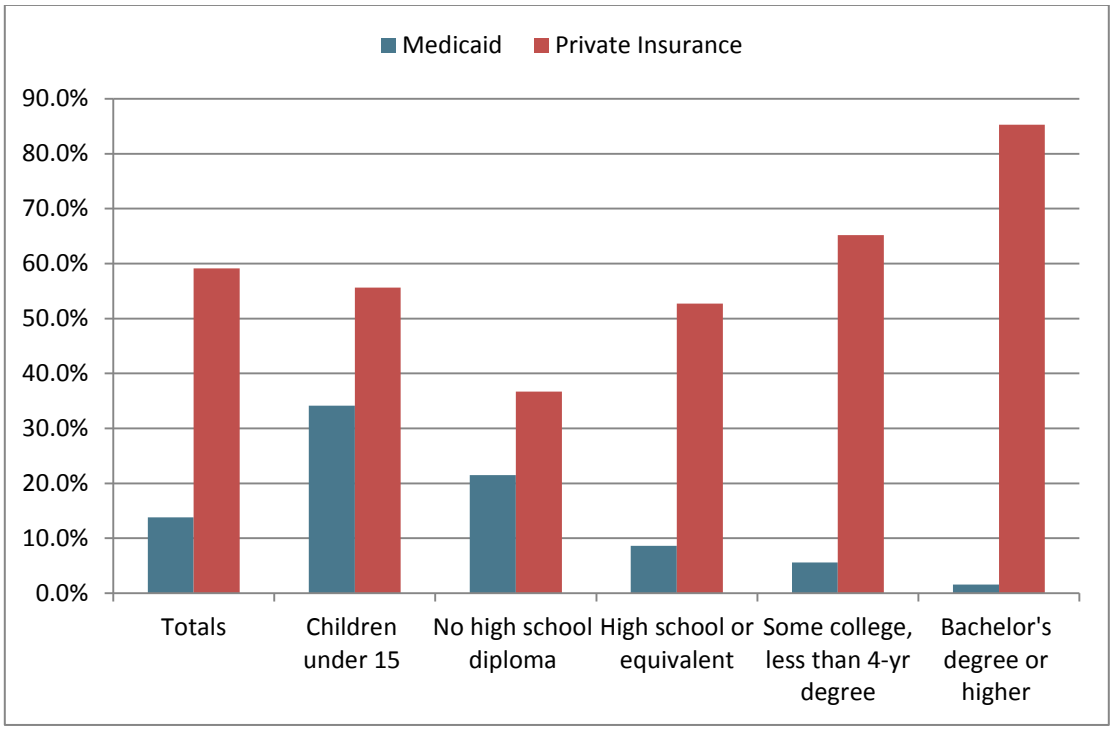
Source: U.S. Census Bureau, American Community Survey

A noted economist, Walter McMahon showed that the total value of fringe benefits such as medical insurance, pension plans, paid vacations, sick leave, and stock options increase with years of schooling. Additionally, individuals with more education generally are healthier than their less-educated counterparts. Educated consumers are more likely to go to the doctor, to adhere to their medical treatments, and to take advantage of newer medical technologies. In addition, more education is associated with healthier behaviors such as smoking less, maintaining a healthy weight, and using seat belts.[13] McMahon estimated that each additional year of schooling reduces the probability of dying in the following 10 years by at least 3.6 percentage points.

U.S. Census Bureau data confirm that private health insurance coverage for South Carolina residents (employer-based or individually purchased) increases with educational attainment from 52.7 percent for high school graduates to 85.3 percent for bachelor's degree or higher. Only 36.7 percent of adult South Carolina residents without a high school degree have private health insurance. Because these people do not have employer-based coverage and are unable to afford an individual plan, a higher percentage of these residents receive Medicaid assistance.

[13] McMahon, Walter W. 2009. *Higher Learning, Greater Good: The Private and Social Benefits of Higher Education.* Baltimore, MD: The Johns Hopkins University Press.

Figure 14: South Carolina Health Insurance by Educational Attainment



Source: U.S. Census Bureau Current Population Survey, Annual Social and Economic Supplement, 2011

Within the Charleston region, 19.6 percent of working-aged residents (aged 25 to 64 years) do not have any health coverage. For working-aged residents without a high school degree, 42.0 percent had no form of health insurance compared to 8.0 percent of people with at least a bachelor's degree.

Table 27: Charleston Region Health Insurance by Educational Attainment

Educational Attainment	Private Insurance	Public Coverage	No health insurance	Total
Less than high school graduate	35.0%	23.0%	42.0%	100.0%
High School Graduate	57.2%	15.3%	27.5%	100.0%
Some College, or Associates	70.7%	12.1%	17.1%	100.0%
Bachelor's Degree (or more)	86.7%	5.3%	8.0%	100.0%
Total Population	68.5%	11.9%	19.6%	100.0%

Source: U.S. Census Bureau, American Community Survey

Spillover Effect on Other Residents

In general, college graduates, and those with some college, command higher wages and salaries when they enter the labor market. This translates into greater disposable income for spending or saving. Median earnings rise steadily for individuals with increasing educational attainment, no matter what year of data is used. Using 2010 data, assuming inflation equals wage growth, and the average worker is employed for 40 years, it is possible to approximate lifetime earnings.

- Overall, the national median income for all workers is $33,665 with lifetime earnings of approximately $1.4 million.
- Over a career, those who did not earn a high school diploma will earn about $.8 million or just over $19,492 per year.
- Nationwide, individuals who earn a bachelor's degree have a median annual income of $48,485, or $1.9 million over a lifetime of work.
- Obtaining a bachelor's degree leads to even more education, as nationally, about one-third of all bachelor's recipients earn an advanced degree.[14]
- Graduate degree and above holders earn at least twice the amount earned by those with only a high school diploma ($63,612 per year compared to $27,281 per year).
- A worker with a college degree in the Charleston region will earn nearly $1.0 million more in lifetime earnings than a worker with only a high school degree.
- ***Given the increasing enrollment at Trident Tech, it is important to note that workers with some college or an associate's degree earn 22.2 percent more per year more than someone with only a high school degree.*** This equates to approximately $300,000 of additional lifetime earnings.

Table 28: Estimated Lifetime Earnings by Educational Attainment (2010)

Educational Attainment	2010 Median Income			Lifetime Earnings		
	CMSA	S.C.	U.S.	CMSA	S.C.	U.S.
Less than high school	$18,252	$18,116	$19,492	$730,080	$724,640	$779,680
High school graduate	$26,694	$25,600	$27,281	$1,067,760	$1,024,000	$1,091,240
Some college or associate's degree	$32,624	$31,057	$33,593	$1,304,960	$1,242,280	$1,343,720
Bachelor's degree	$41,906	$42,192	$48,485	$1,676,240	$1,687,680	$1,939,400
Graduate or professional degree	$53,430	$52,373	$63,612	$2,137,200	$2,094,920	$2,544,480
Population 25 years+	**$33,074**	**$30,860**	**$34,665**	**$1,322,960**	**$1,234,400**	**$1,386,600**

Source: U.S. Census Bureau, American Community Survey

[14] Carnevale, A.P., S.J. Rose, and B. Cheah, 2011. *The College Payoff: Education, Occupations, Lifetime Earnings*, Washington, DC: Georgetown University Center on Education and the Workforce.

At all levels of educational attainment, however, median income in the Charleston region and South Carolina is less than the national median income. Charleston's median income is higher than the South Carolina median at all levels except the bachelor's degree. A number of factors might explain this difference including worker productivity, size of government, cost of living, and military sectors, and labor supply. The trend worth noting is that the more educated a Charleston worker is, the larger the gap between the regional median wage versus the national median wage.

Table 29: Median Earnings by Educational Attainment

	2010 Median Income			As a % of U.S.		
Educational Attainment	CMSA	S.C.	U.S.	CMSA	S.C.	U.S.
Less than high school graduate	$18,252	$18,116	$19,492	93.6%	92.9%	100.0%
High school graduate (equivalency)	$26,694	$25,600	$27,281	97.8%	93.8%	100.0%
Some college or associate's degree	$32,624	$31,057	$33,593	97.1%	92.5%	100.0%
Bachelor's degree	$41,906	$42,192	$48,485	86.4%	87.0%	100.0%
Graduate or professional degree	$53,430	$52,373	$63,612	84.0%	82.3%	100.0%
Population 25 years+ w/earnings	$33,074	$30,860	$34,665	95.4%	89.0%	100.0%

Source: U.S. Census Bureau, American Community Survey

In addition to individual wage benefits, higher education also provides spillover effects in the local community. The sharing of knowledge and skills through formal and informal interaction often generates positive benefits, which results in higher wages even for non-college educated workers. In his study on the spillover benefits, Moretti[15] estimated that a 1.0 percentage point increase in the supply of college graduates in a community raises the wages of high school graduates by 1.6 percent, those of high school dropouts by 1.9 percent, and those of other college graduates by 0.4 percent.

Table 30: Impact of a 1.0 Percent Increase in the Number of College Graduates in a Community on Overall Wages

Education Level	Wage Increase
High School Dropout	1.9 Percent
High School Graduate	1.6 Percent
College Graduate	0.4 Percent

Source: Moretti

The benefits of having college graduates in a community are clearly substantial, but how does this translate to the Charleston region? Not all of the college graduates in the Charleston area attended one of the publicly supported institutions, but many were drawn to the area to either work at one of the schools or at a local business started by a graduate.

[15] Moretti, Enrico, 2004. "Estimating the Social Return to Higher Education: Evidence from Longitudinal and Repeated Cross-Sectional Data," *Journal of Econometrics* 121: 175-212.

Some native Charlestonians have returned home after obtaining a college degree elsewhere. Graduates of the area schools oftentimes reside in other South Carolina cities, which increases earnings in other parts of the state. To simplify the calculation and provide a reasonable estimate, one approach is to examine the difference between the Charleston region's education levels and the U.S. averages. Specifically, if the Charleston region was slightly less educated (matching the national averages) how would this impact income levels?

The Charleston region has 2.0 percent points more college graduates than the U.S. average, which implies that the wages of high school graduates in the Charleston area on average are 3.2 percent higher than they would be without the concentration of college graduates, and the wages of high school dropouts are 3.8 percent greater. Applying these figures to labor force participation rates by educational attainment and wage levels results in $179.5 million less income in the Charleston area if educational attainment levels were similar to the nation. Using the $179.5 million in income as the input to the economic model, the following table highlights this marginal contribution to the local economy.

Table 31: Estimated Economic Impact of Higher Regional Wages Associated with Educational Attainment in Charleston Region

Region	Output	Value Added	Labor Income	Employment
Charleston MSA	$156,460,367	$97,196,763	$52,882,724	1,589
Rest of State	$16,698,542	$9,858,154	$5,286,400	156
Total	**$173,158,909**	**$107,054,917**	**$58,169,124**	**1,745**

Source: TXP, Inc.

Higher percentages of college-educated workers in a region also are correlated with improved community health, increased education aspirations, lower crime, better child education, lower poverty, better civic institutions, greater political stability, and more community engagement for both college and non-college educated workers in that region. It generally is more difficult to convert these benefits to a dollar value. Some economists (McMahon, 2009) have estimated that these benefits are equal to or greater than the value of the monetary benefits. In addition to greater earning, and increased community wages, public higher education results in better workplace conditions, more job satisfaction, higher spouse earnings, increased tax revenue, and lower public assistance costs.[16] Workers with higher educational levels experience lower work turnover rates, which reduce the costs of worker job search, and have more options on where to live. Also, individuals with higher educational attainment save on consumer good purchases like food and automobiles and achieve higher yields on their savings.

[16] McMahon, op. cit.

Charleston's Public Higher Education Sector Leads to Private Sector Jobs for the Region

This section of the report highlights the success of Charleston college graduates and faculty related to entrepreneurship, talent attraction, and skills development. These businesses and programs provide empirical evidence on the broad community benefits the public higher education sector offers the Charleston region. Oftentimes, residents overlook these benefits because they take for granted the existence of the four schools. As the region works diligently to recruit outside firms, some of these examples show how attracting college students to the region translates into graduates becoming entrepreneurs who start local businesses and create private sector jobs.

Scholarship Promotes Liberal Arts-infused Computer Science at the College of Charleston

Attracting and retaining recent computer science and engineering graduates is challenging for many regions. This task is even more difficult for the Charleston area because no school offers a broad range of undergraduate and graduate level engineering programs. Based on stakeholder interviews, the feeling is the technology companies have to work very hard to entice talent to the Charleston area – competing against better-known tech cities.

Charleston-based BiblioLabs (www.bibliolabs.com) is a hybrid software-media company focusing on technology that enables curators and subject matter experts to create books, articles, photos, modern commentary, and videos that provide context to history. With over 25 employees, this successful startup is growing at a rapid pace. The founders of BiblioLabs have strong entrepreneurial ties to Charleston and understand the challenges associated with attracting and retaining a highly skilled workforce. Prior to starting the firm, the founders sold their Charleston headquartered company, BookSurge, to Amazon.com in 2005. At the time of sale, BookSurge had over 80 employees.

To address the issue of talent attraction, BiblioLabs created an annual scholarship for incoming freshman declaring intent to major in Computer Science, Computing for the Arts, or Discovery Informatics. Started in 2008, the full four-year tuition paid scholarship is awarded in conjunction with the College of Charleston. In addition to the scholarship, recipients are also offered a paid internship for the entire duration of their college career.

"We want to improve the ability to attract software engineering talent in South Carolina," says BiblioLabs founder and chief business officer Mitchell Davis, "…and since BiblioLabs was founded by College of Charleston alumni, it was a natural partnership."

While the idea of a scholarship is not new, the BiblioLabs approach focuses less on GPA and more on the "misunderstood geniuses" who exhibit the skills needed to excel in the digital economy. If a similar type of scholarship and internship opportunity was offered by more

Charleston businesses, regardless of industry sector, the region would be more attractive for top high school graduates struggling to pay for their college education.

Joint Degree Program Leads to Biotech Startup

A number of schools in the Charleston region offer joint degree programs. The collaborations extend beyond the classroom and result in business relationships that lead to new company formations.

Drawn to Charleston to complete his doctorate at the Medical University of South Carolina, Ryan Fiorini earned his Ph.D. in microbiology and immunology in 2005. While in Charleston, Dr. Fiorini also enrolled in a joint degree program offered by The Citadel and MUSC.

When working on his MBA, Dr. Fiorini was introduced to Citadel professor Dr. Douglas Carnes. As part of its mentorship program, each student selects a professor as a mentor. Dr. Carnes, a Citadel graduate with a private sector background in the pharmaceutical industry, was a logical choice to serve as adviser. In fact, Dr. Carnes had only recently returned to Charleston and began teaching as a guest lecturer at The Citadel. Dr. Fiorini completed his MBA from The Citadel and a master in health administration certificate from MUSC in 2007.

When asked about the relationship between Charleston's educational institutions and staying in the region, Fiorini stated, "I came to Charleston to complete my Ph.D., but found a number of opportunities here that have allowed me to pursue other interesting areas too."[17]

During this same period, Dr. Fiorini licensed intellectual property from MUSC related to antibody-based therapeutics and started a firm named Immunologix. With the assistance of Dr. Carnes, the firm was among the first companies to move into the S.C. Research Authority-MUSC Innovation Center.[18] Originally a mattress manufacturing facility, the SCRA-MUSC Innovation Center is a state-of-the-art research and business facility with lab spaces designed to support medical and bioscience research. Immunologix also received $200,000 of its $1.1 million in startup capital from the research authority's *SC Launch* venture capital fund. When interviewed, Dr. Carnes emphasized the importance of the SCRA-MUSC Innovation Center in Immunologix's ability to remain in the Charleston area.

Dr. Fiorini explained the relationship between education and entrepreneurship in the Charleston area, "Not only was I able to complete my graduate education and additional degree programs, but I found a great technology at MUSC, received a start-up investment from SC Launch and a number of private investors, and now Immunologix is a tenant in the

[17] www.scra.org/press/media_immunologix_home_charleston.html

[18] www.scra.org/scra_musc_innovation_center.html

SCRA MUSC Innovation Center."[19] Within two years of starting Immunologix, the firm was purchased for an undisclosed amount by Virginia-based Intrexon Corporation.

Even though most startups and technology commercialization projects will not grow as rapidly as Immunologix, the success of this firm serves as a real world example of how Charleston's public higher education institutions play an important role in economic development. Moreover, the ability of schools, students, and faculty to collaborate creates connections that can pay dividends in the future.

Business Attraction, Workforce Training, and the Technical College System

Opportunity Next identifies workforce development and technical skills training as key priorities for the Charleston area. Throughout this report, the statistics clearly indicate that higher levels of education lead to greater prosperity and productivity. For most college graduates, continuing education and professional licensing are managed by industry-specific organizations. In the manufacturing sector, however, state sponsored workforce training programs, oftentimes supported by local technical colleges, play an important part in recruiting and retaining industrial businesses.

As an integral part of the South Carolina Technical College System, readySC works[20] together with technical colleges and economic development professionals to prepare the state's workforce to meet the needs of relocating and expanding businesses. Established in 1961, readySC is one of the oldest and most experienced workforce training programs in the United States. readySC services are provided at little or no cost to companies creating new jobs with competitive wages and benefits. The program offers customized recruitment, assessment, training development, management and implementation services to qualifying companies.

A major factor in Boeing expanding in South Carolina was the proven ability of readySC to recruit and train the local workforce. readySC worked with Boeing to develop a robust recruitment and pre-employment staffing process as well as design, develop, and deliver focused curriculum for the needed workforce. It is projected that readySC will recruit and train nearly 2,000 employees by FY 2012.

Within the Lowcountry, Trident Tech is the regional provider and partner institution for workforce training, certification programs, and other readySC programs. Not only does the school provide space for readySC programs, Trident Tech offers three aviation programs that aim to prepare employees in both aircraft assembly technology and aircraft maintenance

[19] www.scra.org/press/media_immunologix_home_charleston.html

[20] www.readysc.org

technology at its aeronautical training center. Trident Tech also provides recertification training for Boeing employees

According to Geoff Shuler, Charleston Site Integration Leader for Boeing, "Trident Technical College has been and will continue to be a close partner to Boeing South Carolina. This partnership, which has helped provide a trained technical, fabrication and assembly workforce, is critical to the success of the 787 Dreamliner program. These training programs will positively impact the aerospace industry in the region by providing a trained and qualified candidate pool for years to come."[21]

Boeing might be the best-known example of the readySC and Trident Tech partnership, but many more regional businesses and employees take advantage of these services. For Charleston residents without an associates or bachelor's degree, readySC and Trident Tech training and certification programs offer the only opportunity to earn a higher wage. Not only does the individual benefit, but the entire community profits from greater economic activity. The economic impact of the Boeing facility highlights this fact.

The Boeing Effect – Impact on the South Carolina Economy[22]

- 15,000 jobs created - 3,800 jobs for Boeing FAD + thousands of spinoff jobs
- $6.1 billion per year in economic activity
- $2.76 billion in state tax revenues over the next 30 years
- Announced capital investment for Boeing: $1.025 billion
- Boeing's capital investment per job: $268,816

Tourism and Hospitality Sectors Require Specialized Skills Learned at Culinary Institute

The Office of Tourism Analysis at the College of Charleston estimates the tourism sector has a total annual economic impact of over $3.3 billion and generates $1.1 billion in local earnings. The many local restaurants and chefs with a national and international following are part of the attraction for tourists to the Charleston area. Not only does the Food Network television channel feature regional restaurants specializing in Lowcounty cuisine on many of its shows, Charleston is home to a number of James Beard Foundation Award winners – one of the highest honors for food and beverage professionals working in North America. In the most recent tourism impact report, food and history tied as the Charleston area's top assets according to visitors. In 2010, approximately 7.0 percent of Charleston visitors were from international locations – up from 5.0 percent in 2009. These indicators reflect that the

[21] Information obtained from Trident MS PowerPoint presentation named *Building the Lowcountry Economy: One Student at a time*.

[22] Information obtained from readySC MS PowerPoint presentation

tourism sector can continue to grow and attract a more diverse audience if the region has the infrastructure, including workers, required to meet the needs of out-of-town visitors.

When Johnson & Wales University closed its Charleston culinary school in May 2006, the move threatened the culinary and hospitality sectors' local pipeline of college graduates specializing in food service, hospitality, and travel-tourism. Fortunately, Trident Tech was willing to upgrade its facilities and curriculum to fill this void. In conjunction with local chefs, restaurateurs, and other hospitality professionals, the new facilities were designed to emulate an actual restaurant kitchen to provide a hands-on learning environment for students.

The Culinary Institute of Charleston at Trident Technical College offers a wide array of both credit and continuing education offerings to meet the diverse training needs of the tourism industry. Credit programs include associate degree and certificate programs in culinary arts, baking and pastry, sports and nutrition, and hospitality and tourism, as well as advanced certification opportunities. In addition to traditional instruction, the program's flexible course offerings and alternative delivery methods, including online instruction, enable more members of the community to pursue higher education. Continuing Education programs vary with each semester and include community interest sessions, as well as specific industry training workshops.[23]

From 2007 to 2011, Trident Tech issued nearly 300 associates degrees and 240 certificates related to culinary and hospitality coursework. Associates degree enrollment has grown from 291 students in 2007 to 568 students in 2011. The trends for certificate programs are even more compelling. Total enrollment has increased fourfold over the past four years. These statistics are a good indicator of the students' desire to take culinary and hospitality courses as well as the perception that the local job market will provide employment opportunities. ***According to data from the Culinary Institute of Charleston at Trident Technical College, the local hospitality sector currently employs 155 students across the three county MSA.***

For Charleston's tourism and hospitality sectors to grow, the region must continually produce skilled workers trained in the culinary arts. As the industry evolves, the Culinary Institute of Charleston at Trident Technical College will play a pivotal role in meeting the workforce needs of local businesses. Dick Elliott, restaurateur, community leader and founder of Southern Maverick Kitchens, states, "We're now seeing Trident Tech develop a different kind of person who is local…There's a lot of talent around, and the (Culinary Institute) is giving them the fundamentals."[24]

[23] www.tridenttech.edu/culinary_institute_of_charleston.htm

[24] http://www.postandcourier.com/article/20100303/PC1206/303039951

Benchmarking Against Higher Education Regions

To provide additional context for the economic impact of the public higher education institutions in the Charleston area, the project team selected several comparison regions for benchmarking. While the peer regions chosen range in size from roughly the same population as the Charleston MSA to significantly larger, they had several characteristics in common including geographic location, diversity of higher education institutions, tourism economy, port activity, and military presence. The eight peer metropolitan statistical areas (MSA) selected were:

- Austin, Texas
- Baltimore, Maryland
- Birmingham, Alabama
- Knoxville, Tennessee
- Lexington, Kentucky
- Raleigh-Durham-Chapel Hill, North Carolina (comprised of two MSAs)
- Richmond, Virginia
- Tampa-Clearwater-St. Petersburg, Florida

The project team identified and collected information on peer community public 4-year or above; private 4-year or above; and public and private non-profit, 2-year schools in each of these regions. A list of the institutions in the peer regions is in Appendix 1. Institutional information collected included the following:

- Total enrollment
- Graduation rates as well as number of graduates
- Funding including revenues from state, federal, and other sources
- Staffing and related salaries
- Expenditures on payroll, goods and services, and capital
- Revenues derived from out-of-state sources
- Research expenditures

The project team collected additional information for the regions, including:

- Population
- Educational attainment
- Labor force participation
- Unemployment rates
- Poverty status
- Salaries and wages

Performance Indicators & Implications for the Charleston Region

The CRDA's annual *Regional Economic Scorecard* benchmark report is an excellent existing resource Charleston stakeholders and officials use for monitoring the region's performance. Cognizant of this tool, the project team decided to link the role of higher education with the *Opportunity Next regional* economic development strategic plan goals and target clusters. The findings and comparison data are not a workforce gap analysis or talent attraction assessment, but rather highlight key issues for further consideration. Based on the project team's past projects and experience, five performance indicators emerged for the Charleston region. The project team recommends the community update these indicators each year.

- **Educational Attainment** - this metric examines how a region attracts, cultivates, and retains highly skilled workers***. Due primarily to physical space constraints, The Citadel, College of Charleston, and MUSC cannot easily expand. This puts greater pressure on Charleston retaining local graduates and attracting talented workforce to the region.***

- **Median Income by Educational Level** – closely related to educational attainment, wage rates influence where workers, especially recent college graduates, locate. For a new graduate, a few thousand dollars of additional pay might make the difference when evaluating multiple job offers and locations.

- **Students Enrolled in Higher Education** – this metric helps differentiate a "college town" from a community that happens to have higher education institutions. Some students prefer towns that center around the university while others want to live in larger metropolitan areas. Cost of living and tuition rates also influence this indicator. Some site selection consultants also focus on the numerical number of graduates and per capita figures when recommending a new location.

- **STEM Degrees Awarded per Year** – at the national level, greater emphasis currently is placed on producing science, technology, engineering, and mathematics (STEM) graduates. While a number of factors influence this indicator (especially the presence of research universities), these skills are needed to attract and grow the community's economic development targets such as Advanced Security and IT, Aerospace, Biomedical, and Power Systems firms.

- **Percent of Total Workforce in Higher Education** – this indicator is a proxy for deciding if Charleston's higher education sector is keeping pace with overall community growth. Even though every state is struggling to fund higher education, regions that place education funding as a top priority will ensure the schools have superior faculty and staff.

Indicator #1 – Educational Attainment

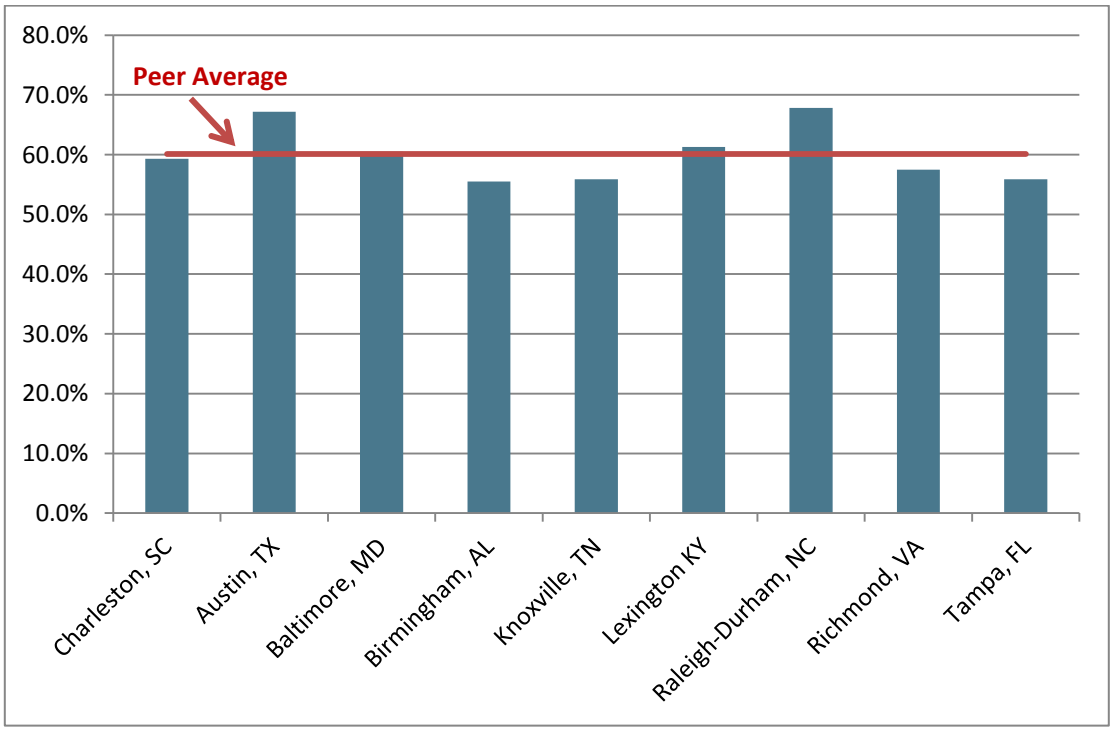
The following exhibits display the educational attainment of the adult population in comparison to peer regions. Relative to these metro areas, Austin, Baltimore, Lexington, and Raleigh-Durham had higher percentages of the adult population with some college experience or degrees. ***In general, Charleston had a higher percentage of residents with some college (no degree) or associates degrees, but lagged many regions in terms of bachelor, graduate, and professional degree holders.***

Table 32: Benchmark Educational Attainment for Adult Population (2010)

Metro Area	Some college, no degree	Associates	Bachelor	Graduate or professional	Total
Charleston, SC	21.0%	8.4%	19.6%	10.3%	59.3%
Austin, TX	21.4%	6.4%	25.8%	13.6%	67.2%
Baltimore, MD	19.7%	6.2%	19.7%	14.9%	60.5%
Birmingham, AL	22.1%	6.9%	17.1%	9.4%	55.5%
Knoxville, TN	20.5%	6.9%	18.1%	10.4%	55.9%
Lexington KY	20.8%	6.9%	19.8%	13.8%	61.3%
Raleigh-Durham,	18.2%	7.8%	26.2%	15.6%	67.8%
Richmond, VA	20.8%	6.0%	19.8%	10.9%	57.5%
Tampa, FL	21.1%	8.9%	17.4%	8.5%	55.9%

Source: U.S. Census Bureau, American Community Survey

Figure 15: Total Percent of Adult Population with Post-Secondary Education (2010)



Source: U.S. Census Bureau, American Community Survey

Indicator #2 – Median Income by Education Attainment

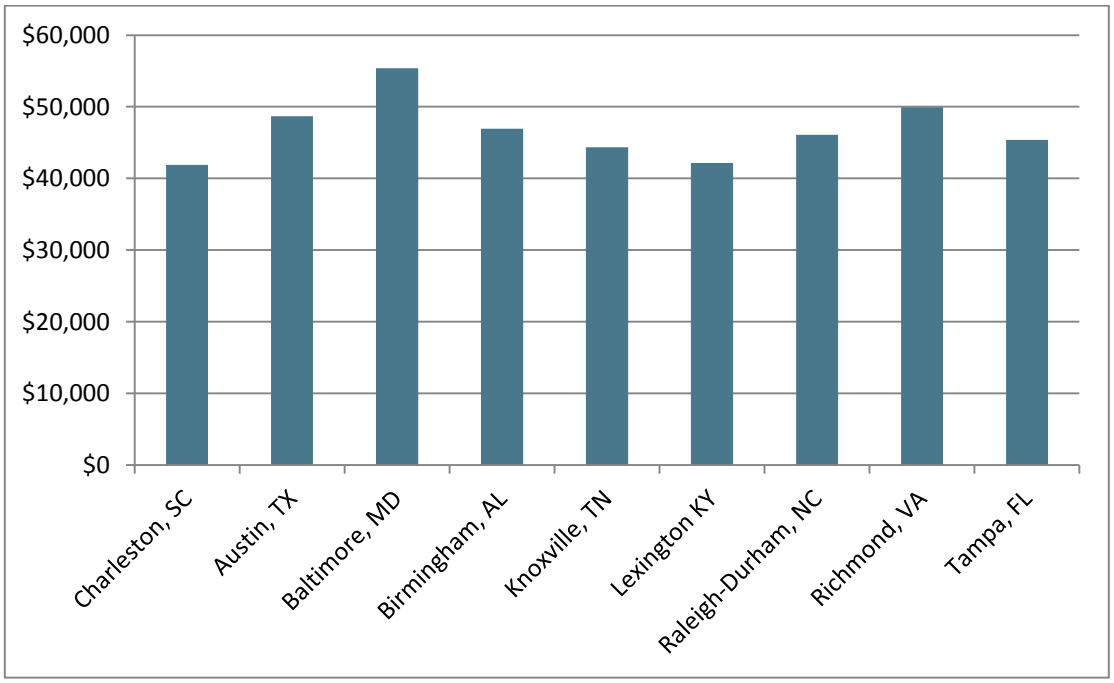
Charleston residents with some college or associate's degrees had a median income that was on par with benchmark MSAs. These workers earned $32,624 per year. For higher levels of education, Charleston residents had the lowest median income for those with a Bachelor's degree and graduate or professional degree. This may partially reflect the lack of developed clusters that required advanced degrees and typically pay high wages. Charleston's two most developed clusters, tourism and healthcare, are at opposite ends of the wage scale.

Table 33: Benchmark Median Earnings by Post-Secondary Education (2010)

Metro Area	Some college or associate's degree	Bachelor's degree	Graduate or professional degree
Charleston, SC	$32,624	$41,906	$53,430
Austin, TX	$34,648	$48,693	$62,519
Baltimore, MD	$41,304	$55,367	$72,522
Birmingham, AL	$32,387	$46,935	$57,141
Knoxville, TN	$31,116	$44,357	$55,721
Lexington KY	$32,781	$42,169	$53,665
Raleigh-Durham, NC	$33,192	$46,094	$61,550
Richmond, VA	$36,516	$49,947	$62,153
Tampa, FL	$32,476	$45,372	$59,151

Source: U.S. Census Bureau, American Community Survey

Figure 16: Median Earnings for Residents with a Bachelor's Degree (2010)



Source: U.S. Census Bureau, American Community Survey

Indicator #3 – Students Enrolled in Higher Education

The following table displays each metro area's population enrolled in higher education as a percent of the total population. The Charleston region has the smallest population at 665,000 residents with only 5.5 percent of citizens enrolled in college. Only the Birmingham MSA (4.2 percent) and Tampa MSA (5.0 percent) have a lower percentage of students enrolled. Despite having a much larger population than the Charleston MSA, the Austin MSA and the Raleigh-Durham-Chapel Hill region have a much larger concentration of college students.

With a population of approximately 120,000 residents, the City of Charleston is home to four higher education campuses. Total enrollment at these locations is in excess of 18,000 students. Assuming all of the students live within the city limits, this translates into 15.0 percent of the City's population enrolled in college – much higher than the CSMA average.

Given the expansion constraints facing The Citadel, College of Charleston, and MUSC, future growth will likely come from Trident Tech or partnerships with other South Carolina universities such as Clemson and the University of South Carolina expanding programs in the three-county area.

Table 34: Population Enrolled in Higher Education (2010)

Region	Total Population	Students Enrolled in Higher Education	% of Population Enrolled in Higher Education
Charleston, SC	664,607	36,493[25]	5.5%
Austin, TX	1,716,289	138,418	8.1%
Baltimore, MD	2,710,489	183,944	6.8%
Birmingham, AL	1,132,264	47,963	4.2%
Knoxville, TN	698,030	43,245	6.2%
Lexington KY	472,099	49,105	10.4%
Raleigh-Durham, NC	1,634,847	125,465	7.7%
Richmond, VA	1,258,251	70,220	5.6%
Tampa, FL	2,824,724	140,744	5.0%
Average	**13,111,600**	**835,597**	**6.4%**

Source: IPEDS Fall Enrollment Surveys, U.S. Census Bureau

[25] Note, the analysis is limited to public and private/non-profit 2-year and 4-year and above providers. This value is for all institutions in the region, not just the four publically supported schools that are the focus of this study.

Indicator #4 – STEM Degrees Awarded Per Year

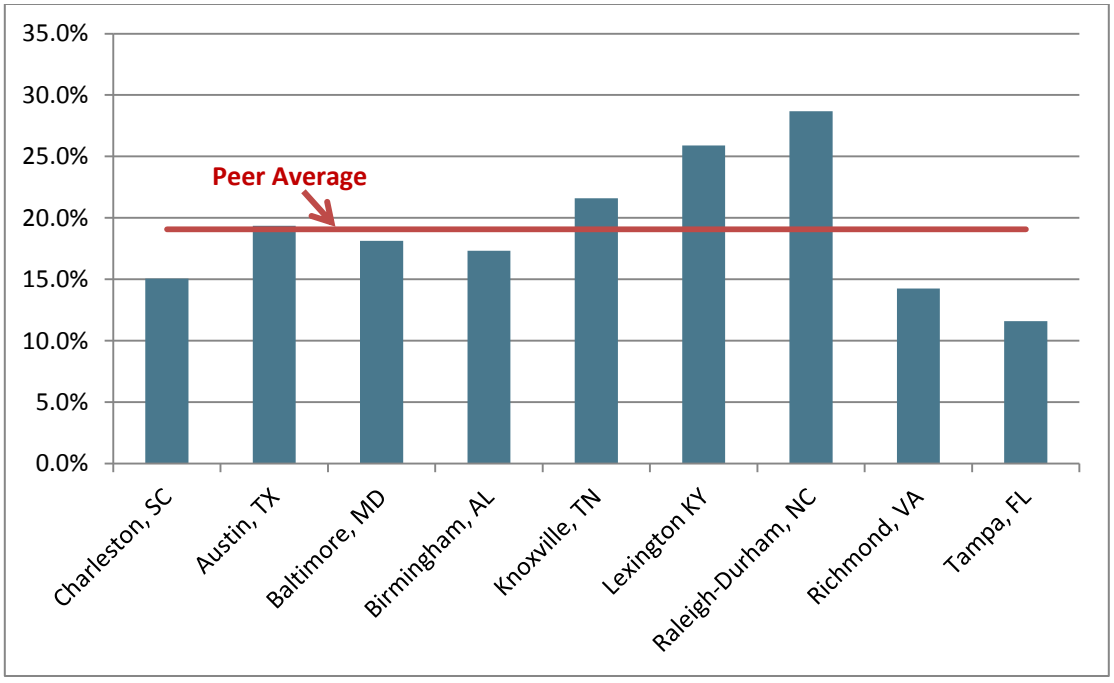
STEM degrees awarded are an important indicator of national competitiveness when it comes to advanced manufacturing, R&D, and high wages. ***Largely because the Charleston area does not have a major, nonmedical research university, the area ranks below most regions for STEM degrees as a percent of degrees awarded***. If medical and healthcare fields are added to the STEM definition, the Charleston region's rank slightly improves. Strategically, the Charleston region must improve the connectivity between its top cluster targets with the degrees earned at local colleges and universities.

Table 35: STEM and STEM + Health Fields Degrees Awarded (2010-11)

Metro Area	Degrees Awarded	STEM Degrees	% STEM	STEM Degree Plus Health	% STEM Plus Health
Charleston, SC	6,990	1,052	15.1%	2,430	34.8%
Austin, TX	25,043	4,850	19.4%	6,396	25.5%
Baltimore, MD	34,758	6,305	18.1%	12,246	35.2%
Birmingham, AL	8,911	1,545	17.3%	4,075	45.7%
Knoxville, TN	9,494	2,050	21.6%	3,299	34.7%
Lexington KY	11,164	2,892	25.9%	5,029	45.0%
Raleigh-Durham, NC	27,271	7,826	28.7%	10,793	39.6%
Richmond, VA	12,926	1,843	14.3%	4,103	31.7%
Tampa, FL	30,907	3,588	11.6%	8,479	27.4%

Source: IPEDS Fall Enrollment Surveys, U.S. Census Bureau

Figure 17: STEM Degrees Awarded as a Percent of Total Regional Degrees (2010-11)



Source: IPEDS Fall Enrollment Surveys, U.S. Census Bureau

Indicator #5 – Percent of Total Workforce in Higher Education

Similar to the other indicators, the percent of the total workforce in higher education demonstrates whether local institutions are growing fast enough to meet demand. An expanding population and employment base requires lifelong skills development that colleges, universities, and technical schools provide. According to information from the South Carolina Budget & Control Board Office of Research and Statistics, the Charleston MSA should surpass 800,000 residents by 2035. This implies higher education needs to expand by a similar proportion, if not more. Communities across the country are competing for public and private funds to expand their footprint, endow professorships, and add new programs. ***Compared to peer MSAs, only 2.9 percent of local jobs are in higher education, well below most peers including high-tech regions such as Austin and Raleigh-Durham.***

Table 36: Percent of Total Workforce in Higher Education

Metro Area	Fall 2011 Staff*	MSA Employment	% of Jobs in Higher Education
Charleston, SC	7,853	268,835	2.9%
Austin, TX	34,869	758,381	4.6%
Baltimore, MD	54,989	1,207,466	4.6%
Birmingham, AL	14,125	481,179	2.9%
Knoxville, TN	16,892	307,837	5.5%
Lexington KY	16,795	235,897	7.1%
Raleigh-Durham, NC	53,231	768,079	6.9%
Richmond, VA	13,172	575,471	2.3%
Tampa, FL	18,775	1,074,942	1.7%
Average	**230,701**	**5,678,087**	**4.1%**

* All schools in the Charleston MSA

Source: IPEDS Fall Enrollment Surveys, U.S. Department of Commerce Bureau of Economic Analysis and U.S. Census Bureau

Strategic Implications for the Region's Higher Education Sector

The information presented in the previous sections of the report document each institution's economic impact, demonstrate the social and community benefits of a highly educated population, and present indicators that compare Charleston to national peers. These tasks were the primary focus of the report, but the CRDA and partner institutions requested the project team capture broader issues related to the region's higher education sector. Specifically, what should the local community or engaged stakeholders concentrate on over the next 5 to 10 years to maintain and improve the region's position?

While this section is not an exhaustive environmental scan, the project team identified a number of issues that deserve further analysis and evaluation. Building upon MGT of America's decades of national higher education consulting, the project team identified ten priority issues – five potential challenges requiring further consideration and five opportunities to build upon. Preliminary solutions, next steps, and examples were included to add context to the discussion.

Potential Challenges Requiring Further Consideration

State appropriations for higher education are not expected to increase substantially. Nationally, states reduced higher education funding from $75.4 billion in FY 2007 to $72.5 billion in FY2011, a 3.8 percent decline in five years. In South Carolina, the state legislature reduced funding from $1.13 billion to $859.0 million, a 23.8 percent decrease.[26] These cuts represented the third largest decrease among the states for higher education appropriations.

In the Charleston region, South Carolina reduced aggregate higher education appropriations by 41.3 percent between FY 2007 to FY 2011, 73.5 percent greater than the 23.8 percent state average. For the College of Charleston, this translated into a 47.6 percent cutback, the largest cut of all the South Carolina public colleges and universities. The Citadel's state appropriation budget shrank 41.5 percent; MUSC's, 40.2 percent; and Trident Tech's 37.0 percent.

The continuing reduction in state support has forced the colleges and universities to reduce services and programs, increase tuition, and seek even greater efficiencies of operation. It is unlikely that state support will increase in the next few years to the level of funding the institutions received in FY 2007. At the same time, enrollments have increased, so that the institutions served more students with fewer state dollars. At some point, quality will suffer; talented faculty will be recruited by institutions in other states where funding is available.

[26] SHEEO, *State Higher Education Finance*, www.sheeo.org

Increases in tuition and fees could mean that students will begin to seek less expensive alternatives in the future.

In other states where appropriations have been constrained or reduced, colleges and universities sought relief from restrictive state laws and regulations in exchange for a smaller increase in state appropriations. The public colleges and universities in South Carolina must follow state law and regulations that can work against efficient operations, particularly in the areas of purchasing, construction, and human resources. In Virginia, the universities reached an agreement with the state to remove the universities from certain state purchasing and human resource regulations that cost the universities significant amounts to follow. In exchange, the universities agreed to reduce their request for increased state appropriations to a percent equal to the increase in the consumer price index.

There is no simple solution to this statewide issue, but it represents the most pressing challenge facing Charleston's higher education sector. The business community and individual contributors typically donate funds for special programs, new buildings, and endowed chairs. These funds are not usually intended to provide a long-term funding stream for normal operations. Charleston's leaders (public and private sector) should continue to advocate for more state funding for higher education in a coordinated effort. As part of this process, difficult decisions regarding prioritization for state funding will be encountered (ex. infrastructure vs. education).

Limited ability to expand the physical footprint of schools in the downtown area

The three institutions with main campuses in the downtown area of Charleston (The Citadel, College of Charleston, and MUSC) have constrained physical footprints. Despite the completion of new buildings and additional classroom space, these schools are unable to expand enrollment to meet growing regional demand. School-related activity can inconvenience and negatively impact citizens living and working in close proximity. These concerns, real and perceived, create disagreements and mistrust that prevents some expansion and improvement projects that otherwise would be acceptable to a large percent of local residents. ***In the long-term, the region's competitiveness and prosperity will be threatened if Charleston institutions are unable to accommodate growth in demand.***

Over the long-term, higher paying out-of state students versus In-state tuition students

There may come a point in the future where the tuition and fees for non-resident students cannot be raised without a reduction in the number of out-of-state students who wish to enroll at the Charleston institutions. Continued reductions in state funding have driven up the price of attending college in Charleston, not only for South Carolina residents but also for non-residents. The non-resident students do subsidize the cost of education for the resident

students, and stakeholders interviewed listed the large number of non-resident students as a positive.

At the same time, when an institution has an undergraduate enrollment cap, the increasing numbers of non-resident, undergraduate students means that there are fewer slots in an entering class for South Carolina residents. Because the size of the institutions is currently limited, both by space constraints and by revenues, the number of enrollment spaces for residents (i.e. serving the citizens of South Carolina) has to be balanced with the increased revenues brought by non-resident students. Miscalculation of the balance can lead to even further reductions of state appropriations. Some states like Arizona and Illinois legislatively placed caps on the percentage of out-of-state students that were permitted to enroll in certain institutions. In the current economic downturn, both states have removed the cap to permit additional revenues from non-resident students.

Similar to the suggestions mentioned above with regard to reduced state funding, local community and business leaders in several of the peer regions have established scholarships and fellowships that mitigate the impact of increased costs of attendance on both resident and non-resident students. These actions also have the beneficial impact of bringing talented youth to the community, who may then remain after graduation.

Charleston leaders will also need to aggressively expand collaborations and partnerships with nonlocal college and universities – preferably in locations outside of the heart of Charleston. This creates an opportunity to leverage Trident Tech's eight locations in the three county region. In Indiana, Ivy Tech campuses have been co-located with branches of Indiana University or Purdue University, resulting in increased numbers of associates' degrees and bachelors' degrees. In Arizona, Arizona State University and Northern Arizona University have located upper division campuses on community college campuses to expand the opportunities for bachelors and masters degrees to individuals in those communities. Ultimately, the Charleston region must increase its capacity to meet the demands of a growing region.

Lack of a comprehensive research institution limits outside research funding

All of the comparison regions host a comprehensive or general research institution, but the Charleston region does not. Typical comprehensive research universities have expenditures over $1 billion per year, enroll more than 25,000 students, and employ thousands of faculty and staff. The diversity of programs offered by these institutions results in millions of dollars in outside research funding, and in many cases, entrepreneurial opportunities with start-up companies.

Although MUSC is a research university, it is a specialized institution that does not attract as much outside research funding as does an institution like the University of North Carolina at Chapel Hill, the University of Virginia, or the University of Tennessee. Consequently, the economic impact on their communities is significantly larger than that of the institutions in the Charleston area.

This is a challenge that does not have easily implementable strategies or solution. ***Charleston schools already have some joint programs with both Clemson University and the University of South Carolina. Enlarging the joint programs with these two in-state research universities is the most cost-effective strategy for bringing more research funding to the region over the short-term.***

Regional employment opportunities for graduates

During the project team's meetings, interviewees commented that it was wonderful to attend college in Charleston, but many graduates had to leave after graduation since jobs in their field of study were not available in the area. The alumni association is usually the best source of this information, but the quality of data can vary by year and school. The project team believes it is worth the time and effort to document where graduates are living, employment by sector, and wages levels. Some regional group will need to take the responsibility for overseeing this task.

The South Carolina Department of Employment and Workforce tracks this information using a system called eTrack. It is possible to obtain graduate information by county of employment, the NAICS code and title, a wage range, and the quarters employed for gradates still living in South Carolina. For this to be effective, the school will need to track all graduates of working age. The cost of this service is $1.90 per matched record so special funding will be required. In addition, this information could be used to refine the community impact of Charleston institution graduates.

Opportunities to Build Upon

Brand Charleston as a nationally known higher education region

The Charleston region already has a strong national and international reputation for economic development, tourism, and culture. The Citadel, College of Charleston, and MUSC attract many out-of-state students. During the last academic year, 28.0 percent of MUSC's students were from out-of-state. At the College of Charleston, over 4,000 students come from outside of South Carolina. Nearly half The Citadel's students were from out-of-state.

Given the growing importance of out-of-state students in terms of higher revenue and offering local businesses the most skilled workforce, the Charleston region should consider

a coordinated effort to brand the region as a higher education hub. Places such as Research Triangle, the Bay Area in California, and the greater Boston area (with MIT and Harvard) are recognized and associated with higher education. Other communities are associated with a single school, but do not offer the same environment as Charleston.

This type of initiative could bring together a number of regional organizations including the schools, Charleston Metro Chamber of Commerce, Charleston Area Convention and Visitors Bureau, CRDA, and private businesses.

Expand strategic collaboration among the Charleston-based schools

The Charleston region is fortunate to have four public higher education institutions that work together for the benefit of the region. Not only do the institutions work with one another on joint programs, they also work with other South Carolina institutions such as Clemson University and the University of South Carolina. Institutions located in other regions of the U.S. often do not collaborate with the other colleges and universities in the area, and even find themselves in the position of competing with one another for scarce state appropriations.

An example of a cooperative program arrangement is the Lowcountry Graduate Center, a setting in which The Citadel, College of Charleston, MUSC, Clemson, and the University of South Carolina jointly offer quality graduate programs at times convenient for working adults. The Lowcountry Graduate Center is the place that connects the faculty and networks of each institution to provide academic information, counsel, and advice. Programs are offered jointly by the institutions planning, computing, project management, educational administration, and social work.

Moving beyond joint degree and collaborative teaching programs, the Charleston region should seek out innovative strategies to leverage research funding, grants, technology commercialization, and entrepreneurship. One strategy employed in other states is to start a regional foundation or other nonprofit organization that coordinates the efforts of the local institutions in seeking research funding, gifts and grants, and technology commercialization. Indiana has used this strategy to assist local institutions in seeking outside funding by providing experts in grantsmanship, fundraising, and assisting in the commercialization and patenting of college and university discoveries. Charleston may find it advantageous to create a similar organization to foster increased research funding and technology commercialization.

Given the funding challenges facing state supported schools in South Carolina, long-term strategies and actions must position the region to meet the needs of a growing population and employment base. This might require each school to make difficult decisions or change

longstanding policies. Topics to explore include consolidating services (ex. public safety operations), expanding to new locations, and becoming more entrepreneurial. The Charleston region will need to move beyond past differences and rethink how to create a sustainable environment that offers the most efficient and effective higher education sector in the South.

Broaden state funding for endowed chairs and other industry-academic partnerships to include all comprehensive universities

During the 2002 legislative session, the South Carolina General Assembly passed the *South Carolina Research Centers of Economic Excellence (RCEE) Act*. With an annual allocation of lottery proceeds, to be matched on a dollar-for-dollar basis with non-state funds, the General Assembly established a competitive grants program to award to South Carolina's three research universities (including MUSC) funds for endowed professorships in areas that will enhance economic opportunities for the state's citizens.

While the Charleston region via MUSC has benefited from this program, the state did not allocate funds for FY 2011 and FY 2012. If this program resumes, the community should work with the legislature to allow The Citadel, College of Charleston, and Trident Tech to access these resources – even if limited to certain departments or programs related specifically to high-value economic development target industries.

Alternatively, targeted state funding designed to foster industry-academic partnerships – such as the recent provisional matching funds award for an Interactive Digital Technology Pilot Project with the College of Charleston Computer Sciences department – should be focused on strategic, high-value sectors and supported at the local and state level.

Encourage private sector scholarships designed to attract South Carolina's top high school students and link to local internships

Building upon the scholarships funded by several Charleston businesses such as BiblioLabs, the community should encourage more local firms to create scholarships programs that provide four years of tuition combined with a formal internship program. These programs would be marketed to the state's top students as a way of attracting and retaining the best talent in Charleston. Given the cost of college, grants and scholarships can sway where a student choses to attend college and could be especially useful in bringing the best and brightest of South Carolina's high school graduates to Charleston.

Evaluate connections between Opportunity Next targets with higher education initiatives

The region's economic development strategic plan, *Opportunity Next* calls on the region to take action to foster the growth of four target clusters – Advanced Security and IT, Aerospace, Biomedical, and Energy Systems – and to further enhance four core

competencies that are critical to overall economic growth – Advanced Materials, Creative Design, Logistics, Software, and Drivetrain and Power Systems.

Trident Tech's Culinary Institute of Charleston and readySC's training for Boeing are two of the most visible links between college and employment. While the community probably cannot create similar programs for each target, actively linking students with immediate employment opportunities is an effective strategy to keep talent.

Over the long-term, the Charleston region will need to offer a broad range of undergraduate and graduate level engineering programs. This includes IT and computer science programs. Some communities have also undertaken marketing initiatives to recruit alumni back to a region to supplement the supply of recent graduates.

In the short-term, the Charleston region should undertake a gap analysis that analyzes this issue and offers strategies for improvement. This will require different groups coming together to fund and manage this process as well as working with the schools to implement the recommendations.

Conclusion

The four publicly supported higher education institutions, plus Charleston Southern University, make a substantial economic contribution to the Charleston region each year. Thousands of workers, directly and indirectly, make a living supporting the students and faculty at these schools. These organizations also fulfill an important community mission by improving the quality of life for all citizens, raising the average salaries of workers in the region, reducing the dependence on state-funded assistance programs, and contributing to the economic competitiveness of the region.

These positive economic impacts would not be possible without the financial support of Charleston taxpayers. Leveraging this public sector funding, the institutions are able to attract additional research dollars, individual donations, and in-kind contributions. The collective support of these four public institutions makes it possible to educate 33,300 students each year and award over 6,100 degrees and certificates.

The Charleston MSA should remain a competitive education region, but a number of issues require attention. The decline in state funding combined with space constraints put pressure on each institution's ability to achieve the community's articulated goal of improving overall educational attainment and workforce skills. The ability to offer an affordable public undergraduate or graduate degree is essential to meeting these goals. These factors combined with the availability of high paying jobs for graduates create a number of interrelated challenges for economic development leaders. The success of the higher education institutions is a good indicator the region is capable of addressing these issues, but it will require coordinated action of all Charleston area stakeholders.

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Economic Impact of Charleston Southern University

Charleston Southern University is one of South Carolina's largest accredited, independent universities. Affiliated with the South Carolina Baptist Convention, the University's vision is to "be a Christian University nationally recognized for integrating faith in learning, leading and serving." Students from 35 states and several foreign countries have enrolled at the University.

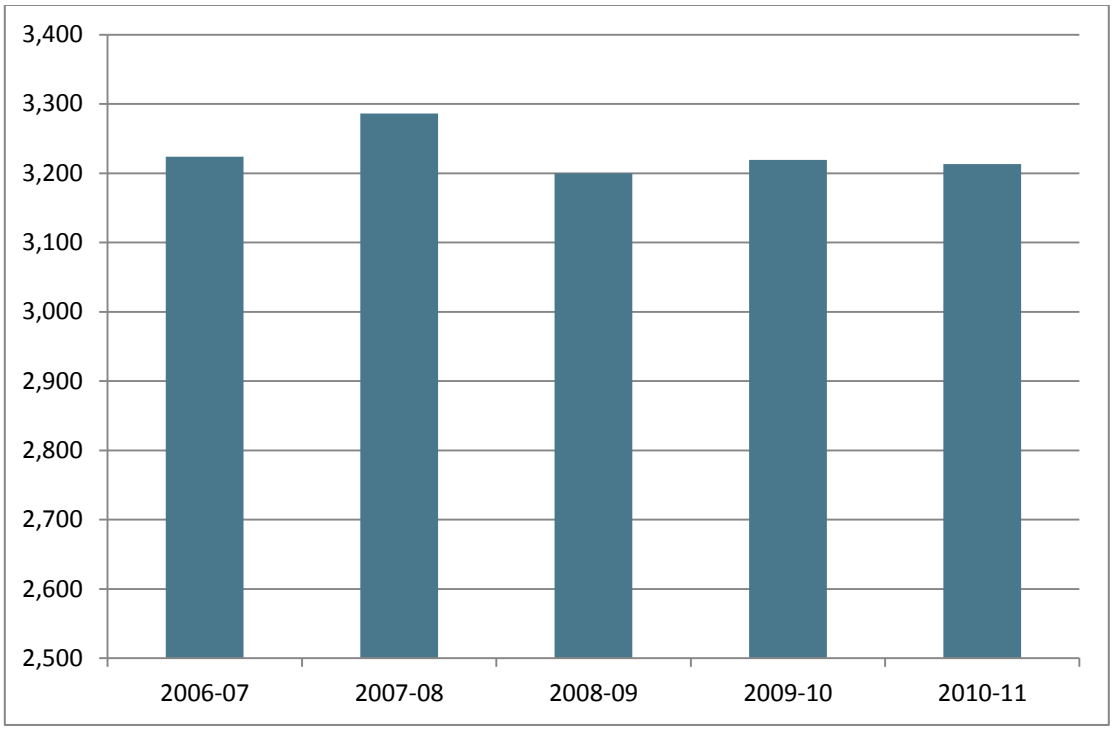
- Charleston Southern University was founded in 1964.
- The University has been named to America's 100 Best College Buys, Military Friendly Schools, America's Best Christian Colleges, VA Yellow Ribbon Program and The President's Higher Education Community Service Honor Roll.
- Charleston Southern University offers 61 undergraduate majors and 5 graduate degree programs, and enrolls 3,300 students. Its programs are organized around six schools or colleges:
    - School of Business
    - School of Education
    - School of Nursing
    - College of Science and Mathematics
    - College of Humanities and Social Sciences
    - College of Adult and Professional Studies (including online and blended programs in business, technology and nursing)
- Joint programs in engineering are offered with the Citadel, Clemson, and the University of South Carolina.
- Charleston Southern University awarded nearly 500 undergraduate degrees and 140 master's degree in 2010-11.
- Currently, the University employs over 600 faculty and staff (excluding student workers) and has an operating budget of $41.7 million.

Table 37: Charleston Southern University Economic Impact Model Inputs

Fiscal Year	Operations	Payroll	Employment	Construction	Student Spending
2006-07	$35,665,582	$15,983,641	517	$5,985,350	$30,108,651
2007-08	$37,445,890	$16,594,693	578	$8,467,731	$30,193,187
2008-09	$39,304,563	$17,186,375	567	$1,143,773	$27,516,808
2009-10	$41,225,554	$18,289,729	576	$2,740,540	$28,124,371
2010-11	$41,616,621	$18,414,816	606	$4,512,130	$27,571,390

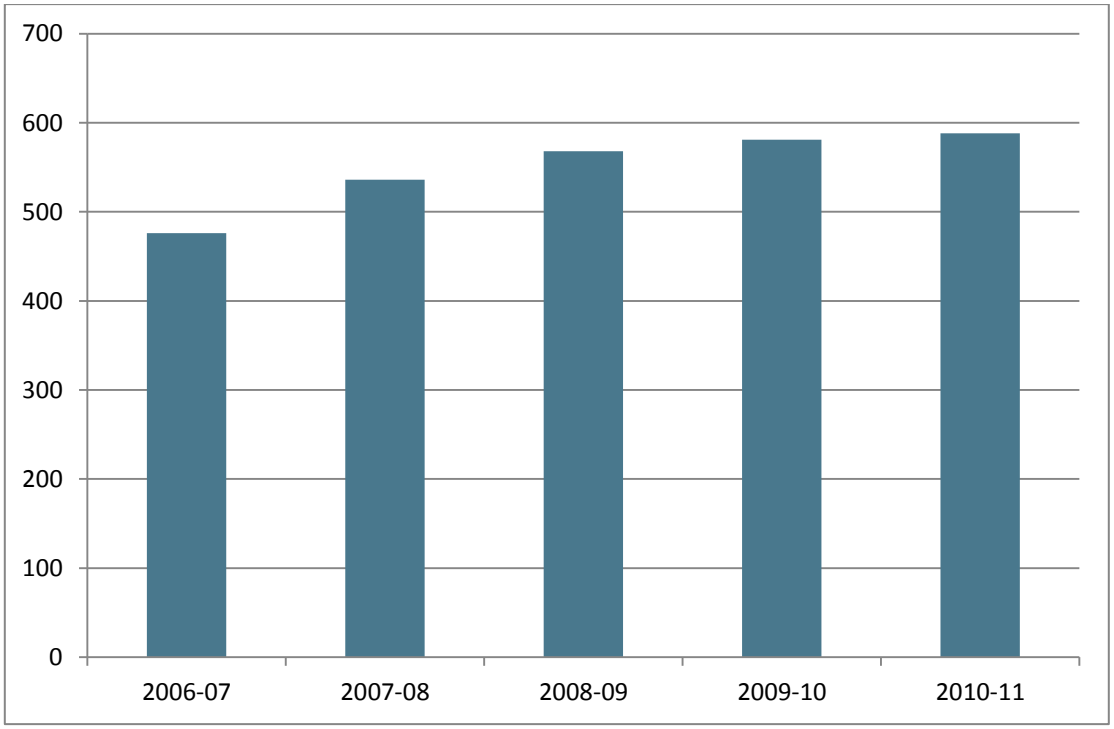
Source: Charleston Southern University, IPEDS Finance Surveys

Figure 18: Annual Enrollment at Charleston Southern University



Source: Charleston Southern University provided, IPEDS

Figure 19: Annual Degrees/Certificates Awarded at Charleston Southern University



Source: Charleston Southern University provided, IPEDS

For FY 2010-11, the estimated total economic output impact related to Charleston Southern University was approximately $141.7 million. The increase in regional spending supported 1,514 total jobs with labor income in excess of $53.5 million.

Table 38: Charleston Southern University Estimated Economic Impact FY 2010-11[27]

Region	Output	Value Added	Labor Income	Employment
Charleston MSA	$121,179,109	$69,121,750	$45,777,753	1,386
Rest of State	$20,495,693	$12,179,050	$7,730,421	129
Total	**$141,674,802**	**$81,300,800**	**$53,508,173**	**1,514**

Source: TXP, Inc.

Table 39: Charleston Southern University Detailed Economic Impact by NAICS Sector

NAICS Sector	Output	Value Added	Labor Income	Employment
Ag, Forestry, Fish & Hunting	$685,039	$270,130	$227,768	9
Mining	$130,947	$70,484	$32,183	1
Utilities	$4,283,247	$3,739,415	$935,770	8
Construction	$5,328,417	$2,440,023	$1,939,755	46
Manufacturing	$7,007,606	$1,900,149	$1,437,482	18
Wholesale Trade	$2,887,506	$2,256,540	$1,302,108	20
Retail Trade	$6,179,659	$4,170,487	$3,073,067	99
Transportation & Warehousing	$2,140,790	$1,322,691	$1,013,906	23
Information	$4,512,815	$2,395,173	$910,262	17
Finance & Insurance	$11,370,655	$5,040,587	$3,149,986	63
Real Estate & Rental	$19,905,119	$16,963,091	$1,923,629	117
Professional, Scientific & Tech Svcs	$5,014,008	$3,661,997	$3,051,523	46
Management of Companies	$468,955	$276,227	$261,521	3
Administrative & Waste Services	$3,302,004	$2,030,443	$1,667,395	54
Educational Services	$41,354,274	$20,352,214	$19,969,880	626
Health & Social Services	$9,906,127	$6,073,082	$5,788,070	102
Arts, Entertainment & Recreation	$1,723,761	$979,170	$607,251	38
Accommodation & Food Services	$6,409,997	$3,555,190	$2,306,603	106
Other Services	$4,156,989	$2,319,179	$2,275,238	96
Government & Non NAICs	$4,906,888	$1,484,531	$1,634,776	22
Total	**$141,674,802**	**$81,300,800**	**$53,508,173**	**1,514**

Source: TXP, Inc.

[27] Economists use a number of statistics to describe regional economic activity. Four common measures are "Output" which describes total economic activity and is generally equivalent to a firm's gross sales; "Value Added" which equals gross output of an industry or a sector less its intermediate inputs; "Labor Income" which corresponds to wages and benefits; and "Employment" which refers to jobs that have been created in the local economy.

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Appendix 1 – Peer Region Higher Education Institutions

Table 40: Colleges and Universities in Peer Regions

Metro Area	School Name
Austin-Round Rock	Austin Community College District
Austin-Round Rock	Austin Presbyterian Theological Seminary
Austin-Round Rock	Baldwin Beauty School-South Austin
Austin-Round Rock	Capitol City Trade and Technical School
Austin-Round Rock	Capitol City Careers
Austin-Round Rock	Concordia University-Texas
Austin-Round Rock	Episcopal Theological Seminary of the Southwest
Austin-Round Rock	Huston-Tillotson University
Austin-Round Rock	Southern Careers Institute-Austin
Austin-Round Rock	Saint Edward's University
Austin-Round Rock	Southwest Institute of Technology
Austin-Round Rock	Southwestern University
Austin-Round Rock	Texas State University-San Marcos
Austin-Round Rock	The University of Texas at Austin
Austin-Round Rock	Central Texas Beauty College-Round Rock
Austin-Round Rock	Austin Graduate School of Theology
Austin-Round Rock	Le Cordon Bleu College of Culinary Arts-Austin
Austin-Round Rock	ITT Technical Institute-Austin
Austin-Round Rock	Allied Health Careers
Austin-Round Rock	Baldwin Beauty School-North Austin
Austin-Round Rock	Academy of Oriental Medicine at Austin
Austin-Round Rock	Texas College of Traditional Chinese Medicine
Austin-Round Rock	Academy of Health Care Professions
Austin-Round Rock	Kussad Institute of Court Reporting
Austin-Round Rock	Virginia College-Austin
Austin-Round Rock	Everest Institute-Austin
Austin-Round Rock	Auguste Escoffier School of Culinary Arts-Austin
Austin-Round Rock	University of Phoenix-Austin Campus
Austin-Round Rock	Paul Mitchell The school-Austin
Austin-Round Rock	The Art Institute of Austin
Austin-Round Rock	National American University-Austin
Austin-Round Rock	Regency Beauty Institute-Austin
Austin-Round Rock	MediaTech Institute-Austin
Austin-Round Rock	Avenue Five Institute
Austin-Round Rock	Strayer University-Texas

Source: IPEDS

Table 40: Colleges and Universities in Peer Regions (cont.)

Metro Area	School Name
Baltimore-Towson	Anne Arundel Community College
Baltimore-Towson	TESST College of Technology-Towson
Baltimore-Towson	Baltimore Studio of Hair Design
Baltimore-Towson	Baltimore City Community College
Baltimore-Towson	University of Baltimore
Baltimore-Towson	Baltimore International College
Baltimore-Towson	Chesapeake College
Baltimore-Towson	Coppin State University
Baltimore-Towson	North American Trade Schools
Baltimore-Towson	Goucher College
Baltimore-Towson	Harford Community College
Baltimore-Towson	Howard Community College
Baltimore-Towson	The Colorlab Academy of Hair
Baltimore-Towson	Johns Hopkins University
Baltimore-Towson	Lincoln College of Technology-Columbia
Baltimore-Towson	Loyola University Maryland
Baltimore-Towson	Maryland Beauty Academy
Baltimore-Towson	University of Maryland-Baltimore
Baltimore-Towson	University of Maryland-Baltimore County
Baltimore-Towson	Maryland Institute College of Art
Baltimore-Towson	Fortis Institute-Towson
Baltimore-Towson	Morgan State University
Baltimore-Towson	Ner Israel Rabbinical College
Baltimore-Towson	Notre Dame of Maryland University
Baltimore-Towson	TESST College of Technology-Baltimore
Baltimore-Towson	Robert Paul Academy of Cosmetology Arts & Sciences
Baltimore-Towson	Maryland Beauty Academy of Essex
Baltimore-Towson	St Mary's Seminary & University
Baltimore-Towson	Sojourner-Douglass College
Baltimore-Towson	St John's College
Baltimore-Towson	Towson University
Baltimore-Towson	Tai Sophia Institute
Baltimore-Towson	United States Naval Academy
Baltimore-Towson	Stevenson University
Baltimore-Towson	McDaniel College

Source: IPEDS

Table 40: Colleges and Universities in Peer Regions (cont.)

Metro Area	School Name
Baltimore-Towson	All State Career-Baltimore
Baltimore-Towson	Carroll Community College
Baltimore-Towson	Baltimore School of Massage
Baltimore-Towson	The Community College of Baltimore County
Baltimore-Towson	University of Phoenix-Maryland Campus
Baltimore-Towson	Empire Beauty School-Owings Mills
Baltimore-Towson	ITT Technical Institute-Owings Mills
Baltimore-Towson	Fortis Institute
Baltimore-Towson	American Career Institute Baltimore
Baltimore-Towson	American Career Institute Columbia
Birmingham-Hoover	University of Alabama at Birmingham
Birmingham-Hoover	Birmingham Southern College
Birmingham-Hoover	Herzing University-Birmingham
Birmingham-Hoover	Jefferson State Community College
Birmingham-Hoover	Lawson State Community College-Birmingham Campus
Birmingham-Hoover	Miles College
Birmingham-Hoover	University of Montevallo
Birmingham-Hoover	Samford University
Birmingham-Hoover	Southeastern Bible College
Birmingham-Hoover	Bevill State Community College
Birmingham-Hoover	Alabama State College of Barber Styling
Birmingham-Hoover	ITT Technical Institute-Bessemer
Birmingham-Hoover	Virginia College-Birmingham
Birmingham-Hoover	Southeastern School of Cosmetology
Birmingham-Hoover	Strayer University-Alabama
Birmingham-Hoover	University of Phoenix-Birmingham Campus
Birmingham-Hoover	Xcell Academy-A Paul Mitchell Partner School
Birmingham-Hoover	Tri-State Institute
Charleston-North Charleston	Charleston Southern University
Charleston-North Charleston	Charleston Cosmetology Institute
Charleston-North Charleston	College of Charleston
Charleston-North Charleston	Citadel Military College of South Carolina
Charleston-North Charleston	Medical University of South Carolina
Charleston-North Charleston	Trident Technical College
Charleston-North Charleston	Academy of Cosmetology

Source: IPEDS

Table 40: Colleges and Universities in Peer Regions (cont.)

Metro Area	School Name
Charleston-North Charleston	Centura College-North Charleston
Charleston-North Charleston	Miller-Motte Technical College-North Charleston
Charleston-North Charleston	Charleston School of Massage
Charleston-North Charleston	Southeastern Institute-Charleston
Charleston-North Charleston	The Art Institute of Charleston
Charleston-North Charleston	Charleston School of Law
Charleston-North Charleston	Lacy Cosmetology School-Goose Creek
Charleston-North Charleston	Virginia College in Charleston
Charleston-North Charleston	ITT Technical Institute North Charleston
Knoxville	Johnson University
Knoxville	South College
Knoxville	Knoxville Institute of Hair Design
Knoxville	Maryville College
Knoxville	Tennessee Technology Center at Knoxville
Knoxville	Pellissippi State Community College
Knoxville	The University of Tennessee
Knoxville	Fountainhead College of Technology
Knoxville	Tennessee School of Beauty of Knoxville Inc
Knoxville	Paul Mitchell The School-Knoxville
Knoxville	ITT Technical Institute-Knoxville
Lexington-Fayette	Asbury University
Lexington-Fayette	Asbury Theological Seminary
Lexington-Fayette	Barrett and Company School of Hair Design
Lexington-Fayette	Bluegrass Community and Technical College
Lexington-Fayette	Paul Mitchell the School-Lexington
Lexington-Fayette	Georgetown College
Lexington-Fayette	The Salon Professional Academy-Lexington
Lexington-Fayette	National College-Lexington
Lexington-Fayette	University of Kentucky
Lexington-Fayette	Lexington Theological Seminary
Lexington-Fayette	Midway College
Lexington-Fayette	Transylvania University
Lexington-Fayette	Spencerian College-Lexington
Lexington-Fayette	Employment Solutions-College for Technical Education
Lexington-Fayette	ITT Technical Institute-Lexington

Source: IPEDS

Table 40: Colleges and Universities in Peer Regions (cont.)

Metro Area	School Name
Lexington-Fayette	Lexington Healing Arts Academy
Lexington-Fayette	Strayer University-Kentucky
Lexington-Fayette	MedTech College Lexington Campus
Raleigh-Durham-Chapel Hill	Duke University
Raleigh-Durham-Chapel Hill	Durham Technical Community College
Raleigh-Durham-Chapel Hill	Johnston Community College
Raleigh-Durham-Chapel Hill	Louisburg College
Raleigh-Durham-Chapel Hill	Meredith College
Raleigh-Durham-Chapel Hill	University of North Carolina at Chapel Hill
Raleigh-Durham-Chapel Hill	North Carolina Central University
Raleigh-Durham-Chapel Hill	North Carolina State University at Raleigh
Raleigh-Durham-Chapel Hill	William Peace University
Raleigh-Durham-Chapel Hill	Piedmont Community College
Raleigh-Durham-Chapel Hill	Saint Augustines College
Raleigh-Durham-Chapel Hill	Shaw University
Raleigh-Durham-Chapel Hill	Wake Technical Community College
Raleigh-Durham-Chapel Hill	Watts School of Nursing
Raleigh-Durham-Chapel Hill	Mitchells Academy
Raleigh-Durham-Chapel Hill	Durham Beauty Academy
Raleigh-Durham-Chapel Hill	Living Arts College
Raleigh-Durham-Chapel Hill	CET-Durham
Raleigh-Durham-Chapel Hill	The Medical Arts School
Raleigh-Durham-Chapel Hill	Apex School of Theology
Raleigh-Durham-Chapel Hill	University of Phoenix-Raleigh Campus
Raleigh-Durham-Chapel Hill	Miller-Motte College-Cary
Raleigh-Durham-Chapel Hill	ITT Technical Institute-Cary
Raleigh-Durham-Chapel Hill	The Art Institute of Raleigh-Durham
Raleigh-Durham-Chapel Hill	Strayer University-North Carolina
Raleigh-Durham-Chapel Hill	Aveda Institute-Chapel Hill
Raleigh-Durham-Chapel Hill	Miller-Motte College-Raleigh
Raleigh-Durham-Chapel Hill	Regency Beauty Institute-Durham
Raleigh-Durham-Chapel Hill	Park West Barber School
Raleigh-Durham-Chapel Hill	The Hair Design School-Durham
Richmond	Bryant and Stratton College-Richmond
Richmond	J Sargeant Reynolds Community College

Source: IPEDS

Table 40: Colleges and Universities in Peer Regions (cont.)

Metro Area	School Name
Richmond	John Tyler Community College
Richmond	Southside Regional Medical Center Professional Schools
Richmond	Randolph-Macon College
Richmond	Richard Bland College of the College of William and Mary
Richmond	Bon Secours Memorial College of Nursing
Richmond	University of Richmond
Richmond	Bon Secours St Mary's Hospital School of Medical Imaging
Richmond	Union Presbyterian Seminary
Richmond	Virginia Commonwealth University
Richmond	Virginia State University
Richmond	Virginia Union University
Richmond	Baptist Theological Seminary at Richmond
Richmond	Fortis College-Richmond
Richmond	Centura College-Richmond Main
Richmond	Henrico County-Saint Marys Hospital School of Practical
Richmond	ITT Technical Institute-Richmond
Richmond	Richmond School of Health and Technology
Richmond	Centura College-Richmond Westend
Richmond	Empire Beauty School-Midlothian
Richmond	University of Phoenix-Richmond Campus
Richmond	Empire Beauty School-Richmond
Richmond	Institute of Advanced Medical Esthetics
Richmond	South University Richmond
Tampa-St. Petersburg-Clearwater	Clearwater Christian College
Tampa-St. Petersburg-Clearwater	Eckerd College
Tampa-St. Petersburg-Clearwater	Florida College
Tampa-St. Petersburg-Clearwater	Concorde Career Institute-Tampa
Tampa-St. Petersburg-Clearwater	Hillsborough Community College
Tampa-St. Petersburg-Clearwater	Cortiva Institute-Florida
Tampa-St. Petersburg-Clearwater	International Academy of Design and Technology-Tampa
Tampa-St. Petersburg-Clearwater	ITT Technical Institute-Tampa
Tampa-St. Petersburg-Clearwater	Loraines Academy Inc
Tampa-St. Petersburg-Clearwater	Manhattan Hairstyling Academy
Tampa-St. Petersburg-Clearwater	Remington College-Tampa Campus
Tampa-St. Petersburg-Clearwater	Fortis College-Tampa

Source: IPEDS

Table 40: Colleges and Universities in Peer Regions (cont.)

Metro Area	School Name
Tampa-St. Petersburg-Clearwater	Pasco-Hernando Community College
Tampa-St. Petersburg-Clearwater	Pinellas Technical Education Center-Clearwater
Tampa-St. Petersburg-Clearwater	Saint Leo University
Tampa-St. Petersburg-Clearwater	St Petersburg College
Tampa-St. Petersburg-Clearwater	Pinellas Technical Education Center-St Petersburg
Tampa-St. Petersburg-Clearwater	University of South Florida-Main Campus
Tampa-St. Petersburg-Clearwater	Benes International School of Beauty
Tampa-St. Petersburg-Clearwater	Everest University-Tampa
Tampa-St. Petersburg-Clearwater	Everest University-Largo
Tampa-St. Petersburg-Clearwater	The University of Tampa
Tampa-St. Petersburg-Clearwater	Trinity College of Florida
Tampa-St. Petersburg-Clearwater	Everest University-Brandon
Tampa-St. Petersburg-Clearwater	Florida Career College-Clearwater
Tampa-St. Petersburg-Clearwater	Brewster Technical Center
Tampa-St. Petersburg-Clearwater	D G Erwin Technical Center
Tampa-St. Petersburg-Clearwater	Sunstate Academy
Tampa-St. Petersburg-Clearwater	Artistic Nails and Beauty Academy
Tampa-St. Petersburg-Clearwater	National Aviation Academy
Tampa-St. Petersburg-Clearwater	Sanford-Brown Institute-Tampa
Tampa-St. Petersburg-Clearwater	Schiller International University
Tampa-St. Petersburg-Clearwater	Galen School of Nursing-Tampa Bay
Tampa-St. Petersburg-Clearwater	Argosy University-Tampa
Tampa-St. Petersburg-Clearwater	University of Phoenix-West Florida Campus
Tampa-St. Petersburg-Clearwater	Central Florida Institute
Tampa-St. Petersburg-Clearwater	Ultimate Medical Academy
Tampa-St. Petersburg-Clearwater	ATA Career Education
Tampa-St. Petersburg-Clearwater	Fortis College-Largo
Tampa-St. Petersburg-Clearwater	American Institute of Beauty
Tampa-St. Petersburg-Clearwater	University of South Florida-St. Petersburg Campus
Tampa-St. Petersburg-Clearwater	Strayer University-Florida
Tampa-St. Petersburg-Clearwater	South University-Tampa
Tampa-St. Petersburg-Clearwater	Paul Mitchell the School-Tampa
Tampa-St. Petersburg-Clearwater	Ultimate Medical Academy-Tampa
Tampa-St. Petersburg-Clearwater	ITT Technical Institute-St. Petersburg
Tampa-St. Petersburg-Clearwater	Aveda Institute-Saint Petersburg

Source: IPEDS

Table 40: Colleges and Universities in per Regions (cont.)

Metro Area	School Name
Tampa-St. Petersburg-Clearwater	Shear Excellence Hair Academy
Tampa-St. Petersburg-Clearwater	Lincoln Technical Institute-Seminole
Tampa-St. Petersburg-Clearwater	FastTrain of Tampa
Tampa-St. Petersburg-Clearwater	FastTrain of Clearwater
Tampa-St. Petersburg-Clearwater	International Academy of Design and Technology-Online
Tampa-St. Petersburg-Clearwater	The Salon Professional Academy-Tampa
Tampa-St. Petersburg-Clearwater	Marchman Technical Education Center

Source: IPEDS

Appendix 2 – Estimated State Appropriations Per Capita by State

Table 41: Estimated State Appropriations (Non-Operating Revenue) Per Capita to Public Degree-Granting Institutions FY2009-10

State	2011 Population	Per Capita State Appropriations
United States	**311,591,917**	**$200.44**
Alabama	4,802,740	$268.45
Alaska	722,718	$463.29
Arizona	6,482,505	$156.05
Arkansas	2,937,979	$256.41
California	37,691,912	$234.77
Colorado	5,116,796	$6.24
Connecticut	3,580,709	$277.14
Delaware	907,135	$241.87
District of Columbia	617,996	$100.44
Florida	19,057,542	$161.36
Georgia	9,815,210	$180.40
Hawaii	1,374,810	$266.83
Idaho	1,584,985	$204.77
Illinois	12,869,257	$138.24
Indiana	6,516,922	$220.21
Iowa	3,062,309	$255.33
Kansas	2,871,238	$254.85
Kentucky	4,369,356	$221.54
Louisiana	4,574,836	$225.18
Maine	1,328,188	$184.99
Maryland	5,828,289	$218.97
Massachusetts	6,587,536	$136.58
Michigan	9,876,187	$180.88
Minnesota	5,344,861	$232.45
Mississippi	2,978,512	$300.77

Source: Digest of Educational Statistics – National Center for Education Statistics

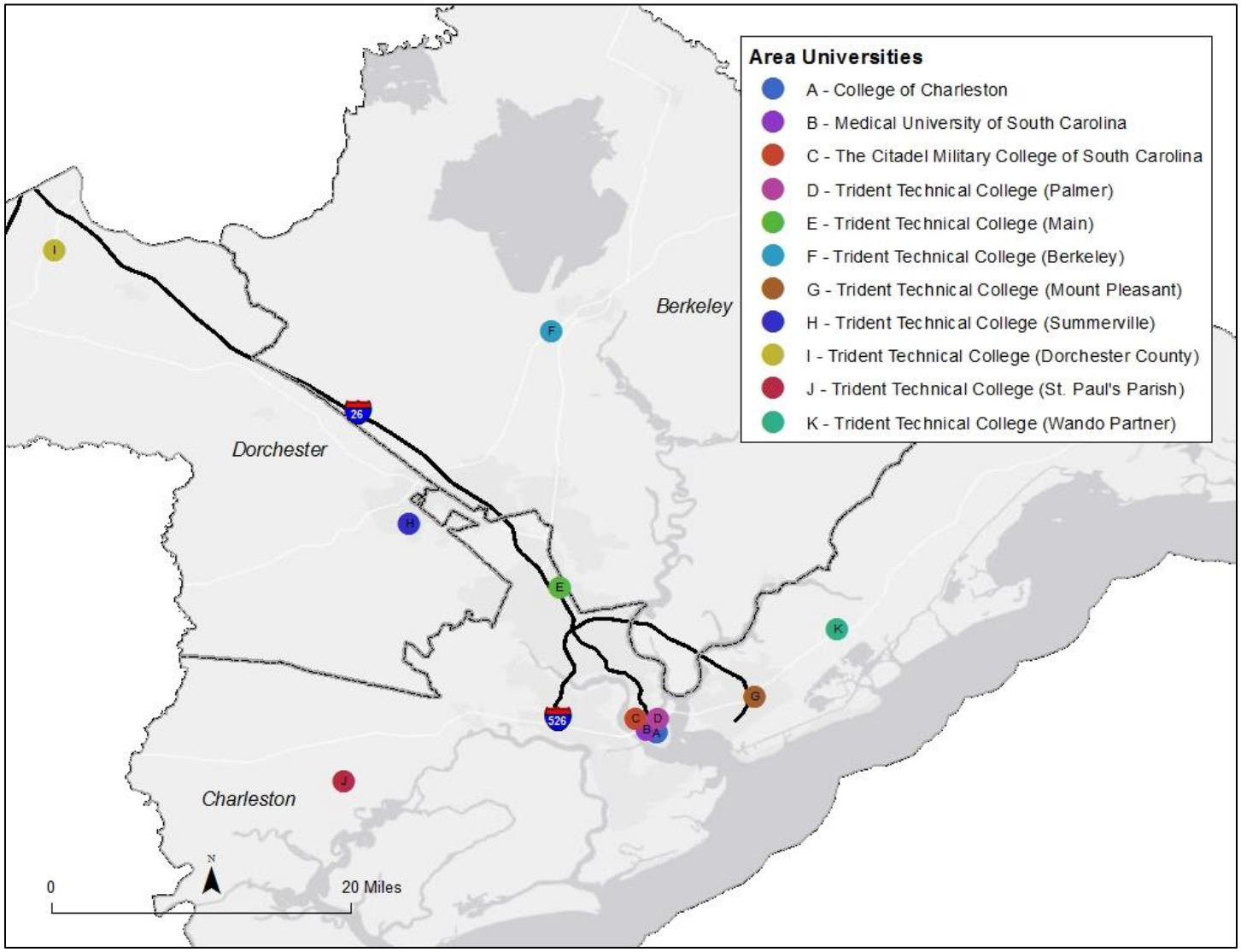
Table 41: Estimated State Appropriations (Non-Operating Revenue) Per Capita to Public Degree-Granting Institutions FY2009-10 (cont.)

State	2011 Population	Per Capita State Appropriations
Missouri	6,010,688	$165.16
Montana	998,199	$175.10
Nebraska	1,842,641	$341.71
Nevada	2,723,322	$142.50
New Hampshire	1,318,194	$99.28
New Jersey	8,821,155	$175.61
New Mexico	2,082,224	$371.35
New York	19,465,197	$223.49
North Carolina	9,656,401	$349.61
North Dakota	683,932	$391.48
Ohio	11,544,951	$163.21
Oklahoma	3,791,508	$244.84
Oregon	3,871,859	$172.22
Pennsylvania	12,742,886	$111.49
Rhode Island	1,051,302	$130.47
South Carolina	4,679,230	$129.14
South Dakota	824,082	$198.79
Tennessee	6,403,353	$170.19
Texas	25,674,681	$212.11
Utah	2,817,222	$233.58
Vermont	626,431	$122.24
Virginia	8,096,604	$177.06
Washington	6,830,038	$200.26
West Virginia	1,855,364	$212.26
Wisconsin	5,711,767	$192.45
Wyoming	568,158	$528.55

Source: Digest of Educational Statistics – National Center for Education Statistics

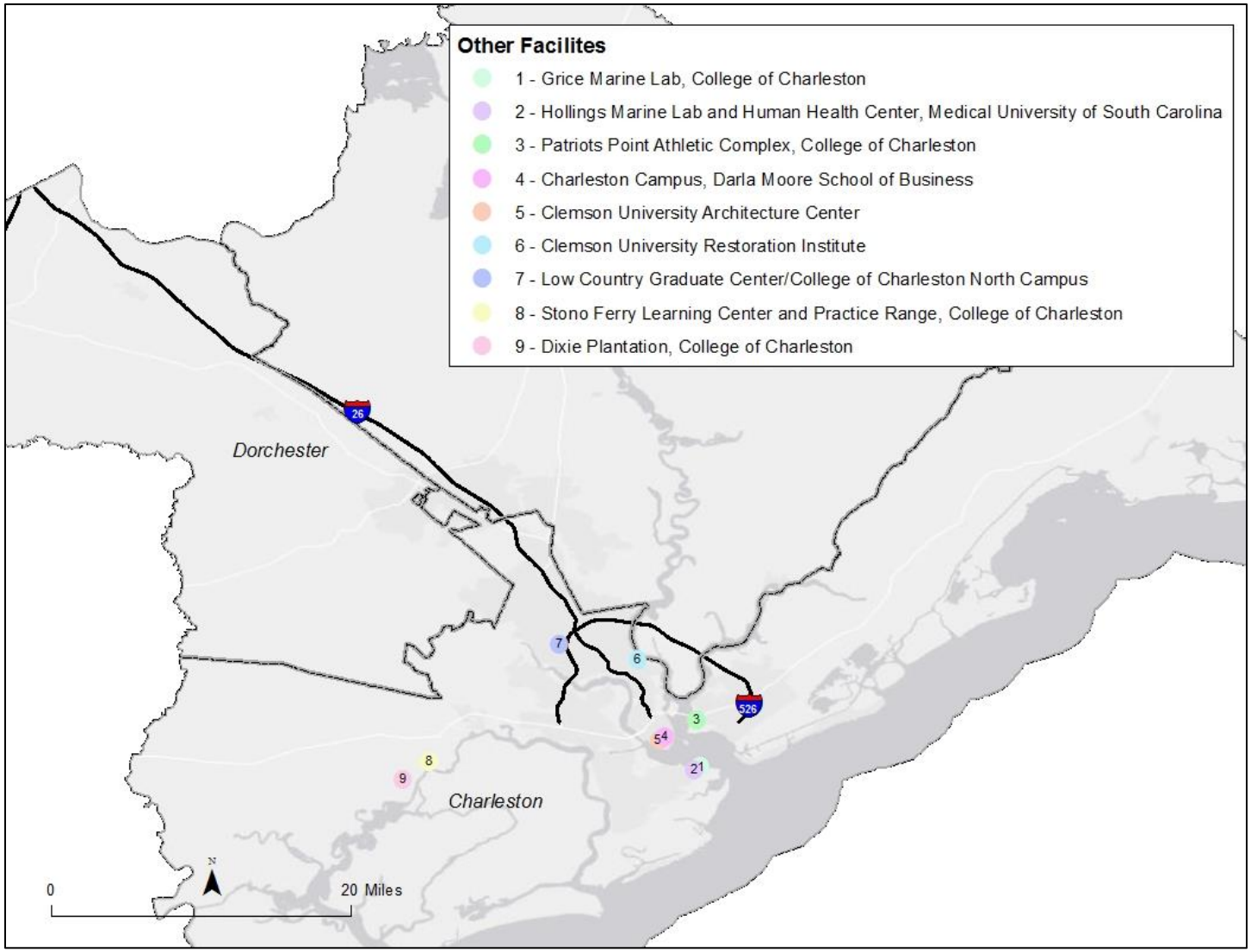
Appendix 3 – Location of Publicly Supported Institutions in the Charleston Region

Figure 20: Publicly Supported Institutions in the Charleston Region



Source: TXP, Inc.

Figure 21: Other Publicly Supported Higher Education Facilities in the Charleston Region



Source: TXP, Inc.