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University of South Carolina Upstate Economic Impact Report

2015-2016 Fiscal Year



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UNIVERSITY OF SOUTH CAROLINA UPSTATE

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The University of South Carolina Upstate (USC Upstate) enhances the educational, social, cultural, and economic environments across the Upstate region of South Carolina. It is estimated that USC Upstate and its faculty, staff, and students spent \$83 million during 2015-2016. This is the direct economic impact of USC Upstate on the region.

To determine the total economic impact of the institution, it is necessary to consider the economic multiplier effect. Multipliers provide estimates of economic impact of each dollar generated by the university as it is re-spent in the community (indirect and induced impact). Although traditional multipliers range between 2.0 and 3.0, the South Carolina Department of Commerce indicates that a multiplier of 1.82 should be used to calculate economic impacts of universities in South Carolina. In any event, the exact multiplier is difficult to identify, and the total economic impact most likely falls somewhere between \$152 million (using the 1.82 multiplier) and \$251 million (using the 3.0 multiplier).

Economic Impact

The total economic impact of USC upstate can be derived by examining the variety of ways the University impacts the local economy. These include direct, indirect, and induced impacts¹.

Direct Impact – all institutions of education have an impact on the economy. This economic activity occurs through the day-to day direct conduct of its business, such as purchases of computers, electricity, and labor. This spending has a direct impact on the economy.

Indirect Impact – Students, visitors, and others will purchase stays in hotels, meals at restaurants, goods and services from local stores, etc., and this economic activity experienced by businesses has an indirect and significant impact on the local economy.

Induced Impact –Colleges and universities produce valuable output. The output is created as a result of the products and services provided by the University, such as new products developed based on research conducted at the University or additional dollars flowing through the economy as a result of higher wages paid to college graduates.

Multiplier Effect

USC Upstate has a significant direct impact on the local economy, but it is important to note that the types of impacts listed above represent only the initial round of spending and income that is generated. Economic research has suggested that there will be multiple spending and income progressions through the community; thus, it is essential that any economic impact study accounts for the appropriate multiplier effect.

¹ Davidson, L. & Shaffer, W. (1980). *A discussion of methods employed in analyzing the impact of short-term entertainment events*. Journal of Travel Research 18(3); 12-16.

The multiplier process is quite simple. For example, if a college purchases \$1,000 in products from a local company; this \$1,000 expenditure has now become income to the local company and it can be safely assumed that the company will use, at least a portion, of this income on other goods and services. It is important to note that the company will likely save a portion of this income; thus, the second round of spending will be smaller than the first. To account for this, a simple spending multiplier is used.

The simple spending multiplier is 1/marginal propensity to save (saving rate). The current saving rate, according to the Economic Research department at the Federal Reserve Bank of St. Louis, has held around 6.0% between July 2015 and June 2016². Spending calculations are adjusted for the savings rate of 6.0% to obtain an estimate of direct spending.

Economic Impact of USC Upstate

USC Upstate’s direct impact on the Upstate economy flows from three sources:

1. University spending – operations
2. Faculty and staff spending
3. Student spending

The data gathered for this report are as follows:

- FY15-16 Aggregated Purchases
- FY15-16 Payroll Expenses for non-student employees
- FY15-16 Employee health and dental care fringe benefits
- FY15-16 # Full Time Enrollment (FTE) students (2015-2016)
- FY15-16 % FTE students residing in Spartanburg/Greenville

Total Spending by Category, USC Upstate FY 2015-2016		
Aggregated Purchases	Payroll, non-student employees	Employee Health and Dental Fringe Benefits
\$8,370,045	\$31,642,425	\$5,785,373

USC Upstate Student Enrollment Numbers FY 2015-2016		
Total Headcount	FTE*	% FTE residing in Spartanburg/Greenville
5,996	5,048	60.8%

**Note: Fall 2015 FTE data is used for the calculations. 12 month FTE was 5,030 during 2015-2016.*

² Personal Savings Rate, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/PSAVERT>

Results

1. **Direct Impact--Operations:** During the 2015-2016 FY, USC Upstate spent \$8,370,045 in total purchases.
2. **Direct Impact—Faculty/Staff Spending:** Payroll for non-student employees during the 2015-2016 FY was \$31,642,425. As suggested in the multiplier effect, the spending (salaries paid) becomes another's income (employee salary). In the case of faculty/staff salaries, the total compensation is adjusted by the savings rate of 6.0% to obtain an estimate of direct spending. After adjusting for the savings propensity, the direct spending of faculty/staff is \$29,743,879.50.
3. **Direct Impact—Employee Health and Dental Fringe Benefits:** In addition to salaries, USC Upstate offers employees fringe benefits including health and dental care. The total health and dental care benefits for the 2015-2016 FY was \$5,785,373. *Note: retirement benefits are not included in the calculations.*
4. **Direct Impact—Student Spending:** In the USC Upstate 2009 economic impact study, the estimated spending data for college students was obtained from the USC Board of Trustees. The estimated amount of \$150/week in 2009 has been adjusted to account for inflation. Current data suggests that the new amount students spend per week in the community is \$170³.

USC Upstate had a total enrollment of 5,996 during the 2015-2016 FY and of that, 5,048 were FTE in Fall 2015. Approximately 60.8% or 3,646 Fall 2015 FTE students reside in Spartanburg/Greenville full time. To calculate student spending, weekly spending is multiplied by 52 weeks for the students residing 12 months in Spartanburg/Greenville and by 32 weeks for those living in the community during academic sessions (two 16 week semesters).

FTE Student Spending, USC Upstate, FY 2015-2016		
Total Spending, 52 week, 3,646 students	Total Spending, 32 week, 1,402 students	Combined Total Spending
\$32,230,640	\$7,626,880	\$39,857,520

³ United States Bureau of Labor Statistics CPI Inflation Calculator, http://www.bls.gov/data/inflation_calculator.htm

Summary of Key Data

Shown below is the summary of the key data used to determine the direct economic impact

Operation Spending	\$8,370,045
Employee Spending	\$29,743,879.50
Health and Dental Fringe Benefits	\$5,785,373
Student Spending	\$39,857,520
Total Spending	\$83,756,817.50

Adjusting for the Multiplier

For the purpose of this report, the traditional multipliers of 2.0, 2.5, and 3.0 are used as well as the multiplier identified by the South Carolina Department of Commerce for colleges and universities (1.82)⁴.

Lower Range: Let's assume a conservative approach and apply an economic multiplier of 2.0. An aggregated economic multiplier of 2.0 means that for each \$1.00 spent, \$2.00 in economic activity is actually generated. Subtracting the original \$1.00 (direct impact) leaves \$1.00 of additional spending on items and services created (indirect and induced impact).

Total Direct Economic Impact of USC Upstate =	\$ 83,756,817.50
Multiplied by the assigned Economic Multiplier	x 2.0
Estimated Total Economic Impact of USC Upstate	\$ 167,513,635

Mid-Range: An aggregated economic multiplier of 2.5 means that for each \$1.00 spent, \$2.50 in economic activity is actually generated. Subtracting the original \$1.00 (direct impact) leaves \$1.50 of additional spending on items and services created (indirect and induced impact).

Total Direct Economic Impact of USC Upstate=	\$ 83,756,817.50
Multiplied by the assigned Economic Multiplier	x 2.5
Estimated Total Economic Impact of USC Upstate	\$ 209,392,044

⁴ *Impact of Economic Development*, South Carolina Department of Commerce, http://sccommerce.com/sites/default/files/document_directory/Impact_of_Economic_Development_A_Communitys_Guide_to_Understanding_the_Impact_of_a_Newly_Located_Business_2009.pdf

Upper Range: An aggregated economic multiplier of 3.0 means that for each \$1.00 spent, \$3.00 in economic activity is actually generated. Subtracting the original \$1.00 (direct impact) leaves \$2.00 of additional spending on items and services created (indirect and induced impact).

Total Direct Economic Impact of USC Upstate =	\$ 83,756,817.50
Multiplied by the assigned Economic Multiplier	x 3.0
Estimated Total Economic Impact of USC Upstate	\$ 251,270,453

Given the identified economic multiplier which lies within the 2.0 to 3.0 range, it is concluded that the estimated total impact of USC Upstate in the 2015-2016 FY was between \$167,513,635 and \$251,270,453.

The data below demonstrates USC Upstate’s economic impact using the 1.82 multiplier assigned for colleges and universities. This is a conservative estimation of the university’s economic impact.

Total Direct Economic Impact of USC Upstate =	\$ 83,756,817.50
Multiplied by the assigned Economic Multiplier	x 1.82
Estimated Total Economic Impact of USC Upstate	\$ 152,437,408

Using the 1.82 multiplier, the estimated economic impact for USC Upstate on the region in 2015-2016 was \$152,437,408.

Other Considerations

The estimated economic impact of USC Upstate shows a significant contribution to the regional economy. However, it is important to note there are additional items that are not considered in this report that have an impact on the economy as well. Such items include:

- Athletic events
- Concerts/recitals/theater
- Visitors to campuses
- Community service and service-learning
- Research spillovers

A conservative estimate of the impact of service-learning classes on the local economy indicates that USC Upstate contributed approximately \$165,000 additional dollars to Spartanburg’s local economy during the 2015-2016 academic year. This amount was calculated using the volunteer dollar (\$23.56/hour) multiplied by the number of hours and individuals completing the service-learning works. In 2015-2016, USC Upstate had approximately 33 known service-learning classes with an estimated combined enrollment of 450 students.

⁵ United States Bureau of Labor Statistics, Occupational Employment Statistics May 2015, http://www.bls.gov/oes/current/oes_nat.htm

Additionally, it is important to note that there is an increase in earning potential and a decrease in unemployment of an individual when bachelor's degrees are attained. The United States Bureau of Labor Statistics estimates that the weekly median earnings of an individual in 2015 with a high school diploma to be \$678 and an unemployment rate of 5.4%, while those with bachelor's degrees have a higher median earning of \$1,341 per week and an unemployment rate of 2.8%⁶. This level of increase is an induced economic impact originating, at least partially, from USC Upstate. As of December 2016, USC Upstate has approximately 24,605 alumni with confirmed degrees, and of those alumni, 67% live in the Upstate region⁷.

Other benefits, including improved cultural awareness, cannot be accounted for in this report. These benefits, while impactful on the economy, are difficult to track, but failure to recognize these benefits results in the true impact of a college's output being under represented.

⁶ United States Bureau of Labor Statistics, Earnings and Unemployment Rates by Educational Attainment, 2015
http://www.bls.gov/emp/ep_chart_001.htm

⁷ USC Upstate Alumni Relations, report obtained 12/02/2016