The Economic Impact of University System of Georgia Institutions on their Regional Economies in FY 2017

April 2018

Commissioned by
The Board of Regents of the University System of Georgia

Dr. Jeffrey M. Humphreys, Director ■ Selig Center for Economic Growth

Selig Center for
Economic Growth
Terry College of Business
UNIVERSITY OF GEORGIA

Executive Summary

The statewide economic impact of the University System of Georgia's institutions in fiscal year 2017 includes:

- $16.8 billion in output (sales);
- $11.6 billion in gross regional product;
- $8.1 billion in income; and
- 163,754 full- and part-time jobs.

These benefits permeate both the private and public sectors of the host communities. For example, for each job created on campus there are 2.2 off-campus jobs that exist because of spending related to the college or university.

These economic impacts demonstrate that continued emphasis on colleges and universities as a pillar of the state's economy translates into jobs, higher incomes, and greater production of goods and services.

In addition to the system-wide impact summarized here, the following chapters quantify the economic benefits that each institution conveys to the community in which it is located. Each institution's benefits are estimated for several categories of college/university-related expenditures: spending by the institutions themselves for salaries and fringe benefits, operating supplies and expenses, and other budgeted expenditures; spending by the students who attend the institutions; and spending by the institutions for capital projects.

Introduction

How much does a region benefit economically from hosting an institution of higher education? Traditionally, the benefits are discussed in broad, qualitative terms that often fail to satisfy those who demand tangible evidence of the economic linkages between the academic community and the community as a whole; however, this report quantifies the economic benefits that the University System of Georgia's institutions convey to the communities in which they are located.

The benefits are estimated for several important categories of college/university-related expenditures: spending by the institutions themselves for salaries and fringe benefits, operating supplies and expenses, and other budgeted expenditures; spending by the students who attend the institutions; and spending by the institutions for capital projects (construction). The economic impact estimates are based on regional input-output models of each institution's regional economy, certain necessary assumptions, and available data on annual spending in the specified categories. Moreover, the emphasis is on funds received by residents in the region that hosts each college or university. The study reports expenditures and impacts for the 2017 fiscal year—July 1, 2016 through June 30, 2017.

The study does not account for all of the short-term impacts of the 26 institutions on their host communities, however. For example, there are no dollar amounts estimated for several sources of college/university-related spending because doing so would require collecting survey data, a task beyond the resources available to this study. In addition, the study neither quantifies the many long-term benefits that an institution of higher education imparts to the host community's economic development nor does it measure intangible benefits (such as cultural opportunities, intellectual stimulation, and volunteer work) to local residents. Finally, the study is not a net benefit analysis; it estimates only economic benefits and does not calculate what the presence of a tax-exempt college/university costs the community.

Economic Impact Highlights

In the simplest terms, the total economic impact of all 26 institutions on their host communities was $16.8 billion in FY 2017. The output impact of each institution is the change in regional output that is due to spending by the institution and spending by the students who attend that particular college or university. Of the FY 2017 total, $11.5 billion (68 percent) is initial spending by the institutions and students; $5.3 billion (32 percent) is the induced or re-spending (multiplier) impact. Dividing the FY 2017 total output impact ($16.8 billion) by initial spending ($11.5 billion) yields an average multiplier value of 1.46. On average, therefore, every dollar of initial spending generates an additional 46 cents for the economy of the region that hosts the institution.

In FY 2017, value added comprises $11.6 billion (69 percent) of the $16.8 billion output impact, with domestic and foreign trade comprising the remaining $5.2 billion (31 percent). The $11.6 billion value-added impact equals 2.2 percent of Georgia's GDP. Labor income received by residents of the communities that host one or more institutions equals $8.1 billion, and represents 70 percent of the value-added impact.

The collective or rolled-up employment impact of all institutions on their host communities in FY 2017, including multiplier effects, is 163,754 full- and part-time jobs. Approximately 31 percent of these positions are on campus (50,541 University System employees) and 69 percent (113,213 jobs) are off-campus positions in either the private or public sectors. On average, for each job created on campus there are 2.2 off-campus jobs that exist because of spending related to the institution. The 163,754 jobs generated by the University System account for 3.7 percent of all the nonfarm jobs in Georgia, or about one job in twenty-seven.

Methodology

■ Short-Term Economic Impact Of a College or University ■

The total annual economic impact of college- or university-related spending is defined to consist of the net changes in regional output, value added, labor income, and employment that are due to initial spending by the institution (for operations as well as personnel services) and its students. The total economic impact includes the impact of the initial round of spending and the secondary, or indirect and induced spending—or the multiplier effect—that occurs when the initial expenditures are re-spent. Figure 1 provides a schematic representation of impact relationships.

Indirect spending refers to the changes in inter-industry purchases as a region's industries respond to the additional demands triggered by spending by the college or university, its faculty and staff, and its students. It consists of the ripples of activity that are created when an institution and its employees and students purchase goods or services from other industries located in the host community. Induced spending is similar to indirect spending except that it refers to the additional demand triggered by spending by the region's households as their income increases due to changes in production. Basically, the induced impact captures the ripples of activity that are created when households spend more due to increases in their earnings that were generated by the direct and indirect spending.

The sum of the direct, indirect, and induced economic impacts is the total economic impact, which is expressed in terms of output (sales, plus or minus inventory), value added (gross regional product), labor income, or employment. Total industry output is gross receipts or sales, plus or minus inventory, or the value of production by industry (including households) for a given period of time. Total output impacts are the most inclusive, largest measures of economic impact. Because of their size, output impacts typically are emphasized in economic impact studies and receive much media attention. One problem with output as a measure of economic impact, however, is that it includes the value of inputs produced by other industries, which means that there inevitably is some double counting of economic activity. The other measures of economic activity (value added, labor income, and employment) are free from double counting and provide a much more realistic measure of the true economic impact of a college or university on its regional economy.

The regional economic areas are the host communities, including the surrounding counties from which employees and students commute. The effects of expenditures that go to people, businesses, or governments located outside the regions are not included in the value-added, labor income, and employment impact estimates.

The multiplier concept is common to most economic impact studies. Multipliers measure the response of the local economy to a change in demand or production. In essence, multipliers capture the impact of the initial round of spending plus the impacts generated by successive rounds of re-spending of those initial dollars. The magnitude of a particular multiplier depends upon what proportion of each spent dollar leaves the region during each round of spending. Multipliers therefore are unique to the region and to the industry that receives the initial round of spending.

Figure 2 illustrates the successive rounds of spending that might occur if a person buys an item locally. Assume that the amount spent is $100 and that the appropriate regional output multiplier is 2.0. The initial injection of spending to the region is $100, which creates a direct economic impact of $100 to the regional economy. Of that $100, only $50 is re-spent locally; the rest flows out of the region through non-local taxes, non-local purchases, and income transfers. After the first round of spending, the total economic impact to the region is $150. During the second round of re-spending, $25 is re-spent locally and $25 leaks out of the region, a 50 percent leakage. Now the total economic impact to the region is $175. After seven rounds of re-spending, less than $1 remains in the local economy, but the total economic impact has reached almost $200. The induced (multiplier effect) impact to the region ($100) equals the total impact ($200) minus the direct impact ($100).

The multiplier traces the flows of re-spending that occur throughout the region until the initial dollars have completely leaked to other regions. Obviously, multiplier effects within large, self-sufficient areas are likely to be larger than those in small, rural, or specialized areas that are less able to capture spending for necessary goods and services. Multiplier effects also vary greatly from industry to industry, but in general, the greater the interaction with the local economy, the larger the multiplier for that industry. For example, personal services, business services, and

entertainment industries have intricate relationships with local supporting industries, and therefore have relatively high multiplier values. Conversely, electric, gas, and sanitary services usually are less intertwined with local supporting industries, and their multipliers are lower.

■ Analytic Approach ■

Estimating the economic impact of the University System of Georgia institutions on their regional economies in FY 2017 involved four basic steps. First, initial spending (and employment) for each institution were obtained for Budget Unit "A" and "Budget Unit "B"; and then the institutional expenditures were allocated to industrial sectors recognized by the economic impact modeling system. Second, spending by students was estimated and then allocated to industrial sectors. Third, expenditures associated with capital projects (construction) funded were obtained for each institution and were allocated to the appropriate industrial sectors. Finally, the IMPLAN Online modeling system was used to build regional economic models that are specific to each institution.

The geographic areas corresponding to the regional models that were built for each institution, which include the labor force directly involved in their economic spheres, are reported in Appendix 1. These geographic areas are based on an analysis of commuting patterns data obtained from the U.S. Census Bureau. For analytical purposes, all dollar amounts were converted to inflation-adjusted dollars, but the amounts expressed in this report are in 2017 dollars.

Type SAM (social accounting matrices) multipliers from the IMPLAN modeling system were used to estimate the economic impacts associated with all categories of spending. Type SAM multipliers capture the original expenditures resulting from the impact, the indirect effects of industries buying from industries, and the induced effects of households' expenditures based on information in the social account matrix. The multipliers account for Social Security and income tax leakage, institutional savings, commuting, inter-institutional transfers, and people-to-people transfers.

Whenever appropriate, IMPLAN Online applied margins to convert purchaser prices to producer prices. In input-output models, all expenditures are in terms of producer prices, which allow all spending to be allocated to the industries that actually produce the good or service. The margins are derived form U.S. Bureau of Economic Analysis data. Moreover, margins were selected according to type of consumer to which these applied. For example, households pay transportation, wholesale, and the full retail margins. In contrast, institutions of higher education may pay little or no retail margin as they have typically more buying power than a household. In addition, some sectors of the model do not have margins. For instance, because there usually are no wholesalers or retailers involved when someone rents a room, hotels and other lodging do not have margins.

The model's default estimates of the local economy's regional purchase coefficients were used to derive the ratio of locally purchased to imported goods. The regional purchase coefficient represents the proportion of the total demands for a given commodity that is supplied by the region to itself. The regional purchase coefficients were estimated with an econometric equation that predicts local purchases based on each region's unique characteristics. In addition, the entire analysis was conducted using the full range of industrial sectors in order to avoid aggregation bias.

■ Initial Spending by the Institutions ■

Institution-specific data on expenditures for personnel services and number of positions were obtained from the Board of Regents for FY 2017. The expenditure amounts were treated as an industry change and are reported in the first column of Tables 1 and 2, respectively. These amounts were allocated to various economic sectors recognized by the IMPLAN software based on the typical expenditure pattern for households of moderate income.

Institution-specific data on expenditures for operating expenses (non-personnel services) for FY 2017 were obtained from the Board of Regents. These amounts were treated as an industry change and are reported in the first column of Tables 1 and 2, respectively.

To avoid double counting, the estimates of initial spending do not include expenditures arising from two budgetary classes: auxiliary enterprise funds (self-supporting activities for housing, food service, bookstore, athletics, and other) and student activity funds (cultural and recreational programs operated by students). The spending associated with such activities is included in the student's personal expenditures, however.

The expenditures and impact reported in Tables 1-3 for Augusta University (formerly Georgia Regents University) do not account for spending by the hospital and clinics operating by the AU Medical Center, Inc., which became a

not-for-profit corporation in July 2000. Expenditures and impacts for the AU Medical Center, Inc., are reported in Appendix 3, however. Appendix 4 reports the combined impacts of Augusta University and the AU Medical Center, Inc. on the Augusta MSA (including the two out-of-state counties) rather than that portion of the local economy that lies within Georgia (defined in Appendix 1).

Since a detailed analysis of spending patterns at each institution was not practical, budgeted expenditures for operating expenses were allocated to various economic sectors based on a typical expenditure pattern estimated for U.S. colleges that was developed by the IMPLAN modelers.

Institution-specific data on capital projects (construction) also were obtained from the Board of Regents. The expenditures were allocated to the fiscal year of reported funding, regardless of whether or not all of the funds were actually spent during fiscal year 2017. Therefore, the amounts for capital expenditures and their impacts are not included in the economic impacts expressed in Tables 1-3, but they are reported in Appendix 2.

It should be noted that previous editions of this study did not include the impacts of public/private ventures. The FY 2017 capital project impacts therefore are not directly comparable to those for FY 2004 or earlier fiscal years.

■ Students' Personal Expenditures ■

College students spend significant amounts of money in the local economy as a part of their living expenses, so the dollar value of this spending was estimated. Since a detailed survey of students' spending habits at each institution was not practical, typical expenditure levels per student per semester were estimated based on data obtained from several sources: (1) The College Board Annual Survey of Colleges, various annual *Consumer Expenditure Surveys* conducted by the U.S. Bureau of Labor Statistics (BLS); (2) a special BLS study that appeared in the July 2001 issue of the *Monthly Labor Review* that examined the expenditures of college-age students and non-students; and (3) a sample of recent estimated costs of attendance prepared by individual institutions. Although the estimated costs of attendance prepared by the College Board and individual institutions were not detailed enough to be used by the IMPLAN Online modeling system, they did provide information for a profile of average expenditures for some of the items typically purchased by students.

Although the *Consumer Expenditure Surveys* cover households consisting of one person at various income levels, no recent data are available specifically for college students; therefore, to adapt the data for this study, spending estimates for several categories of goods or services were increased, decreased, or eliminated. For example, compared to a weighted average of lower-income households, students' expenditures for books and for eating out were increased substantially, while students' expenditures for groceries, cash contributions, insurance and pensions, and health care were reduced. Because spending for vacation and travel do not take place locally, these expenditures were eliminated entirely. In addition, expenditures for tuition were eliminated because of possible double counting. Institutions receive payments from students for tuition, which in turn support the institutions' expenditures, which has already been estimated. After adjustment, the average expenditure per student by semester was estimated at $4,989 for Summer 2016, $7,480 for Fall 2016, and at $7,480 for Spring 2017.

The final step in estimating students' personal expenditures was to multiply the number of semesters of student spending by the average spending per semester. For FY 2017, these amounts are reported in the first column of Tables 1 and 2. The number of semesters of students' spending equals each institution's FTE enrollment as reported in the *Semester Enrollment Report* issued by the Board of Regents.

Results

This section describes the economic benefits that the University System of Georgia's 26 institutions conveyed to their host communities in FY 2017. The estimates represent the economic impact of spending by an institution, its faculty and staff, and its students. Based on the methodology and available data described earlier, the IMPLAN Online modeling system was used to calculate four indicators of impact—total output, total value-added, total income, and total employment—for each category of initial spending. All dollar amounts are reported in 2017 dollars.

Total Initial Spending

For each institution, total initial spending accruing to the institution's regional economy is the combination of three types of spending—spending by the institution for personnel services, spending by the institution for operating expenses, and spending by that institution's students. Estimates of initial spending for FY 2017 are reported in the first column of Tables 1 and 2. Spending by the institutions for capital projects is reported in Appendix 2.

For FY 2017, total initial spending for all 28 institutions was $11.5 billion. Spending originating from personnel services accounted for 37 percent ($4.3 billion) of initial spending, spending due to operating expenses accounted for 24 percent ($2.7 billion) of initial spending, and students' personal expenditures accounted for 39 percent ($4.5 billion) of initial spending.

Total Output Impact

The output impact was calculated for each category of initial spending, based on the impact of the first round of spending and the impacts generated by the re-spending of these amounts—the multiplier effect. Total output impacts are the most inclusive, largest measures of economic impact. Conceptualized as the equivalent of business revenue, sales, or gross receipts, total output is the value of productions by all industries, including households. Output impacts for FY 2017 are reported in the second column of Tables 1 and 2.

Measured in the simplest and broadest possible terms, the total economic impact of the 26 institutions of the University System of Georgia was $16.8 billion in FY 2017 (Table 1). This amount represents the combined impact of all 26 institutions on their host communities. Of the FY 2017 output impact, $11.5 billion (68 percent) was initial spending by the institutions and students, while $5.3 billion (32 percent) was the induced/re-spending impact or multiplier effect (i.e., the difference between output impact and initial spending). The multiplier captures the regional economic repercussions of the flows of re-spending that take place throughout the region until the initial spending has completely leaked to other regions. The average multiplier value for all institutions in FY 2017 was 1.46, obtained by dividing the total output impact ($16.8 billion) by initial spending ($11.5 billion). On average, therefore, every dollar of initial spending generated an additional 46 cents for the economy of the region hosting the institution. Thus, for all institutions, the output impact was 1.462 times greater than their initial spending, but the multiplier varies among the individual USG institutions.

It is no surprise that estimates for the various institutions show differing outcomes, given the differences in budgets, staffing, enrollment, and regional economies. Institutions located in the largest metropolitan areas (e.g., Atlanta)—where multipliers are the highest, or institutions have the largest budgets, staffs, and enrollments—had the largest economic impacts. Thus, for the most part, institutions with large initial spending will rank highly on the various indicators of economic impact, including value-added, labor income, and employment impact described in the following subsections.

Total Value-Added Impact

Because value-added impacts exclude expenditures related to foreign and domestic trade, they provide a much more accurate measure of the actual economic benefits flowing to businesses and households in a region than the more inclusive output impacts. The value-added impacts for FY 2017 are reported in the third column of Tables 1 and 2.

The 26 institutions collectively generated a value-added impact of $11.6 billion in FY 2017. For all institutions combined, the value-added impact equaled 69 percent of the $16.8 billion output impact (with domestic and foreign trade comprising the remaining 31 percent of the output impact). The $11.6 billion value-added impact reported for FY 2017 equals 2.2 percent of Georgia's 2017 gross domestic product.

Labor Income Impact

Collectively, the 26 University System institutions generated a labor income impact of $8.1 billion in FY 2017. The labor income received by residents of the communities that host University System institutions represents 70 percent of the value-added impact. Labor income for each institution is reported in the fourth column of Table 2.

Employment Impact

The economic impact of hosting an institution of the University System of Georgia probably is most easily understood in terms of its effects on employment. Collectively, the 26 institutions generated an employment impact of 163,754 jobs in FY 2017. Approximately 31 percent (50,541) of these positions are on-campus jobs at one of the institutions of the University System of Georgia, and 69 percent (113,213 jobs) are off-campus positions in either the private or public sectors. On average, for each job created on campus there are 2.2 off-campus jobs that exist because of spending related to the University System of Georgia.

The employment impact associated with the University System accounts for 3.7 percent of all the nonfarm jobs held by Georgians, or about one job in 27. For all institutions combined, 14 jobs were generated for each million dollars of initial spending in FY 2017.

Employment impacts in FY 2017 for the individual institutions are reported in the fifth column of Table 2. Table 3 shows a break out (by institution) of on- and off-campus jobs that exist due to institution-related spending.

Limitations and Topics for Future Research

Because the goal of this study was to estimate the economic impact of all 26 institutions, certain necessary assumptions were designed to work well for the average institution, but may lead to an over- or under-estimate of the economic contribution that a specific institution makes to its host community. For example, detailed surveys of actual spending by students at various institutions could help to refine estimates of initial spending by students.

Due to both resource limitations and data limitations, several important types of short-term college or university-related expenditures were not estimated. For instance, studies could be conducted to measure spending by visitors to the institutions and spending by retirees who still live in the host communities. Also, it would be worthwhile to investigate expenditures supported by the non-institutional income of the each institution's employees. Such income may come from an employee's consulting, investments, and other personal business activities. Moreover, other members of an employee's household often supplement their total household income. Employees' household incomes also can be supplemented via inheritances or gifts. At least a portion of income derived from these sources would not come to the community that hosts the institution if that person's job at the college/university did not exist.

Since this study intentionally focused only on the short-term impacts of several types of college- or university-related spending, there was no attempt to evaluate the long-term impacts of the University System's institutions on the economic development of the host communities and the state. After all, colleges and universities not only spend money year by year, but also have long-term impacts on the labor force, local business and industry, and local government.

A college or university improves the skills of its graduates, thereby increasing their productivity and their lifetime earnings. Local businesses benefit from easy access to a large pool of part-time and full-time workers. Moreover, companies and agencies that depend on highly specialized skills often cluster around universities. This may be particularly true of high-tech and information-based companies, which despite the recent recession and sub-par recovery, are still expected to account for a disproportionately high share of future economic growth.

Finally, the outreach and service units of the college or university provide valuable services to local businesses and residents. Cultural and educational programs and facilities often are available to the general public and provide intangible benefits to the host community by improving residents' quality of life.

Summary

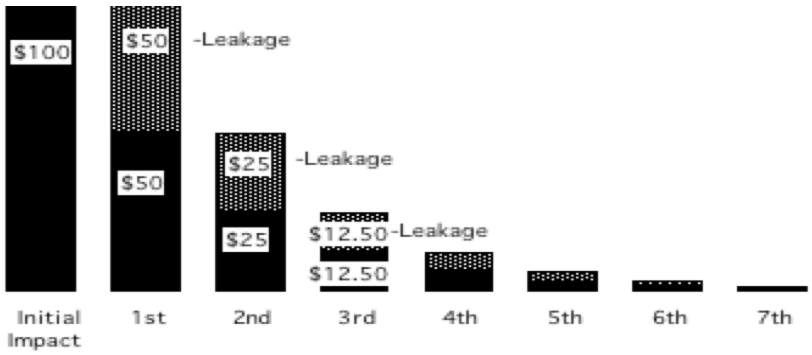
The fundamental finding of this study is that each of the University System of Georgia's institutions creates substantial economic impacts in terms of output, value added, labor income, and employment. The combined economic impact of the University System's 26 institutions on their host communities in FY 2017 includes:

- $16.8 billion in output (sales);
- $11.6 billion in valued added (gross regional product);
- $8.1 billion in labor income; and
- 163,754 full- and part-time jobs.

These economic impacts demonstrate that continued emphasis on higher education as an enduring pillar of the regional economy translates into jobs, higher incomes, and greater production of goods and services for local households and businesses.

Figure 1
Schematic Representation of Impact Relationship

Figure 2
How Multipliers Capture the Impact of Re-spending



Initial Direct or Indirect Impact	**$100**	
First Round of Re-spending	**$50 re-spent locally**	**$50 leakage***
Second Round of Re-spending	**$25 re-spent locally**	**$25 leakage**
Third Round of Re-spending	**$12.50 re-spent locally**	**$12.50 leakage**
Fourth Round of Re-spending	**$6.25 re-apent locally**	**$6.25 leakage**
Fifth Round of Re-spending	**$3.12 re-spent locally**	**$3.12 leakage**
Sixth Round of Re-spending	**$1.56 re-spent locally**	**$1.56 leakage**
Seventh Round of Re-spending	**$.78 re-spent locally**	**$.78 leakage**

Total Economic Impact $200 **Total Leakage $100**

*Leakage indicates amounts spent outside area and not re-circulated locally.

Table 1

Total Economic Impact of All Institutions of the University System of Georgia on their Regional Economies in Fiscal Year 2017

Total for All Institutions in 2017	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
System total	11,515,528,541	16,842,753,824	11,598,058,758	8,106,313,778	163,754
Personnel services	4,316,169,350	8,437,240,487	6,744,536,557	5,596,192,652	81,079
Operating expenses	2,716,573,201	2,044,285,589	1,085,232,019	681,433,984	16,436
Student spending	4,482,785,990	6,361,227,748	3,768,290,182	1,828,687,149	66,239

Notes:

The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using IMPLAN Online and production functions provided by IMPLAN.

Initial spending for personal services and operating expenses were obtained from the Board of Regents of the University System of Georgia. The author estimated initial spending by students.

Output refers to the value of total production, including domestic and foreign trade. Value added includes employee compensation, proprietary income, other property income, and indirect business taxes. Labor income includes both the total payroll costs (including fringe benefits) of workers who are paid by employers and payments received by self-employed individuals. Employment includes both full-time and part-time jobs.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

Table 2

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2017

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Research Universities					
Augusta University	965,640,040	1,319,572,115	962,094,261	780,727,127	12,252
Personal Services	546,202,861	951,344,213	774,966,701	670,104,110	8,734
Operating Expenses	291,517,675	198,012,931	98,741,412	63,228,082	1,663
Student Spending	127,919,504	170,214,970	88,386,148	47,394,935	1,855
Georgia Institute of Technology	1,922,555,891	3,091,052,248	2,225,716,633	1,629,324,584	25,436
Personal Services	934,486,167	2,014,822,564	1,588,525,395	1,282,764,796	16,050
Operating Expenses	614,096,458	504,260,445	283,657,086	177,194,892	3,746
Student Spending	373,973,266	571,969,239	353,534,152	169,364,896	5,639
Georgia State University	1,583,111,606	2,492,619,422	1,716,774,929	1,139,841,015	21,915
Personal Services	524,682,169	1,131,254,277	891,902,930	720,228,762	9,218
Operating Expenses	363,460,535	298,452,739	167,885,934	104,874,974	2,218
Student Spending	694,968,902	1,062,912,406	656,986,066	314,737,278	10,479
University of Georgia	1,902,003,020	2,712,993,180	1,907,601,921	1,398,521,763	26,619
Personal Services	844,721,693	1,563,630,779	1,260,794,805	1,057,427,062	15,189
Operating Expenses	496,196,646	363,636,907	185,025,758	116,451,283	3,080
Student Spending	561,084,681	785,725,494	461,781,358	224,643,417	8,350
Comprehensive Universities					
Georgia Southern University	770,234,740	1,020,969,709	678,514,985	462,384,159	11,535
Personal Services	237,251,789	416,160,029	339,035,974	290,746,919	5,030
Operating Expenses	131,083,060	84,069,362	42,200,133	26,772,228	745
Student Spending	401,899,891	520,740,319	297,278,878	144,865,012	5,761
Kennesaw State University	917,734,645	1,463,433,722	996,738,134	638,804,145	14,441
Personal Services	270,267,895	582,717,938	459,426,185	370,995,476	6,069
Operating Expenses	154,659,726	126,997,606	71,438,819	44,626,400	941
Student Spending	492,807,024	753,718,177	465,873,129	223,182,269	7,431
University of West Georgia	369,672,112	577,095,431	391,883,331	251,702,834	5,788
Personal Services	105,329,665	227,098,691	179,049,036	144,585,539	2,493
Operating Expenses	76,661,191	62,949,729	35,410,542	22,120,258	465
Student Spending	187,681,256	287,047,011	177,423,753	84,997,037	2,830
Valdosta State University	303,435,291	384,182,604	248,456,560	169,197,133	4,594
Personal Services	89,030,656	145,785,322	120,232,482	104,250,498	1,955
Operating Expenses	54,556,900	34,441,456	16,136,288	10,094,655	314
Student Spending	159,847,735	203,955,826	112,087,790	54,851,980	2,325

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2017

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
State Universities					
Albany State University	188,224,897	250,673,440	158,939,890	109,951,196	2,844
Personal Services	56,757,256	99,131,761	79,871,379	68,720,590	1,187
Operating Expenses	37,842,628	25,481,002	11,259,780	7,162,988	246
Student Spending	93,625,013	126,060,676	67,808,731	34,067,618	1,411
Clayton State University	171,983,499	274,571,153	187,220,281	120,286,081	2,749
Personal Services	51,292,659	110,590,836	87,191,972	70,409,194	1,189
Operating Expenses	29,096,467	23,892,333	13,439,938	8,395,660	179
Student Spending	91,594,373	140,087,984	86,588,371	41,481,227	1,381
Columbus State University	225,316,833	283,901,086	187,441,908	129,243,097	3,257
Personal Services	68,799,446	118,283,206	96,035,045	83,076,937	1,433
Operating Expenses	42,405,192	26,285,067	12,437,846	7,822,242	246
Student Spending	114,112,195	139,332,813	78,969,017	38,343,918	1,577
Fort Valley State University	107,822,771	133,211,767	88,830,992	63,728,173	1,535
Personal Services	36,349,171	65,022,951	52,163,405	44,547,069	808
Operating Expenses	32,825,592	22,068,049	10,278,206	6,472,990	207
Student Spending	38,648,008	46,120,768	26,389,381	12,708,114	520
Georgia College & State University	211,272,480	284,528,898	191,535,104	132,460,554	3,095
Personal Services	73,002,370	131,593,351	105,687,138	90,014,723	1,413
Operating Expenses	34,340,626	23,074,262	10,824,246	6,714,551	218
Student Spending	103,929,484	129,861,284	75,023,721	35,731,280	1,464
Georgia Southwestern State University	77,104,889	88,776,666	57,947,093	39,928,335	1,017
Personal Services	22,896,731	33,567,341	28,607,095	25,452,887	367
Operating Expenses	12,816,306	7,461,395	3,071,482	2,007,902	90
Student Spending	41,391,852	47,747,930	26,268,515	12,467,546	560
Middle Georgia State University	198,489,239	253,802,715	159,842,934	106,478,357	2,924
Personal Services	52,068,108	92,164,379	73,443,132	62,810,534	1,157
Operating Expenses	46,616,456	31,939,555	14,552,311	8,867,768	308
Student Spending	99,804,675	129,698,781	71,847,490	34,800,055	1,459
Savannah State University	147,511,979	186,994,615	123,977,940	84,900,528	2,056
Personal Services	42,367,922	75,318,872	61,395,829	52,510,573	879
Operating Expenses	38,106,861	24,473,803	12,535,320	7,923,754	213
Student Spending	67,037,196	87,201,940	50,046,791	24,466,201	964
University of North Georgia	431,972,648	620,008,370	405,339,972	265,670,573	6,769
Personal Services	117,511,809	220,032,881	176,520,278	148,453,768	2,645
Operating Expenses	65,897,709	48,485,270	25,104,335	15,989,865	403
Student Spending	248,563,130	351,490,219	203,715,358	101,226,940	3,721

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2017

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
State Colleges					
Abraham Baldwin Agricultural College	133,540,795	157,838,305	96,582,469	65,945,306	1,826
Personal Services	31,390,387	49,906,139	41,439,373	36,427,701	606
Operating Expenses	27,811,198	16,599,419	7,313,074	4,696,910	162
Student Spending	74,339,210	91,332,747	47,830,022	24,820,694	1,058
Atlanta Metropolitan State College	65,995,521	101,901,521	68,803,861	43,751,089	1,151
Personal Services	17,611,804	37,972,376	29,938,161	24,175,641	552
Operating Expenses	14,218,331	11,675,272	6,567,585	4,102,638	84
Student Spending	34,165,386	52,253,873	32,298,115	15,472,810	515
College of Coastal Georgia	79,725,094	97,793,589	63,091,934	41,974,499	1,143
Personal Services	20,458,912	33,245,656	27,719,548	24,058,526	428
Operating Expenses	13,878,642	8,576,322	4,160,570	2,641,447	78
Student Spending	45,387,540	55,971,612	31,211,816	15,274,526	637
Dalton State College	112,931,895	133,126,399	82,420,674	55,621,794	1,548
Personal Services	26,043,139	40,604,181	34,138,018	30,030,224	516
Operating Expenses	19,698,811	12,137,955	5,482,770	3,587,041	112
Student Spending	67,189,945	80,384,263	42,799,886	22,004,529	920
East Georgia State College	70,562,350	82,831,552	49,854,909	32,420,724	987
Personal Services	13,776,196	21,888,995	18,130,693	15,912,028	314
Operating Expenses	16,328,188	9,803,819	4,595,478	2,954,168	101
Student Spending	40,457,966	51,138,738	27,128,739	13,554,528	573
Georgia Gwinnett College	296,843,219	464,051,774	312,847,839	196,877,346	4,240
Personal Services	77,620,856	167,356,412	131,947,058	106,549,786	1,426
Operating Expenses	54,485,401	44,740,254	25,167,330	15,721,530	330
Student Spending	164,736,962	251,955,108	155,733,451	74,606,030	2,484
Georgia Highlands College	119,796,149	168,656,120	108,097,699	65,392,469	1,916
Personal Services	23,485,796	44,474,867	35,710,269	29,793,439	675
Operating Expenses	20,989,072	15,679,014	8,221,948	4,925,222	123
Student Spending	75,321,281	108,502,239	64,165,482	30,673,808	1,118
Gordon State College	83,093,880	129,682,977	86,835,258	53,660,881	1,310
Personal Services	19,920,585	42,950,282	33,862,839	27,344,894	484
Operating Expenses	13,958,822	11,462,175	6,447,717	4,027,755	84
Student Spending	49,214,473	75,270,520	46,524,702	22,288,232	742

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2017

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
South Georgia State College	58,953,058	68,484,448	40,667,247	27,520,019	806
Personal Services	12,843,308	20,322,191	16,801,815	14,800,978	263
Operating Expenses	13,024,708	7,629,446	3,276,112	2,056,779	78
Student Spending	33,085,042	40,532,811	20,589,320	10,662,262	465

Notes:

The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using IMPLAN Online and production functions provided by IMPLAN.

Initial spending for personal services and operating expenses were obtained from the Board of Regents of the University System of Georgia. The author estimated initial spending by students.

Output refers to the value of total production, including domestic and foreign trade. Value added includes employee compensation, proprietary income, other property income, and indirect business taxes. Labor income includes both the total payroll costs (including fringe benefits) of workers who are paid by employers and payments received by self-employed individuals. Employment includes both full-time and part-time jobs.

Expenditures and impacts for Augusta University do not include impacts associated with the AU Medical Center, Inc., which are reported in Appendix 3.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

Table 3

On-Campus and Off-Campus Jobs that Exist Due to Institution-Related Spending in Fiscal Year 2017

Institution	Total Employment Impact	On-Campus Jobs	Off-Campus Jobs That Exist Due to Institution-Related Spending
System Total	**163,754**	**50,541**	**113,213**
Research Universities	**86,221**	**28,655**	**57,566**
Augusta University	12,252	5,416	6,836
Georgia Institute of Technology	25,436	8,589	16,847
Georgia State University	21,915	5,029	16,886
University of Georgia	26,619	9,621	16,998
Regional Universities	**36,359**	**10,557**	**25,802**
Georgia Southern University	11,535	3,543	7,992
Kennesaw State University	14,441	3,911	10,530
University of West Georgia	5,788	1,652	4,136
Valdosta State University	4,594	1,451	3,143
State Universities	**26,246**	**7,665**	**18,581**
Albany State University	2,844	822	2,022
Clayton State University	2,749	780	1,969
Columbus State University	3,257	1,020	2,237
Fort Valley State University	1,535	568	967
Georgia College & State University	3,095	923	2,172
Georgia Southwestern State University	1,017	274	743
Middle Georgia State University	2,924	814	2,110
Savannah State University	2,056	605	1,451
University of North Georgia	6,769	1,859	4,910
State Colleges	**14,928**	**3,664**	**11,264**
Abraham Baldwin Agricultural College	1,826	444	1,382
Atlanta Metropolitan State College	1,151	412	739
College of Coastal Georgia	1,143	322	821
Dalton State College	1,548	396	1,152
East Georgia State College	987	243	744
Georgia Gwinnett College	4,240	806	3,434
Georgia Highlands College	1,916	518	1,398
Gordon State College	1,310	325	985
South Georgia State College	806	198	608

Notes: On-campus and off-campus jobs reported for Augusta University exclude employment impacts for the AU Medical Center, Inc., which are reported in Appendix 3.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

Appendix 1

Study Areas for Institutions

Research Universities

Augusta University – Richmond, Columbia, Burke, McDuffie, Lincoln, Jefferson, Jenkins, and Warren
Georgia Institute of Technology – Atlanta MSA
Georgia State University – Atlanta MSA
University of Georgia – Clarke, Oconee, Madison, Jackson, Oglethorpe, Barrow, Gwinnett, Walton, and Elbert

Comprehensive Universities

Georgia Southern University – Bulloch, Screven, Candler, Emanuel, Evans, Tattnall, Jenkins, Chatham, Effingham, Bryan, and Liberty
Kennesaw State University – Atlanta MSA
University of West Georgia – Atlanta MSA
Valdosta State University – Lowndes, Brooks, Lanier, Berrien, Cook, and Echols

State Universities

Albany State University – Dougherty, Lee, Worth, Mitchell, Terrell, Sumter, Tift, and Crisp
Clayton State University – Atlanta MSA
Columbus State University – Muscogee, Harris, Chattahoochee, Marion, Talbot, Troup, and Stewart
Fort Valley State University – Peach, Houston, Crawford, Bibb, Taylor, and Macon
Georgia College & State University – Baldwin, Putnam, Hancock, Wilkinson, Washington, Jones, and Bibb
Georgia Southwestern State University – Sumter, Schley, Lee, Macon, Crisp, Webster and Marion
Middle Georgia State University – Bibb, Houston, Jones, Monroe, Peach, Crawford, Twiggs, Baldwin, Wilkinson, Henry, Laurens, Lamar, Bleckley and Pulaski
Savannah State University – Chatham, Effingham, Bryan, Liberty, and Bulloch
University of North Georgia – Lumpkin, Hall, Dawson, Forsyth, White, Oconee, Clarke, Barrow, Madison, Jackson, Gwinnett, Fannin, Gilmer, and Union

State Colleges

Abraham Baldwin Agricultural College – Tift, Worth, Cook, Colquitt, Irwin, Turner, Decatur, Seminole, Miller, Grady, Early, Thomas, Mitchell, and Baker
Atlanta Metropolitan State College – Atlanta MSA
College of Coastal Georgia – Glynn, Brantley, McIntosh, Camden, and Wayne
Dalton State College – Whitfield, Murray, Catoosa, Gordon, Walker, Bartow, and Gilmer
East Georgia State College – Emanuel, Bulloch, Candler, Jefferson, Johnson, Burke, and Toombs
Georgia Gwinnett College – Atlanta MSA
Georgia Highlands College – Floyd, Polk, Bartow, Chattooga, Gordon, Cobb, Paulding, Douglas, and Carroll
Gordon State College – Atlanta MSA
South Georgia State College – Coffee, Atkinson, Bacon, Jeff Davis, Ware, Pierce, Brantley, and Clinch

Note:

Study areas were defined by the author based on commuting data obtained from the Residence County to Workplace County Flows for Georgia, 5-Year ACS, 2009-2013, U.S. Census Bureau (data extracted on March 8, 2018).

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

Appendix 2

Economic Impact of Capital Outlays in Fiscal Year 2017

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs
System Total	**165,030,189**	**249,012,274**	**130,894,918**	**71,671,562**	**1,537**
Research Universities	**47,115,189**	**67,188,180**	**41,604,048**	**15,142,887**	**396**
Augusta University	3,825,000	5,887,391	2,946,271	1,883,271	43
Georgia Institute of Technology	27,190,189	41,664,634	28,476,246	7,006,819	230
Georgia State University	5,200,000	9,467,072	4,714,987	2,905,670	54
University of Georgia	10,900,000	10,169,083	5,466,544	3,347,127	69
Comprehensive Universities	**33,195,000**	**59,098,982**	**29,626,985**	**18,900,436**	**366**
Georgia Southern University	8,620,000	13,608,057	6,442,174	4,077,799	95
Kennesaw State University	4,000,000	8,608,819	4,844,746	3,527,478	55
University of West Georgia	18,975,000	34,545,709	17,205,169	10,602,902	198
Valdosta State University	1,600,000	2,336,397	1,134,896	692,257	18
State Universities	**47,720,000**	**63,921,654**	**30,838,050**	**19,490,450**	**410**
Albany State University	2,100,000	590,544	317,811	155,136	4
Clayton State University	1,350,000	2,516,367	1,385,619	864,078	16
Columbus State University	0	0	0	0	0
Fort Valley State University	0	0	0	0	0
Georgia College & State University	1,900,000	513,343	201,932	106,715	2
Georgia Southwestern State University	0	0	0	0	0
Middle Georgia State University	4,200,000	1,235,108	638,239	301,908	9
Savannah State University	2,000,000	550,407	337,934	172,813	3
University of North Georgia	36,170,000	58,515,885	27,956,515	17,889,800	376
State Colleges	**37,000,000**	**58,803,458**	**28,825,835**	**18,137,789**	**365**
Abraham Baldwin Agricultural College	0	0	0	0	0
Atlanta Metropolitan State College	6,500,000	11,833,840	5,893,734	3,632,088	68
College of Coastal Georgia	2,000,000	2,860,971	1,210,155	751,693	24
Dalton State College	5,000,000	7,173,733	3,259,013	2,189,852	56
East Georgia State College	0	0	0	0	0
Georgia Gwinnett College	2,500,000	3,007,692	1,788,091	1,310,981	19
Georgia Highlands College	17,700,000	27,919,273	13,682,639	8,409,192	164
Gordon State College	3,300,000	6,007,949	2,992,203	1,843,983	34
South Georgia State College	0	0	0	0	0

Notes: The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using IMPLAN Online and production functions provided by IMPLAN. Initial spending for capital projects were obtained from the Board of Regents of the University System of Georgia. Output refers to the value of total production, including domestic and foreign trade. Value added includes employee compensation, proprietary income, other property income, and indirect business taxes. Labor income includes both the total payroll costs (including fringe benefits) of workers who are paid by employers and payments received by self-employed individuals. Employment includes both full- and part-time jobs. Estimates for Augusta University exclude impacts associated with the AU Medical Center, Inc., which are reported in Appendix 3.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

Appendix 3

Combined Economic Impact of Augusta University and AU Medical Center, Inc. in Fiscal Year 2017

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Augusta University	**969,465,040**	**1,325,459,506**	**965,040,532**	**782,610,398**	**12,295**
Personal Services	546,202,861	951,344,213	774,966,701	670,104,110	8,734
Operating Expenses	291,517,675	198,012,931	98,741,412	63,228,082	1,663
Student Spending	127,919,504	170,214,970	88,386,148	47,394,935	1,855
Capital Spending	3,825,000	5,887,391	2,946,271	1,883,271	43
AU Medical Center, Inc.	**591,353,565**	**741,383,694**	**536,628,103**	**434,838,193**	**7,605**
Wages & Salaries and Benefits	291,856,000	508,337,720	414,092,818	358,060,931	5,637
Other Operating Expenditures	267,247,000	185,682,508	99,488,306	61,727,003	1,638
Student Spending	0	0	0	0	0
Capital Spending	32,250,565	47,363,466	23,046,979	15,050,259	330

Grand Total Economic Impact of Augusta University and AU Medical Center, Inc.

	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Grand Total	**1,560,818,605**	**2,066,843,199**	**1,501,668,635**	**1,217,448,592**	**19,900**
Wages & Salaries and Benefits	838,058,861	1,459,681,933	1,189,059,519	1,028,165,041	14,371
Operating Expenses	558,764,675	383,695,439	198,229,718	124,955,086	3,301
Student Spending	127,919,504	170,214,970	88,386,148	47,394,935	1,855
Capital Spending	36,075,565	53,250,857	25,993,250	16,933,530	373

Note: Output refers to the value of total production, including domestic and foreign trade. Value added includes employee compensation, proprietary income, other property type income, and indirect business taxes. Labor income includes both the total payroll costs of workers who are paid by employers and payment received by self-employed individuals. Employment includes both full-time and part-time jobs. Initial spending estimates are based on financial data obtained from AU Medical Center, Inc., (a component unit of AU Health Systems, Inc.) Financial Statements and Report of Independent Certified Public Accountants (June 30, 2017 and 2016). Other operating expenditures do not include $70.4 million in purchased services (a transfer) and $33.6 million in depreciation and amortization. The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN Online, Type SAM multipliers, and consumption functions provided by IMPLAN.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), 2018.

Appendix 4

Combined Economic Impact of Augusta University and AU Medical Center, Inc. on the Augusta MSA in Fiscal Year 2017

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Augusta University	**969,465,040**	**1,347,590,537**	**979,583,080**	**789,636,303**	**12,411**
Personal Services	546,202,861	964,206,183	779,250,008	674,273,634	8,817
Operating Expenses	291,517,675	204,578,265	102,591,014	64,890,823	1,686
Student Spending	127,919,504	172,926,823	94,723,763	48,585,916	1,867
Capital Spending	3,825,000	5,879,266	3,018,294	1,885,929	42
AU Medical Center, Inc.	**591,353,565**	**759,335,985**	**545,107,203**	**441,067,018**	**7,651**
Wages & Salaries and Benefits	291,856,000	515,210,336	416,381,544	360,288,860	5,681
Other Operating Expenditures	267,247,000	196,450,657	104,827,657	65,470,014	1,646
Student Spending	0	0	0	0	0
Capital Spending	32,250,565	47,674,991	23,898,002	15,308,145	323

Grand Total Economic Impact of Augusta University and AU Medical Center, Inc.

	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Grand Total	**1,560,818,605**	**2,106,926,522**	**1,524,690,282**	**1,230,703,321**	**20,062**
Wages & Salaries and Benefits	838,058,861	1,479,416,520	1,195,631,552	1,034,562,494	14,498
Operating Expenses	558,764,675	401,028,922	207,418,672	130,360,837	3,332
Student Spending	127,919,504	172,926,823	94,723,763	48,585,916	1,867
Capital Spending	36,075,565	53,554,257	26,916,296	17,194,074	365

Note: Output refers to the value of total production, including domestic and foreign trade. Value added includes employee compensation, proprietary income, other property type income, and indirect business taxes. Labor income includes both the total payroll costs of workers who are paid by employers and payment received by self-employed individuals. Employment includes both full-time and part-time jobs. Initial spending estimates are based on financial data obtained from AU Medical Center, Inc., (a component unit of AU Health Systems, Inc.) Financial Statements and Report of Independent Certified Public Accountants (June 30, 2017 and 2016). Other operating expenditures do not include $70.4 million in purchased services (a transfer) and $33.6 million in depreciation and amortization. The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN Online, Type SAM multipliers, and consumption functions provided by IMPLAN.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), 2018.

Appendix 5

Augusta University's Albany, Savannah, and Rome Clinical Campuses: Economic Impact of FY 2017 Expenditures

Augusta University has established clinical campuses in Albany, Savannah, and Rome, which generate economic impacts for their host communities. Appendix 5 documents the economic impact that the Albany, Savannah, and Rome clinical campuses had on their host communities in FY 2017.

Albany: In FY 2017, total expenditures at the Albany clinical campus were $1,274,033, including $770,570 personnel expense, $181,823 operating expense, and $321,640 in student spending (Assistant Vice Chancellor for Fiscal Affairs/Budget Director, Board of Regents, University System of Georgia provided the estimates for personnel and operating expenses as well as enrollment).

The economic impact accruing to Albany includes:

- $1,274,033 in initial expenditures and 5 on-campus jobs,
- $1,901,369 in output (sales),
- $1,371,432 in gross regional product (value added),
- $1,084,446 in income, and
- 17 jobs.

Savannah: Total expenditures at the Savannah clinical campus were $1,706,316, including $769,598 personnel expense, $323,358 operating expense, and $613,360 in student spending (Assistant Vice Chancellor for Fiscal Affairs/Budget Director, Board of Regents, University System of Georgia provided the estimates for personnel and operating expenses as well as enrollment).

The economic impact accruing to Savannah includes:

- $1,706,316 in initial expenditures and 5 on-campus jobs,
- $2,373,668 in output (sales),
- $1,679,504 in gross regional product (value added),
- $1,244,933 in income, and
- 20 jobs.

Rome: Total expenditures at the Rome clinical campus were $989,038, including $505,780 personnel expense, $243,898 operating expense, and $239,360 in student spending (Assistant Vice Chancellor for Fiscal Affairs/Budget Director, Board of Regents, University System of Georgia provided the estimates for personnel and operating expenses).

The economic impact accruing to Rome includes:

- $989,038 in initial expenditures and 3 on-campus jobs,
- $1,484,791 in output (sales),
- $1,068,491 in gross regional product (value added),
- $796,328 in income, and
- 14 jobs.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), 2018.

Appendix 6

Augusta University and UGA Medical Partnership's Athens Campus: Economic Impact of FY 2017 Expenditures

In partnership, Augusta University and the University of Georgia opened a new campus in Athens in FY 2011, which generates significant economic impacts for Athens' regional economy. Appendix 6 documents the economic impact that the Athens campus had on its host community in FY 2017.

In FY 2017, initial expenditures at the Athens campus (including St. Mary's) were $16,289,037, including $10,051,656 personnel expense, $1,966,875 operating expense, and $2,460,920 in student spending, and 1,809,586 in capital outlays (Assistant Vice Chancellor for Fiscal Affairs/Budget Director, Board of Regents, University System of Georgia provided expense data for personnel and operations as well as enrollment data).

The economic impact accruing to Athens includes:

- $16,289,037 in initial expenditures and 70 on-campus jobs,
- $26,523,769 in output (sales),
- $19,326,971 in gross regional product (value added),
- $15,021,831 in income, and
- 229 jobs.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), 2018.

Appendix 7

Combined Economic Impact of UGA's Griffin Campus (Budget Unit "A" and Budget Unit "B")
On Its Regional Economy in Fiscal Year 2017

UGA's Griffin Campus	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Total	24,730,713	44,896,581	33,756,596	25,991,872	454
Personnel Services	16,981,479	36,613,347	28,866,677	23,310,396	379
Operating Expenses	5,038,482	4,137,308	2,327,321	1,453,833	34
Student Spending	2,710,752	4,145,926	2,562,597	1,227,643	41

Notes: The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using IMPLAN Online and production functions provided by IMPLAN. Initial spending for personal services and operating expenses were obtained from the Board of Regents of the University System of Georgia. The author estimated initial spending by students. Output refers to the value of total production, including domestic and foregin trade. Value added includes employee compensation, proprietary income, other property income, and indirect business taxes. Labor income includes both the total payroll costs (including fringe benefits) of workers who are paid by employers and payments received by self-employed individuals. Employment includes both full-time and part-time jobs. The total employment impact of 454 jobs consists of 244 on-campus jobs (expressed on a FTE basis) and 210 off-campus jobs. For each FTE job created on the Griffin campus, there are 0.9 off-campus jobs that exist because of spending related to UGA at Griffin.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu),l 2018.

Appendix 8

Total Economic Impact of Information Technology Services in Athens
On the Regional Economy in Fiscal Year 2017

ITS in Athens	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Total	36,862,593	55,280,281	40,624,071	32,108,822	478
Personnel Services	21,466,822	39,736,382	32,040,443	26,872,281	354
Operating Expenses	15,395,771	15,543,899	8,583,628	5,236,541	124

Notes: The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using IMPLAN Online and production functions provided by IMPLAN. Initial spending for personal services and operating expenses were obtained from the Board of Regents of the University System of Georgia. ITS operating expenditures expensed by USG institutions ($40,653,145) are not included because this amount represents various contracts and software licenses with suppliers that are unlikely to be located in the Athens area. In addition, a substantial of this amount represents USG institutions' purchasing software directly through ITS due to its ability to obtain better pricing. Output refers to the value of total production, including domestic and foreign trade. Value added includes employee compensation, proprietary income, other property income, and indirect business taxes. Labor income includes both the total payroll costs (including fringe benefits) of workers who are paid by employers and payments received by self-employed individuals. Employment includes both full-time and part-time jobs.The total employment impact of 478 jobs consists of 212 USG jobs (expressed on a FTE basis) and 266 off-site jobs that are primarily in the private sector. For each FTE job created at ITS in Athens there are 1.25 off-site jobs that exist because of ITS-related spending.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2018.

Appendix 9

Total Economic Impact of the Shared Services Center in Sandersville On the Regional Economy in Fiscal Year 2017

SSC Sandersville	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Total	9,244,289	7,027,523	5,016,006	4,170,597	83
Personnel Services	3,188,457	4,734,409	4,015,726	3,574,959	57
Operating Expenses	6,055,832	2,293,114	1,002,280	595,638	26

Notes: The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using IMPLAN Online and production functions provided by IMPLAN. Initial spending for personal services and operating expenses were obtained from the Board of Regents of the University System of Georgia. Output refers to the value of total production, including domestic and foreign trade. Value added includes employee compensation, proprietary income, other property income, and indirect business taxes. Labor income includes both the total payroll costs (including fringe benefits) of workers who are paid by employers and payments received by self-employed individuals. Employment includes both full-time and part-time jobs. The total employment impact of 83 jobs consists of 42 USG jobs at the Shared Services Center (expressed on a FTE basis) and 41 off-site jobs that are primarily in the private sector. For each FTE job created at the Shared Services Center, there is 1 off-site job that exists because of Center-related spending.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), 2018.