The Economic Impact of University System of Georgia Institutions on their Regional Economies in FY 2018

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Executive Summary

The statewide economic impact of the University System of Georgia's institutions in fiscal year 2018 includes:

- $17.7 billion in output (sales);
- $12.2 billion in gross regional product;
- $8.5 billion in income; and
- 168,284 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 2.3 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 2018 fiscal year—July 1, 2017 through June 30, 2018.

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 $17.7 billion in FY 2018. 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 2018 total, $12 billion (68 percent) is initial spending by the institutions and students; $5.7 billion (32 percent) is the induced or re-spending (multiplier) impact. Dividing the FY 2018 total output impact ($17.7 billion) by initial spending ($12 billion) yields an average multiplier value of 1.47. On average, therefore, every dollar of initial spending generates an additional 47 cents for the economy of the region that hosts the institution.

In FY 2018, value added comprises $12.2 billion (69 percent) of the $17.7 billion output impact, with domestic and foreign trade comprising the remaining $5.5 billion (31 percent). The $12.2 billion value-added impact equals 2.1 percent of Georgia's GDP. Labor income received by residents of the communities that host one or more institutions equals $8.5 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 2018, including multiplier effects, is 168,284 full- and part-time jobs. Approximately 30 percent of these positions are on campus (50,597 University System employees) and 70 percent (117,687 jobs) are off-campus positions in either the private or public sectors. On average, for each job created on campus there are 2.3 off-campus jobs that exist because of spending related to the institution. The 168,284 jobs generated by the University System account for 3.8 percent of all the nonfarm jobs in Georgia, or about one job in twenty-six.

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, personnel 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 2018 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 2018 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 2018. 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 2018 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 Health System, Inc. Expenditures and

impacts for the AU Health System, Inc., are reported in Appendix 3, however. Appendix 4 reports the combined impacts of Augusta University and the AU Health System, 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 2018. 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 2018 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 $5,109 for Summer 2017, $7,660 for Fall 2017, and at $7,660 for Spring 2018.

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 2018, 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 2018. 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 2018 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 2018 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 2018, total initial spending for all 26 institutions was $12 billion. Spending originating from personnel services accounted for 38 percent ($4.5 billion) of initial spending, spending due to operating expenses accounted for 24 percent ($2.8 billion) of initial spending, and students' personal expenditures accounted for 39 percent ($4.6 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 2018 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 $17.7 billion in FY 2018 (Table 1). This amount represents the combined impact of all 26 institutions on their host communities. Of the FY 2018 output impact, $12 billion (68 percent) was initial spending by the institutions and students, while $5.7 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 2018 was 1.47, obtained by dividing the total output impact ($17.7 billion) by initial spending ($12 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 1.47 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 2018 are reported in the third column of Tables 1 and 2.

The 26 institutions collectively generated a value-added impact of $12.2 billion in FY 2018. For all institutions combined, the value-added impact equaled 69 percent of the $17.7 billion output impact (with domestic and foreign trade comprising the remaining 31 percent of the output impact). The $12.2 billion value-added impact reported for FY 2018 equals 2.1 percent of Georgia's 2018 gross domestic product.

Labor Income Impact

Collectively, the 26 University System institutions generated a labor income impact of $8.5 billion in FY 2018. 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 168,284 jobs in FY 2018. Approximately 30 percent (50,597) of these positions are on-campus jobs at one of the institutions of the University System of Georgia, and 70 percent (117,687 jobs) are off-campus positions in either the private or public sectors. On average, for each job created on campus there are 2.3 off-campus jobs that exist because of spending related to the University System of Georgia. In general, 14 jobs were generated for each million dollars of initial spending by USG institutions.

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 26. For prospective, the rolled-up employment impact of the USG's 26 institutions exceeded the combined 160,215 jobs provided by Georgia's top six employers—Fort Benning (35,848 jobs), Walmart (33,467 jobs), Delta Air Lines (27,000 jobs), U.S. Army Signal Center and Fort Gordon (22,500 jobs), Robins Air Force Base (21,223 jobs), and AT&T (20,177 jobs).

Employment impacts in FY 2018 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 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

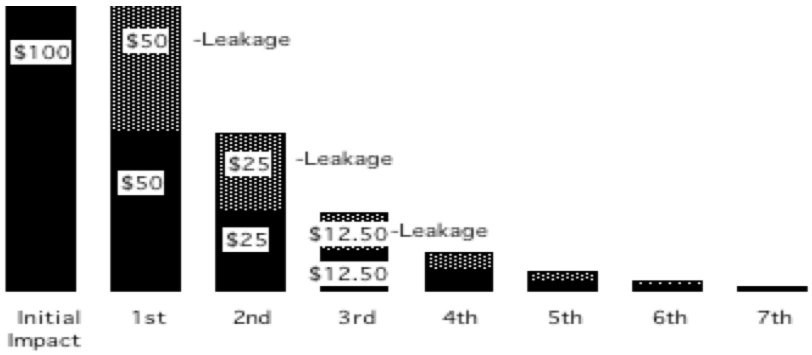
The fundamental finding of this study is that each of the University System of Georgia's institutions creates substantial economic impacts in terms of output, value added, labor income, and employment. The combined economic impact of the University System's 26 institutions on their host communities in FY 2018 includes:

- $17.7 billion in output (sales);
- $12.2 billion in value added (gross regional product);
- $8.5 billion in labor income; and
- 168,284 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 2018

Total for All Institutions in 2018	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
System total	11,996,022,013	17,652,735,508	12,157,031,004	8,497,117,785	168,284
Personnel services	4,519,729,354	8,868,453,679	7,084,991,009	5,872,349,692	82,611
Operating expenses	2,848,662,551	2,163,144,491	1,148,897,086	721,304,058	17,242
Student spending	4,627,630,108	6,621,137,338	3,923,142,909	1,903,464,036	68,430

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 personnel 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), 2019.

Table 2

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2018

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	983,861,245	1,377,756,136	1,010,663,129	822,164,706	12,497
Personnel Services	580,829,856	1,013,914,313	825,619,356	713,410,795	9,012
Operating Expenses	268,520,150	183,658,591	91,521,214	58,604,700	1,534
Student Spending	134,511,239	180,183,232	93,522,559	50,149,211	1,951
Georgia Institute of Technology	2,094,067,111	3,352,836,002	2,406,879,906	1,756,909,024	27,065
Personnel Services	997,349,005	2,156,839,115	1,699,755,509	1,371,383,410	16,736
Operating Expenses	690,997,091	571,304,737	321,176,458	200,632,494	4,211
Student Spending	405,721,015	624,692,150	385,947,939	184,893,121	6,118
Georgia State University	1,619,874,076	2,589,435,673	1,787,852,880	1,190,001,666	22,415
Personnel Services	554,560,030	1,199,276,040	945,121,979	762,535,903	9,502
Operating Expenses	350,827,109	290,057,936	163,064,955	101,863,406	2,139
Student Spending	714,486,937	1,100,101,697	679,665,946	325,602,356	10,774
University of Georgia	2,015,314,452	2,842,020,878	1,983,658,887	1,445,649,991	27,452
Personnel Services	856,298,215	1,589,099,805	1,280,713,960	1,073,268,515	15,123
Operating Expenses	567,283,029	418,631,388	212,857,327	133,967,882	3,522
Student Spending	591,733,208	834,289,685	490,087,600	238,413,594	8,807
Comprehensive Universities					
Georgia Southern University	789,775,232	1,043,491,229	691,981,867	471,439,283	11,639
Personnel Services	240,536,163	422,909,604	344,375,435	295,111,393	5,030
Operating Expenses	145,588,460	94,032,198	47,163,351	29,920,951	823
Student Spending	403,650,609	526,549,427	300,443,081	146,406,939	5,786
Kennesaw State University	966,772,954	1,551,180,911	1,056,513,821	677,442,455	15,040
Personnel Services	286,951,949	620,554,274	489,044,611	394,567,138	6,254
Operating Expenses	162,849,597	134,641,298	75,692,730	47,283,729	991
Student Spending	516,971,408	795,985,338	491,776,479	235,591,588	7,795
University of West Georgia	379,498,517	604,556,747	412,666,784	267,058,436	5,899
Personnel Services	115,405,295	249,572,269	196,682,189	158,685,581	2,567
Operating Expenses	72,436,920	59,889,620	33,668,785	21,032,217	442
Student Spending	191,656,302	295,094,858	182,315,810	87,340,638	2,890
Valdosta State University	310,176,657	394,138,019	254,936,427	173,855,414	4,635
Personnel Services	91,722,006	150,517,115	124,068,292	107,500,101	1,957
Operating Expenses	57,048,279	36,269,285	16,978,797	10,621,716	330
Student Spending	161,406,372	207,351,620	113,889,338	55,733,597	2,348

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2018

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	184,322,661	244,406,917	154,639,114	107,083,762	2,818
Personnel Services	55,146,446	96,531,134	77,745,175	66,843,024	1,214
Operating Expenses	40,170,615	27,237,336	12,027,282	7,651,241	263
Student Spending	89,005,600	120,638,447	64,866,657	32,589,498	1,341
Clayton State University	178,009,541	283,210,501	192,476,596	123,195,565	2,854
Personnel Services	51,567,756	111,518,989	87,885,562	70,907,139	1,238
Operating Expenses	32,250,204	26,663,924	14,989,940	9,363,917	196
Student Spending	94,191,581	145,027,588	89,601,094	42,924,509	1,420
Columbus State University	232,917,111	295,041,159	194,996,423	134,797,597	3,316
Personnel Services	72,159,114	124,331,977	100,903,539	87,227,564	1,452
Operating Expenses	44,496,884	27,779,786	13,133,064	8,259,468	258
Student Spending	116,261,113	142,929,396	80,959,820	39,310,565	1,607
Fort Valley State University	111,882,265	142,567,025	95,003,410	67,835,464	1,598
Personnel Services	38,439,522	68,929,908	55,267,892	47,163,136	816
Operating Expenses	32,917,436	22,286,572	10,371,491	6,531,739	207
Student Spending	40,525,307	51,350,545	29,364,026	14,140,589	575
Georgia College & State University	220,043,657	298,471,484	201,004,867	139,090,895	3,097
Personnel Services	76,788,511	138,756,199	111,383,654	94,795,211	1,352
Operating Expenses	35,282,138	23,874,407	11,190,637	6,941,833	224
Student Spending	107,973,008	135,840,878	78,430,576	37,353,851	1,521
Georgia Southwestern State University	81,359,366	93,624,915	61,165,859	42,246,282	1,061
Personnel Services	24,330,482	35,260,219	30,185,450	26,951,367	380
Operating Expenses	13,683,349	8,022,246	3,299,806	2,157,165	95
Student Spending	43,345,535	50,342,450	27,680,603	13,137,750	586
Middle Georgia State University	190,463,704	251,687,438	160,212,318	107,431,166	2,878
Personnel Services	54,253,380	96,262,857	76,664,939	65,516,735	1,186
Operating Expenses	36,858,669	25,432,058	11,578,246	7,055,457	241
Student Spending	99,351,655	129,992,523	71,969,132	34,858,974	1,452
Savannah State University	142,578,430	183,879,935	122,511,053	84,315,920	2,001
Personnel Services	42,877,038	76,404,472	62,254,151	53,205,830	873
Operating Expenses	34,842,648	22,535,862	11,533,306	7,290,366	196
Student Spending	64,858,744	84,939,601	48,723,595	23,819,724	932
University of North Georgia	460,530,586	667,306,742	437,906,492	288,796,574	7,004
Personnel Services	130,498,366	244,975,197	196,438,277	165,074,928	2,681
Operating Expenses	69,581,312	51,552,206	26,673,590	16,989,375	426
Student Spending	260,450,908	370,779,340	214,794,626	106,732,271	3,898

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2018

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	124,527,557	148,595,411	91,637,850	63,153,275	1,742
Personnel Services	31,034,804	49,437,706	41,032,157	36,046,236	630
Operating Expenses	25,923,686	15,581,871	6,859,423	4,405,548	151
Student Spending	67,569,067	83,575,833	43,746,270	22,701,491	961
Atlanta Metropolitan State College	58,475,362	93,043,354	63,095,420	40,142,952	939
Personnel Services	16,515,746	35,716,491	28,147,348	22,709,623	398
Operating Expenses	10,209,644	8,441,160	4,745,457	2,964,394	62
Student Spending	31,749,972	48,885,703	30,202,615	14,468,935	479
College of Coastal Georgia	83,348,239	104,113,295	67,537,469	45,141,728	1,214
Personnel Services	22,459,163	36,569,972	30,479,565	26,435,447	469
Operating Expenses	13,004,861	8,092,762	3,923,035	2,490,645	73
Student Spending	47,884,215	59,450,561	33,134,869	16,215,636	673
Dalton State College	114,731,449	135,815,305	83,858,689	56,431,070	1,559
Personnel Services	26,149,636	40,848,299	34,328,503	30,178,089	509
Operating Expenses	20,086,629	12,464,122	5,625,715	3,680,555	112
Student Spending	68,495,184	82,502,884	43,904,471	22,572,425	938
East Georgia State College	66,740,049	80,952,494	49,195,743	32,182,548	969
Personnel Services	14,242,027	22,674,067	18,771,951	16,463,904	327
Operating Expenses	12,766,950	7,719,622	3,615,679	2,324,314	78
Student Spending	39,731,072	50,558,804	26,808,112	13,394,330	563
Georgia Gwinnett College	313,290,019	489,589,456	329,321,096	206,754,945	4,429
Personnel Services	80,417,535	173,908,716	137,053,476	110,576,329	1,460
Operating Expenses	60,139,568	49,722,378	27,952,960	17,461,651	364
Student Spending	172,732,916	265,958,363	164,314,660	78,716,965	2,605
Georgia Highlands College	125,103,053	177,046,638	113,731,795	69,238,499	1,976
Personnel Services	25,452,676	48,324,521	38,783,861	32,331,366	699
Operating Expenses	22,621,371	17,014,435	8,916,835	5,341,482	134
Student Spending	77,029,006	111,707,682	66,031,099	31,565,652	1,143
Gordon State College	87,487,031	136,754,098	91,340,962	56,217,330	1,368
Personnel Services	20,485,231	44,300,789	34,912,436	28,167,778	494
Operating Expenses	15,022,518	12,420,363	6,982,489	4,361,818	90
Student Spending	51,979,282	80,032,946	49,446,037	23,687,734	784

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2018

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	60,871,689	71,213,746	42,242,148	28,541,239	816
Personnel Services	13,259,402	21,019,631	17,371,741	15,293,149	254
Operating Expenses	13,253,434	7,818,328	3,354,512	2,105,998	78
Student Spending	34,358,853	42,375,787	21,515,895	11,142,093	483

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 personnel 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 Health System, Inc., which are reported in Appendix 3.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2019.

Table 3

On-Campus and Off-Campus Jobs that Exist Due to Institution-Related Spending in Fiscal Year 2018

Institution	Total Employment Impact	On-Campus Jobs	Off-Campus Jobs That Exist Due to Institution-Related Spending
System Total	**168,284**	**50,597**	**117,687**
Research Universities	**89,430**	**28,810**	**60,620**
Augusta University	12,497	5,484	7,013
Georgia Institute of Technology	27,065	8,773	18,292
Georgia State University	22,415	5,074	17,341
University of Georgia	27,452	9,479	17,973
Regional Universities	**37,214**	**10,568**	**26,646**
Georgia Southern University	11,639	3,523	8,116
Kennesaw State University	15,040	3,963	11,077
University of West Georgia	5,899	1,645	4,254
Valdosta State University	4,635	1,437	3,198
State Universities	**26,629**	**7,621**	**19,008**
Albany State University	2,818	860	1,958
Clayton State University	2,854	826	2,028
Columbus State University	3,316	1,018	2,298
Fort Valley State University	1,598	562	1,036
Georgia College & State University	3,097	837	2,260
Georgia Southwestern State University	1,061	285	776
Middle Georgia State University	2,878	828	2,050
Savannah State University	2,001	596	1,405
University of North Georgia	7,004	1,809	5,195
State Colleges	**15,011**	**3,598**	**11,413**
Abraham Baldwin Agricultural College	1,742	470	1,272
Atlanta Metropolitan State College	939	266	673
College of Coastal Georgia	1,214	353	861
Dalton State College	1,559	388	1,171
East Georgia State College	969	255	714
Georgia Gwinnett College	4,429	818	3,611
Georgia Highlands College	1,976	529	1,447
Gordon State College	1,368	331	1,037
South Georgia State College	816	188	628

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

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2019.

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), 2019.

Appendix 2

Economic Impact of Capital Outlays in Fiscal Year 2018

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
System Total	**281,353,014**	**477,876,107**	**239,572,563**	**151,588,510**	**2,979**
Research Universities	**176,940,000**	**321,875,398**	**164,636,016**	**104,032,013**	**1,941**
Augusta University	4,500,000	7,661,425	4,389,287	3,738,752	52
Georgia Institute of Technology	139,240,000	257,582,192	132,702,317	82,135,835	1,526
Georgia State University	5,600,000	9,543,187	4,744,505	2,923,861	54
University of Georgia	27,600,000	47,088,594	22,799,907	15,233,565	309
Comprehensive Universities	**46,700,000**	**72,527,498**	**34,673,767**	**22,349,191**	**474**
Georgia Southern University	31,900,000	49,320,875	22,245,405	14,677,663	329
Kennesaw State University	5,000,000	9,176,141	4,562,024	2,811,405	52
University of West Georgia	8,100,000	11,527,438	6,652,962	4,119,995	74
Valdosta State University	1,700,000	2,503,044	1,213,376	740,128	19
State Universities	**29,800,000**	**41,350,374**	**20,591,792**	**12,787,398**	**298**
Albany State University	0	0	0	0	0
Clayton State University	6,900,000	12,963,300	7,126,391	4,444,046	83
Columbus State University	2,500,000	1,355,208	717,876	500,498	10
Fort Valley State University	5,000,000	7,891,755	3,684,680	2,315,338	60
Georgia College & State University	11,500,000	17,974,170	8,419,652	5,209,802	137
Georgia Southwestern State University	0	0	0	0	0
Middle Georgia State University	2,800,000	827,535	428,156	202,532	6
Savannah State University	0	0	0	0	0
University of North Georgia	1,100,000	338,406	215,037	115,182	2
State Colleges	**27,913,014**	**42,122,837**	**19,670,988**	**12,419,908**	**266**
Abraham Baldwin Agricultural College	1,600,000	2,485,514	944,588	760,037	23
Atlanta Metropolitan State College	800,000	276,816	181,581	98,836	1
College of Coastal Georgia	0	0	0	0	0
Dalton State College	4,100,000	5,931,712	2,689,121	1,806,921	46
East Georgia State College	4,900,000	7,080,931	2,638,186	1,654,094	47
Georgia Gwinnett College	13,913,014	25,533,556	12,694,302	7,823,023	145
Georgia Highlands College	2,600,000	814,308	523,210	276,997	4

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 Health System, Inc., which are reported in Appendix 3.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), 2019.

Appendix 3

Combined Economic Impact of Augusta University and AU Health System, Inc. in Fiscal Year 2018

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Augusta University	**988,361,245**	**1,385,417,561**	**1,015,052,416**	**825,853,058**	**12,549**
Personnel Services	580,829,856	1,013,914,313	825,619,356	713,410,795	9,012
Operating Expenses	268,520,150	183,658,591	91,521,214	58,554,300	1,534
Student Spending	134,511,239	180,183,232	93,522,559	50,149,211	1,951
Capital Spending	4,500,000	7,661,425	4,389,287	3,738,752	52
AU Health System, Inc.	**746,065,490**	**965,182,771**	**713,825,125**	**584,144,229**	**8,566**
Wages & Salaries and Benefits	406,980,000	710,436,702	578,500,850	499,877,757	6,384
Other Operating Expenditures	318,355,000	222,577,364	119,256,297	73,991,950	1,951
Student Spending	0	0	0	0	0
Capital Spending	20,730,490	32,168,705	16,067,978	10,274,522	231

Grand Total Economic Impact of Augusta University and AU Health System, Inc.

	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Grand Total	**1,734,426,735**	**2,350,600,333**	**1,728,877,541**	**1,409,997,287**	**21,115**
Wages & Salaries and Benefits	987,809,856	1,724,351,015	1,404,120,205	1,213,288,552	15,396
Operating Expenses	586,875,150	406,235,955	210,777,512	132,546,250	3,485
Student Spending	134,511,239	180,183,232	93,522,559	50,149,211	1,951
Capital Spending	25,230,490	39,830,130	20,457,265	14,013,274	283

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 Health System, Inc., (a component unit of the State of Georgia) Financial Statements and Report of Independent Certified Public Accountants (June 30, 2018 and 2017). Other operating expenditures do not include $40.6 million in purchased services (a transfer) and $36.2 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), 2019.

Appendix 4

Combined Economic Impact of Augusta University and AU Health System, Inc. on the Augusta MSA in Fiscal Year 2018

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Augusta University	**988,361,245**	**1,408,458,567**	**1,030,089,466**	**833,290,627**	**12,673**
Personnel Services	580,829,856	1,027,684,035	830,202,723	717,872,408	9,099
Operating Expenses	268,520,150	189,740,135	95,089,327	60,145,854	1,557
Student Spending	134,511,239	183,059,482	100,228,473	51,409,404	1,963
Capital Spending	4,500,000	7,974,915	4,568,943	3,862,961	54
AU Health System, Inc.	**746,065,490**	**987,725,629**	**723,829,683**	**591,765,349**	**8,632**
Wages & Salaries and Benefits	406,980,000	720,084,969	581,712,356	503,003,952	6,446
Other Operating Expenditures	318,355,000	235,515,437	125,656,560	78,476,168	1,961
Student Spending	0	0	0	0	0
Capital Spending	20,730,490	32,125,223	16,460,767	10,285,229	225

Grand Total Economic Impact of Augusta University and AU Health System, Inc.

	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Grand Total	**1,734,426,735**	**2,396,184,196**	**1,753,919,149**	**1,425,055,076**	**21,305**
Wages & Salaries and Benefits	987,809,856	1,747,769,004	1,411,915,079	1,220,876,360	15,545
Operating Expenses	586,875,150	425,255,572	220,745,887	138,622,022	3,518
Student Spending	134,511,239	183,059,482	100,228,473	51,409,404	1,963
Capital Spending	25,230,490	40,100,138	21,029,710	14,148,190	279

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 Health System, Inc., (a component unit of the State of Georgia) Financial Statements and Report of Independent Certified Public Accountants (June 30, 2018 and 2017). Other operating expenditures do not include $40.6 million in purchased services (a transfer) and $36.2 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), 2019.

Appendix 5

Augusta University's Albany, Savannah, and Rome Clinical Campuses: Economic Impact of FY 2018 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 2018.

Albany: In FY 2018, total expenditures at the Albany clinical campus were $1,819,046, including $681,036 personnel expense, $172,850 operating expense, and $965,160 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:

- $1,819,046 in initial expenditures and 4 on-campus jobs,
- $2,617,498 in output (sales),
- $1,715,273 in gross regional product (value added),
- $1,211,800 in income, and
- 24 jobs.

Savannah: Total expenditures at the Savannah clinical campus were $2,428,274, including $849,592 personnel expense, $307,122 operating expense, and $1,271,560 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:

- $2,428,274 in initial expenditures and 4 on-campus jobs,
- $3,377,814 in output (sales),
- $2,290,434 in gross regional product (value added),
- $1,585,500 in income, and
- 29 jobs.

Rome: Total expenditures at the Rome clinical campus were $1,393,414, including $526,224 personnel expense, $239,070 operating expense, and $628,120 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:

- $1,393,414 in initial expenditures and 5 on-campus jobs,
- $2,089,818 in output (sales),
- $1,434,517 in gross regional product (value added),
- $982,283 in income, and
- 19 jobs.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), 2019.

Appendix 6

Augusta University and UGA Medical Partnership's Athens Campus: Economic Impact of FY 2018 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 2018.

In FY 2018, initial expenditures at the Athens campus (including St. Mary's) were $17,449,362, including $10,803,132 personnel expense, $2,420,000 operating expense, and $2,405,240 in student spending, and $1,820,990 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:

- $17,449,362 in initial expenditures and 89 on-campus and St. Mary's jobs,
- $28,298,584 in output (sales),
- $20,642,816 in gross regional product (value added),
- $16,085,703 in income, and
- 233 jobs.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), 2019.

Appendix 7

Combined Economic Impact of UGA's Griffin Campus (Budget Unit "A" and Budget Unit "B")
On Its Regional Economy in Fiscal Year 2018

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	25,853,321	46,520,428	34,927,844	26,930,214	447
Personnel Services	17,540,631	37,932,879	29,894,033	24,118,869	377
Operating Expenses	5,907,450	4,884,180	2,745,792	1,715,241	34
Student Spending	2,405,240	3,703,369	2,288,019	1,096,104	36

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 personnel 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 447 jobs consists of 237 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 2019.

Appendix 8

Total Economic Impact of Information Technology Services in Athens
On the Regional Economy in Fiscal Year 2018

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	42,709,023	62,644,499	45,373,485	35,494,912	531
Personnel Services	22,913,914	42,523,149	34,270,969	28,719,881	372
Operating Expenses	19,795,109	20,121,350	11,102,516	6,775,032	159

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 ($42,096,938) 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 531 jobs consists of 221 USG jobs (expressed on a FTE basis) and 310 off-site jobs that are primarily in the private sector. For each FTE job created at ITS in Athens there are 1.4 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), 2019.

Appendix 9

Total Economic Impact of the Shared Services Center in Sandersville On the Regional Economy in Fiscal Year 2018

SSC Sandersville	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Total	7,084,629	6,739,387	5,175,682	4,435,829	78
Personnel Services	3,650,657	5,429,925	4,603,778	4,095,957	63
Operating Expenses	3,433,972	1,309,462	571,904	339,872	15

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 78 jobs consists of 47 USG jobs at the Shared Services Center (expressed on a FTE basis) and 31 off-site jobs that are primarily in the private sector. For each FTE job created at the Shared Services Center, there are 0.7 off-site jobs that exists because of Center-related spending.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), 2019.