

**The Economic Impact
of University System of Georgia Institutions
on their Regional Economies in FY 2016**

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Executive Summary

The statewide economic impact of the University System of Georgia's institutions in fiscal year 2016 includes:

- \$16.8 billion in output (sales);
- \$11.3 billion in gross regional product;
- \$8.2 billion in income; and
- 157,967 full- and part-time jobs (3.6 percent of all jobs in Georgia).

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 2016 fiscal year—July 1, 2015 through June 30, 2016.

The study does not account for all of the short-term impacts of the 28 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 28 institutions on their host communities was \$16.8 billion in FY 2016. 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 2016 total, \$11.1 billion (66 percent) is initial spending by the institutions and students; \$5.8 billion (34 percent) is the induced or re-spending (multiplier) impact. Dividing the FY 2016 total output impact (\$16.8 billion) by initial spending (\$11.1 billion) yields an average multiplier value of 1.52. On average, therefore, every dollar of initial spending generates an additional 52 cents for the economy of the region that hosts the institution.

In FY 2016, value added comprises \$11.3 billion (67 percent) of the \$16.8 billion output impact, with domestic and foreign trade comprising the remaining \$5.5 billion (33 percent). The \$11.3 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 \$8.2 billion, and represents 72 percent of the value-added impact.

The collective or rolled-up employment impact of all institutions on their host communities in FY 2016, including multiplier effects, is 157,967 full- and part-time jobs. Approximately 32 percent of these positions are on campus (50,146 University System employees) and 68 percent (107,821 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 157,967 jobs generated by the University System account for 3.6 percent of all the nonfarm jobs in Georgia, or about one job in twenty-eight.

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 2016 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 Pro 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 2016 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, the IMPLAN Pro software 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 from 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 2016. 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 2016 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 MCG Health, Inc., which became a not-for-profit

corporation in July 2000. Expenditures and impacts for MCG Health, Inc., are reported in Appendix 3, however. Appendix 4 reports the combined impacts of Augusta University and MCG Health, 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 2016. 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 2016 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 in the IMPLAN Pro 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 \$4,886 for Summer 2015, \$7,326 for Fall 2015, and at \$7,326 for Spring 2016.

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 2016, 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 28 institutions conveyed to their host communities in FY 2016. 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 Pro 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 2016 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 2016 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 2016, total initial spending for all 28 institutions was \$11.1 billion. Spending originating from personnel services accounted for 37 percent (\$4.1 billion) of initial spending, spending due to operating expenses accounted for 24 percent (\$2.6 billion) of initial spending, and students' personal expenditures accounted for 39 percent (\$4.4 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 2016 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 28 institutions of the University System of Georgia was \$16.8 billion in FY 2016 (Table 1). This amount represents the combined impact of all 28 institutions on their host communities. Of the FY 2016 output impact, \$11.1 billion (66 percent) was initial spending by the institutions and students, while \$5.8 billion (34 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 2016 was 1.52, obtained by dividing the total output impact (\$16.8 billion) by initial spending (\$11.1 billion). On average, therefore, every dollar of initial spending generated an additional 52 cents for the economy of the region hosting the institution. Thus, for all institutions, the output impact was 1.52 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 2016 are reported in the third column of Tables 1 and 2.

The 28 institutions collectively generated a value-added impact of \$11.3 billion in FY 2016. For all institutions combined, the value-added impact equaled 67 percent of the \$16.8 billion output impact (with domestic and foreign trade comprising the remaining 33 percent of the output impact). The \$11.3 billion value-added impact reported for FY 2016 equals 2.2 percent of Georgia's 2016 gross domestic product.

Labor Income Impact

Collectively, the 28 University System institutions generated a labor income impact of \$8.2 billion in FY 2016. The labor income received by residents of the communities that host University System institutions represents 72 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 28 institutions generated an employment impact of 157,967 jobs in FY 2016. Approximately 32 percent (50,146) of these positions are on-campus jobs at one of the institutions of the University System of Georgia, and 68 percent (107,821 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 3.6 percent of all the nonfarm jobs held by Georgians, or about one job in 28. For all institutions combined, 14 jobs were generated for each million dollars of initial spending in FY 2016.

Employment impacts in FY 2016 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 28 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 28 institutions on their host communities in FY 2016 includes:

- \$16.8 billion in output (sales);
- \$11.3 billion in valued added (gross regional product);
- \$8.2 billion in labor income; and
- 157,967 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 Relationships**

Direct
Expenditures

+

Indirect and Induced Impacts
(Multiplier Effects)

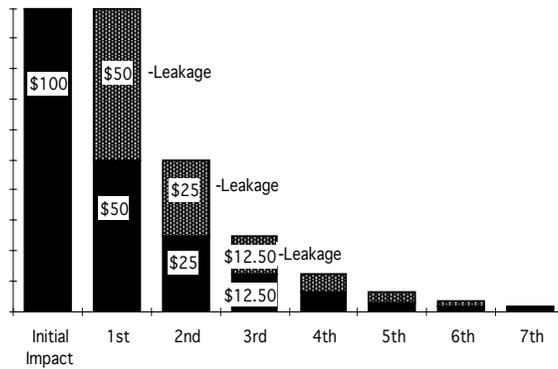
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Total Direct
Economic Impact

Figure 2

How Multipliers Capture the Impact of Re-spending Initial Impacts If the Output Multiplier Equals 2.0



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-spent 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 2016**

Total for All Institutions in 2016	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
System total	11,086,063,517	16,836,998,979	11,339,988,151	8,173,657,021	157,967
Personnel services	4,117,318,911	7,785,806,613	6,228,978,859	5,318,987,805	78,917
Operating expenses	2,608,237,625	3,054,407,126	1,646,994,715	986,448,423	21,048
Student spending	4,360,506,981	5,996,785,240	3,464,014,577	1,868,220,794	58,003

Notes:

The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN Professional System and production functions provided by IMPLAN Group, LLC.

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) April 2017.

Table 2

**Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in Fiscal Year 2016**

<u>Institution</u>	<u>Initial Spending (current dollars)</u>	<u>Output Impact (current dollars)</u>	<u>Value Added Impact (current dollars)</u>	<u>Labor Income Impact (current dollars)</u>	<u>Employment Impact (jobs)</u>
Research Universities					
Augusta University	930,068,992	1,403,878,791	1,009,320,787	786,617,324	12,794
Personnel Services	531,969,954	954,657,309	768,645,110	658,071,175	9,006
Operating Expenses	275,070,665	291,440,357	152,809,813	85,076,485	2,138
Student Spending	123,028,373	157,781,125	87,865,864	43,469,665	1,650
Georgia Institute of Technology	1,800,743,086	3,051,550,474	2,140,514,675	1,635,715,819	24,213
Personnel Services	877,850,329	1,763,658,843	1,398,722,837	1,188,303,694	14,733
Operating Expenses	572,188,840	751,533,111	421,011,351	262,390,136	4,814
Student Spending	350,703,917	536,358,521	320,780,487	185,021,989	4,666
Georgia State University	1,548,309,416	2,539,854,071	1,702,072,066	1,214,912,472	21,277
Personnel Services	510,010,657	1,024,644,869	812,625,509	690,376,866	9,108
Operating Expenses	336,896,785	442,492,143	247,885,574	154,491,623	2,838
Student Spending	701,401,974	1,072,717,058	641,560,984	370,043,983	9,332
University of Georgia	1,807,145,036	2,709,578,898	1,881,545,933	1,404,218,485	25,215
Personnel Services	792,254,034	1,455,966,486	1,174,744,259	1,007,707,336	14,614
Operating Expenses	476,563,895	539,895,221	288,351,992	168,584,448	3,753
Student Spending	538,327,107	713,717,191	418,449,683	227,926,701	6,849
Comprehensive Universities					
Georgia Southern University	569,400,195	719,699,581	452,222,785	305,088,961	8,641
Personnel Services	176,273,641	298,573,948	241,150,803	207,568,404	3,797
Operating Expenses	98,729,536	77,526,927	33,700,871	18,845,998	707
Student Spending	294,397,018	343,598,706	177,371,111	78,674,559	4,137
Kennesaw State University	862,415,345	1,408,554,010	934,146,462	653,662,765	12,933
Personnel Services	252,743,628	507,778,500	402,709,057	342,126,867	5,541
Operating Expenses	146,578,243	192,520,988	107,850,897	67,216,744	1,230
Student Spending	463,093,474	708,254,522	423,586,508	244,319,154	6,162
University of West Georgia	348,159,955	564,267,764	372,595,890	260,329,227	5,336
Personnel Services	98,822,908	198,541,707	157,459,486	133,771,812	2,373
Operating Expenses	72,255,384	94,902,759	53,164,838	33,134,334	608
Student Spending	177,081,663	270,823,298	161,971,566	93,423,081	2,356
Valdosta State University	298,787,437	398,463,399	255,333,885	170,594,577	4,672
Personnel Services	90,227,766	155,251,909	126,147,909	108,287,247	2,065
Operating Expenses	52,065,183	51,512,011	25,815,914	13,941,555	415
Student Spending	156,494,488	191,699,479	103,370,061	48,365,775	2,192

(continued)

Table 2 (continued)

**Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in Fiscal Year 2016**

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	217,815,302	289,969,693	181,761,716	121,028,050	3,256
Personnel Services	61,313,341	107,395,878	86,490,653	74,384,522	1,282
Operating Expenses	41,319,719	41,880,486	20,523,641	11,850,713	331
Student Spending	115,182,242	140,693,329	74,747,422	34,792,815	1,643
Armstrong State University	186,536,405	252,124,574	164,574,815	111,661,464	2,673
Personnel Services	52,065,701	93,564,810	75,410,229	64,677,729	1,213
Operating Expenses	38,050,773	38,593,265	19,780,687	11,287,559	292
Student Spending	96,419,931	119,966,500	69,383,899	35,696,176	1,168
Clayton State University	169,079,880	275,936,943	183,066,026	128,327,710	2,607
Personnel Services	49,913,190	100,278,872	79,529,183	67,565,081	1,174
Operating Expenses	30,544,014	40,117,577	22,474,002	14,006,643	254
Student Spending	88,622,676	135,540,494	81,062,841	46,755,986	1,179
Columbus State University	225,110,517	295,029,169	189,919,857	128,848,682	3,220
Personnel Services	64,992,202	114,479,414	92,439,235	79,775,009	1,368
Operating Expenses	47,278,708	47,419,324	23,947,075	13,471,304	361
Student Spending	112,839,607	133,130,431	73,533,546	35,602,370	1,491
Fort Valley State University	112,330,482	150,530,804	97,895,242	68,563,361	1,549
Personnel Services	36,301,066	65,092,630	52,181,742	44,802,912	768
Operating Expenses	37,976,930	39,385,058	19,767,406	10,772,613	300
Student Spending	38,052,486	46,053,116	25,946,093	12,987,836	481
Georgia College & State University	207,333,366	266,350,202	171,064,290	115,373,640	3,086
Personnel Services	70,945,613	118,371,019	96,512,277	83,072,683	1,330
Operating Expenses	34,216,895	30,702,025	14,629,894	7,459,154	269
Student Spending	102,170,858	117,277,158	59,922,118	24,841,804	1,487
Georgia Southwestern State University	72,757,064	88,734,278	55,714,861	37,700,299	1,056
Personnel Services	21,985,804	36,653,598	29,807,734	25,799,006	416
Operating Expenses	13,367,535	10,775,043	4,873,614	2,830,174	108
Student Spending	37,403,725	41,305,637	21,033,513	9,071,120	532
Middle Georgia State University	184,650,279	250,194,190	159,301,273	105,329,608	2,741
Personnel Services	49,659,895	89,454,157	71,484,490	61,150,475	1,148
Operating Expenses	34,905,447	36,752,033	18,442,396	9,904,489	285
Student Spending	100,084,937	123,988,001	69,374,387	34,274,644	1,308
Savannah State University	142,832,200	192,429,182	125,799,306	86,215,347	1,998
Personnel Services	41,183,739	74,009,351	59,649,158	51,159,798	922
Operating Expenses	35,041,103	35,540,681	18,216,110	10,394,758	269
Student Spending	66,607,358	82,879,150	47,934,037	24,660,792	807
University of North Georgia	402,891,554	577,091,710	378,214,682	257,724,831	5,629
Personnel Services	106,589,984	196,877,278	158,563,536	136,008,523	2,211
Operating Expenses	64,165,962	72,898,170	39,253,928	23,266,987	492
Student Spending	232,135,608	307,316,262	180,397,218	98,449,321	2,925

(continued)

Table 2 (continued)

**Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in Fiscal Year 2016**

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	81,199,395	98,100,111	59,444,050	38,249,544	1,116
Personnel Services	19,182,709	32,462,679	26,320,572	22,657,501	350
Operating Expenses	17,547,275	14,632,271	6,505,678	3,731,380	131
Student Spending	44,469,411	51,005,161	26,617,799	11,860,663	636
Atlanta Metropolitan State College	70,666,362	112,404,800	72,869,367	49,778,250	1,017
Personnel Services	16,517,768	33,185,281	26,318,587	22,359,308	380
Operating Expenses	16,649,902	21,868,568	12,250,839	7,635,186	138
Student Spending	37,498,692	57,350,950	34,299,941	19,783,757	499
Bainbridge State College	51,756,514	59,967,125	36,589,126	23,739,472	711
Personnel Services	11,694,183	19,325,134	15,731,307	13,687,044	259
Operating Expenses	12,006,508	10,335,714	4,991,802	2,819,985	92
Student Spending	28,055,823	30,306,278	15,866,017	7,232,443	359
College of Coastal Georgia	72,740,618	95,730,920	60,606,130	38,710,405	1,068
Personnel Services	19,567,167	33,558,238	27,291,846	23,303,811	444
Operating Expenses	12,774,520	12,767,492	6,463,084	3,332,385	92
Student Spending	40,398,931	49,405,191	26,851,200	12,074,210	532
Dalton State College	112,147,544	136,550,655	84,987,356	54,928,064	1,526
Personnel Services	25,458,143	43,845,334	35,557,143	30,598,623	548
Operating Expenses	22,354,948	18,538,621	9,191,173	5,696,860	154
Student Spending	64,334,453	74,166,700	40,239,041	18,632,582	824
East Georgia State College	64,773,992	80,140,200	47,078,850	28,608,005	991
Personnel Services	12,849,058	21,970,591	17,677,097	15,208,629	333
Operating Expenses	12,244,136	11,153,261	5,242,950	2,711,186	92
Student Spending	39,680,798	47,016,349	24,158,803	10,688,190	566
Georgia Gwinnett College	280,136,153	451,700,058	295,749,827	203,640,440	4,597
Personnel Services	71,958,447	144,569,238	114,654,994	97,406,684	2,081
Operating Expenses	52,098,559	68,428,081	38,333,643	23,890,969	438
Student Spending	156,079,147	238,702,739	142,761,190	82,342,787	2,077
Georgia Highlands College	113,551,024	149,423,968	91,583,633	55,287,875	1,814
Personnel Services	23,054,887	41,274,341	33,064,519	28,109,693	707
Operating Expenses	20,237,354	20,832,379	10,557,293	5,467,890	154
Student Spending	70,258,783	87,317,248	47,961,821	21,710,292	953

(continued)

Table 2 (continued)

**Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in Fiscal Year 2016**

<u>Institution</u>	<u>Initial Spending (current dollars)</u>	<u>Output Impact (current dollars)</u>	<u>Value Added Impact (current dollars)</u>	<u>Labor Income Impact (current dollars)</u>	<u>Employment Impact (jobs)</u>
Gordon State College	90,639,114	143,635,618	92,513,429	62,467,659	1,317
Personnel Services	19,391,442	38,958,676	30,897,353	26,249,260	464
Operating Expenses	19,867,956	26,095,277	14,618,659	9,110,904	169
Student Spending	51,379,716	78,581,665	46,997,417	27,107,495	684
South Georgia State College	62,086,290	75,107,790	43,501,832	26,334,682	914
Personnel Services	12,541,655	21,406,525	17,192,232	14,798,116	283
Operating Expenses	15,240,850	13,868,284	6,339,590	3,125,962	123
Student Spending	34,303,785	39,832,981	19,970,010	8,410,604	508

Notes:

The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN Professional System and production functions provided by IMPLAN Group, LLC.

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

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), April 2017.

Table 3
On-Campus and Off-Campus Jobs that Exist
Due to Institution-Related Spending in Fiscal Year 2016

<u>Institution</u>	<u>Total Employment Impact</u>	<u>On-Campus Jobs</u>	<u>Off-Campus Jobs That Exist Due to Institution-Related Spending</u>
System Total	157,967	50,146	107,821
Research Universities	83,500	28,301	55,199
Augusta University	12,794	5,446	7,348
Georgia Institute of Technology	24,213	8,215	15,998
Georgia State University	21,277	5,321	15,956
University of Georgia	25,215	9,319	15,896
Regional Universities	31,583	9,478	22,105
Georgia Southern University	8,641	2,669	5,972
Kennesaw State University	12,933	3,664	9,269
University of West Georgia	5,336	1,639	3,697
Valdosta State University	4,672	1,506	3,166
State Universities	27,813	8,108	19,705
Albany State University	3,256	878	2,378
Armstrong State University	2,673	863	1,810
Clayton State University	2,607	803	1,804
Columbus State University	3,220	942	2,278
Fort Valley State University	1,549	518	1,031
Georgia College & State University	3,086	885	2,201
Georgia Southwestern State University	1,056	277	779
Middle Georgia State University	2,741	798	1,943
Savannah State University	1,998	645	1,353
University of North Georgia	5,629	1,499	4,130
State Colleges	15,071	4,259	10,812
Abraham Baldwin Agricultural College	1,116	230	886
Atlanta Metropolitan State College	1,017	257	760
Bainbridge State College	711	190	521
College of Coastal Georgia	1,068	325	743
Dalton State College	1,526	393	1,133
East Georgia State College	991	249	742
Georgia Gwinnett College	4,597	1,547	3,050
Georgia Highlands College	1,814	549	1,265
Gordon State College	1,317	320	997
South Georgia State College	914	199	715

Notes: Employment includes both full-time and part-time jobs. Estimates for Augusta University exclude impacts associated with MCG Health, Inc., which are reported in Appendix 3.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), April 2017.

Appendix 1

Study Areas for Institutions

Research Universities

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

Comprehensive Universities

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

State Universities

Albany State University – Dougherty, Lee, Worth, Mitchell, Terrell, Colquitt, Baker, Sumter, Calhoun, and Tift
Armstrong State University – Chatham, Effingham, Bryan, Liberty, and Bulloch
Clayton State University – Atlanta MSA
Columbus State University – Muscogee, Harris, Chattahoochee, Marion, Talbot, Stewart, Troup, Meriwether
Fort Valley State University – Peach, Houston, Bibb, Crawford, Macon, and Taylor
Georgia College & State University – Baldwin, Hancock, Putnam, Wilkinson, Jones, and Washington
Georgia Southwestern State University – Sumter, Schley, Macon, Lee, Crisp, Marion, Webster, and Dooly
Middle Georgia State University – Bibb, Houston, Jones, Monroe, Peach, Crawford, Twiggs, Baldwin, Wilkinson, Bleckley, Dodge, Pulaski, and Laurens
Savannah State University – Chatham, Effingham, Bryan, Liberty, and Bulloch
University of North Georgia – Lumpkin, Hall, Dawson, White, Forsyth, Gwinnett, Jackson, Habersham, Banks, and Union

State Colleges

Abraham Baldwin Agricultural College – Tift, Berrien, Worth, Colquitt, Irwin, Cook, and Turner
Atlanta Metropolitan State College – Atlanta MSA
Bainbridge State College – Decatur, Seminole, Miller, Grady, Early, Mitchell, and Baker
College of Coastal Georgia – Glynn, Brantley, McIntosh, Camden, and Wayne
Dalton State College – Whitfield, Murray, Catoosa, Gordon, Walker, and Gilmer
East Georgia State College – Emanuel, Candler, Bulloch, Johnson, Jefferson, Toombs, Treutlen, and Jenkins
Georgia Gwinnett College – Atlanta MSA
Georgia Highlands College – Floyd, Polk, Chattooga, Bartow, Gordon, Paulding, and Douglas
Gordon State College – Atlanta MSA
South Georgia State College – Coffee, Atkinson, Bacon, Jeff Davis, Ware, Telfair, Ben Hill, Irwin, 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, U.S. Census Bureau.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), April 2017.

Appendix 2

Economic Impact of Capital Outlays in Fiscal Year 2016

<u>Institution</u>	<u>Initial Spending (current dollars)</u>	<u>Output Impact (current dollars)</u>	<u>Value Added Impact (current dollars)</u>	<u>Labor Income Impact (current dollars)</u>	<u>Employment Impact (jobs)</u>
System Total	225,135,000	353,042,419	132,185,526	102,638,352	2,173
Research Universities	76,835,000	121,825,330	48,878,042	37,531,239	713
Augusta University	1,500,000	2,484,105	1,034,196	770,715	18
Georgia Institute of Technology	5,000,000	10,101,284	4,827,590	3,632,643	65
Georgia State University	5,400,000	10,526,824	4,697,161	3,678,384	61
University of Georgia	64,935,000	98,713,117	38,319,095	29,449,497	569
Comprehensive Universities	43,900,000	67,409,311	22,748,865	17,550,309	417
Georgia Southern University	33,600,000	48,146,220	13,873,917	10,469,565	293
Kennesaw State University	4,900,000	9,372,625	4,030,321	3,092,097	52
University of West Georgia	1,900,000	4,385,956	2,533,990	2,227,891	33
Valdosta State University	3,500,000	5,504,510	2,310,637	1,760,756	39
State Universities	81,200,000	124,438,747	45,430,772	35,951,989	807
Albany State University	21,500,000	32,432,682	10,160,162	7,723,219	201
Armstrong State University	1,800,000	3,130,587	1,607,325	1,521,929	29
Clayton State University	1,400,000	3,231,757	1,867,751	1,641,603	25
Columbus State University	17,400,000	24,466,257	8,301,092	6,594,057	142
Fort Valley State University	4,000,000	6,610,725	2,617,102	1,952,140	49
Georgia College & State University	9,100,000	13,210,700	4,779,345	3,579,445	98
Georgia Southwestern State University	0	0	0	0	0
Middle Georgia State University	6,500,000	10,283,949	3,557,536	2,694,140	67
Savannah State University	16,000,000	24,211,873	8,523,402	6,614,213	143
University of North Georgia	3,500,000	6,860,217	4,017,057	3,631,243	53
State Colleges	23,200,000	39,369,031	15,127,847	11,604,815	236
Abraham Baldwin Agricultural College	2,500,000	3,800,783	1,304,183	931,282	30
Atlanta Metropolitan State College	700,000	1,615,879	933,575	820,802	12
Bainbridge State College	0	0	0	0	0
College of Coastal Georgia	0	0	0	0	0
Dalton State College	4,000,000	5,511,124	1,582,676	1,201,929	33
East Georgia State College	4,500,000	6,444,267	1,848,496	1,393,839	39
Georgia Gwinnett College	11,500,000	21,996,978	9,458,917	7,256,963	122
Georgia Highlands College	0	0	0	0	0
Gordon State College	0	0	0	0	0
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 the IMPLAN Professional System and production functions provided by IMPLAN Group, LLC. 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 MCG Health, Inc., which are reported in Appendix 3.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), April 2017.

Appendix 3

Combined Economic Impact of Augusta University and MCG Health, Inc. in Fiscal Year 2016

<u>Institution</u>	<u>Initial Spending</u> <u>(current dollars)</u>	<u>Output Impact</u> <u>(current dollars)</u>	<u>Value Added Impact</u> <u>(current dollars)</u>	<u>Labor Income Impact</u> <u>(current dollars)</u>	<u>Employment Impact</u> <u>(jobs)</u>
Augusta University	931,068,992	1,403,878,791	1,009,320,787	786,617,324	12,794
Personnel Services	531,969,954	954,657,309	768,645,110	658,071,175	9,006
Operating Expenses	275,070,665	291,440,357	152,809,813	85,076,485	2,138
Student Spending	123,028,373	157,781,125	87,865,864	43,469,665	1,650
Capital Spending	1,500,000	2,484,105	1,034,196	770,715	18
MCG Health, Inc.	539,467,961	715,640,560	509,740,398	412,092,093	7,557
Wages & Salaries and Benefits	274,641,000	492,862,477	396,829,661	339,743,480	5,504
Other Operating Expenditures	243,630,000	191,053,258	100,971,639	62,954,401	1,856
Student Spending	0	0	0	0	0
Capital Spending	21,196,961	31,724,825	11,939,099	9,394,212	197

Grand Total Economic Impact of Augusta University and MCG Health Inc.

	<u>Initial Spending</u> <u>(current dollars)</u>	<u>Output Impact</u> <u>(current dollars)</u>	<u>Value Added Impact</u> <u>(current dollars)</u>	<u>Labor Income Impact</u> <u>(current dollars)</u>	<u>Employment Impact</u> <u>(jobs)</u>
Grand Total	1,471,036,953	2,122,003,456	1,520,095,381	1,199,480,133	20,369
Wages & Salaries and Benefits	806,610,954	1,447,519,786	1,165,474,771	997,814,655	14,510
Operating Expenses	518,700,665	482,493,615	253,781,452	148,030,886	3,994
Student Spending	123,028,373	157,781,125	87,865,864	43,469,665	1,650
Capital Spending	22,696,961	34,208,930	12,973,295	10,164,927	215

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 MCG Health, Inc., d/b/a Augusta University Medical Center (a component unit of MCG Health Systems, Inc.) Financial Statements and Report of Independent Certified Public Accountants (June 30, 2016 and 2015). Other operating expenditures do not include \$71.8 million in purchased services (a transfer) and \$32.3 million in depreciation and amortization. The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN system, version 3.1, Type SAM multipliers, and consumption functions provided by IMPLAN Group, LLC.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), April 2017.

Appendix 4

Combined Economic Impact of Augusta University and MCG Health, Inc. on the Augusta MSA in Fiscal Year 2016

<u>Institution</u>	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Augusta University	931,568,992	1,428,782,140	1,028,661,142	787,723,096	12,799
Personnel Services	531,969,954	958,944,625	776,898,399	654,868,359	8,940
Operating Expenses	275,070,665	306,692,365	160,126,486	88,831,466	2,184
Student Spending	123,028,373	160,664,952	90,546,508	43,216,308	1,658
Capital Spending	1,500,000	2,480,198	1,089,749	806,963	17
MCG Health, Inc.	539,467,961	722,188,131	522,852,829	411,172,724	7,463
Wages & Salaries and Benefits	274,641,000	495,075,887	401,090,593	338,089,954	5,470
Other Operating Expenditures	243,630,000	194,807,810	108,745,850	63,008,544	1,798
Student Spending	0	0	0	0	0
Capital Spending	21,196,961	32,304,434	13,016,386	10,074,226	195

Grand Total Economic Impact of Augusta University & MCG Health Inc.

	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Grand Total	1,471,036,953	2,150,970,271	1,551,513,971	1,198,895,820	20,261
Wages & Salaries and Benefits	806,610,954	1,454,020,513	1,177,988,992	992,958,313	14,410
Operating Expenses	518,700,665	501,500,175	268,872,336	151,840,010	3,982
Student Spending	123,028,373	160,664,952	90,546,508	43,216,308	1,658
Capital Spending	22,696,961	34,784,632	14,106,135	10,881,189	212

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 MCG Health, Inc., d/b/a Augusta University Medical Center (a component unit of MCG Health Systems, Inc.) Financial Statements and Report of Independent Certified Public Accountants (June 30, 2016 and 2015). Other operating expenditures do not include \$71.8 million in purchased services (a transfer) and \$32.3 million in depreciation and amortization. The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN system, version 3.1, Type SAM multipliers, and consumption functions provided by IMPLAN Group, LLC.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), April 2017.

Appendix 5

Augusta University's Albany, Savannah, and Rome Clinical Campuses: Economic Impact of FY 2016 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 2016.

Albany: In FY 2016, total expenditures at the Albany clinical campus were \$1,475,901, including \$696,612 personnel expense, \$442,295 operating expense, and \$336,996 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:

- \$1,475,901 in initial expenditures and 5 on-campus jobs,
- \$2,080,094 in output (sales),
- \$1,421,037 in gross regional product (value added),
- \$1,066,353 in income, and
- 18 jobs.

Savannah: Total expenditures at the Savannah clinical campus were \$1,477,672, including \$632,195 personnel expense, \$230,093 operating expense, and \$615,384 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:

- \$1,477,672 in initial expenditures and 5 on-campus jobs,
- \$2,135,091 in output (sales),
- \$1,478,070 in gross regional product (value added),
- \$1,081,403 in income, and
- 19 jobs.

Rome: Total expenditures at the Rome clinical campus were \$1,126,370, including \$548,945 personnel expense, \$342,993 operating expense, and \$234,432 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:

- \$1,126,370 in initial expenditures and 3 on-campus jobs,
- \$1,609,521 in output (sales),
- \$1,127,791 in gross regional product (value added),
- \$842,623 in income, and
- 15 jobs.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), April 2017.

Appendix 6

Augusta University and UGA Medical Partnership's Athens Campus: Economic Impact of FY 2016 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 2016.

In FY 2016, initial expenditures at the Athens campus were \$15,121,451, including \$8,760,727 personnel expense, \$3,298,492 operating expense, and \$2,432,232 in student spending (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:

- \$15,122,451 in initial expenditures and 70 on-campus jobs,
- \$23,775,043 in output (sales),
- \$17,257,764 in gross regional product (value added),
- \$13,562,640 in income, and
- 183 jobs.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), April 2017.

Appendix 7

Combined Economic Impact of UGA's Griffin Campus (Budget Unit "A" and Budget Unit "B") On Its Regional Economy in Fiscal Year 2016

<u>UGA's Griffin Campus</u>	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Total	23,365,498	41,978,659	30,891,696	24,719,745	419
Personnel Services	15,454,130	31,048,360	24,623,838	20,919,512	340
Operating Expenses	5,413,202	7,109,889	3,982,982	2,482,347	48
Student Spending	2,498,166	3,820,409	2,264,876	1,317,886	33

Notes: The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN Professional System and production functions provided by IMPLAN Group, LLC. 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. The total employment impact of 419 jobs consists of 225 on-campus jobs (expressed on a FTE basis) and 194 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), April 2017.

Appendix 8

Total Economic Impact of Information Technology Services in Athens On the Regional Economy in Fiscal Year 2016

<u>ITS in Athens</u>	<u>Initial Spending (current dollars)</u>	<u>Output Impact (current dollars)</u>	<u>Value Added Impact (current dollars)</u>	<u>Labor Income Impact (current dollars)</u>	<u>Employment Impact (jobs)</u>
Total	33,263,727	51,146,339	37,260,526	29,896,162	436
Personnel Services	19,821,406	34,530,750	28,482,825	24,256,587	318
Operating Expenses	13,442,322	16,615,589	8,777,700	5,639,575	118

Notes: The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN Professional System and production functions provided by MIG, Inc. 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 (\$30,606,452) 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, about \$10 million 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 436 jobs consists of 212 USG jobs (expressed on a FTE basis) and 224 off-site jobs that are primarily in the private sector. For each FTE job created at ITS in Athens there are 1.1 off-site jobs that exist because of spending related to ITS in Athens.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), April 2017.

Appendix 9

Total Economic Impact of the Shared Services Center in Sandersville On the Regional Economy in Fiscal Year 2016

<u>SSC Sandersville</u>	<u>Initial Spending (current dollars)</u>	<u>Output Impact (current dollars)</u>	<u>Value Added Impact (current dollars)</u>	<u>Labor Income Impact (current dollars)</u>	<u>Employment Impact (jobs)</u>
Total	9,480,721	7,241,758	5,060,359	4,207,877	88
Personnel Services	3,120,193	4,619,505	3,927,438	3,504,833	58
Operating Expenses	6,360,528	2,622,253	1,132,921	703,044	30

Notes: The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN Professional System and production functions provided by MIG, Inc. 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 88 jobs consists of 44 USG jobs at the Shared Services Center (expressed on a FTE basis) and 44 off-site jobs that are primarily in the private sector. For each FTE job created at the Shared Services Center in Sandersville there is 1.0 off-site job that exists because of spending related to the Shared Services Center in Sandersville.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), April 2017.