The Economic Impact of University System of Georgia Institutions on their Regional Economies in FY 2015

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Dr. Jeffrey M. Humphreys, Director
Selig Center for Economic Growth
Terry College of Business
The University of Georgia

Executive Summary

The statewide economic impact of the University System of Georgia's institutions in fiscal year 2015 includes:

- $15.5 billion in output (sales);
- $10.6 billion in gross regional product;
- $7.5 billion in income; and
- 150,191 full- and part-time jobs (3.5 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 2.1 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 2015 fiscal year—July 1, 2014 through June 30, 2015.

The study does not account for all of the short-term impacts of the 31 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 31 institutions on their host communities was $15.5 billion in FY 2015. 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 2015 total, $10.6 billion (69 percent) is initial spending by the institutions and students; $4.9 billion (31 percent) is the induced or re-spending (multiplier) impact. Dividing the FY 2015 total output impact ($15.5 billion) by initial spending ($10.6 billion) yields an average multiplier value of 1.46. On average, therefore, every dollar of initial spending generates an additional 46 cents for the economy of the region that hosts the institution.

In FY 2015, value added comprises $10.6 billion (69 percent) of the $15.5 billion output impact, with domestic and foreign trade comprising the remaining $4.8 billion (31 percent). The $10.6 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 $7.5 billion, and represents 69 percent of the value-added impact.

The collective or rolled-up employment impact of all institutions on their host communities in FY 2015, including multiplier effects, is 150,191 full- and part-time jobs. Approximately 32 percent of these positions are on campus (48,785 University System employees) and 68 percent (101,406 jobs) are off-campus positions in either the private or public sectors. On average, for each job created on campus there are 2.1 off-campus jobs that exist because of spending related to the institution. The 150,191 jobs generated by the University System account for 3.5 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 2015 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 2015 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 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 2015. 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 2015 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 2015. 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 2015 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 $4,759 for Summer 2014, $7,136 for Fall 2014, and at $7,136 for Spring 2015.

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 2015, 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 31 institutions conveyed to their host communities in FY 2015. 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 2015 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 2015 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 2015, total initial spending for all 31 institutions was $10.6 billion. Spending originating from personnel services accounted for 37 percent ($3.9 billion) of initial spending, spending due to operating expenses accounted for 23 percent ($2.5 billion) of initial spending, and students' personal expenditures accounted for 39 percent ($4.2 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 2015 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 31 institutions of the University System of Georgia was $15.5 billion in FY 2015 (Table 1). This amount represents the combined impact of all 31 institutions on their host communities. Of the FY 2015 output impact, $10.6 billion (69 percent) was initial spending by the institutions and students, while $4.9 billion (31 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 2015 was 1.46, obtained by dividing the total output impact ($15.5 billion) by initial spending ($10.6 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 1.46 times greater than their initial spending.

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 2015 are reported in the third column of Tables 1 and 2.

The 31 institutions collectively generated a value-added impact of $10.6 billion in FY 2015. For all institutions combined, the value-added impact equaled 69 percent of the $15.5 billion output impact (with domestic and foreign trade comprising the remaining 31 percent of the output impact). The $10.6 billion value-added impact reported for FY 2015 equals 2.1 percent of Georgia's gross domestic product.

Labor Income Impact

Collectively, the 31 University System institutions generated a labor income impact of $7.5 billion in FY 2015. The labor income received by residents of the communities that host University System institutions represents 71 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 31 institutions generated an employment impact of 150,191 jobs in FY 2015. Approximately 32 percent (48,785) of these positions are on-campus jobs at one of the institutions of the University System of Georgia, and 68 percent (101,406 jobs) are off-campus positions in either the private or public sectors. On average, for each job created on campus there are 2.1 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 3.5 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 2015.

Employment impacts in FY 2015 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 31 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 31 institutions on their host communities in FY 2015 includes:

- $15.5 billion in output (sales);
- $10.6 billion in valued added (gross regional product);
- $7.5 billion in labor income; and
- 150,191 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

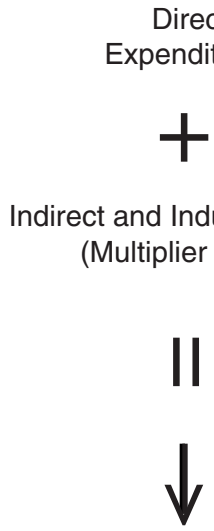
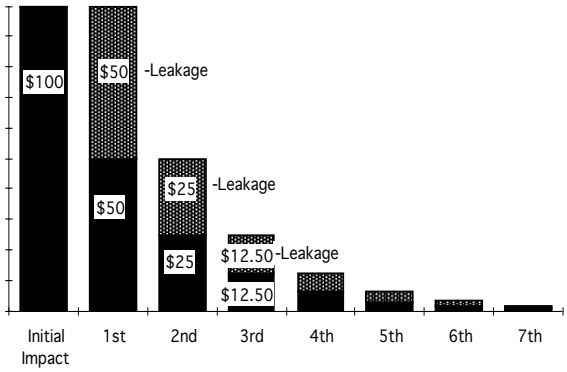


Figure 2

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 2015

Total for All Institutions in 2015	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
System total	10,612,899,611	15,466,029,891	10,644,864,404	7,513,219,357	150,191
Personal services	3,930,653,903	7,288,616,247	5,865,654,160	5,031,214,317	75,693
Operating expenses	2,491,882,483	2,416,622,456	1,444,013,252	683,993,340	17,638
Student spending	4,190,363,225	5,760,791,187	3,335,196,992	1,798,011,701	56,860

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 2016.

Table 2

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2015

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value-Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Research Universities					
Georgia Institute of Technology	1,731,845,171	2,872,418,454	2,050,593,058	1,510,886,719	23,328
Personal Services	835,945,735	1,645,659,726	1,312,785,657	1,120,187,433	13,943
Operating Expenses	570,575,793	729,384,167	439,645,467	218,593,002	4,985
Student Spending	325,323,643	497,374,561	298,161,934	172,106,284	4,400
Augusta University	880,583,577	1,232,507,349	922,022,998	716,577,586	12,036
Personal Services	517,483,783	912,197,502	738,776,860	635,398,405	9,032
Operating Expenses	241,192,581	163,832,131	95,869,011	37,968,789	1,332
Student Spending	121,907,213	156,477,716	87,377,127	43,210,392	1,672
Georgia State University	1,100,085,050	1,792,282,115	1,230,544,070	866,700,472	14,934
Personal Services	397,251,000	782,036,381	623,850,803	532,325,916	6,659
Operating Expenses	256,629,800	328,057,560	197,740,817	98,317,304	2,241
Student Spending	446,204,250	682,188,175	408,952,450	236,057,252	6,034
University of Georgia	1,675,634,897	2,346,351,034	1,685,696,073	1,250,175,167	23,159
Personal Services	743,983,553	1,342,326,144	1,089,312,058	938,551,655	13,970
Operating Expenses	421,542,298	327,400,846	198,396,199	94,888,939	2,556
Student Spending	510,109,046	676,624,044	397,987,816	216,734,573	6,633
Comprehensive Universitites					
Georgia Southern University	553,938,823	663,985,192	428,337,505	285,071,284	8,512
Personal Services	170,326,609	283,824,191	230,591,351	199,397,346	3,984
Operating Expenses	97,171,945	45,525,185	24,569,976	8,908,233	412
Student Spending	286,440,269	334,635,816	173,176,178	76,765,705	4,116
Kennesaw State University	647,988,893	1,044,956,537	700,272,568	478,728,375	9,214
Personal Services	187,999,213	370,099,058	295,237,666	251,923,475	3,536
Operating Expenses	113,382,789	144,940,636	87,364,787	43,438,024	991
Student Spending	346,606,891	529,916,843	317,670,115	183,366,876	4,687
University of West Georgia	322,844,638	518,447,348	347,516,482	237,094,722	5,161
Personal Services	93,392,157	183,853,698	146,664,887	125,147,742	2,369
Operating Expenses	64,701,585	82,709,968	49,854,472	24,787,787	565
Student Spending	164,750,896	251,883,683	150,997,123	87,159,193	2,228
Valdosta State University	301,127,442	379,881,229	249,733,724	165,583,232	4,619
Personal Services	92,336,058	156,244,729	127,678,207	110,108,150	2,109
Operating Expenses	52,310,297	31,824,949	18,329,120	6,973,450	268
Student Spending	156,481,087	191,811,552	103,726,397	48,501,632	2,242

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2015

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	114,973,770	144,131,610	95,442,944	65,378,247	1,717
Personal Services	38,550,520	66,372,170	53,767,758	46,452,428	832
Operating Expenses	23,804,132	13,430,307	7,346,053	2,984,068	118
Student Spending	52,619,118	64,329,133	34,329,133	15,941,751	768
Armstrong State University	183,851,696	234,995,564	157,421,129	104,193,622	2,485
Personal Services	50,713,345	89,505,391	72,566,856	62,520,178	1,084
Operating Expenses	38,324,646	27,440,449	16,364,378	6,446,581	226
Student Spending	94,813,705	118,049,724	68,489,895	35,226,863	1,174
Clayton State University	170,771,360	273,685,174	183,071,399	124,494,266	2,590
Personal Services	48,322,471	95,128,599	75,886,562	64,753,277	1,098
Operating Expenses	34,523,774	44,132,785	26,601,589	13,226,388	303
Student Spending	87,925,115	134,423,790	80,583,248	46,514,601	1,189
Columbus State University	216,500,318	263,535,655	175,001,489	117,535,981	3,042
Personal Services	63,357,193	109,642,981	89,074,582	77,209,163	1,365
Operating Expenses	45,929,840	27,433,217	15,821,456	6,403,957	229
Student Spending	107,213,285	126,459,458	70,105,451	33,922,861	1,448
Fort Valley State University	101,280,624	126,696,516	87,455,446	61,817,998	1,478
Personal Services	36,774,238	64,756,018	52,236,203	45,052,598	853
Operating Expenses	28,949,048	18,922,395	10,892,722	4,593,928	165
Student Spending	35,557,338	43,018,103	24,326,521	12,171,472	460
Georgia College and State University	194,832,296	235,848,787	155,304,046	103,952,759	2,872
Personal Services	66,690,494	109,495,262	89,794,614	77,652,319	1,289
Operating Expenses	30,450,164	14,140,063	8,005,093	2,479,437	129
Student Spending	97,691,638	112,213,462	57,504,339	23,821,002	1,454
Georgia Southwestern State University	71,462,741	80,419,632	52,172,925	34,966,385	977
Personal Services	21,574,211	35,394,797	28,953,988	25,173,196	408
Operating Expenses	14,958,302	6,436,781	3,512,143	1,301,831	62
Student Spending	34,930,228	38,588,055	19,706,794	8,491,358	508
Savannah State University	142,460,121	179,848,528	121,340,567	80,842,451	2,048
Personal Services	40,758,509	71,935,830	58,322,263	50,247,708	1,019
Operating Expenses	35,361,391	25,318,755	15,099,085	5,948,133	209
Student Spending	66,340,221	82,593,942	47,919,218	24,646,610	821
Southern Polytechnic State University	168,314,241	269,138,715	179,198,278	121,114,507	2,394
Personal Services	45,403,190	89,381,642	71,302,066	60,841,369	887
Operating Expenses	32,552,809	41,613,233	25,082,901	12,471,291	285
Student Spending	90,358,242	138,143,840	82,813,312	47,801,847	1,222
University of North Georgia	365,951,168	496,897,784	331,415,403	222,801,906	5,033
Personal Services	94,714,207	171,727,960	139,111,187	119,849,250	1,967
Operating Expenses	61,719,858	47,648,322	28,878,037	13,785,940	368
Student Spending	209,517,103	277,521,501	163,426,179	89,166,716	2,698

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2015

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	79,180,813	89,452,263	55,957,661	34,936,946	1,054
Personal Services	18,361,466	30,571,696	24,930,750	21,560,763	336
Operating Expenses	17,229,783	8,831,129	4,842,712	1,718,852	79
Student Spending	43,589,564	50,049,437	26,184,199	11,657,331	638
Atlanta Metropolitan State College	72,688,584	113,939,246	74,471,737	48,824,679	1,058
Personal Services	16,017,818	31,533,003	25,154,698	21,464,263	378
Operating Expenses	17,951,495	23,212,647	13,832,158	6,877,684	156
Student Spending	38,719,271	59,193,596	35,484,881	20,482,732	524
Bainbridge State College	53,220,863	55,745,072	35,338,855	22,972,461	670
Personal Services	12,660,166	20,596,146	16,862,766	14,735,976	259
Operating Expenses	12,071,378	4,335,052	2,303,883	872,022	38
Student Spending	28,489,319	30,813,874	16,172,206	7,364,464	373
College of Coastal Georgia	69,741,915	86,209,958	55,967,593	35,161,616	982
Personal Services	18,778,049	31,936,030	26,041,620	22,292,324	409
Operating Expenses	13,437,130	8,344,355	4,898,666	1,622,416	68
Student Spending	37,526,736	45,929,573	25,027,308	11,246,876	506
Dalton State College	106,197,251	120,765,591	76,975,136	48,324,907	1,407
Personal Services	23,943,669	40,546,847	33,073,545	28,591,247	528
Operating Expenses	21,897,249	10,582,882	6,018,322	2,202,565	88
Student Spending	60,356,333	69,635,863	37,883,270	17,531,095	791
Darton State College	118,195,831	141,415,549	87,665,735	54,481,222	1,696
Personal Services	25,417,769	43,761,602	35,451,051	30,627,583	574
Operating Expenses	23,966,361	13,521,838	7,396,115	3,004,406	118
Student Spending	68,811,701	84,132,110	44,818,569	20,849,233	1,004
East Georgia State College	62,181,742	70,849,180	42,514,230	25,325,358	905
Personal Services	11,805,221	19,853,220	16,069,190	13,889,253	303
Operating Expenses	12,921,347	6,573,300	3,561,008	1,319,993	56
Student Spending	37,455,174	44,422,660	22,884,032	10,116,112	546
Georgia Gwinnett College	262,114,201	416,821,230	275,646,138	184,372,485	4,208
Personal Services	65,490,389	128,925,713	102,847,400	87,758,702	1,791
Operating Expenses	50,760,463	64,888,616	39,112,428	19,446,811	444
Student Spending	145,863,349	223,006,901	133,686,310	77,166,972	1,973
Georgia Highlands College	106,004,840	132,562,593	83,436,257	49,651,169	1,728
Personal Services	22,490,815	39,548,439	31,874,983	27,229,525	726
Operating Expenses	18,678,596	12,391,946	7,144,675	2,323,880	103
Student Spending	64,835,429	80,622,208	44,416,600	20,097,763	899

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia Institutions on their Regional Economies in Fiscal Year 2015

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Georgia Perimeter College	414,489,395	654,940,893	428,368,231	282,029,665	6,205
Personal Services	90,794,651	178,740,189	142,585,708	121,667,020	2,183
Operating Expenses	74,570,771	95,326,045	57,458,971	28,568,767	653
Student Spending	249,123,973	380,874,659	228,323,551	131,793,879	3,369
Gordon State College	84,741,300	134,010,188	87,869,053	58,041,276	1,289
Personal Services	19,132,840	37,665,297	30,046,590	25,638,467	476
Operating Expenses	15,792,024	20,187,411	12,168,215	6,050,072	138
Student Spending	49,816,436	76,157,479	45,654,248	26,352,737	674
Middle Georgia State College	180,301,488	227,980,503	148,845,397	97,516,386	2,540
Personal Services	47,982,967	84,874,318	68,251,405	58,655,265	1,039
Operating Expenses	34,553,430	22,017,523	12,593,877	5,280,966	194
Student Spending	97,765,091	121,088,662	68,000,114	33,580,155	1,306
South Georgia State College	59,394,562	65,310,399	39,268,277	23,665,509	851
Personal Services	12,201,597	20,481,670	16,550,888	14,312,321	289
Operating Expenses	13,971,404	6,217,962	3,308,915	1,187,824	58
Student Spending	33,221,561	38,610,767	19,408,474	8,165,364	503

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 2016.

Table 3

On-Campus and Off-Campus Jobs that Exist Due to Institution-Related Spending in Fiscal Year 2015

Institution	Total Employment Impact	On-Campus Jobs	Off-Campus Jobs That Exist Due to Institution-Related Spending
System Total	**150,191**	**48,785**	**101,406**
Research Universities	**73,457**	**26,363**	**47,094**
Augusta University	12,036	5,638	6,398
Georgia Institute of Technology	23,328	7,860	15,468
Georgia State University	14,934	3,768	11,166
University of Georgia	23,159	9,097	14,062
Regional Universities	**27,506**	**8,321**	**19,185**
Georgia Southern University	8,512	2,916	5,596
Kennesaw State University	9,214	2,168	7,046
University of West Georgia	5,161	1,689	3,472
Valdosta State University	4,619	1,548	3,071
State Universities	**24,637**	**7,447**	**17,190**
Albany State University	1,717	582	1,135
Armstrong State University	2,485	750	1,735
Clayton State University	2,590	746	1,844
Columbus State University	3,042	958	2,084
Fort Valley State University	1,478	605	873
Georgia College and State University	2,872	879	1,993
Georgia Southwestern State University	977	274	703
Savannah State University	2,048	750	1,298
Southern Polytechnic State University	2,394	556	1,838
University of North Georgia	5,033	1,347	3,686
State Colleges	**24,591**	**6,654**	**17,937**
Abraham Baldwin Agricultural College	1,054	224	830
Atlanta Metropolitan State College	1,058	261	797
Bainbridge State College	670	185	485
College of Coastal Georgia	982	297	685
Dalton State College	1,407	385	1,022
Darton State College	1,696	410	1,286
East Georgia State College	905	228	677
Georgia Gwinnett College	4,208	1,314	2,894
Georgia Highlands College	1,728	574	1,154
Georgia Perimeter College	6,205	1,522	4,683
Gordon State College	1,289	337	952
Middle Georgia State College	2,540	708	1,832
South Georgia State College	851	209	642

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 2016.

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 and State University – Baldwin, Hancock, Putnam, Wilkinson, Jones, and Washington
Georgia Southwestern State University – Sumter, Schley, Macon, Lee, Crisp, Marion, Webster, and Dooly
Savannah State University – Chatham, Effingham, Bryan, Liberty, and Bulloch
Southern Polytechnic State University – Atlanta MSA
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
Darton State College – Dougherty, Lee, Worth, Mitchell, Terrell, Colquitt, Baker, Sumter, Calhoun, and Tift
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
Georgia Perimeter College – Atlanta MSA
Gordon State College – Atlanta MSA
Middle Georgia State College – Bibb, Houston, Jones, Monroe, Peach, Crawford, Twiggs, Baldwin, Wilkinson, Bleckley, Dodge, Pulaski, and Laurens
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), 2016.

Appendix 2

Economic Impact of Capital Outlays in Fiscal Year 2015

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
System Total	**145,650,000**	**220,448,244**	**94,527,988**	**67,890,653**	**1,426**
Research Universities	**96,750,000**	**145,671,759**	**60,396,555**	**46,111,219**	**894**
Augusta University	8,800,000	7,602,648	3,441,169	2,356,201	54
Georgia Institute of Technology	1,700,000	3,924,852	2,273,460	1,998,832	31
Georgia State University	17,000,000	21,451,407	9,739,757	7,202,949	121
University of Georgia	69,250,000	112,692,852	44,942,169	34,553,237	688
Comprehensive Universities	**21,300,000**	**31,741,176**	**15,706,523**	**7,229,282**	**212**
Georgia Southern University	9,500,000	13,640,066	3,943,413	2,975,787	85
Kennesaw State University	9,900,000	15,105,698	10,502,136	3,292,605	105
University of West Georgia	0	0	0	0	0
Valdosta State University	1,900,000	2,995,412	1,260,974	960,890	22
State Universities	**16,000,000**	**22,721,580**	**9,905,063**	**8,259,273**	**196**
Albany State University	1,400,000	2,458,669	1,063,022	1,056,610	28
Armstrong State University	0	0	0	0	0
Clayton State University	2,900,000	941,675	609,476	355,955	5
Columbus State University	4,950,000	7,726,229	3,162,669	2,424,312	57
Fort Valley State University	750,000	1,242,707	493,299	368,149	9
Georgia College & State University	1,000,000	1,611,184	370,738	447,821	24
Georgia Southwestern State University	0	0	0	0	0
Savannah State University	2,500,000	4,347,447	2,238,506	2,119,576	42
Southern Polytechnic State University	0	0	0	0	0
University of North Georgia	2,500,000	4,393,669	1,967,353	1,486,850	31
State Colleges	**11,600,000**	**20,313,729**	**8,519,847**	**6,290,879**	**124**
Abraham Baldwin Agricultural College	2,700,000	3,796,818	1,069,455	791,817	24
Atlanta Metropolitan State College	2,500,000	5,070,296	2,434,089	1,832,308	34
Bainbridge State College	0	0	0	0	0
College of Coastal Georgia	0	0	0	0	0
Dalton State College	0	0	0	0	0
Darton State College	0	0	0	0	0
East Georgia State College	0	0	0	0	0
Georgia Gwinnett College	0	0	0	0	0
Georgia Highlands College	0	0	0	0	0
Georgia Perimeter College	0	0	0	0	0
Gordon State College	4,400,000	8,923,721	4,283,997	3,224,862	59
Middle Georgia State College	2,000,000	2,522,894	732,306	441,892	7
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 2016.

Appendix 3

Combined Economic Impact of Augusta University and MCG Health, Inc. in Fiscal Year 2015

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Augusta University	**889,383,577**	**1,240,109,997**	**925,464,167**	**718,933,787**	**12,090**
Personal Services	517,483,783	912,197,502	738,776,860	635,398,405	9,032
Operating Expenses	241,192,581	163,832,131	95,869,011	37,968,789	1,332
Student Spending	121,907,213	156,477,716	87,377,127	43,210,392	1,672
Capital Spending	8,800,000	7,602,648	3,441,169	2,356,201	54
MCG Health Inc.	**519,919,181**	**689,779,657**	**486,099,938**	**395,518,499**	**7,199**
Wages, Salaries and Benefits	262,814,000	463,276,879	375,201,903	322,699,186	5,166
Other Operating Expenditures	217,364,000	166,915,100	88,395,702	55,113,481	1,656
Student Spending	0	0	0	0	0
Capital Spending	39,741,181	59,587,678	22,502,333	17,705,832	377

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

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Grand Total	**1,409,302,758**	**1,929,889,654**	**1,411,564,105**	**1,114,452,286**	**19,289**
Wages, Salaries and Benefits	780,297,783	1,375,474,381	1,113,978,763	958,097,591	14,198
Operating Expenses	458,556,581	330,747,231	184,264,713	93,082,270	2,988
Student Spending	121,907,213	156,477,716	87,377,127	43,210,392	1,672
Capital Spending	48,541,181	67,190,326	25,943,502	20,062,033	431

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, 2015 and 2014). Other operating expenditures do not include $69.8 million in purchased services (a transfer) and $30 million in depreciation and amortization. The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN system, version 3.0, 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 2016.

Appendix 4

Combined Economic Impact of Augusta University and MCG Health, Inc. on the Augusta MSA in Fiscal Year 2015

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Augusta University	**889,383,577**	**1,268,151,286**	**949,245,158**	**720,384,265**	**12,139**
Personal Services	517,483,783	916,194,442	746,521,872	632,408,132	8,968
Operating Expenses	241,192,581	185,034,116	109,098,299	42,584,391	1,438
Student Spending	121,907,213	159,321,576	90,039,177	42,950,752	1,680
Capital Spending	8,800,000	7,601,152	3,585,808	2,440,990	52
MCG Health, Inc.	**519,919,181**	**696,139,727**	**498,869,759**	**395,328,896**	**7,112**
Wages, Salaries, and Benefits	262,814,000	465,306,798	379,135,354	321,180,519	1,604
Other Operating Expenditures	217,364,000	170,161,500	95,201,643	55,160,882	1,604
Student Spending	0	0	0	0	0
Capital Spending	39,741,181	60,671,428	24,532,762	18,987,497	374

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

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Grand Total	**1,409,302,758**	**1,964,291,012**	**1,448,114,915**	**1,115,713,162**	**19,250**
Wages, Salaries, and Benefits	780,297,783	1,381,501,240	1,125,657,226	953,588,651	14,102
Operating Expenses	458,556,581	355,195,616	204,299,943	97,745,273	3,042
Student Spending	121,907,213	159,321,576	90,039,177	42,950,752	1,680
Capital Spending	48,541,181	68,272,580	28,118,570	21,428,487	426

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, 2015 and 2014). Other operating expenditures do not include $69.8 million in purchased services (a transfer) and $30 million in depreciation and amortization. The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN system, version 3.0, 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 2016.

Appendix 5

Augusta University's Albany, Savannah, and Rome Clinical Campuses: Economic Impact of FY 2015 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 2015, providing base levels of impact that can be referenced in future years as the programs expand. Although the economic impacts in FY 2015 are not large, the impacts should expand rapidly once more students are enrolled at these branch campuses.

Albany: In FY 2015, total expenditures at the Albany clinical campus were $1,558,153, including $750,276 personnel expense, $566,728 operating expense, and $271,149 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:

- $1,588,153 in initial expenditures and 5 on-campus jobs,
- $1,942,995 in output (sales),
- $1,397,929 in gross regional product (value added),
- $1,057,254 in income, and
- 17 jobs.

Savannah: Total expenditures at the Savannah clinical campus were $1,790,687, including $753,812 personnel expense, $537,400 operating expense, and $499,485 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:

- $1,790,697 in initial expenditures and 5 on-campus jobs,
- $2,337,078 in output (sales),
- $1,668,912 in gross regional product (value added),
- $1,205,277 in income, and
- 19 jobs.

Rome: Total expenditures at the Rome clinical campus were $1,303,885, including $534,179 personnel expense, $555,641 operating expense, and $214,065 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:

- $1,303,885 in initial expenditures and 3 on-campus jobs,
- $1,506,380 in output (sales),
- $1,091,121 in gross regional product (value added),
- $785,335 in income, and
- 14 jobs.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), April 2016.

Appendix 6

Augusta University and UGA Medical Partnership's Athens Campus: Economic Impact of FY 2015 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 2015.

In FY 2015, initial expenditures at the Athens campus were $13,709,449, including $7,841,397 personnel expense, $2,201,856 operating expense, $2,283,360 in student spending, and $1,382,836 in capital spending (Assistant Vice Chancellor for Fiscal Affairs/ Budget Director, Board of Regents, University System of Georgia provided expense data for personnel, operations, and capital projects as well as enrollment data).

The economic impact accruing to Athens includes:

- $13,709,449 in initial expenditures and 70 on-campus jobs,
- $21,130,267 in output (sales),
- $15,164,379 in gross regional product (value added),
- $12,027,584 in income, and
- 179 jobs.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, (www.selig.uga.edu), April 2016.

Appendix 7

Combined Economic Impact of UGA's Griffin Campus (Budget Unit "A" and Budget Unit "B")
On Its Regional Economy in Fiscal Year 2015

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	**19,949,721**	**34,000,124**	**25,270,335**	**19,697,403**	**361**
Personal Services	12,472,800	25,554,207	19,587,531	16,713,853	291
Operating Expenses	4,812,000	6,151,323	3,707,788	1,843,524	41
Student Spending	2,154,921	3,294,594	1,975,015	1,140,027	29

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 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 361 jobs consists of 200 on-campus jobs (expressed on a FTE basis) and 161 off-campus jobs. For each FTE job created on the Griffin campus, there are 0.8 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 2016.