

**The Economic Impact of
University System of Georgia
Institutions on their
Regional Economies in FY 2007**

April 2008

A Needs Assessment Study

Commissioned by

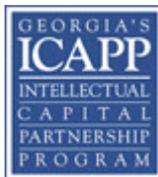
Georgia's Intellectual Capital Partnership Program (ICAPP)

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**The Economic Impact of University System of Georgia Institutions
on their Regional Economies in FY 2007**

Executive Summary

The statewide economic impact of the University System of Georgia's 35 institutions in fiscal year 2007 includes:

- \$11 billion in output (sales);
- \$6.7 billion in gross regional product;
- \$4.8 billion in income; and
- 106,267 full- and part-time jobs (2.6 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 1.4 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.

1. 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 three 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 2007 fiscal year—July 1, 2006 through June 30, 2007. Note that since Georgia Gwinnett College began to enroll students in FY 2007 (Fall Semester 2006), its economic impact is estimated, but is probably not a very reliable indicator of the magnitude of its future economic impacts.

The study does not account for all of the short-term impacts of the 35 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.

2. Economic Impact Highlights

In the simplest terms, the total economic impact of all 35 institutions on their host communities was \$11 billion in FY 2007. 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 2007 total, \$7.3 billion (66 percent) is initial spending by the institutions and students; \$3.8 billion (34 percent) is the induced or re-spending (multiplier) impact. Dividing the FY 2007 total output impact (\$11 billion) by initial spending (\$7.3 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 2007, value added comprises \$6.7 billion (61 percent) of the \$11 billion output impact, with domestic and foreign trade comprising the remaining \$4.3 billion (39 percent). The \$6.7 billion value-added impact equals 1.7 percent of Georgia's state GDP in 2007. Labor income received by residents of the communities that host one or more institutions equals \$4.8 billion, and represents 72 percent of the value-added impact.

The collective or rolled-up employment impact of all 35 institutions on their host communities in FY 2007, including multiplier effects, is 106,267 full- and part-time jobs. Approximately 42 percent of these positions are on campus (University System employees) and 58 percent are off-campus positions in either the private or public sectors. On average, for each job created on campus there are 1.4 off-campus jobs that exist because of spending related to the institution. The 106,267 jobs generated by the University System account for 2.6 percent of all the jobs in Georgia in 2007, or about one job in thirty-nine.

3. Methodology

Understanding the Concept of the 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—referred to as 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 2007 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 Professional Version 2.0 (2007) 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 Census 2000 (*Residence County to Workplace County Flows for Georgia, U.S.* Census Bureau, Internet Release Date: March 6, 2003).

For analytical purposes, all dollar amounts were converted to inflation-adjusted dollars, but the amounts expressed in this report have been re-inflated to 2007 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 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 2007. 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 2007 were obtained from the Board of Regents for FY 2007. 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.

Expenditures for the Medical College of Georgia 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. Prior to FY2007, the University of Georgia accounted for and reported HOPE scholarship funds and Stafford (FDSL) loan funds as sponsored operations instead of agency funds on budget basis reports. Therefore, the expenditures and impacts for the University of Georgia are not comparable to previously published

estimates, and the expenditures and impacts for the Medical College of Georgia are not comparable to estimates in studies for years prior to FY 2004.

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 2.0 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 2007. 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 2007 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) 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 individual institutions were not detailed enough to be used in the IMPLAN 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 \$3,675 for Summer 2006, \$6,125 for Fall 2006, and at \$6,125 for Spring 2007.

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 2007, 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.

4. Results

This section describes the economic benefits that the University System of Georgia's 35 institutions conveyed to their host communities in FY 2007. 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 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 2007 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 2007 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 2007, total initial spending for all 35 institutions was \$7.3 billion. Spending originating from personnel services accounted for 37 percent (\$2.7 billion) of initial spending, spending due to operating expenses accounted for 22 percent (\$1.6 billion) of initial spending, and students' personal expenditures accounted for 41 percent (\$3.0 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 2007 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 35 institutions of the University System of Georgia was \$11 billion in FY 2007 (Table 1). This amount represents the combined impact of all 35 institutions on their host communities. Of the FY 2007 output

impact, \$7.3 billion (66 percent) was initial spending by the institutions and students, while \$3.8 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 2007 was 1.52, obtained by dividing the total output impact (\$11 billion) by initial spending (\$7.3 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.

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 that 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 2007 are reported in the third column of Tables 1 and 2.

The 35 institutions collectively generated a value-added impact of \$6.7 billion in FY 2007. For all institutions combined, the value-added impact equaled 92 percent of initial spending and 61 percent of the \$11 billion output impact (with domestic and foreign trade comprising the remaining 39 percent of the output impact). The \$6.7 billion value-added impact reported for FY 2007 equals 1.7 percent of Georgia's gross state product.

Labor Income Impact

Collectively, the 35 University System institutions generated a labor income impact of \$4.8 billion in FY 2007. The labor income received by residents of the communities that host University System institutions

represents 72 percent of the value-added impact and 67 percent of the initial spending. 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 35 institutions generated an employment impact of 106,267 jobs in FY 2007. Approximately 42 percent of these positions are on-campus jobs at one of the institutions of the University System of Georgia, and 58 percent are off-campus positions in either the private or public sectors. On average, for each job created on campus there are 1.4 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 2.6 percent of all the jobs held by Georgians, or about one job in 39. For all institutions combined, 14.6 jobs were generated for each million dollars of initial spending in FY 2007.

Employment impacts in FY 2007 for the individual institutions are reported in the fifth column of Table 2.

5. Limitations and Topics for Future Research

Because the goal of this study was to estimate the economic impact of all 35 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 households. 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.

6. Summary

The fundamental finding of this study is that each of the University System of Georgia's 35 institutions creates substantial economic impacts in terms of output, value added, labor income, and employment. The combined economic impact of the University System's 35 institutions on their host communities in FY 2007 includes:

- \$11 billion in output (sales);
- \$6.7 billion in valued added (gross regional product);
- \$4.8 billion in labor income; and
- 106,267 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

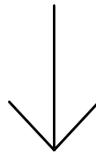
Schematic representation
of impact relationships

Direct
Expenditures

+

Indirect & Induced Impacts
(Multiplier Effects)

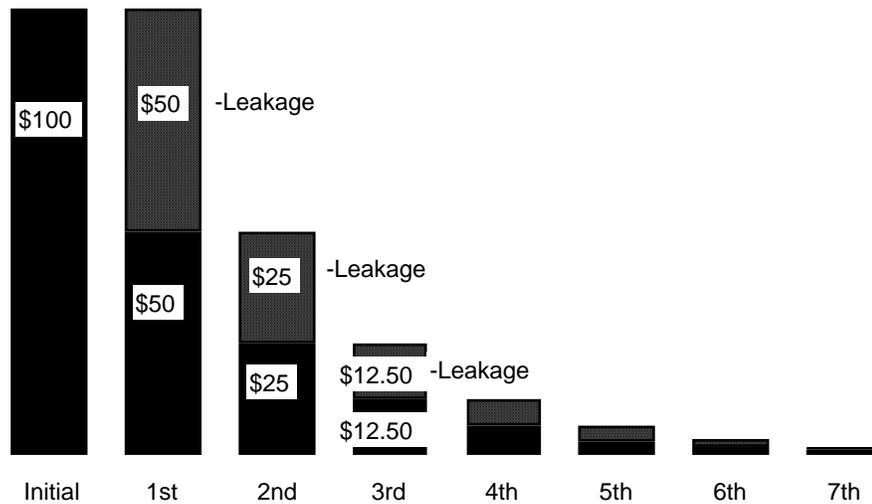
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Total Economic Impact

Figure 2

How multipliers capture the impact of respending 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
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*Leakage indicates amounts spent outside area and not re-circulated locally.

Table 1

Total Economic Impact of all 35 Institutions of the University System of Georgia
on their Regional Economies in the 2007 Fiscal Year

Total for All Institutions in 2007	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
System Total	7,279,143,097	11,037,935,664	6,721,156,391	4,842,777,373	106,267
Personal Services	2,713,323,746	5,329,349,505	3,873,992,176	3,302,804,283	60,206
Operating Expenses	1,599,893,451	2,058,384,442	723,610,640	453,992,416	10,053
Student Spending	2,965,925,900	3,650,201,717	2,123,553,575	1,085,980,674	36,008

Notes:

The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN Professional System, version 2.0, Type SAM multipliers, 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. 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.

Personal Services includes all expenditures for salaries and wages to all employees and persons in the employ of the various departments, boards, commissions, institutions, and other governmental units. Also includes the employer's share of payments for FICA, retirement, group insurance, or other employer payments for employee benefits. Source: University System of Georgia Business Procedures Manual, Section 2.9.1

The expenditures and impacts for the University of Georgia are not comparable to previously published estimates, and the expenditures and impacts for the Medical College of Georgia are not comparable to estimates in studies for years prior to FY 2004. See the text for details.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), April 7, 2008.

Table 2

Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in the 2007 Fiscal Year

<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 and Regional Universities					
Georgia Institute of Technology	1,090,864,032	1,829,265,854	1,150,118,250	869,425,339	14,281
Personal Services	525,983,276	1,066,593,953	785,486,478	661,385,048	9,381
Operating Expenses	341,310,906	466,762,747	188,531,515	116,891,290	2,300
Student Spending	223,569,850	295,909,154	176,100,257	91,149,001	2,600
Georgia State University	745,777,381	1,186,130,572	739,895,965	524,319,697	13,341
Personal Services	272,130,643	551,829,158	406,391,141	342,184,152	8,656
Operating Expenses	168,188,088	230,007,116	92,902,852	57,600,631	1,133
Student Spending	305,458,650	404,294,298	240,601,972	124,534,914	3,552
Medical College of Georgia	582,738,161	961,399,599	598,454,700	488,568,405	8,892
Personal Services	361,083,692	690,585,100	498,161,262	429,535,166	7,229
Operating Expenses	183,101,269	224,990,766	74,139,643	45,717,334	1,185
Student Spending	38,553,200	45,823,733	26,153,795	13,315,905	478
University of Georgia	1,301,528,721	2,068,967,696	1,277,151,793	950,779,310	18,890
Personal Services	571,875,553	1,128,578,076	820,537,001	697,100,966	11,983
Operating Expenses	314,779,968	411,004,170	144,792,649	94,038,256	2,024
Student Spending	414,873,200	529,385,450	311,822,143	159,640,088	4,883
Georgia Southern University	362,022,139	470,491,626	265,289,494	186,785,140	5,238
Personal Services	108,815,199	199,457,446	139,571,529	122,843,294	2,297
Operating Expenses	59,953,390	67,342,910	15,132,732	9,286,484	299
Student Spending	193,253,550	203,691,270	110,585,233	54,655,362	2,642
Valdosta State University	224,133,271	302,427,198	177,521,697	122,452,118	3,099
Personal Services	66,481,176	123,793,448	88,009,510	76,638,862	1,334
Operating Expenses	31,555,495	36,008,569	8,646,416	5,505,399	157
Student Spending	126,096,600	142,625,181	80,865,771	40,307,857	1,608
State Universities					
Albany State University	99,761,150	137,394,103	78,487,689	55,992,809	1,559
Personal Services	30,807,037	58,259,751	41,627,810	36,172,428	812
Operating Expenses	21,862,663	25,800,655	6,669,476	4,329,050	130
Student Spending	47,091,450	53,333,697	30,190,403	15,491,331	617
Armstrong Atlantic State University	136,606,685	195,283,435	116,762,873	80,103,510	1,985
Personal Services	40,330,975	77,508,711	56,019,414	48,195,205	950
Operating Expenses	23,658,935	29,684,421	9,595,085	5,966,168	150
Student Spending	72,616,775	88,090,303	51,148,374	25,942,137	885

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in the 2007 Fiscal Year

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Augusta State University	129,242,404	180,347,832	107,107,432	72,861,782	2,127
Personal Services	35,777,177	68,425,093	49,359,204	42,559,539	1,090
Operating Expenses	20,685,527	25,417,918	8,375,790	5,164,832	134
Student Spending	72,779,700	86,504,821	49,372,438	25,137,411	903
Clayton State University	119,794,690	183,848,708	114,455,389	77,135,265	1,737
Personal Services	34,741,044	70,448,225	51,881,156	43,684,292	839
Operating Expenses	18,786,046	25,691,023	10,376,937	6,433,797	127
Student Spending	66,267,600	87,709,460	52,197,296	27,017,176	771
Columbus State University	154,757,145	211,839,694	123,319,348	86,393,792	2,436
Personal Services	45,591,251	85,816,921	61,508,237	53,576,975	1,276
Operating Expenses	25,272,994	29,518,617	7,613,780	5,085,123	137
Student Spending	83,892,900	96,504,156	54,197,331	27,731,694	1,023
Fort Valley State University	75,601,427	111,882,678	66,515,705	49,561,190	1,455
Personal Services	30,324,745	58,055,973	41,944,533	36,215,293	999
Operating Expenses	18,008,182	21,573,228	6,185,706	3,954,194	105
Student Spending	27,268,500	32,253,477	18,385,466	9,391,703	351
Georgia College & State University	135,485,842	171,519,082	99,860,163	71,554,550	1,855
Personal Services	44,360,021	79,632,667	55,667,830	49,276,251	906
Operating Expenses	18,335,096	19,637,623	3,974,818	2,314,001	69
Student Spending	72,790,725	72,248,792	40,217,515	19,964,298	880
Georgia Southwestern State University	60,576,621	77,636,619	41,107,999	29,412,123	793
Personal Services	17,060,119	31,414,481	21,739,531	19,185,687	347
Operating Expenses	15,073,227	16,925,503	3,176,966	2,106,669	70
Student Spending	28,443,275	29,296,635	16,191,502	8,119,767	376
Kennesaw State University	381,518,157	584,598,257	368,026,524	246,427,964	5,244
Personal Services	110,330,949	223,730,166	164,764,685	138,733,004	2,306
Operating Expenses	43,966,858	60,127,261	24,286,179	15,057,657	296
Student Spending	227,220,350	300,740,830	178,975,660	92,637,303	2,642
North Ga. College & State University	101,142,365	145,760,977	89,385,444	61,582,885	1,443
Personal Services	31,742,777	61,007,315	44,143,873	37,873,153	650
Operating Expenses	11,849,088	14,705,486	4,775,418	3,168,605	73
Student Spending	57,550,500	70,048,176	40,466,153	20,541,127	720
Savannah State University	85,089,732	121,592,072	70,264,933	48,739,229	1,157
Personal Services	24,637,123	47,348,016	34,220,775	29,441,173	549
Operating Expenses	21,874,909	27,446,034	8,871,557	5,516,282	138
Student Spending	38,577,700	46,798,022	27,172,601	13,781,774	470

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in the 2007 Fiscal Year

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Southern Polytechnic State University	86,845,046	134,661,517	84,768,951	57,759,037	1,139
Personal Services	27,237,797	55,233,066	40,676,048	34,249,514	505
Operating Expenses	12,147,074	16,611,838	6,709,737	4,160,099	82
Student Spending	47,460,175	62,816,613	37,383,166	19,349,424	552
University of West Georgia	201,579,411	310,083,610	194,950,001	131,356,577	2,867
Personal Services	59,846,694	121,357,707	89,373,126	75,252,790	1,344
Operating Expenses	25,764,417	35,234,358	14,231,613	8,823,733	174
Student Spending	115,968,300	153,491,545	91,345,262	47,280,054	1,349
State Colleges					
Abraham Baldwin Agricultural College	65,561,742	81,229,336	44,725,879	30,279,609	1,005
Personal Services	15,216,392	28,024,674	19,774,062	17,365,993	452
Operating Expenses	12,094,725	13,500,467	2,701,832	1,780,677	57
Student Spending	38,250,625	39,704,195	22,249,985	11,132,939	496
Dalton State College	70,186,728	87,548,854	50,001,962	34,047,972	949
Personal Services	17,871,924	32,573,060	23,019,971	20,247,674	418
Operating Expenses	10,813,029	11,778,312	2,252,521	1,481,386	42
Student Spending	41,501,775	43,197,482	24,729,470	12,318,912	489
Gainesville State College	107,305,279	152,522,517	90,854,422	57,865,589	1,558
Personal Services	21,330,717	42,148,513	30,666,371	26,033,956	629
Operating Expenses	15,282,262	19,986,618	7,057,895	4,623,402	97
Student Spending	70,692,300	90,387,386	53,130,156	27,208,231	832
Georgia Gwinnett College	16,195,398	25,981,677	14,706,996	10,984,873	224
Personal Services	5,872,680	11,908,677	8,770,071	7,384,460	149
Operating Expenses	9,324,343	12,751,586	5,150,531	3,193,377	63
Student Spending	998,375	1,321,414	786,394	407,036	12
Gordon College	61,955,404	91,874,927	56,127,773	36,084,974	847
Personal Services	13,445,397	27,264,706	20,078,922	16,906,592	328
Operating Expenses	9,185,057	12,561,106	5,073,593	3,145,675	62
Student Spending	39,324,950	52,049,115	30,975,258	16,032,707	457
Macon State College	106,693,797	144,834,388	84,878,357	56,254,117	1,492
Personal Services	25,674,255	48,945,575	35,286,764	30,464,199	558
Operating Expenses	15,865,467	18,930,075	5,762,051	3,499,224	91
Student Spending	65,154,075	76,958,738	43,829,542	22,290,694	843
Middle Georgia College	71,410,052	85,136,465	40,541,629	26,955,576	839
Personal Services	12,193,679	22,194,210	15,588,029	13,764,692	303
Operating Expenses	25,854,723	28,187,114	5,869,797	3,619,319	110
Student Spending	33,361,650	34,755,141	19,083,803	9,571,565	426

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in the 2007 Fiscal Year

Institution	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment Impact (jobs)
Two-year Colleges					
Atlanta Metropolitan College	34,722,459	52,871,937	32,375,031	21,693,092	474
Personal Services	9,392,676	19,046,559	14,026,720	11,810,595	213
Operating Expenses	6,813,908	9,318,420	3,763,830	2,333,610	46
Student Spending	18,515,875	24,506,958	14,584,481	7,548,887	215
Bainbridge College	50,266,572	60,015,706	31,243,838	20,959,640	658
Personal Services	10,714,478	19,396,591	13,425,765	11,891,208	199
Operating Expenses	10,903,019	11,960,861	2,381,622	1,472,058	56
Student Spending	28,649,075	28,658,254	15,436,451	7,596,374	403
Coastal Georgia Community College	51,943,968	69,284,826	39,041,628	26,419,226	695
Personal Services	13,111,247	24,466,039	17,404,397	15,136,590	281
Operating Expenses	10,179,971	11,814,792	3,020,757	1,946,843	54
Student Spending	28,652,750	33,003,995	18,616,474	9,335,793	360
Darton College	80,245,164	105,808,797	59,444,558	40,141,234	1,363
Personal Services	18,693,109	35,350,880	25,258,943	21,948,723	668
Operating Expenses	15,699,080	18,526,861	4,789,199	3,108,592	94
Student Spending	45,852,975	51,931,056	29,396,416	15,083,919	601
East Georgia College	33,773,307	42,137,152	21,871,837	14,023,260	471
Personal Services	5,926,290	10,945,520	7,729,666	6,768,046	155
Operating Expenses	8,386,667	9,534,563	2,372,772	1,428,199	44
Student Spending	19,460,350	21,657,069	11,769,399	5,827,015	272
Ga. Highlands College	68,989,194	89,617,375	50,783,887	33,204,322	986
Personal Services	15,242,788	28,565,052	20,452,100	17,759,151	404
Operating Expenses	12,425,931	14,384,052	4,079,392	2,397,267	65
Student Spending	41,320,475	46,668,271	26,252,395	13,047,904	517
Georgia Perimeter College	337,727,565	504,549,383	309,516,140	201,124,885	4,507
Personal Services	78,544,122	159,272,528	117,295,261	98,763,421	1,741
Operating Expenses	50,706,818	69,344,553	28,009,163	17,365,941	342
Student Spending	208,476,625	275,932,302	164,211,716	84,995,523	2,424
South Georgia College	31,584,363	39,566,414	20,745,264	14,167,842	427
Personal Services	7,235,393	13,297,418	9,335,670	8,231,885	159
Operating Expenses	7,451,320	8,212,529	1,663,829	1,052,669	33
Student Spending	16,897,650	18,056,467	9,745,765	4,883,288	235

(continued)

Table 2 (continued)

Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in the 2007 Fiscal Year

<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>
Waycross College	15,517,725	19,824,779	10,852,839	7,360,438	235
Personal Services	3,701,351	6,874,228	4,796,320	4,224,304	97
Operating Expenses	2,732,999	3,102,290	672,987	424,573	14
Student Spending	9,083,375	9,848,261	5,383,532	2,711,561	124

Notes:

The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN Professional System, version 2.0, Type SAM multipliers, 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. 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.

Personal Services includes all expenditures for salaries and wages to all employees and persons in the employ of the various departments, boards, commissions, institutions, and other governmental units. Also includes the employer's share of payments for FICA, retirement, group insurance, or other employer payments for employee benefits. Source: University System of Georgia Business Procedures Manual, Section 2.9.1

Expenditures and impacts for the Medical College of Georgia and the University of Georgia do not include impacts associated with the hospital and clinics operated by MCG Health Inc. See the text for details.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), April 7, 2008.

Table 3

On-Campus and Off-Campus Jobs that
Exist Due to Institution-Related Spending
in the 2007 Fiscal Year

<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	106,267	44,140	62,127
Research Universities and Regional Universities	63,741	29,523	34,218
Georgia Institute of Technology	14,281	6,088	8,193
Georgia State University	13,341	6,952	6,389
Medical College of Georgia	8,892	5,086	3,806
University of Georgia	18,890	8,705	10,185
Georgia Southern University	5,238	1,728	3,510
Valdosta State University	3,099	964	2,135
State Universities	25,796	9,440	16,356
Albany State University	1,559	625	934
Armstrong Atlantic State University	1,985	711	1,274
Augusta State University	2,127	878	1,249
Clayton State University	1,737	621	1,116
Columbus State University	2,436	1,022	1,414
Fort Valley State University	1,455	808	647
Georgia College & State University	1,855	714	1,141
Georgia Southwestern State University	793	267	526
Kennesaw State University	5,244	1,615	3,629
North Georgia College & State University	1,443	472	971
Savannah State University	1,157	403	754
Southern Polytechnic State University	1,139	334	805
University of West Georgia	2,867	970	1,897
State Colleges	6,913	2,217	4,696
Abraham Baldwin Agricultural College	1,005	373	632
Dalton State College	949	338	611
Gainesville State College	1,558	507	1,051
Georgia Gwinnett College	224	112	112
Gordon College	847	244	603
Macon State College	1,492	401	1,091
Middle Georgia College	839	242	597
Two-Year Colleges	9,816	2,960	6,856
Atlanta Metropolitan College	474	154	320
Bainbridge College	658	149	509
Coastal Georgia Community College	695	213	482
Darton College	1,363	554	809
East Georgia College	471	123	348
Georgia Highlands College	986	320	666
Georgia Perimeter College	4,507	1,249	3,258
South Georgia College	427	121	306
Waycross College	235	77	158

Notes: Employment includes both full-time and part-time jobs. The expenditures and impacts for the University of Georgia are not comparable to previously published estimates, and the expenditures and impacts for the Medical College of Georgia are not comparable to estimates in studies for years prior to FY 2004. See the text for details.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), April 7, 2008.

Appendix 1

Study Areas for Institutions

Research and Regional Universities

Georgia Institute of Technology – Atlanta MSA
Georgia State University – Atlanta MSA
Medical College of Georgia – Richmond, Columbia, Burke, McDuffie, Jefferson, Lincoln, Warren, and
Glascock
University of Georgia – Clarke, Oconee, Madison, Oglethorpe, Jackson, Barrow, Walton, and Gwinnett
Georgia Southern University – Bulloch, Screven, Candler, Jenkins, Evans, Tattnall, and Emanuel
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 Atlantic State University – Chatham, Effingham, Bryan, Liberty, and Bulloch
Augusta State University – Richmond, Columbia, Burke, McDuffie, Jefferson, Lincoln Warren, and Glascock
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
Kennesaw State University – Atlanta MSA
North Georgia College & State University – Lumpkin, Hall, Dawson, White, Forsyth, and Union
Savannah State University – Chatham, Effingham, Bryan, Liberty, and Bulloch
Southern Polytechnic State University – Atlanta MSA
University of West Georgia – Atlanta MSA

State Colleges

Abraham Baldwin Agricultural College – Tift, Berrien, Worth, Colquitt, Irwin, Cook, and Turner
Dalton State College – Whitfield, Murray, Catoosa, Gordon, Walker, and Gilmer
Gainesville State College – Hall, Gwinnett, Jackson, White, Habersham, Lumpkin, Banks, and Forsyth
Georgia Gwinnett College – Atlanta MSA
Gordon College – Atlanta MSA
Macon State College – Bibb, Houston, Jones, Monroe, Peach, Crawford, Twiggs, Baldwin, Wilkinson, and
Laurens
Middle Georgia College – Bleckley, Dodge, Pulaski, Twiggs, and Laurens

Two-Year Colleges

Atlanta Metropolitan College – Atlanta MSA
Bainbridge College – Decatur, Seminole, Miller, Grady, Early, Mitchell, and Baker
Coastal Georgia Community College – Glynn, Brantley, McIntosh, Camden, and Wayne
Darton College – Dougherty, Lee, Worth, Mitchell, Terrell, Colquitt, Baker, Sumter, Calhoun, and Tift
East Georgia College – Emanuel, Candler, Bulloch, Johnson, Jefferson, Toombs, Treutlen, and Jenkins
Georgia Highlands College – Floyd, Polk, Chattooga, Bartow, and Gordon
Georgia Perimeter College – Atlanta MSA
South Georgia College – Coffee, Atkinson, Bacon, Jeff Davis, Ware, Telfair, Ben Hill, and Irwin
Waycross College – Ware, Pierce, Brantley, Bacon, Coffee, Clinch, and Atkinson

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, Internet Release date March 6, 2003.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), April 7, 2008.

Appendix 2

Economic Impact of Capital Outlays
in Fiscal Year 2007

<u>Institution</u>	<u>Initial Spending (2007 dollars)</u>	<u>Output Impact (2007 dollars)</u>	<u>Value Added Impact (2007 dollars)</u>	<u>Labor Income Impact (2007 dollars)</u>	<u>Employment Impact (jobs)</u>
System Total	308,208,000	516,777,326	275,030,920	204,973,597	4,738
Research Universities and Regional Universities	158,685,000	281,412,209	155,550,960	116,393,357	2,501
Georgia Institute of Technology	48,000,000	85,269,375	47,943,578	35,148,253	738
Georgia State University	95,885,000	171,807,045	95,011,001	71,615,126	1,538
Medical College of Georgia	0	0	0	0	0
University of Georgia	9,800,000	16,910,130	9,594,513	7,310,959	152
Georgia Southern University	5,000,000	7,425,659	3,001,868	2,319,019	73
Valdosta State University	0	0	0	0	0
State Universities	66,218,000	107,655,983	56,846,226	42,136,456	986
Albany State University	0	0	0	0	0
Armstrong Atlantic State University	5,618,000	9,313,463	4,871,106	3,742,225	94
Augusta State University	2,800,000	3,313,243	2,583,335	784,974	11
Clayton State University	0	0	0	0	0
Columbus State University	0	0	0	0	0
Fort Valley State University	0	0	0	0	0
Georgia College & State University	4,850,000	6,234,984	3,089,361	2,410,602	72
Georgia Southwestern State University	0	0	0	0	0
Kennesaw State University	4,900,000	8,908,752	4,361,245	3,250,244	71
North Ga College & State University	39,550,000	64,974,944	34,900,975	26,658,454	614
Savannah State University	3,800,000	6,365,468	2,856,969	2,172,376	56
Southern Polytechnic State University	0	0	0	0	0
University of West Georgia	4,700,000	8,545,129	4,183,235	3,117,581	68
State Colleges	54,510,000	86,004,892	42,621,438	31,292,966	797
Abraham Baldwin Agricultural College	17,075,000	24,090,623	10,918,347	7,933,876	254
Dalton State College	4,650,000	6,517,349	3,244,890	2,510,651	73
Gainesville College	5,000,000	8,758,887	4,338,162	3,256,788	69
Georgia Gwinnett College	0	0	0	0	0
Gordon College	23,285,000	40,338,427	21,519,906	15,568,991	339
Macon State College	0	0	0	0	0
Middle Georgia College	4,500,000	6,299,606	2,600,133	2,022,660	62
Two-Year Colleges	28,795,000	41,704,242	20,012,296	15,150,818	454
Atlanta Metropolitan College	0	0	0	0	0
Bainbridge College	0	0	0	0	0
Coastal Georgia Community College	4,700,000	7,314,873	3,845,375	3,010,788	84
Darton College	5,000,000	7,917,176	4,019,838	3,103,951	88
East Georgia College	1,400,000	1,925,250	944,789	701,773	21
Georgia Highlands College	0	0	0	0	0
Georgia Perimeter College	0	0	0	0	0
South Georgia College	15,395,000	21,288,356	9,626,296	7,106,424	223
Waycross College	2,300,000	3,258,587	1,575,998	1,227,882	38

Appendix 2 (continued)

Notes: The impacts of spending on Output, Value Added, Labor Income, and Employment were estimated using the IMPLAN Professional System, version 2.0, Type SAM multipliers, and production functions provided by MIG, Inc. 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-time and part-time jobs. The expenditures and impacts for the University of Georgia are not comparable to previously published estimates, and the expenditures and impacts for the Medical College of Georgia are not comparable to estimates in studies for years prior to FY 2004. See the text for details.

Capital expenditures are allocated to the fiscal year that the USG reports funding them, not to the fiscal year in which the funds were spent. Therefore, institutions that show no capital outlays for FY 2007 in Appendix 2 may have spent capital funds in FY 2007 that were allocated (and reported) in a previous fiscal year.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia (www.selig.uga.edu), April 7, 2008.

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