

The town-and-gown economy

Jeffrey M. Humphreys

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 34 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 attending 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 regarding annual spending in the specified categories. Moreover, the emphasis is on funds received by recipients in the region that hosts each college or university. The study reports expenditures and impacts for the 2004 fiscal year—July 1, 2003 through June 30, 2004.

The study does not account for all of the short-term impacts of the 34 institutions of their host communities,

however. For example, several sources of college/university-related spending are identified, but no dollar amounts are estimated for them, because to do so would require collecting survey data, a task beyond the resources available to this study. Also, the study neither quantifies the many long-term benefits flowing to the economic development of the host communities through the presence of an institution of higher education 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.

Highlights

In the simplest terms, the total economic impact of all 34 institutions on their host communities was \$9.7 billion in FY 2004. 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 2004 total, \$6.4 billion (66 percent) is initial spending by the institutions and students; \$3.3 billion (34 percent) is the induced or respending (multiplier) impact. Dividing the FY 2004 total output impact (\$9.7 billion) by initial spending (\$6.4 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 hosting the institution.

In FY 2004, value added comprises \$5.9 billion (61 percent) of the \$9.7 billion output impact, with domestic and foreign trade comprising the remaining \$3.8 billion (39 percent) of the output impact. The \$5.9 billion value-added impact equals 1.8 percent of Georgia's gross state product. Labor income received by residents of the communities that host one or more institutions equals \$4.4 billion, and represents 74 percent of the value-added impact.

The collective or rolled-up employment impact of all 34 institutions on their host communities in FY 2004, including multiplier effects, is 107,202 full- and part-time jobs. Approximately 38 percent of these positions are on campus—employees of the University System of Georgia—and 62 percent are off-campus positions in either the private or public sectors. On average, for each job created on campus there are 1.7 off-campus jobs that exist because of spending related to the institution. The 107,202 jobs generated by the University System of Georgia account for 2.8 percent of all the jobs in Georgia, or about one job in 36.

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Explaining Economic Impact

The total annual economic impact of college- or university-related spending consists of the net changes in regional output, value added, labor income, and employment that are due to initial spending by the institution, its faculty and staff, and its students. The total economic impact includes the impact of the initial round of spending and the secondary, or indirect and induced spending—often referred to as the multiplier effect—created as the initial expenditures are re-spent.

There are two types of secondary spending, indirect spending and induced spending. 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 service from other industries located in the host community. Induced spending 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.

Total economic impact—or the sum of the direct, indirect and induced economic impacts—often 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. 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, and therefore some double counting of economic activity is inevitable. 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 virtually every economic impact study. 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 every

dollar spent 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.

For example, suppose you buy 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 respending, \$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 respending, 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 place 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 instance, 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, so their multipliers are lower.

Institutions' Initial Spending

Institution-specific data on expenditures for personnel services and for operating expenses 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. These amounts were allocated to various economic sectors recognized by the IMPLAN software based on the typical expenditure pattern for households of moderate income.

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 recreations 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. and therefore are not comparable to previously published estimates for the institution.

METHODOLOGY

Estimating the economic impact of the University System institutions on their regional economies 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, students' spending was estimated and then allocated to industrial sectors. Next, 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 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 Table 4. These geographic areas are based on an analysis of commuting patterns data obtained from Census 2000.

For analytical purposes, all dollar amounts were converted to inflation-adjusted 2001 dollars, but the amounts expressed in this report have been re-inflated to 2004 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. The margins used differed depending on the consumer. For example, households pay transportation, wholesale, and the full retail margins. But institutions of higher education may pay little or no retail margin as they typically have more buying power than a household. In addition, some sectors of the model do not have margins. For example, because there usually are no wholesalers or retailers involved when someone rents a room, hotels do not have margins.

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) funded also were obtained from the Board of Regents. The expenditures were allocated to the year of reported funding, regardless of whether or not all of the funds were actually spent during that fiscal year. These amounts therefore are not included in the economic impacts expressed in Tables 1-3, although they are reported in the Appendix.

Students' Personal Spending

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 the 2001 *Consumer Expenditure Survey* conducted by the U.S. Bureau of Labor Statistics (BLS); a special BLS study that appeared in the July 2001 Monthly Labor Review that examined the expenditures of college-age students and nonstudents; and a sample of recent estimated costs of attendance prepared by individual institutions. Although the latter was not detailed enough to be used in the IMPLAN modeling system, the sample was used to develop a profile of average expenditures for some of the items typically purchased by students.

The 2001 *Consumer Expenditure Survey* covers consumer units consisting of one person at various income levels, but 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 consumer units at lower income levels, students' expenditures for books and for eating out were increased substantially, while their expenditures for groceries, cash contributions, insurance and pensions, and health care were reduced. Spending for vacations and travel—which do not take place locally—were eliminated entirely. In addition, expenditures for tuition were eliminated because of possible double counting. (System 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 per semester was estimated at \$3,360 for Summer 2003, at \$5,600 for Fall 2003, and at \$5,600 for Winter 2004.

The final step in estimating students' personal expenditures was to multiply the number of semesters of student spending by the average spending per semester. These amounts are reported in the first column of Tables 1 and 2. The number of semesters of students' spending equals

Snapshot

The statewide economic impact of the University System's 34 institutions in fiscal year 2004 includes:

- **\$9.7 billion in output (sales);**
- **\$5.9 billion in gross regional product;**
- **\$4.4 billion in income; and**
- **107,202 full- and part-time jobs (2.8 percent of all jobs held by Georgians).**

each institution's FTE enrollment as reported in the Semester Enrollment Reports issued by the Board of Regents.

Results

■ Total Initial Spending

For FY 2004, total initial spending for all 34 institutions was \$6.4 billion. Spending originating from personnel services accounted for 37 percent (\$2.4 billion) of initial spending, spending due to operating expenses accounted for 23 percent (\$1.4 billion), and students' personal expenditures accounted for 40 percent (\$2.5 billion) of initial spending.

■ Total Output Impact

The output impact was calculated for each category of initial spending, based on the impact of the first round of spending and the impacts generated by the re-spending of these amounts—the multiplier effect. Outputs impact for FY 2004 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 University System's 34 institutions was \$9.7 billion in FY 2004 (Table 1). Of the output impact, \$6.4 billion (66 percent) was initial spending by the institutions and students, while \$3.3 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

TABLE 1

**Total Economic Impact of all 34 Institutions of the University System of Georgia
on their Regional Economies in FY 2004**

Total in 2004	Initial Spending (current dollars)	Output Impact (current dollars)	Value Added Impact (current dollars)	Labor Income Impact (current dollars)	Employment (jobs)
System Total	6,359,472,602	9,676,857,493	5,906,070,256	4,364,678,229	107,202
Personal Services	2,373,591,927	4,724,188,936	3,386,292,035	2,939,000,643	58,429
Operating Expenses	1,437,922,115	1,858,802,663	661,816,492	429,631,390	11,241
Student Spending	2,547,958,560	3,093,865,894	1,857,961,728	996,046,195	37,532

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.

Estimates for the Medical College of Georgia do not include impacts associated with the hospital and clinics operated by MCG Health Inc.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia February 2005.

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 2004 was 1.52, obtained by dividing the total output impact (\$9.7 billion) by initial spending (\$6.4 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.

That the estimates for the various institutions show differing outcomes is not surprising, 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 where 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.

■ 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 2004 are reported in the third column of Tables 1 and 2.

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TABLE 2

**Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in FY 2004**

<u>Institution</u>	<u>Initial Spending (current \$)</u>	<u>Output Impact (current \$)</u>	<u>Value Added Impact (current \$)</u>	<u>Labor Income Impact (current \$)</u>	<u>Employment Impact (jobs)</u>
Research Universities and Regional Universities					
Georgia Institute of Technology	945,195,651	1,617,873,050	1,035,461,938	806,384,220	13,888
Personal Services	483,409,663	994,216,278	724,218,765	621,152,129	9,192
Operating Expenses	271,589,828	376,006,997	158,857,916	102,238,658	2,230
Student Spending	190,196,160	247,649,775	152,385,258	82,993,433	2,466
Georgia State University	652,052,085	1,044,234,354	668,249,319	486,065,506	10,233
Personal Services	245,824,239	505,580,405	368,280,852	315,869,251	5,528
Operating Expenses	117,908,486	163,240,344	68,966,853	44,386,073	968
Student Spending	288,319,360	375,413,605	231,001,613	125,810,182	3,737
Medical College of Georgia	476,132,183	800,837,493	493,297,064	410,729,014	8,830
Personal Services	301,297,202	586,000,448	415,111,048	363,681,983	7,097
Operating Expenses	142,757,061	176,760,630	55,885,105	35,235,968	1,208
Student Spending	32,077,920	38,076,416	22,300,911	11,811,063	525
University of Georgia	1,317,384,884	2,052,770,055	1,223,688,816	925,484,609	22,458
Personal Services	526,204,136	1,047,224,141	749,613,624	648,772,113	13,945
Operating Expenses	415,050,028	537,531,325	190,830,498	125,629,025	3,192
Student Spending	376,130,720	468,014,589	283,244,695	151,083,471	5,321
Georgia Southern University	343,729,418	438,915,921	235,574,180	170,785,026	6,252
Personal Services	93,782,509	173,541,972	119,099,154	107,009,285	2,425
Operating Expenses	81,915,549	92,655,733	19,406,497	13,218,133	583
Student Spending	168,031,360	172,718,216	97,068,529	50,557,609	3,244
Valdosta State University	191,093,681	258,317,195	153,067,247	109,155,034	3,635
Personal Services	58,027,948	109,325,600	76,264,243	67,821,680	1,592
Operating Expenses	22,689,733	26,013,739	5,860,696	3,945,885	150
Student Spending	110,376,000	122,977,855	70,942,307	37,387,470	1,893
State Universities and State Colleges					
Albany State University	96,440,702	134,461,399	74,808,102	54,335,849	1,676
Personal Services	28,038,829	53,755,324	37,893,515	33,447,772	796
Operating Expenses	28,407,793	34,351,407	9,922,113	6,459,511	219
Student Spending	39,994,080	46,354,668	26,992,474	14,428,566	661
Armstrong Atlantic State Univ.	114,934,606	161,967,270	98,208,949	69,222,424	2,167
Personal Services	33,599,376	65,104,879	46,221,402	40,640,787	1,016
Operating Expenses	16,134,430	20,065,395	6,264,300	4,123,849	133
Student Spending	65,200,800	76,796,996	45,723,247	24,457,789	1,018

(continued)

TABLE 2 (continued)

**Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in FY 2004**

Institution	Initial Spending (current \$)	Output Impact (current \$)	Value Added Impact (current \$)	Labor Income Impact (current \$)	Employment Impact (jobs)
Augusta State University	106,875,053	150,722,286	90,907,717	63,276,937	1,901
Personal Services	30,540,605	59,399,183	42,077,199	36,864,158	762
Operating Expenses	13,952,688	17,276,105	5,462,059	3,443,868	118
Student Spending	62,381,760	74,046,999	43,368,459	22,968,911	1,021
Clayton College & State Univ.	96,166,816	146,651,458	93,010,742	64,066,365	1,894
Personal Services	26,973,502	55,475,710	40,410,272	34,659,316	1,059
Operating Expenses	13,118,274	18,161,810	7,673,121	4,938,310	108
Student Spending	56,075,040	73,013,938	44,927,349	24,468,739	727
Columbus State University	125,215,287	174,301,022	103,861,512	72,809,998	2,385
Personal Services	35,818,780	69,169,512	48,983,496	42,993,653	1,145
Operating Expenses	19,105,307	22,935,964	6,386,825	4,236,288	143
Student Spending	70,291,200	82,195,545	48,491,191	25,580,057	1,097
Dalton State College	57,301,816	73,636,446	43,232,860	29,888,939	937
Personal Services	14,094,614	26,460,248	18,522,436	16,468,350	355
Operating Expenses	8,066,082	9,409,793	2,433,510	1,636,135	56
Student Spending	35,141,120	37,766,405	22,276,914	11,784,454	526
Fort Valley State University	84,289,252	123,724,609	71,338,318	53,685,499	1,347
Personal Services	30,907,320	59,871,305	42,709,855	37,447,243	698
Operating Expenses	25,761,612	31,410,381	9,681,091	6,211,046	203
Student Spending	27,620,320	32,442,924	18,947,373	10,027,210	446
Georgia College & State Univ.	123,524,840	154,777,351	84,841,362	62,116,188	1,977
Personal Services	37,328,936	67,279,228	45,712,648	41,500,024	849
Operating Expenses	25,593,824	27,602,236	4,783,844	3,125,259	113
Student Spending	60,602,080	59,895,887	34,344,870	17,490,905	1,015
Georgia SW State University	51,260,746	67,457,547	38,006,717	28,132,262	846
Personal Services	17,308,981	31,718,818	21,629,578	19,467,566	391
Operating Expenses	9,111,285	10,013,932	1,802,649	1,206,606	51
Student Spending	24,840,480	25,724,797	14,574,490	7,458,090	404
Kennesaw State University	289,965,412	440,937,822	281,407,260	192,871,382	4,287
Personal Services	80,463,268	165,486,741	120,545,807	103,390,425	1,725
Operating Expenses	32,327,104	44,755,792	18,908,722	12,169,380	265
Student Spending	177,175,040	230,695,289	141,952,731	77,311,577	2,297
Macon State College	82,208,825	112,034,568	65,761,243	44,889,777	1,487
Personal Services	19,961,042	38,540,473	27,342,523	24,032,617	573
Operating Expenses	12,678,823	15,411,439	4,662,852	2,981,704	99
Student Spending	49,568,960	58,082,656	33,755,868	17,875,456	815

(continued)

TABLE 2 (continued)

**Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in FY 2004**

<u>Institution</u>	<u>Initial Spending (current \$)</u>	<u>Output Impact (current \$)</u>	<u>Value Added Impact (current \$)</u>	<u>Labor Income Impact (current \$)</u>	<u>Employment Impact (jobs)</u>
North GA College & State Univ.	84,176,411	120,655,245	74,042,825	51,914,226	1,778
Personal Services	25,309,289	49,479,806	35,240,645	30,750,645	974
Operating Expenses	10,186,322	12,614,730	3,907,220	2,581,024	76
Student Spending	48,680,800	58,560,709	34,894,960	18,582,557	728
Savannah State University	61,309,220	89,696,476	55,224,927	40,501,272	1,148
Personal Services	22,243,243	43,100,314	30,599,196	26,904,752	603
Operating Expenses	8,849,497	11,005,573	3,435,876	2,261,870	73
Student Spending	30,216,480	35,590,589	21,189,855	11,334,650	472
Southern Polytechnic State Univ.	69,635,633	109,820,298	71,406,473	50,839,263	1,172
Personal Services	24,603,208	50,600,788	36,859,224	31,613,632	622
Operating Expenses	7,086,825	9,811,471	4,145,215	2,667,801	58
Student Spending	37,945,600	49,408,039	30,402,034	16,557,830	492
State University of West GA	198,395,061	300,779,242	186,199,521	128,069,075	3,025
Personal Services	51,792,004	106,519,287	77,592,037	66,549,586	1,319
Operating Expenses	40,923,217	56,656,822	23,936,747	15,405,345	336
Student Spending	105,679,840	137,603,134	84,670,737	46,114,143	1,370
Associate Degree Colleges					
Abraham Baldwin Ag. College	55,658,722	70,443,013	39,907,694	27,921,908	976
Personal Services	14,143,556	26,362,492	18,320,066	16,352,202	370
Operating Expenses	9,199,806	10,557,354	2,360,626	1,561,063	62
Student Spending	32,315,360	33,523,167	19,227,002	10,008,643	544
Atlanta Metropolitan College	33,423,027	51,156,623	32,201,926	22,322,129	606
Personal Services	9,512,162	19,563,420	14,250,618	12,222,552	322
Operating Expenses	5,576,465	7,720,430	3,261,778	2,099,233	46
Student Spending	18,334,400	23,872,773	14,689,530	8,000,344	238
Bainbridge College	34,161,609	41,050,410	22,368,677	15,034,312	592
Personal Services	6,835,357	12,460,444	8,517,107	7,668,902	192
Operating Expenses	6,574,892	7,307,308	1,465,648	937,579	38
Student Spending	20,751,360	21,282,658	12,385,922	6,427,831	362
Coastal GA Community College	41,727,991	54,434,741	31,497,948	21,852,801	732
Personal Services	10,541,935	19,662,735	13,750,206	12,236,513	275
Operating Expenses	7,128,456	8,227,178	2,029,341	1,339,795	51
Student Spending	24,057,600	26,544,828	15,718,402	8,276,494	406

(continued)

TABLE 2 (continued)

**Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in FY 2004**

<u>Institution</u>	<u>Initial Spending (current \$)</u>	<u>Output Impact (current \$)</u>	<u>Value Added Impact (current \$)</u>	<u>Labor Income Impact (current \$)</u>	<u>Employment Impact (jobs)</u>
Darton College	61,129,841	82,252,056	47,719,480	32,676,702	1,081
Personal Services	14,373,330	27,556,181	19,428,566	17,146,075	397
Operating Expenses	10,028,351	12,126,530	3,502,646	2,280,298	77
Student Spending	36,728,160	42,569,345	24,788,268	13,250,329	607
East Georgia College	22,346,029	27,803,211	15,159,858	10,376,604	441
Personal Services	4,827,272	8,989,332	6,203,395	5,553,924	152
Operating Expenses	4,107,877	4,715,856	1,069,637	715,759	30
Student Spending	13,410,880	14,098,023	7,886,826	4,106,920	259
Floyd College	49,365,461	65,265,543	38,708,261	26,306,362	869
Personal Services	12,392,667	23,710,843	16,657,786	14,690,090	313
Operating Expenses	5,812,154	6,981,835	2,045,888	1,272,684	43
Student Spending	31,160,640	34,572,865	20,004,587	10,343,587	513
Gainesville College	73,229,945	103,268,391	63,858,615	41,987,928	1,132
Personal Services	15,827,262	31,425,510	22,498,015	19,473,467	381
Operating Expenses	6,848,123	8,903,831	3,197,187	2,109,692	53
Student Spending	50,554,560	62,939,050	38,163,414	20,404,769	698
Georgia Perimeter College	288,070,689	428,511,049	269,161,283	180,046,524	5,159
Personal Services	66,693,551	137,166,917	99,916,747	85,697,172	2,468
Operating Expenses	37,557,138	51,996,596	21,967,864	14,138,200	308
Student Spending	183,820,000	239,347,536	147,276,672	80,211,152	2,383
Gordon College	51,904,913	76,160,300	47,165,157	31,071,312	782
Personal Services	10,490,615	21,575,779	15,716,484	13,479,805	283
Operating Expenses	8,010,298	11,089,989	4,685,372	3,015,437	66
Student Spending	33,404,000	43,494,532	26,763,301	14,576,070	433
Middle Georgia College	42,731,233	52,761,063	29,451,660	20,638,026	763
Personal Services	10,489,499	19,412,469	13,383,153	12,033,896	299
Operating Expenses	7,041,734	7,823,141	1,524,230	1,054,744	43
Student Spending	25,200,000	25,525,453	14,544,276	7,549,386	421

(continued)

TABLE 2 (continued)

**Total Economic Impact of University System of Georgia
Institutions on their Regional Economies in FY 2004**

<u>Institution</u>	<u>Initial Spending (current \$)</u>	<u>Output Impact (current \$)</u>	<u>Value Added Impact (current \$)</u>	<u>Labor Income Impact (current \$)</u>	<u>Employment Impact (jobs)</u>
South Georgia College	23,835,051	30,472,163	16,826,306	11,905,559	465
Personal Services	6,206,613	11,523,903	7,951,181	7,131,715	200
Operating Expenses	4,452,758	4,990,894	960,284	647,592	27
Student Spending	13,175,680	13,957,366	7,914,841	4,126,252	238
Waycross College	14,600,509	18,707,821	10,446,298	7,315,197	283
Personal Services	3,729,414	6,928,450	4,771,191	4,277,364	113
Operating Expenses	2,370,295	2,670,103	532,284	357,577	15
Student Spending	8,500,800	9,109,267	5,142,822	2,680,256	155

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.

Estimates for the Medical College of Georgia do not include impacts associated with the hospital and clinics operated by MCG Health Inc.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, February 2005.

TABLE 3

**On-Campus and Off-Campus Jobs That Exist
Due to Institution-Related Spending in FY 2004**

<u>Institution</u>	<u>Total Employment Impact</u>	<u>On-Campus Jobs</u>	<u>Off-Campus Jobs</u>
System Total	107,202	40,595	66,607
Research Universities and Regional Universities			
Georgia Institute of Technology	13,888	5,487	8,401
Georgia State University	10,233	3,644	6,589
Medical College of Georgia	8,830	4,657	4,173
University of Georgia	22,458	10,145	12,313
Georgia Southern University	6,252	1,779	4,473
Valdosta State University	3,635	1,151	2,484
State Universities and State Colleges			
Albany State University	1,676	584	1,092
Armstrong Atlantic State University	2,167	751	1,416
Augusta State University	1,901	515	1,386
Clayton College & State University	1,894	852	1,042
Columbus State University	2,385	870	1,515
Dalton State College	937	264	673
Fort Valley State University	1,347	453	894
Georgia College and State University	1,977	658	1,319
Georgia Southwestern State University	846	290	556
Kennesaw State University	4,287	1,108	3,179
Macon State College	1,487	416	1,071
North Georgia College & State University	1,778	785	993
Savannah State University	1,148	428	720
Southern Polytechnic State University	1,172	434	738
State University of West Georgia	3,025	922	2,103
Associate Degree Colleges			
Abraham Baldwin Agric. College	976	272	704
Atlanta Metropolitan College	606	249	357
Bainbridge College	592	153	439
Coastal Georgia Community College	732	201	531
Darton College	1,081	289	792
East Georgia College	441	117	324
Floyd College	869	220	649
Gainesville College	1,132	269	863
Georgia Perimeter College	5,159	1,957	3,202
Gordon College	782	203	579
Middle Georgia College	763	227	536
South Georgia College	465	158	307
Waycross College	283	88	195

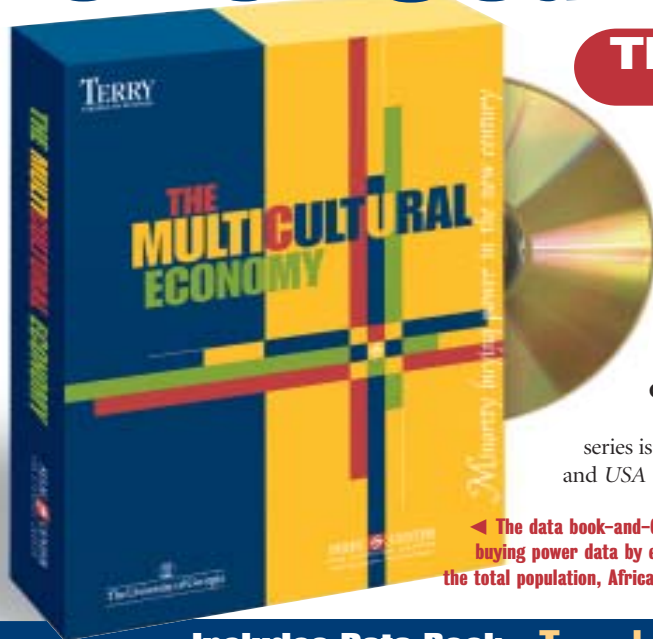
Notes:

Employment includes both full-time and part-time jobs.

Estimates for the Medical College of Georgia do not include impacts associated with the hospital and clinics operated by MCG Health Inc.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, February 2005.

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The 34 institutions collectively generated a value-added impact of \$5.9 billion in FY 2004. For all institutions combined, the value-added impact equaled 93 percent of initial spending and 61 percent of the \$9.7 billion output impact (with domestic and foreign trade comprising the remaining 39 percent of the output impact). The \$5.9 billion value-added impact equals 1.8 percent of Georgia’s gross state product.

■ Labor Income Impact

Collectively, the 34 University System institutions generated a labor income impact of \$4.4 billion in FY 2004 (see the fourth column of Table 2). The labor income received by residents of the communities that host these institutions represents 74 percent of the value-added impact and 69 percent of the initial spending.

■ Employment Impact

The economic impact of hosting a unit of the University System of Georgia probably is most easily understood in terms of its effects on employment. Collectively, the 34 institutions generated an employment impact of 107,202 jobs in FY 2004 (see column five of Table 2). Approximately 38 percent of these positions are on campus and 62 percent are off-campus positions in either the private or public sectors. On average, for each job created on campus there are 1.7 off-campus jobs that exist because of spending related to the University System.

The employment impact associated with the University System of Georgia accounts for 2.8 percent of all the jobs held by Georgians, or about one job in 36. For all institutions combined, 16.8 jobs were generated for each million dollars of initial spending in FY 2004.

End Note

Since this study intentionally focused only on the short-term impacts of several types of college- or university-related spending, no attempt was made 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 recover, 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. ■

Table 4 and the Appendix follow on pages 14-15

TABLE 4

**Study Areas for Institutions
(Counties)**

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 and State Colleges

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 College & State University – Atlanta MSA
 Columbus State University – Muscogee, Harris, Chattahoochee, Marion, Talbot, Stewart, Troup, Meriwether
 Dalton State College – Whitfield, Murray, Catoosa, Gordon, Walker, and Gilmer
 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
 Macon State College – Bibb, Houston, Jones, Monroe, Peach, Crawford, Twiggs, Baldwin, Wilkinson, and Laurens
 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
 State University of West Georgia – Atlanta MSA

Associate Degree Colleges

Abraham Baldwin Agricultural College – Tift, Berrien, Worth, Colquitt, Irwin, Cook, and Turner
 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
 Floyd College – Floyd, Polk, Chattooga, Bartow, and Gordon
 Gainesville College – Hall, Gwinnett, Jackson, White, Habersham, Lumpkin, Banks, and Forsyth
 Georgia Perimeter College – Atlanta MSA
 Gordon College – Atlanta MSA
 Middle Georgia College – Bleckley, Dodge, Pulaski, Twiggs, and Laurens
 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, February 2005.

Appendix

**Total Economic Impact of Capital Projects of University System Institutions
on their Regional Economies in FY 2004**

<u>Institution</u>	<u>Initial Spending (current \$)</u>	<u>Output Impact (current \$)</u>	<u>Value Added Impact (current \$)</u>	<u>Labor Income Impact (current \$)</u>	<u>Employment Impact (jobs)</u>
System Total	51,725,000	76,812,399	35,092,272	30,029,268	984
Research Universities and Regional Universities					
Georgia Institute of Technology	0	0	0	0	0
Georgia State University	3,500,000	6,740,710	3,562,366	3,027,814	68
Medical College of Georgia	8,600,000	14,263,856	6,472,488	5,609,565	182
University of Georgia	2,500,000	4,109,050	2,870,787	2,079,526	43
Georgia Southern University	22,234,000	32,909,334	13,033,990	11,683,275	473
Valdosta State University	0	0	0	0	0
State Universities and State Colleges					
Albany State University	0	0	0	0	0
Armstrong Atlantic State Univ.	0	0	0	0	0
Augusta State University	1,640,000	501,621	320,418	184,459	5
Clayton College & State Univ.	0	0	0	0	0
Columbus State University	0	0	0	0	0
Dalton State College	4,900,000	7,420,512	3,031,395	2,666,337	101
Fort Valley State University	0	0	0	0	0
Georgia College & State Univ.	0	0	0	0	0
Georgia SW State Univ.	936,000	253,179	156,170	88,893	4
Kennesaw State University	5,298,000	9,651,799	5,116,053	4,327,613	97
Macon State College	1,330,000	399,591	255,516	147,365	4
North GA College & State Univ.	0	0	0	0	0
Savannah State University	0	0	0	0	0
Southern Polytechnic State University	0	0	0	0	0
State University of West Georgia	0	0	0	0	0
Associate Degree Colleges					
Abraham Baldwin Ag. College	400,000	114,134	71,849	41,398	2
Atlanta Metropolitan College	0	0	0	0	0
Bainbridge College	0	0	0	0	0
Coastal GACommunity College	275,000	414,976	179,693	160,545	6
Darton College	112,000	33,637	21,547	12,478	0
East Georgia College	0	0	0	0	0
Floyd College	0	0	0	0	0
Gainesville College	0	0	0	0	0
Georgia Perimeter College	0	0	0	0	0
Gordon College	0	0	0	0	0
Middle Georgia College	0	0	0	0	0
South Georgia College	0	0	0	0	0
Waycross 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, 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. Estimates for the Medical College of Georgia do not include impacts associated with the hospital and clinics operated by MCG Health Inc.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia , February 2005.