

Economic Contributions of the State University System of Florida in Fiscal Year 2009-10

*Sponsored Project Report to
The Board of Governors of the State University System of Florida*

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Executive Summary

The State University System (SUS) of Florida is one of the largest public university systems in the United States, consisting of 11 separate institutions and 30 campus branch locations across the state. In an era of declining public funding for higher education, it is important for public policymakers to understand the economic contributions to society made by universities. This report was commissioned by the Board of Governors of the State University System of Florida to provide an assessment of its economic contributions to the State. This analysis considered SUS spending for payroll, operations, and capital investment by each university and their affiliated component units in fiscal year 2009-10, along with the increase in net present value (NPV) of equivalent lifetime (30 year) earnings generated by university graduates who were employed in Florida, above those reported for Florida high school graduates.

The main findings of this study are as follows:

- In 2009-10, the SUS had overall enrollment of 312,216 students (209,309 full-time equivalents), and awarded 73,579 academic degrees, including 53,392 bachelors, 15,956 masters, 2,175 doctoral, and 2,056 professional (specialist) degrees.
- The SUS of Florida employed over 58,000 persons in the State, including 16,864 full-time and part-time faculty and instructors, and over 16,000 other professionals.
- SUS expenditures on operations, payroll, and capital improvements totaled just over \$9.0 billion in FY 2009-10. SUS related expenditures by students (excluding tuition and on-campus room and board) totaled \$4.5 billion that same year.
- Procedures for estimating SUS graduate earnings differentials were refined over previous Florida studies to more accurately project future earnings over time and estimate the proportion of graduates working in the State.
- The present value of increased earnings by SUS graduates over a 30 year work life was estimated at \$30.9 billion in 2010 dollars.
- The total economic impacts of SUS expenditures and graduate earnings differential were estimated at 771,245 full-time and part-time jobs, \$79.91 billion in output or revenues, \$51.90 billion in value added, \$31.22 billion in labor income to employees and business owners, \$16.57 billion in other property income, and \$4.11 billion in indirect business taxes to local, state and federal government agencies in Florida.
- The employment impacts of the SUS represented 7.89 percent of the total state workforce in 2010 (9,773,730 positions), while the total value added impacts represented 7.27 percent of the State's Gross Domestic product in 2010 (\$713.84 billion).

Total expenditures and economic impacts in Florida associated with the SUS for FY 2009-10 are summarized in Table ES1.

Table ES 1. Summary of expenditures and total economic impacts of the State University System of Florida in FY 2009-10

Category	Expenditures (million \$)	Output Impact (million \$)	Value Added Impact (million \$)	Employment Impact (fulltime and part-time jobs)
Operations	\$4,768.8	\$6,527.7	\$4,258.3	53,519
Payroll	\$3,392.8	\$4,774.1	\$3,033.9	100,716
Capital Investment	\$883.4	\$2,356.3	\$1,325.3	19,752
Student Spending	\$4,535.8	\$3,735.4	\$2,670.0	39,969
Total SUS Expenditures & Impacts	\$13,580.8	\$17,393.5	\$11,287.5	213,956
Present Value of Graduate Earnings Differential	\$30,856.1	\$62,517.6	\$40,612.8	557,290
Total All Activities	\$44,436.9	\$79,911.2	\$51,900.3	771,245

All values in 2010 dollars. Impact estimates include *IMPLAN* regional multiplier effects of supply chain activity (indirect effect) and employee household and government spending (induced).

Acknowledgements

Important assistance for this study was provided by the staff of the SUS Board of Governors: Chris Kinsley, Director of Finance and Facilities, and Tim Jones, Chief Financial Officer. Also, the research team would like to thank the Florida Educational Training Placement Information Program (FETPIP) Director, Teresa Miller and Benita McMillian (Database Consultant) for their assistance and effort in obtaining the FETPIP SUS Summary Outcomes Report for FY2009-10, and for the associated High School Graduate data for FY2009-10.

Introduction

The State University System (SUS) of Florida is one of the largest public university systems in the United States, consisting of 11 separate institutions and 30 campus branch locations across Florida (Figure 1), with 80 million square feet of building space, and 40,533 acres of land (SUS Quick Facts, 2010). In academic year 2009-10, the SUS had overall enrollment of 312,216 students (209,309 full-time equivalents), and awarded 73,579 academic degrees, including 53,392 bachelors, 15,956 masters, 2,175 doctoral, and 2,056 professional (specialist) degrees. The University system had over 58,000 employees, including 16,864 full-time and part-time faculty and instructors, and over 16,000 other professionals. The Florida SUS is consistently rated as among the best values in higher education in the United States, offering a high quality educational experience at very low costs for tuition. Descriptions of each of the 11 institutions of the State University System of Florida are described in Appendix D, based on information available from each university's website.

Figure 1. Location of institutions in the State University System of Florida



Source: SUS Board of Governors

The education and skills that students attain at Florida's universities enhance and contribute substantially to the state's economy. The contributions to human capital provided by these institutions are increasingly important to the welfare of all citizens as the technological revolution makes increasingly complex demands for new ways of thinking and doing in the global economy. The accelerating pace of change presents new

challenges that require a highly skilled workforce. Increasing numbers of highly trained engineers, scientists, mathematicians, and information system specialists are required to meet these challenges.

The SUS regularly produces acclaimed advances in teaching, research and industry collaboration in a variety of fields. The number and quality of its graduates fulfill much of Florida's skilled workforce requirements, but presently the supply of graduates with relevant expertise does not begin to meet intrastate, national or global demands. Such extant shortages are detrimental to the advancement of Florida's economy and hamper the state's advancement into global markets.

In an era of declining public funding for higher education, it is important for public policymakers to understand the economic contributions to society made by universities. This report was commissioned by the Board of Governors of the State University System of Florida to provide an assessment of the economic contributions to the State by the SUS. This analysis considered SUS spending for payroll, operations, and capital investment by each university and their affiliated component units in fiscal year 2009-10, along with the increase in net present value (NPV) of equivalent lifetime (30 year) earnings generated by university graduates who were employed in Florida, above those reported for Florida high school graduates. This report updates a previous study by Lynch *et al.* (2001) following similar, although not identical, methods, and follows the methodology used in a recent study of the University of Florida (Hodges *et al.*, 2011).

Methodology

Data Sources

The approach taken to this economic impact analysis was based on university expenditures. The methodology is a standard approach that has been used in previous economic impact research studies on higher education in Florida (Harrington *et al.*, 2005, and Lynch *et al.*, 2003). Expenditures for university operations, personnel payrolls, and capital improvements for fiscal year 2009-10 (ending June 30, 2010), were taken from the consolidated financial statements for the SUS, with supplemental detail provided by the Board of Governors financial staff. Data on direct employment were taken from the Board of Governors Annual Report for 2010. In addition to the primary university budgets, operating expenditures and direct employment were also included for component organizations, such as hospitals and faculty practices, direct support organizations such as athletic associations and research foundation, and other business enterprises. Expenditures by students at each university were estimated based upon "cost of attendance" data, together with local room and board rates, and student enrollment, broken down by level (undergraduate, graduate). All expenditures are summarized in Appendix A.

The economic impacts of increased earnings received by FY 2009-10 SUS graduates over their working lifetime, compared to Florida high school graduates were also estimated in this analysis. Data on employment and earnings for Florida SUS and high school graduates were obtained from the Florida Educational Training Placement Information Program “Outcomes Report” for Fall 2010 (FETPIP, 2011), which provides information for graduates in fiscal year 2009/10, and the report for Fall 2009 providing information for graduates in fiscal years 2006/07, 2007/08 and 2008/09. This information is based upon matching of Social Security numbers for graduates to employer and school databases, rather than surveys of graduates, to determine the number of graduates who are employed or continuing education in Florida. Reported earnings for employed graduates in the fourth quarter can be expressed as annual equivalent earnings. The share of SUS graduates who leave the state workforce was taken from a report by the Office of Program Policy Analysis and Government Accountability (OPPAGA) of the Florida Legislature (2005), based on previous FETPIP outcomes reports. The reported earnings for Florida high school graduates were used as a baseline to compare the greater earnings of SUS graduates at each institution. The earnings differential for SUS graduates was projected over a 30-year period, representing a typical working lifetime.

The net present value of the average lifetime earnings differential was computed using the U.S. Census Bureau earnings estimation methodology. This present value was then expanded to reflect the total number of FY 2009-10 SUS graduates who were fully employed in the fall of 2010. This method assumes a median salary structure rather than extrapolating graduate starting salaries from the previous five years salaries in the labor force. The analysis does not calculate present value (PV) of future incomes, but instead uses a salary structure or matrix. An advantage of the method is that no assumptions are needed for pricing adjustments or discount rates to use. Also, it reduces potential bias concerning the FETPIP sample (e.g., the top graduating students are first to get greater-than-average wages). It provides greater definition on age group cohorts: ages 18-22 years, 22-26 years, 24-28 years, 27.5-31.5 years, and 27.5-31.5 years. Estimates from previous research studies were used for further out-of-state adjustment for the Florida SUS graduates expected to be either employed outside Florida, self-employed, unemployed, stay-at-home parents, active in the military, incarcerated, or pursuing further education. The lifetime earnings methodology did not account for the SUS graduate’s opportunity costs associated with attendance at other universities.

Due to time constraints, this study did not consider the economic impacts of visitor spending or technology licensing to spinoff companies for the SUS as a whole, as was done in a recent study for the University of Florida (Hodges *et al.*, 2011), however, these results for UF and FSU are provided as examples in the Appendix.

Regional Economic Analysis

The total economic impacts of SUS-related spending was estimated with multipliers generated using a regional economic input-output model for the state of Florida that was constructed with the *IMPLAN* economic impact modeling system (MIG, Inc., 2011). Input-output analysis is a widely used procedure for estimating economic impacts that is based on mathematical models of a regional economy in terms of the specific mix of industries and institutions, and the linkages between industries, employees, households, and governments. *IMPLAN* regional models account for industrial output, employment, value added, commodity production and consumption, personal income, household and institutional spending, domestic and foreign trade, marketing margins, business inventories, capital investment, taxes, and transfer payments such as welfare and retirement pensions. *IMPLAN* divides the regional economy into 440 business sectors defined according to the North American Industrial Classification System (NAICS), as well as consumption spending profiles for seven household income categories. *IMPLAN* and other regional input-output models enable the derivation of economic multipliers which capture the “ripple” effects of supply chain spending for input purchases (indirect effects), and household spending by employees (induced effects) for new final demand to the state’s economy, as well as direct spending and employment (Miller and Blair, 2009). Economic multipliers for each business sector and household income category are used to estimate various economic impacts, including output or revenue, employment (fulltime and part-time jobs), value added, labor-income, other property income, and indirect business taxes. The *IMPLAN* economic multipliers and regional purchase coefficients used in this analysis are shown in Appendix B. The assignment of SUS expenditures to *IMPLAN* sectors is given in Appendix A.

For accurate regional economic impact analysis, it is important to determine the source of revenues and the destination of expenditures in relation to the study region, in this case the State of Florida. Spending from revenues that originate outside the state represent new money that generates additional economic activity through ripple or multiplier effects. In comparison, spending funded by local revenues contributes only to direct effects, because these dollars would have been used for other purchases anyway, and therefore do not represent net new economic activity (Watson, *et al.* 2007). Conversely, spending on goods and services imported from outside the State represents a “leakage” of money, and generates no impacts for the State’s economy. The share of spending inside of Florida was based on the State’s average percentage of total purchases of each particular good or service. These shares are known as regional purchase coefficients, which were econometrically estimated by the *IMPLAN* software based on the balance of supply and demand in the State for each product or service. The total economic impacts of SUS associated spending funded by new dollars are equal to the sum of the direct, indirect and induced effects multipliers applied to the portion of that spending that occurs inside the State. Direct multipliers only were applied to SUS spending from local sources. Each expenditure item was assigned to the appropriate *IMPLAN* sector. The proportion of expenditures for SUS operations and payroll designated as new final demand was determined by the overall share of revenues originating from outside the State based on an

analysis of the source of funds from the 2005-06 UF study. All expenditures for capital improvement projects were treated as new final demand, by definition. Depreciation expenses on fixed assets were excluded from the analysis since they do not represent cash transactions that generate current local economic impacts. The proportion of nonlocal funding for student expenditures was determined by the aggregate sources of financial aid utilized by students for tuition and living expenses, and their home residence.

The economic impacts of spending by SUS employees was based upon typical household expenditure patterns for income brackets representative of UF Faculty, staff, and temporary employees. Student spending on tuition and on-campus housing was not included in the analysis since these dollars were captured by SUS revenues and spending. Sales by private vendors for campus food services, bookstores, and other concessions were not included in this analysis since their activity is captured in the spending of employees and students. Retail margins were applied to purchases of goods at retail stores by students and employees. A glossary of input-output terminology and concepts is provided in Appendix A at the end of this report.

Results

SUS Degree Production

As depicted in Table 1, the number of Florida SUS graduates increased from 58,699 in FY 2008-09 to 74,593 in FY 2009-10, representing a 27.1 percent increase. Similarly, the individual SUS degree types show corresponding increases of 24.4 percent, 19.3 percent, and 20.1 percent for BS, MS, and Ph.D. degrees, respectively. Over the past 30 years, the annual growth in the total number of SUS degrees awarded has averaged 3.75 percent¹. In the same period, the number of MS and Ph.D. degrees granted saw 4 percent and 4.1 percent annual growth, respectively, while the number of Bachelor's awarded degrees saw a steady annual growth of 3.67 percent. In comparison, the state's population grew at an annual rate of 2.4 percent during this same time period. This underscores how the increasing demand by Florida's technologically advancing economy have spurred a surge in SUS graduates that is approximately 1.4 percentage points higher annually when compared with the State's corresponding increase in the general population.

Table 1. Florida SUS degrees awarded FY 2006/07 to FY 2009/10

Degree	2006-07	2007-08	2008-09	2009-10
Bachelors	45,875	51,307	53,078	53,392
Masters	13,073	13,663	14,296	15,956
Doctorate	1,814	1,928	1,959	2,175
Professional	2,070	2,253	2,282	2,056
All Degrees	62,832	69,151	71,615	73,579

Source: Florida Department of Education. Florida Education and Training Placement Information Program (FETPIP). State University Reports for FY 2006-07, 2008-09 and 2009-2010, at <http://www.fldoe.org/fetpip/sus.asp>. Professional degrees include Dentistry, Engineer, Law, M.D., Pharmacy, Specialist and Veterinary.

A total of 73,579 degrees were awarded by the Florida SUS during the 2009-10 academic year (Table 2). Bachelors degrees accounted for 53,392, or nearly 73 percent, of all degrees, Masters degrees accounted for 15,956, or 22 percent, of degrees awarded, and Professional and Doctorate degrees each accounted for slightly less than three percent of degrees awarded. The number of degrees awarded is important in terms of estimating the economic impacts of higher earnings by graduates on the State's economy.

¹ Source: FETPIP data for FY 2006-07, FY 2007-08, FY 2008-09, FY 2009-10 (<http://www.fldoe.org/fetpip/>), and earlier data for 1970-80 and 1998-99 taken from Lynch et al (2001), p. 12.

Table 2. Degrees awarded by Florida SUS Institutions, academic year 2009-10

Institution	Bachelors	Masters	Professional	Doctorate	Total
Florida A&M University	1,243	348	283	29	1,903
Florida Atlantic University	4,511	1,219		92	5,822
Florida Gulf Coast University	1,461	360			1,821
Florida International University	6,267	2,359	144	146	8,916
Florida State University	7,926	2,245	343	340	10,854
New College of Florida	153				153
University of Central Florida	9,969	1,960		260	12,189
University of Florida	9,302	3,862	1,170	957	15,291
University of North Florida	2,967	584		46	3,597
University of South Florida	7,891	2,544	116	284	10,835
University of West Florida	1,702	475		21	2,198
Total	53,392	15,956	2,056	2,175	73,579
Percent	72.56	21.69	2.79	2.96	100

Source: SUS Data Online – 2009-2010 Degrees Granted (Interactive): <http://www.flbog.edu/resources/iud/>

Graduate Earnings and Employment

Average annual earnings and employment rates for Florida high school students and Florida SUS students graduating with Bachelors, Masters or Ph.D. degrees in FY 2009-10 are summarized in Table 3. Average annual per-capita earnings for Florida SUS graduates in the fall of 2010 were \$36,520 for graduates with Bachelors degrees, \$58,698 for Masters degrees, \$66,743 for doctorates, and \$70,716 for professional degrees. These earnings were significantly higher than for students graduating with a high school diploma (\$20,924). The average annual earnings differential for all SUS graduates compared to high school graduates was \$21,732, and ranged as high as \$49,792 for those with professional degrees. The percentage of 2009-10 SUS graduates who were found employed in the state in the fall of 2010 was nearly 60 percent, and of those nearly 80 percent were employed fulltime.

Table 3. Annual average per capita earnings and earnings differentials for Florida high school and SUS graduates in FY 2009-10

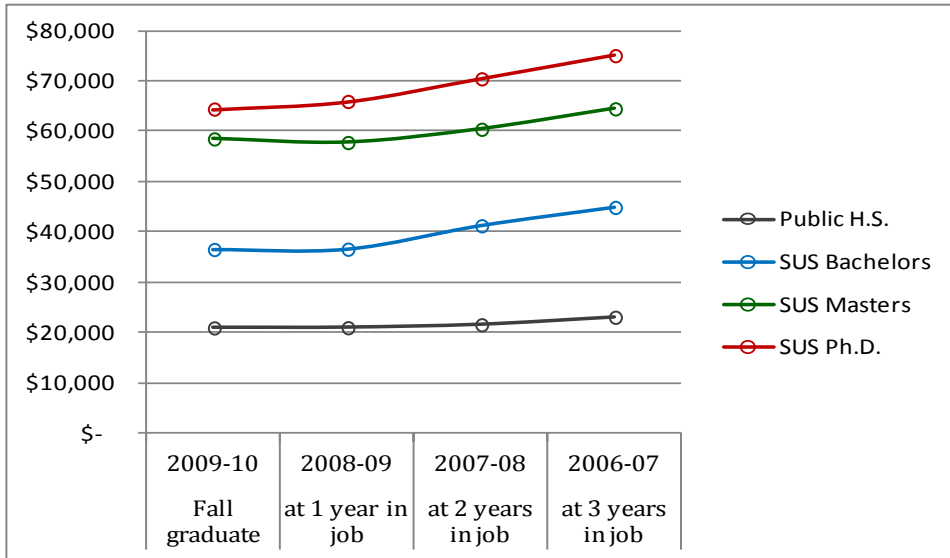
Education level	Total individuals	Number found employed	Percent employed	Number found employed fulltime	Percent of employed who were fulltime	Equivalent annual earnings	Annual earnings differential
Public high school	118,679	51,774	43.6%	23,168	44.7%	\$ 20,924	
State University System, Bachelors	55,089	33,279	60.4%	24,908	74.8%	\$ 36,520	\$ 15,596
State University System, Masters	15,034	8,837	58.8%	8,042	91.0%	\$ 58,698	\$ 37,774
State University System, Ph.D.	2,165	743	34.3%	684	92.1%	\$ 66,743	\$ 45,819
State University System, Professional	2,305	1,255	54.4%	1,142	91.0%	\$ 70,716	\$ 49,792
State University System, All Degrees	74,593	44,114	59.1%	34,776	78.8%	\$ 42,656	\$ 21,732

Annual earnings differential compared to high school graduates in same year. All values in 2010 dollars.

Source: Annual Outcomes Report, Florida Education & Training Placement Information Program (FETPIP), Division of Accountability, Research and Measurement, Fall of 2010.

Over the period 2006/07 to 2009/10, annual earnings for SUS graduates have increased faster than earnings of high school graduates (Figure 2). The average annual per capita earnings of graduates, working full-time, are increasing in each degree category over four years between FY 2006-07 to FY 2009-10. The per capita earnings for PhD recipients ranged from \$64,378 for those graduating in FY 2009-10 to \$74,976 for those in FY 2006-07, after three years of employment. Earnings for Masters graduates ranged from \$58,449 to \$64,420 (after three years being employed), and earnings for Bachelor recipients ranged from \$36,489 to \$44,848. Earnings for high school diploma recipients ranged from \$20,924 in FY 2009-10 to \$23,040 in FY 2006-07 (after three years of being employed) over the same period.

Figure 2: Annual average per capita earnings for Florida high school and SUS graduates



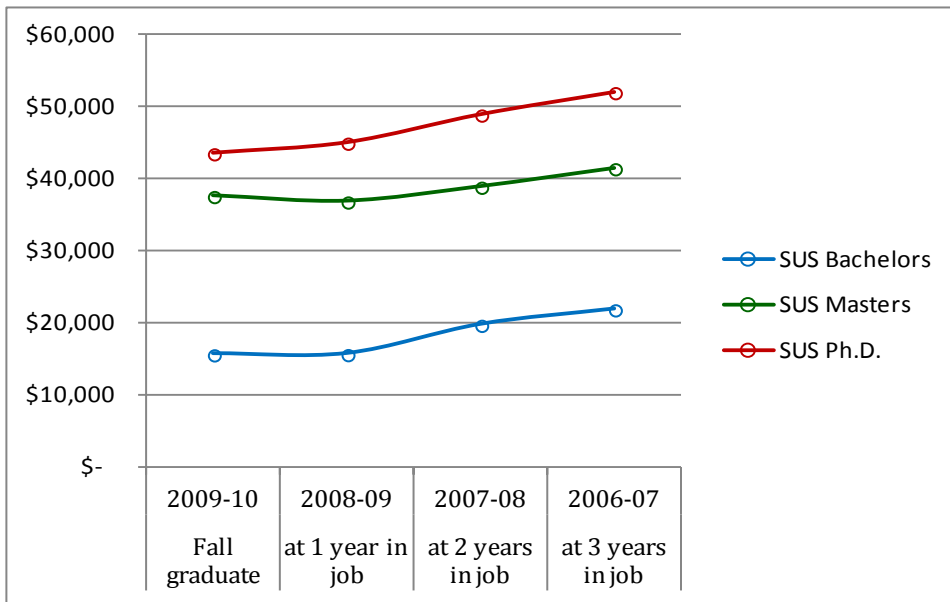
Data are nominal dollar values.

Source: Florida Department of Education. Florida Education and Training Placement Information Program (FETPIP), state University reports for FY 2006-07, 2008-09 and 2009-2010, available at: <http://www.fldoe.org/fetpip/sus.asp>.

The life time earnings methodology was based on median earnings in the past 12 months (in 2010 inflation adjusted-dollars) by educational attainment for the population 25 years and over². Figure 3 presents the trend in the annual per capita earnings differentials between high school graduates and SUS graduates working fulltime over the period 2006-07 to 2009-10. SUS graduates with Ph.D. degrees earned on average \$45,819 more in FY 2009-10, and \$51,936 more than high school graduates in FY 2006-07 (after three years employment). Graduates working with Masters degrees earned on average \$37,774, \$36,768, \$38,816 and \$41,380 more than high school graduates in the respective years. SUS graduates working with Bachelor’s degrees earned \$15,596, \$15,596, \$19,660 and \$21,808 more than high school graduates, respectively.

² The lifetime earnings data was based on US Bureau of Census Factfinder series: median earnings by educational attainment for ages 25 and older, in combination with US Bureau of Census American Community Survey, for Years 2006-2008 and adjusted to 2010 dollars, available at <http://www.census.gov/acs/www/>, and <http://www.census.gov/hhes/socdemo/education/data/acs/index.html>. Supplementary: Table 1, Synthetic Estimates of Work-life Earnings and Median Annual Earnings by Educational Attainment, Work Experience and Age, 2006-2008.

Figure 3. Annual average per capita earnings differential for Florida SUS graduates compared to high school graduates



In order to give a perspective on the contribution of the SUS to the Florida economy, the first step was to calculate lifetime earnings for individuals based on average full-time labor income earnings in 2010 dollars corresponding to each degree type. Table 4 presents the average annual income by age grouping and degree program. At the base of the table, the median income is given as well, as an estimated average age at which the median income will be obtained. The research team based the estimation of SUS graduates lifetime earnings over a 30 year time horizon on methodology similar to that used by the U.S. Bureau of Census. In order to account for the differential among graduates income levels associated with varying degree programs, it was assumed that high school students enter the labor market at 18 years of age, Bachelor’s at 22 years, Master’s at 24 years and both Ph.D. students and Professional degree students, at 27.5 years of age. For each degree program, polynomial (non-linear) trend lines were estimated to derive the respective salaries at their year of graduation and upon entering the labor market, in five-year time intervals, thereafter. Between the five-year intervals, the yearly increments were estimated by linear extrapolation. At the base of the table, the median is given as well as an estimated average age at which the median income will be obtained. The individual lifetime earnings by degree program are provided in Table 5.

Table 4. Average incomes for high school, bachelors, masters, Ph.D. and professional degrees in Florida, 2010

Age (years)	High School	Bachelors	Masters	PhD	Professional
25-29	\$ 19,404	\$ 28,798	\$ 34,354	\$ 43,736	\$ 42,025
30-34	\$ 21,392	\$ 36,052	\$ 43,357	\$ 50,341	\$ 59,417
35-39	\$ 23,412	\$ 41,997	\$ 52,023	\$ 64,794	\$ 81,357
40-44	\$ 24,435	\$ 44,646	\$ 55,934	\$ 73,693	\$ 87,350
45-49	\$ 25,542	\$ 47,601	\$ 57,536	\$ 70,235	\$ 92,641
50-54	\$ 25,467	\$ 45,880	\$ 55,311	\$ 70,151	\$ 94,559
55-59	\$ 24,766	\$ 44,665	\$ 53,721	\$ 70,177	\$ 90,951
60-64	\$ 24,143	\$ 43,643	\$ 52,520	\$ 72,138	\$ 95,902
Overall median income	\$ 23,479	\$ 41,191	\$ 49,976	\$ 63,436	\$ 77,898
Overall average age	+/-37.4	+/-36.75	+/-36.2	+/-35.4	+/-33.75

Sources: U.S. Census Bureau, American Community Survey, public use microdata samples:

<http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t#none>, and

<http://www.higheredinfo.org/dbrowser/?level=nation&mode=data&state=0&submeasure=364>.

Average ages for high school and bachelors graduates based on a Florida Board of Governors report: "State University System of Florida and Florida College System: A Comparative Profile": www.fldoe.org/cc/pdf/comparative_profile.pdf and "traditional college-age population (18 to 24 years old)" <http://nces.ed.gov/programs/digest/d10/>.

Table 5. Average individual lifetime earnings for high school, bachelors, masters, Ph.D. and professional degrees, and differential with high school graduates

Degree	Estimated Lifetime Earnings Over Time		
	10 Years	20 Years	30 Years
High School	\$ 193,772	\$ 425,322	\$ 677,494
SUS Bachelors	\$ 323,328	\$ 766,205	\$ 1,227,636
SUS Masters	\$ 423,701	\$ 981,621	\$ 1,532,957
SUS Ph.D.	\$ 591,984	\$ 1,312,104	\$ 2,009,941
SUS Professional	\$ 698,549	\$ 1,620,409	\$ 2,551,504
Differential compared to high school graduates			
SUS Bachelors	\$ 129,556	\$ 340,883	\$ 550,141
SUS Masters	\$ 229,929	\$ 556,300	\$ 855,463
SUS Ph.D.	\$ 398,212	\$ 886,782	\$ 1,332,447
SUS Professional	\$ 504,777	\$ 1,195,087	\$ 1,874,009

It is projected that graduates in each degree category will continue, as they have in the past, to add value to Florida's economy by virtue of their lifetime earnings. It is estimated that the present value of lifetime earnings attributed to SUS graduates employed in Florida will total \$30.856 billion over the next 30 years, or approximately \$1 billion annually in current dollars. The calculations from which the above data were derived were based on the FY2009-2010 FETPIP Annual Outcomes report that pertains to both graduates employed in the state and those employed out-of-state. To only measure those who were employed in-state post-graduation, the research team based its methodology on a previous study conducted by Florida OPPAGA using previous research estimates of

expected in-state graduates, by degree³. This involved additional adjustments for segments of Florida SUS graduates expected to be either employed outside Florida, self-employed, unemployed, stay-at-home parents, active in the military, incarcerated, or pursuing further education. The present value of lifetime earnings were apportioned to the 11 SUS universities, based on student numbers, and the research team’s previous methodology, using \$30.856 billion over 30 the year timeframe, as shown in Table 6.

Table 6. Present value of estimated lifetime earnings differential for Florida SUS graduate degrees by SUS institutions compared to high school graduates in FY 2009-10

SUS Degree / Institution	Present value of lifetime earnings differential (million \$)
All SUS degrees	\$30,856
Bachelors	\$19,599
Masters	\$7,621
Ph.D.	\$1,051
Professional	\$2,585
Florida A&M University	\$943
Florida Atlantic University	\$2,388
Florida Gulf Coast University	\$698
Florida International University	\$3,558
Florida State University	\$4,846
New College of Florida	\$54
University of Central Florida	\$4,704
University of Florida	\$7,006
University of North Florida	\$1,397
University of South Florida	\$4,378
University of West Florida	\$885

Lifetime earnings estimated for 30 years.

³ Office of Program Policy Analysis & Government Accountability, Dec. 2005. Florida’s University Graduates Tend to Stay in the State Workforce After Completing Their Degrees.

Revenues and Sponsored Funding

In fiscal year 2009-10, the Florida SUS had total revenues of \$9.75 billion, including operating revenues of \$6.83 billion and non-operating revenues of \$2.92 billion (Table 7). These values included all component units and auxiliary enterprises associated with the SUS. The largest operating revenue items were student tuition and fees, net of scholarship allowances (\$1.17 billion), hospital revenues (Shands Hospital at UF, \$1.53 billion), and federal grants and contracts (\$959 million), sales and services of component units (\$865 million), and nongovernmental grants and contracts (\$761 million). The largest non-operating revenue items were state appropriations (\$2.12 billion and net investment income (\$484 million). Overall, approximately 46.8 percent of total revenues to the SUS represented new final demand from non-Florida sources.

Table 7. Revenues received by the Florida SUS in FY 2009-10

Revenue Item	Amount (million \$)
OPERATING REVENUES	
Net Student Tuition & Fees	\$1,169.79
Federal Grants and Contracts	\$958.72
State and Local Grants and Contracts	\$145.03
Nongovernmental Grants and Contracts	\$761.42
Sales & Services of Educational Department	\$45.47
Sales and Services of Auxiliary Enterprise	\$649.97
Sales and Services of Component Units	\$865.10
Hospital Revenues	\$1,527.03
Royalties and Licensing Fees	\$71.76
Gifts and Donations	\$241.31
Interest on Loans Receivable	\$2.93
Other Operating Revenue	\$392.83
Total Operating Revenues	<u>\$6,831.37</u>
NON-OPERATING REVENUES	
State Appropriations	\$2,118.45
Non-Capital Grants, Donations	\$165.46
Am. Recovery & Reinvestment Act Funds	\$84.46
Net Investment Income	\$484.33
Other Non-Operating Revenue	\$62.87
Gain/Loss on Disposal of Capital Assets	\$4.00
Total Non-Operating Revenues	<u>\$2,919.58</u>
TOTAL REVENUES	<u>\$9,750.94</u>

Source: 2009/2010 University Financial Statements, Exhibit B, Board of Governors, Office of Budgeting and Fiscal Policy

A summary of Florida SUS institution grants, contracts and technology licensing activity in FY 2009-10 is presented in Table 8. A total of 16,521 sponsored projects were active during the fiscal year, with 6,170 new grants or contract awards received, and 7,300 renewed or continuing grants or contracts. Applications were submitted for 788 U.S. patents, and 247 patents were granted. The largest number of active sponsored projects was at the

University of Florida (7,152), while the largest number of U.S. patents was awarded to University of Central Florida (91).

Table 8. Summary of Florida SUS institution grants, contracts and technology licensing, FY 2009-10

	UF	FSU	FAMU	USF	FAU	UWF	UCF	FIU	UNF	FGCU	NCF	SUS
Proposals submitted to funding agencies	5,645	1,353	330	1,719	578	138	1,465	760	128	204	22	12,342
New contracts or grant awards received	2,838	594	285	1,070	223	61	565	384	52	87	11	6,170
Grant and contract renewals, continuations or supplemented	3,711	548	63	1,782	154	40	652	269	40	34	7	7,300
Sponsored projects active	7,152	1,616	996	2,852	668	155	1,524	976	272	292	18	16,521
Applications for U.S. patents submitted	286	73	13	210	7	2	184	10	2	1	0	788
U.S. patents granted	58	21	6	66	3	0	91	1	1	0	0	247

SOURCE: BOG survey of individual universities, November 2010.

State University System Employment

The Florida SUS had total direct employment of 58,669 positions in the fall of 2009, including 40,076 full-time and 18,593 part-time (Table 9). The University of Florida accounted for 17,827 or about 30 percent of those jobs, followed by FSU (9,546), and USF (8,286), UCF (6,278) and FIU (5,251), and the remaining six institutions employed 11,481 individuals that term.

Table 9. Direct employment in Florida SUS institutions, fall 2009.

SUS Institution	Full-time	Part-time	Total	Percent share
Florida A&M University	1,908	400	2,308	3.93
Florida Atlantic University	2,485	1,553	4,038	6.88
Florida Gulf Coast University	982	252	1,234	2.10
Florida International University	3,516	1,735	5,251	8.95
Florida State University	5,902	3,644	9,546	16.27
New College of Florida	256	20	276	0.47
University of Central Florida	4,196	2,082	6,278	10.70
University of Florida	12,448	5,379	17,827	30.39
University of North Florida	1,625	386	2,011	3.43
University of South Florida	5,708	2,578	8,286	14.12
University of West Florida	1,050	564	1,614	2.75
Total	40,076	18,593	58,669	100.00

Source: www.flbog.org, 2010-SUS QuickFacts.xls and www.flbog.org/resources/publications/accountability.php
www.flbog.org/resources/doc/factbooks/quickfacts/2010-SUSQuickFacts.xls

SUS Operating, Payroll and Capital Improvement Expenditures

Expenditures for SUS operations are summarized in Table 10. Operations expenditures included utilities, equipment, repairs and maintenance, supplies, travel and entertainment, insurance, professional services and independent contractors, employee training, printing and publications, fees, dues and subscriptions, postage/shipping, rentals, and commodities purchased. Expenses for asset depreciation were excluded because this is a non-cash expense. Total operations expenses for the SUS amounted to \$4.77 billion in FY 2009-10. SUS expenditures made within the state of Florida were estimated at \$4.13 billion. Based on the share of total revenues to the SUS from non-Florida sources (46.8%), expenditures in-state from new final demand were \$1.94 billion, or 40.6 percent of total expenditures. Expenditures were assigned to the appropriate economic sectors in order to apply regional *IMPLAN* multipliers. A detailed listing of expenditure items and the corresponding economic sectors is provided in Appendix B.

Table 10. Operations expenditures by Florida SUS institutions in FY 2009-10

Category / Institution	Total Expenditures (million \$)	Expenditures In-State (million \$)	In-State Expenditures from New Final Demand (million \$)
Florida A&M University	\$135.4	\$109.6	\$51.4
Florida Atlantic University	\$274.3	\$242.4	\$113.7
Florida Gulf Coast University	\$60.3	\$46.5	\$21.8
Florida International University	\$313.4	\$248.0	\$116.2
Florida State University	\$484.8	\$383.6	\$179.8
New College of Florida	\$13.8	\$11.3	\$5.3
University of Central Florida	\$579.2	\$504.1	\$236.3
University of Florida	\$2,023.4	\$1,807.0	\$847.2
University of North Florida	\$96.7	\$80.7	\$37.8
University of South Florida	\$686.2	\$608.7	\$285.4
University of West Florida	\$101.3	\$85.9	\$40.3
Total	\$4,768.8	\$4,127.7	\$1,935.2

Florida SUS payroll expenses in FY 2009-10 are summarized in Table 11. Payroll expenses included salaries and benefits for faculty, administrative/professional and support employees, and part-time student assistants, and other temporary employment, but not contract employees. Employee benefits included the employer's portion of health, life and disability insurance payments, social security, retirement, and worker's compensation. Total payroll expenses amounted to \$3.39 billion, with \$3.15 billion made within the state. Payroll expenses that were attributed to new final demand from non-Florida revenue sources were estimated at \$1.48 billion, or about 46.8% of total payroll spending.

Table 11. Payroll expenditures by Florida SUS institutions in FY 2009-10

Category / Institution	Total Expenditures (million \$)	Expenditures In-State (million \$)	In-State Expenditures from New Final Demand (million \$)
Florida A&M University	\$158.9	\$147.2	\$69.0
Florida Atlantic University	\$229.6	\$208.7	\$97.9
Florida Gulf Coast University	\$79.0	\$71.3	\$33.4
Florida International University	\$354.8	\$321.6	\$150.8
Florida State University	\$512.7	\$462.9	\$217.0
New College of Florida	\$17.7	\$15.6	\$7.3
University of Central Florida	\$418.0	\$390.6	\$183.1
University of Florida	\$769.3	\$769.3	\$360.7
University of North Florida	\$115.7	\$102.3	\$47.9
University of South Florida	\$653.0	\$585.2	\$274.4
University of West Florida	\$84.1	\$73.1	\$34.3
Total	\$3,392.8	\$3,147.9	\$1,475.8

Expenditures on capital improvements in FY 2009-10 are summarized in Table 12. These amounts were taken from the consolidated SUS cash flow statement as representing actual expenditures made in FY 2009-10, rather than capital appropriations amounts shown on the accrual basis statement of revenues and expenses, which may be spent over a several year period. Total capital improvement expenses were \$883 million for FY 2009-10. All of this was assumed to be spent within the state, and represents new final demand for construction.

Table 12. Capital improvement expenditures by Florida SUS institutions in FY 2009-10

Institution	Expenditures (million \$)
Florida A&M University	\$36.6
Florida Atlantic University	\$87.3
Florida Gulf Coast University	\$45.0
Florida International University	\$99.4
Florida State University	\$116.7
New College of Florida	\$5.9
University of Central Florida	\$133.0
University of Florida	\$217.7
University of North Florida	\$25.6
University of South Florida	\$98.4
University of West Florida	\$17.8
Total	\$883.4

Student Enrollment and Spending

Enrollment, residency, and on-campus living numbers are important to estimating economic impacts. It is not only important to know the number of students, but their residency as well, in order to determine the geographical source of dollars used to pay tuition and other costs of attendance. The number of students living on-campus is necessary to determine the share of these dollars flowing through SUS institutions or their surrounding communities. Enrollment in Florida's State University System totaled 312,259 students during the fall of 2009 (Table 12). Over 91 percent were Florida residents. Nearly 77 percent of all students were enrolled in undergraduate programs and just under 14 percent of all students, or 43,451, lived in on-campus housing facilities. New College, FAMU and UWF were the top three institutions for attracting American out-of-state enrollments, at 21.7, 18.0 and 12.2 percent of students, respectively, while UF, FSU and FIU were the top three schools for attracting foreign students to the State, at 6.7, 6.6 and 5.2 percent, respectively (Table 13). Again, these values are important because they indicate how many out-of-state or "new" dollars each school brings in through tuition and other spending associated with enrollment.

Table 12. Student enrollment in Florida SUS institutions, by residency, level, and campus living, 2009-2010

SUS Institution	<i>Total</i> Fall 2009	<i>Florida Resident</i> Fall 2009	<i>Non-Florida Resident</i> Fall 2009	<i>Under-graduate</i> Fall 2009	<i>Graduate & Other</i> Fall 2009	Living on-campus 2010*	Living off-campus 2010*
Florida A&M University	12,261	10,468	1,793	10,083	2,178	2,483	9,778
Florida Atlantic University	27,707	26,106	1,601	21,527	6,180	2,446	25,261
Florida Gulf Coast University	11,105	10,426	679	9,486	1,619	3,173	7,932
Florida International University	40,455	36,631	3,824	30,927	9,528	2,856	37,599
Florida State University	40,201	36,479	3,722	30,399	9,802	6,108	34,093
New College of Florida	827	684	143	827	0	434	393
University of Central Florida	53,644	51,146	2,498	45,078	8,566	6,159	47,485
University of Florida	50,842	43,114	7,728	33,015	17,827	9,338	41,504
University of North Florida	16,719	16,258	461	14,219	2,500	3,000	13,719
University of South Florida	47,307	44,855	2,452	35,834	11,473	5,694	41,613
University of West Florida	11,191	10,022	1,169	8,707	2,484	1,760	9,431
Total/Avg.	312,259	286,189	26,070	240,102	72,157	43,451	268,808
% Share	100	91.65	8.35	76.89	23.11	13.92	86.08

Source: SUS Enrollment by residency <http://www.flbog.edu/resources/iud/>.

Data on resident, non-resident, graduate, and undergraduate students are for Fall 2009; data for on- and off-campus living are for Fall 2010.

Table 13. Share of non-Florida and non-USA student enrollment in Florida SUS institutions in FY 2009-10

Institution	Percent Non-Florida*	Institution	Percent Non-USA
NCF	21.70%	UF	6.74%
FAMU	18.02%	FSU	6.60%
UWF	12.18%	FIU	5.16%
FSU	11.65%	USF	2.82%
UF	10.73%	UNF	2.00%
FGCU	8.13%	FAMU	1.47%
UCF	5.46%	NCF	1.44%
USF	5.12%	FAU	1.36%
FAU	4.31%	UCF	1.20%
FIU	4.00%	UWF	1.17%
UNF	2.86%	FGCU	0.74%
SUS	7.51%	SUS	3.61%

Source: Florida Board of Governors: www.flbog.org/resources/factbooks/2009-2010/xls/t15_10_0910_F.xls.

* Percent non-Florida does not include non-USA enrollment.

Estimating student expenditures on room and board at SUS institutions was carried out by multiplying undergraduate, graduate, resident, nonresident, living on-campus, and living off-campus enrollment at each institution (Table 12) by their appropriate fee schedule shown in Table 14. Because some student data was not readily available at all institutions, it was assumed that the proportion of resident and non-resident students was the same at undergraduate and graduate levels and across students living either on or off-campus. Expenditures by students enrolled in professional degree programs were treated the same as graduate students. The total expenditures by summer enrollments at each institution were calculated as a fraction of the expenditures for the regular academic-year times the ratio of summer to fall term enrollment (FTEs) at that institution, times 0.375 (12 weeks of summer term divided by 32 weeks for fall and spring combined). Estimates of the share of nonlocal dollars used to pay for these expenditures were based on the numbers of resident and nonresident students and the estimated share of nonlocal funding each class of student used to pay their expenses. This was based on previous analyses of the amounts and geographic sources of various scholarships, grants and loans received by University of Florida students to pay for tuition, fees and other costs of attendance in 2005 and 2009. Room and Board expenditures were estimated from on-campus room and board fees at each institution. It was assumed that room and board costs were the same for on and off-campus students, but a 26 percent premium was added for graduate student room expenditures.

Table 14. Room and board charges for full-time undergraduate students at Florida SUS institutions in FY 2009-10

Institution	Room Charge	Board Charge	Room and Board Charge
Florida A&M University	\$4,128	\$3,090	\$7,218
Florida Atlantic University	\$6,208	\$3,374	\$9,582
Florida Gulf Coast University	\$3,138	\$4,504	\$7,642
Florida International University	\$4,920	\$3,300	\$8,220
Florida State University	\$4,800	\$3,200	\$8,000
New College of Florida	\$5,252	\$2,531	\$7,783
University of Central Florida	\$4,940	\$3,598	\$8,538
University of Florida	\$4,860	\$2,640	\$7,500
University of North Florida	\$4,530	\$3,342	\$7,872
University of South Florida	\$5,222	\$3,528	\$8,750
University of West Florida	\$3,610	\$1,615	\$5,225
Average	\$4,692	\$3,157	\$7,848

Rates are for an academic year of two semesters (Fall and Spring). Room charges are for double occupancy.

Source: IRM IPEDS Institutional Characteristics (IC) 2009-10: www.flbog.org/resources/factbooks/2009-2010/xls/t36_00_0910_F.xls

Other costs of attendance, such as books and supplies, housing, food, clothing, computers and personal items for resident, nonresident, undergraduate and graduate students were estimated from a University of Florida cost of attendance budget for 2009-10 as shown in Table 15. These were also set the same for on and off-campus students. Expenditures for room and board, either on or off-campus, were based on the same budget, but on-campus expenditures were not applied to the impact analysis to avoid double counting, since these dollars are spent by the institutions to provide those services. As previously mentioned, expenditures for other costs of enrollment for the summer term were also estimated by taking a fraction of those costs estimated for the regular academic year.

Table 15. Typical per-student costs of attendance at Florida SUS, 2009-10

Expense Item	Resident	Non-Resident	Resident	Non-Resident
	Undergraduate	Undergraduate	Graduate	Graduate
Tuition/Fees	4,351	18,668	7,693	23,336
Books & Supplies	990	990	990	990
Computer	947	947	947	947
Housing	4,692	4,692	5,907	5,907
Food	3,157	3,157	3,157	3,157
Transportation	540	540	540	540
Clothing	656	656	656	656
Personal	1,717	1,717	1,717	1,717
Total	\$17,049	\$31,367	\$21,607	\$37,550

Tuition and fees represent an average across 11 institutions for 2009-10, SUS Board of Governors website:

www.flbog.org/about/_doc/budget/tuition/2009-10Fees.xls. Expenses for books/supplies, computer, transportation, clothing and personal are based on cost of attendance estimates for University of Florida in 2009-10. Expenses for housing and food as given in Table 14. Graduate housing was increased by 26 percent based on data collected for 2009-10 UF study.

Total estimated student expenditures for attendance at SUS institutions in FY 2009-10 are summarized in Table 16. Expenditures on tuition were estimated to total \$2.45 billion, and on average about \$1.31 billion, or 53 percent, of these dollars were estimated to originate from outside the State. Expenditures for on-campus room and board were \$261 and \$166 million dollars respectively, while spending for off-campus room and board were \$1.68 and \$1.04 billion, respectively. Other expenditures for attendance included computers (\$353 million), transportation (\$201million), personal and health (\$640 million), and clothing (\$244 million).

For purposes of economic impact analysis, student expenditures for tuition/fees and on-campus room and board were excluded from the impact analysis to avoid double counting, since these expenditures are captured by institutional operations spending. Total student expenditures, excluding tuition and on-campus room and board were \$4.54 billion, of which \$3.64 billion or 80.2 percent was spent within Florida, and \$822 million or 18.1 percent representing new final demand from dollars originating from sources outside the state (Table 17).

Table 16. Total student expenditures for attendance at Florida SUS institutions, FY 2009-10

Institution	Tuition & Fees	Room On-Campus	Room Off-Campus	Board On-Campus	Board Off-Campus	Books & Supplies	Com-puter	Transpor-tation	Clothing	Personal & Health	Total
-----Million \$-----											
FAMU	\$90.3	\$12.4	\$48.7	\$8.8	\$34.7	\$14.0	\$13.4	\$7.6	\$9.2	\$24.2	\$263.3
FAU	\$193.7	\$19.5	\$201.1	\$10.0	\$103.0	\$33.1	\$31.7	\$18.1	\$21.9	\$57.5	\$689.6
FGCU	\$73.3	\$11.7	\$29.3	\$16.2	\$40.5	\$12.5	\$11.9	\$6.8	\$8.3	\$21.6	\$232.1
FIU	\$337.1	\$18.7	\$245.9	\$11.8	\$154.9	\$50.0	\$47.8	\$27.3	\$33.1	\$86.7	\$1,013.3
FSU	\$323.4	\$37.3	\$208.0	\$23.3	\$130.0	\$47.4	\$45.4	\$25.9	\$31.4	\$82.2	\$954.3
NCF	\$5.9	\$2.3	\$2.1	\$1.1	\$1.0	\$0.8	\$0.8	\$0.4	\$0.5	\$1.4	\$16.3
UCF	\$370.7	\$37.9	\$292.3	\$26.5	\$203.9	\$63.4	\$60.6	\$34.6	\$42.0	\$110.0	\$1,241.9
UF	\$524.9	\$57.8	\$256.8	\$28.6	\$127.3	\$58.5	\$55.9	\$31.9	\$38.7	\$101.4	\$1,281.8
UNF	\$102.5	\$17.0	\$77.6	\$12.0	\$55.0	\$19.9	\$19.0	\$10.8	\$13.2	\$34.5	\$361.5
USF	\$341.9	\$38.0	\$277.9	\$24.1	\$176.0	\$56.2	\$53.7	\$30.6	\$37.2	\$97.4	\$1,133.0
UWF	\$83.5	\$8.1	\$43.6	\$3.4	\$18.4	\$13.4	\$12.8	\$7.3	\$8.9	\$23.2	\$222.6
Total	\$2,447.2	\$260.7	\$1,683.3	\$165.8	\$1,044.7	\$369.2	\$353.0	\$201.3	\$244.4	\$640.1	\$7,409.7

Table 17. Summary of student expenditures at Florida SUS institutions, expenditures in-state and from new final demand, excluding tuition/fees and on-campus room and board, FY 2009-10

SUS Institution	Expenditures (million \$)	Expenditures In-State (million \$)	Expenditures In- State from New Final Demand (million \$)
Florida A&M University	\$151.8	\$122.8	\$33.0
Florida Atlantic University	\$466.4	\$370.1	\$77.4
Florida Gulf Coast University	\$130.9	\$108.4	\$22.9
Florida International University	\$645.7	\$517.8	\$121.6
Florida State University	\$570.2	\$457.8	\$107.1
New College of Florida	\$7.1	\$5.7	\$1.6
University of Central Florida	\$806.8	\$649.8	\$130.9
University of Florida	\$670.4	\$534.3	\$148.0
University of North Florida	\$230.0	\$185.7	\$34.9
University of South Florida	\$729.0	\$584.6	\$120.0
University of West Florida	\$127.5	\$101.8	\$24.6
Total	\$4,535.8	\$3,638.6	\$822.1

Total Economic Impacts

In this section the total economic impacts of spending associated with the SUS in FY 2009-10 are summarized. This includes regional economic multiplier effects from supply chain activity (indirect effects) and employee household spending (induced effects).

Economic impacts of SUS operations, payroll and capital improvement expenditures are presented in Table 18. The total employment impact of SUS operations was estimated to be 173,986 full-time and part-time jobs. This includes 58,669 direct jobs at SUS institutions, plus 115,317 additional jobs generated through indirect and induced multiplier effects in the Florida economy. The total output impacts of SUS activities in 2009-10 was estimated at \$13.66 billion, representing the sales or revenues received by all businesses providing goods and services to SUS institutions and their employees. The estimated value added impacts of \$8.62 billion includes the labor income impact of \$5.22 billion, other property income impact of \$2.74 billion, and indirect business tax impacts of \$664 million. Value added also represents the SUS's contribution to the Gross Domestic Product of Florida. Labor income impact represents wages, salaries and benefits received by SUS employees, as well as employees of businesses providing inputs to SUS operations, and employees of other businesses patronized by consumption spending by these employees. Other property income represents rents, royalties, dividends, and interest payments generated by SUS activities. Indirect business taxes represent property, payroll, sales and other tax revenues generated for local, state, and federal government agencies in Florida, except income taxes.

Table 18. Total economic impacts of Florida SUS institution operations, payroll, and capital improvements in FY 2009-10

Category / Institution	Output (million \$)	Value Added (million \$)	Labor Income (million \$)	Other Property Income (million \$)	Indirect Business Tax (million \$)	Employment (jobs)
Florida A&M University	\$493.0	\$309.1	\$185.5	\$100.2	\$23.5	6,462
Florida Atlantic University	\$933.1	\$580.9	\$356.0	\$182.1	\$42.9	11,917
Florida Gulf Coast University	\$310.2	\$188.5	\$118.5	\$56.6	\$13.4	3,834
Florida International University	\$1,166.9	\$724.3	\$451.3	\$219.8	\$53.3	15,119
Florida State University	\$1,666.6	\$1,042.8	\$636.9	\$326.4	\$79.7	23,540
New College of Florida	\$59.2	\$36.3	\$22.8	\$10.9	\$2.7	780
University of Central Florida	\$1,734.4	\$1,083.9	\$667.0	\$333.9	\$83.1	20,976
University of Florida	\$4,515.0	\$2,891.2	\$1,713.7	\$953.5	\$228.4	55,802
University of North Florida	\$357.2	\$221.1	\$139.0	\$65.4	\$16.8	5,094
University of South Florida	\$2,127.6	\$1,351.6	\$819.4	\$428.3	\$104.9	26,395
University of West Florida	\$295.0	\$187.9	\$111.6	\$61.3	\$15.1	4,067
Total All SUS Institutions	\$13,658.1	\$8,617.5	\$5,221.5	\$2,738.3	\$663.8	173,986

Estimates include regional multiplier effects. Values expressed in 2010 dollars. Employment represents all full-time and part-time positions.

The estimated total economic impacts of spending by SUS students included 39,969 jobs, \$3.74 billion in output, \$2.67 billion in value added, \$1.19 billion in labor income, \$1.18 billion in other property income, and \$303 million in indirect business taxes (Table 19).

Table 19. Total economic impacts of Florida SUS institution student spending in FY 2009-10

Institution	Output (million \$)	Value Added (million \$)	Labor Income (million \$)	Other Property Income (million \$)	Indirect Business Tax (million \$)	Employment (jobs)
Florida A&M University	\$129.4	\$90.9	\$43.2	\$37.4	\$10.2	1,401
Florida Atlantic University	\$383.6	\$279.1	\$116.6	\$130.9	\$31.6	4,002
Florida Gulf Coast University	\$101.1	\$69.1	\$35.5	\$25.4	\$8.2	1,186
Florida International Univ.	\$541.1	\$387.2	\$172.1	\$171.3	\$43.7	5,773
Florida State University	\$473.3	\$337.5	\$152.1	\$147.2	\$38.2	5,065
New College of Florida	\$6.0	\$4.2	\$2.0	\$1.7	\$0.5	64
University of Central Florida	\$643.3	\$459.4	\$204.6	\$202.0	\$52.9	6,997
University of Florida	\$588.3	\$420.3	\$189.7	\$184.2	\$46.4	6,125
University of North Florida	\$177.7	\$126.3	\$57.2	\$54.4	\$14.7	1,952
University of South Florida	\$587.5	\$421.8	\$184.6	\$188.9	\$48.3	6,309
University of West Florida	\$104.2	\$74.1	\$34.0	\$31.7	\$8.4	1,094
Total All SUS Institutions	\$3,735.4	\$2,670.0	\$1,191.7	\$1,175.2	\$303.0	39,969

Estimates include regional multiplier effects.

Values expressed in 2010 dollars. Employment represents all full-time and part-time positions.

The total economic impacts of the lifetime earnings differential of FY 2009-10 SUS graduates compared to high school graduates is shown in Table 20. Recall that the estimated present value of the 30-year lifetime earnings differential was \$30.86 billion (Table 6). Assuming that these earnings were spent within the state according to typical patterns prevailing for the Florida labor force, the total economic impacts of the present value of additional lifetime earnings received by SUS graduates would generate 557,290 jobs, \$62.52 billion in output, \$40.61 billion in value added, \$24.81 billion in labor income, \$12.65 billion in other property income, and \$3.15 billion in indirect business taxes (Table 20).

Table 20. Total economic impacts of the lifetime earnings differential of FY 2009-10 graduates of the State University System of Florida.

SUS Institution	Output (million \$)	Value Added (million \$)	Labor Income (million \$)	Other Property Income (million \$)	Indirect Business Tax (million \$)	Employment (jobs)
Florida A&M University	\$1,909.7	\$1,240.6	\$757.9	\$386.5	\$96.1	17,024
Florida Atlantic University	\$4,838.5	\$3,143.2	\$1,920.3	\$979.4	\$243.6	43,131
Florida Gulf Coast University	\$1,413.5	\$918.2	\$561.0	\$286.1	\$71.2	12,600
Florida International University	\$7,208.8	\$4,683.0	\$2,861.0	\$1,459.1	\$362.9	64,260
Florida State University	\$9,818.7	\$6,378.4	\$3,896.7	\$1,987.4	\$494.3	87,525
New College of Florida	\$110.3	\$71.6	\$43.8	\$22.3	\$5.6	983
University of Central Florida	\$9,530.1	\$6,191.0	\$3,782.2	\$1,929.0	\$479.8	84,952
University of Florida	\$14,194.7	\$9,221.2	\$5,633.5	\$2,873.1	\$714.6	126,533
University of North Florida	\$2,830.3	\$1,838.6	\$1,123.3	\$572.9	\$142.5	25,230
University of South Florida	\$8,869.3	\$5,761.7	\$3,520.0	\$1,795.2	\$446.5	79,062
University of West Florida	\$1,793.7	\$1,165.2	\$711.9	\$363.1	\$90.3	15,989
Total All SUS Institutions	\$62,517.6	\$40,612.8	\$24,811.4	\$12,654.1	\$3,147.3	557,290

Estimates include regional multiplier effects.

Values expressed in 2010 dollars. Employment represents all full-time and part-time positions.

The total economic impacts of all spending associated with SUS operations, payroll, capital improvement, student living, and present value of graduate earnings differential in FY 2009-10 are summarized in Table 21 and Figures 4 and 5. These values represent the sum of values shown in Tables 18, 19, and 20. The total economic impacts of the State University System of Florida in FY 2009-10 include 771,245 jobs, \$79.91 billion in output, \$51.90 billion in value added, \$31.22 billion in labor income, \$16.57 billion in other property income, and \$4.11 billion in indirect business taxes. Relative to the State's economy, the employment impact represents 7.89 percent of the total state workforce in 2010 (9,773,730 positions). The total value added impact represents 7.27 percent of the Gross Domestic product of Florida in 2010 (\$713.84 billion).

Table 21. Summary of total economic impacts of Florida SUS institutions in FY 2009-10 for all spending for operations, payroll, capital improvement, student living, and present value of graduate earnings differential

SUS Institution	Output (million \$)	Value Added (million \$)	Labor Income (million \$)	Other Property Income (million \$)	Indirect Business Tax (million \$)	Employment (jobs)
Florida A&M University	\$2,532.1	\$1,640.6	\$986.7	\$524.2	\$129.8	24,886
Florida Atlantic University	\$6,155.2	\$4,003.3	\$2,392.9	\$1,292.4	\$318.1	59,050
Florida Gulf Coast University	\$1,824.7	\$1,175.8	\$714.9	\$368.2	\$92.7	17,620
Florida International University	\$8,916.8	\$5,794.4	\$3,484.4	\$1,850.2	\$460.0	85,153
Florida State University	\$11,958.6	\$7,758.7	\$4,685.7	\$2,461.0	\$612.2	116,130
New College of Florida	\$175.5	\$112.1	\$68.6	\$34.9	\$8.7	1,827
University of Central Florida	\$11,907.8	\$7,734.2	\$4,653.7	\$2,464.9	\$615.8	112,926
University of Florida	\$19,298.0	\$12,532.8	\$7,536.8	\$4,010.8	\$989.5	188,461
University of North Florida	\$3,365.2	\$2,186.1	\$1,319.4	\$692.7	\$174.0	32,275
University of South Florida	\$11,584.4	\$7,535.0	\$4,524.0	\$2,412.4	\$599.7	111,766
University of West Florida	\$2,192.8	\$1,427.3	\$857.5	\$456.0	\$113.7	21,151
Total All SUS Institutions	\$79,911.2	\$51,900.3	\$31,224.6	\$16,567.6	\$4,114.2	771,245

Estimates include regional multiplier effects.

Values expressed in 2010 dollars. Employment represents all full-time and part-time positions.

The largest value added and employment impacts in the Florida SUS were generated by the University of Florida at \$12.53 billion and 188,461 jobs respectively, followed by Florida State University at \$7.76 billion and 116,130 jobs respectively, University of Central Florida at \$7.73 billion and 112,926 jobs respectively, and University of South Florida at \$7.54 billion and 111,766 jobs respectively (Table 21 and Figures 4 and 5).

Figure 4. Total employment impacts of Florida SUS institutions in FY 2009-10

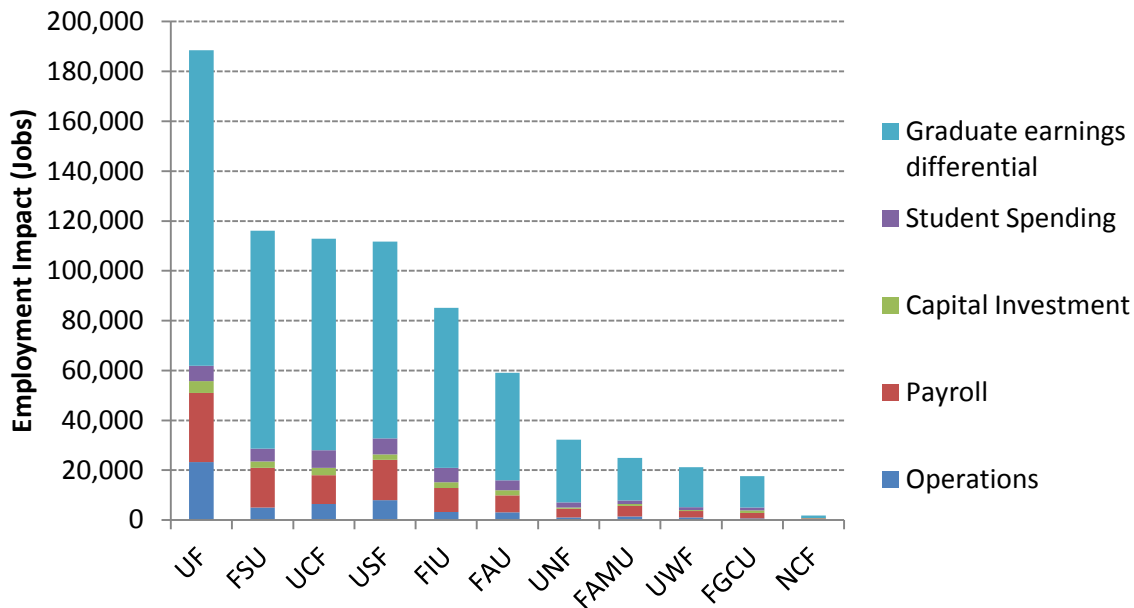
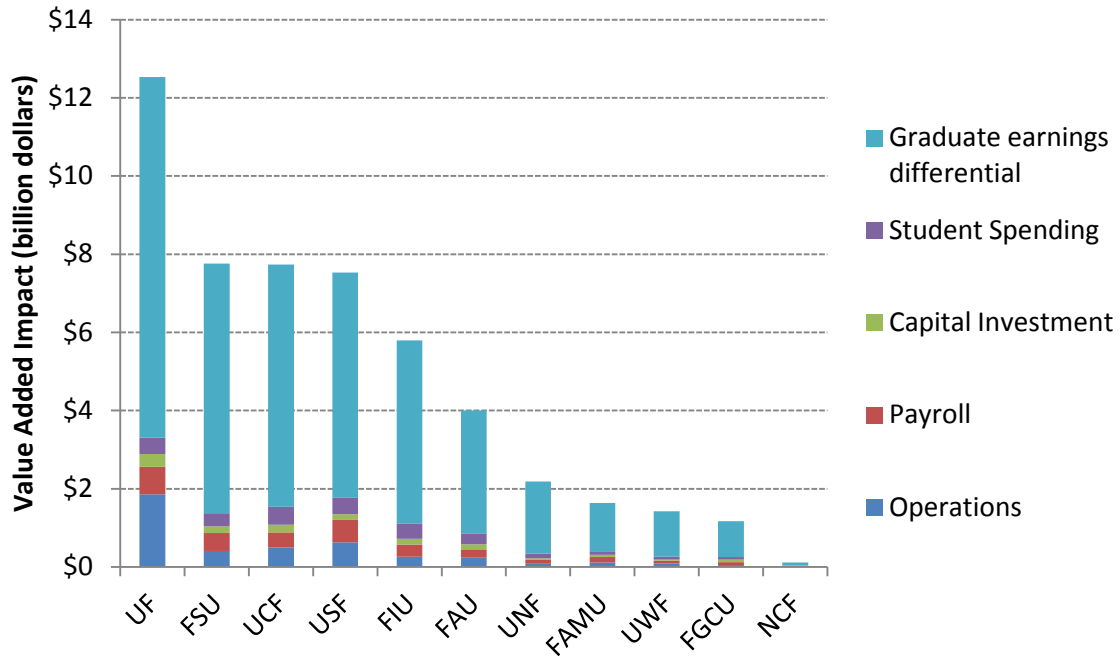


Figure 5. Total value added impacts of Florida SUS institutions in FY 2009-10



Conclusions

The State University System of Florida (SUS) is an important component in Florida's economy and a significant driver of employment and earnings for state residents. In 2009-10 the SUS had a total enrollment of 312,216 students and awarded a total of 73,579 degrees. Expenditures by SUS institutions for operations, payroll, and capital improvements totaled just over \$9.0 billion in 2009-10, with direct employment totaling 58,669. SUS related expenditures by students (excluding tuition and on-campus room and board) were estimated to total \$4.5 billion that same year. The economic impacts of expenditures by SUS institutions and enrolled students were estimated at \$17.4 billion in output or revenues, \$11.3 billion in value added, and 214 thousand jobs.

Economic impacts were estimated for expenditures and for projected earnings differentials by SUS graduates remaining in the State over a 30 year work-life. Using an approach adopted by the U.S Census Bureau, the present value of increased earnings by SUS graduates was calculated to range from \$550,000 for a bachelors degree, to \$1.87 million for a professional degree. Expanding by the number of each degree-type awarded for 2009-10 graduates, the present value of increased earnings for all graduates over 30 years that remain in Florida was estimated to total \$30.9 billion. The economic impacts of increased work-life earnings by SUS graduates were estimated at \$62.5 billion in output or revenues, \$40.6 billion in value added, and 557,290 jobs.

The combined economic impacts of SUS spending in 2009-10 and the present value of SUS graduate earnings differentials were estimated at \$79.9 billion in output, \$51.9 billion in value added, and 771,245 jobs.

Total employment impacts of the Florida SUS in FY 2009-10 were 2.72 fold higher than previously stated for FY 1998-99 by Lynch *et al.* (2001), although the methodology used for estimating lifetime earnings of high school and university graduates was somewhat different.

It should be noted that the economic impacts of visitor spending and technology transfers on the State were not evaluated in the analysis.

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Appendix A: Glossary of Economic Impact Terms

Employee compensation is comprised of wages, salaries, commissions, and benefits such as health and life insurance, retirement and other forms of cash or non-cash compensation.

Employment is a measure of the number of jobs involved, including fulltime, part-time and seasonal positions. It is not a measure of fulltime equivalents (FTE).

Exports are sales of goods to customers outside the region in which they are produced, which represents a net inflow of money to the region. This also applies to sales of services to customers visiting from other regions.

Final Demand represents sales to final consumers, including households and governments, and exports from the region.

Gross Regional Product is a measure of total economic activity in a region, or total income generated by all goods and services. It represents the sum of total value added by all industries in that region, and is equivalent to Gross Domestic Product for the nation.

IMPLAN is a computer-based input-output modeling system that enables users to create regional economic models and multipliers for any region consisting of one or more counties or states in the U.S. The current version of the *IMPLAN* software, version 3, accounts for commodity production and consumption for 440 industry sectors, 10 household income levels, taxes to local/state and federal governments, capital investment, imports and exports, transfer payments, and business inventories. Regional datasets for individual counties or states are purchased separately.

Impact or total impact is the change in total regional economic activity (e.g. output or employment) resulting from a change in final demand, direct industry output, or direct employment, estimated based on regional economic multipliers.

Imports are purchases of goods and services originating outside the region of analysis.

Income is the money earned within the region from production and sales. Total income includes labor income such as wages, salaries, employee benefits and business proprietor income, plus other property income.

Indirect business taxes are taxes paid to governments by individuals or businesses for property, excise and sales taxes but do not include income taxes.

Input-Output (I-O) model and Social Accounting Matrix (SAM) is a representation of the transactions between industry sectors within a region that captures what each sector purchases from every other sector in order to produce its output of goods or services. Using such a model, flows of economic activity associated with any change in spending may be traced backwards through the supply chain.

Intermediate sales are sales to other industrial sectors. The value of intermediate sales is netted-out of Total Value Added.

Local refers to goods and services that are sourced from within the region, which may be defined as a county, multi-county cluster, or state. Non-local refers to economic activity originating outside the region.

Margins represent the portion of the purchaser price accruing to the retailer, wholesaler, and producer/manufacturer, in the supply chain. Typically, only the retail margins of many goods purchased by consumers accrue to the local region, as the wholesaler, shipper, and manufacturer often lie outside the local area.

Multipliers capture the total effects, both direct and secondary, in a given region, generally as a ratio of the total change in economic activity in the region relative to the direct change. Multipliers are derived from an I-O model of the regional economy. Multipliers may be expressed as ratios of sales, income, or employment, or as ratios of total income or employment changes relative to direct sales. Multipliers express the degree of interdependency between sectors in a region's economy and therefore vary considerably across regions and sectors. A **sector-specific multiplier** gives the total changes to the economy associated with a unit change in output or employment in a given sector (i.e. the **direct economic effect**) being evaluated. **Indirect effects multipliers** represent the changes in sales, income, or employment within the region in backward-linked industries supplying goods and services to businesses (e.g., increased sales in input supply firms resulting from more nursery industry sales). **Induced effects multipliers** represent the increased sales within the region from household spending of the income earned in the direct and supporting industries for housing, utilities, food, etc. An **imputed multiplier** is calculated as the ratio of the total impact divided by direct effect for any given measure (e.g. output, employment).

Other property income represents income received from investments, such as corporate dividends, royalties, property rentals, or interest on loans.

Output is the dollar value of a good or service produced or sold, and is equivalent to sales revenues plus changes in business inventories.

Output-consumption ratio is the total industry output divided by the apparent consumption, for any given commodity or industry, and is a measure of the degree to which local demands are met by local production.

Producer prices are the prices paid for goods at the factory or point of production. For manufactured goods the purchaser price equals the producer price plus a retail margin, a wholesale margin, and a transportation margin. For services, the producer and purchaser prices are equivalent.

Proprietor income is income received by non-incorporated private business owners or self-employed individuals.

Purchaser prices are the prices paid by the final consumer of a good or service.

Region defines the geographic area for which impacts are estimated, usually an aggregation of several counties defined on the basis of worker commuting patterns.

Sector is an individual industry or group of industries that produce similar products or services, or have similar production processes. Sectors are classified according to the North American Industrial Classification System (NAICS).

Value Added is a broad measure of income, representing the sum of employee compensation, proprietor income, other property income, indirect business taxes and capital consumption (depreciation). Value added is the basis for calculation of Gross Domestic Product, and is a commonly used measure of the contribution an industry to regional economy because it avoids double counting of intermediate sales.

Appendix B. Summary of Detailed SUS Expenditures and *IMPLAN* Sector Assignments

Expense Category / Item	Expenditures	IMPLAN Sector Number
Capital Investment (Construction Services)	883,436,779	36
Operations	4,768,764,010	
Accounting Services	6,143,867	368
Acetylene, Butane & Other Gas	2,456,845	121
Agricultural Property	543,328	360
Agricultural Supplies	2,246,843	19
Aid To Counties-Other	293	438
Airfare - In State Travel	77,696	332
Airfare - Out Of State Travel	61,850	332
Airfare Foreign Travel-Training	7,022	393
Application Software (Licenses)	17,579,711	345
Architectural Services	1,829,568	369
Attorneys' Fees & Gross Proceeds	3,800	367
Automobile Fleet Insurance	992,929	358
Banking Services	1,883,912	354
Bedding And Other Textiles	4,028,438	80
Books And Other Library Resources	50,505,269	343
Books And Other Library Resources-Training	-10,129	343
Building & Construction Material	13,395,109	323
Building And Fixed Equipment	483,571	34
Care And Subsistence	12,121	419
Care And Subsistence - Medical Services	1,735,869	394
Care And Subsistence - Other Vendor Services	238,044	395
Care And Subsistence - Transition Services	160,214	398
Cellular Telephones	3,434,138	351
Cellular Telephones Rental	158,251	351
Civil Rights Insurance	1,771,465	358
Client Benefits And Allowances	61,516	359
Coal And Wood	1,600	21
Communications/Freight Other	1,609,152	335
Construction Services	6,512,970	36
Consulting Services	32,413,607	374
Copy Equipment Rental	2,349,135	365
Court Reporting, Transcription & Translation Svcs.	35,919	367
Cur. Chgs. - Other Services	250,683	357
Current Charges And Obligations	44,563,097	357
Custodial And Janitorial Services	3,863,653	388
Diesel Fuel	235,883	115
Dues	14,072,921	425
Educational Aids	1,620,875,727	10002
Educational Aids - Needs Based	165,569,229	10002
Educational Property	41,787,950	360
Educational Supplies	34,978,867	319
Educational-Training Property	1,314	360
Educational-Training Supplies	287,114	319
Emp./Volunteer Reimbursement Other Than Travel	386,089	319
Employee Moving Expense	716,509	335
Employment Advertising & Job Opportunity Announc.	677,261	382
Engineering Services	15,167,775	369
Entertainment Services	6,716,232	409

Expense Category / Item	Expenditures	IMPLAN Sector Number
Examination And Testing Services	94,184	393
Faculty	733,110,748	10007
Fire Fund Insurance	1,054,653	358
Fiscal Agents & Other Fees	1,023,693	355
Food Products	22,681,301	319
Food Services	7,454,086	413
Foreign Travel - Other	20,164,396	332
Freight	3,445,599	335
From Dept. Of Management Services	39,035	437
From Non-Governmental Entities	45,529,011	425
From Other Governmental Units	1,975,787	437
From Other State Agencies	3,872,602	437
Fuel Oil	622,364	115
Furniture And Equipment	75,756,965	299
Furniture And Equipment-Training	7,973	393
Gasoline	2,721,451	115
General Liability Insurance	5,394,391	358
Graduate Assistants	75,442,606	10003
Grants, Contributions And Distributions	627,838	424
Hotel - In State Travel	7,069	411
Hotel - Out Of State Travel	4,466	411
Human Resource Services	80,905	374
In State Travel-Training	3,112	393
Independent Contractor-Not Otherwise Classified	236,157,973	380
Information Technology Communications	1,866,740	351
Information Technology Equip Rental	1,331,086	365
Information Technology Equipment	37,354,672	234
Information Technology Insurance	5,960	358
Information Technology Services	26,664,255	373
Information Technology Supplies	13,911,448	319
Information Technology Supplies-Training	527	393
In-State Travel-Class A&B Meals	173,653	413
Insurance Contributions	16,678,696	358
Interest	35,341,918	354
Interest On Late Payment Of Invoices	13,474	354
Investigative Services	30,569	387
Janitorial & Household Supplies	6,753,105	388
Lawn Care, Grounds Keeping & Landscaping Svs.	724,782	388
Legal And Official Advertisements	641,604	341
Legal Fees And Attorneys' Services	7,459,391	367
Linen And Laundry Services	178,349	421
Lubricants	66,042	115
Machinery Rental	110,816	365
Mailing And Delivery Services	565,079	427
Medical Property	381,115	360
Medical Records	13,283	384
Medical Services	7,802,073	396
Medical supplies	8,062,634	319
Medical-Training Property	13,007	360
Minor Tools	727,557	319
Modular Building Structures	49,582	101
Monthly Mileage Allowance	2,625	326
Motor Vehicles-Other	2,587,918	320

Expense Category / Item	Expenditures	IMPLAN Sector Number
Motor Vehicles-Passenger	1,234,832	320
Nonqualified Moving Payments To Employees	5,956	335
Non-Qualified Payments To Third Parties	98	10004
Nonresident Alien Scholarship Nonqualified	534,373	10004
Nonresident Alien Scholarship Qualified	1,200	10004
Office Equipment Rental	2,251,611	365
Office Supplies Consumable	18,688,455	319
Office Supplies Consumable-Training	68,769	393
Office Supplies Non-Consumable	276,720	319
Office Supplies Non-Consumable-Training	313	393
Other	9,677,207	319
Other Advertising Services	9,289,004	377
Other Cur Chgs.-Other	333,741,225	357
Other Fluids	2,074,315	141
Other Furniture And Equipment	3,795,504	301
Other Insurance	9,277,014	358
Other Material And Supplies	92,334,404	319
Other Materials And Supplies-Training	21	393
Other Nonoperating	1,123,373	319
Other Real Property	113,484	360
Other Rented Equipment	4,085,437	365
Other Structures And Improvements	1,656,256	36
Other Training	15,281	393
Out Of State Travel-Class A&B Meals	113,280	413
Out Of State Travel-Training	682	393
Pager	122,582	238
Parts And Fittings	3,562,847	319
Per Diem - Foreign Travel	670	319
Perquisites	277,223	10007
Postage	9,359,109	427
Postage Equipment Rental	52,260	365
Pretax Administrative Assessments	2,007,260	384
Printing & Reproduction-Training	382	393
Printing And Reproduction	21,367,502	113
Privatized Services	425	374
Promotional Advertising	5,807,169	377
Propane	513,843	115
Public Employees Optional Retirement Plan	603,047	359
Public Service Notices & Announcements	302,965	377
Purchases For Resale	61,380,947	319
Qualified Moving Payments To Employees	234,107	335
Qualified Payments To Third Parties	321,937	374
Registration Fee With No Travel Expenses	2,099,520	425
Repairs & Maintenance	58,937,790	39
Repairs And Maintenance-Commodities	23,034,652	39
Repairs And Maintenance-Contracted Services	36,525,552	39
Research Services	40,264,822	376
Rewards	4,414	10006
Royalties	1,861,028	10009
Security Services	928,432	387
Social Security	69,925,275	359
State Financial Assistance	14,254,358	10003
Subscriptions	3,282,296	342

Expense Category / Item	Expenditures	IMPLAN Sector Number
Subscriptions-Training	4,166	393
Supplies And Commodities	105,968	319
Surety Bonds	11,906	359
Telephone	36,595,916	351
Temporary Employment Services	5,991,923	382
Training Equipment Rental	148,558	365
Training Equipment-Other	3,176	319
Training Facilities	48,302	360
Training Services	4,816,889	393
Travel - In State - Other	29,845,016	362
Travel Advances	1,081,419	332
Travel Nonres. Alien Independ. Cont.-Foreign Source	232	332
Travel Nonres. Alien Independent Cont.-Exempt	5,274	332
Travel -Out Of State -Other	46,993,434	332
Utilities-Electricity	162,535,506	31
Utilities-Garbage Collection	6,241,482	390
Utilities-Natural Gas	18,452,570	32
Utilities-Other	61,021,942	33
Utilities-Steam	2,961,220	31
Utilities-Water And Sewerage	32,239,479	33
Vehicle Rental	2,610,009	362
Payroll	3,392,812,272	
Administrative And Professional	451,499,884	10005
Direct employment		115
Faculty	618,645,158	10007
Graduate Assistants	68,171,482	10003
Health Benefits	7,510	358
Nonres. Alien Independ. Contractor-Foreign Source	1,380,809	10006
Nonresident Alien Independent Contractor-Exempt	61,794	10006
Nonresident Alien Independent Contractor-Taxable	75,544	10006
Optional Retirement Plan-Employer Contribution	30,712,483	359
Other - University Authorized	502,144,220	10004
Other Pension And Benefits	21,930	359
Part-Time Academic Employment	90,432,616	10003
Pers. Serv.-Salary And Wages	540,551,798	10005
Personal Services-Other	142,388,157	10005
Public Employees Optional Retirement Plan	6,980,477	359
Social Security	32,354,548	359
State Awards To State Employees-Nontaxable	1,025,371	10006
State Disability-Employer's Contributions	12,464,600	359
State Health-Employer's Contributions	223,352,347	357
State Life-Employer's Contributions	2,312,706	357
State Retirement	106,771,783	359
Student Assistants	57,940,695	10003
Student Or Graduate Assistants	40,292,037	10003
Temporary Employment	180,611,919	10004
U.S. Civil Service Health Insurance	158	358
Unemployment Compensation Benefits	3,191,490	359
University Support And Professional Service	270,766,458	384
Workers' Compensation Benefits	14,316	359
Workers' Compensation Insurance	8,639,982	358
Student Spending	4,535,783,529	
Board off-campus 1	522,354,729	324

Expense Category / Item	Expenditures	IMPLAN Sector Number
Board off-campus 2	522,354,729	413
Books & Supplies	369,034,566	328
Clothing Maintenance	244,408,984	327
Computer & Cell Phone 1	176,517,806	322
Computer & Cell Phone 2	176,517,806	352
Personal & Health Ins. 1	128,024,428	329
Personal & Health Ins. 2	192,036,642	358
Personal & Health Ins. 3	192,036,642	409
Personal & Health Ins. 4	128,024,428	419
Room off-campus	1,683,181,188	360
Transportation 1	100,645,791	320
Transportation 2	50,322,895	326
Transportation 3	50,322,895	414
Grand Total	13,580,796,590	

Appendix C. *IMPLAN* Multipliers and Regional Purchase Coefficients for Selected Industries and Social Accounts in the State of Florida (2010)

IMPLAN Sector	Industry / Social Account	Employment (jobs per million dollars output)			Output (dollars per dollar)			Value Added (dollars per dollar output)			Regional Purchase Coefficient
		Direct Effects	Indirect Effects	Induced Effects	Direct Effects	Indirect Effects	Induced Effects	Direct Effects	Indirect Effects	Induced Effects	
19	Support activities for agriculture and forestry	33.28	0.86	15.06	1.0000	0.1469	1.6768	0.7454	0.0684	1.0951	0.5946
21	Mining coal	2.66	0.94	14.22	1.0000	0.1512	1.5366	0.6734	0.0885	1.0217	0.0087
31	Electric power generation, transmission, and distribution	1.84	0.60	16.30	1.0000	0.0789	1.7583	0.8638	0.0426	1.1690	0.7611
32	Natural gas distribution	1.21	2.02	8.18	1.0000	0.2619	0.8886	0.3471	0.1097	0.5879	0.4459
33	Water, sewage and other treatment and delivery systems	5.30	1.84	15.83	1.0000	0.2204	1.7513	0.7973	0.1291	1.1423	1.0000
34	Construction of new nonresidential commercial and health care structures	8.22	2.44	11.21	1.0000	0.3139	1.2495	0.4548	0.1784	0.8128	1.0000
36	Construction of other new nonresidential structures	7.75	2.99	11.62	1.0000	0.3713	1.2959	0.4388	0.2187	0.8427	1.0000
39	Maintenance and repair construction of nonresidential structures	8.59	2.74	12.35	1.0000	0.3361	1.3762	0.5035	0.1974	0.8952	1.0000
80	Textile and fabric finishing mills	4.62	1.80	9.15	1.0000	0.2604	1.0177	0.3664	0.1555	0.6629	0.0741
101	Manufactured home (mobile home) manufacturing	7.33	2.26	8.23	1.0000	0.2938	0.9158	0.2928	0.1605	0.5978	0.0000
113	Printing	6.96	2.49	9.74	1.0000	0.3163	1.0834	0.3588	0.1896	0.7063	0.2422
115	Petroleum refineries	0.14	2.91	3.99	1.0000	0.3796	0.4431	0.0831	0.1542	0.2881	0.0588
121	Industrial gas manufacturing	1.09	2.46	9.33	1.0000	0.4912	1.0304	0.2445	0.2964	0.6735	0.2492
141	All other chemical product and preparation manufacturing	1.91	2.16	7.48	1.0000	0.4073	0.8325	0.2114	0.2092	0.5419	0.5585
234	Electronic computer manufacturing	0.84	2.33	7.54	1.0000	0.5294	0.8391	0.1787	0.2666	0.5453	0.3058
238	Broadcast and wireless communications equipment manufacturing	1.96	2.91	9.21	1.0000	0.5381	1.0227	0.2379	0.2768	0.6678	0.2211
299	Institutional furniture manufacturing	4.92	2.46	10.02	1.0000	0.3529	1.1183	0.3911	0.1949	0.7257	0.1359
301	Office furniture and custom architectural woodwork and millwork manufacturing	8.48	2.49	11.04	1.0000	0.3423	1.2308	0.4313	0.1902	0.8014	0.1277
319	Wholesale trade businesses	6.25	1.63	17.08	1.0000	0.1905	1.8456	0.7786	0.1224	1.2296	0.9081
320	Retail Stores - Motor vehicle and parts	1.61	0.46	2.48	0.1560	0.0557	0.2702	0.0918	0.0365	0.1795	0.9500
322	Retail Stores - Electronics and appliances	2.67	0.77	4.02	0.2640	0.0934	0.4407	0.1563	0.0612	0.2906	0.9500
323	Retail Stores - Building material and garden supply	4.20	0.72	5.37	0.3190	0.0873	0.5787	0.2185	0.0573	0.3868	0.9500
324	Retail Stores - Food and beverage	5.31	0.54	4.85	0.2820	0.0653	0.5230	0.2068	0.0428	0.3493	0.9405
326	Retail Stores - Gasoline stations	2.20	0.32	2.54	0.1500	0.0390	0.2723	0.1050	0.0256	0.1823	0.7424
327	Retail Stores - Clothing and clothing accessories	7.70	1.34	6.88	0.4270	0.1611	0.7376	0.2415	0.1055	0.4952	0.9500
328	Retail Stores - Sporting goods, hobby, book and music	7.78	0.95	6.40	0.3890	0.1145	0.6911	0.2571	0.0750	0.4611	0.9500
329	Retail Stores - General merchandise	5.10	0.46	4.75	0.2730	0.0555	0.5117	0.2090	0.0364	0.3419	0.9500
332	Transport by air	3.76	2.26	12.02	1.0000	0.2802	1.3032	0.4804	0.1593	0.8661	0.4617
335	Transport by truck	10.21	3.56	12.82	1.0000	0.3514	1.4292	0.4940	0.2256	0.9292	0.7626
341	Newspaper publishers	8.63	2.21	12.36	1.0000	0.2667	1.3819	0.5416	0.1713	0.8969	0.2869
342	Periodical publishers	4.15	4.05	11.00	1.0000	0.5012	1.2289	0.3212	0.3215	0.7973	0.2812
343	Book publishers	3.78	3.65	11.90	1.0000	0.4462	1.3310	0.4371	0.2786	0.8609	0.1961
345	Software publishers	2.26	3.86	13.53	1.0000	0.3935	1.5146	0.5629	0.2529	0.9793	0.2506
351	Telecommunications	2.64	2.42	13.05	1.0000	0.3567	1.4373	0.5574	0.2098	0.9400	0.5680
352	Data processing, hosting, ISP, web search portals and related	3.71	1.33	14.37	1.0000	0.1723	1.6107	0.7831	0.1113	1.0381	0.3053

IMPLAN Sector	Industry / Social Account	Employment (jobs per million dollars output)			Output (dollars per dollar)			Value Added (dollars per dollar output)			Regional Purchase Coef-ficient
		Direct Effects	Indirect Effects	Induced Effects	Direct Effects	Indirect Effects	Induced Effects	Direct Effects	Indirect Effects	Induced Effects	
	services										
354	Monetary authorities and depository credit intermediation activities	3.01	4.58	12.20	1.0000	0.5784	1.3634	0.4475	0.2896	0.8823	0.6869
355	Nondepository credit intermediation and related activities	8.39	3.42	13.97	1.0000	0.4481	1.5555	0.5301	0.2521	1.0138	0.6869
357	Insurance carriers	3.93	1.92	14.60	1.0000	0.2508	1.6186	0.7133	0.1553	1.0538	0.6608
358	Insurance agencies, brokerages, and related activities	7.62	3.32	14.73	1.0000	0.3499	1.6478	0.6139	0.2252	1.0691	0.6608
359	Funds, trusts, and other financial vehicles	6.98	4.49	12.32	1.0000	0.6125	1.3650	0.4587	0.2492	0.8896	0.4330
360	Real estate establishments	7.10	0.85	15.74	1.0000	0.1035	1.7298	0.8894	0.0675	1.1299	0.7000
362	Automotive equipment rental and leasing	5.30	2.91	15.15	1.0000	0.3682	1.6392	0.6080	0.2199	1.0887	0.9000
365	Commercial and industrial machinery and equipment rental and leasing	4.16	3.84	14.71	1.0000	0.4434	1.6123	0.5394	0.2820	1.0608	0.8000
367	Legal services	7.27	1.34	16.29	1.0000	0.1523	1.8073	0.8295	0.0998	1.1786	0.9000
368	Accounting, tax preparation, bookkeeping, and payroll services	11.13	1.59	15.93	1.0000	0.1814	1.7840	0.8034	0.1187	1.1555	0.9000
369	Architectural, engineering, and related services	9.78	3.57	14.92	1.0000	0.3717	1.6656	0.5922	0.2376	1.0837	0.9000
373	Other computer related services, including facilities management	5.66	1.60	14.79	1.0000	0.1727	1.6584	0.8000	0.1074	1.0696	0.8000
374	Management, scientific, and technical consulting services	10.22	2.94	15.34	1.0000	0.3133	1.7139	0.6570	0.1993	1.1145	0.8000
376	Scientific research and development services	6.88	3.71	14.15	1.0000	0.4113	1.5800	0.5347	0.2527	1.0280	0.4770
377	Advertising and related services	10.16	1.68	15.03	1.0000	0.1944	1.6809	0.7615	0.1234	1.0885	0.8000
380	All other miscellaneous professional, scientific, and technical services	6.32	1.32	14.77	1.0000	0.1435	1.6572	0.8342	0.0920	1.0665	0.8000
382	Employment services	29.27	1.78	16.52	1.0000	0.1726	1.8501	0.8172	0.1090	1.2015	0.8000
384	Office administrative services	10.76	4.45	14.99	1.0000	0.4390	1.6723	0.5421	0.2805	1.0900	0.8000
387	Investigation and security services	26.01	2.25	15.51	1.0000	0.2662	1.7287	0.6895	0.1638	1.1273	0.8000
388	Services to buildings and dwellings	18.15	2.60	12.37	1.0000	0.2968	1.3771	0.5186	0.1838	0.8968	0.8000
390	Waste management and remediation services	5.57	2.67	13.94	1.0000	0.3431	1.5434	0.5891	0.2092	1.0071	0.8000
393	Other private educational services	18.16	2.89	14.72	1.0000	0.3315	1.6400	0.5999	0.2080	1.0696	0.8000
394	Offices of physicians, dentists, and other health practitioners	8.81	2.63	15.18	1.0000	0.3073	1.6925	0.6461	0.1944	1.1025	0.9500
395	Home health care services	17.98	2.20	15.72	1.0000	0.2305	1.7566	0.7245	0.1467	1.1431	0.9787
396	Medical and diagnostic labs and outpatient and other ambulatory care services	8.53	3.74	13.99	1.0000	0.4131	1.5597	0.5312	0.2603	1.0147	0.8413
398	Nursing and residential care facilities	18.37	2.27	15.49	1.0000	0.2605	1.7133	0.6779	0.1699	1.1227	0.8993
409	Amusement parks, arcades, and gambling industries	7.73	2.68	15.37	1.0000	0.3149	1.6667	0.6446	0.1991	1.1051	0.7978
411	Hotels and motels, including casino hotels	9.51	3.17	14.68	1.0000	0.3704	1.6039	0.5817	0.2285	1.0582	0.8000
413	Food services and drinking places	17.15	2.25	13.63	1.0000	0.3042	1.4944	0.5590	0.1888	0.9844	0.9000
414	Automotive repair and maintenance, except car washes	15.16	1.92	13.59	1.0000	0.2318	1.4937	0.5658	0.1449	0.9826	0.8883
419	Personal care services	17.07	3.16	15.04	1.0000	0.3591	1.6685	0.5933	0.2318	1.0891	0.9000
421	Dry-cleaning and laundry services	20.82	1.31	16.55	1.0000	0.1554	1.8388	0.7973	0.0962	1.1996	0.9000
424	Grantmaking, giving, and social advocacy organizations	10.60	4.65	13.51	1.0000	0.4983	1.5061	0.4478	0.2988	0.9818	0.6690
425	Civic, social, professional, and similar organizations	11.99	3.65	13.71	1.0000	0.4624	1.5207	0.4874	0.2628	0.9950	0.6690

IMPLAN Sector	Industry / Social Account	Employment (jobs per million dollars output)			Output (dollars per dollar)			Value Added (dollars per dollar output)			Regional Purchase Coef-ficient
		Direct Effects	Indirect Effects	Induced Effects	Direct Effects	Indirect Effects	Induced Effects	Direct Effects	Indirect Effects	Induced Effects	
427	US Postal Service	9.62	1.05	16.48	1.0000	0.1234	1.8469	0.8396	0.0712	1.2005	0.6966
437	* Employment and payroll only (state & local govt., non-education)	13.26	0.00	17.54	1.0000	0.0000	1.9693	1.0000	0.0000	1.2760	1.0000
438	* Employment and payroll only (state & local govt., education)	16.68	0.00	17.54	1.0000	0.0000	1.9694	1.0000	0.0000	1.2761	1.0000
10001	Labor income	0.00	0.00	18.06	0.0000	0.0000	2.0261	0.0000	0.0000	1.3162	1.0000
10002	Households 10-15k	8.75	0.00	7.32	1.0000	0.0000	0.8365	0.6317	0.0000	0.5284	1.0000
10003	Households 15-25k	8.84	0.00	8.01	1.0000	0.0000	0.9065	0.6403	0.0000	0.5804	1.0000
10004	Households 25-35k	8.88	0.00	7.98	1.0000	0.0000	0.8991	0.6374	0.0000	0.5731	1.0000
10005	Households 35-50k	8.95	0.00	8.56	1.0000	0.0000	0.9557	0.6413	0.0000	0.6128	1.0000
10006	Households 50-75k	8.84	0.00	8.76	1.0000	0.0000	0.9913	0.6452	0.0000	0.6396	1.0000
10007	Households 75-100k	8.89	0.00	9.01	1.0000	0.0000	1.0137	0.6464	0.0000	0.6552	1.0000
10009	Households 150k+	8.96	0.00	9.55	1.0000	0.0000	1.0658	0.6447	0.0000	0.6871	1.0000

Appendix D. Descriptions of Institutions in the State University System of Florida

Florida Agricultural and Mechanical University (FAMU) was founded as the State Normal College for Colored Students, and on October 3, 1887, it began classes with fifteen students and two instructors. Today, FAMU, as the university has become affectionately known, is the premiere state school among historically black colleges and universities. Florida A&M University remains the only historically black university in the eleven member State University System of Florida. It additionally has a campus in Orlando, Florida and a Research and Development Center in Quincy, Florida as well as extension campuses of its College of Pharmacy in Miami, Jacksonville, Tampa and Crestview, Florida. FAMU is designated as a general purpose institution with curricular offerings in most of the arts and sciences, business, and education at the baccalaureate level and in some graduate degree programs. The university is directed to develop a set of academic programs to attract a statewide, rather than a more limited regional, student population. The university offers 62 bachelor's degrees in 103 majors/tracks; 36 master's degrees with 56 majors/tracks are also offered within eleven of the university's 13 schools and colleges. In addition, two professional degrees and eleven PhD degree programs are offered. In the fall of 1997, FAMU was selected as the TIME Magazine-Princeton Review "College of the Year" and was cited in 1999 by Black Issues in Higher Education for awarding more baccalaureate degrees to African-Americans than any institutions in the nation. (Source: <http://www.famu.edu/index.cfm?catalog&GeneralInformation>).

Florida Atlantic University (FAU) was established by the Florida State Legislature in 1961 as the fifth university in the state system. When it originally opened in 1964, FAU was the first university in the country to offer only upper-division and graduate-level work. This model was based on the theory that freshmen and sophomores would be served by the community/state college system. Located in rapidly growing South Florida, the University responded to population growth and the need to provide increased access to higher education by admitting its first freshman class in 1984. Today, with its developed system of distributed campuses and sites, Florida Atlantic University serves as a model for urban, regional universities of the future. It offers a comprehensive array of undergraduate and graduate programs and enrolls 28,000 students who reflect the rich cultural diversity of the region. Florida Atlantic University's colleges include the Dorothy F. Schmidt College of Arts and Letters, the College of Business, the College for Design and Social Inquiry, the College of Education, the College of Engineering and Computer Science, the Graduate College, the Harriet L. Wilkes Honors College, the Charles E. Schmidt College of Medicine, the Christine E. Lynn College of Nursing and the Charles E. Schmidt College of Science. These colleges offer more than 170 degree programs—83 bachelors, 73 masters, 3 specialist and 22 doctoral degrees. (Source: <http://www.fau.edu/registrar/universitycatalog/welcome.php>)

Florida Gulf Coast University (FGCU) was authorized in 1991, and began admitting students in 1997 to its 760 acre campus located south of Fort Meyers, Florida. During the past decade student enrollment increases have averaged from 6 to 24 percent, to the current enrollment of 12,000. Students today can earn bachelor's Master's or Doctorate degrees in undergraduate and graduate programs in colleges of Arts and Sciences, Education, Health Professions, Business or Engineering. Graduate degrees are offered in a variety of areas of study: accounting, computer information systems, economics, finance, management and marketing and awarded in accounting and taxation, computer information

systems and business administration, and the University offers a dynamic Honors program as a means whereby students may maximize their academic experience. FCUs Academic Learning Compact initiative helps students identify core student learning outcomes and align expectations with curricula and assessment as a means of guiding continuous student improvement. From 1997-08 to 2009-10, the university's research and sponsored programs grew from just under \$3 million to \$14.4 million. (Source: <http://www.fgcu.edu/catalog>)

Florida International University (FIU) was established by the Florida Legislature in 1965. Classes began in September 1972, with 5,667 students enrolled in upper division and graduate programs – the largest opening day enrollment in U.S. collegiate history. In 1984, FIU received authority to begin offering degree programs at the doctoral level. The Carnegie Foundation for the Advancement of Teaching ranks FIU as a Research University in the High Research Activity Category. The University offers more than 190 baccalaureate, master's and doctoral degree programs in 23 colleges and schools, including: the College of Architecture and the Arts (School of Architecture, School of Art and Art History, School of Music, School of Theatre, Dance, and Speech Communication); College of Arts and Sciences; College of Business Administration (School of Accounting, Chapman Graduate School); College of Education; College of Engineering and Computing (School of Computing and Information Sciences); College of Nursing and Health Sciences; College of Social Work, Justice, and Public Affairs (School of Criminal Justice, School of Public Administration, School of Social Work); Honors College; Robert Stempel School of Public Health; School of Journalism and Mass Communication; School of Hospitality and Tourism Management; College of Law; and the University Graduate School. FIU has more than 38,614 students, 1,180 full-time faculty, and more than 146,000 alumni, making it the largest university in South Florida and placing it among the nation's largest colleges and universities. The University has two campuses – University Park in western Miami-Dade County and the Biscayne Bay Campus in northeast Miami-Dade County – and an educational facility at the Pines Educational Center in nearby Broward County. (Source: <http://catalog.fiu.edu>)

Florida State University (FSU), located in Tallahassee, Florida, was first designated as Florida State University when, in 1947 the Governor of Florida signed an act of the Legislature that returned Florida State College for Women to coeducational status and named it The Florida State University. The student body then numbering 4,056, now numbers 40,255 students. FSU currently awards over 2,000 graduate and professional degrees each year, and comprises 16 independent colleges and 39 centers, facilities, labs and institutes that offer more than 300 programs of study. Its main campus is 452 acres. Notable among its endeavors are the Marine Laboratory on the Gulf Coast, the National High Magnetic Field Laboratory and Division of Research at Florida State's Southwest Campus and the branch campus in Panama City, Florida. During fiscal year 2010, Florida State University's faculty generated a record \$215 million in funding to supplement state funds used for research. These external funds, derived through contracts and grants from various private foundations, industries, and government agencies, are used to provide stipends for graduate students, to improve research facilities, and to support the research itself. Many members of Florida State University's faculty are renowned scholars in their fields. In the natural sciences, Florida State University is perhaps best known for its basic research programs in physics, chemistry and biochemistry, biology, psychology, meteorology, and oceanography. Its programs in materials science, high-field magnet research, superconductivity, geology, mathematics, computer science, and statistics

also have strong research components, both basic and applied. Since 1982, Florida State has operated a College of Engineering as a joint program with Florida A&M University, an enterprise combining strengths in mechanical, electrical and computer, civil, environmental, chemical and biomedical, and industrial and manufacturing engineering. The Florida State University College of Medicine, founded by statute in 2000, has major research components in the biomedical and clinical sciences, family medicine and rural health, geriatrics, and medical humanities and social sciences.

(Sources: <http://gradschool.fsu.edu/>; <http://registrar.fsu.edu/bulletin/undergrad/>) and Ross Ellington, Associate VP for Research, FSU, personal communication.

New College of Florida (NCF) became the eleventh independent school in the Florida State University System in 2001. New College's 144-acre bay front campus is located in west Sarasota, Florida, approximately fifty miles to the south of Tampa. Situated between Sarasota Bay and the Sarasota-Bradenton airport, the college lies within a public educational, cultural, and historic district that includes the John and Mable Ringling Museum of art and the Asolo Theatre. The primary campus is located on the former Edyth and Charles Ringling estate. Today, as Florida's independent honors college, New College retains a distinctive academic program, while enjoying the benefits and accessibility that being a public university affords. Students are encouraged to chart their own course at New College, choosing from more than 40 majors or design a multi-disciplinary or special area of concentration. With a 10-to-one student/faculty ration students work closely with faculty, exploring their personal interests and achieving their educational goals through independent projects, group study and research projects on and off campus. Students complete seven contracts prior to graduation in lieu of credit hours and, working with their faculty advisor, create a written agreement each semester that sets criteria for their success. Each contract usually includes three to five academic activities (courses, tutorials, internships, independent reading projects) that are designed to develop their personal educational goals. Professors provide Narrative Evaluations instead of grades for each course or project completed. The goal is to give students useful, informative feedback on their studies in a holistic context rather than assigning grades that may not tell the whole story. (Source: <http://ncf.edu/general-catalog/>).

The University of Central Florida (UCF) is a metropolitan public research university located in Orlando, Florida. The university was authorized by the Florida State Legislature in 1963, and opened its doors in 1968 as Florida Technological University, with the goal of providing highly-trained personnel to support the Kennedy Space Center. The university was renamed the University of Central Florida in 1978. Once known mainly as a small commuter and technology school, in recent years UCF has undertaken an effort to increase its academic and research standings while also evolving into a more traditional research university. The university has changed dramatically since its founding in 1963. As of 2011, there were approximately 58,587 students attending classes on twelve satellite campuses spread across Central Florida. Today's student population represents over 140 countries, all 50 states and the District of Columbia. Most are located on the university's 1,415-acre (573 ha) main campus approximately 13 miles (21 km) east-northeast of downtown Orlando. UCF currently is the largest university in the nation in terms of undergraduate enrollment, the largest university in Florida, and in 2003 held the distinction of being the fastest-growing university in the United States. The university's exponential growth in student population was highlighted when, during its Spring ceremonies, its 200,000

degree was awarded, (including 35,000 graduate and professional degrees to nearly 170,000 alumni worldwide). This was less than five years after awarding its 150,000th diploma. UCF offers over 225 separate degree options through twelve colleges and its satellite campuses. Designated as a space-grant university, the university has made notable research contributions to optics, modeling and simulation, digital media, engineering and computer science, business administration, education, and hospitality management. Source: <http://www.graduatecatalog.ucf.edu>).

The University of Florida (UF) is a public land-grant, sea-grant and space-grant research university, one of the most comprehensive in the United States. Located on a 2,000-acre campus in Gainesville, Florida, It traces its historical origins to 1853 and has operated continuously on its present Gainesville campus since September 1906. The University of Florida is one of three "research flagship universities" within the State University System of Florida. It is the second-largest Florida university by student population and the sixth largest single-campus university in the United States by student population. The University of Florida is home to sixteen academic colleges and more than 150 research centers and institutes. It offers multiple graduate and professional programs—including business administration, engineering, law and medicine--on one contiguous campus and administers 123 masters degree programs and 76 doctoral degree programs in 87 schools and departments. It is a member of the Association of American Universities and has high national rankings by academic assessment institutions and consistently ranks within the top 100 universities worldwide. Its faculty and staff are dedicated to the common pursuit of the university's threefold mission: teaching, research and service. Sources: <http://www.registrar.ufl.edu>; <http://gradschool.ufl.edu/GimsPublic/Acalog/Faculty.aspx>).

The University of North Florida (UNF) is a comprehensive, metropolitan university offering degree programs at the baccalaureate, master's, and doctoral levels. Initially established as an upper division and master's degree-granting institution, UNF began offering classes in 1972 to a 2,000-member student body. In 1984, freshmen and sophomores were admitted. In 1990 the university opened a doctoral program in educational leadership and in 2007, UNF added a doctorate in nursing practice and a doctorate in physical therapy. UNF remains one of the most selective comprehensive universities in America. In fall 2010, approximately 1 out of every 8 freshman applicants enrolled in the fall class. With a mean SAT score of 1204 and grade point average of 3.79, UNF's 2010 fall freshman class reflected the university's commitment to high-quality undergraduate education. The university is committed to diversity with the belief that exposure to an extraordinary blend of students offers a rich and rewarding educational experience. Of the more than 16,320 students enrolled at UNF for the 2010 fall term, about 56 percent were women, just under 24 percent were minorities, and 89 percent were undergraduates. (Source: <http://www.unf.edu/cat-->).

The University of South Florida (USF), located the Tampa, Florida area, broke ground in 1958 and enrolled approximately 2000 students in 1960. A St. Petersburg, Florida campus opened in 1965. USF established a College of Medicine and New College in Sarasota became part of USF in the 1970s. Several landmark developments occurred during the 1980s: a graduate school was established, the H. Lee Moffitt Cancer Center and Research Institute opened, and when the Lakeland, Florida campus opened, enrollments surged past 30,000. In the 1990s, USF research funding exceeded \$100 million and there was widespread recognition of USF as a major research university. The university today has almost 43,000 students enrolled in 200 undergraduate and graduate programs. The Carnegie Foundation for

the Advancement of Learning ranks USF in the top tier of U.S. research universities. (Sources:

<http://www.ugs.usf.edu/catalogs.htm> ; <http://www.grad.usf.edu/catalog.asp>).

The University of West Florida (UWF) was established in 1963. Two years later, ground was broken, and classes began in the fall of 1967. UWF has three colleges, Arts and Sciences, Business, and Professional Studies. In 2009/10 it had a total student population of approximately 11,200. Undergraduate degrees are offered in 51 areas, master's degrees in 25 areas, two specialist degrees, and a doctorate of education. In addition to UWF's main campus, the University serves student populations east of Santa Rosa County at UWF Emerald Coast locations in Fort Walton Beach, Eglin Air Force Base, Hurlburt Field and shared facilities at regional community colleges. UWF's Archaeology Institute offers a unique marine archaeology program as does its terrestrial archaeology program, and its Center for Environmental Diagnostics and Bioremediation conducts invaluable research on the health of Northwest Florida's natural resources. UWF also has developed a four-year nursing degree in partnership with Northwest Florida State College. Source:

<http://catalog.uwf.edu>).

Appendix E. Visitor Attendance and Spending at the University of Florida

Spending by visitors to University facilities and functions was estimated from visitor counts provided by various UF organizations and average per-visitor-day spending estimates provided by VISIT FLORIDA and the Alachua County Visitors and Convention Bureau. UF Visitor expenditures were estimated from the number of unaffiliated (not UF employee, student, or family) visitor days to UF events, facilities or attractions, and average travel expense data for Florida in 2009 provided by *VISIT FLORIDA*. Spending by visitors was only included for unaffiliated persons, i.e., excluding University faculty, staff and students. Data on attendance to various athletic events were provided by the University Athletic Association and the management of the O'Connell Center. Visitor attendance and spending for UF athletic events is detailed in Table E1. Overall, about 64 percent of the estimated 1.3 million athletic visitors were estimated to be unaffiliated with UF, and about 9.4 percent of total visitors were estimated to come from outside the State. Football was the dominant venue for athletic visitors, accounting for 770,550, or 59 percent of total attendance, and nearly 88 percent of athletic visitor spending. Total visitor spending for athletic events was estimated at \$88.7 million, including \$30.6 million by out-of-state visitors. This is a substantially higher value than estimated in the 2005-06 study because the out-of-state visitor attendance to home football games was revised upward, and one-half of the attendees to the Georgia game in Jacksonville, Florida were also treated as out-of-state visitors.

Table E1. Athletic event attendance and expenditures by spectators at the University of Florida in FY 2009-10

Sport	Overall Attendance	Non-Affiliated Attendance	Out-of-state Attendance	In-state Visitor Spending	Out-of-state Visitor Spending	Total Spending
		Person-nights				
Football	770,550	559,387	114,185	48,677	29,066	77,743
Basketball	216,181	108,091	3,243	2,099	321	2,421
Baseball	126,195	63,098	1,893	3,596	550	4,147
Gymnastics	47,507	23,754	713	790	121	911
Volleyball	44,294	22,147	664	297	45	343
Softball	27,633	13,817	414	460	70	530
Soccer	17,867	8,934	268	233	36	269
Swimming/Divin	14,025	7,013	210	57	9	65
Track, Indoors	3,400	1,700	51	737	113	850
Lacrosse	7,539	3,770	113	125	19	145
Tennis	5,497	2,749	82	91	14	105
Track & Field	14,400	10,080	1,440	706	244	951
Other	10,000	5,000	150	166	25	192
Total	1,305,088	829,536	123,427	58,037	30,634	88,671

Sources: University Athletic Association, Stephen C. O'Connell Center, www.gatorzone.com.

The University of Florida provides an array of events and facilities that draw visitors for healthcare, educational, and cultural purposes including Shands healthcare, commencements, orientations, conventions, continuing education, lectures, presentations, recitals and concerts. Estimated visitation and spending at these UF related venues and events are shown in Table C2. For FY2009-10, it is estimated that there were a total of 3.4 million non-athletic visitor-days to University related venues and events, of which 2.4 million were by non-affiliated persons. Total spending by in-state visitors was estimated at \$114 million, and spending by out-of-state visitors was estimated at over \$30 million. Altogether, \$144 million was spent in association with non-athletic related visits to University related events and

facilities. Visits and spending associated with Shands healthcare dominated this class of visitation, followed by visitation to the Florida Museum of Natural History and University commencement exercises.

Table E2. Non-athletic event attendance and visitor expenditures at the University of Florida in FY 2009-10

Venue / Facility / Event	Overall Visitor-Days	Non-Affiliated Visitor-Days	In-State Visitor-Days	Out-of-State Visitor-Days	In-State Visitor Spending	Out-of-State Visitor Spending	Total Visitor Spending
O'Connell Center							
Concerts & other non-athletic events	67,470	33,735	33,398	337	\$2,598,805	\$57,248	\$2,656,053
UF Commencements (grads & guests)	97,883	65,582	55,744	9,837	\$4,623,995	\$1,669,380	\$6,293,375
Local High School Commencements	11,800	11,800	824	118	\$68,914	\$20,025	\$88,939
Harn Museum of Art	88,195	44,098	43,657	441	\$3,406,431	\$74,833	\$3,481,265
University Auditorium	22,650	8,291	8,208	83	\$640,480	\$14,070	\$654,550
Phillips Performing Arts and Baugham Center							
Phillips Commencement	15,723	10,534	8,954	1,580	\$742,755	\$268,153	\$1,010,908
Phillips HS Graduation	3,952	3,952	3,912	40	\$305,283	\$6,707	\$311,990
Phillips Unaffiliated local	33,562	6,712	6,377	336	\$497,567	\$56,955	\$554,522
Phillips Affiliated local	20,737	2,074	1,970	104	\$153,716	\$17,595	\$171,312
Baugham Center	4,713	2,357	2,121	236	\$165,486	\$39,990	\$205,475
Florida Museum of Natural History	188,544	143,293	78,811	64,482	\$6,368,749	\$10,942,604	\$17,311,352
Career Resource Center							
Employer participants in events	709	709	355	355	\$65,923	\$120,317	\$186,240
Student Interviews	220	220	110	110	\$20,456	\$37,334	\$57,790
Preview							
Freshmen Prospective Students	6,400	6,400	6,144	256	\$1,179,525	\$86,886	\$1,266,412
Freshmen family members	7,900	7,900	7,584	316	\$1,410,321	\$107,250	\$1,517,571
Transfer students	2,400	2,400	2,304	96	\$188,652	\$16,291	\$204,943
Family weekend	2,300	2,300	2,208	92	\$410,600	\$31,225	\$441,824
Athletic camps (All costs in tuition)	8,262	7,436	0				
Band Camp (All cost in tuition)	200	180	0				
UF Conferences & Continuing Ed.	14,967	13,470	10,523	2,982	\$2,174,931	\$1,811,887	\$3,986,818
IFAS Conferences & Continuing Ed.	9,073	8,166	6,730	1,480	\$1,936,790	\$705,833	\$2,642,623
Shands Healthcare							
Admissions	85,450	64,088					
Emergency Room Visits	211,449	158,587	152,085	6,502	\$1,505,638	\$1,103,399	\$2,609,037
Outpatient Visits	1,116,312	837,234	802,907	34,327	\$7,948,783	\$5,825,223	\$13,774,006
Accompanying Admissions	85,450	64,088	61,460	2,628	\$6,619,233	\$891,803	\$7,511,036
Accompanying Emergency Rm. Visits	105,725	79,293	76,042	3,251	\$5,982,251	\$551,700	\$6,533,951
Accompanying Outpatient Visits	1,116,312	837,234	802,907	34,327	\$63,164,726	\$5,825,223	\$68,989,949
College of Veterinary Medicine Hospitals	16,000	12,000	10,800	1,200	\$907,416	\$203,640	\$1,111,056
Totals	3,367,008	2,442,423	2,194,344	165,597	\$113,727,906	\$30,499,642	\$144,227,548

Table E3. Total Economic Impacts in the State of Florida by Visitor Spending Associated with the University of Florida in FY 2009-10

Activity or Entity	Employment Impacts	Output Impacts	Value Added Impacts	Labor Income Impacts	Indirect Business Taxes Impacts
	Jobs*	Million \$			
Cultural & academic venues	2,320	168.84	118.78	76.46	18.19
Athletic events	1,533	121.01	82.69	52.98	11.64
Total	3,853	289.85	201.47	129.44	29.83

Note: total impacts represent direct effect multiplier applied to in-state spending, plus indirect and induced effects multipliers applied to in-state expenditures funded from sources outside Florida. * Employment impacts represent fulltime, part-time, and seasonal jobs.

Appendix F. Economic Impacts of Technology Spinoff Companies Affiliated with the University of Florida

To evaluate the economic impacts of UF technology based spin-off businesses started by UF employees or students, or from patents and copyrights developed at UF, data on the number jobs created by these businesses was collected for Progress Park in Alachua, Florida and from the UF *TechConnect* Program, provided by the UF Office of Technology Licensing. These job numbers were converted into revenues using regional averages available for each type of business within *IMPLAN*. The estimated revenues of 50 companies were allocated between 16 different *IMPLAN* sectors. Most of these spin-off businesses were involved in biological or medical technology. Among Spin-offs that had begun manufacturing activities, the most common types were *Biological Product (except diagnostic) Manufacturing* (*IMPLAN* sector 135); *Surgical and Medical Instrument Manufacturing*, (sector 305); and, *Custom Computer Programming Services*, (sector 371). Spin-off businesses that had not yet begun production activities were classified as *Scientific Research and Development Services* (*IMPLAN* sector 376).

Table F1. Expenditures by University of Florida affiliated technology spin-off companies in FY 2009-10

Type of Business	Total Expenditures (million \$)	Expenditures In-State (million \$)	Expenditures from Outside Sources (million \$)
Biological/Medical Technology	475.51	475.51	475.51
Electronics	9.91	9.91	9.91
Telecommunications	4.36	4.36	4.36
Computers and Networking	10.71	10.71	10.71
Scientific research and development services	29.35	29.35	29.35
Other	13.40	13.40	13.40
Total	543.24	543.24	543.24

Table F2. Total economic impacts in the State of Florida by University of Florida affiliated technology spinoff companies in FY 2009-10

Type of Business	Employment Impacts	Output Impacts	Value Added Impacts	Labor Income Impacts	Indirect Business Taxes Impacts
	Jobs	-----Million \$-----			
Biological/Medical Technology	6,776	1,255.32	568.83	361.02	166.18
Electronics	155	24.59	12.19	8.08	3.27
Telecommunications	56	11.07	4.87	3.27	1.25
Computers and Networking	245	28.86	17.22	13.09	3.06
Scientific research and development services	686	84.07	49.24	36.40	9.93
Other	180	30.07	14.59	9.67	4.04
Total	8,098	1,433.98	666.94	431.54	47.66

Appendix G. Key Facts about Florida State University's Economic Impact on Tallahassee-Leon County in 2010

- FSU is an institution of 40,000 students supported by about 6,400 faculty and staff, with a total budget of \$1.05 billion per year.⁴
- For fiscal year 2010, FSU employed more than 13,000 employees and the average bi-weekly payroll was \$21.6 million. Approximately 48% of these employees were OPS and this resulted in a yearly payroll of about \$550 million.⁵
- The FSU 10 Year Campus Master Plan identifies approximately \$1.8 billion worth of capital projects, with only \$112 million of those projects outside Tallahassee. Thus, the primary impact of FSU's construction activity will be through local companies and local employees. The total PECO appropriation for construction for FSU in 2009/10 was \$12.2 million.⁶
- In the past three years, FSU's PECO appropriations have totaled 102.4 million, contributing significant revenue to the local economy in construction alone.⁷
- The approved appropriated FY10 operating budget for the City of Tallahassee totals \$718,726,886 which represents a decrease of \$122,735,729 or approximately 14.59% over the approved 2009 budget.⁸ FSU's operating budget is 1.46 times the City of Tallahassee's operating budget.
- The campus electric utility bill (to the City of Tallahassee) is \$30,955,522 this year⁹ – approximately 8.7% percent of the City of Tallahassee's total electric utility revenues.¹⁰
- FSU Florida State University is the top user of electricity in the City of Tallahassee followed closely by the State of Florida.¹¹ In 2010 the university used more electricity than Leon County's public schools, Tallahassee Memorial HealthCare, Wal-Mart, Publix, federal and county government combined.
- FSU researchers have been successful, bringing in \$215,291,225 in contracts and grants, an increase of 1.074% from last year.¹²
- Florida State faculty members attract almost \$200 million a year in research dollars. Florida State consistently ranks in the top 15 universities nationally in physical sciences grants awarded by the National Science Foundation.¹³
- Each research dollar spent in the State of Florida increases personal income statewide by nearly \$5.50.¹⁴ That means the university's \$215,291,225 million in contracts and grants generate over a billion dollars in spending power.¹⁵
- From fiscal year 2007 through fiscal year 2010 (ending June 30, 2010), the Foundation processed 9,510 student scholarships and fellowships, awarding \$18,447,697.06 to deserving Florida State students (an average of \$6,149,232.35 per year).¹⁶

⁴ Browning Brooks, Director: News and Public Affairs (bbrooks@mailers.fsu.edu)

⁵ Browning Brooks, Director: News and Public Affairs (bbrooks@mailers.fsu.edu)

⁶ Browning Brooks, Director: News and Public Affairs (bbrooks@mailers.fsu.edu), <http://www.facilities.fsu.edu>

⁷ Browning Brooks, Director: News and Public Affairs (bbrooks@mailers.fsu.edu)

⁸ <http://www.talgov.com>, Florida State University Beginning Annual Operating Budget for FY09-10

⁹ FSU Electric Utilities paid to COT; FSU Utilities Accounting (Debbie Gill)

¹⁰ City of Tallahassee (COT) Annual Report to Bondholders 2010, p. 25, received total operating revenues

¹¹ Tom Gillman, City of Tallahassee (850-891-6122)

¹² Florida State University Division of Sponsored Research (850-644-9694)

¹³ Browning Brooks, Director: News and Public Affairs (bbrooks@mailers.fsu.edu)

¹⁴ www.cefa.fsu.edu

¹⁵ Florida State University Division of Sponsored Research (850-644-9694)

¹⁶ Florida State University Foundation: Susan Sigman, Senior Director of Communications (850-645-8844), Jerry Ganz, Chief Financial Officer (850-644-0766) and Lynda Williams, Accounting Specialist (850-644-0751)

- From fiscal year 2007 through fiscal year 2010 (ending June 30, 2010), the Foundation disbursed \$112,480,612.56 in support of scholarships, fellowships, professorships, eminent scholar chairs, programs and other resources at Florida State and to the local, regional, national and even international community.¹⁷
- University faculty and staff contribute to the local economy through purchases and taxes. Assuming an average value of \$170,357 per home, the total assessed value of FSU faculty and staff's personal residential property is around \$1.09 billion.¹⁸
- FSU faculty and staff alone paid nearly \$6.7 million in sales tax during the past year. Total FSU employees (including OPS) alone paid about \$13.7 million in sales tax.¹⁹
- The 40,000 FSU students generate \$705 million a year in direct revenues for the city's economy through their spending for housing, food, books, utilities, gasoline, entertainment—all the expenses that go into a college education.²⁰
- In 2007, almost 630,000 people visited Leon County for reasons related to FSU—from prospective students and their families to the world's most eminent scientists and artists. Altogether, they spent over \$200 million on shopping, restaurants, entertainment, groceries, lodging, transportation, sports activities and events, arts and cultural activities, and other attractions²¹.
- Game weekends have significant economic impact. A game like UM vs. FSU, which drew a record 85,000 fans, has a \$15 million economic impact from visitors. A standard game brings in \$2.5 to \$5 million plus another 50 percent from the multiplier effect.²²
- FSU Athletics and The Seminole Boosters' budget total \$55 million. They maintain approximately 170 full-time employees almost 200 part-time OPS employees. During football season, FSU adds hundreds of additional part-time opportunities alongside approximately 1,000 people who volunteer for different service organizations.²³
- Faculty members have obtained over 500 patents worldwide and created over 15 start-up businesses locally. In the fiscal year 2009, there were 72 patents filed, 10 U.S. patents issued, and 2 start-up businesses locally.²⁴
- Florida State University students have completed a total of 216,298.75 hours of volunteer work through community outreach programs (2009 calendar year).²⁵ The ServScript Program at FSU has had a significant impact on campus encouraging students to participate in volunteer work in and around the Tallahassee area. Assuming those students had been paid \$7.25 (2009 minimum wage in Florida and federal minimum wage) an hour to perform their jobs, it would have cost local businesses, government and others approximately \$1.6 million in salaries.²⁶
- Faculty and staff volunteers at FSU also contribute their time, skills and funds to countless volunteer and community outreach efforts.
- About 24% of FSU employees contribute to The United Way of the Big Bend. Approximately 19% of employees contribute to the FSU Foundation.
- There are 31,637 FSU alumni who live and own businesses in Leon County. Around 35,000 faculty, staff and alumni retire here in the Big Bend area continuing to be a part of its economic health.²⁷

¹⁷ Florida State University Foundation: Susan Sigman, Senior Director of Communications (850-645-8844), Jerry Ganz, Chief Financial Officer (850-644-0766) and Lynda Williams, Accounting Specialist (850-644-0751)

¹⁸ <http://www.homeinsight.com>.

¹⁹ CEFA calculation based on previous figures

²⁰ CEFA calculation using FSU Office of Budget and Analysis Andrew Brady's data based on FSU student handbook

²¹ FSU-related visitor expenditures based on 2004 visitor's spending data for FSU with estimated percentage reduction provided by Dr. Mark Bonn, and calculations performed by CEFA

²² Dr. Mark Bonn, FSU Professor in College of Business and School of Hospitality, June 2008

²³ The Orlando Sentinel and Michelle Pohto, Athletics Administration (850-644-0416)

²⁴ Eric McNair, Office of IP Development and Commercialization at Florida State University (850-644-3328)

²⁵ Samantha Nix, Center for Leadership and Civic Education at Florida State University(850-644-3342)

²⁶ <http://www.floridajobs.org>, US Department of Labor

²⁷ Jonathan Wallace, FSU Foundation/Information Assistant & Writer, Public Affairs (jmw05n@fsu.edu)

- Jobs directly and indirectly related to FSU total approximately 34 percent of employment in the Tallahassee area.²⁸
- Based on student spending, the university budget and estimated visitors' spending at FSU, the economic impact of FSU on the state economy was estimated at \$3.4 billion. This spending generated over 45,000 jobs (direct, indirect and induced) locally.²⁹
- If FSU were removed from Leon County today, about 20% (one-fifth) of Leon County's economic impact would be lost—and that does not include the economic value of the community outreach we sponsor and conduct for students of all ages, teachers and others.³⁰
- FSU's campus is a total of 19,669,518 ft² and its covered areas are a total of 9,559,759 ft² (gross). It has the 9th largest total campus area out of the universities in the State University System and the 3rd largest building gross square footage.

²⁸ CEFA calculation based on economic impact analysis

²⁹ Economic impact analysis in 2007 performed by CEFA using IMPLAN 2006 (for Leon County)

³⁰ Economic impact analysis in 2007 performed by CEFA using IMPLAN 2006 (for Leon County)

Appendix H. Florida State University Commercialization Fact Sheet

“Research universities are the world’s great venture capitalists for investments in human capital—that is, knowledge. “
--*Caroline Hoxby, the Bommer professor in economics at Stanford University.*

FSU COMMERCIALIZATION

Start-Up Companies. In the last 10 years, FSU has licensed 25 start-ups businesses-- 3 coming from the National High Magnetic Laboratory (NHMFL). See <http://www.research.fsu.edu/techtransfer/example.html>.

Among those companies, 4 applied for public grant funds (\$3.5 million dollars awarded); a further \$5 million competitive contract won, and 339 new jobs are projected over the next 5 years based on successful growth.

Examples:

- Sunnyland Solar: A solar devise resembling an oversized sausage-shaped balloon has been scaled up to generate electricity. As a result, a company, Sunnyland Solar was created and is contracting with the Tallahassee utility to sell its solar generated electricity.
- Powers Device: In November 2011, the company will introduce a medical device called PAL which teaches premature infants to feed themselves resulting in shorter hospital stays, resulting in fewer problems for children in later life and huge savings to the health care system.
- High Performance Magnetics Inc.: The Company is building a perfect mile-long superconducting wire, created with millions of fine wires, each spliced and operating near absolute zero. This is a tiny component of a device in France which will mimic the power of the sun. The company won a \$5 million competitive contract.
- BevShots: The Company is turning national award-winning art from microscopic images created at the NHMFL into products for the home as well as apparel.
- Weather Predict: The Company uses FSU created data and software to predict the weather as well as the path of hurricanes. The National Hurricane Center in Miami includes the predictions in its analysis to alert citizens to severe weather. This information is purchased by many entities.

LICENSES TO EXISTING COMPANIES

FSU creative research has led to 25 products in the US marketplace benefiting people and saving lives. In each case, the companies licensed have products which support jobs. These products range from the world renowned cancer drug Taxol™ to the Seminole Fight Song sheet music. Bristol-Myers Squibb estimated that in the first five years after the synthesis technology of FSU Chemistry professor Bob Holton allowed them to offer the drug Taxol™ globally, over 2

million women used the drug in their fight against breast and ovarian cancers. See

<http://www.research.fsu.edu/techtransfer/>.

FSU's Mimi Graham is Director of the Center for Prevention and Early Intervention Policy. They created a series of training manuals for homecare visitors to prepare them to work with unwed mothers to gain confidence in dealing with their first birth and coping with the new baby. The manuals are sold worldwide and there is growing evidence that they improve survival rates of mother and child. See Partners for a Health Baby – books and handouts.

<http://www.research.fsu.edu/techtransfer/showcase/partnerbooks.html>.

FSU COMMERCIALIZATION AT A GLANCE (last five years)

	FY 07	FY 08	FY 09	FY 10	FY 11	Average
Invention Disclosures	39	45	41	38	58	44
Work Disclosures	5	11	4	7	4	5
Patent applications	69	56	72	65	75	67
Issued Patents	19	11	10	21	36	19
Licenses signed	13	11	12	6	11	10
Spin-off companies	2	2	3	3	3	2.6
Active Licenses	52	60	63	65	68	62
Royalties (\$M)	\$2.19	\$0.99	\$0.92	\$1.22	\$1.18	\$1.300
Other Revenue	\$0.30	\$0.76	\$0.57	\$0.14	\$0.10	\$.37
Linked R&D contracts \$(M)	\$1.35	\$2.35	\$1.10	\$2.10	\$3.77	\$2.1
Total Revenue\$(M)	\$3.84	\$4.09	\$2.59	\$3.46	\$5.09	\$3.8
Total Research Expend. \$(M)	\$199.0	\$206.5	\$197.0	\$218.0	225.1	\$209

The Office of Intellectual Property Development and Commercialization (OIPDC) assists faculty, staff and students to move their innovative research results and creative work into public use by licensing to outside organizations to develop and market products based on FSU research. The base budget of OIPDC is funded from the overhead on competitively won grants obtained by faculty. No state funds contribute to the base budget which covers salaries, office expenses and annual monies for patent coverage. The Office also manages two additional programs – the GAP programs of internal grants to faculty for ‘proof of concept’ commercialization work, and the Equipment Grant Program to encourage multidisciplinary research leading to increased research funding from traditional federal sources. OIPDC has also been awarded competitive state funds to accelerate start-up creation.