Economic Contributions of the State University System of Florida in 2019-20

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 12 separate institutions and 30 campus branch locations across the state. It is important for policymakers to understand the economic contributions to society made by institutions comprising the Florida SUS, for informed public policy and funding decisions. This report was commissioned by the Florida State University System Board of Governors to provide an assessment of its economic contributions to the State of Florida, and to update a previous report for 2014-2015 (Hodges et al, 2016). This analysis considered SUS-related spending for university operations, capital construction expenditures, nonresident student spending, and sales and services of component units such as academic hospitals and other direct support organizations like athletic associations and research foundations, for each institution during fiscal year 2019-20, ending June 30, 2020. Additionally, this study considered the increase in present value of equivalent lifetime (30 year) earnings generated by university graduates who were employed in Florida, above those reported for Florida high school graduates. Methods used in this analysis were consistent with current best practices for estimating the economic contributions of colleges and universities. A regional economic model for the State of Florida developed with the IMPLAN© economic impact analysis software was used to estimate multipliers and margins for applicable industry sectors.

In academic year 2018-19, the SUS had overall enrollment of over 346,604 students and awarded 93,961 academic degrees, including 69,928 bachelors, 18,854 masters, 2,984 doctoral, and 2,195 professional (specialist) degrees. The present value of increased lifetime (30 year) earnings by SUS graduates who remain in the State in comparison to high school graduates was estimated at $39.1 billion in 2019 dollars.

The Florida SUS employed 83,864 persons directly in 2020, including faculty, staff, student workers, auxiliaries, and component unit organizations. Total applicable expenditures within the state by all Florida SUS-related entities totaled $16.64 billion in 2019-20.

Total economic contributions of Florida SUS institution operating expenditures, sales and services of component units, capital expenditures and nonresident student spending included 359,042 fulltime and part-time jobs, and $33.53 billion in industry output or revenues (Table ES1). Value added contributions of $22.37 billion to Florida's Gross State Product were comprised of $15.85 billion in labor income to employees and business owners, $5.45 billion in other property income, and $1.07 billion in indirect business taxes to local, state, and federal governments. Employment contributions of the Florida SUS represented 2.03 percent of the total state workforce, and value added contributions represented 2.84 percent of the Gross State Product in 2019.

The largest individual institutions for economic contributions were University of Florida with 127,471 jobs and $9.80 billion in value added, University of South Florida (54,523 jobs, $3.07 billion), University of Central

Florida (50,985 jobs, $2.45 billion) and Florida State University (35,907 jobs, $2.13 billion), as shown in Figure ES1. In summary, since the previous study for 2014-15, economic contributions of the Florida SUS university operations, and sales & services of component units and hospitals, have grown by 34 percent and 14 percent, respectively, and in terms of capital outlay has decreased 62 percent, for industry output.

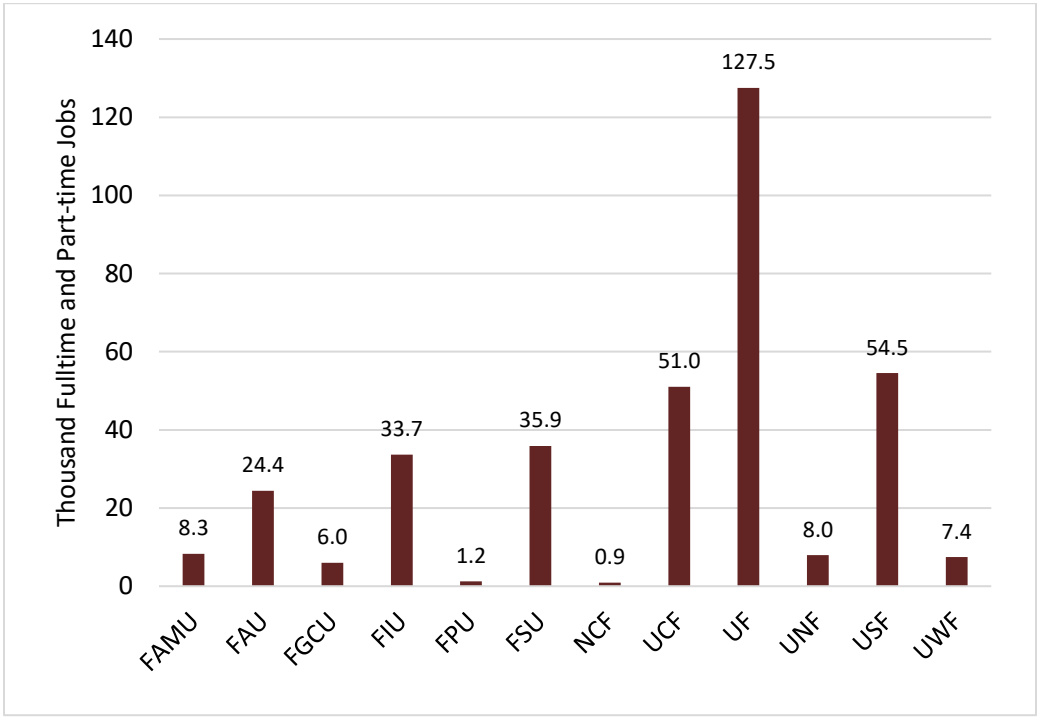
In addition, the increased earnings received by SUS graduates over their working lifetime, compared to Florida high school graduates were also estimated in this analysis. It is projected that graduates in each degree category will continue to add value to Florida's economy by virtue of their lifetime earnings.

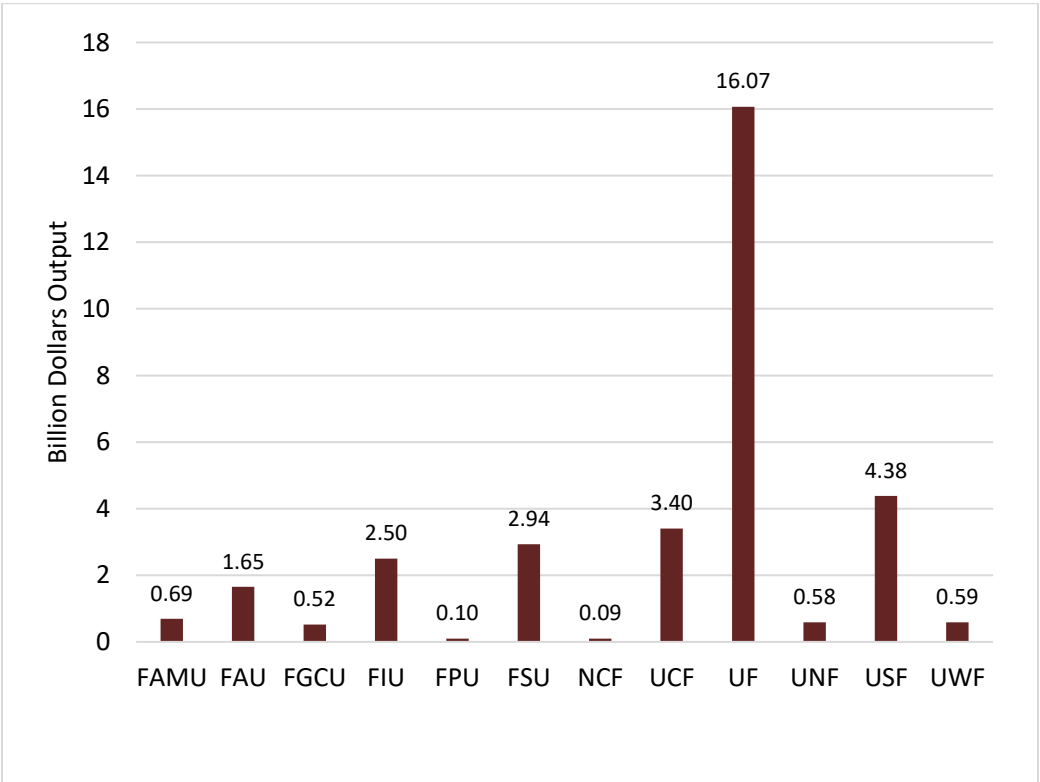
Table ES1. Summary of economic contributions of the State University System of Florida by institution and activity in fiscal year 2019-20

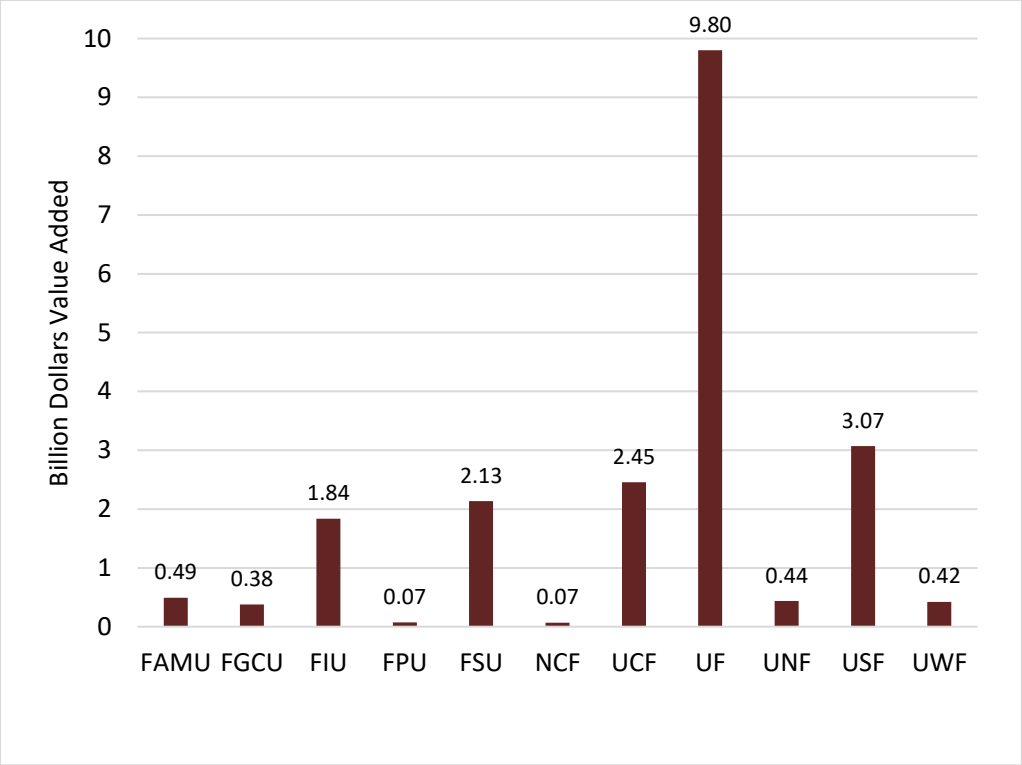
Institution / Activity	Revenue or Expense Within Florida (M$)	Output (M$)	Employ-ment (Jobs)	Value Added (M$)	Labor Income (M$)	Property Income (M$)	Business Tax (M$)
Florida A&M University (FAMU)	353.25	688.60	8,306	489.05	348.55	118.49	22.00
Florida Atlantic University (FAU)	850.18	1,649.56	24,435	1,191.72	864.62	270.95	56.15
Florida Gulf Coast University (FGCU)	267.77	515.56	6,000	378.21	269.90	91.87	16.43
Florida International University (FIU)	1,288.73	2,502.58	33,688	1,836.69	1,333.10	423.41	80.18
Florida Polytechnic University (FPU)	51.36	100.47	1,199	74.43	55.69	15.62	3.12
Florida State University (FSU)	1,529.82	2,936.26	35,907	2,133.13	1,514.85	522.69	95.59
New College of Florida (NCF)	49.39	94.91	932	69.11	49.33	16.71	3.06
University of Central Florida (UCF)	1,720.53	3,401.57	50,985	2,453.27	1,813.77	529.91	109.59
University of Florida (UF)	7,671.50	16,066.60	127,471	9,800.20	6,816.42	2,473.36	510.42
University of North Florida (UNF)	302.03	584.31	7,969	436.20	318.62	99.25	18.33
University of South Florida (USF)	2,241.47	4,381.17	54,523	3,068.62	2,153.16	777.10	138.36
University of West Florida (UWF)	302.44	585.94	7,434	421.64	299.68	103.08	18.88
Board of Governors (BOG)	10.69	20.36	192	13.05	8.03	4.32	0.70
University operations	11,914.48	23,357.81	315,013	16,882.82	12,310.16	3,841.92	730.74
Compensation	6,295.18	11,676.66	111,772	9,045.48	6,526.12	2,221.70	297.65
Financial	2,896.27	5,848.26	157,546	4,504.78	3,735.37	601.66	167.75
Services	1,116.50	2,374.17	18,062	1,282.27	832.62	357.96	91.69
Utilities	319.78	597.16	1,721	314.47	118.52	145.37	50.58
Commodities and supplies	144.12	327.93	3,336	179.45	120.34	37.37	21.74
Property	118.09	323.81	2,314	182.32	113.91	53.77	14.64
Equipment	39.14	333.22	2,572	171.13	123.31	25.60	22.22
Other	985.40	1,876.60	17,690	1,202.92	739.97	398.49	64.46
Capital appropriations	170.45	314.21	2,185	188.43	115.89	63.95	8.59
Component unit sales and services	4,128.83	9,077.92	33,951	4,811.72	3,201.81	1,338.41	271.49
Non-resident student spending	425.41	777.96	7,893	482.34	217.84	202.50	62.00
Total All Institutions and Activities	16,639.17	33,527.89	359,042	22,365.31	15,845.71	5,446.78	1,072.82

Values in millions of 2019 dollars; employment represents fulltime and part-time jobs.
Contribution estimates include regional multiplier effects.
Sources: Florida SUS Board of Governors and IMPLAN© software and data.

Figure ES1. Summary of employment, output and value added contributions of State University System of Florida institutions in fiscal year 2019-20






Billion Dollars Value Added
10
9
8
7
6
5
4
3
2
1
0
0.49
0.38
1.84
0.07
2.13
0.07
2.45
9.80
0.44
3.07
0.42
FAMU
FGCU
FIU
FPU
FSU
NCF
UCF
UF
UNF
USF
UWF

Acknowledgements

Assistance for this study was provided by the staff of the SUS Board of Governors, including Tim Jones, Vice Chancellor/Chief Financial Officer, Jason Jones, Chief Data Officer, and Dale Bradley, Budget Director. Also, the research team would like to thank the Florida Educational and Training Placement Information Program (FETPIP), especially Roland Johnson and Adrian Woody for providing data on graduate outcomes.

Introduction

The State University System of Florida (hereafter, Florida SUS) is one of the largest public university systems in the United States, consisting of 12 separate institutions and 30 campus branch locations across Florida (Figure 1) with over 100 million square feet of building space, and 51,180 acres of land. The first institutions of higher education in Florida were established in the 1850's (Table 1).

In academic year 2018-2019, the SUS had overall enrollment of over 346,604 students. In academic year 2018-19, the SUS awarded 93,961 academic degrees, including 69,928 bachelors, 18,854 masters, 2,984 doctoral, and 2,195 professional (specialist) degrees. In 2020, the Florida SUS had over 75,000 permanent employees. According to US News and World, the Florida SUS is the best value in higher education in the United States, offering a high quality educational experience at very low costs.[1]

[1] See: https://www.usnews.com/news/best-states/rankings/education/higher-education

Figure 1. Map of locations of State University System of Florida institutions

Source: SUS Board of Governors.

Table 1. State University System of Florida campus locations and years established

Institution Name	Abbreviation	Florida City Location	Year Established
Florida A & M University	FAMU	Tallahassee	1887
Florida Atlantic University	FAU	Boca Raton	1961
Florida Gulf Coast University	FGCU	Ft. Myers	1991
Florida International University	FIU	University Park	1965
Florida Polytechnic Institute	FPU	Lakeland	2012
Florida State University	FSU	Tallahassee	1851
New College of Florida	NC	Sarasota	2001
University of Central Florida	UCF	Orlando	1968
University of Florida	UF	Gainesville	1853
University of North Florida	UNF	Jacksonville	1972
University of South Florida	USF	Tampa	1958
University of West Florida	UWF	Pensacola	1963

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, as well as generally educated individuals for problem solving, are required to meet these challenges.

The SUS 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 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 2019-20, along with the increase in net present value (NPV) of equivalent lifetime (30 year) earnings generated by university graduates who were employed in Florida, in comparison to earnings reported for Florida high school graduates. This report updates a previous study for 2014-15 by some of the same authors, and following relatively similar methods[2].

Methodology

Economic Contribution Analysis

Data on expenditures for university operations and capital construction as well as student expenditures for FY 2019-20 (ending June 30, 2020), were provided by the Florida SUS Board of Governors. Data on expenditures for university operations and capital improvements are published in the consolidated financial statements within the Florida SUS Board of Governors Annual Report. Financial data as well as supplemental information were provided by the Board of Governors staff. In addition to the primary university budgets, operating revenues were also provided for affiliated component organizations. Expenditures by students at each university were estimated

[2] Economic Contributions of the State University System of Florida in Fiscal Year 2014-15. Sponsored project report to the State University System Board of Governors, March 31, 2016, available at: https://cefa.fsu.edu/sites/g/files/imported/storage/original/application/5d4b762de630408b3d85be3b878e43e4.pdf

based upon "cost of attendance" data and student residency available on the Florida SUS Board of Governor's website at: https://www.flbog.edu/forstudents/planning/tuition.php

Numerous studies have recently been completed by academic researchers and organizations for various universities and university systems, most of which use input-output-based regional economic analysis methods to estimate either the economic impacts or economic contributions of university activity (Parker Philips, 2018; Schultz, 2018; Allgrunn et al., 2016; Bowen and Meszaros, 2016; Hodges et al., 2016; Humphreys, 2016; CAI, 2015; EMSI, 2015; ESI, 2015; Hodges et al., 2012; Clinch, 2011). A review of the various input-output-based methodological approaches and known pitfalls of such studies was provided in Siegfried et al. (2007). More recently, a set of guidelines for economic impact analysis was published by the Association of Public and Land-Grant Universities, which further delineates the common pitfalls associated with such analyses and provides guidelines for more accurate and defensible estimates (Ambargis et al., 2014).

Economic impacts and economic contributions have very distinct meanings and methods of estimation. However, these terms are often conflated and methodological descriptions within a given study are not clear enough to determine the assumptions used and their implications for the interpretation of results. Economic impact analysis aims to determine the economic impacts of new activity or changes in the level of activity from some baseline or counterfactual scenario, while the goal of economic contribution analysis is to analyze the economy-wide indirect and induced effects of the current value of the goods or services provided by one or more sectors (direct effects). This analysis of the Florida SUS follows the current best practices for determining the total value of economic activity that is required of all Florida industries in support of Florida SUS-related expenditures, more precisely, the *total economic contributions* of the Florida SUS. For a brief description of the differences between the two types of analyses, see IMPLAN© (2018) or Watson et al. (2007).

For all Florida SUS institutions, total economic contributions were estimated based on a regional economic input-output model constructed with licensed IMPLAN© software and associated data representing the structure of the Florida economy in 2019 (IMPLAN© Group, LLC, 2020). Although the sphere of economic influence for any one institution is likely more localized, the goal of this analysis was to estimate the economic contributions to the State of Florida of the entire Florida SUS, which has locations statewide (Figure 1). As such, the geographic scope of the economic model was the State of Florida.

IMPLAN© data describe the specific mix of industries and institutions that make up the economy as well as the transactions that occur between industries, employees, households, and governments (Miller and Blair, 2009). IMPLAN© regional models account for industrial output, employment, value added, commodity production and consumption, personal income, household and institutional spending, domestic and foreign trade, wholesale, retail, and transportation margins, business inventories, capital investment, taxes, and transfer payments such as welfare and retirement pensions. The 2019 version of IMPLAN© divides the regional economy into 544 business

sectors defined according to the North American Industrial Classification System (NAICS), as well as consumption spending profiles for nine household income categories. IMPLAN© and other regional input-output models enable the estimation of economic activity directly attributable to spending as well as economic multiplier effects that capture the "ripple" effects of supply chain spending for input purchases (indirect effects), and household spending by employees (induced effects) within the regional economy. Economic multipliers for each industry sector and household income category are used to estimate various economic contributions, including output or revenue, employment (fulltime and part-time jobs), value added (Gross State Product), labor-income (employee and proprietor salaries and benefits), other property income (rents, interest, dividends, royalties, etc.), and indirect business taxes.

Economic contributions were estimated for university operations, sales and services of component units, non-resident student expenditures, and capital expenditures. Extraction-based contribution analysis was deemed inappropriate since activity associated with the Florida SUS resides within an institution (State and Local Government, Education) as opposed to an industry sector[3]. Also, although the data on expenditure patterns is known, these expenditures do not represent the entire (or even a majority) of total industry output within the respective industry sectors, meaning that internal adjustments for extraction-based contribution analysis across these sectors would not capture any indirect or induced effects that occur within sub-industries that represent the remaining portion of the more aggregated industry sectors, resulting in underestimates of the total economic contributions. Therefore, this report employs a methodology more akin to what IMPLAN© (2018) refers to as gross-base contribution analysis and is similar to the methodology proposed by Watson (2015). One deviation from these conventions is that our interest is in estimating the total economic contributions of all activity of the Florida SUS, meaning that although adjustments are made so as not to double-count certain expenditure categories and for the proportion of expenditures spent in-state, we are interested in how and where money is spent, irrespective of the geographical source of funding or demand.

All input-output models, including IMPLAN©, record transactions in terms of producer prices. However, expenditures for university operations, component units, and students are valued using purchaser prices, which comprise the producer value of the good as well as transportation, wholesale, and retail margin values. For appropriate sectors, IMPLAN© provides the information to convert expenditures on goods valued with purchaser prices into their component values, which include the producer value of the goods purchased as well as values representing expenditures on (or demand for) the wholesale, retail, and transportation margin sectors. Some

[3] Note that there is an industry sector titled *Junior colleges, colleges, universities, and professional schools* within the IMPLAN© software, however, this industry represents private or for-profit educational institutions and does not include public institutions.

sectors, most notably service sectors do not have margins. Expenditures in all relevant industries were adjusted to account for all margins.

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 expenditures that occur within the State 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 (RPCs), which were estimated by the IMPLAN© software using a gravity model of trade flows, based on the balance of supply and demand in the State for each product or service. The RPCs employed by the IMPLAN© model represent the regional share of expenditures on an industry's primary commodity produced that occur within the State of Florida. These adjustments were made for all expenditure categories within this analysis.

With respect to university operations expenditures, expenses for asset depreciation, real property purchases, interest payments, and certain transfers were excluded from the analysis because these are non-cash expenses that are not expected to generate multiplier effects. Spending by students is an important dimension of the total economic contributions of the Florida SUS, however it is important to ensure that student expenditures associated with payments to the Florida SUS that support university operations are not double counted. For this reason, expenditures on tuition and fees and on-campus room and board were not considered in the economic contribution analysis because these dollars were accounted for as university operations expenditures that support the provision of educational services to both resident and non-resident students. Also, all expenditures by Florida resident students were not included since it is assumed that any increase in their daily spending is offset by a decrease in their family local spending (Cheney, 2018a, b). Known limitations of these assumptions are discussed in the conclusions section of this report. This study did not consider the economic contributions 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*., 2016).

A glossary of input-output terminology and concepts is provided in Appendix A.

Lifetime Earnings Analysis

The economic contributions of increased earnings received by SUS graduates over their working lifetime, compared to Florida high school graduates were also estimated in this analysis. The methodology is a standard approach that has been used in previous economic research studies on higher education in Florida (Harrington *et al*., 2005, and Lynch *et al*., 2003). Data on employment and earnings for Florida SUS and high school graduates were obtained from the Florida Educational Training Placement Information Program *Annual Outcomes Report* for Fall 2019 (FETPIP, 2020), which provides information for graduates in fiscal year 2018-19. Additional reports were used to analyze information for graduates in the previous five academic years: 2013-2014, 2014-15,

2015-16, 2016-17, 2017-18, and 2018-19.[4] 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 in 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 self-reported graduating student surveys about first employment outcomes. The reported earnings for Florida high school standard diploma 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 2018-19 SUS graduates who were fully employed in the fall of 2019. This method assumes a median salary structure of employed Floridians (by educational attainment and age), or a salary structure or matrix, rather than extrapolating graduate starting salaries from the previous five years' salaries in the labor force. 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. a selection bias, where the top graduating students are more likely to get timely job offers at likely higher wages). It provides greater definition on age group cohorts: ages 25-34 years, 35-44 years, 45-54 years and 55-64 years. Estimates from previous research studies were used for further out-of-state adjustments 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 costs of university attendance that partly offset the increased earnings.

Lifetime Earnings Results

State University System Degree Production

The number of degrees awarded is important in terms of estimating the economic impacts of earnings by graduates on the State's economy. A total of 93,961 degrees were awarded by the Florida SUS during the 2018-19 academic year, with bachelors degrees accounting for 69,928, or nearly 74 percent of all degrees, masters degrees accounted for 18,854 (nearly 21% of all degrees awarded), and professional and doctoral degrees accounted for about three and two percent of degrees awarded, respectively, as shown in Table 2. The number of degrees awarded by each SUS institution is summarized in Table 3. The University of Central Florida awarded the most of all degrees (16,843) and the highest number of bachelors degrees (13,959), followed by the

[4] According to the FETPIP team in personal communication with CEFA staff, data for the 2019-2020 academic year was not available at the time of the report and was only estimated to become available sometime in December 2021.

University of Florida (15,773), Florida International University (14,749), University of South Florida (14,306), and Florida State University (11,376).

The number of Florida SUS degrees awarded increased from 84,423 in 2013-14 to 89,840 in 2018-19, representing a 13.2 percent increase over this four-year period (Table 2). The number of SUS degrees awarded during this period increased by approximately 12.4 percent for bachelor's degrees, 15.9 percent for masters degrees, 30.2 percent for professional degrees, and decreased by 2.6 percent for doctoral degrees. Over the past 30 years, the annual growth in the total number of SUS degrees awarded has averaged approximately 3.4 percent, much faster than the state's population growth rate of 1.9 percent.

Table 2. Degrees awarded by Florida State University System in academic years 2013-14 to 2018-19[5]

Degree	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
Bachelor's	62,210	62,087	63,423	64,538	66,991	69,928
Master's	16,263	17,544	17,811	18,628	19,265	18,854
Professional	2,291	2,719	2,837	2,971	2,916	2,984
Doctorate	2,253	2,073	2,046	2,099	2,213	2,195
All Degrees	83,017	84,423	86,117	88,236	91,385	93,961

[5] Professional degrees include Dentistry, Engineer, Law, Medicine, Pharmacy, Specialist and Veterinary Medicine. Sources: State University System Data Dashboard, Degreed Awarded by Student Demographic, retrieved from https://flbog.ondemand.sas.com/SASVisualAnalytics/?reportUri=%2Freports%2Freports%2F2243f686-95da-424d-afd2-08d12d5c924d&page=vi6&sso_guest=true.

Table 3. Degrees awarded by Florida SUS institutions in Academic Year 2018-2019[6]

University	Bachelors	Percent of Bachelors	Masters	Percent of Masters	Prof.	Percent of Prof.	Doctorates	Percent of Doctorates	Total	Percent of Total
FAMU	1,444	2.1%	288	1.5%	299	10.0%	20	0.9%	2,074	2.2%
FAU	5,786	8.3%	1,558	8.3%	85	2.8%	115	5.2%	7,544	8.0%
FGCU	2,369	3.4%	311	1.6%	38	1.3%	8	0.4%	3,339	3.6%
FIU	8,640	12.4%	2,469	13.1%	361	12.1%	215	9.8%	14,749	15.7%
FPOLY	239	0.3%	16	0.1%		0.0%		0.0%	247	0.3%
FSU	9,963	14.2%	2,006	10.6%	308	10.3%	422	19.2%	11,376	12.1%
NCF	213	0.3%	8	0.0%		0.0%		0.0%	229	0.2%
UCF	13,959	20.0%	3,845	20.4%	164	5.5%	251	11.4%	16,843	17.9%
UF	10,007	14.3%	3,547	18.8%	1215	40.7%	750	34.2%	15,773	16.8%
UNF	3,342	4.8%	968	5.1%	135	4.5%	20	0.9%	4,123	4.4%
USF	10,961	15.7%	3,212	17.0%	379	12.7%	373	17.0%	14,306	15.2%
UWF	3,005	4.3%	626	3.3%		0.0%	21	1.0%	3,358	3.6%
Total	69,928	100.00%	18,854	100.00%	2,984	100.00%	2,195	100.00%	93,961	100.00%
	74.4%		20.1%		3.2%		2.3%		100.0%	

Graduate Employment and Earnings

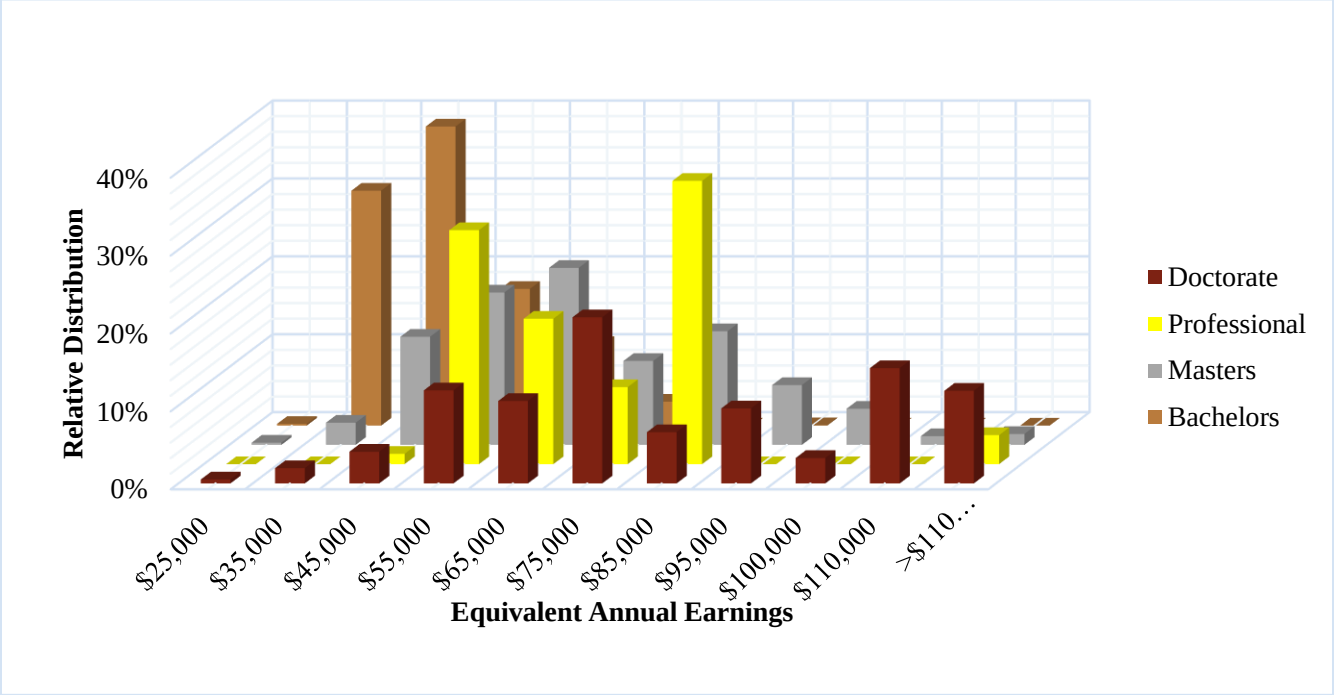
Average annual earnings and employment rates for Florida high school students and Florida SUS students graduating with bachelors, masters, professional or doctoral degrees in 2018-19 are summarized in Table 4. Average annual equivalent per-capita earnings for Florida SUS graduates in the fall of 2019 were $44,196 for graduates with bachelors degrees, $64,808 for masters degrees, $67,256 for professional degrees and $81,452 for doctoral degrees. These earnings are significantly higher than equivalent average earnings for students graduating with a high school diploma ($25,644). The average annual earnings differential for all SUS graduates compared to high school graduates in 2018-2019 was $26,384 and ranged from $18,552 for those graduates with a bachelors degree to $55,808 for those with a doctoral degree. The percentage of 2018-19 SUS graduates who found employment in the state in the fall of 2019 was approximately 60 percent, and of those who are employed, 81.5 percent were employed full-time, an increase of 2.5 percentage points since the last study. A comparison to high school graduate data from 2018-19 shows that around 53.7 percent of high school graduates found employment in the same year, of which 21.4 percent were employed full-time. Figure 2 depicts the equivalent earnings distributions across the attained education levels.

[6] Source: State University System Data Dashboard, Degrees Awarded by Student Demographic, retrieved from https://flbog.ondemand.sas.com/SASVisualAnalytics/?reportUri=%2Freports%2Freports%2F2243f686-95da-424d-afd2-08d12d5c924d&page=vi6&sso_guest=true

Table 4. Annual average per capita earnings and earnings differentials for Florida high school and State University System graduates in 2018-2019[7]

Education Level	Total Individuals	Total Employed	Percent Employed	Number Employed Fulltime	Percent Employed Fulltime	Equivalent Annual Earnings	Annual Earnings Differential
Public High School	124,520	66,883	53.7%	14,320	21.4%	$25,644	
Bachelors	69,928	43,687	62.5%	34,171	78.2%	$44,196	$18,552
Masters	18,854	10,203	54.1%	9,460	92.7%	$64,808	$39,164
Doctoral	2,984	1,154	38.7%	1,080	93.6%	$81,452	$55,808
Professional	2,195	1,359	61.9%	1,278	94.0%	$67,256	$41,612
All Degrees	93,961	56,403	60.0%	45,989	81.5%	$52,028	$26,384

Figure 2. Distribution of average annual per capita earnings for State University System of Florida graduates, 2018-2019



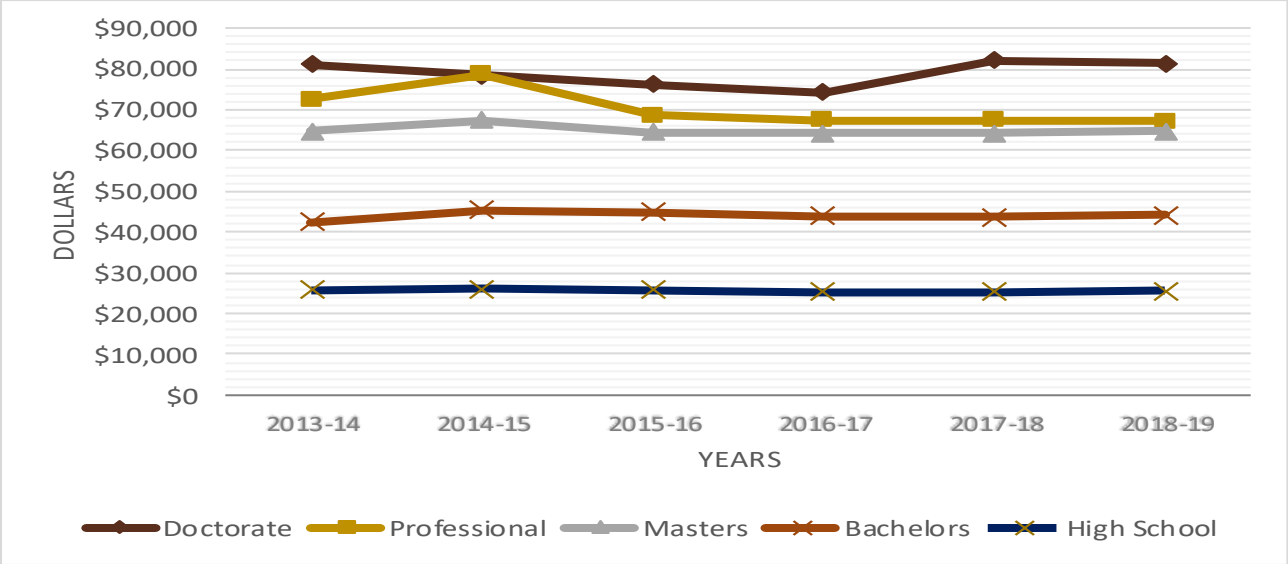
As shown in Figure 3, for the period 2013-14 to 2018-19, inflation adjusted annual average earnings for recent SUS graduates increased slightly compared to their levels in 2013-14, except for professional degrees. Initial

[7] Annual earnings differential compared to high school graduates in same year.
Source: State University System Data Dashboard, Degrees Awarded by Student Demographic, retrieved from: https://flbog.ondemand.sas.com/SASVisualAnalytics/?reportUri=%2Freports%2Freports%2F2243f686-95da-424d-afd2-08d12d5c924d&page=vi6&sso_guest=true and Annual Outcomes Report, Florida Education & Training Placement Information Program (FETPIP), Division of Accountability, Research and Measurement, Fall 2019 Data (Dec 2019).

earnings for graduates with professional degrees decreased from $72,524 in 2013-14 to $67,256 in 2018-19 while earnings for masters degrees increased slightly from $64,268 to $64,808, and earnings for bachelors degrees increased slightly from $42,357 to $44,196. Earnings for doctorates initially decreased between 2014-2017, but then increased to $81,452 in 2018-19 from $81,244 in 2013-14. Earnings for high school diploma recipients were rather stable over the four-year period, slightly decreasing from $25,863 in 2013-2014 to $25,644 in 2018-2019.

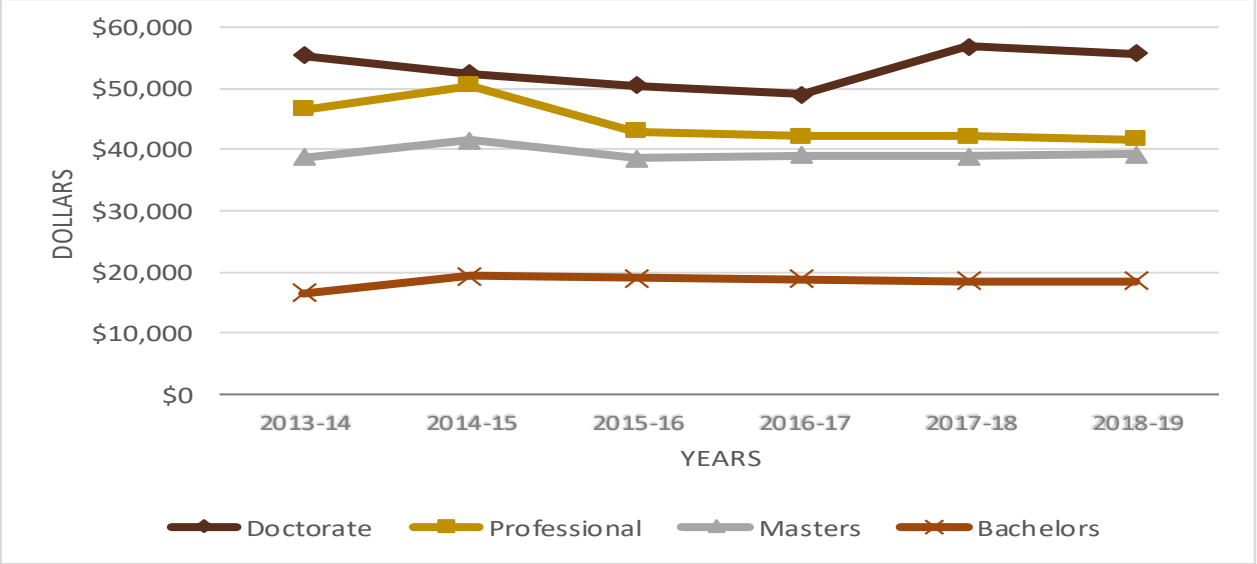
The differentials in average annual equivalent earnings between high school graduates and SUS graduates working fulltime are presented in Figure 4. Between 2014-2019, SUS graduates with doctoral degrees earned an average of $53,345 more than high school graduates, professional degrees averaged $44,399 more, masters degrees averaged $39,325 more, and bachelors degrees averaged $18,446 more than high school graduates.

Figure 3. Trend in average annual per capita earnings for Florida high school and State University System of Florida graduates, year 2013-14 to 2018-2019



Source: Florida Department of Education. Florida Education and Training Placement Information Program (FETPIP), data available at: http://www.fldoe.org/fetpip/sus.asp.

Figure 4. Trend in average annual per capita earnings differential for State University System of Florida graduates compared to high school graduates, year 2013-2014 to 2018-2019



Source: Florida Department of Education. Florida Education and Training Placement Information Program (FETPIP), data available at: http://www.fldoe.org/fetpip/sus.asp.

To evaluate the contributions of SUS graduates to the Florida economy, lifetime earnings were calculated for individuals based on median fulltime labor income earnings corresponding to educational attainment and age, as shown in Table 5. At the base of the table, the median income across age groups for each level of educational achievement is given as well. Estimates of SUS graduate lifetime earnings were made for a 30-year time horizon using U.S. Census wage information, adjusted to educational attainment and age.

Table 5. Median annual incomes for high school and higher education graduates in Florida[8]

Age (Years)	High School	Bachelors	Masters	Professional	Doctorate
25-34	$25,298	$37,561	$47,435	$38,553	$42,129
35-44	$22,669	$38,341	$50,346	$48,986	$47,381
45-54	$34,830	$57,279	$74,584	$75,864	$77,469
55-64	$35,434	$57,412	$74,504	$80,345	$83,327
Median	$30,064	$47,810	$62,425	$62,425	$62,425

[8] Values in 2019 dollars. Annual earnings and Synthetic Work-life earnings are based on median.
Sources: U.S. Census Bureau, American Community Survey, 2014-2019. U.S. Census Bureau, 2019 American Community Survey 5-Year Estimates. Median earnings in the past 12 months (in 2019 inflation-adjusted dollars) by educational attainment for the population 25 years and over, Florida data retrieved from:
https://data.census.gov/cedsci/table?q=B20004&g=0400000US12&tid=ACSDT5Y2019.B20004&hidePreview=true

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, bachelors recipients at 22 years, masters at 24 years and both doctoral and professional degree students, at 27.5 years of age. For each degree program, trend lines were estimated to derive the respective salaries at their year of graduation and in time intervals thereafter. Average incomes by age group and degree level are provided in Table 5. The projected incomes over a lifetime were broken-down in ten-year increments based on educational attainment as well as the lifetime income differential between high school graduates and college graduates at different levels of educational achievement. For example, over a 30-year period, an individual with a professional degree is projected to earn an average of about $1.7 million more than an individual with a high school degree. The individual lifetime earnings by degree attained are provided in Table 6. It is estimated that the present value of lifetime earnings attributed to all SUS graduates will total $58.9 billion over the next 30 years, or approximately $1.96 billion annually in 2019 dollars.

To measure the economic contributions of SUS graduates who remain in Florida, data was taken from publicly available survey response information of recent Florida SUS graduates by institution. Where this information was not available, the percentages of alumni residing in Florida was used as a substitute. Where no other information was available, the mean percent Florida residency for the other Florida institutions was imputed for the missing data. It is projected that graduates in each degree category will continue to add value to Florida's economy by virtue of their lifetime earnings. Thus, it's estimated that the present value of lifetime earnings attributed to SUS graduates in Florida totals $39.1 billion over the next 30 years, or approximately $1.3 billion annually in 2019 dollars, as shown in Table 7.

Table 6. Average individual lifetime earnings for high school and collegiate graduates in Florida, and differential with high school graduates

	Estimated Lifetime Earnings Over Time		
Degree	10 Year	20 Year	30 Year
High School	$247,361	$517,746	$824,412
Bachelors	$344,614	$812,580	$1,323,653
Masters	$461,762	$1,063,098	$1,694,829
Professional	$695,345	$1,601,523	$2,525,350
Doctorate	$579,551	$1,320,001	$2,110,384
Differential compared to high school graduates			
Bachelors	$97,253	$294,835	$499,241
Masters	$214,401	$545,353	$870,417
Professional	$447,984	$1,083,777	$1,700,938
Doctorate	$332,190	$802,256	$1,285,972

Table 7. Aggregate present value of estimated lifetime earnings differential compared to high school graduates in 2018-2019, for all graduates and for SUS graduates employed in Florida

SUS Degree / Institution	All Graduates ($M)	Graduates in Florida ($M)
All	$58,893	$39,086
Bachelor's	$34,911	$22,990
Master's	$16,411	$11,025
Professional	$3,837	$3,285
Doctorate's	$3,734	$1,785
Florida A&M University	$1,506	$968
Florida Atlantic University	$4,537	$2,916
Florida Gulf Coast University	$1,528	$1,085
Florida International University	$7,353	$4,726
Florida Polytechnic University	$133	$86
Florida State University	$7,787	$2,768
New College of Florida	$113	$73
University of Central Florida	$10,917	$9,826
University of Florida	$11,114	$7,669
University of North Florida	$2,766	$1,778
University of South Florida	$9,392	$6,036
University of West Florida	$2,072	$1,156

Value(s) in million dollars.
* Institutional values based on weighted average by educational attainment and differentials.

Economic Contribution Results

Operating Expenditures

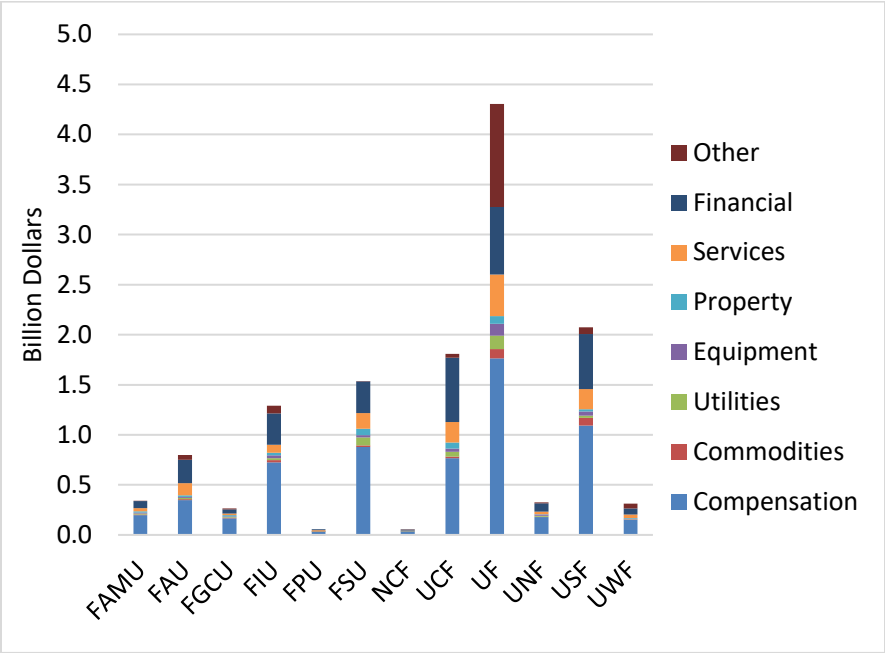
Expenditures for Florida SUS operations in 2019-20 are summarized in Table 8 and Figure 5. Total operating expenditures for all Florida SUS institutions were $13.18 billion, including $6.32 billion for employee compensation (salaries and benefits), $3.00 billion for financial services (including student financial aid), $1.32 billion for professional and technical services, $256 million for commodities and supplies, $353 million for utilities, $288 million for equipment, $295 million for property purchases, and $1.34 billion for other miscellaneous expenses.

Table 8. Operating expenditures by State University System of Florida institutions in 2019-20

Institution	Employee Compen-sation	Commodities and Supplies	Utilities	Equipment	Property	Services	Financial	Other	Total
					Million Dollars				
FAMU	197.36	5.49	11.30	9.43	11.46	33.56	69.89	1.48	339.97
FAU	347.03	9.75	14.24	7.43	16.18	123.72	231.78	47.83	797.95
FGCU	166.94	4.66	6.97	5.63	12.06	17.97	41.82	7.47	263.52
FIU	725.16	21.96	18.97	29.61	23.64	82.42	313.07	76.41	1,291.25
FPU	31.87	0.68	0.73	0.97	0.22	13.01	10.22	-6.28	51.42
FSU	876.78	17.43	78.55	24.15	64.16	154.55	316.64	5.75	1,538.00
NCF	33.36	1.14	1.95	0.92	1.90	5.39	7.82	0.37	52.85
UCF	765.84	15.06	50.67	31.30	59.54	203.98	642.52	39.38	1,808.28
UF	1,762.28	93.12	134.30	120.15	76.16	414.28	676.60	1,027.63	4,304.52
UNF	177.07	5.79	8.72	11.25	3.91	26.91	82.73	10.34	326.72
USF	1,091.55	77.03	23.19	41.61	21.32	202.90	548.16	68.25	2,074.03
UWF	149.15	4.09	3.79	5.97	4.45	37.08	60.79	48.39	313.71
BOG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.55	14.55
Total	6,324.40	256.18	353.38	288.41	295.01	1,315.77	3,002.03	1,341.59	13,176.78

Source: Board of Governors

Figure 5. Summary of operating expenditures by State University System of Florida institutions in 2019-20



Revenues

The statement of operating and non-operating revenues for Florida SUS institutions in FY 2019-20 is presented in Table 9. This statement includes sales and services by component units, auxiliary enterprises, and educational departments associated with the Florida SUS. For all Florida SUS units, total operating revenues were $10.39 billion, nonoperating revenues net of nonoperating expenses were $4.41 billion, and total operating and non-operating revenues were $14.80 billion. The largest operating revenue items were for hospitals ($3.62 billion), tuition and fees net of scholarship allowances ($1.85 billion), nongovernmental grants and contracts ($1.28 billion), federal grants and contracts ($1.16 billion), sales and services of auxiliary enterprises ($795 million), and sales and services of component units ($511 million), and other operating revenues ($512 million), and gifts and donations ($382 million), while the large nonoperating revenues were state appropriations ($3.16 billion), federal and state student financial aid ($1.33 billion), and net investment income ($365 million). Total operating and net nonoperating revenues for the largest institutions were $6.83 billion for University of Florida, $1.87 billion for University of South Florida, $1.55 billion for Florida State University, $1.39 billion for University of Central Florida, and $1.15 billion for Florida International University. Revenues for sales and services of component units and hospitals were used for the economic contribution analysis, while sales and services of auxiliary enterprises were not used because they duplicated by university operating expenditures.

Table 9. Operating and nonoperating revenues for State University System of Florida institutions in 2019-20

	SUS Total	UF	FSU	FAMU	UCF	USF	NCF	FAU	UWF	FIU	UNF	FGCU	FPU
						Million Dollars							
Operating Revenues													
Student Tuition & Fees	3,125.69	667.29	401.25	80.53	527.44	411.17	6.41	240.72	85.14	466.57	121.72	110.21	7.22
Less: Tuition Scholarship Allowances	-1,277.44	-267.66	-194.74	-36.86	-221.59	-149.92	-5.39	-85.61	-28.00	-193.89	-44.37	-43.94	-5.48
Net Student Tuition & Fees	1,848.25	399.63	206.52	43.67	305.86	261.25	1.02	155.12	57.14	272.69	77.35	66.27	1.74
Federal Grants and Contracts	1,160.22	480.99	166.99	49.63	111.05	188.77	0.70	30.93	13.20	104.68	6.89	6.23	0.16
State and Local Grants and Contracts	155.83	46.76	20.17	8.44	10.73	36.40	0.03	18.73	0.98	8.98	2.67	1.78	0.15
Nongovernmental Grants and Contracts	1,281.69	915.82	14.49	1.51	28.45	278.40	1.92	15.27	0.00	18.96	2.25	4.04	0.58
Sales & Services of Educational Departments	55.72	53.78	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.80	0.49	0.00	0.02
Sales and Services of Auxiliary Enterprises	794.67	114.68	173.61	28.94	96.91	126.24	4.76	76.47	6.11	103.82	27.65	31.79	3.70
Sales and Services of Component Units	510.88	190.87	35.34	0.00	0.00	239.93	0.00	34.68	1.86	7.70	0.49	0.00	0.00
Hospital Revenues	3,617.95	3,617.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Royalties and Licensing Fees	65.52	48.26	13.57	0.00	0.00	3.38	0.00	0.31	0.00	0.00	0.00	0.00	0.00
Gifts and Donations	381.90	147.87	91.55	0.00	25.59	55.45	2.46	7.67	5.39	26.61	0.82	17.90	0.59
Interest on Loans Receivable	1.83	1.04	0.27	0.00	0.15	0.20	0.00	0.14	0.00	0.04	0.00	0.00	0.00
Other Operating Revenue	512.18	175.25	26.00	18.24	140.38	70.34	0.48	10.42	11.37	31.71	24.13	3.59	0.26
Total Operating Revenues	10,386.66	6,192.90	748.50	150.44	719.11	1,260.37	11.37	350.37	96.06	575.98	142.75	131.60	7.21
Non-Operating Revenues (Expenses)													
State Appropriations	3,175.63	803.31	488.26	122.77	378.43	428.95	36.79	208.83	119.68	323.33	120.39	106.17	38.74
Federal and State Student Financial Aid	1,328.34	244.32	187.44	36.91	264.07	164.43	3.75	87.90	33.00	201.21	51.76	44.47	9.08
State Appropriated American R&R Act	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Noncapital Grants, Contracts, and Gifts	341.82	185.02	85.74	2.17	5.52	32.29	1.25	0.00	5.61	24.23	0.00	0.00	0.00
Investment Income	350.48	197.27	42.11	1.34	5.67	43.16	0.55	18.94	8.67	19.52	4.16	7.27	1.82
Unrealized Gains and Losses	22.81	-10.49	7.41	0.96	24.73	-13.93	-0.96	5.80	-2.51	5.21	3.69	1.73	1.17
LESS: Investment Expenses	-8.71	-6.97	-0.08	0.00	-0.43	0.00	0.00	0.00	-0.45	-0.79	0.00	0.00	0.00
Net Investment Income	364.57	179.82	49.45	2.30	29.97	29.23	-0.41	24.74	5.71	23.93	7.85	9.00	2.99
Other Non-Operating Revenues	339.46	144.24	15.35	1.82	55.87	23.25	1.21	37.19	0.05	22.20	26.42	11.44	0.41
Gain/Loss on Disposal of Capital Assets	-13.40	-3.10	-1.84	-0.53	-0.32	-0.53	0.00	-0.59	-0.16	-6.27	-0.01	-0.03	0.00
Interest on Asset-Related Debt	-144.44	-54.63	-17.58	-1.10	-14.34	-25.06	-1.23	-10.16	-1.55	-6.55	-5.25	-6.97	-0.02
Other Non-Operating Expenses	-980.12	-857.36	-2.53	-5.08	-45.38	-46.93	-1.23	-5.95	-5.69	-5.21	-4.10	-0.40	-0.26
Total Non-Operating Revenues (Expenses)	4,411.87	641.62	804.29	159.26	673.82	605.61	40.11	341.96	156.64	576.86	197.07	163.68	50.94

Source: Board of Governors

Employment

The Florida SUS had total direct employment of 74,405 fulltime, part-time and temporary faculty and staff positions in the Spring semester of 2020, including contract and grant-funded positions, student workers, auxiliaries, and support organizations such as intercollegiate athletics and faculty health practices (Table 10). The largest institutions in terms of direct employment were the University of Florida (22,566 jobs), Florida State University (10,400), University of South Florida (12,594), University of Central Florida (8,254), and Florida International University (7,644).

Table 10. Direct employment for State University System of Florida institutions in 2019-20

Institution	Employees
Florida A & M University	2,085
Florida Atlantic University	4,473
Florida Gulf Coast University	1,812
Florida International University	7,644
Florida Polytechnic Institute	295
Florida State University	10,400
New College of Florida	350
University of Central Florida	8,254
University of Florida	22,566
University of North Florida	2,208
University of South Florida	12,594
University of West Florida	1,724
Total	74,405

Note: Includes fulltime, part-time and temporary jobs.
Source: Board of Governors.

Capital Improvement Expenditures

Capital improvement appropriations for building construction by Florida SUS institutions in 2019-20 totaled $170 million, as shown in Table 11. The largest capital expenditures were for the University of Florida ($46 million), Florida Atlantic University ($28 million), Florida A&M University ($27 million), and Florida State University ($23 million).

Table 11. Capital improvement appropriations to State University System of Florida institutions in 2019-20

Institution	Million Dollars
Florida A & M University	26.68
Florida Atlantic University	27.51
Florida Gulf Coast University	10.91
Florida International University	4.05
Florida Polytechnic Institute	0.21
Florida State University	23.17
New College of Florida	0.13
University of Central Florida	9.34
University of Florida	46.05
University of North Florida	2.08
University of South Florida	19.13
University of West Florida	1.20
Total	170.45

Source: Board of Governors

Student Enrollment and Spending

Expenditures by students at each institution were estimated based upon cost of attendance, student enrollment by level (undergraduate, graduate, and professional), living situation (on campus vs off-campus or home) and residency (Florida resident vs. nonresident). Only expenditures of nonresident students were considered as new final demand for the economic contribution analysis because spending by resident students represents a transfer from elsewhere in the state.

Enrollment in all Florida SUS institutions during academic year 2019-20 was 230,214 in the summer semester, 365,442 in the fall semester, and 348,246 in the spring semester, or a total of 943,902 student-semesters (Table 12). Undergraduate, graduate and unclassified students represented 76.2 percent, 18.8 percent and 4.9 percent of total student-semesters, respectively, while nonresident students represented 9.0 percent of undergraduates, 30.8 percent of graduate students, and 13.6 percent of all students. The share of students who were nonresidents varied widely across campuses, 21.8 percent for the University of Florida to 5.5 percent for University of North Florida.

The cost of attendance at Florida SUS institutions is compiled by the Board of Governors for the categories of tuition/fees, books/supplies, room/board, transportation, and other expenses. The total cost for fulltime students in fall and spring semesters across all institutions averaged $22,431 for resident students living on campus and $15,539 for students living off campus or at home, as shown in Table 13. For students living on campus, room and board represented 47.3 percent of total costs, followed by tuition and fees (26.7%), other expenses such as clothing and personal care items (12.9%), transportation (7.8%), and books and supplies (5.3%). For students living off campus or at home, room and board was 22.5 percent of total costs. The tuition and fees represent costs for fulltime resident undergraduate students, and are significantly higher for graduate or professional students and nonresident

students. Expenditures for tuition/fees and room/board for students living on campus were excluded from the economic analysis since these expenditures duplicate institutional operating expenditures. The number of students who resided in on-campus housing was estimated at 52,123 based on the number of beds available in fall 2020. Overall, 14.3 percent of students enrolled lived on campus, but it ranged from a high of 91.5 percent for New College to a low of 6.3 percent for Florida International University (Table 13).

Total applicable nonresident student expenditures at Florida SUS institutions are summarized in Table 14. Expenditures for enrollment during the 12-week summer semester were estimated at 75 percent of the average cost for fall and spring semesters (16 weeks). Spending by nonresident students amounted to $623 million, including $269 million for off-campus housing and food, $109 million for transportation, $66 million for books/supplies, and $179 million for other expenses.

Total nonresident student expenditures were assigned to industry sectors for economic analysis as indicated in Table 15. Expenses for books and supplies were assigned to sectors for book publishers and general merchandise stores; room and board expenses were assigned to tenant occupied housing, food stores, and limited service restaurants; transportation expenses were assigned to transit and ground passenger transportation and gasoline stores; other expenses were assigned to general merchandise stores, clothing/accessories stores, electronics/appliance stores and personal care services.

Table 12. Student enrollment at State University System of Florida institutions by semester, student level and nonresident status in 2019-20

Institution	Semester				Student Level (All Semesters)			Percent Nonresidents (Fall 2019)		
	Summer	Fall	Spring	Total	Undergrad	Graduate	Unclassified	Undergrad	Graduate	All
FAMU	4,514	9,612	8,942	23,068	17,864	4,480	724	16.2%	16.6%	15.2%
FAU	21,236	30,131	28,526	79,893	61,670	13,209	5,014	9.0%	33.0%	12.8%
FGCU	7,635	14,998	14,085	36,718	32,651	2,964	1,103	9.3%	3.7%	8.5%
FIU	40,202	58,787	56,480	155,469	113,417	24,374	17,678	10.1%	23.8%	11.6%
FPU	590	1,340	1,221	3,151	3,006	119	26	4.3%	37.5%	5.6%
FSU	25,287	42,779	41,212	109,278	83,089	23,007	3,182	9.3%	25.7%	13.7%
NCF		727	668	1,395	1,350	45		13.0%	33.3%	13.8%
UCF	45,241	69,523	66,188	180,952	153,674	25,131	2,147	6.9%	24.6%	9.9%
UF	34,036	56,567	54,454	145,057	96,586	41,609	6,862	10.2%	46.9%	21.8%
UNF	11,654	17,308	16,148	45,110	37,633	6,043	1,434	3.8%	13.1%	5.5%
USF	31,497	51,082	48,377	130,956	95,488	28,916	6,552	9.8%	32.0%	16.2%
UWF	8,322	12,588	11,945	32,855	23,209	7,830	1,816	11.2%	25.9%	14.9%
Total	230,214	365,442	348,246	943,902	719,637	177,727	46,538	9.0%	30.8%	13.6%

Summer semester counted as 75% of fall and spring semesters (12 weeks vs. 16 weeks).
Source: Board of Governors

Table 13. Average cost of attendance at State University System of Florida institutions by living situation in academic year 2019-20

Institution	Tuition & Fees	Books & Supplies	Living On Campus				Living At Home				Percent living on campus
			Room & Board	Transportation	Other Expenses	Total	Room & Board	Transportation	Other Expenses	Total	
					U.S. Dollars						
FAMU	4,554	1,138	10,986	1,356	5,398	23,432	2,416	1,912	5,794	15,814	27.4%
FAU	5,432	1,248	11,950	2,172	5,210	26,012	1,450	3,250	5,210	16,590	14.8%
FGCU	6,118	1,200	9,672	1,700	1,700	20,390	2,883	1,700	1,700	13,601	31.7%
FIU	6,558	1,350	11,136	2,202	2,612	23,858	4,052	3,090	2,428	17,478	6.3%
FPU	4,940	1,200	11,471	2,000	2,000	21,611	4,158	2,000	2,000	14,298	58.2%
FSU	5,666	1,000	10,780	1,180	3,830	22,456	5,390	1,180	3,830	17,066	15.7%
NCF	6,916	1,200	9,529	1,100	2,170	20,915	3,220	1,100	2,170	14,606	91.5%
UCF	5,954	1,200	10,010	1,866	3,104	22,134	5,588	1,866	3,104	17,712	11.8%
UF	6,380	850	10,220	1,110	2,650	21,210	960	1,110	2,650	11,950	15.7%
UNF	6,590	1,200	9,720	2,823	1,247	21,580	2,732	2,808	1,247	14,577	20.2%
USF	6,410	1,100	11,836	1,600	2,500	23,446	5,150	1,600	2,500	16,760	12.3%
UWF	6,360	1,600	10,062	1,800	2,300	22,122	3,950	1,800	2,300	16,010	11.9%
Total	5,990	1,191	10,614	1,742	2,893	22,431	3,496	1,951	2,911	15,539	14.3%

Costs are for fulltime undergraduate students.
Percent living on campus based on number of beds available in campus housing.
Source: Board of Governors

Table 14. Applicable nonresident student expenditures for State University System of Florida institutions in academic year 2019-20

Institution	Books & Supplies	Room & Board	Transportation	Other Expenses	Total Applicable
			Million Dollars		
FAMU	2.03	8.48	3.14	10.13	23.78
FAU	6.14	14.81	15.21	25.64	61.80
FGCU	1.84	7.73	2.61	2.61	14.80
FIU	12.19	40.62	27.39	22.03	102.22
FPU	0.10	0.71	0.17	0.17	1.14
FSU	6.62	41.27	7.81	25.35	81.05
NCF	0.11	0.86	0.10	0.21	1.28
UCF	9.57	48.73	14.88	24.75	97.94
UF	12.33	35.07	16.10	38.44	101.95
UNF	1.29	4.47	3.03	1.34	10.13
USF	10.18	55.26	14.80	23.13	103.37
UWF	3.66	10.71	4.12	5.27	23.75
Total	66.07	268.70	109.37	179.07	623.21

Table 15. Assignment of nonresident student expenditures by industry sector for State University System of Florida in academic year 2019-20

Expense category	Split	IMPLAN© industry
Tuition & Fees		Not applicable
Books & Supplies	60%	425-Book publishers
	40%	411-Retail - General merchandise stores
Room & Board	70%	448-Tenant-occupied housing
	20%	406-Retail - Food and beverage stores
	10%	510-Limited-service restaurants
Transportation	40%	418-Transit and ground passenger transportation
	60%	408-Retail - Gasoline stores
Other Expenses	30%	411-Retail - General merchandise stores
	30%	409-Retail - Clothing and clothing accessories stores
	20%	404-Retail - Electronics and appliance stores
	20%	517-Personal care services

Total Economic Contributions

The total economic contributions of the Florida SUS in 2019-20, including regional economic multiplier effects arising from supply chain activity (indirect effects) and household spending (induced effects) for activity associated with Florida SUS activities including university operations, sales and services of component units, student spending, and capital expenditures are summarized in Table 16. Total direct expenditures within the state after margins and RPCs were applied that drives the economic contribution analysis were estimated at $16.64 billion. Total industry output contributions were estimated at $33.53 billion, representing the total sales revenues received for goods and services throughout the Florida economy supported by Florida SUS activity. Total employment contributions were estimated at 359,042 fulltime and part-time jobs, representing 2.84 percent of the 2019 Florida workforce. Total value-added contributions of $22.37 billion are equivalent to 2.03 percent of Florida's Gross State Product (GSP). Labor income contributions of $15.85 billion represent employee compensation (wages, salaries, and benefits) of $15.02 billion and proprietor (business owner) income of $825 million. Total other property income contributions of $5.45 billion represents rents, royalties, interest payments, dividends, and corporate profits. Indirect business tax, also known as taxes on production and imports, contributions of $1.07 billion includes property, payroll, sales and other tax revenues generated for local, state, and federal governments in Florida. Note that these measures of total economic contributions are independent and should not be summed together.

Table 16. Summary of economic contributions of State University System of Florida institutions in 2019-20

Institution	Revenue or Expense Within Florida (M$)	Output (M$)	Employ-ment (Jobs)	Value Added (M$)	Labor Income (M$)	Property Income (M$)	Business Tax (M$)
Florida A&M University	353.25	688.60	8,306	489.05	348.55	118.49	22.00
Florida Atlantic University	850.18	1,649.56	24,435	1,191.72	864.62	270.95	56.15
Florida Gulf Coast University	267.77	515.56	6,000	378.21	269.90	91.87	16.43
Florida International University	1,288.73	2,502.58	33,688	1,836.69	1,333.10	423.41	80.18
Florida Polytechnic University	51.36	100.47	1,199	74.43	55.69	15.62	3.12
Florida State University	1,529.82	2,936.26	35,907	2,133.13	1,514.85	522.69	95.59
New College of Florida	49.39	94.91	932	69.11	49.33	16.71	3.06
University of Central Florida	1,720.53	3,401.57	50,985	2,453.27	1,813.77	529.91	109.59
University of Florida	7,671.50	16,066.60	127,471	9,800.20	6,816.42	2,473.36	510.42
University of North Florida	302.03	584.31	7,969	436.20	318.62	99.25	18.33
University of South Florida	2,241.47	4,381.17	54,523	3,068.62	2,153.16	777.10	138.36
University of West Florida	302.44	585.94	7,434	421.64	299.68	103.08	18.88
Board of Governors	10.69	20.36	192	13.05	8.03	4.32	0.70
Total All Institutions	16,639.17	33,527.89	359,042	22,365.31	15,845.71	5,446.78	1,072.82

Values in millions of 2019 dollars; employment represents fulltime and part-time jobs.
Contribution estimates include regional multiplier effects.
Sources: Board of Governors and IMPLAN© software and data.

Figures 6 through 9 chart the total economic contribution measures by individual Florida SUS institutions for employment, output, value added, and labor income, property income and business taxes, respectively. The largest institutions for economic contributions were the University of Florida with 127,471 jobs and $9.80 billion in value added, University of South Florida (54,523 jobs, $3.07 billion), University of Central Florida (50,985 jobs, $2.45 billion), Florida State University (35,907, $2.13 billion), and Florida International University (33,688 jobs, $1.84 billion).

Figure 6. Employment contributions of State University System of Florida institutions in 2019-20

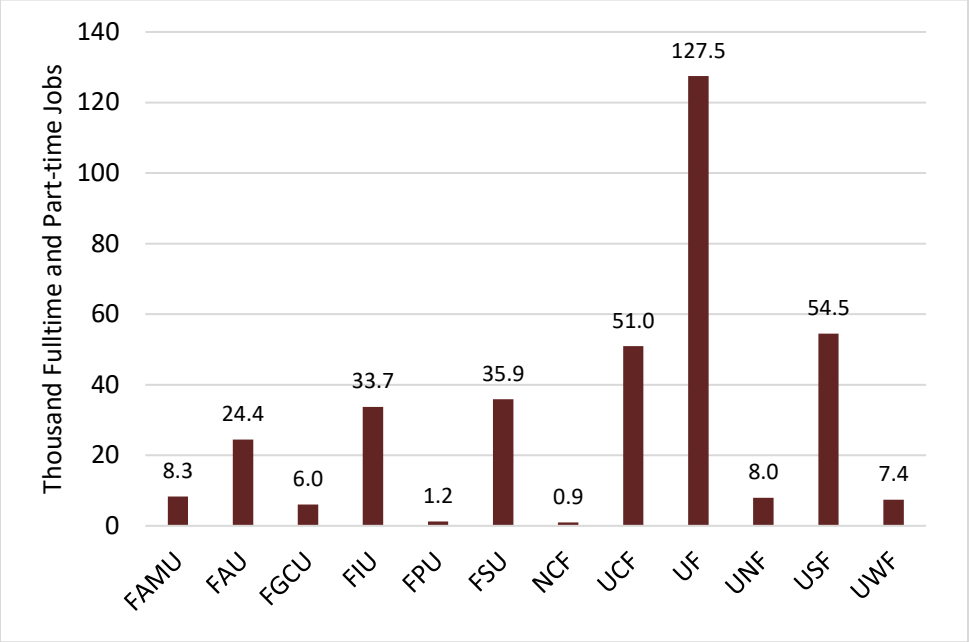


Figure 7. Output contributions of State University System of Florida institutions in 2019-20

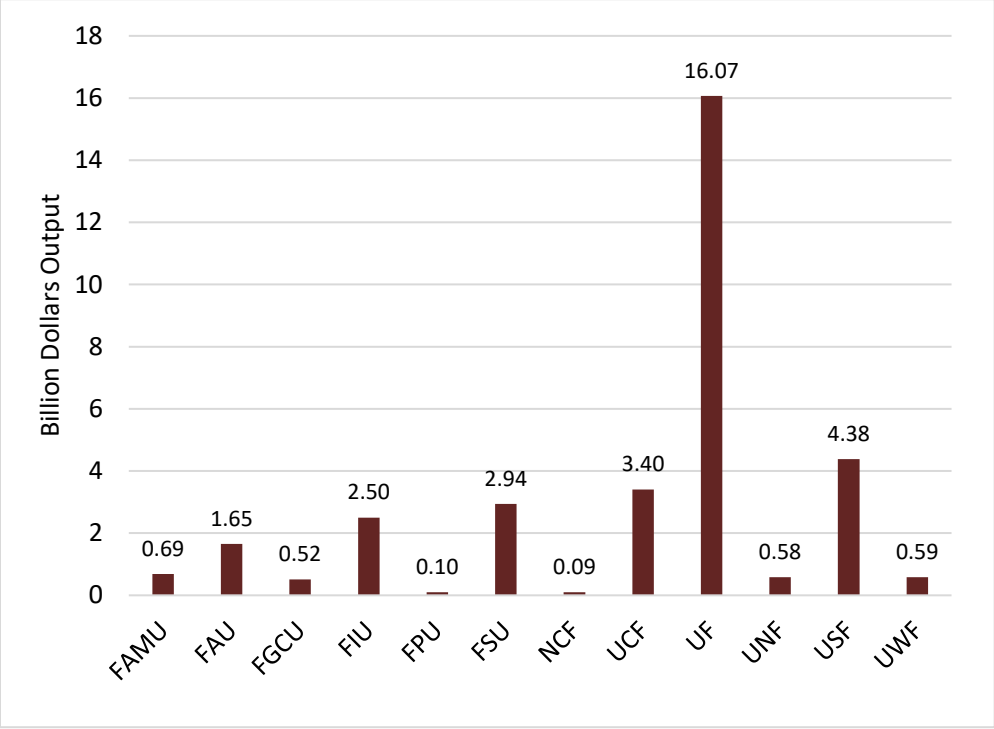


Figure 8. Value added contributions of State University System of Florida institutions in 2019-20

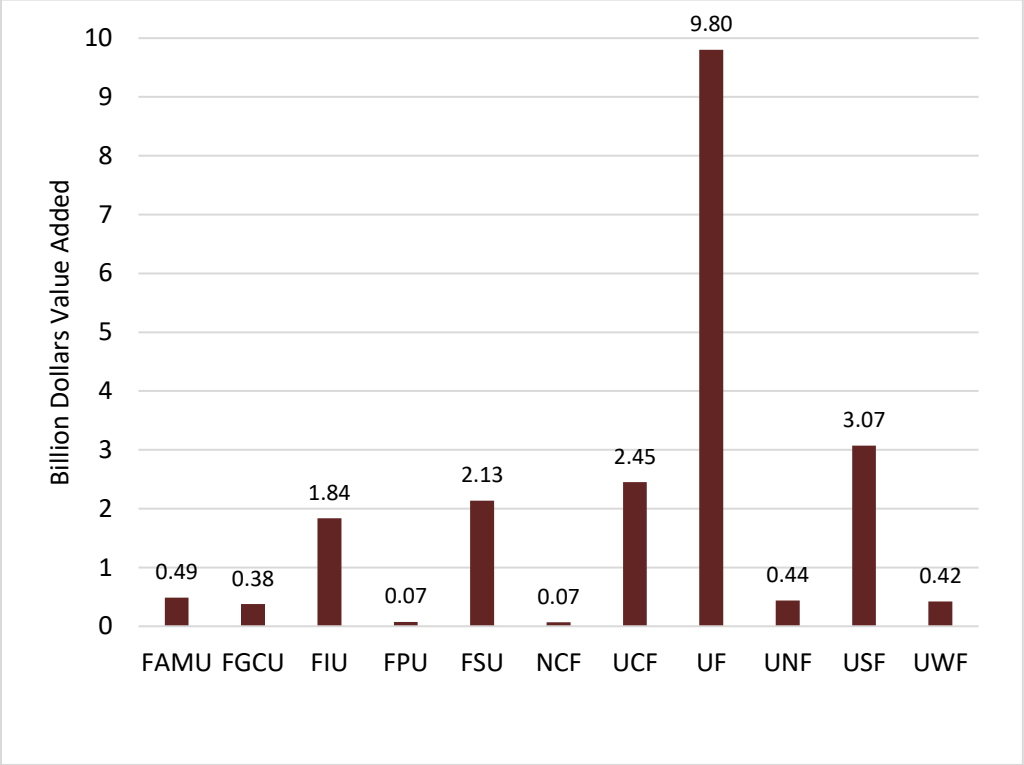
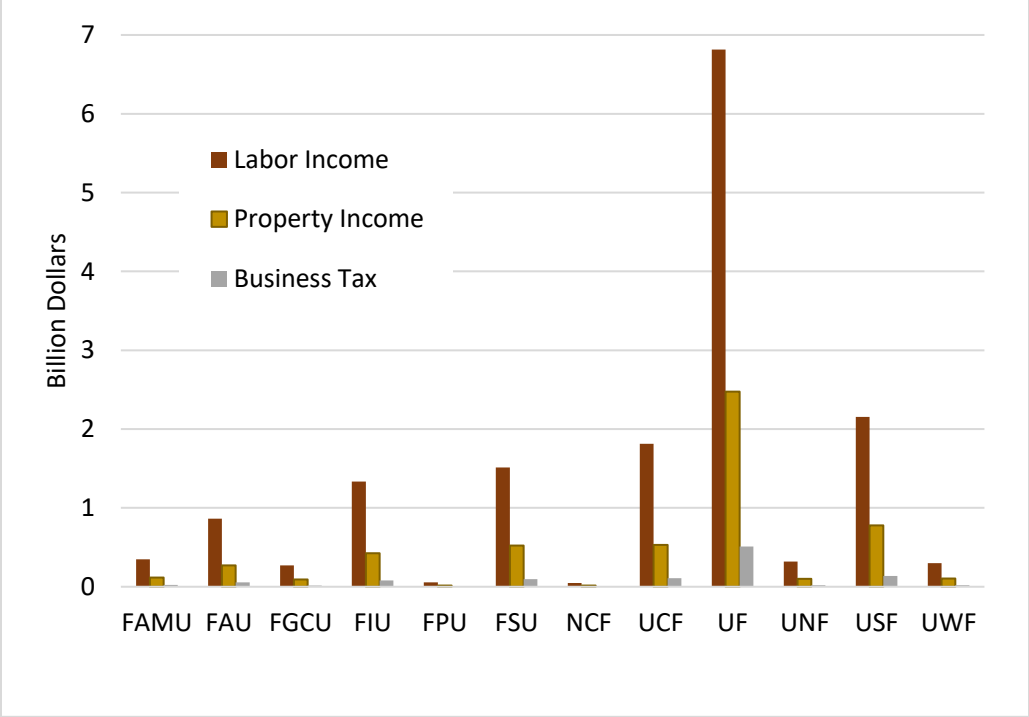


Figure 9. Labor Income, property income and business tax contributions of State University System of Florida institutions in 2019-20



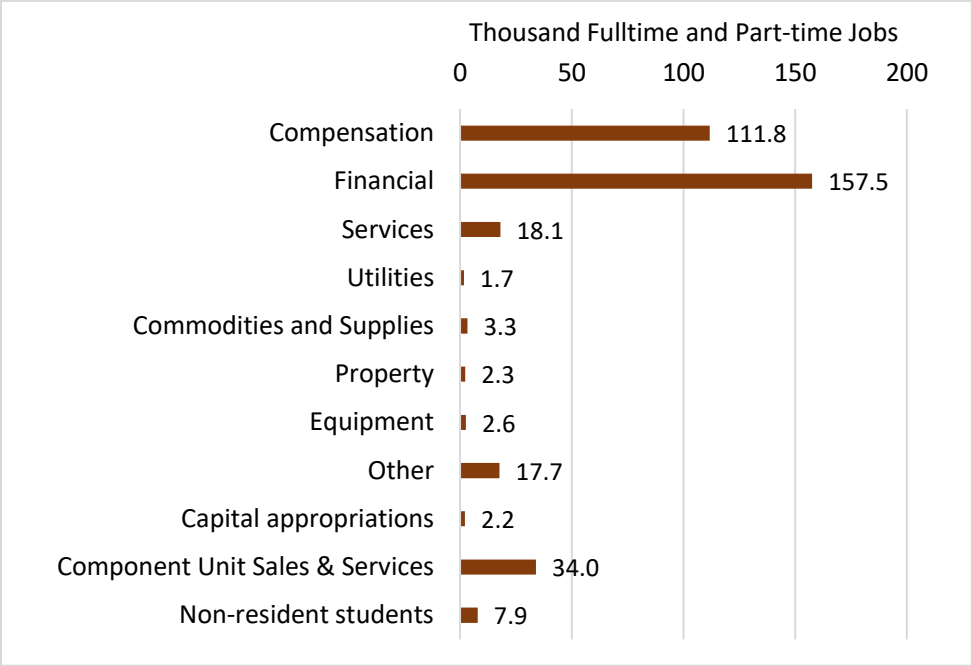
Economic contributions of the Florida SUS are summarized by activity in Table 17 and Figure 10. University operations expenditures together accounted for total contributions of 315,013 jobs, $23.36 billion in output, $16.88 billion value added, and $731 million in business taxes generated. The largest items within university operations were employee compensation contributing 111,772 jobs and $9.05 billion value added, and financial activities with 157,546 jobs and $4.50 billion value added. Capital appropriations for campus construction contributed 2,185 jobs and $188 million value added. Component units including hospitals and charitable support organizations contributed 33,951 jobs and $4.81 billion value added. Nonresident student spending contributed 7,893 jobs and $482 million value added.

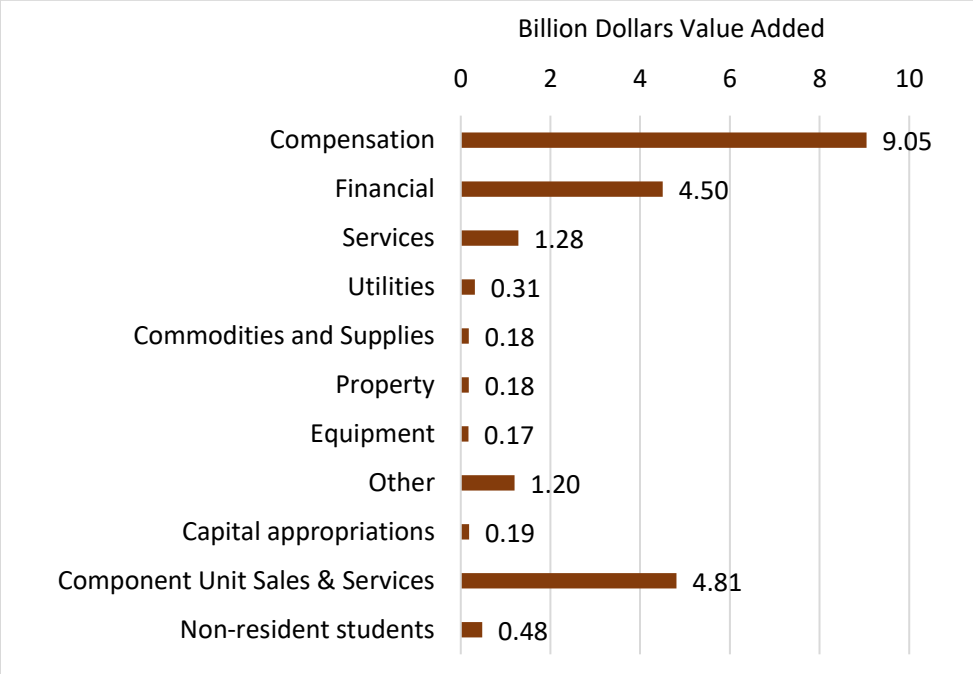
Table 17. Summary of economic contributions by activity of State University System of Florida in 2019-20

Activity	Revenue or Expense Within Florida (M$)	Output (M$)	Employ-ment (Jobs)	Value Added (M$)	Labor Income (M$)	Property Income (M$)	Business Tax (M$)
University operations	11,914.48	23,357.81	315,013	16,882.82	12,310.16	3,841.92	730.74
Employee compensation	6,295.18	11,676.66	111,772	9,045.48	6,526.12	2,221.70	297.65
Financial	2,896.27	5,848.26	157,546	4,504.78	3,735.37	601.66	167.75
Services	1,116.50	2,374.17	18,062	1,282.27	832.62	357.96	91.69
Utilities	319.78	597.16	1,721	314.47	118.52	145.37	50.58
Commodities and supplies	144.12	327.93	3,336	179.45	120.34	37.37	21.74
Property	118.09	323.81	2,314	182.32	113.91	53.77	14.64
Equipment	39.14	333.22	2,572	171.13	123.31	25.60	22.22
Other	985.40	1,876.60	17,690	1,202.92	739.97	398.49	64.46
Capital appropriations	170.45	314.21	2,185	188.43	115.89	63.95	8.59
Component unit sales and services	4,128.83	9,077.92	33,951	4,811.72	3,201.81	1,338.41	271.49
Non-resident student spending	425.41	777.96	7,893	482.34	217.84	202.50	62.00
Total All Institutions and Activities	16,639.17	33,527.89	359,042	22,365.31	15,845.71	5,446.78	1,072.82

Values in millions of 2019 dollars; employment represents fulltime and part-time jobs.
Contribution estimates include regional multiplier effects.
Sources: Board of Governors and IMPLAN© software and data.

Figure 10. Employment and value-added contributions by activity of the State University System of Florida in 2019-20





Comparison to Economic Contributions in 2014-2015

The methodologies used in this report have evolved over time to reflect current best practices for estimating the economic contributions of colleges and universities, however, the present analysis for 2019-20 is largely consistent with the previous report for fiscal year 2014-2015. Economic contributions of the Florida SUS in 2014-2015 were adjusted for inflation to express in 2019 dollars for the percent change comparison to the present study results shown in Table 18. Over this period, economic contributions for all SUS institutions increased by 21 percent for industry output, 1 percent for employment, 19 percent for value added, while declining 17 percent for revenues.

Among individual institutions, employment contributions increased by over 30 percent for Florida Atlantic University, Florida Gulf Coast University, Florida International University, Florida Polytechnic University, Florida State University, and University of Central Florida, while employment contributions grew at a slower rate for Florida A&M University (16.6%), New College of Florida (13.5%) and University of West Florida (2.0%).

Economic contributions in 2019-20 increased from 2014-15 by 1 percent for employment, 21 percent for output, and 19 percent for value added. In summary, since the previous study for 2014-15, output contributions of the Florida SUS in terms of university operations, and sales and services of component units and hospitals, have grown by 34 percent and 14 percent, respectively, and in terms of capital outlay has decreased 62 percent, for industry output. When compared with the previous study for 2014-15, value added (GDP) contributions of the Florida SUS university operations, and sales and services of component units and hospitals, have grown by 33 percent and 5 percent, respectively, while capital outlay has decreased 29 percent. Regarding employment, when compared with the previous study for 2014-15, economic contributions of the Florida SUS university operations, and sales & services of component units and hospitals, have grown by 19 percent, but decreased by 69 percent respectively, and concerning capital outlay, has decreased by 48 percent.

Table 18. Change in economic contributions of State University System of Florida institutions from fiscal year 2014-15 to 2019-20

Institution	Output	Employment	Value Added	Labor Income
Florida A&M University	12.1%	16.6%	9.4%	7.2%
Florida Atlantic University	28.7%	30.6%	26.5%	23.4%
Florida Gulf Coast University	25.5%	30.0%	26.4%	24.2%
Florida International University	23.4%	40.4%	24.2%	23.2%
Florida Polytechnic University	77.4%	95.0%	90.7%	93.4%
Florida State University	28.9%	47.1%	28.8%	27.8%
New College of Florida	17.4%	13.5%	20.9%	18.7%
University of Central Florida	36.1%	35.6%	31.8%	28.7%
University of Florida	36.7%	19.4%	28.9%	23.6%
University of North Florida	10.4%	25.9%	12.9%	11.7%
University of South Florida	14.1%	21.7%	10.7%	9.5%
University of West Florida	-3.1%	2.0%	-2.0%	-5.1%
Total SUS	29.1%	26.9%	24.4%	21.2%

Dollar values adjusted for inflation using the GDP Implicit Price Deflator (U.S. Commerce Department).

Table 19. Change in economic contributions of State University System of Florida institutions from fiscal year 2014-2015 to 2019-2020

SUS Entity	Expenditures or Revenues	Industry Output	Value Added (GDP)	Employment (Fulltime, Part time Jobs)
	Million Dollars			
Contribution in 2014-2015 (Million 2014 dollars)				
University operations (incl. payroll)	10,470.7	14,109.1	10,339.2	235,180
Sales & Services of Component Units and Hospitals	2,928.8	7,173.1	4,193.3	52,741
Capital outlays	201.5	467.0	223.6	2,974
Student spending	4,722.5	3,768.9	2,451.2	63,088
Grand Total	$18,323.5	$25,518.1	$17,207.3	353,983
Contribution in 2014-2015 (Million 2019 dollars)				
University operations (incl. payroll)	11,413.1	15,378.9	11,269.7	235,180
Sales & Services of Component Units and Hospitals	3,192.4	7,818.7	4,570.7	52,741
Capital outlays	219.6	509.0	243.7	2,974
Student spending	5,147.5	4,108.1	2,671.8	63,088
Grand Total	$19,972.6	$27,814.7	$18,756.0	353,983
Contribution in 2018-2019 (Million 2019 dollars)				
University operations (incl. payroll)	11,914.5	23,357.8	16,882.8	315,013
Sales & Services of Component Units and Hospitals	4,128.8	9,077.9	4,811.7	33,951
Capital outlays	170.5	314.2	188.4	2,185
Student spending	425.4	778.0	482.3	7,893
Grand Total	$16,639.2	$33,527.9	$22,365.3	359,042
Percent Change from 2014-2015 to 2018-2019 (Inflation Adjusted)				
University operations (incl. payroll)	4%	34%	33%	25%
Sales & Services of Component Units and Hospitals	23%	14%	5%	-55%
Capital outlays	-29%	-62%	-29%	-36%
Student spending[9]	-1110%	-428%	-454%	-699%
Grand Total	-17%	21%	19%	1%

[9] It should be noted that the methodology concerning student spending evolved from the earlier study: expenditures on tuition and fees and on-campus room and board were not considered in the economic contribution analysis because these dollars were accounted for as university operations expenditures that support the provision of educational services to both resident and non-resident students. Also, all expenditures by Florida resident students were not included since it is assumed that any increase in their daily spending is offset by a decrease in their family local spending.

Table 20. Change in lifetime earnings of State University System of Florida graduates from fiscal year 2014-2015 to 2019-2020

Year of BOG SUS Study	Lifetime Earnings
	Million Dollars
Contribution in 2014-2015 (Million 2014 dollars)	
Present value graduate lifetime earnings differential	$29,017
Contribution in 2018-2019 (Million 2019 dollars)	
Present value graduate lifetime earnings differential	$39,086
Percent Change from 2014-2015 to 2018-2019 (Inflation Adjusted)	
Present value graduate lifetime earnings differential	23.6%

Conclusions

The State University System of Florida (SUS) is an important contributor to Florida's economy both directly and indirectly through spending for University operations and capital improvements and student living expenses, and also through increased earnings and spending by graduates who remain in the state. In fiscal year 2019-20, the total economic contributions of all SUS-related institutions were estimated at $33.53 billion in output or revenues, $22.37 billion in value added that represented 2.03 percent of state GDP, and 359,042 jobs that represented 2.84 percent of the state workforce. The largest contributions by individual institutions were the University of Florida (127,471 jobs, $9.80 billion value added), University of South Florida (54,523 jobs, $3.07 billion value added), University of Central Florida (50,985 jobs, $2.45 billion value added), Florida State University (35,907 jobs, $2.13 billion value added), and Florida International University (33,688 jobs, $1.84 billion value added). The lifetime earning analysis showed that graduates across all degree levels and Florida SUS institutions are projected to earn significantly more income than high school graduates, more than doubling lifetime earnings in the case of advanced degree holders. When compared to high school graduates, the differential in average annual earnings for all SUS graduates in 2018-2019 was $38,784, and ranged from $18,552 for those with a bachelor's degree to $55,808 for a Doctoral degree. The present value of aggregate lifetime earnings over a 30-year period for those graduates remaining employed in the state totaled $39.1 billion; representing an increase of 23.6 percent when compared with the 2014-15 study.

It should be noted that the economic contributions of visitor spending and technology licensing were not evaluated in this study, but may be significant, as presented in a recent study for the University of Florida (Hodges et al, 2019). Also, resident student expenditures were assumed to be offset by decreases in parent expenditures within the State. Data are not available to determine the extent to which this assumption holds true across income categories, geographic locations, etc. Economic contributions associated with only nonresident student spending are therefore seen as conservative. However, non-resident expenditures on books and supplies are included even though some of these purchases likely take place within university bookstores, which are included in auxiliary operations that are counted in university operations expenditures, creating the potential for some double-counting of these student expenditures. Finally, although expenditure values were modified to account for margin values, the margins within IMPLAN© were not modified based on the type of consumer to which they applied. For example, student and employee households pay transportation, wholesale, and the full retail margins but Florida SUS institutions may have more buying power and pay little or no retail margin as a result.

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Appendix A: Glossary of Regional Economic Analysis 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 Contribution 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 good 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** 39 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.