

THE ECONOMIC IMPACT of Southern Illinois University Carbondale in the Region and the State of Illinois



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SIU
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**The Economic Impact of Southern Illinois University
Carbondale in the Region and the State of Illinois**

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Executive Summary

Southern Illinois University Carbondale (SIUC), in its second century, is the largest employer in southern Illinois and is the engine of economic growth in southern and central Illinois. The Southern Illinois University School of Medicine (SOM) has its primary educational and research facilities in Springfield and Carbondale; a clinical campus in Springfield; regional patient care and resident training in Springfield, Carbondale, Decatur, and Quincy; and patient care and educational outreach sites throughout central and southern Illinois. The SOM has affiliations with teaching hospitals in Springfield, Carbondale, Decatur, and Quincy. Thus, SIUC is not only the engine of economic growth in southern Illinois but contributes significantly to the economy of central Illinois and the State of Illinois.

The contribution of SIUC to the economy of Illinois, to southern and central Illinois (23 counties in southern Illinois: Alexander, Edwards, Franklin, Gallatin, Hamilton, Hardin, Jackson, Jefferson, Johnson, Massac, Monroe, Perry, Pope, Pulaski, Randolph, St. Clair, Saline, Union, Wabash, Washington, Wayne, White, and Williamson; and 9 counties in central Illinois, i.e. Adams, Christian, Logan, Macon, Macoupin, Menard, Montgomery, Morgan, and Sangamon), and to southern Illinois (twenty three counties) is estimated here for the Fiscal year 2010, i.e. from July 1, 2009 to June 30, 2010. The contribution of SOM to the economy of ten counties (9 counties of central Illinois cited above and Jackson County) is also estimated for the same time period.

SIUC Impact on Illinois Economy

A. Annual Impact (Short-Term)

- SIUC contributes approximately \$2.3 billion in economic activity annually to the Illinois economy.
- Both directly and indirectly SIUC supports approximately 23,903 jobs in the state and about \$1.19 billion in personal income (a component of the state output).
- For every \$1.00 appropriated by the state to SIUC, it generates roughly \$7.72 of economic activity annually in the state.
- For every \$1.00 appropriated by the state to SIUC, 41 cents (\$0.41) are returned to the state and local governments in tax revenues annually.

B. Long-Term Impact:

- SIUC contributes approximately \$8.14 billion in increased expected work life earnings for its graduates each year. Fifty percent of the SIUC graduates stay in Illinois, and thus \$4.07 billion gets circulated in the Illinois economy.

- This \$4.07 billion in impact creates an additional \$7.4 billion in economic activity in the state; i.e. each year's SIUC graduates create about \$11.4 billion economic activity (in 2010 dollar value) in the long-run.
- Each \$1.00 appropriated by the state to SIUC generates approximately \$38.60 of economic activity in the long-run in the state.
- FY10 graduates will pay at least \$458.8 million in state and local taxes (in 2010 dollar value) in their work life. Comparing this to \$296.2 million state appropriation for FY10, there is a net gain of \$162.6 million to the state.
- Each \$1.00 appropriated by the state will generate \$1.55 in state and local taxes in the long-run.

C. Overall Impact:

- Ultimately (in the long-run and short-run) each \$1.00 appropriated by the state to SIUC will return \$2.00 in the form of state and local taxes, and will generate \$46.00 of economic activity in the state.
- Of nearly 210,000 alumni, at least 104,600 are living in Illinois thus providing an impact to the state. This includes 44,752 alumni in the southern and central Illinois, and 37,000 alumni in the 23 county region of southern Illinois. Moreover, 2,436 SIUC annuitants also live in Illinois. SIUC alumni and annuitants contribute annually \$17.4 billion to economic activity in Illinois and they also generate directly and indirectly, \$1.1 billion in state and local taxes.

SIUC Impact on the southern and central Illinois Economy

- SIUC activities contribute approximately \$1.4 billion, 17,707 jobs (directly and indirectly) and \$837.8 million in personal income to the southern and central Illinois (32 counties) economy.
- Every \$1.00 appropriated by state, generates roughly \$4.65 worth of economic activity in the southern and central Illinois region.
- Annually around \$66.83 million in state and local taxes are attributable to the southern and central Illinois region, i.e. for \$1.00 appropriated by state, this region returns around \$0.23 in the form of state and local taxes.



SIUC Economic Impact in southern Illinois

- SIUC contributes approximately \$859.1 million of total economic activity in the southern Illinois region, directly and indirectly supports 12,402 jobs and generates approximately \$551.5 million in personal income.
- Every \$1.00 appropriated by the state to SIUC generates approximately \$2.90 of economic activity in the Southern Illinois region.
- \$43.12 million in the state and local tax revenues are generated by the SIUC activities in the southern Illinois region.

School of Medicine Economic Impact

- During FY 2010 the SIU School of Medicine contributed approximately \$331.8 million in total economic activities (output) in the 10 county region
- A total of 3,801 jobs (direct, indirect and induced) were created as a result of the SIU School of Medicine
- SOM activities generated \$14.5 million in direct and indirect (households, corporations, indirect business tax and employee compensation) taxes to the state of Illinois

In addition to monetary contributions, SIUC provides extensive community service activities to the region and the state of Illinois. Community service activities may be classified broadly in terms of economic development, health and social services, culture and volunteerism. In FY 2010, the Office of Economic and Regional Development assisted 51 businesses in southern Illinois start and expand their companies. This past year more than 3,600 students provided 50,965 hours of service to regional not-for-profit organizations.

The School of Medicine provides a significant amount of community service via specialty and primary care at 100 outreach sites in nearly 50 communities. The SOM routinely provides a number of public education programs around the region concerning cancer, diabetes, back pain, sports medicine, Alzheimer's disease and Parkinson's disease just to name a few. The SOM also regularly holds continuing medical education sessions for physicians and other health care providers.

A. Southern Illinois University Carbondale

Southern Illinois University Carbondale was established in 1869 as Southern Illinois Normal College (SINC). Instructors at SINC began in 1874 for a two-year teacher training program and by 1904 students were enrolled in four-year degree programs. In 1943, SINC was transformed into Southern Illinois Normal University (SINU) and graduate courses and Master's degree in education started the same year. By action of the Illinois General Assembly, in 1947 SINU was renamed as the Southern Illinois University (SIU) and became a comprehensive research institution during the next twenty years. Ph.D. programs started in 1955 and the first doctoral degree was granted in 1959.

To serve the greater Southern Illinois region, SIU started offering off-campus courses in metropolitan East St. Louis area in 1949. In 1965, this led to the development of a separate campus at Edwardsville. In 1969, two campuses became as the Southern Illinois University (at) Carbondale (SIUC) and the Southern Illinois University (at) Edwardsville (SIUE) under the SIU System. Also in the same year, the General Assembly approved two professional schools, i.e. School of Law and School of Medicine. The Southern Illinois University School of Medicine (SOM) began in 1970 and the School of Law in 1973.

At present SIUC has a diverse undergraduate and graduate programs offered by eight academic colleges, the Graduate School and two Professional Schools: Agricultural Sciences, Business, Education and Human Services, Engineering, Liberal Arts, Mass Communication and Media Arts, Science, Applied Sciences and Arts; and the School of Law and the School of Medicine (SOM). The SOM has its primary educational and research facilities in Springfield and Carbondale; a clinical campus in Springfield; regional patient care and resident training in Springfield, Carbondale, Decatur, and Quincy; and patient care and educational outreach sites throughout central and southern Illinois. The first year of the four year M.D. program is offered at the Carbondale campus and then students move to Springfield in the beginning of their second year.

The SIUC mission statement is available online as well as in the undergraduate and graduate catalogs. Here the first and last paragraphs are quoted:

"Southern Illinois University Carbondale, now in its second century, is a major public higher education institution dedicated to quality academic endeavors in teaching and research, to supportive programming for student needs and development, to effective social and economic initiatives in community, regional, and statewide contexts, and to affirmative action and equal opportunity."

"Even as SIUC constantly strives to perpetuate high quality in both instruction and research, it continues a long tradition of service to its community and region. Its unusual strengths in the creative and performing arts provide wide-ranging educational, entertainment, and cultural opportunities for its students, faculty, staff, and the

public at large. Its programs of public service and its involvement in the civic and social development of the region are manifestations of a general commitment to enhance the quality of life through the exercise of academic skills and application of problem-solving techniques. SIUC seeks to help solve social, economic, educational, scientific, and technological problems, and thereby to improve the well-being of those whose lives come into contact with it. ¹"

The mission of the School of Medicine has an added specific mission in addition to the SIUC mission, i.e., "to assist the people of central and southern Illinois in meeting their healthcare needs through education, patient care, research and service to the community. ²"

In addition to the mission and focus statements of SIUC, there "is an explicit commitment to the tradition of affirmatively supporting the educational needs of underrepresented and disadvantaged populations in the state. ³" To achieve these objectives, SIUC has established priorities and one of the priorities is, "to build public and private sector partnerships that address the state's needs and strengthens the university's leadership role in the region. ⁴"

SIUC has been accredited since 1913 under several institutional names. Master's degree programs were accredited in 1944 and in 1969 full accreditation at the doctoral level was attained. SIUC has had full accreditation since 1979 from the North Central Association. This accreditation is renewed every ten years, and the latest renewal came in 2010. Since 2005, SIUC (including SOM) has been classified as a "Research University: High Research Activity," by the Carnegie Foundation for the Advancement of Teaching. This is their second highest tier based on research productivity. Prior to 2005, SIUC was classified as a Category II research institution by the Carnegie Foundation. The Carnegie Foundation changed their classification categories in 2006.

SIUC owns 480 buildings (including School of Medicine in Springfield), leases 22 buildings in Springfield and manages one of the buildings owned by the Illinois Department of Natural Resources. SIUC and SOM have a total area of 8,475 acres with 8,456,424 building square feet.⁵

1 <http://www.siu.edu/bot/leg/policies.html#1A>

2 <http://www.siumed.edu/>; <http://www.siumed.edu/news/brieflook09.pdf>

3 Factbook 2009-10, p. 6.;

4 Factbook 2009-10, p. 6.

5 Factbook 2009-10, p. 21.

B. Programs, Degrees Awarded, Students and Financial Aid

Starting as a small two year teaching college in 1869, SIUC had 32 doctoral and professional (Law/Medicine) programs, 74 master's degree programs, 10 post-Baccalaureate certificates, 101 Bachelor of Arts/Sciences (most with minors and specializations) and 2 Associate degree programs during FY 2010. The first degree was awarded by SIUC in 1876 and since then 269,195 degrees have been awarded through FY10. During FY10, a total of 5,430 degrees were awarded: Professional Practice: 205 (Medicine: 71; Law: 134); Doctorate: 157; Master's: 950; Bachelors: 4,039; Associates: 66; and 13 Post-Baccalaureate certificates.

During Fall 2009, there were 20,350 total students enrolled: 15,511 undergraduates; 4,121 graduates (including Medical/Dental Education Preparatory Program students); 385 law students; and 293 in the School of Medicine. SIUC has a long tradition of embracing students who are first generation in their families to attend a university; and/or students from the academically underserved; and/or economically disadvantaged areas, and minority and disabled students. During Fall 2009, 24% of students were minority students; 45.5% were women, 54.5% men and 6% were international students. The average ACT of the freshman class in Fall 2009 was 21.6, above the state average of 20.8. During Fall 2009, 58% of new undergraduate transfers came from public community colleges in Illinois, 81% of the total students were from Illinois, and 25% came from out-of-state and/or from other countries. In the Fall of 2009 the percentage of new freshmen coming from outside the state increased to 8%, compared to 4% in Fall 2008. (The above statistics are from the Fact book 2009-10).

The SIUC Financial Aid Office provides a service to students by awarding financial aid to assist in paying for post-secondary education. In FY 10, \$282 million was awarded from federal, state, institutional and private sources in the form of grants, scholarships, loans and student employment. This represents an increase of 7.4% from the previous year. During FY10, 85% of students received some form of financial aid, with gift aid exceeding all other areas. The Financial Aid Office packaged 15,767 students through their office. For the last five years the student's financial aid is reported below.⁶

SIUC absorbs a loss of tuition and certain fees for many constituents to assist the region: the cost of entitlements for Illinois Veterans and Illinois National Guards when these are not fully funded by the State; teacher special education; Illinois General Assembly; Illinois Air Force ROTC; Illinois Army ROTC; Graduate Assistants; Faculty, Staff, Civil Service, and Civil Service Military Programs; children of SIUC employees; children of state university employees; NCAA Men and Women; Medical Preparation Waivers; and others. During FY10, these waivers were \$26.8 million and \$103.7 million for the past five years, as indicated in the table below.

C. Methodology and Channels of Economic Impact

C.1 Methodology

To estimate the contribution of SIUC to the regional and state economy we used the IMPLAN (Impact Analysis and Planning; Version 3) software and database developed by the Minnesota IMPLAN group. IMPLAN software is the most commonly used software to estimate economic impacts. The IMPLAN uses the Input-Output model developed by Nobel Laureate Professors in Economics, Wassily Leontief and Richard Stone. The IMPLAN software classifies the economy in 440 different sectors and the input-output model expresses relationships between these sectors.

Three kinds of effects are estimated by IMPLAN, i.e. Direct Effects, Indirect Effects, and Induced Effects. Direct effects are the initial changes in an industry when purchases are made by SIUC of goods and services for its operations. These include changes in production and employment in a specific industry. Indirect effects are the effects created in other industries by the purchases of goods and services in the directly affected industries. The directly and indirectly affected industries generate household income which further affect the local industries. These effects are called induced effects.

The direct, indirect and induced effects generate economic activities including output, employment, labor income and value added into the economy of the region. Labor income here consists of employee compensation and proprietary income. Employee Compensation includes wages, salaries and benefits. Benefits include retirement payments, health and life insurance and any other non-cash payments. Proprietary Income is the income received by self-employed individuals, e.g. private business owners, doctors, lawyers and so on. Indirect Business Taxes are the excise tax and sales tax paid by individuals to businesses.

C.2 Channels of Economic Contribution

SIUC contributes to the state economy annually, i.e. in the short-run, and also in the long-run. The annual contribution of SIUC to the Illinois and regional economies is through many channels, i.e. i) the impact of SIUC employee's spending, ii) the impact of student's spending, iii) the impact of university's purchases and operating expenses, iv) the impact of the capital/permanent improvement projects, i.e. construction of new structures and improvement of existing ones, v) the impact of research grants generated by SIUC, vi) the impact of visitors to the region due to SIUC. We call their impact as the short-term effect.

vii) The graduates of SIUC who work in Illinois contribute to the state economy for the next 40 years of their work life. This we call the long-term contributions of SIUC to the economy of Illinois.

⁶ Factbook 2010-11.

Table 1: Student Financial Aid – Five Year Comparison

	FY06	FY07	FY08	FY09	FY10
Federal	\$107,143,447	\$109,133,530	\$119,684,468	\$138,524,864	\$167,951,969
State	\$ 25,330,049	\$ 28,613,051	\$ 28,011,332	\$ 28,039,438	\$ 25,087,970
Institution	\$ 58,099,184	\$ 62,540,315	\$ 70,801,721	\$ 79,576,960	\$ 74,868,756
Other	\$ 12,503,871	\$ 15,221,383	\$ 17,195,209	\$ 16,540,300	\$ 14,094,918
Total	\$203,076,551	\$215,508,279	\$235,692,730	\$262,681,562	\$282,003,613

Table 2: Tuition Waivers

	FY06	FY07	FY08	FY09	FY10
Cost of Veterans Entitlements*	\$ 1,479,345	\$ 1,774,346	\$ 2,118,413	\$2,289,285	\$ 2,748,228
Other Tuition Waivers	\$ 13,524,880	\$ 15,678,920	18,429,886	21,617,722	24,064,182
Total	\$ 15,004,225	\$ 17,453,266	\$ 20,548,299	\$ 23,907,007	\$ 26,812,240

In addition to these, viii) the earnings and spending of SIUC alumni working in Illinois, and ix) the SIUC annuitants living in Illinois also contribute annually to the economy of Illinois.

Finally, the most important impact of SIUC which cannot be quantified is the effect on the community through social and voluntary services provided by SIUC and SOM employees and students, and the SIUC graduates overall being the responsible citizens.

i) Employees' Salary

During FY10, SIUC paid a total of \$516.1 million in salaries and fringe benefits to its 9,633 (including graduate assistants, residents and fellows) employees in Illinois.⁷ This includes the School of Medicine, the President's Office and university wide services employees. This also includes \$13.6 million in stipends paid to residents and fellows of the SOM.⁸ Salaries also include \$30.1 million paid by the SIU Healthcare as compensation to 280 SOM faculties for their clinical services. Employees are classified as the total full time and part time employees of SIUC, SOM (including residents and fellows), President's Office, and of the University wide services. Employees include faculty, civil

service, administrative professional, and 2082 graduate assistants. We have not included approximately 5,300 student workers, including housing resident assistants, undergraduate assistants and undergraduate research assistants. Their spending is captured in student spending. Total salaries and benefits for southern Illinois (23 counties) were \$333.1 million and for southern and central Illinois (32 counties) were \$485.1 million. The number of employees in southern and central Illinois and southern Illinois were 8834 and 6777 (including graduate assistants, residents and fellows) respectively.

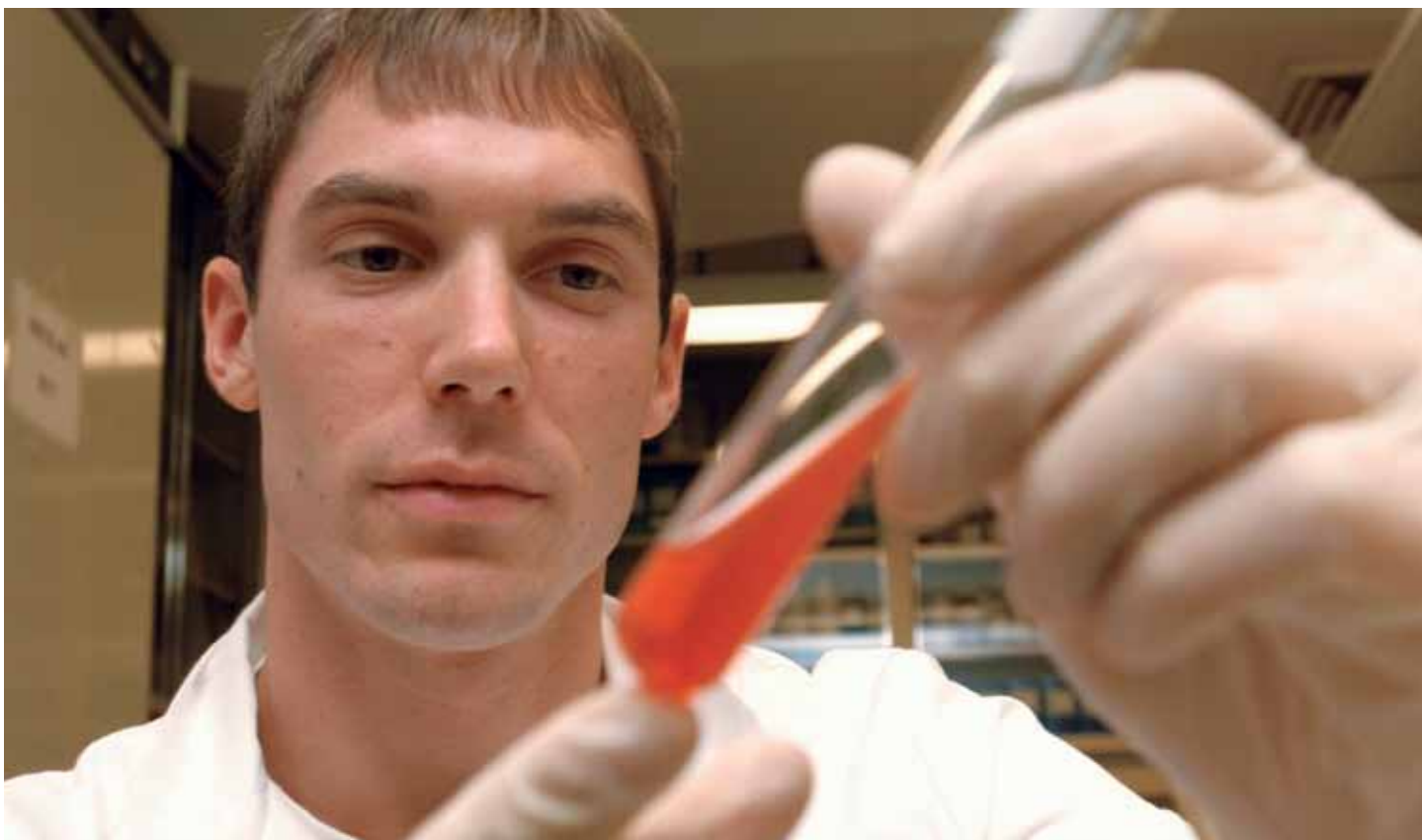
ii) Student Spending

The SIUC Office of Financial Aid estimates and provides an estimate of expenses to students for room and board, book and supplies and of living expenses, in addition to tuition and fees. These expenses are provided for a nine month basis and for summer school to the undergraduate, graduate and professional students. To obtain the student spending we multiplied the number of students by the average expenditure provided by the financial aid office. The total spending for the SIUC campus is \$213.7 million.⁹ With respect to student spending, we have not included graduate assistants, as these are treated as employees of SIUC.

⁷ Employee count was provided by Human Resources, SIUC.

⁸ These residents and fellows are paid by the hospitals they are affiliated with. We assume that they generate at least the amount of services to the hospital they work for. Without SOM these residents and fellows would not be there.

⁹ We are estimating how much SIUC is contributing to the economy of Illinois. We are not answering a hypothetical question, if SIUC did not exist, how much will be the loss to Illinois economy.



iii) - v) **Operating Expenses: Including Capital Expenditure/ Permanent Improvements and Research Grants**

During FY10, SIUC, including: SOM; the SIU President's Office; University Wide Services; the SIUC Foundation and the SIUC Alumni Association spent \$196.2 million for the operation of the university. The major categories of these expenses were contractual services, equipment, commodities, permanent improvements/capital expenditures, telecommunications, utilities, equipment maintenance/rental, ground maintenance, travel, mass transit service among others. Out of these expenditures, \$108.3 million were spent in southern Illinois, \$124.3 million in southern and central Illinois, \$140.3 million in the State of Illinois and a sizable amount, \$55.9 million was spent outside the state of Illinois.

vi) **Visitors' Spending**

During FY10, we estimated a total of \$7.6 million visitors spending in the southern Illinois region. Visitors included to all activities related to students and athletic events, i.e. family weekend, homecoming, commencements, open houses, moving out weekend, some of the activities of various colleges, and visitors to all athletic events in Carbondale. In estimating visitor's spending, we had meetings with a number of colleagues on campus and in the community. This is a very conservative estimate. We have not included visitors to SIUC employees in the region.

vii) **Work Life Earnings**

To estimate the long-term contribution of SIUC to the state of Illinois economy, we estimate the incremental work-life earnings of 2010 graduates.¹⁰ The common approach is to estimate the net present value (NPV) of the future 40 years of incremental work life earnings by using the work life earnings estimate provided by the US Census Bureau. We estimate the incremental work life earning as the additional earnings allowed by a college degree as compared to the earning of a typical high school degree. We observe that a doctoral degree will gain \$2.9 million more than a high school degree over a typical 40 years of work life. For professional, masters and bachelors the incremental gains are respectively \$4.3 million, \$1.95 million and \$1.2 million.¹¹

The NPV of the work life earnings of FY10 graduates of SIUC is a measure of the contribution to the Illinois and the national economy in the long-run. The work life incremental earnings of SIUC graduates of FY2010 are approximately \$8.14 billion and are given below.

10 The incremental work life earnings have been estimated by some other economic impact studies of the universities. eg. Resel, R.;Hewing, G.J.D.; Lubotsky, D. and Edwards, F.; The impact of the University of Illinois on the Economy of our State, The Institute of Government and Public Affairs, January 2009. Institute for Economic Development; Economic Impact Study: A Study of the Economic Impact of the university of Texas System, 2004.

11 The cost of college education is a very small amount compared to the incremental work life earnings and so we have not taken this into account.

Table 3: Work-Life increase in earnings of FY10 SIUC graduates

Degree	Graduates 2010 ^a	Work life earnings ^b	Incremental earnings per graduate ^c	Total work life incremental earnings
Doctoral degree	157	\$4,556,660	\$2,957,182	\$464,277,605
Professional degree	205	\$5,923,540	\$4,324,062	\$886,432,792
Masters degree	950	\$3,556,327	\$1,956,849	\$1,859,006,502
Bachelors degree	4,039	\$2,812,058	\$1,212,580	\$4,897,610,216
Some university degree or Associates' degree	79	\$1,977,788	\$378,311	\$29,886,553
Total	5,430		\$10,828,984	\$8,137,213,669

a Source: SIUC Fact book 2010-2011.

b Source: Authors' calculations following the methodology from "The big pay-off: Educational Attainment and Synthetic Estimates of Work-life Earnings", US Bureau of census (2002). The data come from the Current Population Survey 2010 Annual Social and Economic Supplement, US Bureau of Census. Work-life= 10* Average earnings (for workers between 25 and 34) + 10* Average earnings (for workers between 35 and 44) + 10 *Average earnings (for workers between 45 and 54) +10*Average earnings (for workers between 55 and 64). The calculation concerns only full time, year-round workers. All the average earnings were CPI adjusted to 2010 (1.5%) before the calculation.

c The work life earning of a typical high school degree in 2010 dollars (\$1,599,478) is used as reference for the calculation of the incremental earnings. i. e. the incremental earning for a given degree is the additional earnings above the earning of a typical high school degree.

viii) SIUC Alumni Earnings

SIUC had a total of 209,990 Alumni including School of Medicine, and among these at least 104,599 are working in Illinois, 37,302 in Southern Illinois (23 county region), 44,752 in Southern and Central Illinois (32 county region). Cook County has the largest concentration of Alumni, i.e. 17,988 followed by 11,436 in Jackson, 5,887 in Williamson, 5,770 in DuPage, 4,120 in St. Clair, 4003 in Sangamon, and 2,709 in Franklin counties. However, there are 1300 to 1500 alumni in Perry, Randolph, Saline and Union counties.¹² Among these, there are 214 SIUC graduates who are teaching in K-12 schools in Illinois. As of 2010 there are 82,861 Alumni with Baccalaureate degree, 8,121 with Master's degree, 1,082 with Doctoral degree, 836 Physicians (M.D.s), 1,791 with other professional degrees and 9,908 with some college or Associate degree working in Illinois.¹³

The US Bureau of Census provides the mean salary for each degree holders and for each age group. We used the mean salary of full-time, year round workers between ages 25 and 64 for 2009. This was adjusted for 2010 by using CPI. The average salary for MD is the weighted average of SIU MD alumni, based on Modern Healthcare 2010 Physician compensation survey.



¹² As per record of the Alumni office.

¹³ Data provided by the Alumni office.

Table 4: Earnings of SIUC Alumni in 2010: Working in State of Illinois

Degrees	Headcount	2010 Average salary (Dollars)	Total earnings (Dollars)
Bachelor's	82,861	68,839	5,704,068,379
Doctorate degree	1,082	116,871	126,454,595
Master's degree	8,121	89,903	730,099,096
Medical Doctor	836	278,294	232,653,546
Other professional degree	1,791	15,151	27,134,827
Some college or Associate's	9,908	49,450	489,948,470
Total	104,599		7,310,358,912

**Table 5: Earnings of SIUC alumni in 2010: Working in Central and Southern Illinois
(32 counties)**

Degrees	Headcount	2010 Average salary (Dollars)	Total earnings (Dollars)
Bachelor's	33,644	68,839	2,316,019,316
Doctorate degree	678	116,871	79,238,646
Master's degree	5,097	89,903	458,233,603
Medical Doctor*	384	278,294	106,864,787
Other professional degree	899	15,151	13,620,441
Some college or Associate's	4,050	49,450	200,271,629
Total	44,752		3,174,248,422

**Table 6: Earnings of SIUC alumni in 2010: Working in Southern Illinois
(23 counties)**

Degrees	Headcount	2010 Average salary (Dollars)	Total earnings (Dollars)
Bachelor's	2,8270	68,839	1,946,078,530
Doctorate degree	555	116,871	64,863,494
Master's degree	4,645	89,903	417,597,623
Medical Doctor*	85	278,294	23,654,966
Other professional degree	566	15,151	8,575,272
Some college or Associate's	3,181	49,450	157,299,766
Total	37,302		2,618,069,651

Thus, the total earnings of SIUC alumni working in Illinois during 2010 are estimated to be \$7.3 billion for the State, \$3.2 billion for the southern and central Illinois region and \$2.6 billion for the southern Illinois region.

viii) SIUC Annuitants

There are a total of 2,436 annuitants (retirees) living in Illinois, and among these 2,419 are in southern and central Illinois (32 county region) and 1,975 are in southern Illinois (23 county region). Almost half (1,239) live in Jackson County followed by 382 in Williamson, and 362 in Sangamon County. During FY10, the total annuity amount paid to the annuitants was \$71.9 million in Illinois, \$71.2 million in southern and central Illinois, and \$62.5 million in southern Illinois.

D. Economic Impact Estimates

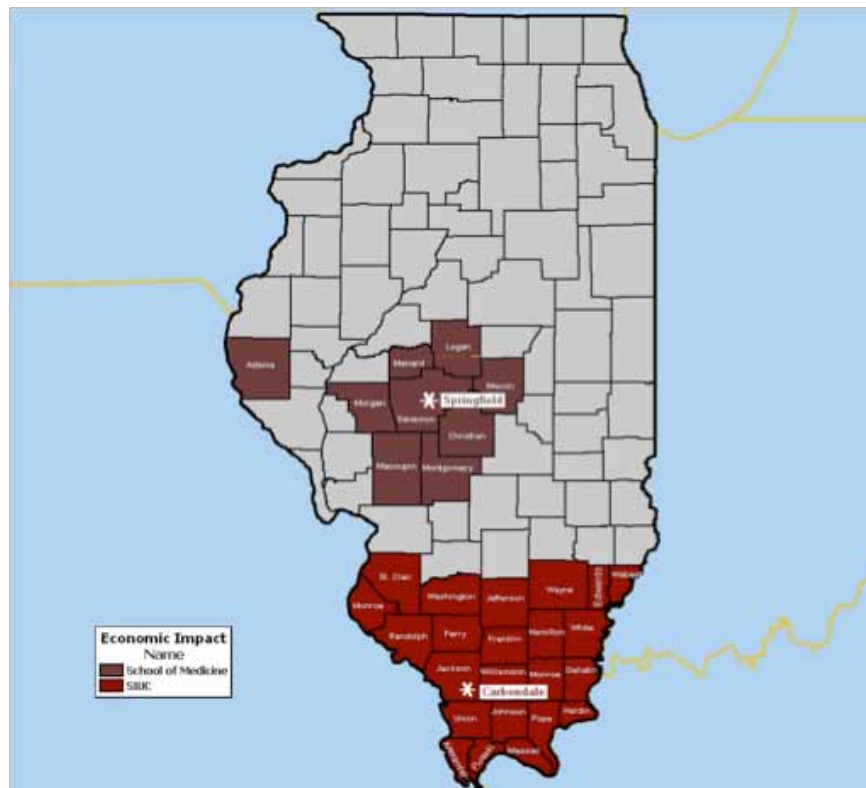
Among other reasons, one of the reasons people decide to go to college, is the expected higher earnings through their working life and ultimately a better standard of living for themselves and their families. We have many first generation college students at SIUC. Thus, a degree from college for such students will also affect many future generations to come, and their economic wellbeing. In addition to having higher paying jobs, a college degree also helps people become well informed about the world we live in, having a better work environment, better health, and help them make rational decisions in life and thus overall being responsible citizens.

A well educated work force in a region increases its economic growth, lowers unemployment and thus increases higher standard of living by attracting new businesses, entrepreneurs and also the growth in old businesses. Yearly appropriations by the State of Illinois to higher education not only contributes to the economy that year, but has long lasting effects on the economy of the State (i.e. in the long-run) and on the lives of college graduates. The graduates of each year contribute to the economic growth and the per capita income of the state for the next 40 years of their work life. Technically speaking an academic institution contributes to the regional economy in the short-run as well as in the long-run.

The contribution of SIUC to the economy of Illinois, to southern and central Illinois (23 counties in southern Illinois: Alexander, Edwards, Franklin, Gallatin, Hamilton, Hardin, Jackson, Jefferson, Johnson, Massac, Monroe, Perry, Pope, Pulaski, Randolph, St. Clair, Saline, Union, Wabash, Washington, Wayne, White, and Williamson; and 9 counties in central Illinois, i.e. Adams, Christian, Logan, Macon, Macoupin, Menard, Montgomery, Morgan, and Sangamon), and to southern Illinois (twenty three counties) is estimated for the Fiscal year 2010, i.e. from July 1, 2009 to June 30, 2010. The contribution of SOM to the economy of ten counties (9 counties of central Illinois cited above and Jackson County) is also estimated for the same time period.

Refer to the map below for a description of the impact study area.

Figure 1: Economic Impact Study Area



We have estimated the economic contribution of SIUC in the short-run as well as in the long-run. In the short-run, the first six channels of economic contribution listed in the previous section, i.e. employees' spending; students' spending; universities purchases; construction of new structures and improvement of existing ones; the research grants generated by SIUC; and the visitors to the region contribute to the economic activities. To estimate the long-run economic impact of SIUC, first we estimate the net present value of the incremental work life earnings of FY10 graduates. Next, we estimate the contribution of these earnings to the Illinois economy. Finally, the annual contribution of the SIUC alumni and annuitants to the Illinois economy is also estimated.

A critical question to be answered is: **is it worth for the State to annually appropriate millions of dollars to SIUC?** Here, we answer this by estimating for each \$1.00 of state appropriation, how many dollars' worth of economic activity is created by SIUC in the short-term and in long-term in the local regions and in the state; and how many dollars are contributed to the state and local taxes in lieu of these activities.

Here, we report the economic contribution of SIUC to the state output (total economic activity), to the direct and indirect jobs created in state, labor income (also called the personal income) generated, and how much state and local (direct and indirect) taxes are attributable to the activities of SIUC.



Annual economic contribution (short-term)

Table 7: Estimated Contribution of SIUC to the Economy

	Direct	Indirect and Induced	Total
State of Illinois			
Expenditure	827.81million	1,457.45 million	2,285.26 million
Employment	12,810	11,093	23,903
Labor Income	635.32 million	557.60 million	1,192.92 million
Southern and Central Illinois (32 counties)			
Expenditure	617.03 million	760.99 million	1,378.02 million
Employment	10,131	7,576	17,707
Labor Income	537.42 million	300.42 million	837.84 million
Southern Illinois (23 counties)			
Expenditure	439.09 million	419.97million	859.06 million
Employment	8,152	4,250	12,402
Labor Income	384.19 million	167.38 million	551.51 million

During FY10, SIUC contributed approximately \$2.3 billion of total economic activity in the state of Illinois; \$1.4 billion in the southern and central Illinois; and \$859.1 million in the southern Illinois region.

During the same time period, 23,903 jobs (directly and indirectly) were supported by SIUC in the state; 17,707 jobs in the southern and central Illinois region, and 12,402 jobs in the southern Illinois. In terms of personal income (a component of the output impact) SIUC added a total of \$1.2 billion in state; \$837.8 million in the southern and central Illinois region; and \$551.5million in the southern Illinois.

The SIUC being a state university does not pay state taxes on its purchases. However, SIUC employees, and corporations where SIUC employees, students and visitors spend their money do pay state tax, sales tax, and local taxes.

For FY10, the total state and local government revenues (direct and indirect) attributable to SIUC were \$121.6 million in Illinois, \$66.8 million in the southern and central Illinois, and \$43.1 million in the southern Illinois region.

The State of Illinois appropriation for SIUC was \$296.2 million (including SOM, President's Office and University Wide Services) during FY10. Thus, for every \$1.00 appropriated to SIUC by state, it generated \$7.72 worth of economic activities in Illinois, \$4.65 worth of economic activity in the southern and central Illinois, and \$2.90 worth of economic activity in the southern Illinois region.

Moreover, for every \$1.00 in state appropriations to SIUC, 41 cents (\$0.41) are returned to the state and local governments in direct and indirect tax revenues.

Long-term economic contributions

The graduates of FY10 would contribute to the economic growth and the per capita income of the state for the next 40 years of their work life. Based on past alumni information, 50% of our graduates settle in Illinois. Thus, the NPV of the 50% of our graduates of FY10 would be approximately \$4.07 billion,

compared to the \$296.2 million state appropriations for FY10. The ratio of the state's appropriation of \$296.2 million to the \$4.07 billion of incremental earnings is 1 to 14 (approximately).

These earnings will get circulated into the Illinois economy and will generate at least \$11.42 billion of economic activity in 2010 purchasing power, and will support (directly or indirectly) 56,860 additional jobs in the state. Thus, each \$1.00 appropriate by state results in \$38.60 of long term economic activity in Illinois by SIUC graduates.

In terms of state and local taxes, SIUC graduates of FY10 will pay at least \$458.8 million in taxes (in 2010 dollar value) in their work life. Comparing this to \$296.2 million state appropriation for FY10, there is a net gain of \$162.6 million to the state. For each \$1.00 appropriated by the state to SIUC in FY10, SIUC graduates will pay back \$1.55 in state and local taxes (direct and indirect) in the long-term.

Alumni and Annuitants Contributions

During 2010 SIUC alumni's earnings were \$7.3 billion in the entire state, \$3.17 billion in southern and central Illinois, and \$2.62 billion in southern Illinois. Moreover, the annuity payments to the annuitants were \$71.9 million in the State, \$71.2 million in southern and central Illinois, and \$62.5 million in southern Illinois. The estimated economic contributions of these earnings are reported below.

The annual contribution of SIUC alumni and annuitants is approximately \$17.4 billion to the Illinois economy; approximately \$3.98 billion to the southern and central Illinois economy and around \$3.36 billion to the southern Illinois region.¹⁵ In terms of jobs, both directly and indirectly SIUC alumni and annuitants supports 134,545 jobs in Illinois, 39,588 jobs in the 32 southern and central Illinois counties, and 34,076 in the 23 southern counties. The personal income generated annually by SIUC alumni and annuitants is approximately \$6.6 billion in Illinois, \$1.6 billion in southern and central Illinois, and \$1.33 billion in southern Illinois.

¹⁵ In the Southern and Central Illinois region some of the SIUC alumni are also SIUC employees. There is a very small overestimation of economic activities here. Authors realized this after estimation was completed.

Table 8: State and Local Taxes

	Direct household & Corporation	Indirect Business Tax	Employee compensation	Total
State of Illinois	\$39.74	\$78.49	\$3.41	\$121.64
Southern and Central Illinois (32 counties)	\$21.92	\$40.76	\$4.15	\$66.83
Southern Illinois (23 counties)	\$14.48	\$26.13	\$2.51	\$43.12
(in millions)				

Table 9: Estimated Contribution of SIUC Alumni and Annuitants to the Economy

	Direct	Indirect and Induced	Total
State of Illinois			
Expenditure	54.63million	17,369.59 million	17,424.22 million
Employment	425	134,120	134,545
Labor Income	18.47 million	6,627.88 million	6,646.35 million
Southern and Central Illinois (32 counties)			
Expenditure	40.34 million	3,937.32 million	3,977.66 million
Employment	396	39,192	39,588
Labor Income	13.95 million	1,579.52 million	1,593.48 million
Southern Illinois (23 counties)			
Expenditure	34.63 million	3,326.91 million	3,361.54 million
Employment	346	33,730	34,076
Labor Income	11.62 million	1,314.87 million	1,326.49 million

Table 10: SIUC Alumni and Annuitants contribution to State and Local Taxes

	Direct household & Corporation	Indirect Business Tax	Employee compensation	Total
State of Illinois	\$266.08	\$801.24	\$18.23	\$1,085.55
Southern and Central Illinois (32 counties)	\$53.63	\$192.45	\$7.51	\$253.59
Southern Illinois (23 counties)	\$46.39	\$169.29	\$5.75	\$221.42

The state and local revenues collected by state from the economic activities of the SIUC alumni and annuitants are approximately \$1.09 billion annually. However, in the southern and central Illinois and southern Illinois, these are approximately \$253.6 million and \$221.4 million.

E. Research Grants and Contracts

Evidence of SIUC's commitment to research can be seen in statistics for research and development (R&D) expenditures at the nation's universities, recently released by the National Science Foundation (NSF). According to these data, for total R&D expenditures, SIUC's rank among public institutions is 103 in FY09. Much of this research success comes in the areas of energy, biotechnology, and materials sciences. In biotechnology and

genomics, research in the College of Agricultural Sciences, College of Science, and School of Medicine has focused on improvements in soybeans and corn, transgenic plant and animal research, nutraceuticals, and bioinformatics. In materials, the College of Engineering, College of Science, and other academic and research units on campus have developed marketable innovations in coal by-products technology, friction materials, "smart" technologies, and waste product conversions, to name a few. With respect to energy, SIUC is the only university in the State of Illinois—and the leading university in the nation—engaged in a comprehensive program of research dedicated to "clean coal technologies:" commercially viable, technologically advanced, and environmentally clean, coal-based power systems, and energy systems of the future. In addition, in Fall 2010 Southern Illinois University launched a professional science masters program in energy and fuels that is one of the first of its kind in the country.

Since 2005, SIUC (including SOM) has been classified as a “Research University: High Research Activity,” by the Carnegie Foundation for the Advancement of Teaching. This is their second highest tier based on research productivity. SIUC is the only large, public, comprehensive research university in the southern half of Illinois. Grants and contracts awards for the Fiscal Year 2010 totaled a record \$79.9 million. Fifty seven percent of these were federal awards, and 24 percent were state awards, with the balance from foundation, industry or other sources. The National Institutes of Health (NIH) was the largest individual sponsor of these external grants and contracts with a total of \$14.4 million, followed by \$6.8 million from the National Science Foundation, \$6.6 million from non-NIH U.S. Department of Health and Human Services, \$6.2 million from the Illinois Department of Child and Family Services, \$5.8 million from the Illinois Department of Commerce and Economic Opportunity, \$4.7 million from the U.S. Department of Education, \$3.9 million from the Illinois State Board of

Education, \$2.6 million from the U.S. Department of Energy, and just under \$2 million from both the U.S. Department of Labor and Illinois Department of Public Health.

During FY10, there were 581 grant awards received by 367 individuals from 243 grant-awarding agencies at SIUC. Medicine was the largest grant funded area with a total of \$21.8 million across both the Carbondale and Springfield campuses, followed by Education and Human Services, which received \$19.0 million in grants. The College of Science received \$7.9 million. The Office of the Vice Chancellor for Research, and College of Engineering received grants in the amount of \$4.7 million and \$4.5 million, respectively. The Chancellor’s Office and Agricultural Sciences both received just over \$4 million while the President’s Office and Liberal Arts received approximately \$3 million each. Mass Communication and Media Arts received \$1.6 million and other areas, such as Applied Sciences, Business, the Illinois Clean Coal Institute and others received a total of \$5.9 million.

Figure 2: External grants and contracts received by SIUC in the last five years

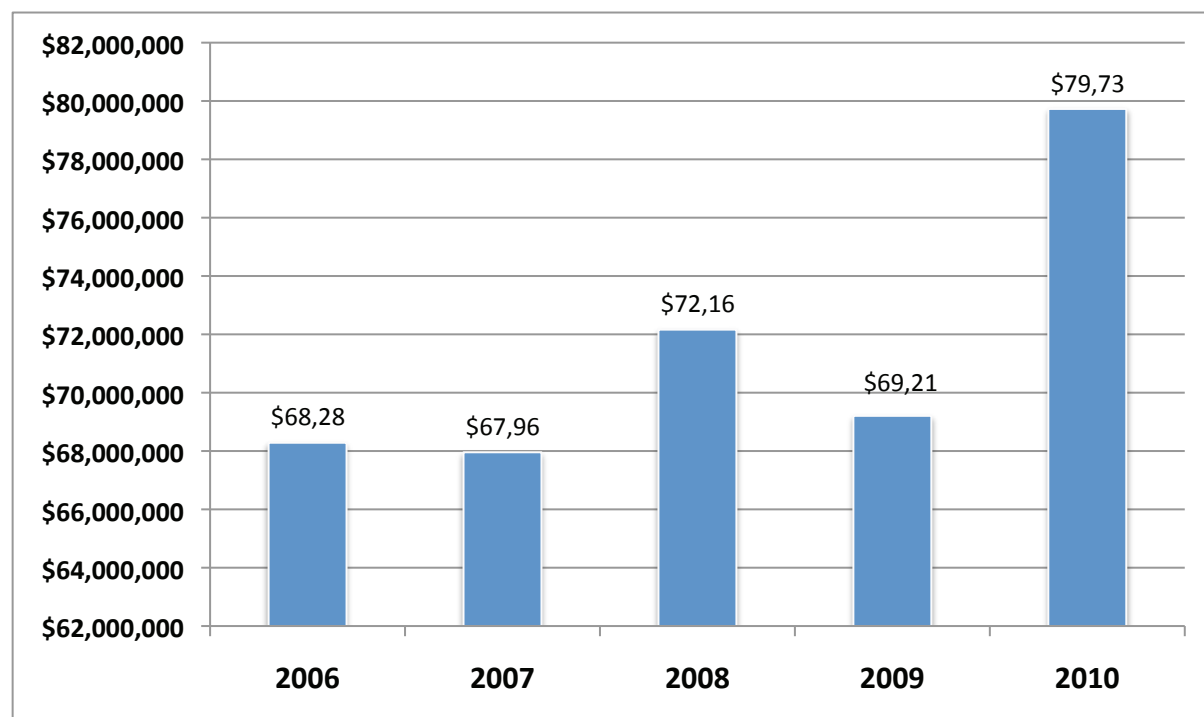


Table 11: Economic Activities of Five Years of Research Grants
(in 2010 Dollars)

Total Output (millions)	Jobs Created	Total Personal Income (millions)	Total Direct and Indirect Taxes ^(a) (millions)
Southern and central Illinois (32 counties)			
\$1,115.0	8,550	\$547.9	\$41.7

^(a)Direct and indirect taxes include taxes paid by households, corporations, indirect business taxes and employee compensations.



SIUC generated a total of \$357.5 million in research grants during last five years, i.e. FY06 through FY10, in nominal dollars. In terms of 2010 dollars, these research grants created an economic activity of \$1.12 billion in the southern and central Illinois, i.e. the 32 counties region. Moreover, these grant activities supported directly and indirectly 8550 jobs during last five years and \$548 million in personal income. Moreover, over five years these grant activities also generated \$41.7 million in direct and indirect state and local taxes.

F. Plant and Service Operations

Plant and Service Operations (PSO) is a division of the Vice Chancellor for Administration and Finance at SIUC, and its primary purpose is to provide operational services of various types to the faculty, staff and students. PSO coordinates all construction projects of the campus. Those projects can range from a few hundred dollars to the newly completed Saluki Way, at a cost approaching \$80 million for the new football stadium and remodeled arena.

The capital and permanent improvement expenditures for FY01 through FY10 are noted in the table below. The capital expenditure appropriated by State from FY 01 to FY10 was \$77.9

million in current dollars. However, the capital expenditure appropriated by State from FY91 till FY 2000 was \$102.1 million in current dollars.

From FY 1991 to 2000 there were numerous capital projects on campus. Projects included completion of the University Power Plant, Life Sciences III building, College of Engineering "E" Building and the Dunn-Richmond Economic Development Center. Major renovations completed during this time period included Wheeler Hall and the Glove Factory. From the time period 2001 to 2010, notable capital projects included completion of Saluki Way, Health Services Building, the Library Annex, student housing on Grand & Wall, and Phase II infrastructure at One Enterprise Place. Renovation projects included Altgeld Hall, Anthony Hall, Morris Library and Lawson Hall.

Capital and permanent improvement projects at the Carbondale and Springfield campuses have significantly contributed to the economic activity in the region. In the past 10 years, the Carbondale campus has had \$263.3 million in capital improvements while the Springfield campus has had over \$86.1 million in improvements. The capital projects overlap in couple of fiscal years, and sometimes even more. Thus, to capture the economic impact of the capital spending and permanent improvements we have taken a ten year span, i.e. FY2001 to FY2010.

Table 12: Capital Expenditures and Permanent Improvements

Year	SIUC Capital Expenditure*	SIUC Permanent Improvement	SOM-Permanent Improvement-Springfield
2001	\$ 5,882,507	\$ 5,049,517	\$ 1,294,500
2002	\$ 7,624,370	\$ 10,696,948	\$ 9,770,500
2003	\$ 8,698,044	\$ 8,472,449	\$25,005,000
2004	\$ 9,214,404	\$ 8,990,147	\$12,299,500
2005	\$ 3,501,240	\$ 27,467,433	\$ 4,086,500
2006	\$ 5,688,842	\$ 23,276,208	\$ 9,064,595
2007	\$19,129,180	\$ 23,531,756	\$16,203,730
2008	\$11,110,861	\$ 14,449,022	\$ 5,245,021
2009	\$ 5,141,982	\$ 13,804,993	\$ 1,339,000
2010	\$ 1,881,458	\$ 49,707,735	\$ 1,773,185
Total	\$77,872,288	\$185,446,208	\$86,081,531

*These projects were developed by the Capital Development Board.

Table 13: Economic Activities of ten years of Capital and Permanent Improvement expenditures
(in 2010 Dollars)

Total Output (in millions)	Jobs Created	Total Personal Income (millions)	Total Direct and Indirect Taxes ^(a) (millions)
Southern Illinois (23 counties)			
\$548.5	5,100	\$230.3	\$20.5
Southern and central Illinois (32 counties)			
\$734.3	6,710	\$311.2	\$26.6

^(a)Direct and indirect taxes include taxes paid by households, corporations, indirect business taxes and employee compensations.

During the last ten years, these capital and permanent improvement projects in Carbondale generated a total of \$548.5 million economic activities (in 2010 dollars) in the southern Illinois (23 counties) region, supported 5100 jobs directly and indirectly (including induced), and contributed a total of \$230.3 million in personal income. However, including the SOM capital and permanent improvement projects, a total of \$734.3 million worth of economic activities were created in southern and central Illinois during last ten years. These activities supported 6,710 jobs and generated \$311.2 million in personal income over a ten year period. In addition, a total of \$26.6 million in state and local (direct and indirect) taxes was collected by state as a result of these activities.

G. Southern Illinois University School of Medicine

G.1 Introduction

The Southern Illinois University School of Medicine (SOM) celebrated its 40th anniversary in 2010. The mission of the SOM is “to assist the people of central and southern Illinois in meeting their health care needs through education, patient care, research, and service to the community.” The SOM has main educational and research facilities in Springfield and Carbondale; a main clinical campus in Springfield; regional patient care and resident

training sites in Springfield, Carbondale, Decatur, and Quincy; and patient care and educational outreach sites throughout central and southern Illinois. The School has affiliations with teaching hospitals in Springfield, Carbondale, Decatur, and Quincy.

SIU School of Medicine compares favorably with other medical schools regarding the percentage of its graduates practicing in the medical school's home state (Illinois for SOM) and in rural and underserved areas. The School ranked at the 70th percentile of all medical schools in the percentage of graduates practicing in the state in which they attended medical school. The SOM ranked above the 80th percentile nationally for graduates practicing in primary care and above the 90th percentile in graduates practicing in rural areas. A recent study in the *Annals of Internal Medicine* ranked SIU's medical school among the top 15 medical schools in the country for their "social mission", recognizing the School's success in graduating physicians practicing in primary care, serving in medically underserved areas, and training physicians from minority backgrounds. These results are consistent with the School's mission.

G.2 Programs and Students

SIU School of Medicine is focused on the health-related needs of the region's citizens. The SOM is fully accredited as a medical education institution. SOM is accredited by the Liaison Committee on Medical Education (undergraduate medical education leading to the M.D. degree); by the Accreditation Council for Graduate Medical Education (clinical residencies/fellowships); and by the Accreditation Council for Continuing Medical Education (CME programs). Graduate science programs in pharmacology, physiology, molecular biology, microbiology, and biochemistry are offered at the master's and doctoral levels. Post-baccalaureate medical science is also provided through SOM's Medical/Dental Education Preparatory Program (MEDPREP).

During FY10, the SOM educated 292 medical students and trained 277 clinical residents and fellows. The SOM has a diverse medical student body, one reflecting the region's population. During 2006-2010, the SOM's graduating classes had 22.8% of their graduates in minority classifications (9.4% African Americans, 3.1% Hispanic, and 10.3% all other); and 51.9% were female students. In FY10, 82% of medical students came from downstate Illinois and 36% were from rural counties, representing 60 of the 102 total counties in Illinois. In general, medical students come from rural areas, small towns and over half of them come from communities of 25,000 or less. The SOM's preparatory program for disadvantaged and minority students seeking admission to health professional schools, MEDPREP, enrolled 64 students in this year, 98% of whom were minority students and 68% were women. Every year 90% or more students receive financial aid.

In FY10, SOM also educated graduate level students in various biological science disciplines. This included 60 Ph.D. and 23 M.S. students in the Molecular Biology, Microbiology

and Biochemistry (MBMB) program; and 4 Ph.D. and 15 M.S. students in the Physiology program. MBMB and Physiology programs are collaborative programs with the College of Science at SIUC. SOM also taught 15 Ph.D.'s students in its Pharmacology program during this year.

In the medical school's first forty years (1970 – 2010), SOM graduated 2,336 medical students, completed training for 1,964 clinical residents/fellows, and graduated 439 graduate science students.

G.3 Patient Care and Outreach

The SOM physician practice organization is called "SIU HealthCare." SIU HealthCare is one of the largest multi-specialty physician group practices in central and southern Illinois. The SOM academic and patient care programs enhance Illinois' economy through direct impact on the citizens of Illinois. In FY10, the SOM physicians served 120,000 patients in 367,000 patient visits to their clinics. When both inpatient and outpatient services are considered, the SOM physicians provided service in 521,000 patient visits. The SOM provides services in almost all the specialties needed by patients. The SOM physicians also provided patient care and regional outreach programs in 52 Illinois communities through their 123 separate clinics/outreach sites. Besides these activities, the Telehealth network outreach hosted 19 educational programs at 105 sites in 79 Illinois communities, and 8 clinical programs at 69 sites in 55 Illinois communities. Thus, the SIU Health care activities affect the State's economy in many counties.

G.4 Research

The SOM's research covers a wide range of basic, clinical, and translational research. Medical school faculty study diseases and health-related issues present in central and southern Illinois. The clinical research brings clinical trials of new drugs to the region which helps the community and the economic development in the region. In FY10, 255 research projects were active with work occurring in over 100 laboratories. External funding had grown to \$31.7 million in active research funding, with much of it coming from federal agencies such as the National Institutes of Health. Also in this year, the SOM Office of Technology Transfer (OTT) issued 1 new patent, executed 3 licenses/options and processed 9 new patent applications and 15 invention disclosures. A total of 28 intellectual property items were processed.

G.5 Economic Impact of SOM

For the SOM, the salaries and benefits in the ten county region were \$157.5 million, which includes the \$13.6 million stipend to residents and fellows and the \$ 30.0 million compensation paid by SIU Health Care to 280 employees for their clinical services. The SOM employs around 2088 (including residents, fellows and graduate assistants) employees. The student spending for the SOM is estimated to be \$5.4 million. Here again



we have used the average living expenses estimate provided by the Financial Aid Office and multiplied by the number of students in Springfield. The total operating expenses including contractual services, equipment, commodities, and telecommunication were \$15.8 million. The visitors spending for the SOM is small and is estimated to be \$106,262.

The total work life incremental earnings of FY10 SOM graduates are estimated to be \$1.3 billion. There are 864 SOM alumni working in Illinois in different specialties. However, out of these, 299 are working in the ten county regions with their FY10 earnings to be \$81.9 million.

The contribution of the SOM to the economy of ten county regions is estimated for Fiscal year 2010 by using IMPLAN. These counties are: Adams, Christian, Jackson, Logan, Macon, Macoupin, Menard, Montgomery, Morgan, and Sangamon. The annual economic impact is through six channels, i.e. employee's spending, student's spending, universities purchases, construction of new structures and improvement of existing ones, the research grants generated by SOM and the visitors to Springfield region due to SOM.

During FY10, SOM contributed approximately \$331.8 million in total economic activities (i.e. output) in the ten county region. These activities supported a total of 3801 jobs (direct, indirect and induced) and generated a total of \$227.0 million in personal income in the region. The SOM activities also generated \$14.5 million in direct and indirect (households, corporations, indirect business tax and employee compensation) taxes to the state of Illinois.

We also estimated the five year contribution of SOM research grants to the economy of the ten county regions. The total economic activities created by these grants were worth \$208.7 million (in 2010 dollars), supported 1842 jobs and generated \$90.5 million in personal income. Over the five year span these grants also generated \$7.07 million in direct and indirect state and local tax revenues to the State of Illinois.

The SOM had \$86.1 million worth of permanent improvements in the Springfield area from FY01 until FY10. During the ten year period, these activities generated \$189.4 million (in 2010 dollars) worth of output in the ten county region, supported 1702 jobs and created \$80.2 million in personal income. In addition, these, permanent improvement activities also generated \$6.6 million in direct and indirect taxes to the State of Illinois.

H. Community Service of SIUC

While the monetary impacts of SIUC on the region and the state are summarized in employee salaries, purchases, research, capital spending, and student spending, there are number of contributions by SIUC that do not appear in the economic impact model. Those impacts are reflected via outreach and service to the region.

In the spring 2007, the Illinois Board of Higher Education developed a "Public Agenda," as directed by the General Assembly. One of the four goals adopted is to "Better integrate Illinois' educational, research, and innovation assets to meet the



economic needs of the state and its regions.”¹⁶ To implement the “Public Agenda,” the Board of Trustees (BOT) of SIU has set seven goals for the SIU system. One of their goals is to “build strong economic and educational outreach that will effectively serve the needs of the Southern and Central Illinois area.”¹⁷ Both goals articulate the necessity to meet the needs of Illinoisans beyond classrooms and laboratories. As stated in the last paragraph of the SIUC mission statement:

*Even as the university constantly strives to perpetuate high quality in both instruction and research, it continues a long tradition of service to its community and region. Its unusual strengths in the creative and performing arts provide wide-ranging educational, entertainment, and cultural opportunities for its students, faculty, staff, and the public at large. Its programs of public service and its involvement in the civic and social development of the region are manifestations of a general commitment to enhance the quality of life through the exercise of academic skills and application of problem-solving techniques. SIUC seeks to help solve social, economic, educational, scientific, and technological problems, and thereby to improve the well-being of those whose lives come into contact with it.*¹⁸

¹⁶ SIUC Self-Study, in preparation for accreditation with the Higher Learning commission of the North Central Association of Colleges and Schools, January 2010, page: 63.

¹⁷ SIUC Self Study, p: 64.

¹⁸ <http://www.siu.edu/~policies/policies/misscarb.html>

SIUC’s social services can be broadly categorized as: Economic Development, Health and Social Services, Cultural and Volunteerism. SIUC is the largest employer in the Southern Illinois region and is the economic engine in the region.

H.1 Economic Development

Universities stimulate economic development in their respective regions through learning and research discoveries, and as an outreach mechanism for service. Southern Illinois University Carbondale has supported economic development for the past twenty-five years through its Office of Economic and Regional Development (OERD). OERD’s mission is to enhance growth and build prosperity in the region through entrepreneurship, innovation, and community engagement. Its impact is measured through several key indicators including business start-ups and expansions; jobs created and retained; and community engagement.

During this past year, OERD assisted 51 businesses start and expand their operations, with over \$6.3 million in financing secured. A total of 502 jobs were created or retained in southern Illinois as a result of this growth. An in-depth entrepreneurship program offered participants access to seed capital for their business ideas. Community engagement has included: leading a rural medical transportation project in the southern 34 counties of Illinois to facilitate access for those in need of medical and healthcare services; implementing a school-based physical activity/nutrition program; and becoming one of 26 rural sites nationally

Table 14: Intellectual Property

Year	Inventions Disclosed	Royalties	Licenses/Options Issued	Patents Filed	Patents Issued
2006	20	\$354,045	4	13	2
2007	21	\$524,584	5	18	4
2008	35	\$776,102	10	14	3
2009	23	\$538,004	7	14	3
2010	29	\$569,105	6	15	2

to participate in the National Children's Study. The Connect SI regional broadband initiative has introduced high-speed Internet to underserved areas in southern Illinois and has created an economic development model through the use of broadband.

Increasing technology jobs and advancing research and innovation in southern Illinois is part of OERD's mission and is being realized through development of the Southern Illinois Research Park and continued business development interface with the SIUC Technology Transfer Office and University Research Centers. OERD also coordinates market research and strategic planning activities linking regional businesses with academic resources. A total of \$12 million has been invested to date in the Southern Illinois Research Park and includes 21 tenants housed within the two mixed-use facilities.

H.2 Intellectual Property

The university has been actively involved in technology transfer efforts for more than 15 years. The Technology Transfer Program is increasingly active in delivering results that benefit the university, industry and economic development. Over the past decade, SIU Carbondale and School of Medicine have disclosed 217 inventions and filed 113 patent applications with a resulting 39 issued patents. Patents are transferred into industry in the form of licenses and start-up companies. Also over the past decade, the university has issued 54 licenses/options and received more than \$3.8 million in royalties. At least 8 startups have resulted directly from university technologies.

H.3 Health and Social Services

Outreach relevant to health and social services are provided by a number of entities on campus. The School of Medicine, Center for Rural Health and Social Service Development, School of Applied Health, School of Social Work are units who provide this service.

The School of Medicine provides specialty and primary care at 100 outreach sites in nearly 50 communities. During FY 10, the SOM physicians saw patients in Springfield, Carbondale, Decatur and Quincy. The Family Residency Program of the SOM based

in Carbondale also has a mobile health clinic, "SIU Care-a-Van", which visits on a routine schedule to Benton High school, West Frankfort High school, and ECHO-which is an alternative school between West Frankfort and Johnston city. The Dental Hygiene program within the College of Applied Sciences & Arts has the SIUC Community Dental Center in Carbondale.

As stated in its central mission, the School of Social Work's organizing principle is the "enhancement of quality of life for individuals, families, organizations and communities, especially for poor and oppressed populations, through the promotion of social and economic justice and human rights." Within this school there exists the Integrated Assessment Program and Child Welfare Programs reach out to the region and provide needed services related to youth.

H.4 Cultural and other activities

Virtually every college on campus provides some type of cultural activity valued by stakeholders. The School of Music attracted over 1,000 people to performance and workshops this past year. McLeod Summer Playhouse has an audience base of nearly 7,000 people. The university museum attracted over 3,000 visitors in events ranging from workshops, art exhibits, summer programs, and education festivals. Events coordinated by the Center for Archeological Investigations, Geography & Environmental Resources, Political Science, Philosophy, History, and Speech Communications brought scores of visitors to the region this past year.

The annual Big Muddy Film Festival is an international event attracting 150-300 entries per year. Competition screenings, documentary screenings, and guest presentations of independent, non-traditional films are included with this event. Events in the College of Science included Darwin Day, Computer Science Day, Regional Science Fair and Illinois Junior Science and Humanities Symposium. Lecture series are provided within most of the colleges on campus. The College of Engineering also hosts an annual engineering day on campus for regional high school students and engineering summer camp for middle school students.

H.5 Volunteerism

Faculty, staff and students have a commitment to the region and provide significant community service. From July 1, 2009 through June 30, 2010, more than 3,600 students contributed 50,965 hours of service to the region to assist about 60 non-profit organizations in the region. As stated in the FY 2010 Performance report, more than 611 full-time equivalent employees provided public service to individuals and organizations outside the University in FY 2010.

H.6 Dental Hygiene Program

The Dental Hygiene program is located at SIUC in the College of Applied Science and Arts. The program offers a variety of services to community members in addition to students, faculty and staff of SIUC. In collaboration with Southern Illinois Dental Society and Southern Illinois Dental Hygiene Society, this program sponsors annually, "Give Kids a Smile Day," and offers free dental care. They target children ages 2 to 18 without dental insurance and provide x-rays, cleanings, fluoride treatments, sealants, fillings and simple extractions among other things.

H.7 Coal Research Center (CRC) External Service Activities

CRC is an active participant with regional and state coal development beyond its service functions as a campus research facilitator. Activities in this area include assistance in clean coal technology demonstration and commercialization, mining productivity service, and public information and policy. CRC is frequently called on to assist government agencies in developing programs, attracting projects and evaluating proposals. These activities frequently involve some level of collaboration with university faculty. Activities range from informational meetings of interested organizations to assistance in the review of proposals. The center has also worked with the Illinois Finance Authority and local economic development organizations. CRC also provides staff support to the Illinois Clean Coal Review Board. CRC operates the Illinois Coal Development Park in Williamson County. This facility provides unique research and pilot testing space for projects of regional interest including coal cleaning, dust control and mine safety and coal and biomass gasification.

H.8 The Center for Advanced Friction Studies

The Center for Advanced Friction Studies in the college of engineering assists the community by performing research for US and abroad companies in a value exceeding \$300,000. They collaborated with : Red Bull (UK-Oxford/Enston), Brembo (Italy, Bergamo), Meggit (UK, Coventry+ ABSC-US, purchased recently, Dayton OH), Honeywell (US, South Band, IN), Magna Power (US, Detroit, MI), ITT (Italy, Palermo), Spartan (US-Sparta, Illinois!), US Synthetic (US, Orem-Salt Lake City, UT), Halliburton (US, Huston TX), Hoganas (US, Detroit), Zeon Chemicals (US, Louisville, KY), ZF Sachs (Brazil, Sao Paulo),

Affinia (US, Winchester, KY), Dexter (US, Detroit, MI), Tribco (US, Cleveland, OH), Link Engineering (US, Detroit, MI), Boeing (US, St. Louis, MO), Airstair (US, Irvine, CA), Tech 3M (US, San Diego, CA), BASF (Germany, Leverkusen).

I. Community Service of SOM

The medical school's mission advocates service to the community. The SOM has numerous community service programs, projects, and initiatives. These include: The SOM continuing medical education provides ongoing professional development to the region's practicing physicians and other health care professionals. The School provided continuing medical education to over 4,700 physicians and other health care professionals in over 1,000 sessions of regularly scheduled series and symposia.

Patient care services and clinical outreach site programs provided by the medical school offer primary and specialty physician services to meet needs not otherwise met in the area. These activities complement health care provided by affiliated hospitals and community physicians. Research programs, such as that in cancer research, focus on diseases and health conditions prominent in the region, improving both the quality of patient care provided in the medical school's clinics and through its regional affiliates/networks and the quality of the training for new and practicing physicians. Clinical research also attracts clinical trials of new drug and medical device therapies to patients in the region. The School's research activities enhance economic development in the region, though programs such as its technology transfer initiatives and work with the Mid-Illinois Medical District. The medical school's community service programs are designed to directly enhance the health of the region's citizens through programs such as health screenings and health fairs, and to lead and participate in community initiatives such as adopt-a-school partnerships with the Springfield public school system.

Simmons Cancer Institute at SIU: The Simmons Cancer Institute (SCI) at SIU was established in FY2001 as a patient care, research, education, and outreach program to improve cancer care in central and southern Illinois. SCI is a comprehensive center providing state-of-the-art facilities for cancer-related treatments. Community educational programs are also regularly held at this institute to educate the community in the region.

The Center for Alzheimer Disease and Related Disorders (CADRD): Established in 1987 by the State of Illinois, CADRD provides clinical care to patients with Alzheimer's disease, Parkinson's disease, and/or other neurological disorders; educational programs for medical professionals and lay care givers; and research into these diseases. Through its outreach networks, CADRD offers expertise and assistance to physicians and other health care providers providing patient care to Alzheimer's patients in those locations.

