

STATE UNIVERSITY OF NEW YORK
UPSTATE
MEDICAL UNIVERSITY



**THE ECONOMIC AND
COMMUNITY IMPACT**
OF THE STATE UNIVERSITY OF NEW YORK
UPSTATE MEDICAL UNIVERSITY

2019

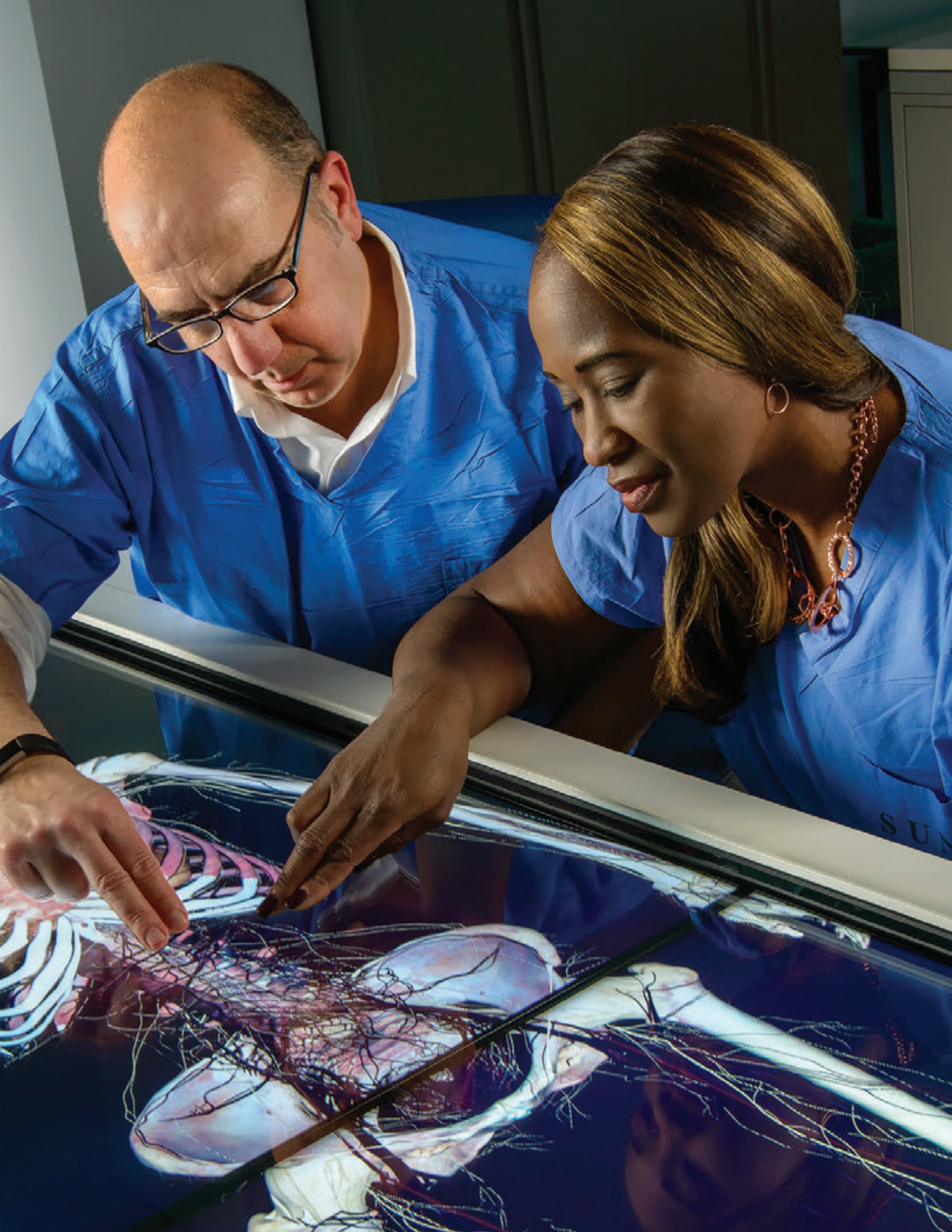


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The State University of New York Upstate Economic Impact Study – Executive Summary

The State University of New York (SUNY) Upstate Medical University is a public, integrated healthcare delivery and education system that includes hospitals and numerous satellite clinical locations in Upstate New York and serves a population of approximately 1.8 million people.

The entities included in this study are¹:

- Upstate Medical University’s educational mission, which is anchored by its four colleges—**Medicine, Nursing, Health Professions, and Graduate Studies** (biomedical sciences). Since 2006, student enrollment has grown by 30 percent as Upstate responds to the needs of the region.
- **The biomedical research enterprise.** Upstate focuses on the most prevalent human diseases, including cancer, diabetes, heart disease, nervous system disorders, vision, and infectious diseases. The quest for treatments and cures is built upon expertise in structural, molecular, and systems biology. Upstate also offers many clinical trials for patients.
- The health system, based in Syracuse, serves a large population, often the most seriously ill and injured, and includes **Upstate University Hospital, Upstate University Hospital at Community Campus, Upstate Golisano Children’s Hospital, the Upstate Cancer Center, Upstate’s Clinical Practice Plan consisting of clinical faculty from the College of Medicine, and numerous satellite sites.** These clinical settings are the primary teaching sites for Upstate Medical University. Stretching north to Canada and south to Pennsylvania, Upstate’s sphere of influence can be felt across a wide swath of New York. Education programs in various locations across the state help train medical professionals in their home communities. Clinical care, too, is spread far and wide, with physicians using telemedicine to help cover medical specialist shortages in rural communities.
- **The Upstate Foundation,** the primary vehicle for receiving and distributing philanthropic gifts to Upstate. The Foundation manages approximately 1,000 funds and endowments totaling close to \$200 million in total assets. Importantly, each of the Colleges (Medicine, Nursing, Health Professions) have separate alumni related entities which generously support the needs of students and alumni in their respective Colleges. Collectively, these four entities generate \$20 million annually in support of programs and services, many of which would not exist in the absence of these efforts.

This report quantifies the impacts of SUNY Upstate on the State of New York as well as Onondaga County for fiscal year 2018.



SUNY Upstate
Directly and Indirectly
Generates

**\$2.5
BILLION**

Per Year for
the State of New York



SUNY Upstate
Creates and Supports
More Than

**18,321
JOBS**

Per Year for
the State of New York



SUNY
Upstate
Generates

**\$160.4
MILLION**

Per Year In Tax Revenue for
the State of New York

¹ Throughout this report all references to SUNY Upstate will encompass each of the entities listed below.

Economic Impact

In fiscal year 2018, SUNY Upstate contributed more than \$2.5 billion in economic impact for the State of New York. Economic impact is generated when entities from the network spend funds on capital improvements and provide salaries to employees, who in turn spend their income on housing and services in their communities. Further economic impact to the communities is generated by students, patients, and visitors of SUNY Upstate. This demonstrates a 10-year increase in impact from fiscal year 2008 of nearly 50% in the State of New York.

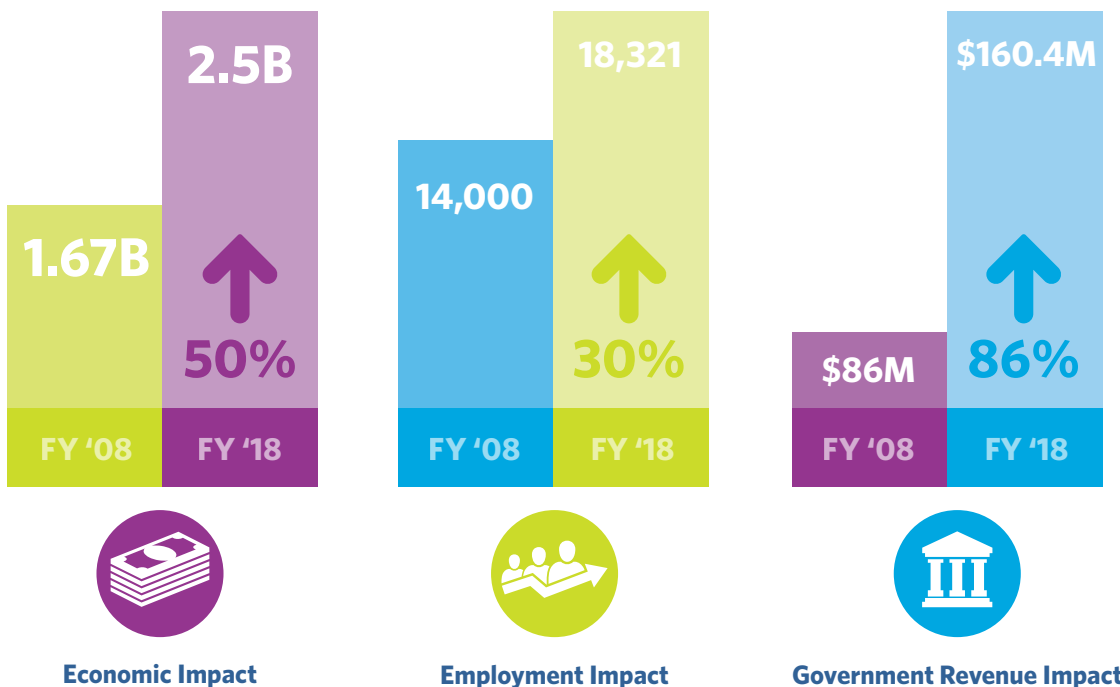
Employment Impact

SUNY Upstate is more than just a community asset delivering high-quality and low-cost care and educating healthcare professionals locally; it also employs thousands of individuals in high-level jobs across the region. SUNY Upstate supports more than 10,959 direct jobs across the multiple locations in New York. In fiscal year 2018, the combined direct and indirect employment impact of SUNY Upstate felt by the State of New York was a total of **18,321 jobs**. Since fiscal year 2008 this is an increase in jobs by more than 30%.

State and Local Government Revenue Impact

It is a common misperception that nonprofit healthcare providers and higher education institutions do not generate tax income for the regions or states in which they reside. In fact, hospitals and universities are drivers of spending in the state, and SUNY Upstate is no exception. In fiscal year 2018, SUNY Upstate generated more than **\$160.4 million** in state and local tax revenue impacts by means of spending in the region. This shows that since fiscal year 2008 the government tax revenue impact for the State of New York has increased by more than 86%.

Increase In Impacts from 2007-2008 to 2017-2018



Community Impact

Public and nonprofit hospitals and higher education institutions provide numerous other supports and services to the communities they serve. Community benefits provided through SUNY Upstate include:

- Direct financial assistance to patients (free or reduced cost of care)
- Subsidized programs (including the unreimbursed costs of educating health professionals), subsidizing needed services (such as mental health), and covering the unreimbursed costs of care for government programs, such as Medicaid, that typically do not cover their costs
- Community programs (for example, health screenings and free clinics, in-kind donations to other nonprofits, and community health improvement staff)

- Direct grants to other community organizations (for example, support for healthcare organizations offering complementary services, such as Federally Qualified Health Centers and designated mental health agencies)

In addition, employees of SUNY Upstate engage with the community on their own time and in their own personal ways, including through volunteering both time and money to local causes. Across SUNY Upstate, we estimate the value of that time and money as an additional \$25 million in impacts to the community in fiscal year 2018.



Upstate Medical University, Weiskotten Hall

Economic Impact Study Background

SUNY Upstate retained Tripp Umbach to quantify the economic, employment, government revenue, and community impacts of the university. To produce its report, Tripp Umbach gathered and analyzed relevant data related to the operations and activities of the network's members. That included quantitative data such as spending and employment values, as well as qualitative data gathered through interviews with key local stakeholders. The analysis sought to quantify the impacts of each of SUNY Upstate in the State of New York as well as on Onondaga County. The overall economic and fiscal impact that SUNY Upstate has on the vitality of the regions and states in which it operates includes the following elements:

- Business volume impacts (capital expenditures, operational expenditures, salary data, and state and regional business volumes)
- Direct and indirect/induced employment impacts

- The government revenue impact of SUNY Upstate at the local and state levels
- The impact of spending by employees and residents/students in the local economy on goods and services
- The impact of visitor spending on the economy (wage premiums, job creation, etc.)

This report also quantifies additional community impacts on the region served by the network, including:

- The value of the community benefits provided directly by SUNY Upstate members to the region (charity care, health screening, free clinics, etc.)
- The impact that health network employees have on the community through donations and volunteer work



Methodology Employed in the Economic Impact Study



Tripp Umbach's operational economic impact analysis measures the direct, indirect, and induced business volume and government revenue impacts of SUNY Upstate operations throughout the State of New York and Onondaga County for FY18. SUNY Upstate provided Tripp Umbach with the following primary data used to conduct the analysis: capital expenditures, operational expenditures, number of employees, payroll and benefits, and taxes paid to local and state governments.

Tripp Umbach analyzed the economic impact of the university using the IMPLAN input-output model.² Economic impact begins when an organization spends money. Studies measuring economic impact capture the direct economic impact of an organization's spending, plus additional indirect and induced spending in the economy as a result of direct spending. Visitor and student spending in the region are also a substantial component of the economic impact of an organization. Visitors and students spend money for retail purchases, lodging, restaurants, and other goods and services; these expenditures filter through the economy and support local jobs.³

SUNY Upstate's total economic impact represented here includes the system's spending on goods and services with a variety of vendors; the spending of SUNY Upstate's faculty, staff, students, and visitors; and the business volume generated by organizations within Onondaga County and the State of New York. Not all dollars spent by an institution remain in the institution's home state. Dollars that go out of the state through spending with out-of-state organizations or people are not included in SUNY Upstate's economic impact. The economic impact values presented in this report are generated by direct, indirect, and induced operational spending; capital spending; payroll; visitor spending; and student spending within the county of Onondaga and State of New York.

SUNY Upstate's overall impact to the state goes beyond the economic outcomes analysis that is this report's primary focus. As a pioneer in academic medicine, SUNY Upstate through its teaching, research, clinical care, and outreach is a catalyst in providing care to its communities in New York; its impact also extends to the

development of human capital, promotion of civic values, and other significant impacts of value to New York. The broader impact is acknowledged but not comprehensively documented in this report.

Visitor Definitions

Impact analysis looks to quantify the impact of the attraction of "fresh" dollars to a region. Therefore, when including visitor spending in the impact analysis of a medical campus, the analysis will include only those visitors coming to a region from outside of said region. Visitors to events who also live in the region would have spent their dollar in that region otherwise; therefore, this dollar was not attracted to the region as a result of the organization being analyzed.

For SUNY Upstate, the impact analysis looked at impacts to Onondaga County and the State of New York. Visitors to SUNY Upstate were counted only if they were from outside of the region being analyzed.

Community Benefits

Community benefits provided in this report outline two forms of impact — monetary donations made by employees and students to local nonprofits as well as volunteer hours that are assigned a monetary value.

- Tripp Umbach has conducted survey research to estimate the amount of monetary donations a student, staff member, and faculty member will spend in a year. This amount differs per individual but ranges from \$200 to \$700. Tripp Umbach also understands that not all individuals donate; therefore, this is taken into account in the analysis.
- The value of a volunteer hour has been quantified by Independent Sector to be \$26.40 per individual per hour. Tripp Umbach utilized this value with the understanding (also from survey research) of the average number of hours faculty, staff, and students engage in volunteer activities (estimated at 100 hours per year, for 50 percent of the employees and students).



² Minnesota IMPLAN Group Inc. (MIG) is the corporation that is responsible for the production of IMPLAN (IMPact analysis for PLANning) data and software. IMPLAN is a micro-computer-based, input-output modeling system. With IMPLAN, one can estimate Input-Output models of up to 528 sectors for any region consisting of one or more counties. IMPLAN includes procedures for generating multipliers and estimating impacts by applying final demand changes to the model.

³ To remain conservative while calculating visitor spending throughout the state, Tripp Umbach utilized federal per diem rates for New York; <https://www.gsa.gov/travel/plan-book/per-diem-rates>

SUNY Upstate Impact Study- Key Impact Findings



**Intraoperative Radiation Therapy
(IORT)**

Introduction

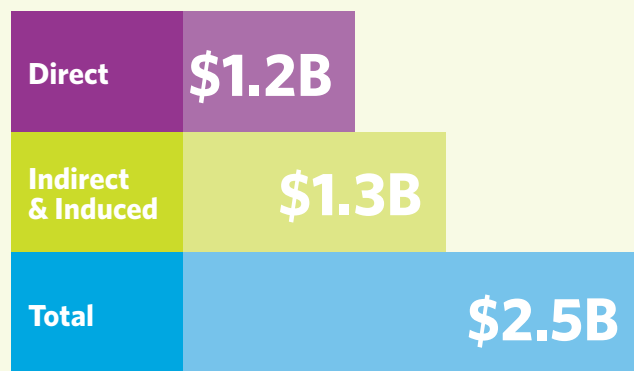
SUNY Upstate plays an important role in the economy of New York, providing impacts at the local level through community outreach programming and direct patient care as well as at the state level through economic, employment, and tax revenue generation.

Overall Economic Impact of SUNY Upstate

SUNY Upstate directly or indirectly impacts residents throughout the state by means of organizational spending, employment opportunities, government revenue generated from spending, research activities, and visitor spending in the region (e.g., retail, food services, cultural events, etc.). In 2018, the overall economic impact of SUNY Upstate on the State of New York amounted to **\$2.5 billion annually (\$1.2 billion in direct impact and \$1.3 billion in indirect and induced impact)**.

Economic Impact of SUNY Upstate on the State of New York

Source: Tripp Umbach using IMPLAN result from data obtained through SUNY Upstate.



SUNY Upstate affects business volume in New York in three ways:

1. Direct expenditures for goods and services by the SUNY Upstate entities and their faculty, physicians, staff, patients, residents, students, and visitors. This spending supports local businesses, which in turn employ local individuals to sell the goods and provide the services that the local community needs.
2. Indirect spending within the State of New York. The businesses that receive direct payments re-spend this money within the region, thus creating the need for even more jobs.
3. Induced spending by households either directly employed by SUNY Upstate or its suppliers creates a third tier of impact.

Industries impacted by SUNY Upstate's spending range from the real estate market to insurance companies, financial institutions, legal services, and the hospitality industry. With locations in New York, the economic impact analysis of SUNY Upstate focused on the combined impacts across the state as well as the impacts within the county.

In 2018, the **State's direct contribution** to the operations of SUNY Upstate was **\$43 million**. **SUNY Upstate is able to then leverage that State support and generates an additional \$58 in the New York State economy for each \$1 of direct funding from the State of New York.**

Capital Improvements Impact

Outside of the annual operating impacts of SUNY Upstate in New York there will also be a substantial impact in the coming years with the \$141 million project to create the Nappi Longevity Institute, an outpatient care center modeled after the Medicaid redesign efforts. This investment not only will generate the economic value and jobs over the period of construction, but it will also have long-lasting cost-savings impacts, which are yet to be determined.

The economic impact of the expansion alone is more than \$231.7 million over the course of the project, and this expansion will create 1,269 jobs during the project. It is important to note that these are outside of the permanent full-time jobs that will be created by the new facility's need for additional staffing for this new service line and the facilities constructed.

Capital Improvements Impact of the Nappi Longevity Institute at Upstate on the State of New York



**\$231.7
MILLION**



**1,269
JOBS**

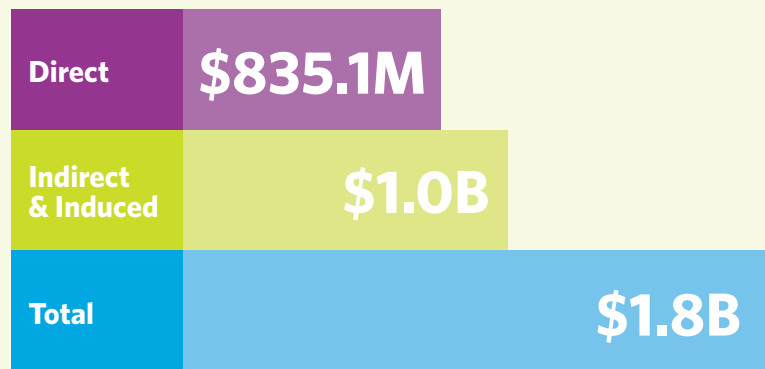
Economic Impacts on Onondaga County, NY

SUNY Upstate impacts not only the State of New York, but also has a substantial impact on Onondaga County. Through its local spending and local campuses (both educational and clinical), as well

as attracting visitors, the overall economic impact of SUNY Upstate on the county itself amounted to more than **\$1.8 billion annually (\$835.1 million in direct impact and \$1 billion in indirect and induced impact)**.

Economic Impact of SUNY Upstate on Onondaga County, New York

Source: Tripp Umbach using IMPLAN result from data obtained through the SUNY Upstate.



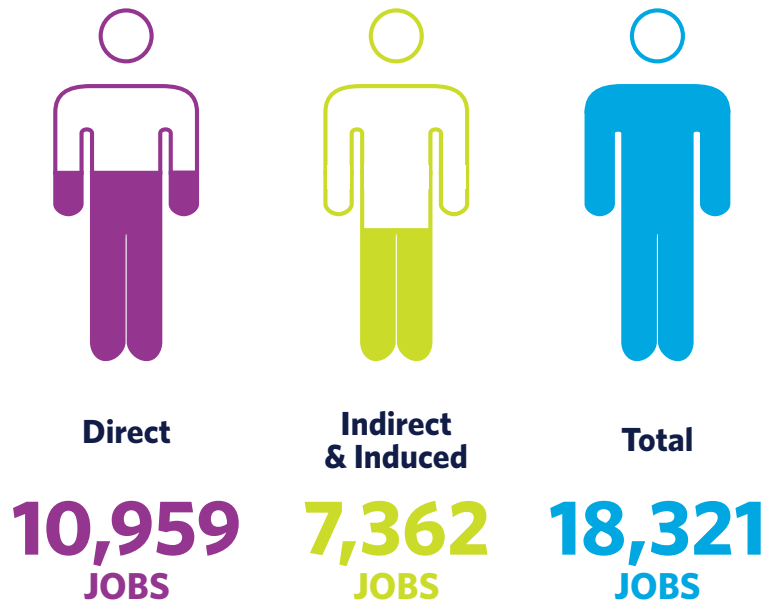
Employment Impact

SUNY Upstate employs individuals in a variety of fields, from the healthcare professionals to administrative and support staff, in the areas of patient care, teaching, and research. In FY18, SUNY Upstate supported a total of **10,959 direct jobs (both full-time and part-time jobs)**.⁴ This direct employment in turn generated another **7,362 indirect and induced jobs** in virtually every sector of the economy, including the service industry (equipment vendors, construction workers, contractors, and hotel and restaurant employees, to name only a few), as well as information technology, physicians' offices, and employment companies. Altogether, the total employment impact of SUNY Upstate in New York was **18,321 jobs in FY18**.

Of the nearly 11,000 direct jobs supported by SUNY Upstate, employees live throughout New York as well as into Canada and other states. Economic impact follows employees where they live by way of spending on residences, goods, and services.

Employment Impact of SUNY Upstate on the State of New York

Source: Tripp Umbach using IMPLAN result from data obtained through the SUNY Upstate.



⁴ A job can be a full-time or part-time position; therefore, a job, in IMPLAN analysis, is not equivalent to a full-time equivalent (FTE) job.

Employment Impacts on Onondaga County, NY

SUNY Upstate sustains and supports **14,920 jobs** in the Onondaga County area. This accounts for both the 9,080 direct jobs that are added to the region due to the operations of SUNY Upstate and an additional 5,840 jobs that are added because of SUNY Upstate's local operations in Onondaga County.

In Onondaga County, higher education and hospitals account for two of the top eight local employment industries. The jobs created by SUNY Upstate pay on average about 100 percent more per year than the average job in this market, creating more economic impact per Full Time Equivalent (FTE) than the average job in the county.



**EMPLOYER
IN CENTRAL NY**



**TOTAL
PAYROLL**

**\$625
MILLION**

Upstate employees circulate their paychecks in businesses across New York State. They also contribute as taxpayers and productive community members in hundreds of hometowns.

Source: Upstate Payroll Office



**COMMITMENT TO A
DIVERSE WORKFORCE**

**10,078
TOTAL JOBS**

9,344

State, Research Foundation,
MedBest Employees

734

Temporary and
Contract Employees

State and Local Government Revenue Impact of SUNY Upstate New York

It is a common misperception that nonprofit universities and healthcare providers do not generate tax revenue. On the contrary, nonprofits generate government revenue in the form of income taxes, sales taxes, real estate taxes, and other types of taxes paid by the individuals and companies receiving revenue from them. In FY18, state and local government revenues attributable to the presence of SUNY Upstate totaled more than **\$160.4 million for the state and local governments combined and \$68.7 million for the New York state** tax base alone.

The table to the right outlines the specific categories of tax revenue generation that SUNY Upstate contributes to the State of New York.

Research Impacts of SUNY Upstate on New York

SUNY Upstate is a part of the SUNY Research Foundation, which statewide is on the leading edge of innovation, scholarship, and solutions that contribute to the state’s economy, security, and well-being. Discoveries and advances made at SUNY Upstate are leading to companies being developed that will be providing goods and services across the country.

As a result of research activity and spending by SUNY Upstate, economic, employment, and government revenue impacts are generated in the region and state that would otherwise not be present if not for the significant research activity of the university. In FY18, the economic impact of research conducted by SUNY Upstate faculty, staff, and students reached **\$55.7 million**. The employment impact of the innovative and exciting research going on at SUNY Upstate supported **477 jobs** throughout the state. An additional **\$3 million** was generated in state and local government revenue attributed solely to the research activities of the work conducted at SUNY Upstate.



SUNY Upstate Research
Directly and Indirectly
Generates

\$55.7
MILLION

Per Year for
the State of New York



SUNY Upstate Research
Creates and Supports
More Than

477
JOBS

Per Year for
the State of New York



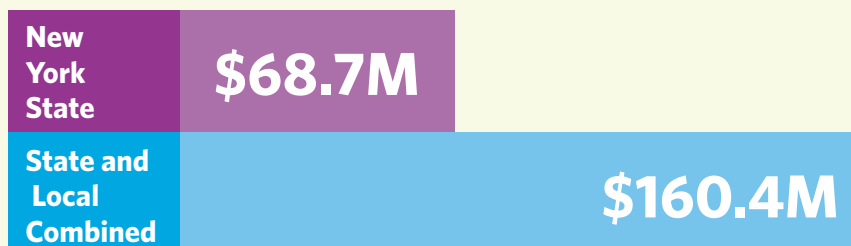
SUNY Upstate
Research
Generates

\$3.0
MILLION

Per Year In Tax Revenue for
the State of New York

Economic Impact of SUNY Upstate on Onondaga County, New York

Source: Tripp Umbach using IMPLAN result from data obtained through SUNY Upstate.



Alumni Impacts of SUNY Upstate on New York PHYSICIANS

The contributions of the more than 15,000 SUNY Upstate Medical University graduates are important to the economic vitality of regions throughout the United States. By producing highly educated, engaged, global citizens, SUNY Upstate continues to shape a skilled workforce that will transform healthcare. While operational impacts are impressive, the impact of SUNY Upstate's graduates is even greater.

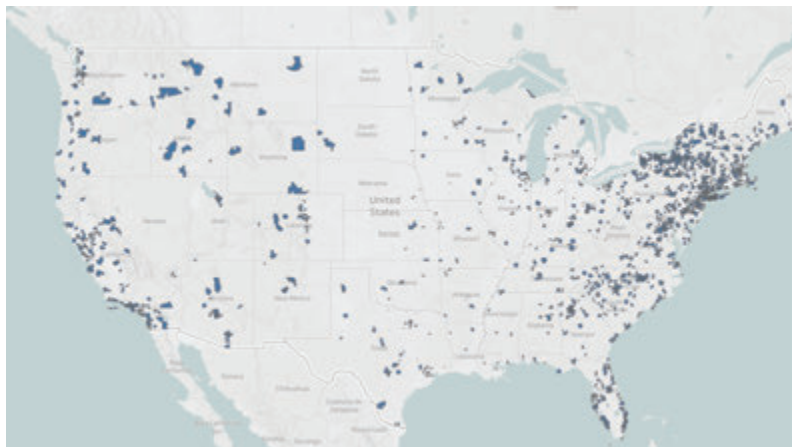
Nearly 7,900 SUNY Upstate alumni physicians are licensed throughout the United States. Tripp Umbach estimates that these alumni are generating more than **\$24.8 billion** in economic activity and support or employ nearly **132,354 employees** throughout the United States.⁵

According to the American Medical Association, each physician in the United States generates approximately \$126,129 in total state and local taxes. Therefore, SUNY Upstate alumni physicians generate approximately **\$993.1 million** in additional taxes annually. These numbers are in addition to SUNY Upstate's operational impacts presented on the previous page.

When looking at these alumni physician impacts on the New York economy, the numbers are also impressive. Tripp Umbach estimates that the SUNY Upstate alumni physicians who graduated in 2018 and then stay and practice in New York generate more than **\$342.7 million** annually once they begin practicing. This would support **1,699 jobs** annually and generate an additional **\$18.1 million** in state and local taxes.

Looking at the full breadth of SUNY Upstate alumni practicing in New York over the years, the current impact of the more than **3,100 New York physicians** who are practicing in the state and alumni of SUNY Upstate Medical University generates **\$7.1 billion** in economic activity. These alumni physicians also support or employ **35,363 jobs** and generate more than **\$377 million** in state and local taxes.

Of these physicians, if 20% will practice primary care in medically underserved areas in the State, the State of New York would see a healthcare cost savings of **\$53.8 million annually**.



ALUMNI CONTINUE TO GENERATE IMPACT FOR THE REGION

The contributions of SUNY Upstate graduates are critically important to the economic vitality of the state, across the United States, and internationally. Given that more than 25 percent of the alumni stay in Onondaga County after graduating and more than

65 percent of the graduates remain in New York, this equates to approximately 8,300 SUNY Upstate alumni living, working, and generating impact within the state.

Over a lifetime of employment (40 years), undergraduate alumni who remain in the state generate \$1.4 billion that would have otherwise been unachieved if these students did not pursue an

⁵ <https://www.physicianseconomicimpact.org/>.

OTHER HEALTH SCIENCE GRADUATES

When looking at the alumni who graduate and work in the State of New York outside of those physicians, Tripp Umbach estimates that the additional impact to the economy in New York is also impressive, keeping in mind that the impacts of education generated by SUNY Upstate Medical University do not occur in a vacuum. Students educated at the university are able to apply their knowledge throughout the state and country in a variety of ways to bring economic value to the regions in which they work.

By educating students, SUNY Upstate adds to the talent pool of human capital in Onondaga County, New York, and the country. A degree increases a graduate's value, productivity, and earning potential in the job market. Based on data on median annual earnings for university graduates, a bachelor's degree earned at a university increases a graduate's salary compared with a high school diploma by an average of about \$21,100 a year (from \$35,400 to \$56,500), while a master's degree earned at a university increases a graduate's salary compared to a bachelor's

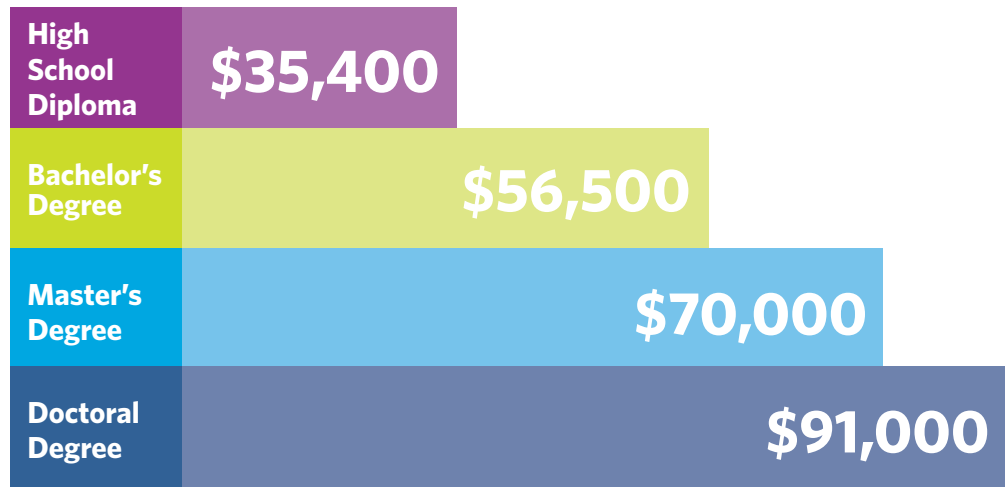
degree by an average of about \$13,500 a year (from \$56,500 to \$70,000 for master's, and \$91,000 for doctoral).

In FY18, SUNY Upstate awarded approximately 93 undergraduate degrees. Across all degrees approximately 67 percent of SUNY Upstate graduates remain in the state to work after completing their degree. For the undergraduate class of 2018, the increased earning power in their first year of employment equates to the creation of \$1.3 million in salary. A similar analysis applied to the 124 graduate and the 62 doctoral degrees awarded in FY18 equates to another \$2.9 million and \$2.3 million of value created, respectively, for their first year of employment in the New York State economy.

Therefore, on an annual basis, SUNY Upstate creates \$6.5 million of additional earning power for members of each graduating class outside of the graduating physicians. This impact is in addition to the impact of the physicians who graduate and practice as well as the university's operations.

Salary Comparison by Degree Type⁶

Source: U.S. Department of Commerce, Bureau of Economic Analysis 2008



undergraduate degree at SUNY Upstate and remain in the state. Likewise, over a lifetime of employment, SUNY Upstate graduate and doctoral alumni who remain in the state generate \$2 billion that would have otherwise been unachieved if these students did not pursue a graduate degree.⁷

In total, all alumni living in New York generate an increased earning power of \$3.5 billion over 40 years. By teaching and retaining students within the state and working to maintain their opportunities in the state to allow them to utilize their education, graduates of SUNY Upstate are generating impacts every day.

⁶ These are general degrees and oftentimes healthcare salaries are higher than average.

⁷ Accounting for forgone income while attending the university, future periods of unemployment, time out of the labor force for child rearing, and other life events, total earning power over 40 years of employment was adjusted down to 80 percent of graduates.



Community Impact of SUNY Upstate on New York

Public and nonprofit hospitals provide numerous other supports and services to the communities they serve. Those community benefits include:

- Direct financial assistance to patients (free care).
- Subsidized programs (including the unreimbursed costs of educating health professionals), subsidizing needed services (such as mental health), and covering the unreimbursed costs of care for government programs, like Medicare and Medicaid, that typically do not cover their costs.
- Community programs (for example, health screenings and free clinics, in-kind donations to other nonprofits, and community health improvement staff).
- Direct grants to other community organizations (for example, support for community housing organizations or healthcare organizations offering complementary services, such as Federally Qualified Health Centers and designated mental health agencies).

In 2018, SUNY Upstate provided uncompensated and charity care totaling more than \$123 million.

Upstate provided children, teens, and adults with social support programs such as:

CanTeen

A program which provides companionship and engagement in sciences in an after-school setting for students.

Caring for Kids

A program that provides classroom essentials to elementary schools to help address the social barriers they are facing.

Community Connections

An after school tutoring and mentor program for students in Syracuse.

Extended Hands for Adolescent Mothers

A program for pregnant or parenting teens which helps them to develop parenting skills and reinforce a positive mental status through creative outlets.

Folk Art Partnership

A program where students build cross-cultural and intergenerational relationships through the creation of arts and crafts to help promote the mental and social health of participants who are largely refugees.

Health Careers Shadow Days

Henninger High School students meet with representatives from the colleges of Health Professions and Nursing.

Hillside Work-Scholarship Connection

At-risk junior and seniors are mentored by Upstate employees after-school to help the students develop life skills and get job training. The graduation rate of these students is twice the rate of their peers.

Let's Not Meet Like This

This program is aimed at getting teenagers to make meaningful behavioral changes in their driving habits to promote safe driving in their community. Offered by Upstate's Level 1 Trauma Center, this multimedia program offers teens a real-life, up-close view of what happens when teens are involved in a car crash, from the first police reports on the scene to the activity in the trauma center when the accident victims arrive. More than 1,000 students from area high schools participate in this program annually.

MASH Camp (Medical Academy of Science and Health)

Upstate employees volunteer to teach in this two-day "mini med school" for middle school students.

Project SEARCH

Upstate broke barriers by being the first hospital in the state to offer a 30-week internship for students with developmental disabilities. Nearly 100 students have gone through the program with 20 eventually being hired by Upstate historically.

Point in Time Count

Upstate students and staff volunteer to help count homeless people on the streets during winter nights. If the homeless individuals will not go to a shelter or can't they are provided with warm coats and blankets.

Support Groups

Upstate hosts many group meetings for health and other concerns such as smoking cessation, cancer, stroke, and bariatric surgery support.

Women Heal

A semi-monthly group meeting is hosted with female residents of the Rescue Mission to promote physical, mental, and social well-being through activities, education, and relaxation services.

In addition, employees of SUNY Upstate engage with the community on their own time and in their own personal ways, including through volunteering both time and money to local causes. Across SUNY Upstate, we estimate the value of that time and money as an additional **\$25 million** in impacts to the community in FY18.⁸

This breaks down to \$9.7 million in direct charitable contributions and an additional \$15.3 million in volunteerism and the donations of time to various local charities by the students, staff, faculty, physicians, residents, and families of SUNY Upstate.

⁸ The Points of Light Foundation estimates the value of a volunteer hour at \$22.14 per individual per hour. Based on Tripp Umbach's extensive economic impact analysis background, we estimated the number of hours donated as well as dollars donated by SUNY Upstate employees to achieve the estimated value of additional community impact. This impact value is in addition to the community benefits reported previously and these impacts are achieved by employees outside of work hours - on their own time.

Appendix A

Definition of Terms

Study Year

Fiscal year was defined as FY18 for each entity.

Total Economic Impact

The total impact of an organization is a compilation of the direct impact, the indirect impact, and the induced impact generated in the economy as a result of the organization.

Direct Economic Impact

Direct impact includes all direct effects the organization has on the region due to the organization's operations. These include direct employees, organizational spending, employee spending, and spending by patients and visitors to the organization.

Indirect Economic Impact

The indirect impact includes the impact of local industries buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain until all money is spent outside of the local economy, either through imports or by payments to value added.

Induced Economic Impact

The response by an economy to an initial change (direct effect) that occurs through re-spending of income received by a component of value added. IMPLAN's default multiplier recognizes that labor income (employee compensation and proprietor income components of value added) is not lost to the regional economy. This money is recirculated through the household spending patterns causing further local economic activity.

Multiplier Effect

The multiplier effect is the additional economic impact created as a result of the organization's direct economic impact. Local companies that provide goods and services to an organization increase their purchasing by creating a multiplier.

Government Revenue

Government revenue that is collected by governmental units in addition to those paid directly by an organization, including taxes paid directly by employees of the organization, visitors to the organization, and vendors who sell products to the organization.

Appendix B

Methodology

This economic impact analysis measures the effect of direct and indirect/induced business volume and government revenue impacts for all of SUNY Upstate's operations throughout the State of New York and Onondaga County. The methodology employed in the calculation of these impacts is IMPLAN. Primary data used to conduct the analysis were collected from each of the four hospitals in the network. Data included five-year average of capital expenditures, operational expenditures, employment headcounts, payroll and benefits, and taxes. The multipliers used in this study were derived from the IMPLAN software. Tripp Umbach's approach to economic impact analysis is conservative by way of utilizing the industry standard software, IMPLAN, to conduct the impact analysis as well as using

conservative assumptions for individual spending patterns. Tripp Umbach bases assumptions of spending on federal per diem rates.

Economic impact begins when an organization spends money. Studies measuring economic impact capture the direct economic impact of an organization's spending, plus additional indirect and induced spending in the economy as a result of direct spending.

Total economic impact measures the dollars generated within New York due to the presence of SUNY Upstate. This includes not only the member's spending on goods and services with a variety of vendors and the spending of its physicians, faculty, staff, patients, students, and visitors, but also the

business volume generated by businesses within New York that benefit from SUNY Upstate's spending. It is important to remember that not all dollars spent by a medical school or hospital remain in its immediate locale. Economic impact includes all dollars that are spent in the region in the form of purchases from in-area vendors, employees, etc.

The economic impact analysis conducted for this study gathered and modeled fiscal year 2018 (FY18) data for each of the four SUNY Upstate entities. The analysis looked at impacts of SUNY Upstate through two lenses: impacts on Onondaga County and the State of New York.

What is included in the Economic Impact?

- Operational Spending
- Capital Spending
- Research Spending
- Number of Employees
- Salaries and Benefits
- Visitor Spending
- Student Spending

What is not included in the Economic Impact?

- Research Commercialization
- Attraction Power
- Knowledge and Expertise
- Arts and Culture

Appendix C

FAQ Regarding Economic Impact Assessment



University Hospital East Tower and
Golisano Children's Hospital

What is economic impact?

Economic impact begins when an organization spends money. Economic impact studies measure the direct economic impact of an organization's spending, plus additional indirect and induced spending in the economy as a result of direct spending. Direct economic impact measures the dollars that are generated within New York due to the presence of SUNY Upstate. This includes not only spending on goods and services with a variety of vendors across the state, and the spending of its employees, patients, and visitors, but also the business volume generated by businesses within New York that benefit from spending by SUNY Upstate. It is important to remember that not all dollars spent by SUNY Upstate stay in New York. Dollars that go out of the state in the form of purchases from out-of-state vendors are not included in the economic impact that SUNY Upstate has on the State of New York.

The total economic impact includes the "multiplier" of spending from companies that do business with SUNY Upstate. Support businesses may include lodging establishments, restaurants, construction firms, vendors, temporary agencies, etc. Spending multipliers attempt to estimate the ripple effect in the state economy where the spending occurs. For example, spending by SUNY Upstate with local vendors provides these vendors with additional dollars that they re-spend in the local economy, causing a multiplier effect.

What is the multiplier effect?

Multipliers are a numeric way of describing the secondary impacts stemming from the operations of an organization. For example, an employment multiplier of 1.8 would suggest that for every 10 employees hired in the given industry, eight additional jobs would be created in other industries, such that 18 total jobs would be added to the given economic region. The multipliers used in this study range from 1.8 to 2.0.

The Multiplier Model is derived mathematically using the input-output model and Social Accounting formats. The Social Accounting System provides the framework for the predictive Multiplier Model used in economic impact studies. Purchases for final use drive the model. Industries that produce goods and services for consumer consumption must purchase products, raw materials, and services from other companies to create their products. These vendors must also procure goods and services. This cycle continues until all the money is spent outside of the specified region's economy. There are three types of effects measured with a multiplier: the direct, the indirect, and the induced effects. The direct effect is the known or predicted change in the local economy

that is to be studied. The indirect effect is the business-to-business transactions required to satisfy the direct effect. Finally, the induced effect is derived from local spending on goods and services by people working to satisfy the direct and indirect effects.

- **Direct effects** take place only in the industry immediately being studied.
- **Indirect effects** concern inter-industry transactions. Because SUNY Upstate is in business, it has a demand for locally produced materials needed to operate.
- **Induced effects** measure the effects of the changes in household income. Employees of SUNY Upstate and suppliers purchase from local retailers and restaurants.
- **Total Economic Impacts** are the total changes to the original economy as a result of the operations of SUNY Upstate (i.e., Direct effects + Indirect effects + Induced effects = Total Economic Impacts).

What methodology was used in this study?

IMPLAN (IMpact analysis for PLANning) data and software were used. Using classic input-output analysis in combination with regional specific Social Accounting Matrices and Multiplier Models, IMPLAN provides a highly accurate and adaptable model for its users. The IMPLAN database contains county, state, ZIP code, and federal economic statistics, which are specialized by region, not estimated from national averages, and can be used to measure the effect on a regional or local economy of a given change or event in the economy's activity.

What is employment impact?

Employment impact measures the direct employment (employees, staff, physicians, administration) plus additional employment created in the economy as a result of the operations of SUNY Upstate.

Indirect and induced employment impact refers to other employees throughout the region that exist because of the university's economic impact. In other words, these are jobs related to the population - city services (police, fire, EMS, etc.), employees at local hotels and restaurants, clerks at local retail establishments, or residents employed by vendors used by SUNY Upstate.

What is the difference between direct and indirect taxes?

Direct tax dollars include sales taxes and net corporate income taxes paid directly by the institution to the state, while indirect taxes include taxes paid to the state by vendors that do business with SUNY Upstate and individuals (employees, patients, and visitors).

Is this a one-time impact, or does the impact repeat each year?

The results presented in SUNY Upstate economic impact study are generated on an annual basis. The economic impact in future years can either be higher or lower based on number of employees, patients, visitors, capital expansion, increases in external research, and state appropriations.

What are Tripp Umbach's qualifications to perform an Economic Impact Study for SUNY Upstate?

Tripp Umbach is the national leader in providing economic impact analysis to leading healthcare organizations, universities, and academic medical centers. We have completed more than 150 economic impact studies over the past 20 years for clients such as The Pennsylvania State University, The Ohio State University, The University of Washington, The University of Iowa, The University of Alabama at Birmingham, the Cleveland Clinic, The University of Florida Health Shands Hospital, The University of North Carolina Hospitals, The University of Pennsylvania Health System, The University of Pittsburgh Medical Center, and The Ohio State University Medical Center.



Golisano Children's Hospital



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