

ED 398 776

HE 029 304

TITLE The Economic Impact of the State University of New York on the State of New York.

INSTITUTION State Univ. of New York, Albany.

SPONS AGENCY Small Business Administration, Washington, D.C.

PUB DATE 95

CONTRACT 5-7770-003310

NOTE 27p.

PUB TYPE Reports - Research/Technical (143) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC02 Plus Postage.

DESCRIPTORS \*College Graduates; College Students; Economic Development; \*Economic Impact; Educational Benefits; \*Educational Economics; Employment Patterns; \*Expenditures; Federal Aid; Grants; Higher Education; Institutional Characteristics; Inventions; Labor Force Development; Multicampus Colleges; Private Financial Support; Research Projects; School Community Relationship; School Personnel; Small Businesses; \*State Universities; Student Financial Aid; Taxes; Technology Transfer; Tourism

IDENTIFIERS Economic Impact Studies; \*New York; \*State University of New York

## ABSTRACT

A study of the impact of the State University of New York (SUNY) on the state's economy is reported. In 1992-93, about \$9.2 billion of the state's economy was a direct result of spending by SUNY, its employees, students, and visitors; about five times the state's investment in SUNY in fiscal 1993. Annually, graduates add \$16.8 billion to the economy through increased personal earning power. One-third of all New York high school graduates enroll at a SUNY campus, and SUNY enrollments are one-half of the state's college enrollments. SUNY has 1.4 million graduates in the state. It attracts out-of-state dollars through research grants, non-resident and foreign student spending, and federal student aid. It employs 78,997 people directly, and 32,952 additional jobs are attributable to SUNY expenditures. In 1993, employees paid about \$534 million in income, sales, and property taxes to the state. In 1992-93, students spent about \$2.2 billion for off-campus expenses related to attendance. In 1993, about 1.2 million people visited SUNY campuses and spent \$50 million in the local economy. Research and other externally-funded programs at SUNY have grown to \$330 million in 1994. Over 7,000 sponsored research programs directly benefit local areas, and research activities generated over 8,000 jobs. SUNY-associated tax revenues directly contribute over \$875 million to the state and \$681 million to local governments. (Contains 34 references.) (MSE)

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THE  
 ECONOMIC  
 IMPACT  
 of  
 State University of New York  
 on  
 THE  
 STATE OF  
 NEW YORK

HE 029 304

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Winter 1995

**A MESSAGE FROM  
THE CHANCELLOR**

Dear Colleague,

In addition to providing wide access to outstanding educational programs and conducting cutting edge research, the State University of New York aggressively promotes and positively impacts the economic vitality of New York State, paying back many times over the state's investment in the University.

In 1992-93, the most recent period for which full economic data is available, approximately \$9.2 billion of New York State's economy was a direct result of expenditures by SUNY, its employees, students, and visitors. This was approximately 4.9 times the total annual budget for the University.

SUNY's 64 campuses offer a total of 4,929 academic programs for undergraduate, graduate, and professional students. Almost every field of academic or professional study is offered somewhere within the SUNY system. In 1992-93 alone, 76,587 degrees and other formal awards were granted. Over the past 10 years, SUNY has awarded a total of 663,233 degrees. The vast majority of SUNY graduates continue to work and live in New York State, contributing to the economic and social vitality of the state.

Research conducted at SUNY generates economic benefits which accrue to the people of New York on many levels – by bringing in funding and by contributing to the productivity of industries throughout the state. Many new products and services are tangible outcomes of research and development and transfer of new technology at SUNY. Research at SUNY also has the potential for solving current economic problems, creating new economic opportunities, improving the environment, and enhancing the quality of life for New York citizens.

The relationship between SUNY and New York State is a dynamic one, characterized by mutual support, cooperation, and shared goals. A better understanding of the relationship between the economic growth of New York and SUNY's impact on the state's economy will benefit us all as we strive to make New York State the best place to live and work and the State University of New York the best place to learn in the nation.

The explicit facts and figures are contained in this study. However, implicit in the study are the accomplishments, aspirations, and ideals of SUNY's outstanding faculty, students, and alumni. In the last analysis, they are surely one of New York's greatest assets and SUNY's most important contribution to New York State.

*Thomas A. Bartlett*

Thomas A. Bartlett, Chancellor

## HIGHLIGHTS

- In 1992-93, approximately \$9.2 billion of New York State's economy was a direct result of spending by SUNY, its employees, students, and visitors. The effect of SUNY's spending activities was over 5.6 times the amount of the state's \$1.63 billion investment in SUNY in fiscal year 1993.
- For almost 50 years, SUNY has provided New Yorkers with higher education that is an exceptional balance of quality, affordability, and accessibility.
- People with four or more years of college earn as much as 40% more than those with less education and fewer skills. This greater income has a substantial impact upon the New York State economy.
- Each year, SUNY graduates add an estimated \$16.8 billion to New York's economy through increased personal earning power.
- One-third of all New York State high school graduates enroll at a SUNY campus.
- SUNY's total enrollment comprises almost half of all college students in New York State. Students from every county in New York State benefit from SUNY's accessibility.
- SUNY's community colleges enroll more than half of SUNY's student body.
- SUNY has 1.4 million graduates living and working in New York State and contributing to the State's economy. They represent the complete spectrum of professions.
- SUNY is one of the nation's largest, most diversified, complex, and largest comprehensive public universities, having 64 campuses, enrolling more than 400,000 students, and conferring approximately 76,000 degrees each year.
- SUNY offers more than 4,900 programs of study. Almost every field of academic or professional study is provided somewhere within the system.
- SUNY expands the economy by attracting out-of-state dollars, which enter New York State through research grants, spending by non-resident and foreign students, and federal student assistance. In fiscal year 1993, over \$983 million entered New York through SUNY from outside the State.
- In addition to SUNY's direct employment of 78,997 people, 32,952 additional jobs for New Yorkers are attributable to SUNY, its direct expenditures, and spending on capital projects in fiscal year 1993.
- In 1993, SUNY employees — and individuals whose employment is a result of SUNY activities — paid an estimated \$534 million in income, sales, and property taxes to the State of New York.
- SUNY students spent an estimated \$2.2 billion during the 1992-93 academic year for off-campus expenses related to attendance.
- In 1993, approximately 1.2 million people visited SUNY's state-operated campuses and spent an estimated \$50 million in the local economy.
- Research and other externally funded programs at SUNY have more than doubled in the past ten years to a projected \$330 million in expenditures in 1994. More than 7,000 sponsored research programs conducted by SUNY faculty directly benefit the economic development of their regions. Research activities generated jobs for more than 8,000 New York residents.

- ↳ Since 1987, SUNY's technology transfer program has consistently ranked in the top 20 among research universities and moved into the top 10 in issued patents among U.S. universities engaging in significant research and development.
- ↳ The New York State Small Business Development Center (SBDC), administered by SUNY, has counseled over 68,000 clients, helped clients acquire \$482 million in private and public funding for small businesses, and in turn, these businesses have created 28,516 jobs. The SBDC serves a broad cross-section of New York's 400,000 small businesses.
- ↳ The indirect economic impacts include accessible and affordable quality education, work force development, sponsored research, and private giving.
- ↳ SUNY-associated tax revenues directly contribute over \$875 million to the State and over \$681 million to local governments, and indirectly to the State through federal transfer receipts.

**TABLE OF  
CONTENTS**

**7** Introduction to State University of New York

**9** The University's Economic Impact

**10** Revenue Sources

**14** Direct Economic Impact:

**14** 1. University Spending in the State of New York

**15** 2. Jobs for New York Residents

**16** 3. State Tax Revenues

**16** 4. Out-of-State Revenues

**17** Other Impacts

**19** National Recognition

**20** Sponsored Research, Development and Transfer of New Technology

**23** Conclusion

**25** References

The State University of New York (SUNY) is one of the nation's most diversified and comprehensive public university systems. Born of the vision for educational excellence, broad access, and public service, the State University of New York was dedicated on March 12, 1948 as a university of the people. At its founding, the University comprised 32 colleges that had acted independently, but whose histories of service dated back as far as 1816. Today, SUNY is composed of 29 state-operated campuses that include four university centers; 13 university colleges; two stand-alone health science centers; six two-year colleges of technology and one upper-division institute of technology, as well as three specialized colleges. SUNY also encompasses five statutory colleges and 30 community colleges. These 64 campuses cover all geographical areas of New York State, from the rural to the urban. Some campuses have multiple sites and occupy several hundred acres, while others are small and self-contained. Taken together, the SUNY system offers educational opportunities for students who thrive on the cultural and recreational opportunities of metropolitan areas as well as those who prefer more relaxed non-urban environments.

In less than a half century of existence as a university system, SUNY has become diversified yet integrated, offering a full range of academic programs from certificate-level to post-doctoral work. SUNY's 64 campuses have a total enrollment of over 400,000 students — more than 40 percent of the state's higher education student population. By its 46th year, SUNY had conferred more than 1.4 million degrees. Its state-operated campuses, hospitals, community colleges, Research Foundation, university-wide programs, and Administration employ a total of 78,997 people. SUNY operates in over 500 locations, including 64 campuses, 55 other sites offering complete programs, 30 extension centers, and 414 extension sites, experiment stations, and projects abroad in 24 countries.

**Research and advanced graduate and professional studies are conducted primarily through the four University Centers at Albany, Binghamton, Buffalo, and Stony Brook.** Each Center confers baccalaureate, master's, doctoral and professional degrees, with considerable differentiation among the four campuses. Together, the four centers offer 1,056 programs. Campus enrollments range from 11,966 to 25,362.

In undergraduate instruction, **SUNY's 13 University Colleges conduct programs of academic study through the master's degree** in a range of liberal arts and professional disciplines. The campuses together offer some 980 baccalaureate and 365 master's level programs and have deep roots in teacher education. Campus enrollments range from 3,949 to 12,109.

SUNY offers courses of study in medicine, dentistry, pharmacy, nursing, social work and the allied professions to some 7,789 students through its free-standing **Health Science Centers at Brooklyn and Syracuse, and the Health Science components of the University Centers at Buffalo and Stony Brook.** The medical programs at these four institutions collectively produce more physicians than all but two other U.S. universities.

SUNY's **Colleges of Agriculture and Technology** have revised their curricula to emphasize the shift of the nation's economy from agriculture to industry. Overall, agricultural studies now represent a substantially smaller share of the curriculum. The colleges have further responded to change by **developing new and innovative programs in public and human services as well as high-level technological offerings.** Enrollments range from 2,278 to 8,800.

Four SUNY institutions have been designated **Specialized Colleges.** The Colleges of Environmental Science and Forestry, Maritime College, the College of Optometry, and the Institute of Technology at Utica/Rome have the objective of providing upper division programs for students. Enrollments at the four campuses range from 266 to 2,550.

SUNY's five Statutory Colleges, are publicly supported and governed through a cooperative arrangement between the SUNY Trustees and the governing boards of the parent institu-

tions. Four are located at Cornell University; the fifth is located at Alfred University. These campuses offer specializations leading to bachelor's, master's and doctoral degrees.

The 30 locally co-sponsored Community Colleges of SUNY offer programs that are often job-related, as well as two-year degree programs that serve as a job-entry educational experience and/or a transfer opportunity to a baccalaureate degree. Enrollments range from 1,643 to 22,369.

An integral part of the SUNY mission is to provide all citizens with opportunities for advanced education. SUNY's program for the educationally and economically disadvantaged, consisting of Educational Opportunity Programs (EOP) and Educational Opportunity Centers (EOC), offers a variety of curricula to prepare students for college-level work or to provide them with specialized skills for entrance into the job market. More than 310,000 New York State residents have benefitted from this program.

The Graduate Education and Research Initiative (GRI), designed to advance SUNY as a top-ranked research university and PhD-granting institution, is a critical investment in New York's future. GRI established a priority for campuses to develop centers of excellence related specifically to key employers.

Economic development is a natural component of SUNY's teaching, research, and service mission. The New York State Small Business Development Center (NYS/SBDC), administered by SUNY, coordinates 20 Small Business Development Regional Centers and 14 Outreach Offices throughout the State. These service centers are conveniently located on the campuses of SUNY and SUNY's higher education partners: CUNY and private universities. Through this statewide network, support from federal, state, local, and private sources is combined with institutional contributions to allow the SBDCs to serve a broad cross-section of New York's approximately 400,000 small businesses. Since 1984, the SBDC has provided one-to-one counseling, training, research, and business information to more than 68,000 individual clients, helping new or at-risk businesses acquire over \$482 million in public and private funding, making it possible for them to grow and modernize. In turn, these businesses have helped create and save over 28,516 jobs in New York State.

The 41 Economic Development Centers (EDCs) of SUNY offer tailor-made instructional and training programs designed to meet the specific needs of companies. A variety of activities are offered to meet regional development needs. EDCs service business and industry in their areas, providing help and access to SUNY's resources to business, industry and local government.

The New York State Office of Rural Affairs has established a network of Rural Services Institutes (RSI) at colleges and universities throughout the state. There are 15 RSIs located at SUNY campuses. Established to provide technical and other supportive assistance to various rural organizations and local governments, each RSI provides a wide range of services such as computer and software evaluation and access. SUNY also contributes to economic development through technology transfer, the creation of incubator facilities, and efforts to maximize the rate at which university research and inventions are transferred to industry for commercialization. Today, SUNY ranks in the top twenty universities nationwide in technology transfer.

SUNY provides leadership and direction in work force education programs for New York business and industry. It provides training and educational assistance as well as more traditional workplace skills. SUNY has created the Workforce Institute to foster collaboration among campuses to meet the new training demands of high performance work organizations.

Teaching, research, and service projects by SUNY faculty respond to a wide array of imperatives, especially those identified as priority areas in New York State's needs agenda. These include health care, economic development, social services, public education, and envi-

ronmental conservation. SUNY is also forging economic, academic, scientific, and technological connections in countries around the world. Faculty are active in the international arena, leading programs in Asia, South America, and Central and Eastern Europe. Assisting businesses, providing health care, analyzing protein structure, studying earthquakes, designing computer chips, protecting the world's rain forests, developing vaccines, pioneering programs to educate students — these are but a few of the multitude of projects in which SUNY investigators are involved.

The international activities of SUNY are coordinated through the Office of International Programs (OIP). OIP has coordinated nearly 200 overseas academic programs and exchanges in 90 academic disciplines in some 43 countries. In addition, a total of 8,078 foreign students from 149 countries study on SUNY campuses. These students contribute an important cross cultural component to on-campus programs and the state economy.

SUNY serves as a catalyst in research, health care, business and economic development, training, and services for the betterment of New York. By serving the full range of students at every level of higher education, as well as serving businesses, public agencies, and cultural organizations in innovative and creative ways, SUNY has demonstrated it is one of the country's top public university systems.

## **THE UNIVERSITY'S ECONOMIC IMPACT**

State governments subsidize their public institutions of higher education. Yet, the subsidy may actually work both ways. In New York, the state receives a substantial return on every dollar it invests in its public institutions of higher education.

The value of education, research, and public service provided by SUNY has long been recognized. Less understood and less well known is SUNY's major impact on the economy of the State of New York. Yet, like traditional manufacturing firms, high technology enterprises, and service industries that are at the heart of the state's economy, SUNY is an "engine" of economic development and job creation. It offers substantial economic benefits, attracts a steady stream of visitors, and supplies a constantly renewed pool of talent to replenish the work force. Seen in this light, the vitality of SUNY and the economy of the State of New York are inextricably bound together.

Economists categorize economic impacts as direct, indirect, and induced (multiplier effects). This study is consistent with most economic impact studies in assuming that the total economic impact of the university includes both direct and multiplier effects. A standard statistical multiplier gauges the full economic impact of the funds spent by SUNY, since every dollar spent is "re-spent" by the purchaser to buy materials, labor, services, etc. The methodology used in this study identifies the amount of money SUNY puts into the economy of New York State and applies the multiplier.

The best way to express SUNY's impact on the economy of New York is to look at the total dollars generated by SUNY's direct spending, taxes paid, and secondary expenditures by SUNY employees, students, and visitors to the campuses.

The direct economic impacts include: SUNY's purchases from New York businesses, including capital improvement and construction expenditures, plus the expenditures of employees, students, and visitors to the campuses; job creation for New York residents; contribution to state tax revenue; and attraction of out-of-state revenues.

According to the payroll records, about \$2.3 billion of SUNY employees' salaries, wages and benefits was spendable income (that is, net after taxes and other deductions) in 1992-93. SUNY's 404,065 students spent over \$2.2 billion on off-campus housing, food, transportation, books, supplies, and other living expenses. An estimated 1,250,000 visitors came to SUNY's

state-operated campuses — family members and friends of students, audiences for conferences, workshops, seminars, sports, arts, and some special events — and spent over \$50 million on food, lodging, transportation, and miscellaneous items. The total expenditures of SUNY for construction and rehabilitation came to \$185.4 million in 1992-93. SUNY also expands the state economy by attracting out-of-state dollars, which enter New York State through research grants and contracts, spending by out-of-state and foreign students, and federal student assistance. In 1993, over \$983 million was brought into the state economy through SUNY from outside New York. This amount netted \$913 million in purchases within the state. These combined expenditures yielded \$5.65 billion of increased economic activity within New York. Based upon the spending multiplier of 1.64\*, the additional business volume that results from the original expenditures expanded the economy of New York State by \$9.18 billion in 1992-93.

Beyond the short-term effects of SUNY's direct spending are the long-term economic dividends of public investments in the university's teaching, research and service programs which help the state economy by saving public expenditures on many needed services and by enabling the recipients of the services to lead richer and more productive lives. It is impossible to put a dollar value on the returns of SUNY's indirect economic impacts, but there can be no challenge to the assertion that they must be taken into account in assessing the total impact of SUNY on the New York State economy. The lives of hundreds of thousands of citizens are improved because of their experiences at SUNY.

## REVENUE SOURCES

SUNY has several major resources in support of activities at the 29 state-operated campuses. The support from the State of New York in 1992-93 accounted for 44.2% of the total funding. The Federal government provided 11.1% of the revenue, predominantly for sponsored research, programs, and student aid programs. The remaining 44.7% comes from a variety of sources including tuition and fees, hospital income, private giving, residence halls, etc..

Less than half of SUNY's total budget actually comes from state funding. State appropriations to SUNY have been fluctuating in recent years. Listed opposite are the figures of the New York State appropriations to SUNY over the last six years.

\*A number of possible general multipliers for New York State were evaluated. Sources examined include regional multipliers provided by the U.S. Department of Commerce, Bureau of Economic Analysis, in their *Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II)* (May 1986 and May 1992), and the multiplier report (1990) from IMPLAN provided by New York State Department of Economic Development, Research and Policy Division. A conservative multiplier of 1.64 for SUNY related expenditures was selected in cooperation with the Research and Policy Division of NYS Department of Economic Development. This means that one dollar in expenditures by the SUNY community in New York State economy will generate an incremental increase of 1.64 in total economic activity for the State of New York.

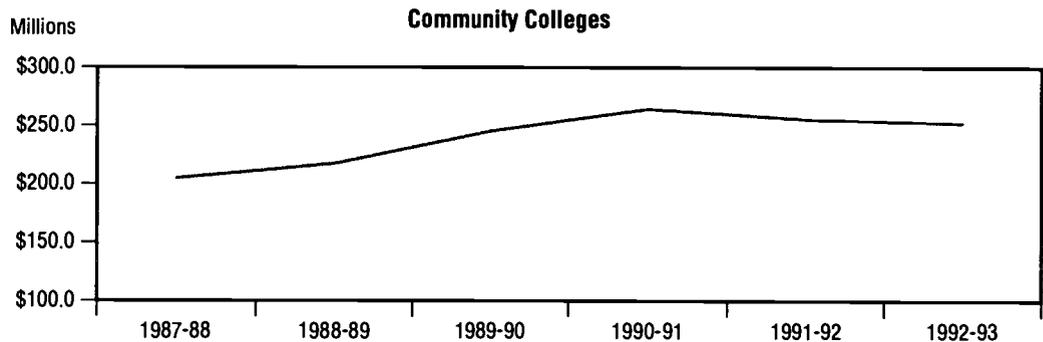
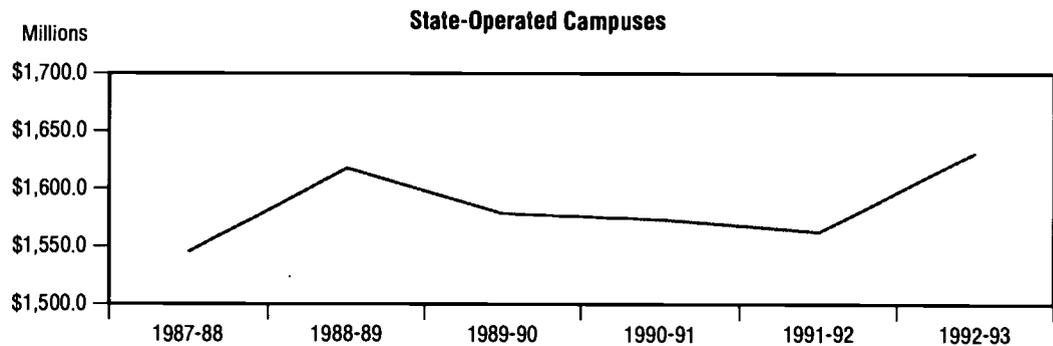
## NEW YORK STATE APPROPRIATIONS TO SUNY

### State-Operated Campuses

| Fiscal Year:<br>(June 30-July 1) | (Millions of Dollars) | %<br>Change |
|----------------------------------|-----------------------|-------------|
| 1987-88                          | \$ 1,544.8            | —           |
| 1988-89                          | \$ 1,617.6            | 4.7         |
| 1989-90                          | \$ 1,578.3            | - 2.4       |
| 1990-91                          | \$ 1,573.3            | - 0.32      |
| 1991-92                          | \$ 1,562.5            | - 0.68      |
| 1992-93                          | \$ 1,631.0            | 4.38        |

### Community Colleges

| College Year:<br>(Sept.1-Aug.31) | (Millions of Dollars) | %<br>Change |
|----------------------------------|-----------------------|-------------|
| 1987-88                          | \$ 204.8              | —           |
| 1988-89                          | \$ 217.4              | 6.2         |
| 1989-90                          | \$ 246.3              | 13.3        |
| 1990-91                          | \$ 264.4              | 7.3         |
| 1991-92                          | \$ 255.5              | - 3.4       |
| 1992-93                          | \$ 252.4              | - 1.2       |

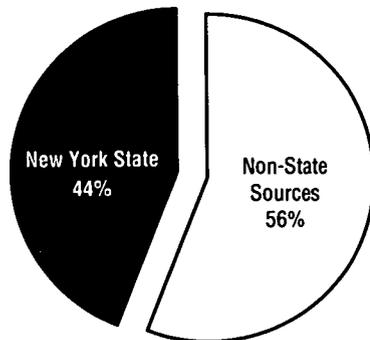


**SOURCES OF OPERATING REVENUE OF THE STATE-OPERATED CAMPUSES  
FOR FISCAL YEAR 1992-93** (July 1, 1992 - June 30, 1993)

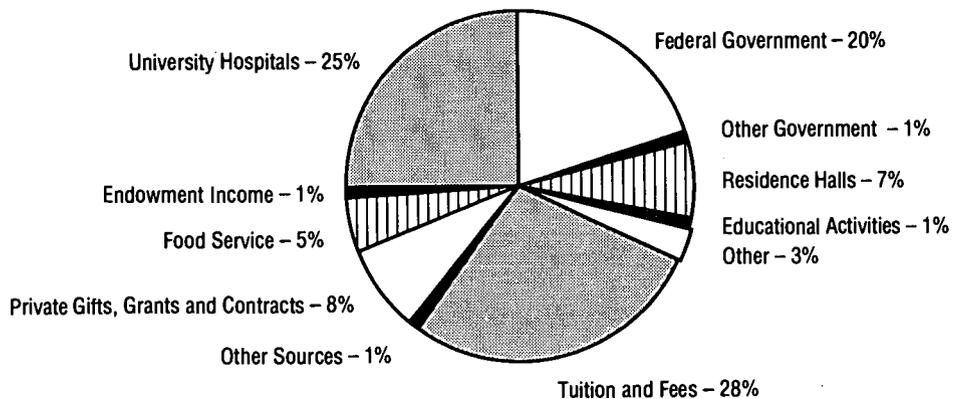
(Millions of Dollars)

|  |                    |
|--|--------------------|
| New York State .....                         | \$1,631,014        |
| Federal Government .....                     | 411,434            |
| Other Government .....                       | 21,646             |
| Tuition and Fees .....                       | 567,924            |
| Sales and Services:                          |                    |
| University Hospitals .....                   | 519,089            |
| Educational Activities .....                 | 25,998             |
| Private Gifts, Grants and Contracts .....    | 170,318            |
| Endowment Income .....                       | 10,985             |
| Other Sources .....                          | 12,795             |
| Sales and Services of Auxiliary Enterprises: |                    |
| Residence Halls .....                        | 153,293            |
| Food Service .....                           | 106,845            |
| Other .....                                  | 60,816             |
| <b>Total Revenues .....</b>                  | <b>\$3,692,157</b> |

**Revenue at State-Operated Campuses  
for Fiscal Year 1992-93**



**Non-State Revenue Sources at State-Operated Campuses  
for Fiscal Year 1992-93**



Most of the support for community colleges comes from three sources: State aid, local sponsor revenue, and student tuition. The support from the State of New York in Fiscal Year 93 amounted to 29.4% of the total funding for operations. Local sponsors provided 21.4% of the revenue. Student tuition totalled up to 33.5%. The revenues in lieu of sponsor's contribution was 7.3%. The Federal government provided 2.1%, and revenues from other sources accounted for 6.3%. The amounts and relationships are graphically presented as follows:

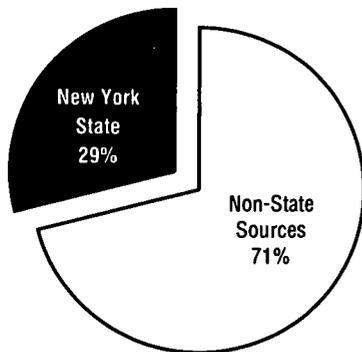
**SOURCES OF COMMUNITY COLLEGES OPERATING REVENUE FOR COLLEGE FISCAL YEAR 1992-93\***

(Millions of Dollars)

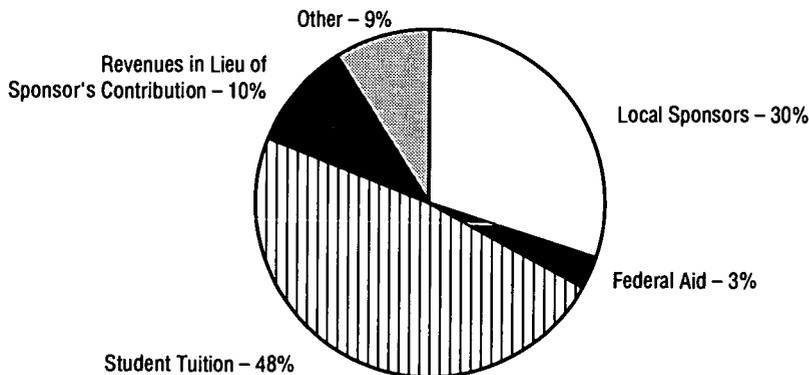
|   |                      |
|---|----------------------|
| State Aid .....                                     | \$252,436,305        |
| Local Sponsors .....                                | 184,080,673          |
| Student Tuition .....                               | 287,976,385          |
| Revenues in Lieu of<br>Sponsor's Contribution ..... | 62,968,565           |
| Federal Aid .....                                   | 18,049,319           |
| Other .....   | 54,437,531           |
| <b>Total Revenues .....</b>                         | <b>\$859,948,778</b> |

\* September 1, 1992 - August 31, 1993 is the fiscal year for all Community Colleges, except July 1, 1992 - June 30, 1993 for Fashion Institute of Technology.

**Revenue at Community Colleges for Fiscal Year 1992-93**



**Non-State Revenue Sources at Community Colleges for Fiscal Year 1992-93**



## **1. University Spending in the State of New York**

The five types of direct expenditures generated by SUNY which affect the state economy may be defined as: university purchases, expenditures for construction and rehabilitation, employee spending, student spending, and visitor spending.

*University purchases* mainly refer to purchases, capital improvement and construction. SUNY is a major purchaser of goods and services from private sector businesses in New York State, stimulating additional economic activity with every purchase. In 1992-93, SUNY's state-operated campuses spent \$592 million, community colleges spent \$275 million and the Research Foundation spent \$46 million for supplies, materials, equipment, library acquisitions, and maintenance and operation of plant. Since most of this spending was within New York State, the total in-state spending — excluding payroll expenditures and scholarships — was \$913 million.

*Expenditures for construction and rehabilitation* are another important way in which SUNY stimulates economic activity within the state. During 1992-93, \$158.8 million was expended for construction and rehabilitation of academic facilities. An additional \$9.7 million was expended to equip the new facilities; and \$9.6 million was expended for construction and rehabilitation of residential facilities. The capital expenditures of the 30 community colleges was \$7.3 million. The total expenditures of SUNY for construction and rehabilitation came to \$185.4 million in 1992-93.

*Employee Spending* - In fiscal year 1993, \$2.8 billion was paid to SUNY employees in salaries, wages, and benefits. Approximately \$2.3 billion of this is spendable income, that is, net after taxes and other deductions. This \$2.3 billion was spent in local and state economies by SUNY employees through payments, direct purchases, savings, and investments.

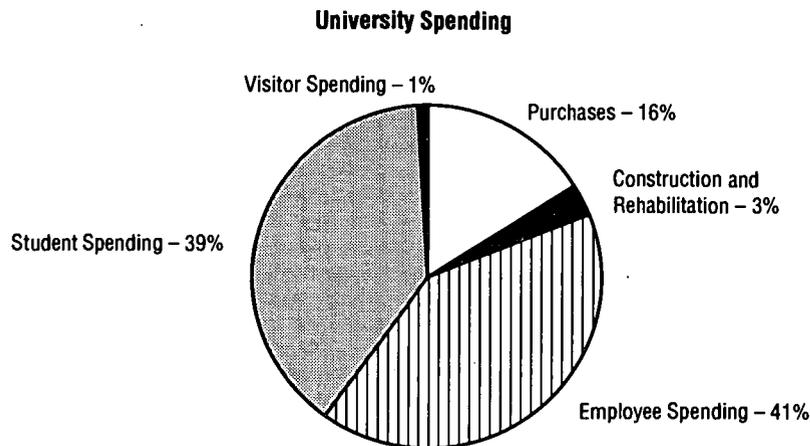
*Student Spending* is a significant factor in the economic impact of SUNY. Based on the data provided by the Office of Access Services, during 1993 the SUNY's 404,065 students spent over \$2.2 billion in the state economy, of which \$1.2 billion was spent by students at state-operated campuses and \$1.0 billion by students at community colleges. This includes expenditures for off-campus housing, food, transportation, books/supplies, and other living expenses. These expenditures go directly into the state economy, while expenditures for on-campus housing/food, tuition, and fees work their way into the economy in a more indirect manner.

*Visitor Spending* - In 1992-93, approximately 1,250,000 people visited SUNY's state-operated campuses as family members and friends, audiences for conferences, workshops, seminars, sports, arts, and special events. It is estimated, conservatively, that these visitors spent over \$50 million on food, lodging, transportation, and other miscellaneous items which directly impacted the state economy.

As a result of this spending, just over \$5.6 billion in expenditures were made by the University directly into the New York economy in 1993. This, in turn, stimulated economic activity within the state by the multiplier effect of 1.64, yielding the total economic impact of a \$9.2 billion combined effect — over 5.6 times the amount of the State's annual investment in SUNY. (The multiplier assumes that for every dollar spent by the University in the state, another 0.64 cents is generated and spent within the state.)

## University Spending within New York

|                                 |                       |
|---------------------------------|-----------------------|
| Purchases                       | \$ 913 million        |
| Construction and Rehabilitation | 185.4 million         |
| Employee                        | 2.3 billion           |
| Student                         | 2.2 billion           |
| Visitor                         | 50 million            |
| <b>Total</b>                    | <b>\$ 5.6 billion</b> |



## 2. Jobs for New York Residents

Sustained employment activity contributes directly to New York's economic stability and tax base. SUNY is among the top employers of New York State residents. It is significant that approximately 111,949 non-student jobs for New Yorkers were attributable to SUNY and its related expenditures in fiscal year 1993.

Indirect employment comes from SUNY's direct purchasing and capital expenditures.. These expenditures create a ripple effect. For instance, in 1993, SUNY purchased \$913 million in goods and services and spent \$185.4 million on construction, rehabilitation, and maintenance. It is estimated that a total of 32,952 additional jobs were created for New Yorkers through the indirect employment resulting from these activities in fiscal 1993. This estimate is based on a conservative employment multiplier of 30 additional jobs created for every \$1 million spent in the local economy.\*

### Direct employment

48,194 - # of state-operated campus employees

22,897 - # of Community College employees

7,806 - # of Research Foundation staff

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78,897

### Indirect employment

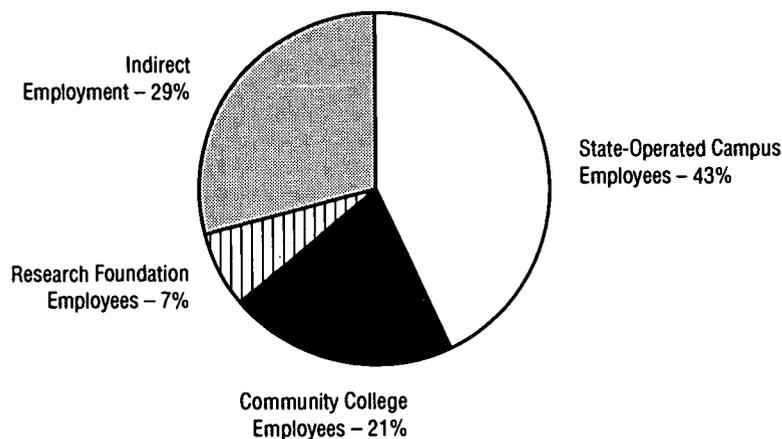
32,952 - # of estimated jobs created by SUNY purchase/capital expenditures

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111,849

\*What 100 Jobs Mean to a Community, 1993 Edition, by Markin Lofkowitz.

### Jobs for New Yorkers Created by SUNY



### 3. State Tax Revenues

Through taxes paid by its employees, students, and visitors, SUNY generates significant revenues for local and state governments.

In the past year, SUNY's employees paid state income taxes amounting to over \$116 million. In addition to the state income tax, it is estimated that SUNY's employees paid \$167 million in state sales taxes based upon spendable income of \$2.2 billion. The spending by SUNY students and campus visitors results in additional sales tax revenue for the state. While it is difficult to estimate precisely, the spending by students and visitors generated at least \$168 million in state sales tax revenue in 1993.

In addition to the direct income and sales taxes generated by SUNY employees, students, and visitors, indirect tax revenues of \$83 million are generated by induced employees of University spending. These employees generate \$34 million in income taxes and \$49 million in sales taxes. Combined employee, student and visitor spending-derived income and sales tax revenues accounted for over \$534 million for New York State tax revenues in 1993.

SUNY employees also paid \$296 million in federal income taxes, \$131 million in FICA taxes, and \$30 million in Medicare taxes. On average, more than 50 cents of every dollar SUNY employees pay in federal income and social security taxes is returned to the state in the form of benefits or services. Therefore, \$214 million of federal tax payments by SUNY employees are returned to New York State through transfer payments.

SUNY faculty and staff also contribute significantly to the tax base of local communities via property taxes. In 1993, it is estimated that local property tax paid by SUNY's employees who are home owners was \$131 million. In addition, SUNY's faculty and staff who are not home owners provide rental income for local property owners and contribute indirectly to local property taxes through rent payments. Finally, SUNY employees paid over \$6 million in local income taxes.

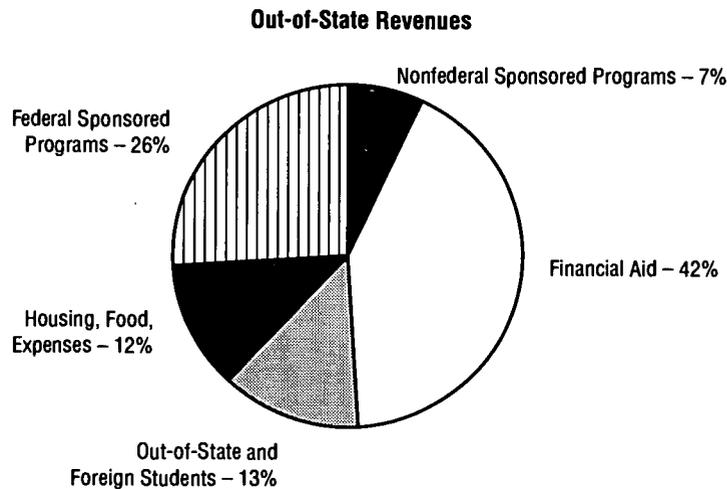
### 4. Out-of-State Revenues

SUNY also expands the state economy by attracting out-of-state dollars that enter the state through research grants and contracts, spending by out-of-state and foreign students, and federal student assistance. In 1993, \$983 million was brought into New York from outside.

SUNY has been able to attract significant research funding from outside the state through research grants and contracts. In 1993, SUNY generated substantial increases in research funding from federal and private sources. The great majority of these awards came from outside the state. During Fiscal Year 93, the Research Foundation on behalf of SUNY administered more than 7,000 sponsored program accounts with a total value exceeding \$319 million. These awards came from both federal (\$253,166,616), and non-federal sources (\$65,992,204) — the latter includes business, industry, and foundations. Such research conducted at SUNY generates economic benefits that accrue to the people of New York on many levels — by bringing in funding and by contributing to the productivity of industry throughout the state. In fact, SUNY ranks among the top institutions in the country in attracting federal funds to support research.

In the academic year 1992-93, SUNY had a total of 17,769 students from outside New York State out of an overall student population of 404,065. Nine thousand six hundred and four students were from states other than New York; 87 students from the US Territories & Possessions; and 8,078 students from 149 foreign countries. Out-of-state and foreign students spent \$123 million dollars on tuition and fees and an additional \$116 million dollars on housing, food, books and supplies, transportation, and other personal expenses during the 1992-3 academic year. The total of their spending amounted to \$239 million.

Both in-state and out-of-state SUNY students attract funds into New York by means of federal student assistance programs, which generally consist of six financial aid awards: Perkins, Stanford, and SLS Loans; FSEOG and Pell Grants, and FWS Employment. These federal financial aids were provided to 240,637 students and amounted to a total of more than \$425 million in 1993. A total of over \$983 million entered New York State from the out-of-state sources as a result of SUNY activities.



**OTHER  
ECONOMIC  
IMPACTS**

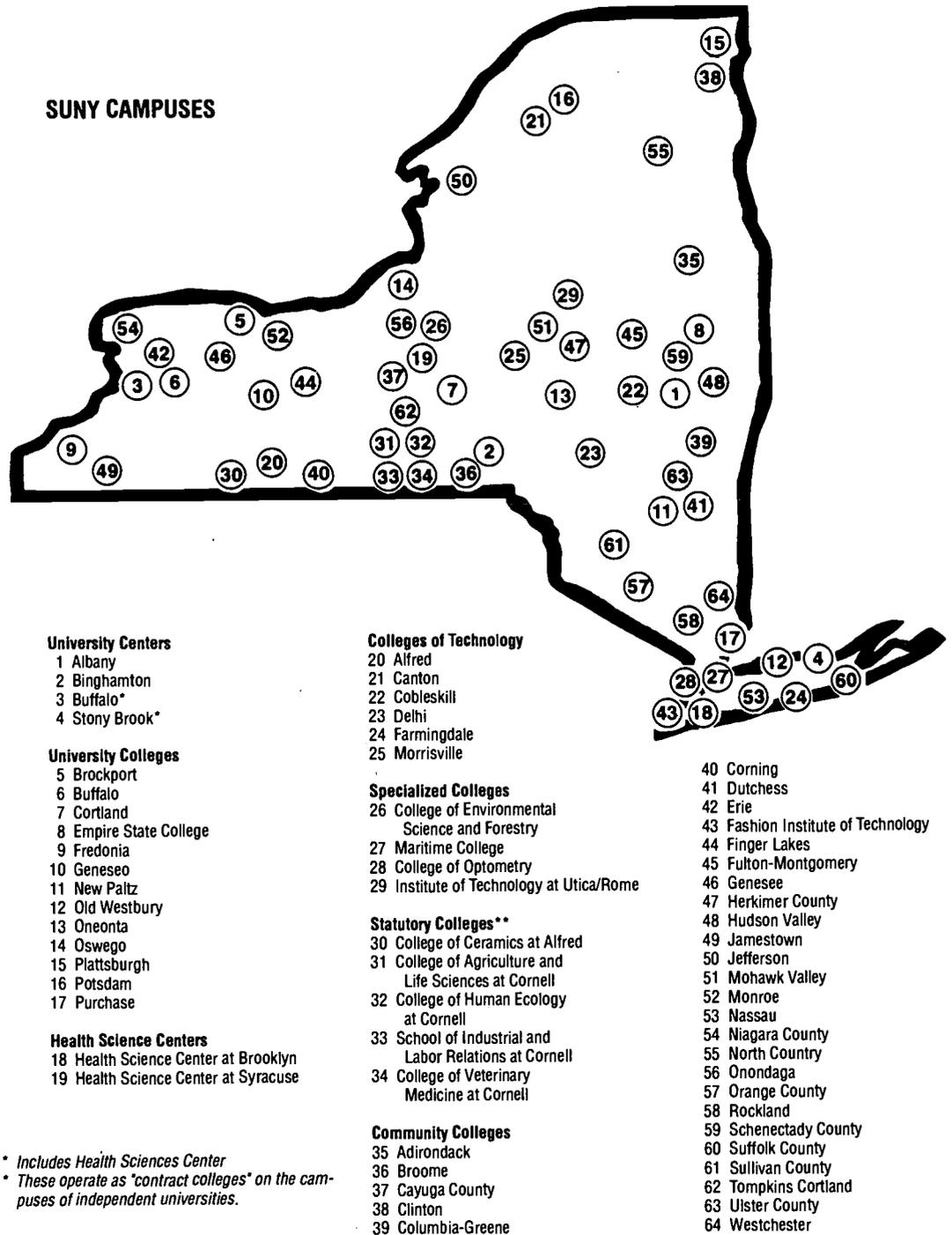
Although these benefits are often more difficult to measure, they are no less important to the economic health of New York and its communities. These benefits are considered economically indirect because the financial gains that derive from them are long-term and difficult to quantify. The indirect economic impacts include accessible and affordable quality education, work force development, sponsored research, and private giving.

**ACCESSIBLE AND AFFORDABLE QUALITY EDUCATION**

SUNY is widely recognized for the quality of its undergraduate and graduate education, the excellence of its faculty and staff, and its strength in research. Its special mission to the

people of New York is to develop the base of research and knowledge on which the state's economic life depends, and to offer every New York State resident access to the finest public higher education.

The rate of the return on investment of a college education is substantial. People with four or more years of college earn as much as 40% more than those with less education and fewer skills. This greater income of college-educated individuals has a substantial impact upon the New York State economy. The rewards of education are more than economic, however; they also create a thoughtful and informed citizenry. Both for societal and economic reasons, it is vital that quality education be accessible to all and that SUNY graduates represent the diversity of the citizens of the New York State.



One-third of all New York State high school graduates enroll at a SUNY campus. In Fall 1992, enrollment at SUNY's 64 campuses totaled 404,065, of which 246,175 were full-time and 157,890 part-time. Community colleges enrolled 203,052 and the State-operated campuses enrolled 201,013, of which 161,703 were undergraduates and 39,310 graduates. New York residents made up 95.7% of the student population; 2.3% were from other states, and 2% were foreign students. Among the SUNY student population, 55.4 percent were women and 14.6 percent minorities. One-third of SUNY's students are 25 years of age or older. SUNY's total enrollment is close to half of the total college student population in New York State.

## **NATIONAL RECOGNITION**

### ***Money Magazine: Best College Buys 1994***

*Money* magazine featured five SUNY campuses in the top 50 institutions in the country. These rankings placed New York State ahead of all other states in terms of the number of public colleges and universities represented. SUNY University Centers at Binghamton and Albany were ranked 9th and 18th respectively, and were joined in the "top 50" by the University Center at Stony Brook (20th), the College at Geneseo (29th), and the University Center at Buffalo (31st). In addition, *Money* magazine rated Binghamton the number one "Best Buy" in the Northeast, and placed five other SUNY schools — Albany, Stony Brook, Geneseo, and the University Colleges at Buffalo and Fredonia — among the top 25 in the same category.

### ***U.S. News & World Report: America's Best Colleges 1994***

*U.S. News and World Report's* 1994 Fall issue ranked all four of SUNY's University Centers — Binghamton, Buffalo, Stony Brook, and Albany — in the top 25 in the nation for best college value, ranking 8th, 16th, 22nd, and 23rd respectively. The University Colleges at Geneseo, Fredonia, and Oswego ranked among the top five regional colleges and universities in the North.

### **Association of American Universities (AAU)**

SUNY at Buffalo was recently elected to membership in the Association of American Universities, the first and only public research institution in New York and New England invited to join this organization.

### **Work Force and Entrepreneurial Development**

New York State's industries and businesses rely upon State University as a source of well-educated employees. SUNY has contributed to the development of the work force in New York by providing citizens with a wide range of accessible and affordable educational opportunities. (SUNY enrolls African, Asian, Hispanic and Native American students at a rate faster than any other state higher education system.) Through partnerships with business and industry, the assistance provided to small businesses and to minority-owned businesses, SUNY has tremendous impact on the economic well-being of New York State.

Non-credit instruction remains important to adults at transition points in their lives. Adults considering a career change or career advancement, or those seeking personal growth and development, most often turn or return to higher education. SUNY institutions have responded to the demand for adult education with an array of non-credit instructional activities. For example, the number of these non-credit activities offered in the last six months of

1992 was nearly 13,000, with almost 450,000 participants. Examples of non-credit instructional activities for adults and in-service education include: Careers in Technology, Choices and Changes for Women, Start and Finance a Computer Enterprise, Economic Education Workshop for Teachers, Project Management, Telemarketing Techniques, etc.

Work force training is provided to over 90,000 individuals annually through 3,000 separate courses across the SUNY system. Work force training has become a central part of the mission of SUNY's community colleges. SUNY's Office of Economic Development established the Workforce Institute as a resource for work force education practitioners who must keep pace with the changes in today's workplace and develop a more productive and competitive work force.

Entrepreneurs and small business owners receive direct one-to-one counseling, training, and targeted research through SUNY's Small Business Development Center (SBDC). Since 1984, the SBDC has supplied small business owners and entrepreneurs with management, business, and technical assistance to resolve problems, increase productivity, and improve profitability. In 1994, entrepreneurs and small business owners, with SBDC assistance, invested over \$100 million in New York State. These investments generated New York State tax receipts of almost \$19 million. Recent studies have noted that SBDC-assisted entrepreneurs and small businesses have dramatically improved their "survivability" and are long-term revenue and job generators for New York State.

## **SPONSORED RESEARCH, DEVELOPMENT AND TRANSFER OF NEW TECHNOLOGY**

SUNY has been able to attract significant research funding from the public and private sectors. Research provides the knowledge needed to solve the increasingly complex technological and social problems facing the State and the nation. Research and externally funded programs at SUNY, administered by the Research Foundation, have more than doubled in the past ten years to \$330 million in expenditures. The 7,000 sponsored research programs conducted by SUNY benefit the economic development of the regions in which they are located and beyond. For the fiscal year ended June 30, 1993, expenditures of research programs totaled \$319,100,000 in salaries, supplies and equipment, representing an increase of 8 percent over the previous year. Examples of SUNY research programs include:

- Three Center for Advanced Technology (CAT) awards in 1993. Binghamton's research in electronic chip packaging earned the Integrated Electronics Engineering Center; Albany's Joint Laboratories for Advanced Materials — nationally recognized for approaches to fabricating computer chips — form the core of a CAT in Advanced Thin Films and Coatings; and Stony Brook's Center for Biotechnology — established in 1983 to foster business/faculty collaboration in biomedical technology — were designated CATS.
- SUNY at Albany's School of Public Health, with State University College at Oswego and Syracuse University, received a \$4.9 million, three-year federal Superfund grant to conduct a wide-ranging study of the impact of PCBs and their byproducts on the Akwesasne Reservation in northern New York State.
- A \$4.7 million grant from the National Institutes of Health supports AIDS research through the University at Buffalo's Center for Applied Molecular Biology and Immunology.
- SUNY at Buffalo's Center of Excellence for Document Analysis and Recognition (CEDAR) is the first such center to be designated by the US Postal Service. The only one dedicated to handwriting recognition, CEDAR receives an average of \$3.5 million in funding each year to develop technologies that can deal with handwriting in all of its varieties.

- Five physicists at SUNY at Stony Brook have received a \$9 million, five-year grant from the National Science Foundation to continue work-in-progress at Stony Brook's Nuclear Structure Laboratory.
- Basic research at the SUNY Health Science Center at Syracuse on cardiac arrhythmias — research that may eventually prevent and cure cardiac arrest, which claims 300,000 lives each year — is in the third year of a five year \$6.4 million National Institutes of Health grant.
- At the SUNY College of Optometry, the Schnurmacher Institute for Vision Research has completed its first decade, and received over \$12 million in federal, state, and corporate grants in support of scientific investigation into the structure and function of the human visual system.
- At the SUNY College of Environmental Science and Forestry, energy is the common thread in more than 30 percent of current funded research. One cooperative project, Research on Energy and Materials Conservation (REMCO), represents a three-year commitment of \$1.2 million from Niagara Mohawk Power Corporation and the NYS Energy Research and Development Authority.
- State University College at Buffalo has garnered \$1.1 million in funding from the NYS Education Department, the Buffalo Board of Education, the Research Foundation, the Private Industry Council, and business and industry for innovative precollegiate and special programs focusing on encouraging at-risk students to complete high school, pursue higher education, and develop career goals.
- State University College at New Paltz was awarded a three-year, \$645,647 grant from the Public Health Service to implement a new graduate program in gerontological nursing. The SUNY Institute of Technology at Utica/Rome received \$579,000 in federal funding to offer an adult nurse practitioner graduate degree.
- SUNY's Colleges of Technology at Morrisville, Cobleskill, and Alfred are participating in a multi-campus venture called Agri-Tech Prep 2000 with a goal of establishing a statewide agricultural curriculum. A \$250,000 five-year grant from the NYS Education Department has funded the project.
- SUNY's Office of International Programs, in conjunction with Empire State College, provides technical support, services, and expertise to the Russian Federation to establish a national distance learning center in Moscow. Another initiative, funded by \$1.5 million from the US Agency for International Development, is helping Bolivia build democratic legislative staff capabilities.
- The University at Albany continues to build its atmospheric sciences program to a position of international prominence. GRI funding made it possible to attract two major research teams, both of whom have been awarded several million dollars per year in external funding from NASA, NSF and the U.S. Department of Energy.

Many new products and services are tangible outcomes of research and development and transfer of new technology at SUNY. New York's businesses and industries benefit from technologies developed on SUNY campuses and patented through the Research Foundation's technology transfer program. More than 1,100 research technology disclosures have been filed with private business since the Technology Transfer Office (TTO) was established in 1979. New disclosures are being accepted at a rate of 150 per year. TTO and campus offices report more than 190 active US patents today. Royalties from licensing these technologies have earned SUNY more than \$5 million. Since 1987, the Research Foundation's technology transfer program has consistently ranked among the top 20 research universities nationally and in the top 10 in issued patents among United States universities engaging in significant research and development.

## **PRIVATE GIVING**

SUNY has experienced increasing success in its ability to raise funds from private sources. These funds are usually restricted and represent enrichment opportunities that augment the missions of the campuses. In fiscal year 1993, the state-operated campuses raised a total of \$50.3 million, and the community colleges raised \$8 million. Gifts from private sources in 1993 totaled \$58.4 million, down 3.1% from 1992.

## **GENERAL IMPACTS**

As a modern public university system meeting the needs of an increasingly diverse population, SUNY provides service to the citizens, businesses, and government of New York State. New incubator facilities at SUNY provide lab space, basic services, and faculty expertise to fledgling companies. Albany's Center for Environmental Sciences and Technology Management will house the Weather Forecast Office, Atmospheric Sciences Research Center, Department of Atmospheric Science, Center for Advanced Thin Films and Coatings, an x-ray optics research program, and other high-technology, business development, and incubator programs. The Incubator for Design and Engineering Applications at State University College at New Paltz will offer a network of services and equipment to engineers, designers, and other entrepreneurs to help develop commercially viable programs, designs, and products. The Albany and New Paltz incubators join SUNY at Stony Brook's Long Island High Technology Incubator and two incubator facilities at SUNY at Buffalo to create a system of five strategically placed incubator facilities.

SUNY's Program for the Disadvantaged, consisting of Educational Opportunity Programs (EOP) and Educational Opportunity Centers (EOC), has increased higher educational opportunities for more than 318,000 New York State residents over the last 24 years. 11,300 students at 48 campuses are receiving tutoring and counseling to improve scholastic performance in college courses. Since EOP began, these programs have awarded 25,355 degrees. A total of 112,355 students have participated in EOP since its inception. At EOC (11 locations across the state), an additional 14,000 students are improving educational competencies, preparing for college entry, or receiving occupational training. The BRIDGE program is aimed at providing employment training for people receiving public assistance and is offered through the EOC. With funding from the federal JOBS program and the state, an estimated 3,200 clients in 1993-94 will receive educational and vocational training services to prepare them for the work force.

SUNY's libraries circulate over 6 million informational materials and documents each year. Of these, over a third of a million were made available to the wider community by lending materials to non-SUNY institutions, including public, school, special and business libraries. The SUNY Office of Library Services' SUNY/OCLC Network provides services and support to 330 libraries in New York State. The OCLC system has processed more than 48 million interlibrary loan requests since April 1979, establishing nationwide and international access to library resources for all New York member libraries. SUNY's libraries are an important resource for New York State.

SUNY's involvement in the health sciences is extensive and carries with it considerable benefits to the citizens of New York State. Hundreds of thousands are served each year by medical and health sciences faculty and students in University hospitals and clinics or affiliated hospitals. The following figures attest to SUNY's share in health care delivery to New York residents during fiscal year 1992-93: 475,406 in-patient days, 1,083,550 ambulatory care visits, 78,170 Emergency Room visits, 74,310 Dental School Clinic visits, 60,000 College Clinic visits, 9,300 visits to affiliated clinics.

SUNY's thousands of employees and student body not only work and do research within

the University, they and their spouses make important contributions to the quality of life of New York State through volunteering thousands of hours of time to community organizations and activities. School and library boards, volunteer fire departments, ambulance corps, and charitable and religious organizations are a few of these organizations. SUNY employees serve their communities in many ways: as consultants to businesses, government, school districts, and not-for-profit organizations, as volunteers in every area of community need, and as full participants in the cultural, social and political life of their communities.

The arts are very important to New York's economy, and SUNY contributes to a flourishing arts industry that increases property values, attracts tourists, and helps retain corporations. SUNY has more than 90 theaters and 40 galleries and museums across the state offering a wide variety of campus productions in music, theater, dance, performances by outstanding guest artists, poetry readings, film series, and a number of exhibitions each year. SUNY's arts faculty contributes to the state's economy as professional artists and performers. In both large and small venues, SUNY enriches, delights, and educates its audiences with thriving cultural programs that serve their regions with distinction. In many areas of the state, SUNY serves as the primary cultural center.

In addition, the sports programs and the public use of SUNY's facilities, such as gymnasiums, swimming pools, etc., are considerable contributions made by SUNY to the residents of New York State. All these programs and activities by SUNY have a significant impact on the economy and the quality of life in New York State. It is impossible to put a dollar value on these contributions, but they must be taken into account in assessing the total impact of SUNY on the state economy. The lives of hundreds of thousands of citizens are improved because of their experiences at SUNY.

## **CONCLUSION**

The annual economic impact of SUNY on the State of New York is considerable. Over \$5.6 billion of the State's economy was the result of spending by SUNY, its employees, students, and visitors in New York State in 1993. This in turn stimulated other economic activities within the State, which had the effect of multiplying the impact of these university and university-related expenditures. A conservative spending multiplier of 1.64 was used to account for the additional business volume that results from the re-spending that occurs. The total economic impact of SUNY on the economy of New York State in 1992-93 is estimated to be \$9.2 billion.

SUNY provides direct employment to 78,997 people at its own facilities. SUNY's purchasing and capital expenditures also created additional jobs for New York residents. It is estimated that approximately 32,952 additional jobs were created due to the economic activities of SUNY. Taken together, the total number of jobs attributed to SUNY is 111,949, including direct and indirect employment.

Through the taxes paid by its employees, students and visitors, SUNY generated significant revenues for local and state governments. In 1993, SUNY employees paid \$116 million in state income tax, \$167 million in state sales tax, and about \$131 million in local property tax. The spending by students and visitors resulted in about \$168 million in sales tax revenue for the state. These taxes added up to \$582 million of New York State's tax revenues in 1993.

SUNY also expands the state economy by attracting out-of-state dollars which enter New York State through research grants and contracts, spending by out-of-state and foreign students, and federal student assistance. In 1993, over \$983 million was brought into the state economy through SUNY from outside New York State. This is a laudable achievement in any economic situation, but especially significant in today's economic climate.

Beyond the short-term effects of SUNY's direct spending are the long-term economic dividends of public investments in the university's teaching, research and service programs.

Although these indirect economic impacts of SUNY are often more difficult to measure, they are no less important to the future economic health of New York State. SUNY makes important contributions to the state's economic development by providing accessible and affordable quality education to the citizens of New York, which enables them to work productively and to compete effectively in an economy that places a premium on high-quality human resources.

There is almost no aspect of New York's life that is not taught or researched at SUNY. Despite the cumulative effect of budget cuts, SUNY has maintained the ability to deliver quality education opportunities, uphold its reputation for excellence, and enhance the State's investment in its institutions and academic programs.

Today's economy demands a sophisticated and well-educated work force and New York State's industries and businesses rely upon State University as a source of well-educated employees. SUNY is continuing to provide a wide range of educational opportunities and to prepare New York residents of all ages for the demands of a changing workplace. Its 64 campuses offer a total of 4,929 different academic programs for undergraduate, graduate, and professional students. SUNY awarded 76,587 degrees and other formal awards in 1992-93. Over the past ten years, SUNY has awarded a total of 663,233 degrees. SUNY proudly counts more than 1.4 million graduates who work and live in New York State, contributing to the economic and social vitality of the state.

Research conducted at SUNY generates economic benefits that accrue to the people of New York on many levels — by attracting funding and contributing to the productivity of industries throughout the state. Many new products and services are tangible outcomes of research and development and transfer of new technology at SUNY. Research at SUNY has unlimited potential for solving economic problems, creating economic opportunities, improving the environment, and enhancing the quality of life.

According to the Current Population Report (1993) of the U.S. Bureau of the Census, in 1990 the average college graduate's monthly income was \$1,039 more (\$4,961 for people with medical degrees) than the income of an employee with only a high school diploma. Therefore, the college graduate makes, on average, about \$12,000 a year (\$59,500 more for medical school graduates) more than the high school graduate. Given this average increased earning power, SUNY graduates each year add \$16.8 billion to New York's economy and tax base. Furthermore, these educated and skilled New Yorkers are attracting both business and industry, which are essential to the state's continued economic development.

Thus, SUNY is an engine of economic recovery. New York and the nation depend on higher education for a strong economic recovery. SUNY educates the future work force, and performs research in the sciences and technologies crucial to New York State's economy. SUNY's graduate and research programs play a key role in the creation and management of new technologies, and technical programs for the re-education of the work force.

Investments in training, education, and research create the most flexible, adaptable and responsive work force. If New York's business organizations are to succeed in today's marketplace, they need the best technology, the latest research, and the most knowledgeable workers. The state's investment in SUNY helps ensure a vital and strong university system that will continue to play a major role in the economy and well-being of the state and its citizens.

Time and circumstance have woven together New York State and SUNY into a dynamic partnership characterized by mutual support, cooperation, and shared goals. SUNY strives constantly to adapt to the changing needs of New York and its citizens today and in the future.

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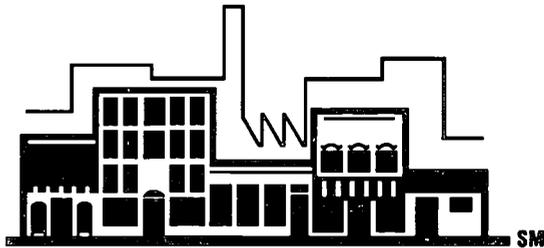
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*This publication is based upon work supported by the US Small Business Administration (SBA) under cooperative agreement number 5-7770-003310.*

*The support given by the US SBA through such funding does not constitute an express or implied endorsement of the participant's opinions, products, or services.*

*Jinshui Zhang  
Principal Investigator*



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