

A Partner in New York's Growth:

**The Economic Impact of New York University on
New York City and New York State in Fiscal Year 2009
&
The Impact of the University's Proposed
2031 Development Plan**

Appleseed

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Highlights

Higher education has, since the early 1990's, been one of New York City's leading growth industries – and New York University (NYU) has been a major contributor to that growth.

NYU's Washington Square Campus: A Major New York City Enterprise

- With more than 16,200 full- and part-time employees (excluding students) in the fall of 2008, NYU's Washington Square campus is one of the City's largest private employers.
- Through its purchases of goods and services, and its investments in construction in fiscal year 2009, NYU's Washington Square campus directly supported more than 2,100 full-time-equivalent (FTE) jobs with its suppliers and contractors in New York City.
- Off-campus spending by NYU students in fiscal year 2009 directly supported more than 2,000 FTE jobs in New York City.
- Taking into account both the direct impact of University and student spending and the indirect (or "multiplier") effect of that spending, we estimate that in fiscal year 2009 NYU's Washington square campus directly and indirectly accounted for more than \$2.25 billion in economic output in New York City, and more than 24,800 jobs.
- Through income taxes paid by its employees, taxes paid by its suppliers and contractors (and their employees), and taxes derived from jobs and economic activity associated with the multiplier effect, we estimate that in fiscal year 2009 NYU directly and indirectly generated \$77.8 million in New York City tax revenues, and \$64.1 million in New York State tax revenues.

Education, Research and Business Development

- Both by educating New York City residents and by attracting students from throughout the U.S. and around the world, NYU helps the City attract, develop and retain the "human capital" on which the future of its economy depends.
- NYU's strengths in undergraduate, graduate and professional education are well-matched with the industries that drive NYC's economy, and will shape its future, including finance, professional services, media and the arts, information technology, health care and non-profit organizations.
- Many of those attracted to NYU stay here – as of 2009, 32 percent of all NYU alumni lived in NYC.
- Research spending at NYU's Washington Square campus in fiscal year 2009 totaled \$83.2 million – an increase of 47 percent since 2002. Research at NYU (nearly three-quarters of which is financed with federal funds) generates new knowledge in areas such as neuroscience, computer science and digital media that can provide a basis for future economic growth.
- The University also contributes to economic growth in New York City by supporting the creation of new businesses that are developing for commercial use new technologies

invented at NYU; and by preparing both undergraduate and graduate students for careers as entrepreneurs.

Stronger School and Neighborhoods

- NYU also contributes to the vitality of New York City's economy through its participation in efforts to improve the quality of elementary and secondary education and by providing a broad range of community services in neighborhoods throughout the City.
- In 2008-09, more than 15,000 NYU students engaged in some form of community service. These students provided approximately 1.4 million hours of service – the equivalent of having 700 people engaged full-time in serving the community.

Growing New York's Future: NYU 2031

- Between 2010 and 2031 – the University's 200th anniversary – NYU plans to develop approximately 6.2 million square feet of new and renovated space, including classrooms, research labs, office space, student and faculty housing and other facilities, at a cost of approximately \$6.2 billion.
- NYU's 2031 plan represents one of the largest private investments likely to occur not just in higher education, but in *any* of NYC's growth industries during the next 20 years.
- This new space will be developed at several locations – at the existing Washington Square campus, on other sites in the surrounding neighborhood, in the health sciences corridor along First Avenue, in downtown Brooklyn (near the campus of the Polytechnic Institute of NYU), and at other locations (possibly including Governors Island).
- NYU's \$6.2 billion investment will generate an average of 2,400 FTE jobs each year for the next 20 years (directly and through the multiplier effect).
- We estimate that, directly and through the multiplier effect, construction of University facilities will generate an average of \$26.8 million in New York City tax revenues each year through 2031, and \$21.1 million in New York State tax revenues (in 2009 dollars).
- The program will provide the new space and facilities that NYU needs to increase its contribution to the development of New York's human capital, and to sustain the growth of its research enterprise.
- When fully built-out and occupied, we estimate that the new facilities envisioned in the NYU 2031 plan will support the creation of more than 6,900 permanent new jobs at NYU and in associated retail, restaurant and hotel businesses.
- Directly and through the multiplier effect, we estimate the expansion of University operations and associated retail, restaurant and hotel businesses would add more than \$1.1 billion in economic output in New York City (in 2009 dollars) and about 9,575 jobs.
- When the facilities envisioned in the NYU 2031 plan are fully occupied, we estimate that expanded University operations and the associated retail, restaurant and hotel activity would – directly and through the multiplier effect – generate \$67.8 million annually in New York City tax revenues, and \$54.4 million in New York State tax revenues (in 2009 dollars).

Introduction

In December 2009, the recession of 2008-2009 had led to a loss of 121,000 payroll jobs in New York City – a decline of 3.2 percent – and an increase in the City’s unemployment rate to 10.4 percent.¹ By January 2011, total numbers showed that the City lost 141,300 jobs since the recession began in the Spring of 2008; much less than the estimated 179,000 jobs. Additionally, these numbers less severe than the losses suffered at the national level. Between December 2007 and December 2009, payroll employment in the U.S. fell by 5.1 percent and unemployment in the City held just below the national average in January 2011.²

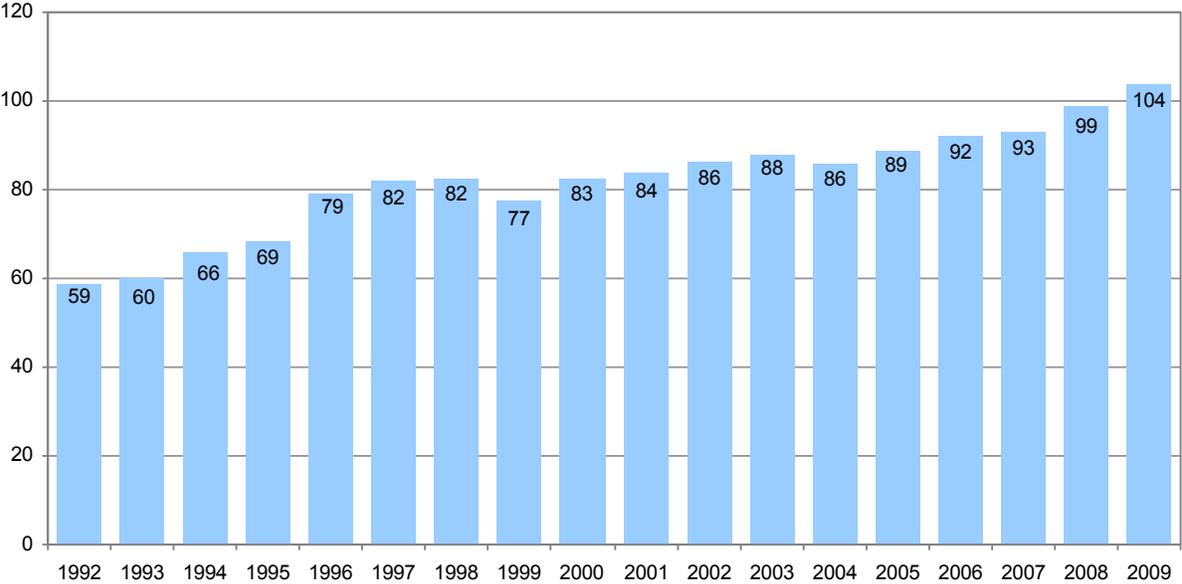
The fact that the City has survived the recession relatively well should not, however, be cause for complacency. At both the national and local levels, most economists expect that the process of recovery from the recession of 2008-2009 will be slow and painful. Given the damage done by the recession, the prospect of a slow recovery – and the reality that further shocks to the City’s financial sector may still lie ahead – it is natural for New Yorkers to ask which industries, and which economic forces, might drive the next round of economic growth. One of the most promising places to look is a sector that has been a significant source of growth in New York City since the 1990’s, and which has continued to grow during the current recession – the City’s colleges and universities.

As Figure 1 shows, between October 1992 and October 2009, college and university employment in New York City grew by 77 percent, compared to an increase of 16 percent in total private payroll employment. Colleges and universities, moreover, are not only an important industry in themselves – they also contribute to the vitality of the City’s economy through their mission of education, research, business development and service to the community. They are thus well-positioned to play a central role not just in recovery from the current recession, but in assuring that New York prospers in the long run.

¹New York City Independent Budget Office, *A Cautiously Better Outlook: Fewer Job Losses, Higher Tax Revenues*, December 2009.

² New York Times: New York City Fared Better in Recession Than Thought, March 9, 2011

Figure 1: College and University Employment in New York City, October of Each Year (thousands)



Among New York’s colleges and universities, none has played a greater role in the growth of the City’s higher education sector since the early 1990’s than New York University. Between 1993 and 2008, undergraduate and graduate enrollment at NYU grew by 30 percent – research spending grew by 140 percent – and the University emerged as a national leader in bringing the results of University research to the marketplace. NYU today is a major global university, ranked among the top twenty universities in the United States.

Moreover, both its existing programs and its plans for development through 2031, when the University will mark its 200th anniversary, suggest that NYU can be a significant contributor to the City’s continued growth, and to the economic well-being of its residents.

This report highlights New York University’s current impact on the economy of the city that has been its home since 1831 – how that impact has grown in recent years – and how the University’s plans for development over the next twenty years will help to strengthen New York City’s economy.

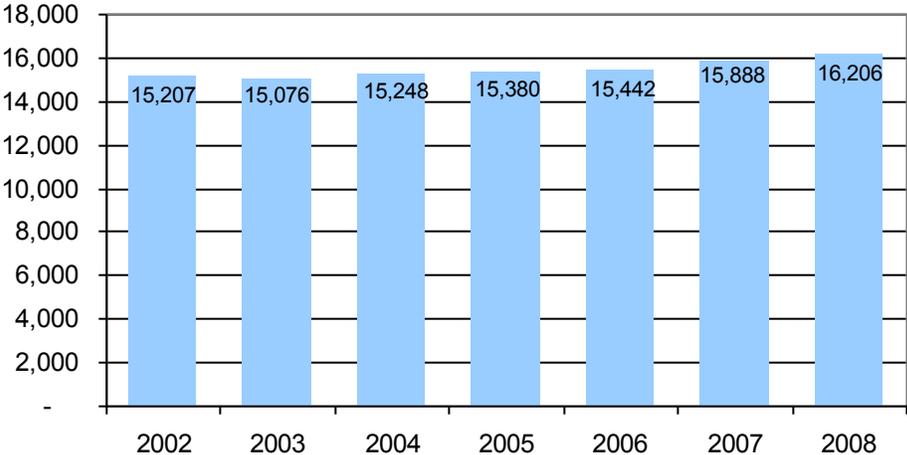
Part One: A Major New York Enterprise

With revenues of more than \$2 billion in fiscal year 2008, New York University³ is a major enterprise in its own right – a major employer, and a generator of jobs in New York City through its purchases of goods and services and its investments in University facilities. NYU is also a growth enterprise, having added nearly 1,000 jobs between 2002 and 2008.

NYU as an Employer

As of the fall of 2008, NYU’s Washington Square campus employed 16,206 people, including 9,155 full-time and 7,051 part-time employees. (In addition to these regular employees, the University employed 9,091 student workers). NYU’s payroll in calendar year 2008 totaled \$732 million. As Figure 2 shows, employment at the University grew by 6.6 percent between 2002 and 2008 – slightly faster than the 6.1 percent increase in total employment in the City during the same period.

Figure 2: Full-time and Part-time Employment, fall of 2002 through fall of 2008

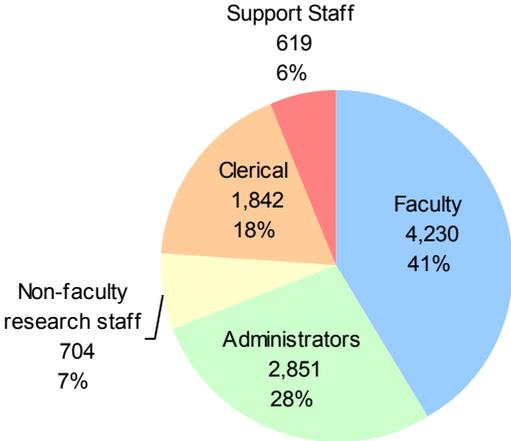


³ New York University can be defined as consisting of three major units: the Washington Square campus, the NYU Langone Medical Center, and the Polytechnic Institute of NYU. The Washington Square campus includes most of the University’s undergraduate, graduate and professional schools, as well as the School of Continuing and Professional Studies. The Medical Center includes three hospitals – Tisch Hospital, the Rusk Institute for Rehabilitation and the Hospital for Joint Diseases – as well as the NYU Medical School. Polytechnic has merged with NYU; but in the period under study here it was, in most respects, operationally independent. In our analysis of the University’s current impact, this report focuses primarily on the impact of the Washington Square campus; and except where otherwise specified, “NYU” and “the University” as used in this analysis refer to the Washington Square campus. In our analysis of the impact of the planned development of NYU during the next twenty years, however, we include planned developments in all three major units of the University.

NYU is notable not only for the number of people it employs, but for the diversity of job opportunities it offers. As

Figure 3 shows, about 41 percent of all jobs (as measured on a full-time equivalent basis) were faculty positions, and about 7 percent were for non-faculty research staff. About 24 percent of the University’s full-time equivalent workforce was comprised of clerical workers and support staff, and 28 percent were administrators.

Figure 3: Full-time Equivalent Employment by Occupational Category



As shown in

Table 1, the average annual earnings of full-time employees ranged in 2009 from \$37,444 for clerical and technical workers to more than \$113,000 for full-time faculty members.

Table 1: Annual Earnings for Full-Time, Full-Year Employees by Occupational Category

<i>Occupational category</i>	<i>Annual earnings</i>
Faculty	\$ 113,061
Non-faculty research staff	40,936
Administrators	71,838
Clerical/technical	37,444
Support staff	60,255

As Figure 4 shows, more than 12,000 (about 81 percent) full-time and part-time NYU employees lived in New York City during the fall of 2008. Another 500 lived elsewhere in the New York State.

Figure 4: Employment by Place of Residence, fall of 2008

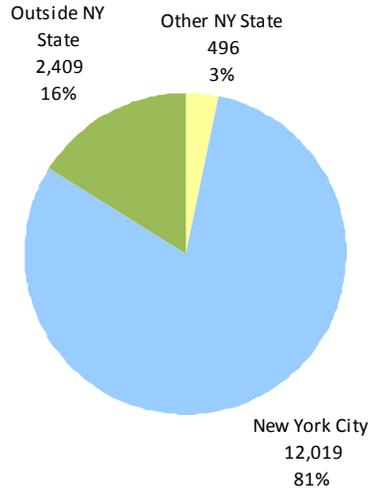
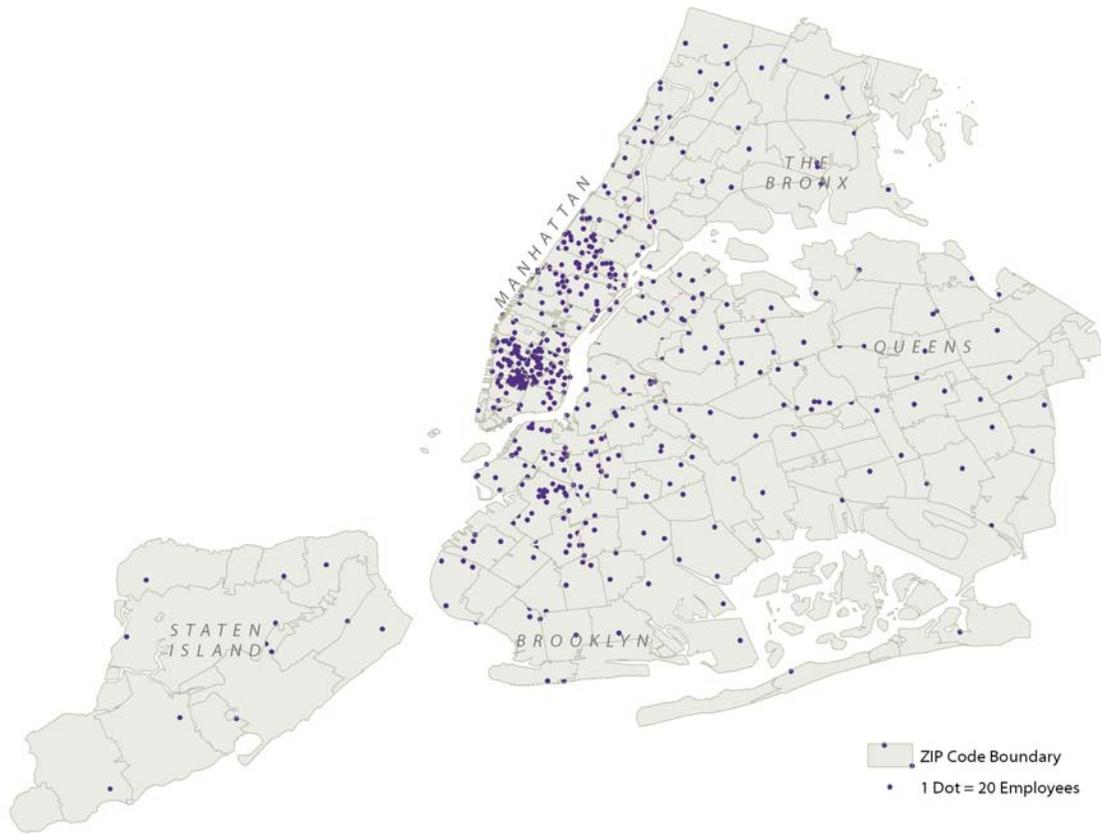


Figure 5 shows the distribution of NYU employees within the City, by ZIP Code of residence. While a majority of all New York City residents employed by NYU live in Manhattan, the University employs thousands of residents of other boroughs as well.

Figure 5: Map of NYU employees in New York City, distributed by ZIP code



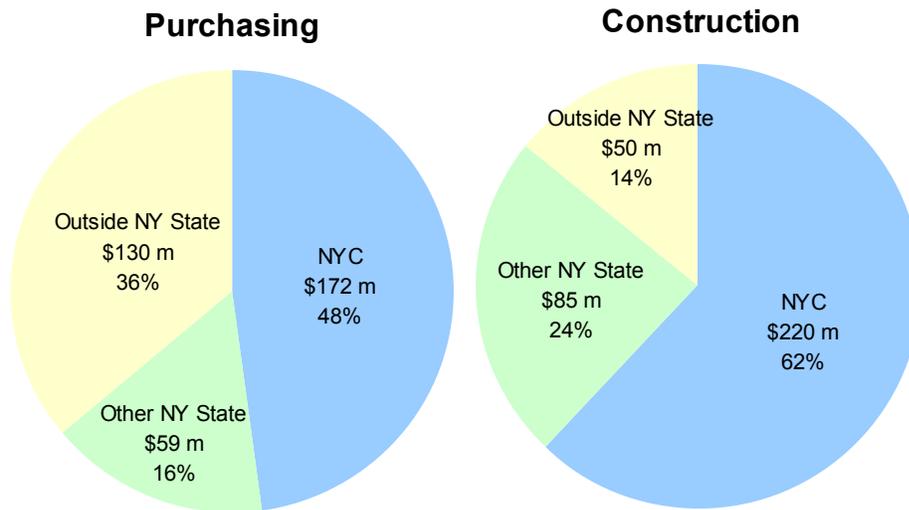
Generating Jobs through Purchasing and Construction

In addition to its role as a major employer, NYU creates jobs in New York City through its purchases of goods and services and its investments in University facilities. In fiscal year 2009, NYU spent \$361 million on purchases of goods and services, including \$172 million paid to New York City companies, and \$58.7 to vendors based elsewhere in New York State.

NYU also invested \$355 million in fiscal year 2009 in construction of new and renovation of existing University facilities. Of this total, \$220 million (about 62 percent) was paid to New York City-based contractors; and about \$85 million with contractors elsewhere in New York State. The following are some of the major projects completed or under way in fiscal year 2009.

- The University converted 12-16 Waverly Place into the Center for Genomics and Systems Biology, a world-class biological sciences research facility. The project included a 20,000 square foot extension, creating approximately 70,000 square feet for classrooms, laboratories, faculty offices, conference and meeting rooms. The façades of the original buildings were preserved and restored. The Center was completed in the summer of 2010.
- The 84,500 square-foot Stern Concourse and Gould Plaza renovation improved connections between three of Stern's facilities: Tisch Hall, the Henry Kaufman Management Center, and Shimkin Hall. The project included new state-of-the-art classrooms, an Undergraduate Learning Center and a Faculty Behavioral Research Center.
- In September of 2009, the NYU School of Law completed the conversion of office space at 22 Washington Square North into a Legal Research Center.
- In May 2009, NYU opened its newest student residence, Founder's Hall, on 12th Street. The building houses more than 700 first-year students, 25 resident assistants and several live-in professional staff. The 190,000 square-foot building also includes a large outdoor courtyard, a community garden, and wi-fi access throughout the lobby and lounges.
- New York University replaced and expanded its Cogeneration Plant. The upgrade increases the plant's output, energy efficiency, and overall environmental performance. In addition to providing hot water to 40 NYU buildings, the new plant also provides electrical power to an additional 18 to 20 NYU buildings. The plaza above the Cogeneration Plant was transformed into the Mercer Street Garden; an 8,000 square feet open space that serves both the University and the community.
- NYU is working on the transformation of a recently purchased site on Washington Square South and Thompson Street into a Center for Academic and Spiritual Life. The building will provide a shared space for NYU students' religious and spiritual activity and provide additional academic space for the Washington Square campus. Facilities will include space for religious observance; offices for the NYU Chaplains' Circle; classrooms; music practice and rehearsal spaces; conference rooms; and space for independent use by the Archdiocese of New York. The center will be constructed to LEED Silver standards and is scheduled for completion in the fall of 2011.

Figure 6: Distribution of Purchasing and Construction Spending, by location of Vendor/Contractor, FY 2009 (\$ millions)



We estimate that the University’s purchases of goods and services from New York City companies directly supported 1,209 full-time-equivalent (FTE) jobs with these companies; and that payments to New York City construction contractors directly supported 905 FTE jobs in fiscal year 2009.

Indirect and Induced Impact

The jobs and economic activity generated by New York University’s spending on payroll, purchasing, and construction are not limited to the direct impacts cited above. Some of the money that NYU pays to local suppliers and contractors is used to buy goods and services from other local companies; and the latter companies in turn buy goods and services from still other local businesses. University employees, and the employees of its suppliers and contractors, similarly spend part of their earnings locally – on housing, utilities, food, transportation, child care, personal services, and other household needs.

Using a tool of economic analysis called an input-output model, we can measure these indirect and induced (or “multiplier”) effects of University spending. We estimate that in New York City, NYU’s spending on payroll, purchasing, and construction in fiscal year 2009 indirectly generated:

- More than \$764.5 million in economic activity throughout the City;
- 3,771 full-time-equivalent jobs, and
- \$126.6 million in employee compensation.

Throughout New York State (including New York City), NYU’s spending indirectly generated:

- Approximately \$966.8 million in economic activity;
- 5,472 FTE jobs; and
- \$154.4 million in employee compensation.

Table 2 below summarizes the total economic impact of New York University’s operations during fiscal year 2009.

Table 2: Economic Impact of NYU's Washington Square Campus as an Enterprise, FY 2009

	<i>Direct University spending</i>		<i>Indirect and induced impact of spending by vendors, contractors and employees</i>		<i>Total impact</i>
	<i>Payroll</i>	<i>Purchasing / construction</i>	<i>Impact of employee spending</i>	<i>Impact of vendor and contractor spending</i>	
New York City	\$732.4 million 16,206 jobs	\$392.1 million 2,114 FTE	\$551.0 million 2,483 jobs	\$213.5 million 1,288 FTE	\$1.9 billion 22,091 FTE
New York State	\$732.4 million 16,206 jobs	\$535.8 million 2,974 FTE	\$642.3 million 3,443 FTE	\$324.5 million 2,029 FTE	\$2.2 billion 24,651 FTE

Impact of Student and Visitor Spending

NYU also contributes to the economy of New York City by attracting students and visitors from around the country and the world. Spending by students and visitors supports employment in a variety of local industries; including housing, restaurants, hotels, retailing and entertainment.

Student spending

NYU enrolled 41,426 undergraduate and graduate students in the 2008-09 academic year. Based on data provided by the University, we estimate that students living in a dormitory or NYU-owned apartment spend an average of about \$1,800 on miscellaneous personal expenses off-campus; and students living off-campus, about \$14,685. To calculate the impact of summer students, we assumed that summer students would spend a quarter of the amounts spent during the academic year. We further assume that about 70 percent of all graduate and professional students are primarily in New York because they are working here, and do not count their spending as part of NYU’s impact.

Based on the assumptions outlined above, Appleseed estimates that in fiscal year 2009, spending by NYU students totaled about \$250 million.

As with spending by the University itself, money spent by NYU students generates economic activity and jobs in New York City, both directly and indirectly. Appleseed estimates that student spending of \$250 million in fiscal year 2009 directly supported 2,064 full-time equivalent jobs; and through the multiplier effect, another \$117 million in economic output and 668 FTE jobs.

Visitor spending

NYU attracts thousands of visitors to its campus every year, from prospective students and their families to alumni, to conference attendees and guest researchers and speakers.

While we do not attempt to quantify the impact of visitor spending on the City’s economy, each visitor contributes both to the City’s economy and to the vitality of the Greenwich Village area through spending on hotels, food and entertainment.

Impact on State and City Taxes

Despite its tax-exempt status, NYU generates several types of revenues for both City and State governments. In fiscal year 2009, the University:

- Withheld \$35.9 million in New York State income taxes from the salaries and wages of its employees, and also paid more than \$1 million in unemployment insurance taxes.
- Withheld \$15.9 million in New York City income taxes, and also paid \$4.2 million in real property taxes on properties owned by the University that are not used for tax-exempt purposes.
- NYU also contributed \$80,000 in fiscal year 2009 to business improvement districts in areas in which University facilities are located.

The University is also subject to the payroll tax enacted by the New York State Legislature in 2009 to support the Metropolitan Transportation Authority's capital program. The University estimates that in its current fiscal year it will pay approximately \$2.45 million in MTA payroll taxes.

In addition to tax revenues paid directly by the University, NYU indirectly generates additional tax payments by the vendors and contractors from whom it buys goods and services; and the additional economic activity that the University generates through the multiplier effect also produces tax revenues for both the City and the State. As Table 3 shows, we estimate that in fiscal year 2009, NYU directly and indirectly generated more than \$141 million New York City and New York State taxes.

Table 3: City and State Taxes Directly and Indirectly Generated by NYU, FY 2009

	Direct	Indirect / Induced	Total
NYS Taxes			
Personal income tax	35,900,000	13,349,062	49,249,062
User taxes	-	6,214,218	6,214,218
Business taxes	4,120,734	2,761,875	6,882,609
Other taxes	1,030,184	690,469	1,720,652
Total	\$ 41,050,918	\$ 23,015,623	\$ 64,066,541
NYC Taxes			
Property tax	4,200,000	18,735,225	22,935,225
Sales tax		6,566,084	6,566,084
Personal income tax	15,900,000	7,441,561	23,341,561
Business taxes (inc. GCT)	6,166,977	4,815,128	10,982,105
Other taxes	7,848,880	6,128,345	13,977,225
Total	\$ 34,115,858	\$ 43,686,343	\$ 77,802,200

University and Student Spending: Combined Impact

As Table 4 shows, taking into account direct spending by the University, its employees, vendors, contractors and students – and economic activity through the multiplier effect – NYU in fiscal year 2009 generated:

- Approximately \$2.26 billion in economic output, and 24,800 FTE jobs in New York City; and
- Approximately \$2.65 billion in economic output, and 28,200 FTE jobs in New York State.

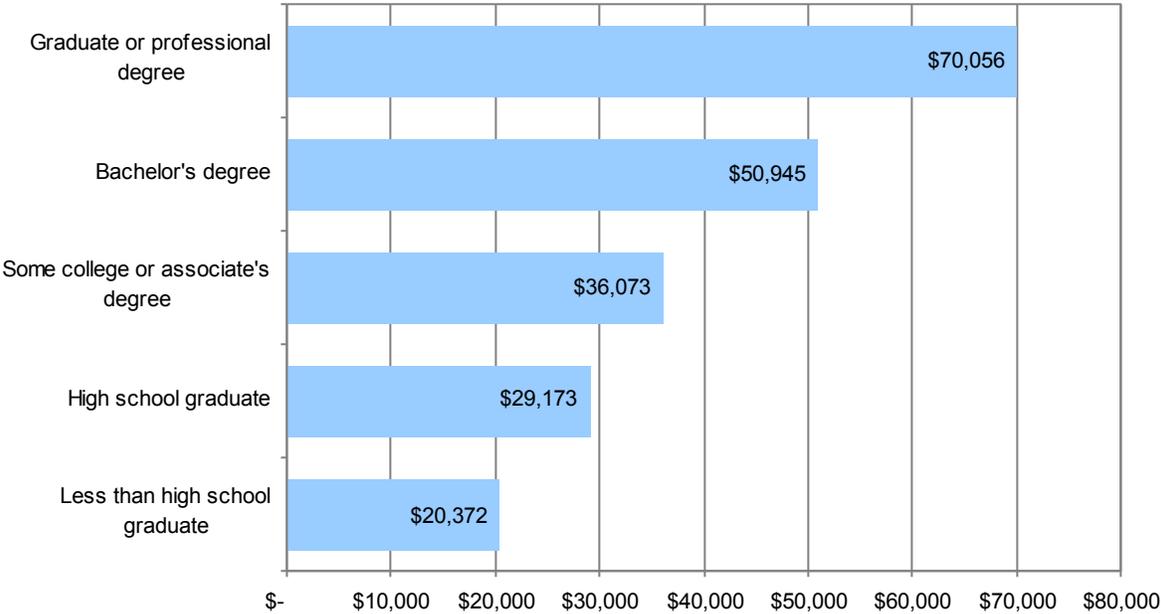
Table 4: Combined Impact of New York University Operations and Student Spending, FY 2009

	Wash SQ - NYC		Wash SQ - NYS	
	Output (\$M)	Jobs (FTEs)	Output (\$M)	Jobs (FTEs)
Payroll				
Direct	\$ 732.4	16,206	732.4	16,206
Indirect/induced	\$ 551.0	2,483	642.3	3,443
SUBTOTAL	\$ 1,283.4	18,689	\$ 1,374.7	19,649
Purchasing				
Direct	\$ 172.1	1,209	\$ 230.8	1,719
Indirect/induced	\$ 85.0	494	\$ 146.4	928
SUBTOTAL	\$ 257.1	1,703	\$ 377.2	2,647
Construction				
Direct	\$ 220.0	905	\$ 305.0	1,255
Indirect/induced	\$ 128.5	794	\$ 178.1	1,101
SUBTOTAL	\$ 348.5	1,699	\$ 483.1	2,355
Student spending				
Direct	\$ 250.7	2,064	\$ 250.7	2,525
Indirect/induced	\$ 116.8	669	\$ 163.3	1,019
SUBTOTAL	\$ 367.5	2,733	\$ 414.0	3,544
GRAND TOTAL	\$ 2,256.5	24,824	\$ 2,649.0	28,195

Part Two: NYU's Contribution to the Development of New York's Human Capital

Human capital – the accumulated knowledge, skills, and experience of a nation's, a region's or a city's people – is perhaps the single most important contributor to economic growth. At the individual level, the impact of education on earnings is well-known. In 2008, as Figure 7 shows, the median income of adult New York City residents who had four-year college degrees was 75 percent higher than the median income of those who had only a high school diploma; and the income of those with graduate and professional degrees was 140 percent higher.

Figure 7: Median Earnings by Educational Attainment, New York City Residents Age 25 & Older, 2008



The economic benefits of higher education, however, are not limited to those who earn degrees. In a paper published by the New York Federal Reserve Bank, Jaison Abel and Todd Gabe have found that “a one percentage point increase in the proportion of residents with a college degree is associated with a 2.3 percent increase in metropolitan-area GDP per capita.” Summarizing the results of previous studies, Abel and Gabe cite two explanations for the powerful link between human capital and economic growth.

First, human capital increases individual-level productivity and idea generation. Second, the concentration of human capital within a region facilitates knowledge spillovers, which further enhance productivity and fuel innovation. Indeed, Glaeser suggests that human capital is a key predictor of urban success because “high skilled people in high skilled industries may come up with more new ideas.” In addition, a region's stock of human

*capital has been shown to lead to more rapid reinvention and increases in the long-term economic vitality of cities.*⁴

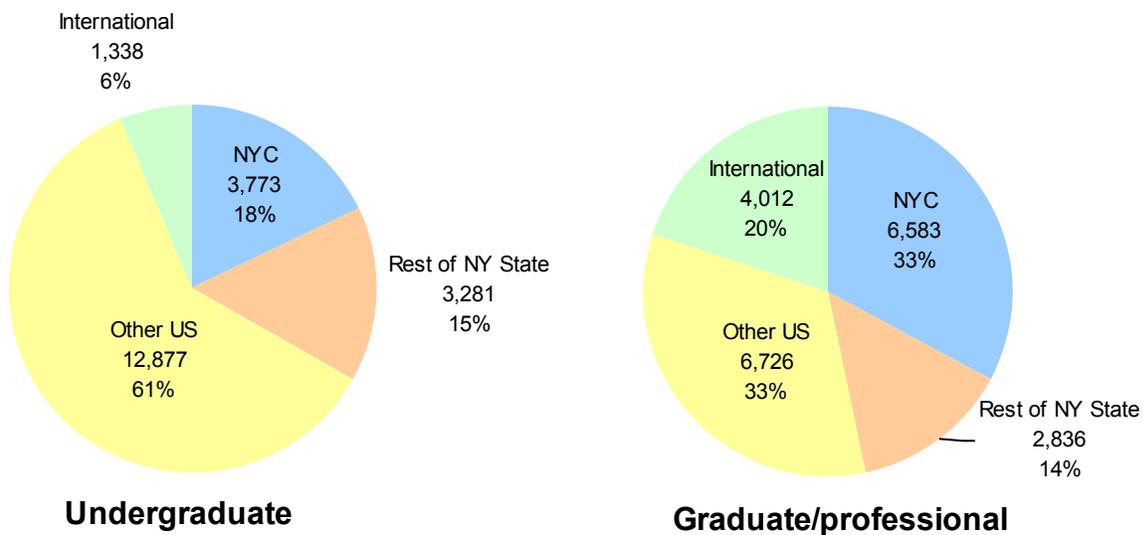
Abel and Gabe’s work echoes that of other economists who have found similar spillover effects. Even non-college educated workers benefit from this effect; other research has shown that a 1 percentage-point increase in the percentage of workers with college degrees is associated with a 1.6 percent increase in the earnings of workers who only have high school diplomas.⁵

NYU Students and Alumni

New York University contributes to the development of human capital in New York City through the education of New York City residents – and by attracting and educating talented students from elsewhere in the U.S. and around the world.

In the fall of 2008, 21,269 full- and part-time undergraduates and 20,157 full- and part-time graduate and professional students were enrolled the schools associated with NYU’s Washington Square campus.⁶ As Figure 8 shows:

Figure 8: NYU Enrollment by Permanent Residence, fall of 2008



⁴ Jaison Abel and Todd Gabe, “Human Capital and Economic Activity in Urban America,” Federal Reserve Bank of New York, staff report no. 332, July 2008, pp. 1-2.

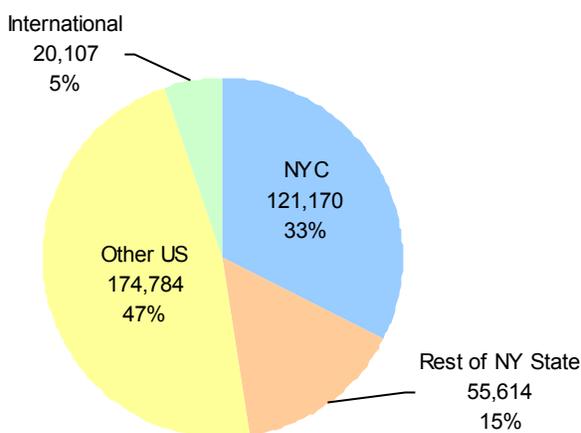
⁵ Enrico Moretti, “Social Returns to Human Capital,” NBER Reporter: Research Summary, Spring 2005.

⁶ Enrollment at the NYU School of Medicine totaled 763; and at the Polytechnic Institute, 1,541 undergraduates and 2,442 graduate students.

- About 18 percent of the University’s undergraduate students had permanent New York City addresses – about 15 percent came from elsewhere in New York State – and 67 percent came to NYU from elsewhere in the U.S. and around the world.
- About 33 percent of all graduate and professional students had permanent addresses in New York City, while 14 percent came from the rest of New York State – 33 percent from other states – and 20 percent from other countries.

Many of the students who come to NYU stay in New York City after they graduate. As of 2009, more than 121,000 of the University’s 372,000 alumni – about 32 percent – lived in New York City. About 55,600 other NYU graduates – about 15 percent – lived elsewhere in New York State. The current residence of Washington Square alumni is shown in Figure 9 below.

Figure 9: Distribution of NYU Washington Square Campus Alumni, by Place of Residence



NYU has, for years, been a magnet for international students. In the fall of 2008, 5,350 international students were enrolled in undergraduate and graduate degree programs at NYU. The University ranks first among all New York City institutions in international enrollment; and ranks second at the national level, behind only to the University of Southern California. Bringing international students to New York benefits the City’s economy in several ways. It has in effect made higher education a major New York “export” industry. It enriches the education that NYU and other colleges and universities provide to American students. Some of these students stay in New York after graduation, adding to the City’s talent pool. And even those who choose not to stay can still be an asset to New York, by strengthening personal, cultural and business ties between the city and their home countries.

Preparing Students for Tomorrow's Economy

NYU is notable not only for the number of students it attracts to New York City and the number of alumni who live here, but also for both undergraduate and graduate programs that every year provide highly-skilled employees to some of New York City's leading industries. For example:

- The Stern School of Business offers an undergraduate degree in **Business and Political Economy**, designed to prepare students for careers in an increasingly-integrated global economy. The program includes semesters in London and Singapore.
- The Tisch School of the Arts' **Kanbar Institute of Film and Television** is one the leading places in the world for learning the art, technology and business of film-making and television production – for both undergraduate and graduate students.
- With specializations in banking, corporate finance, financial markets and financial analysis, the Stern School's **MBA program** is among the world's top-ranked programs in preparing students for careers in financial services. Stern's part-time MBA program, designed for business professionals who are employed full-time, is the top-ranked program of its kind in the U.S.
- The **Interactive Telecommunications Program** at the Tisch School is a two-year graduate program that explores relationships among digital communications, art and design. Since its founding 30 years ago, ITP has been a continuing source of both technical and creative talent for the City's digital media companies.
- The NYU Schack Institute of Real Estate at NYU offers a Master of Science degree in **Construction Management and Real Estate** as well as graduate and professional certificates and continuing education courses in sustainable development, real estate finance, construction management and other topics.
- The Steinhardt School of Culture, Education and Human Development offers both undergraduate and graduate degrees in **Music Business** and **Music Technology**. Students are immersed in the creative, technical and business aspects of the music industry through classroom and studio work, internships and working at the music business program's in-house company, Village Records.
- New York City is home to some of the world's largest not-for-profit enterprises and foundations. **The Master of Public Administration in Public and Nonprofit Management** at the Wagner Graduate School of Public Service helps existing non-profit leaders hone their skills and helps to develop the next generation of non-profit professionals. Program specializations include management, public policy analysis, finance and international management.

NYU School of Continuing and Professional Studies

Since 1934, the NYU School of Continuing and Professional Studies has been offering degree, certificate, and non-degree programs that help New York City residents upgrade their skills, explore new interests or change careers.

The School offers programs leading to associate's, bachelor's and master's degrees and professional certificates, as well as individual continuing education courses. Areas in which SCPS offers programs include business, real estate, construction management, hospitality and tourism, sports management, philanthropy, media and liberal studies. The School offers courses at several locations, including the Washington Square campus, Midtown Manhattan, Lower Manhattan and Turtle Bay.

In 2008, the School enrolled 1,866 undergraduates and 2,787 graduate students in degree programs, and 31,253 continuing education students.

Part Three: Research and Business Development at NYU

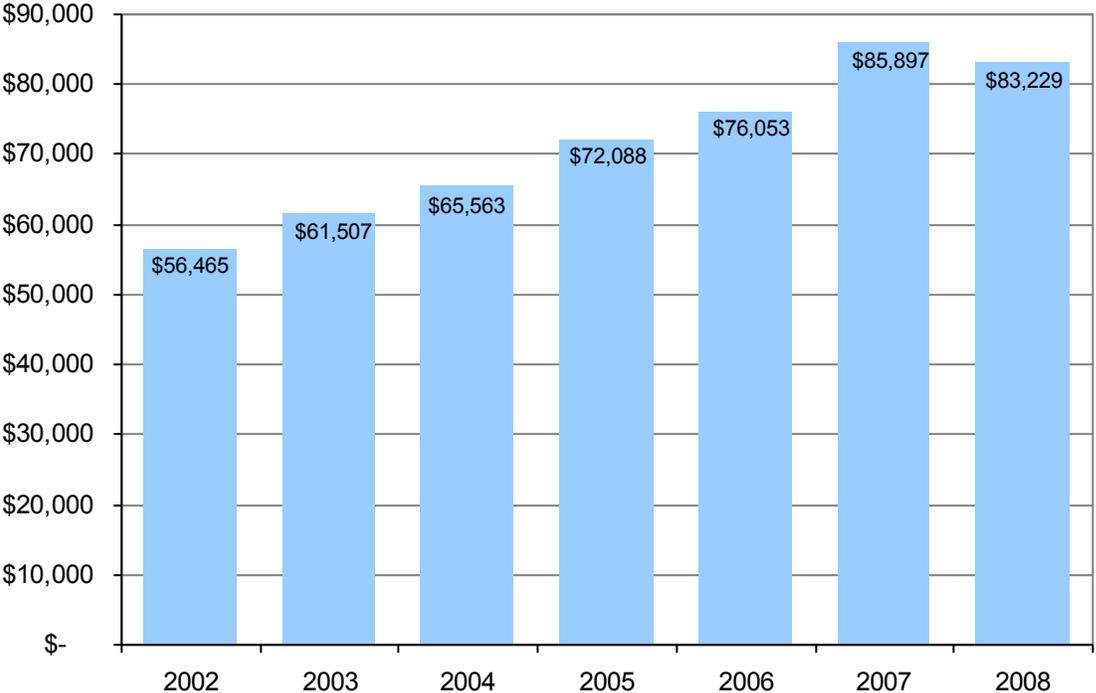
University research contributes to the vitality of New York City’s economy in several ways:

- By attracting funding from federal agencies and other sources outside the City, most of which is spent locally.
- By expanding the boundaries of knowledge in areas that in the years ahead are likely to be continuing sources of innovation and growth in New York.
- By developing a better understanding of – and helping to develop effective responses to – some of the City’s most pressing problems.
- By creating the “intellectual capital” that provides a foundation for the creation of new products and services, new businesses, and new jobs.

A Growing Research Enterprise

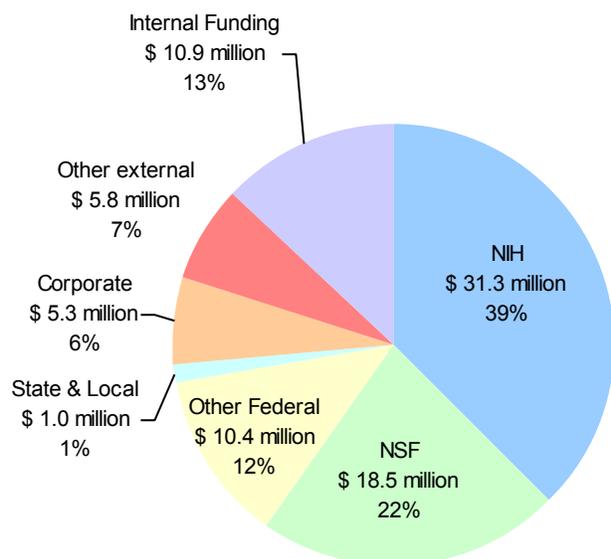
In fiscal year 2008, the schools associated with NYU’s Washington Square campus spent a total of \$83.2 million on research. As Figure 10, this was a 47 percent increase from 2002.

Figure 10: Washington Square Research Spending, 2002-2009 (\$ 000s)



As Figure 11 shows, about 73 percent of this total was financed through federal grants and contracts, 13 percent with funding from corporate partners and other external sources. Another 13 percent was funded by the University. Only 1 percent of NYU's research spending in fiscal year 2008 was funded by state or local government.

Figure 11: NYU Washington Square Campus Research Spending, FY 2008



Research at NYU: A Sampler

Through the discovery and development of new knowledge, University research helps to create a foundation for future economic growth. We cite here just a few examples:

- The **Center for Neural Science** at NYU has, since 1984, research programs associated with the Center include the Center for Brain Imaging, Center for Neuroeconomics, the Center for the Neuroscience of Fear and Anxiety and the Sloan-Swartz Center for Theoretical Visual Neuroscience.
- The Stern School's **Center for Digital Economy Research** supports research on the uses of information technology in business, with particular emphasis on the IT industry and digital media. Research at the Center focuses on topics such as business intelligence, data mining, interactive marketing and social networking.
- Researchers associated with the Courant Institute's **Media Research Lab** conduct interdisciplinary research on a wide range of topics related to computer science and the media, including computer graphics, visualization, simulation and motion capture.
- NYU is the lead partner in the **Games for Learning Institute**, a six-university consortium that is exploring how computer gaming technology and strategies can be used as teaching and learning tools. The Institute – created in 2008 with funding from the participating universities and a matching grant from Microsoft – focuses on the use of games in teaching science and mathematics to middle-school students.

- The **Center for Catastrophic Preparedness and Response** – a university-wide center established after the September 11 attack on the World Trade Center – has developed a sophisticated simulation tool called “Plan C” that can help cities, emergency management officials, public health agencies and hospitals plan for, and respond more effectively to a wide range of catastrophes, both natural and man-made.
- The **Furman Center for Real Estate and Urban Policy** conducts research and seeks to promote discussion of housing, land use, and neighborhood development and related policy issues in New York City. The Center has, for example, been a leading source of information and analysis on the foreclosure crisis and its impact in New York City.

Research partnerships with New York companies can also contribute to the vitality of the City’s economy. Recent examples include collaborations with:

- Nielsen – research on consumer behavior;
- Con Ed – research on asbestos contamination;
- The Federal Reserve Bank of New York – research on housing price trends; and
- Morgan Stanley—research on financial market volatility.

Supporting New Business Development

NYU also contributes to the growth of New York City’s economy by supporting the creation and development of new businesses.

Commercializing Technologies First Developed at NYU

During the past several years, research conducted at NYU’s Washington Square campus has been translated, as shown in Table 5, into a growing number of agreements under which private companies are commercializing technologies first developed at the University. Between 2005 and 2009, the University entered into 37 agreements under which technologies first developed at the Washington Square campus were licensed to companies for commercial use. These companies included 11 new businesses started specifically to bring to market new technologies first developed at NYU. Examples in New York City include:

- **Perceptive Pixel**, founded by NYU computer science researcher Jeff Han, develops high-powered multi-touch screens that allow users to visualize, manipulate and display complex information, easily and intuitively. The company, for example, developed the “magic wall” used by CNN for its election-night coverage and other political analyses.
- **Advanced Valuation Analytics Corporation**, founded by Roy Lowrance, has developed a new GPS-based system for valuing homes and tracking how values change over time. The data can be used to construct customized home-price indices at any geographic level.

Table 5: Formal Technology Transfer Activity, Washington Square Campus, 2005-2009

	2005	2006	2007	2008	2009
Gross licensing income	\$116,588	\$187,739	\$1,622,636	\$170,623	\$475,829
Invention disclosures	27	29	31	35	33
New patent applications filed	13	11	15	18	18
Patents issued	14	8	14	8	12
Licenses / options executed	5	6	5	9	12
Start-up companies formed	1	1	2	3	4

Preparing Students for Careers as Entrepreneurs

NYU provides a variety of options for students who are interested in creating new businesses. At the Stern School, MBA students can choose a specialization in Entrepreneurship and Innovation, which includes courses on emerging technologies, business innovation, business planning for start-ups, venture capital financing, managing a growth business and similar topics.

The Stern School's ***Berkley Center for Entrepreneurial Studies*** offers several programs that help students develop their talents as entrepreneurs. The Center's Innovation and Entrepreneurship Lab is a seminar that trains students in "How to systematically and repeatedly create commercially-viable innovations, yielding a large and diverse portfolio of novel products, services and business models for sale and licensing to industry." The Center also sponsors an annual business plan competition.

Recent examples of new businesses created in New York City by NYU students or alumni include:

- ***Butter Beans*** – a Brooklyn-based company, co-founded by a graduate of the Stern School's MBA program, that supplies high-quality, healthy lunch services, as well as nutritional education services, to schools in New York City.
- ***Cold Brew Labs*** – co-founded by a Stern MBA student, provides a platform for on-line shopping via mobile devices.
- ***FourSquare*** – a company founded by a graduate of the Tisch School's Interactive Telecommunications Program, whose platform combines local social networks with neighborhood guides and incentive programs that reward users for frequenting local stores, restaurants, clubs, etc. – all accessible via a variety of mobile devices.
- ***Social Bomb*** – a company founded by three ITP graduate students that provides a platform and applications for gaming across a variety of social networks, and enables advertisers to reach targeted groups of users on those networks.
- ***Iconology*** – a web-based service for collectors, retailers and publishers of comic books, founded by two stern MBA students.

Butter Beans, Social Bomb and Iconology were all winners of the Berkley Center's business plan contest.

Part Four: Strengthening Schools and Neighborhoods

In addition to their role in education, research and business development, colleges and universities contribute to the vitality of New York City's economy by providing services that strengthen communities – and help meet the needs of community residents – throughout the City. At NYU, this engagement with community takes multiple forms, including:

- “Service learning” programs that integrate classroom learning with hands-on experience in serving local communities. The university's Office of Community Engagement reports that in 2008-2009, NYU offered 293 service learning courses, in which 6,595 students were enrolled.
- Research and technical support provided to schools and other community institutions and organizations.
- Student participation in volunteer community service programs. In 2008-2009, the Office of Community Engagement reports that 15,483 NYU students engaged in some type of community service – including more than 6,400 who contributed at least 20 hours of community service work per semester.

Below we briefly highlight several examples of community engagement at NYU. We begin by focusing on the University's involvement in efforts to strengthen the City's public schools, and to expand educational opportunity.

Strengthening Public Education in New York City

NYU's Steinhardt School prepares undergraduate for careers in teaching; and through its graduate-level programs, helps teachers and other school professionals develop the knowledge and skills that are essential to longer-term success, both in the classroom and in other aspects of school operations.

Practical experience is integral to the School's education programs, at both undergraduate and graduate levels. Each semester, about 300 Steinhardt students work as student teachers, as interns and in other positions in schools throughout the five boroughs.

NYU's role is not limited to educating teachers and other school professionals, however. The Steinhardt School's ***Metropolitan Center for Urban Education*** (Metrocenter) seeks to address problems of access, equity and student achievement in urban schools through research on education and education policy, and changing practice at the school level. The Metrocenter conducts research on topics such problems affecting young black and Latino male students; provides technical assistance to New York City schools in areas such as improving bilingual education; and under a contract with the City Department of Education provides professional development services for public school teachers in math and literacy.

Other Metrocenter programs work directly with at-risk students. The ***Liberty Partnerships Program***, for example, focuses on the academic, psychological, social and developmental needs of high-risk students, helping them to finish high school, enroll in higher education and successfully transition into the working world. The program is currently working with three schools in Bedford Stuyvesant, Brooklyn.

Other NYU programs are similarly aimed at helping children succeed in school. Founded in 1997, America Reads is a nationwide program in which college students work with schoolchildren who are learning to read. America Counts was founded two years later to assist children learning algebra and geometry. NYU's **America Reads & America Counts** program is the largest in the country, with more than 1,000 undergraduate and graduate tutors each contributing 10 to 12 hours a week each year. The program currently serves 105 public schools in New York City School Districts 1, 2, 4, and 13.

Other Aspects of Community Engagement at NYU

NYU's engagement with New York City communities is not limited to the field of education. Here we cite just a few examples.

- Each year, approximately 1,200 students at NYU's **Silver School of Social Work** complete field placements at approximately 300 sites throughout the New York City area, including hospitals, mental health centers, and community organizations serving children, families and the elderly.
- The **NYU Civic Team** places more than 300 students at 25 non-profit agencies each semester. Students commit to a minimum of 2 hours weekly service at settlement houses, senior centers, tutoring programs, human rights organizations and governmental agencies.
- Most graduate students at the Wagner School of Public Service are required to complete a two-semester **Capstone** project in order to fulfill their degree requirements. Over the course of an academic year, students work in teams – either to address challenges and identify opportunity for a client organization or to conduct research on pressing social issues. This program serves 60 to 80 public agencies and non-profits each year with crucial services. Since its founding in 1995, more than 2,600 students have participated in 500 projects for approximately 400 organizations.
- Working with established non-profit organizations and consulting firms, the **Stern Consulting Corps** provides consulting services to community organizations and small businesses throughout New York City. Recently, for example, Stern students working with the Clinton Foundation provided consulting services to several small businesses in Harlem. Participating students typically commit at least 10 hours to the program each week for ten weeks. Since the program started in 2002, more than 400 NYU students have participated.
- Through the Law School's **Community Development and Economic Justice Clinic**, NYU law students provide legal services to neighborhood organizations throughout New York City. Services provided include assistance with routine transactions such as applying for tax-exempt status, as well assistance with litigation on topics such as workers' and tenants' rights.

Through these and similar programs, NYU helps to strengthen New York City's economy by contributing to the vitality of neighborhoods throughout the City, and enhancing the quality of life that residents of those neighborhoods enjoy.

Part Five: Impact of NYU’s Proposed Expansion through 2031

To continue the growth of its research and teaching enterprise during the next twenty years – and to maintain its contribution to the vitality of New York City’s economy – NYU will need room to grow. Through 2031 – its 200th anniversary – the University is proposing to develop about 6.2 million square feet of space – an increase of approximately 40 percent in the University’s physical plant.

As Table 6 shows, current plans call for the development of approximately:

- 1.57 million square feet of undergraduate student housing;
- 1.4 million square feet of lab space;
- 1.35 million square feet of other research and office space;
- 600,000 square feet of space for student activities and services;
- 375,000 square feet of faculty housing;
- 370,000 square feet of classroom space;
- 215,000 square feet of retail and restaurant space;
- 200,000 square feet of graduate student housing; and a
- 135,000 square-foot, 240-room hotel.

The new facilities outlined above would be distributed across five areas.

- The properties that now make up the core of NYU’s Washington Square campus;
- Other sites in the surrounding neighborhood;
- The health sciences corridor along First Avenue;⁷
- Downtown Brooklyn, near the campus of the Polytechnic Institute of NYU; and
- Elsewhere in New York City, possibly including Governors Island.

Table 6: Proposed NYU 2031 Development Program in Square Feet

Type of Space	Core Campus	Other Neighborhood	Health Corridor	Downtown Brooklyn	Governors Island / other	Total
Retail space	40,000	40,000	10,000	50,000	75,000	215,000
Classroom space	150,000	50,000	50,000	50,000	70,000	370,000
Research/lab space	400,000	150,000	450,000	200,000	200,000	1,400,000
Office/research space	450,000	350,000	200,000	200,000	150,000	1,350,000
Student services	250,000	-	50,000	150,000	150,000	600,000
Undergrad housing	450,000	450,000	150,000	270,000	250,000	1,570,000
Graduate housing	-	-	100,000	50,000	50,000	200,000
Faculty housing	165,000	-	-	80,000	130,000	375,000
240-room hotel	135,000	-	-	-	-	135,000
TOTAL	2,040,000	1,040,000	1,010,000	1,050,000	1,075,000	6,215,000

⁷ The square footage for the Health Corridor includes research and other academic space for the NYU School of Medicine. It does not include any additional hospital space that could be developed during the next twenty years.

Using the IMPLAN input-output model, we have developed estimates of the economic impact of NYU's development program through 2031. Our analysis takes into account both the temporary jobs created as a result of construction, and the permanent jobs that could be created once the new space becomes available. As in our analysis of the economic impact of NYU's ongoing operations in Part One, we assess both the direct impact and indirect (or "multiplier") effects of both construction and operations.

Impact of Proposed Construction through 2031

As discussed above, New York University is proposing to develop a total of about 6.215 million square feet of classroom, research, office, student services, residential, retail and hotel space in Manhattan and Brooklyn through 2031. Because the details and timing of this development are uncertain, the University does not now have detailed estimates of construction costs. Based on rough estimates provided by the University, we assume that construction costs, including both hard and soft costs, would average \$1,000 per square foot, for a total of \$6.215 billion in construction spending (in 2009 dollars).

Table 7: Economic Impact of Construction (6.2 million square feet through 2031)

	Wash Sq and other	Health Corridor	Total
Employment impacts (person-years)			
Direct	21,384	4,153	25,537
Indirect	8,170	1,587	9,757
Induced	10,586	2,056	12,642
Total	40,140	7,796	47,936
Output (\$ millions)			
Direct	\$ 5,200	\$ 1,010	\$ 6,210
Indirect	1,331	259	1,590
Induced	1,707	332	2,039
Total	8,238	1,600	9,838
Employee compensation (\$ millions)			
Direct	\$ 2,693	\$ 523	\$ 3,216
Indirect	603	117	720
Induced	617	120	737
Total	3,913	760	4,673

As Table 7 shows, we project that through 2031:

- \$6.21 billion in construction spending will directly generate about 25,500 person-years of employment in New York City in construction and related industries.
- Through the multiplier effect, that spending will generate another \$3.64 billion in economic output and 22,400 person-years of additional employment throughout New York City
- On an annual basis, the NYU 2031 program will directly and indirectly generate an average of 2,400 full-time-equivalent jobs and more than \$490 million in output each year over the next 20 years.

Tax Impacts of Construction

In addition to economic impacts resulting from the proposed NYU 2031 developments, construction spending also generates taxes paid to New York City and New York State. We estimate that, both directly and through the multiplier effect, construction spending of \$6.21 billion would produce an average of \$7.4 million in New York City personal income taxes and \$19.4 million in business and other City taxes every year for 20 years (in 2009 dollars).

Similarly, we estimate that the same expenditure would yield \$15.0 million in New York State personal income taxes and \$6.0 million in other State taxes every year through 2031 (in 2009 dollars).

The average tax revenues generated each year by spending associated the NYU 2031 program is summarized in Table 8.

Table 8: Annual Average New York City and State Taxes Generated from Proposed NYU 2031 Development

	Direct	Indirect / Induced	Total
NYS Taxes			
Personal income tax	21,016,199	9,090,947	30,107,145
User taxes	-	4,231,992	4,231,992
Business taxes	4,348,179	1,880,885	6,229,065
Other taxes	1,087,045	470,221	1,557,266
Total	\$ 26,451,423	\$ 15,674,046	\$ 42,125,468
NYC Taxes			
Property tax	-	12,666,076	12,666,076
Sales tax	-	4,439,045	4,439,045
Personal income tax	9,716,229	5,030,918	14,747,147
Business taxes (inc. GCT)	6,286,972	3,255,300	9,542,272
Other taxes	8,001,600	4,143,109	12,144,709
Total	\$ 24,004,801	\$ 29,534,448	\$ 53,539,249

Economic Impact of University Operations at Full Build-out

In addition to generating temporary jobs in construction and related industries through 2031, the new space created by the University will allow for a significant expansion of NYU’s teaching and research activities, and a substantial increase in University employment.

Using data from comparable projects, we developed estimates of the number of direct jobs created per thousand square feet of new space. While much of the space created by the University will house new academic programs, students, faculty, administration and staff members, some of the space will be used to “decompress” existing space. For each type of space, we estimate the percent of jobs that could be considered *net new* to New York City.

In total, we estimate that New York University could add about 6,670 new jobs when the space is fully built-out and occupied; and ancillary retail, restaurant and hotel businesses could add approximately 770 additional jobs. Our job creation assumptions and assumptions about net new job creation are shown in Table 9 below.

Table 9: Direct Job Creation by Type of Space

Type of space	Jobs per 1000 sq ft	% net new jobs	Total jobs
Retail and restaurant	4.1	80%	705
Classroom	1.4	50%	259
Research / laboratory	2.1	70%	2,058
Office	4.0	60%	3,240
Student services	0.7	70%	294
Undergraduate housing	0.16	100%	251
Graduate housing	0.04	100%	8
Faculty housing	0.16	100%	60
Hotel	-	-	64
TOTAL			6,939

We can use the IMPLAN input-output model to estimate the incremental annual economic impact that would be generated as a result of these new jobs at the University, the proposed hotel and retail and restaurant space.

As Table 10 shows, we estimate that the 7,000 new positions and University activity associated with them would directly add about \$681 million to the City’s economy, and through the multiplier effect generate another \$435 million in economic output.

Table 10: Economic Impact of Ongoing NYU Operations After 2031 Build-out (2009 dollars)

	Total
Employment impacts (FTEs)	
Direct	6,939
Indirect	1,242
Induced	1,395
Total	9,576
Output (\$ millions)	
Direct	\$ 680.9
Indirect	210.1
Induced	224.9
Total	1,115.9
Employee compensation (\$ millions)	
Direct	\$ 349.2
Indirect	85.8
Induced	81.3
Total	516.3

In addition to the one-time tax revenue impacts resulting from the proposed NYU 2031 construction, the new employees and activity associated with the space also generates taxes paid to New York City and New York State. We estimate spending – both direct and through the multiplier effect – on labor and other associated construction costs produced \$15.9 million in personal income taxes and \$51.9 million in business and other taxes in the City. These taxes included:

- *Property taxes* – We assume the operations of NYU’s proposed development would not be subject to property taxes. Through the multiplier effect, the development is estimated to generate \$14.5 million in property taxes;
- *Sales taxes* – About \$8.9 million in sales taxes. Through the multiplier effect, the development’s operations are estimated to generate \$5.1 million in sales taxes;
- *Personal income taxes* – \$10.1 million generated directly from the taxes paid by NYU employees, and \$5.8 million generated through the multiplier effect; and
- *Business and other taxes* – \$14.9 million generated directly, and \$8.4 million generated through the multiplier effect.

For New York State, this includes the following taxes:

- *Personal income taxes* - \$21.2 million generated directly from new NYU employees, and \$10.4 million generated through the multiplier effect;
- *Sales taxes* – About \$9.9 million in state sales taxes, and \$4.8 million through the multiplier effect;
- *Business and other taxes* – \$5.3 million in direct business and other tax revenues, and \$2.7 million generated through the multiplier effect.

The annual tax revenues generated from the NYU 2031 project are summarized in Table 11.

Table 11: Ongoing City and State tax Revenues Generated as a Result of New NYU Activity

	Direct	Indirect / Induced	Total
NYS Taxes			
Personal income tax	21,161,992	10,400,146	31,562,138
User taxes	9,851,272	4,841,447	14,692,719
Business taxes	4,378,343	2,151,754	6,530,098
Other taxes	1,094,586	537,939	1,632,524
Total	36,486,193	17,931,286	54,417,479
NYC Taxes			
Property tax		14,512,345	14,512,345
Sales tax	8,938,643	5,086,102	14,024,745
Personal income tax	10,130,462	5,764,249	15,894,711
Business taxes (inc. GCT)	6,555,005	3,729,808	10,284,813
Other taxes	8,342,733	4,747,029	13,089,762
Total	33,966,842	33,839,534	67,806,376