

The Economic Impact of New York University

Final Report
January 14, 2015

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NYU as an enterprise

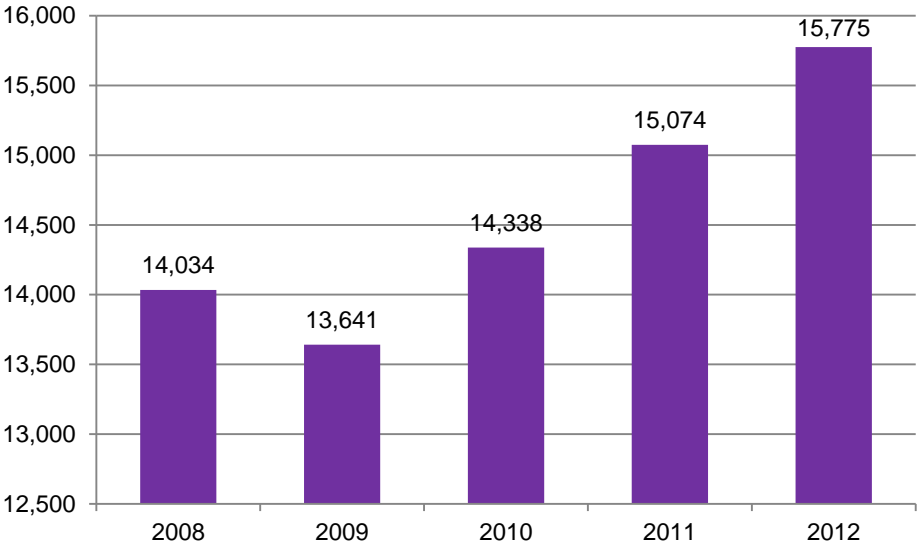
With revenues of more than \$2.6 billion in fiscal year 2013, New York University¹ is a major enterprise in its own right – a major employer and a generator of jobs in New York City through its purchases of goods and services and its investments in University facilities.

NYU as an employer

In the fall of 2012, NYU's Washington Square Campus and NYU Polytechnic School of Engineering (School of Engineering) employed 15,775 people, including 9,367 full-time and 6,408 part-time employees. In addition to the University's regular full- and part-time employees, 5,305 student workers were employed by NYU in the fall of 2012. In fiscal year 2013, salaries and wages paid to NYU employees (including students) totaled nearly \$987.4 million.

As shown in Figure 1, University employment grew by 12.4 percent between fall 2008 and fall 2012.

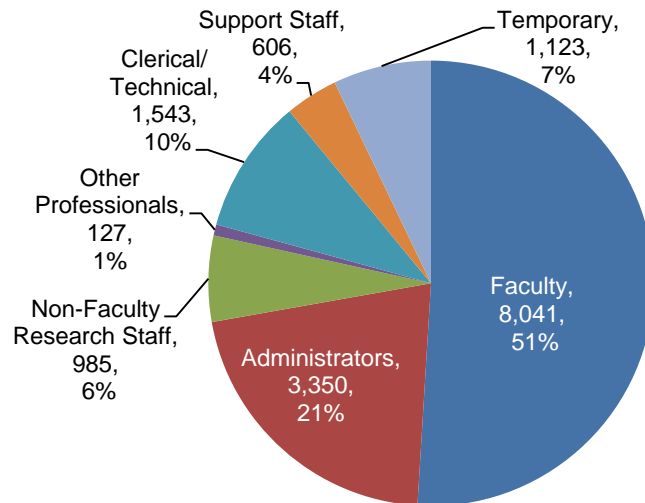
Figure 1: Full- and part-time employment at NYU, fall 2008 – fall 2012



¹ New York University can be defined as consisting of three major units: the Washington Square campus, the NYU Langone Medical Center, and NYU Polytechnic School of Engineering. The Washington Square campus includes most of the University's undergraduate, graduate and professional schools, as well as the School of 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 School of Medicine; and NYU Polytechnic School of Engineering, based in Brooklyn, is the University's engineering school. This preliminary report focuses on the combined impact of the Washington Square campus and NYU Polytechnic School of Engineering, but does not include the impact of NYU Langone Medical Center.

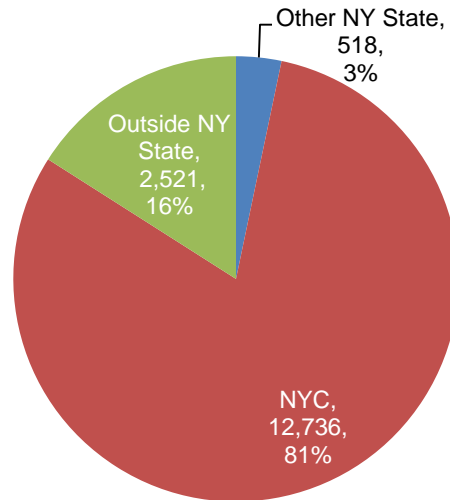
As shown in Figure 2, faculty (including temporary adjunct faculty) and non-faculty research staff account for 57.2 percent of total non-student University employment. Administrators and other professionals account for 22.0 percent of the total, and clerical/technical and support staff account for 13.6 percent.

Figure 2: Full- and part-time employment at NYU by occupational category, fall 2012



About 84 percent of all NYU employees live in New York State. As Figure 3 shows, 80.7 percent (12,736 employees) of NYU employees (excluding students) lived in New York City during the fall of 2012. An additional 518 (3.3 percent) lived elsewhere in New York State.

Figure 3: Full- and part-time NYU employment by place of residence, fall 2012



The impact of purchasing and construction

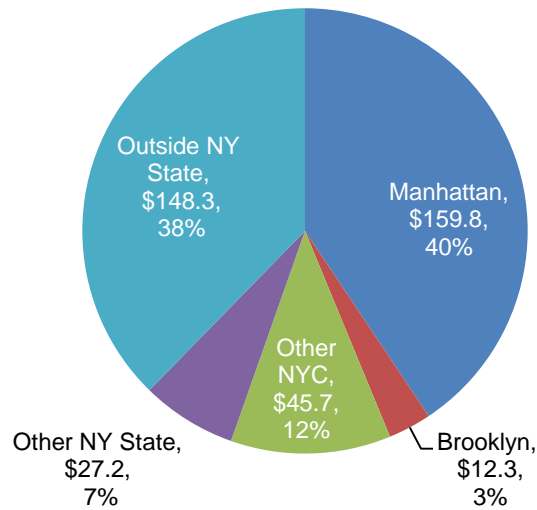
In addition to its role as a major employer, NYU contributes to the vitality of New York City's economy through its purchases of goods and services and its investments in University facilities.

Purchases of goods and services

In fiscal year 2013, NYU spent nearly \$393.4 million on the purchases of goods and services (excluding construction). Of this total (as shown in Figure 4):

- More than \$159.8 million was paid to businesses located in Manhattan;
- More than \$12.3 million was paid to businesses located in Brooklyn;
- \$27.2 million was paid to businesses located elsewhere in New York City; and
- Nearly \$148.3 million was paid to businesses located elsewhere in New York State.

Figure 4: NYU purchasing by location of vendor, FY 2013 (in \$ millions)



Leading categories of goods and services purchased from companies located in New York City include utilities, building maintenance and janitorial services, architectural and engineering services, consulting services, advertising, office supplies, laboratory supplies and computer equipment.

Using the IMPLAN input-output modeling system – a tool of economic analysis commonly used in economic impact studies – we estimate that in fiscal year 2013, NYU’s purchases of goods and services from Manhattan businesses directly supported 942 full-time-equivalent (FTE) jobs in Manhattan, and purchases of goods and services from Brooklyn businesses directly supported 79 FTE jobs in Brooklyn. Citywide (including Manhattan and Brooklyn), NYU’s spending on goods and services from New York City businesses directly supported 1,354 FTE jobs in the City in fiscal year 2013.

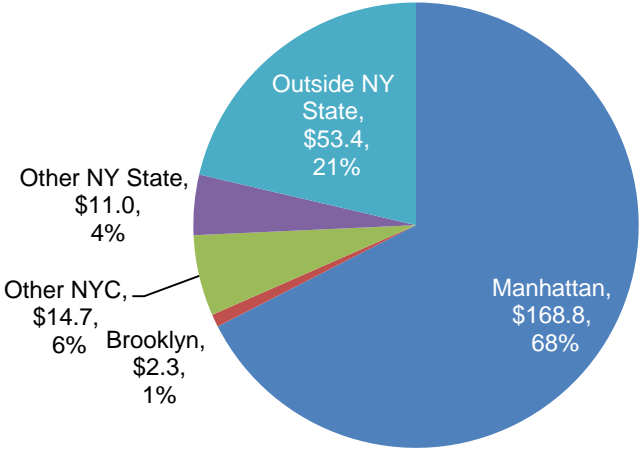
NYU’s spending on goods and services from businesses located elsewhere in New York State directly supported an additional 101 FTE jobs in New York State in fiscal year 2013.

Construction

In fiscal year 2013, NYU spent more than \$250.1 million on new construction and renovation of Washington Square and School of Engineering campus facilities. Of this total (as shown in Figure 5):

- More than \$168.8 million (67.5 percent) was paid to contractors based in Manhattan;
- Nearly \$2.3 (1.0 percent) million was paid to contractors in Brooklyn;
- \$14.7 million (5.9 percent) was paid to contractors located elsewhere in New York City; and
- Nearly \$11.0 million (4.4 percent) to contractors located elsewhere in New York State.

Figure 5: NYU construction spending by location of contractor, FY 2013 (in \$ millions)



We estimate that in fiscal year 2013, NYU’s spending on construction directly supported 856 FTE jobs with contractors in Manhattan and 15 FTE jobs with contractors in Brooklyn. Citywide (including Manhattan and Brooklyn), NYU’s payments to New York City companies in construction and related industries directly supported 1,009 FTE jobs in New York City in fiscal year 2013.

NYU’s payments to contractors located elsewhere in New York State directly supported an additional 62 FTE jobs in New York State in fiscal year 2013.

Indirect and induced effects

The jobs and economic activity supported by NYU's spending for payroll, purchasing, and construction go beyond the direct impacts cited above. Some of the money that the University pays to its suppliers and contractors in New York is used to buy goods and services from other local companies; and the latter companies in turn buy goods and services from other local businesses.

NYU employees, and the employees of its suppliers and contractors, similarly use part of their earnings to buy a wide variety of goods and services – housing, utilities, food, transportation, personal services and other items – from local businesses; and the employees of those businesses do the same.

Using the IMPLAN input-output modeling system, we can measure these indirect and induced (or “multiplier”) effects of NYU spending. We estimate that through these effects, in fiscal year 2013, NYU spending on payroll, purchasing and construction indirectly accounted for:

- 4,030 FTE jobs in New York City;
- Nearly \$276.5 million in wages and salaries; and
- More than \$777.8 million in City-wide economic output.

Statewide (including New York City), NYU spending indirectly accounted for:

- 4,306 FTE jobs in New York State;
- Nearly \$293.7 million in wages and salaries; and
- Nearly \$828.3 million in State-wide economic output.

The indirect and induced impacts on NYU spending in New York City and New York State cited above include the impacts of NYU purchases of goods and services (discussed previously) from suppliers and contractors in Manhattan and Brooklyn. To further highlight the impact of NYU's spending at the borough level, the indirect and induced effects of these expenditures can also be broken out separately.

In fiscal year 2013, NYU spending on purchasing and construction indirectly accounted for:

- 524 FTE jobs in Manhattan;
- Nearly \$44.9 million in wages and salaries; and
- More than \$115.5 million in economic output in Manhattan.

In Brooklyn, NYU spending on purchasing and construction indirectly accounted for:

- 43 FTE jobs in Brooklyn;
- \$2.3 million in wages and salaries; and
- Nearly \$7.1 million in economic output in Brooklyn.

Direct, indirect and induced effects of NYU spending

Taking into account NYU's employment and payroll, the direct impact of NYU's spending on purchasing and construction from local vendors and contractors, and the indirect and induced impact of NYU's spending on payroll, purchasing and construction, we estimate that (as shown in Table 1) University spending in fiscal year 2013 directly and indirectly accounted for:

- 22,168 FTE jobs in New York City;
- More than \$1.4 billion in wages and salaries; and
- Nearly \$2.2 billion in City-wide economic output.

Statewide (including New York City), NYU spending directly and indirectly accounted for (as shown in Table 1):

- 22,607 FTE jobs in New York State;
- Nearly \$1.5 billion in wages and salaries; and
- \$2.2 billion in State-wide economic output.

Table 1: Direct, indirect and induced impact of NYU spending in New York City and New York State, FY 2013 (jobs in FTE, wages and output in \$000's)

	New York City			New York State		
	Jobs	Wages	Output	Jobs	Wages	Output
Direct spending impact						
Payroll	15,775	\$987,383.5	\$987,383.5	15,775	\$987,383.5	\$987,383.5
Purchasing/construction	2,363	\$187,207.7	\$391,021.3	2,527	\$200,044.1	\$423,760.8
<i>Subtotal, direct impact</i>	<i>18,138</i>	<i>\$1,174,591.2</i>	<i>\$1,378,404.8</i>	<i>18,302</i>	<i>\$1,187,427.6</i>	<i>\$1,411,144.3</i>
Indirect and induced effects						
Employee spending	3,003	\$199,652.3	\$572,130.4	3,162	\$208,995.3	\$600,020.6
Contractor and vendor spending	1,026	\$76,800.3	\$205,689.3	1,143	\$84,688.2	\$228,276.9
<i>Subtotal, indirect/induced impact</i>	<i>4,030</i>	<i>\$276,452.6</i>	<i>\$777,819.7</i>	<i>4,306</i>	<i>\$293,683.4</i>	<i>\$828,297.5</i>
Total impact	22,168	\$1,451,043.8	\$2,156,224.5	22,607	\$1,481,111.0	\$2,239,441.8

Taking into account the direct impact of NYU's spending on purchasing and construction with Manhattan and Brooklyn-based vendors and contractors, and the indirect and induced impact of NYU's spending on purchasing and construction, we estimate that in fiscal year 2013, NYU spending on construction and purchasing directly and indirectly accounted for (as shown in Table 2):

- 2,322 FTE jobs in Manhattan;
- Nearly \$201.7 million in wages and salaries; and
- Nearly \$433.2 million in Borough-wide economic output.

In Brooklyn, NYU's spending on purchasing and construction directly and indirectly accounted for (as shown in Table 2):

- 137 FTE jobs in Brooklyn;
- Nearly \$8.2 million in wages and salaries; and
- Nearly \$21.1 million in Borough-wide economic output.

Table 2: Direct, indirect and induced impact of NYU spending on construction and purchasing in Manhattan and Brooklyn, FY 2013 (jobs in FTE, income and output in \$000's)

	Manhattan			Brooklyn		
	Jobs	Wages	Output	Jobs	Wages	Output
Direct impact	1,799	\$156,791.6	\$317,671.0	94	\$5,872.4	\$14,027.4
Indirect/induced impact	524	\$44,875.6	\$115,508.5	43	\$2,311.7	\$7,058.6
Total impact	2,322	\$201,667.2	\$433,179.6	137	\$8,184.2	\$21,086.0

The impact of student and visitor spending

In addition to the impact of NYU's spending on payroll, purchasing and construction, NYU contributes to the economy of New York City by attracting students and visitors from across the country and around the world to New York City. These students and visitors also spend money within the local economy, supporting employment and economic activity in a variety of industries, including housing, restaurants, hotels, retailing, transportation and entertainment.

The impact of student spending

In the fall of 2012, a total of 37,807 full-time undergraduate and graduate students were enrolled at NYU, and an additional 8,649 students lived in NYU-owned housing during the summer of 2013. To calculate the impact of off-campus spending by graduate and professional students, we assumed that all part-time graduate and professional students from New York City are primarily in New York City because they are working there, and do not count their spending as part of NYU's impact.

Based on data on students' living arrangements and average student living costs obtained by the university, we estimate that in fiscal year 2013, aggregate off-campus spending by students – for housing, food, transportation, books and supplies, entertainment and other needs – totaled more than \$608.5 million. We estimate off-campus spending by students who came to NYU from outside of New York State totaled nearly \$365.6 million.

Table 3: Estimated off-campus spending by full-time NYU students, FY 2013 (total off-campus spending in \$000's)

	Number of students	Per student off-campus spending	Total off-campus spending
Undergraduate students	23,199	\$11,353	\$263,386.7
Graduate/professional students	11,997	\$28,261	\$339,047.0
Summer students	8,649	\$704	\$6,093.1
Total, all students	43,845		\$608,526.7

Using IMPLAN, we estimate that in fiscal year 2013, off-campus student spending directly and indirectly accounted for:

- 4,275 FTE jobs in New York City;
- \$192.6 million in wages and salaries; and
- Nearly \$746.5 million in City-wide economic output.

Statewide, we estimate that off-campus spending by students who came to NYU from outside of New York State directly and indirectly accounted for:

- 3,231 FTE jobs in New York State;
- \$135.9 million in wages and salaries; and
- \$523.3 million in State-wide economic output.

The impact of visitor spending

NYU attracts thousands of visitors to its campus every year – for commencement, prospective student tours, conferences, performances, guest speakers and more.

While we do not attempt to quantify the impact of visitor spending on New York City's economy in this report, each visitor to NYU contributes to the vitality of New York City's economy through local spending on hotels, food, transportation and entertainment.

Adding it all up: the impact of NYU and student spending

Taking into account the impact of NYU's spending on payroll, purchasing and construction and the impact of student spending, we estimate that in fiscal year 2013, NYU directly and indirectly accounted for (as shown in Table 4):

- 26,443 FTE jobs in New York City;
- More than \$1.6 billion in wages and salaries; and
- \$2.9 billion in City-wide economic output.

Statewide, NYU and student spending directly and indirectly accounted for (as shown in Table 4):

- 25,838 FTE jobs in New York State;
- More than \$1.6 billion in wages and salaries; and
- Nearly \$2.8 billion in State-wide economic output.

**Table 4: Total impact of NYU and student spending in New York City and New York State, FY 2013
(jobs in FTE, wages and output in \$000's)**

	New York City			New York State		
	Jobs	Wages	Output	Jobs	Wages	Output
Impact of payroll						
Direct	15,775	\$987,383.5	\$987,383.5	15,775	\$987,383.5	\$987,383.5
Indirect/induced	3,003	\$199,652.3	\$572,130.4	3,162	\$208,995.3	\$600,020.6
<i>Subtotal, payroll impact</i>	<i>18,778</i>	<i>\$1,187,035.8</i>	<i>\$1,559,513.9</i>	<i>18,937</i>	<i>\$1,196,378.8</i>	<i>\$1,587,404.0</i>
Impact of purchasing						
Direct	1,354	\$98,647.9	\$212,570.1	1,455	\$106,264.8	\$235,122.5
Indirect/induced	542	\$40,506.2	\$110,410.4	614	\$45,484.0	\$124,850.2
<i>Subtotal, purchasing impact</i>	<i>1,896</i>	<i>\$139,154.1</i>	<i>\$322,980.5</i>	<i>2,069</i>	<i>\$151,748.8</i>	<i>\$359,972.6</i>
Impact of construction spending						
Direct	1,009	\$88,559.8	\$178,451.2	1,072	\$93,779.3	\$188,638.3
Indirect/induced	484	\$36,294.1	\$95,278.9	530	\$39,204.2	\$103,426.7
<i>Subtotal, construction spending impact</i>	<i>1,494</i>	<i>\$124,853.9</i>	<i>\$273,730.1</i>	<i>1,601</i>	<i>\$132,983.5</i>	<i>\$292,065.1</i>
Impact of student spending						
Direct	3,343	\$122,992.2	\$546,894.8	2,355	\$79,148.9	\$353,624.0
Indirect/induced	932	\$69,609.3	\$199,578.3	876	\$56,780.8	\$169,688.3
<i>Subtotal, student spending impact</i>	<i>4,275</i>	<i>\$192,601.5</i>	<i>\$746,473.1</i>	<i>3,231</i>	<i>\$135,929.7</i>	<i>\$523,312.3</i>
Total impact	26,443	\$1,643,645.3	\$2,902,697.6	25,838	\$1,617,040.7	\$2,762,754.0

Contributing to state and local revenues

As shown in Table 5, in fiscal year 2013, NYU directly accounted for nearly \$48.5 million in New York State taxes and \$26.6 million in New York City taxes and fees – a total of nearly \$75.1 million in City and State government revenues.

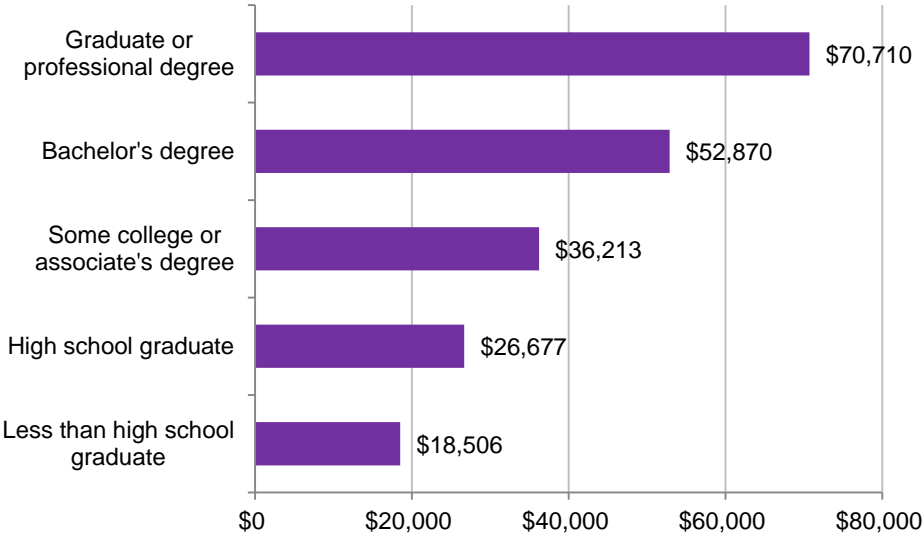
Table 5: State and local government revenues directly attributable to NYU, FY 2013 (in \$000's)

Type of revenue	Amount
New York State revenues	
New York State income taxes withheld	\$48,319.5
Unemployment insurance taxes	\$133.7
Real property taxes	\$12.0
Other fees paid to New York State agencies	\$0.03
<i>Subtotal, NYS revenues</i>	<i>\$48,465.3</i>
New York City revenues	
NYC income taxes withheld	\$20,956.4
Real property taxes	\$849.8
Water/sewer charges	\$4,655.8
License and permit fees	\$88.4
Other fees paid to NYC agencies	\$68.8
<i>Subtotal, NYC revenues</i>	<i>\$26,619.1</i>
<i>Total NYS and NYC revenues</i>	<i>\$75,084.4</i>

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 relationship between education and income is readily evident. As Figure 6 shows, in 2012, the median earnings of New York City residents who had four-year college degrees were nearly double (98.4 percent higher than) the median earnings of those who had only a high school diploma; and the median earnings of City residents who had graduate or professional degrees were more than 165 percent higher than the earnings of those who had no education beyond high school.

Figure 6: Median earnings by educational attainment for New York City residents age 25 and older, 2012



Source: American Community Survey 2012 (1-Year Estimates), Social Explorer, U.S. Census Bureau

The economic value of education, however, is not limited to its impact on individual earnings. A study published by the Milken Institute in 2013 found that in U.S. metropolitan areas, increasing employed workers’ average years of schooling by one year increased regional GDP per capita by 10.5 percent and increased average real wages by 8.4 percent.

Higher education was found to have an even greater impact than education generally: Adding one year of schooling to the educational attainment of workers who already had a high school

diploma increased average GDP per capita by 17.4 percent and average real wages by 17.8 percent.²

Even non-college educated workers benefit from this effect. Enrico Moretti 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.³

NYU students and alumni

In the fall of 2012, 48,468 full- and part-time students were enrolled at schools associated with NYU's Washington Square campus and School of Engineering, including 24,569 undergraduates and 23,899 graduates. Table 6 shows undergraduate and graduate/professional enrollment by school; and Table 7 breaks out enrollment between full-time and part-time students.

Table 6: Total undergraduate and graduate enrollment by school, fall 2012

School/College	Undergraduate	Graduate/ professional
College/Graduate School of Arts & Science	7,092	3,014
College of Dentistry	196	1,554
College of Nursing	942	705
Courant Institute of Mathematical Sciences	371	837
Gallatin School of Individualized Study	1,487	172
Institute of Fine Arts	–	164
Institute for the Study of the Ancient World	–	11
Leonard N. Stern School of Business	2,474	3,355
Polytechnic School of Engineering	2,071	2,580
Robert F. Wagner Graduate School of Public Service	–	962
School of Professional Studies	1,314	2,566
School of Law	–	2,167
Silver School of Social Work	129	1,227
The Steinhardt School of Culture, Education, and Human Development	2,521	3,568
Tisch School of the Arts	3,283	798
University College (Global Public Health)	–	219
Liberal Studies Program	2,301	–
University Programs	388	–
Total enrollment	24,569	23,899

²Ross de Vol et al, *A Matter of Degrees: The Effect of Educational Attainment on Regional Economic Prosperity*, The Milken Institute, February 2013, p.1.

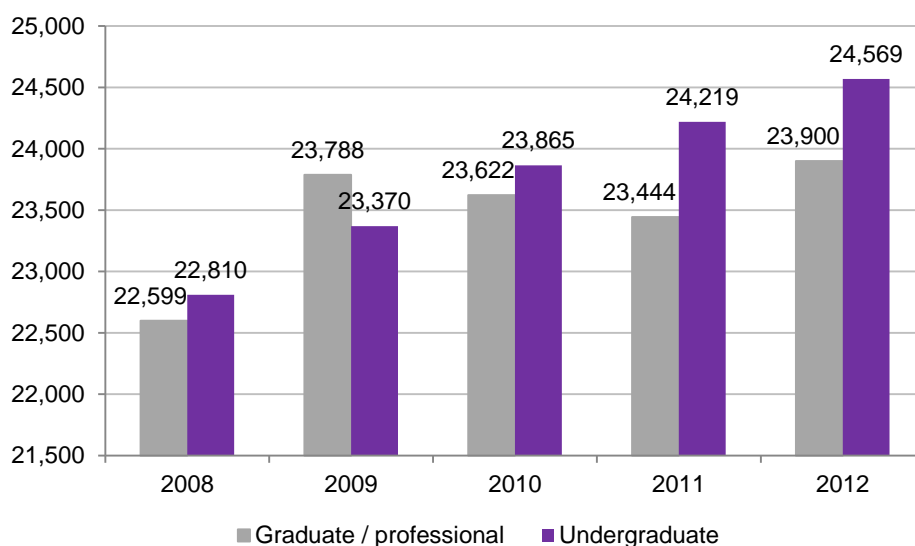
³ Enrico Moretti, "Social Returns to Human Capital," NBER Reporter: Research Summary, spring 2005; and Moretti, *The New Geography of Jobs* (Houghton Mifflin Harcourt, 2012) p. 100.

Table 7: Full- and part-time undergraduate and graduate/professional enrollment, fall 2012

	Full-time	Part-time	Total enrollment
Undergraduate	23,199	1,370	24,569
Graduate/professional	14,608	9,291	23,899
Total	37,807	10,661	48,468

As shown in Figure 7, between fall 2008 and fall 2012, total enrollment at NYU grew by 6.7 percent – an increase of 3,060 students. During that same time period, undergraduate student enrollment grew by 7.7 percent and graduate and professional student enrollment grew by 5.8 percent.

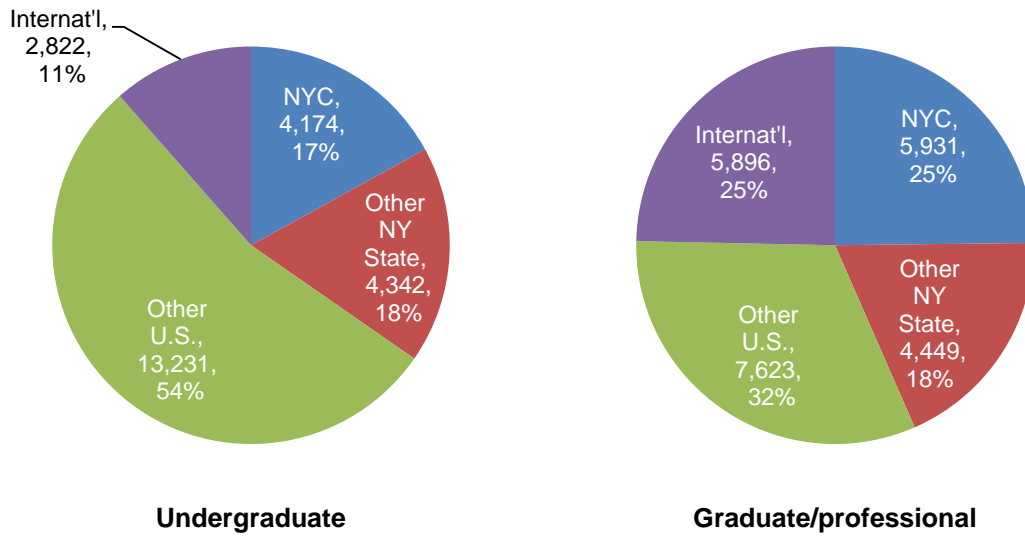
Figure 7: Total undergraduate and graduate enrollment, fall 2008 – fall 2012



As Figure 8 shows, of all those enrolled full- and part-time in the fall of 2012:

- About 17 percent of all undergraduates were from New York City; 17.7 percent were from elsewhere in New York State; 53.9 percent were from elsewhere in the U.S.; and 11.5 percent were international students.
- Nearly 25 percent of all graduate and professional students were from New York City; 18.6 percent were from elsewhere in New York State; 31.9 percent were from elsewhere in the U.S.; and 24.7 percent were international students.

Figure 8: NYU enrollment by student’s permanent place of residence, fall 2012



International students at NYU

In the fall of 2012, 8,718 international students were enrolled in undergraduate and graduate degree programs at NYU – nearly 18.0 percent of total undergraduate and graduate enrollment. In 2013-2014, NYU was ranked 1st among all U.S. institutions in international enrollment.⁴ NYU also ranked first among all New York City colleges and universities in international student enrollment. The University thus plays a central role in making higher education one of the City’s leading service exports, and is a major contributor to the City’s status as “the world capital of international education.”

Continuing education

In addition to NYU’s degree programs, the University offers a wide range of non-degree programs and courses. During the 2012-2013 academic year, 9,155 students were enrolled in non-degree continuing education programs.

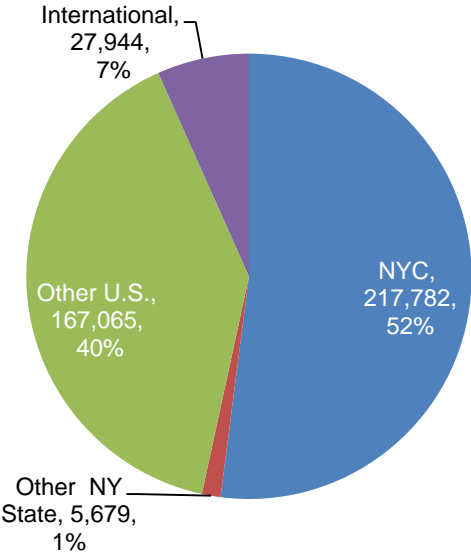
⁴ Institute of International Education. (2013). “Top 25 Institutions Hosting International Students, 2013/14.” *Open Doors Report on International Educational Exchange*.

Where NYU alumni live

As of the summer of 2013, more than 217,780 (52.0 percent) of NYU's 418,470 alumni lived in New York City, and an additional 5,680 alumni (1.4 percent) lived elsewhere in New York State.

The data presented in Figure 9 are particularly striking when compared with the data in Figure 6 on where NYU students come from. In 2012-13, fewer than 21 percent of all NYU undergraduate, graduate and professional students were permanent residents of New York City; but 52 percent of all University alumni live in the City. To a degree that few if any other institutions in New York City can match, NYU attracts students to the City from throughout the U.S. and around the world – many of whom choose to stay in New York after they graduate.

Figure 9 NYU alumni by place of residence, as of summer 2013



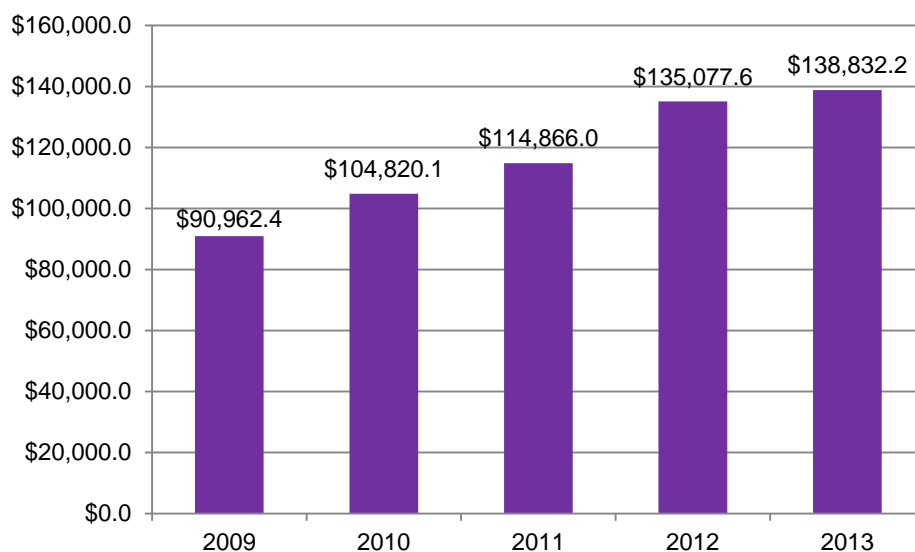
Research and business development

In New York City as elsewhere in the U.S., scientific discovery and technological innovation are among the most important sources of economic growth. As one of the City's leading research universities, NYU is a major contributor to the growth of scientific research in New York City, the development of new technologies and the use of those technologies to develop new products and services, new businesses and new jobs.

A growing research enterprise

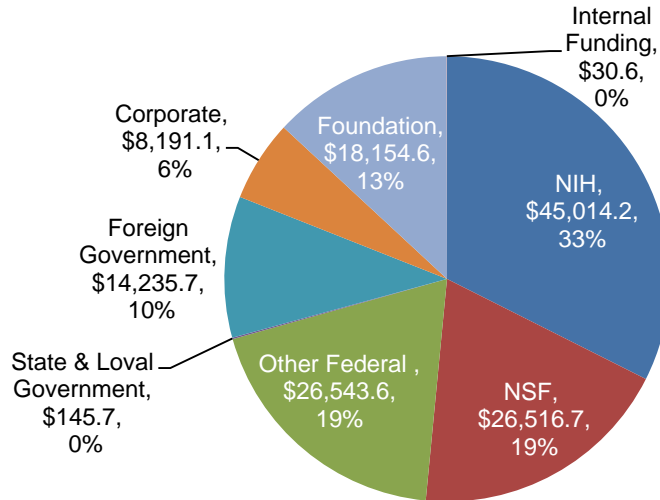
In fiscal year 2013 (as shown in Figure 10), NYU spent a total of \$138.8 million on research—a total increase of nearly 52.6 percent since fiscal year 2009.

Figure 10: Total annual NYU research spending, FY 2009 – FY 2013 (in \$000's)



As shown in Figure 11, the federal government is NYU's leading source of research funding, accounting for 70.6 percent (\$98.1 million) of total research spending in fiscal year 2013. Foundation funding accounted for 13.1 percent (\$18.2 million); foreign governments for 10.3 percent (\$14.2 million); and corporate funding for 5.9 percent (\$8.2 million). Less than one percent (\$145,650) of NYU's research spending in fiscal year 2013 was funded by state or local government.

Figure 11: NYU research spending by source of funds, FY 2013



Technology transfer and new business development

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

Between fiscal year 2009 and fiscal year 2013 (as Table 8 shows), NYU:

- Filed 165 applications for new patents based on research conducted at NYU;
- Secured 142 patents;
- Entered into 59 licensing agreements for the commercial use of technologies first developed at NYU; and
- Assisted in the creation of 19 start-up companies.

Table 8: Technology transfer activity at NYU, FY 2009 – FY 2013

	2009	2010	2011	2012	2013
Gross licensing income	\$475,829	\$2,294,768	\$466,597	\$5,954,522	\$1,321,292
Invention disclosures	31	28	43	56	74
New patent applications filed	26	29	41	32	37
Patents issued	13	34	46	30	19
Licenses/options executed	12	8	12	11	16
Start-up companies formed	3	2	5	4	5

NYU's support for innovation and entrepreneurship is not limited to the formal process of technology transfer. The School of Engineering currently operates three incubators for technology start-ups.

- **The Varick Street Incubator** (137 Varick Street) was launched in 2009 through a partnership among the University, the New York City Economic Development Corporation and Trinity Real Estate. The incubator provides below-market-rate office space and services, connections to investors and other supports. Companies that are not physically located at the incubator can also utilize its services as virtual tenants.

As of the fall of 2014, the Varick Street Incubator was serving 21 companies as either physical or virtual tenants, in industries such as digital media, financial technology, educational technology, and mobile communications.

- **The New York City Accelerator for a Clean and Renewable Economy (NYC ACRE)**, housed within the Urban Future Lab and located at 15 Metrotech Center, was launched in 2009 with a grant from New York State. As of the fall of 2014, NYC ACRE was working with 17 companies (both physical tenants and others) in areas such as smart grid technology, heating systems and renewable energy.
- **The DUMBO Incubator** (20 Jay Street) was launched in 2012 through a partnership among NYU NYCEDC and Two Trees. Its focus is on start-up companies in creative services, digital media, and mobile technology. As of the fall of 2014, the incubator was working with 28 physical and virtual tenant companies.

In addition to its three incubators, NYU supports innovation and entrepreneurship through a variety of other centers and programs.

- The **NYU Entrepreneurial Institute** is a University-wide institute created in 2012 to accelerate the commercialization of NYU technologies and the successful launch and growth of start-ups founded by NYU students, faculty and alumni. Its programs include:
 - Annual new venture, technology venture and social venture competitions;
 - Lean start-up classes and an annual start-up boot camp program;
 - The Innovation Venture Fund, which each year makes five or six seed-stage investments of \$100,000 to \$150,000 in new businesses with roots at NYU.
- The Stern School's **Berkley Center for Innovation and Entrepreneurship** provides students with co-curricular experiences that help them prepare to succeed as entrepreneurs, including venture competitions, mentoring and an entrepreneurs-in-residence program.
- The School of Engineering's **Office of Innovation and Entrepreneurship** supports new business development through NYC Seed, a partnership with New York State and the NYC Investment Fund that provides seed capital investments.

A growing entrepreneurial community

In addition to the University's formal technology transfer process and the support for new business development through its incubator and accelerator programs, NYU alumni, students and faculty members have during the past twenty years become major contributors to the creation and growth of new businesses in New York City. Table 9 lists several notable examples of companies started in New York City since the 1990's by founders with ties to NYU. Some of these companies – such as Razorfish and Etsy – are now well-established as leaders in their respective industries. Others succeeded to the degree that they became acquisition targets – such as ComiXology, founded in 2007 and acquired by Amazon in 2014, and Tap Commerce, which was founded in 2012 and acquired by Twitter in 2014 at a reported price of \$100 million. Others are still small but promising start-ups.

Table 9: Notable New York City companies started by NYU alumni, students and faculty

Company	Year founded	Nature of business	Location
Razorfish	1994	Digital advertising	Midtown
XO Group	1996	Oline media	Lower Manhattan
Seamless	1999	Online ordering of meals	Midtown
W Capital Partners	2001	Financial services	Midtown
BioDigital	2002	Biomedical visualization technology	SoHo
The Ladders	2003	Online job search and recruiting	Hudson Square
Etsy	2006	Online craft marketplace	DUMBO
BuzzFeed	2006	Online media	Flatiron
Charity Water	2006	Water projects in developing nations	Hudson Square
Digital Assembly	2006	Digital forensic analysis	Hudson Square
ComiXology	2007	Digital distribution of comics	Midtown
FourSquare	2008	Location-based social media	SoHo
Rocket Hub	2010	Crowdfunding	Midtown
Tagasuris	2010	Digital media tagging, annotation	Union Square
Tactonic Technologies	2010	Multi-touch imaging sensors	Long Island City
App Orchard	2011	Support for app developers	Lower Manhattan
Kinvolved	2011	Real-time sharing of school data	DUMBO
Fan Bridge	2011	Social media CRM	Chelsea
VHX	2011	Direct distribution of online video	DUMBO
Biblio Crunch	2011	E-book publishing services	
Vengo Labs	2012	Small touch-screen vending machines	Long Island City
Tap Commerce	2012	Mobile marketing	Union Square
WeeSpring	2012	Social shopping for expectant parents	
Bot Factory	2013	3D printers for making circuit boards	DUMBO
Ex Vivo Dynamics	2013	Medical device for transfusion	Midwood
Solvuu	2013	Software for genomic analysis	Midtown
Spring	2014	Mobile shopping	SoHo

Together, the companies listed in Table 9 employ more than 3,500 people in New York City.

Companies such as these are not only one-by-one additions to New York City's economy. Companies started by NYU alumni, faculty and students – and the University itself – have become an integral part of the City's thriving entrepreneurial ecosystem.