NYC ECONOMIC BRIEF
Office of the New York City Comptroller
Scott M. Stringer
BUREAU OF FISCAL & BUDGET STUDIES JULY 2014

Who Works in Manhattan's Office Buildings?

At one time or another most New Yorkers have probably gazed at the downtown or midtown skylines and wondered: Who works in all those office buildings? Where do they live and what do they do? What are their backgrounds and qualifications?

Such questions may reflect our casual curiosity about our neighbors, but underlying them are also important questions about the City's economy and how it is changing. This report finds that to the extent that office workers in Manhattan earn, on average, more than double what workers who don't work in office buildings earn, employment in the office economy represents enhanced access to a middle-class standard of living. In addition, the economic literature on internal labor markets[1] suggests that early entry into an office environment may provide a lifetime of career opportunities that will often become closed to those who begin their work lives in other employment settings.

Moreover, investigating trends in the office sector as a whole can reveal shifts in occupational categories and skill requirements that may be obscured when the labor market as a whole is considered. Likewise, analyzing trends in office employment avoids many of the pitfalls of industry-level analysis, such as the frequently arbitrary distinction between legal services and finance, or between the "tech" industry and more traditional but technology-infused industries such as advertising.

This brief looks at trends in Manhattan's office workforce between 1990 and 2012. Since Manhattan contains about 85 percent of the City's office space, it can be surmised that the trends discussed here are broadly representative of those in the City as a whole.

A Note on Methodology

For this brief we utilized microdata from the 1990 Census and the 2012 American Community Survey. Although neither source provides data specifically on office employment, they both provide data, for a very large sample of individuals, on geographic place of work, on industry of employment, and on occupation, as well as on a host of other characteristics of each respondent. By cross-referencing county of employment, industry, and occupation, we were able to estimate Manhattan's office worker population and the characteristics of that population for the two points in time.

Workers in industries which typically operate in office buildings were initially categorized as office workers, while workers in industries typically operating in other types of structures were not. Then, further exclusions were made based on the worker's occupation. For example, workers in finance were classified as office workers while workers in retail trade were not. However, even within the finance industry, some workers, such as bank tellers, are exclusively engaged in retail activities and typically work in retail spaces. Consequently, bank tellers were excluded from the count.

The cross-referencing process was particularly important for counting educational and health care

1 Peter B. Doeringer and Michael J. Piore (1985); *Internal Labor Markets and Manpower Analysis*. M.E. Sharpe.

workers. Education and health care are industries with an extensive presence in both commercial office buildings and in dedicated institutional structures. In the case of education, we excluded all workers who are involved in elementary and secondary education, as most of that activity occurs in dedicated school buildings. However, we included workers engaged in other educational activities, such as higher education, because both public and private universities in Manhattan utilize significant amounts of commercial office space as well as occupying their own office-type buildings on campus and off. Similarly, we excluded health care workers who work in hospitals and other institutions that typically operate out of dedicated residential facilities, but included health care workers who are employed in physician offices and similar establishments.

Building maintenance workers, who are typically employees of buildings maintenance contractors or real estate management firms, were also excluded.

Our process yielded a total estimate of 1,203,000 Manhattan office workers in 2012. Given a Manhattan office building inventory of 402 million gross square feet in 2012,[2] and a total vacancy rate of 9.3 percent,[3] our count implies a reasonable 303 gross occupied square feet per worker in that year.

Characteristics of the Office Workforce

New York City's office workforce grew very slowly during the 1990 to 2012 period. We estimate that the 1990 office workforce, numbering 1.176 million in 1990, increased to only 1.203 million by 2012, representing an average annual growth rate of only 0.1 percent. Nevertheless, we found dramatic changes in the composition of the workforce over that period of time.

Contrary to the widespread impression that there has been a massive "return to the city" of professionals, the number of Manhattan office workers who actually live in New York City fell slightly between 1990 and 2012. In 2012, about 70 percent of Manhattan office workers lived in the city, compared to 71 percent in 1990.

Manhattan Office Workers
Place of Residence

	1990		2012		
	(000s)	% share	(000s)	% share	Growth
Total	1,177	100.0	1,203	100.0	
Resides In:					
New York City	833	70.8	843	70.0	1.2%
Bronx	77	6.6	63	5.2	-18.2%
Manhattan	358	30.4	416	34.6	16.2%
Brooklyn	192	16.3	198	16.4	3.1%
Queens	170	14.5	141	11.7	-17.2%
Staten Isl	36	3.1	25	2.1	-30.6%
Long Island	93	7.9	76	6.3	-17.9%
Nthn Suburbs	72	6.1	68	5.7	-5.3%
Connecticut	20	1.7	21	1.8	4.5%
NJ & PA	159	13.5	195	16.2	22.9%

Source: NYC Comptroller from Census microdata

The portion of Manhattan office workers who live on Long Island and in the Northern suburbs both fell. The fastest-growing place of residence of Manhattan office workers was New Jersey (and adjacent parts of Pennsylvania), where about one-sixth of Manhattan office workers now reside. With the growth of New Jersey as a domicile of Manhattan's office workforce, and most of Manhattan's new office space planned for the World Trade Center site and the Hudson Yards, transit access between New Jersey and Manhattan may become more of a constraint on the region's economic development.[4] Manhattan office workers who live in New Jersey spent, on average, 67 minutes commuting to work each way in 2012, up from an average of 56 minutes in 1990.

Over the 22-year period, the office workforce became more diverse[5], but in important ways the progress towards equal opportunity was disappointing. While the proportion of Manhattan's office workforce that was white non-Hispanic fell from about two-thirds to less than 60 percent, the proportion that was black non-Hispanic also fell. Moreover, the fall in black office representation did not simply reflect a declining representation of non-Hispanic blacks in the City's overall population. In 1990, 15.6 percent of the City's young black residents (ages 25 to 40)

2 NYC Department of Finance

3 Cushman and Wakefield

4 In 2010 New Jersey Governor Chris Christie cancelled construction of the Access to the Region's Core (ARC) tunnel, a planned commuter rail tunnel connecting Secaucus and 34th Street.

5 Primarily due to the portion of Asian non-Hispanic Manahattan office workers doubling between 1990 and 2012.

were employed in Manhattan's office buildings; by 2012 only 11.1 percent were. Furthermore, by 2012, only 8.3 percent of resident black males ages 25 to 40 were employed in Manhattan offices, compared to 34 percent of white males of similar age.[6] The proportion of young Hispanic males working in offices was even lower, at 7.7 percent.

Manhattan Office Workers Distribution by Race and Gender

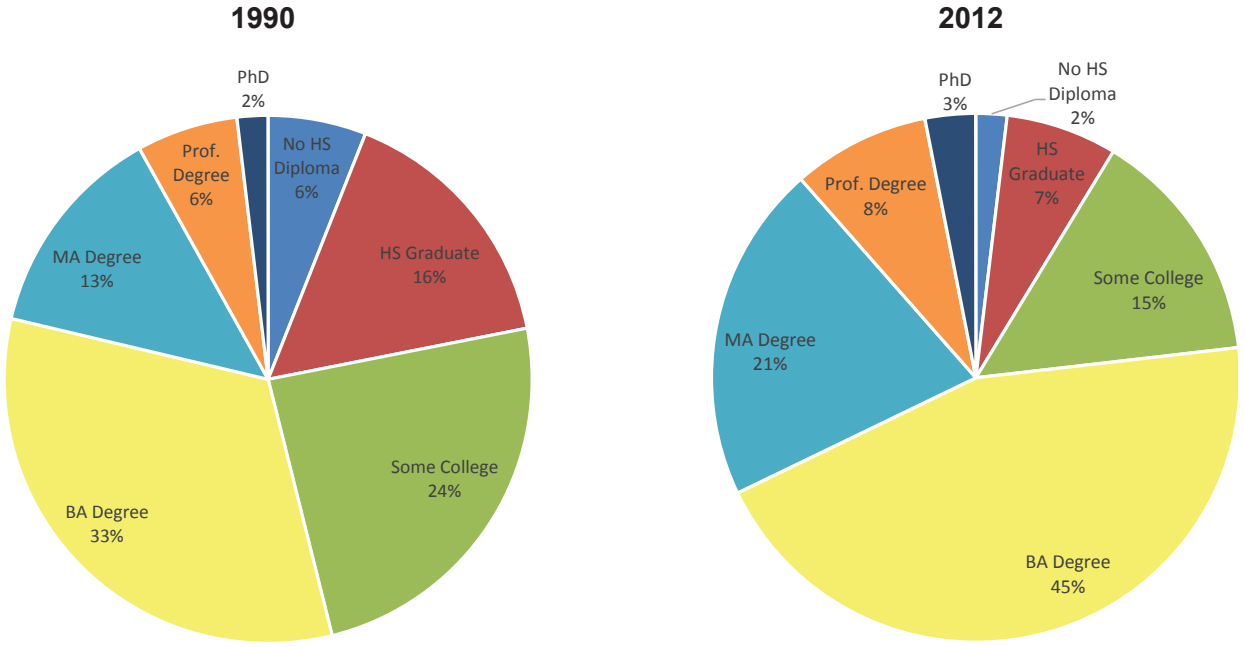
Race	1990	2012
	(percent)	
White, non-Hispanic	67.9	59.6
Black, non-Hispanic	14.9	12.0
Hispanic	9.9	12.2
Asian, non-Hispanic	7.1	14.2
Other	0.2	2.0
Total	100.0	100.0
Gender		
Male	50.1	51.8
Female	49.9	48.2

Source: NYC Comptroller from Census microdata

The declining representation of African-Americans in Manhattan's office workplaces is, in part, a result of the dramatic increase in the educational requirements for office employment. The percentage of Manhattan office workers with a least a BA degree increased from 54 percent in 1990 to 77 percent in 2012, as a result of a changing occupational mix within offices, a greater use of office technology, and a competitive inflation of educational requirements. By 2012, nearly one-third of all Manhattan office workers possessed graduate degrees.

With a college degree rapidly becoming the minimum qualification for office employment, educational disparities assume a new importance in perpetuating economic inequality. In 2012, 69 percent of all non-Hispanic whites in the City between the ages of 25 and 40 had at least a four-year college degree. Only 27 percent of resident non-Hispanic blacks in that age group had a BA or more, and only 20 percent of Hispanics. Hispanics increased their representation in Manhattan's offices because they grew in number relative to the City's overall population; the percentage of the City's working-age Hispanics who work in Manhattan office buildings declined between 1990 and 2012.

Manhattan Office Workers Highest Degree Attained



6 This finding is not an artifact of residential preferences. Black and Hispanic office workers are more likely to live in the City than white and Asian office workers.

Manhattan Office Workers
Employment in Traditionally Female Occupations

Occupation	% Female	1990 Total	2012 Total	Change
Secretaries & Adm Assistants	98	79,000	54,200	-31%
Receptionists	93	12,900	7,000	-46%
Typists & Word Processors	85	20,800	5,500	-74%
Misc Management Occupations	84	15,300	7,640	-50%
Data Entry Keyers	81	13,200	6,000	-55%
General Office Clerks	75	36,300	21,500	-41%
Bookeeping & Accounting Clerks	73	30,900	14,000	-55%
Social Workers	68	12,600	11,800	-6%
Paralegals & Legal Assistants	62	9,400	16,800	79%

Source: NYC Comptroller from Census microdata

It is initially surprising that the representation of women in Manhattan's office workplaces declined between 1990 and 2012, from 49.9 percent to 48.2 percent. However, the data confirm what might be surmised, which is, the decline in traditionally female office occupations during the period was not fully offset by the increasing representation of women in high-growth occupations. This might be related to technology innovations in office operations and the reallocation of back-office jobs outside of Manhattan.

Women made progress penetrating some traditionally male office occupations, but in others there was surprisingly little change. In 1990, for example, only 26 percent of Manhattan's lawyers and judges were women, but by 2012 that proportion had risen to 43 percent. However, in accounting and auditing the proportion of women only rose slightly (to 42 percent) and in architecture not at all (22 percent in 2012). In some occupations, such as financial manager and financial and securities sales, the proportion of women actually declined from 1990 to 2012.

It has been widely noted that women are underrepresented in computer technology jobs and our analysis bears that out. We estimate that there are over 100,000 computer-related technology jobs in Manhattan office workplaces and that women hold only 22 percent of those jobs. Women represent about 43 percent of the web designers, but only 30 percent of computer programmers, 16 percent of software engineers, and 14 percent of computer and information systems managers.

Earnings, Industries and Occupations

In 1990, Manhattan office workers had average wage or salary income of about $41,200, compared to the average income of $23,600 for Manhattan workers who did not work in offices. By 2012, that 75 percent earnings differential had widened to 110 percent, as the average office worker salary rose to $100,900.

Average Earnings From Wages and Salary
Selected Manhattan Office Occupations

	Earnings 1990 (dollars)	2012	Change (%)
All Office Workers	41,200	100,900	144.9
Selected Occupations:			
Architects	28,600	85,000	197.2
Financial Managers	71,000	203,600	186.8
Accountants & Auditors	42,000	111,600	165.7
Lawyers	65,700	173,900	164.7
Securities & Financial Sales	80,600	204,800	154.1
Bookkeepers & Auditing Clerks	21,700	52,700	142.9
Public Relations Specialists	39,600	91,200	130.3
Authors, Reporters & Editors	32,300	71,600	121.7
Computer Programmers	42,800	90,200	110.7
Receptionists	15,800	32,000	102.5
General Office Clerks	18,000	33,800	87.8
Secretaries & Adm Assistants	24,300	41,000	68.7

Source: NYC Comptroller from Census microdata

Although the average earnings of office workers are boosted by the high rates of pay in the financial industry, the rising gap between office workers and non-office workers has occurred outside of the financial industry as well. In 2012, the average wage or salary income of Manhattan's non-financial office workers was about $83,400, or about 74 percent higher than the average earnings of non-office workers. In 1990, that differential was about 58 percent.

In 2012, female office workers still earned, on average, only 60 percent of what their male counterparts earned.

The changes in earnings between Manhattan office workers and non-office workers, and among office workers themselves, parallel those that have been much discussed in the society at large. One major question that has been debated in recent years is the role of education and skills in producing wider

earnings disparities.[7] Some insight into those issues can be gained from an analysis of the earnings of Manhattan office workers.

The Census Bureau changed its definition of numerous office occupations between 1990 and 2012, usually because some occupations grew obsolete (switchboard operators, for example) while others emerged due to changes in technology and business organization (web designers). However, there are a number of office occupations that remained relatively constant in definition and function during the period and can be used for comparison.

The data indicate that while the relative growth of office worker earnings may have been boosted by a shift toward higher-paying jobs, the earnings gains were mostly driven by pay increases realized by traditional professional and skilled occupations. Architects, accountants, financial managers and lawyers all experienced earnings increases well above the average although the nature of those jobs, including their skill content and educational requirements, changed little during that time.

The rate of earnings increase for specific occupations does not seem to be highly correlated with the rate of educational inflation within that occupation. For example, while the average earnings of secretaries and administration assistants increased by only 69 percent between 1990 and 2012, the percentage holding at least a 4-year college degree grew from 14 percent to 42 percent. Similarly, the number of receptionists holding a college degree increased from 17 percent to 35 percent. Conversely, the percentage of architects holding an MA or higher degree declined, as did the percentage of writers, editors and reporters. Wage growth and educational attainment seem to be most closely linked in financial occupations, as the percentage of financial managers, financial sales persons, and accountants and auditors holding graduate degrees soared between 1990 and 2012.

Although Manhattan office workers experienced a faster rate of earnings growth than non-office workers, it is not all wine and roses for office workers. The average office worker works more hours per week than the average non-office worker and the gap has been growing. In 1990, the average Manhattan office worker worked 40.2 hours per week, but by 2012 that had increased to 43.6 hours. The extra hours office workers spend at work reduces their effective pay differential, compared to non-office workers, by about one-fifth.

The average number of hours worked each week by Manhattan Office workers rises uniformly with educational attainment, except that those holding doctorate degrees work slightly fewer hours than those with professional degrees.[8]

Women who work in Manhattan offices work about 10 percent fewer hours, on average, than do their male counterparts, partially explaining the difference in salaries. That is probably because women are more likely to shoulder childcare responsibilities. Women who work in Manhattan offices are five times more likely to be a single parent. However, our datasets provide no information about how childcare and other family responsibilities are divided among married workers.

Weekly Hours Worked
Manhattan Office Workers

	1990		
Education	**Male**	**Female**	**All**
	(average hours worked)		
All Office Workers	**42.3**	**38.1**	**40.2**
No HS Diploma	35.3	35.2	35.2
HS Graduate	39.8	35.4	36.8
Some College	40.3	37.2	38.5
BA Degree	42.5	40.3	41.5
MA Degree	45.2	39.4	43.2
Prof. Degree	47.7	41.4	46.1
Ph D	43.1	43.1	43.1
Non-Office Workers	39.4	35.8	37.9
	2012		
Education	**Male**	**Female**	**All**
	(average hours worked)		
All Office Workers	**45.7**	**41.3**	**43.6**
No HS Diploma	39.8	34.4	36.0
HS Graduate	42.3	36.4	38.6
Some College	41.3	38.2	39.5
BA Degree	46.0	42.9	44.8
MA Degree	47.3	42.4	45.4
Prof. Degree	49.7	45.4	47.9
Ph D	48.2	43.0	45.9
Non-Office Workers	41.1	37.7	39.6

Source: NYC Comptroller from Census microdata

7 Robert J. Gordon and Ian Dew-Becker (2008): *Controversies About the Rise of American Inequality: A Survey*. National Bureau of Economic Research , Working Paper 13982.

8 Primarily lawyers and physicians.

Summary and Further Considerations

An analysis of Manhattan office employment provides insight into changes in the City's economy and workforce that are often obscured by conventional industry-level analysis. Trends in occupational structure, earnings, and educational requirements often transcend industry boundaries but can also be masked when non-office activities are included.

Our study shows that Manhattan office employment grew slowly between 1990 and 2012 but that there were dramatic changes in occupational structure and relative earnings. The average wages of office employees in both the financial and non-financial sectors grew significantly faster than did the wages of non-office workers during the period. The growth in office worker earnings was concurrent with a substantial increase in the educational qualifications of office workers, but the relationship between earnings growth and educational attainment was not necessarily causal.

Two unsettling findings bear upon the questions of gender and racial inequality. First, progress in creating opportunities for women in traditionally male-dominated office professions and occupations was offset by technology-driven changes in office staffing that disproportionately affected traditionally female occupations. The result was a decline in the proportion of office workers who are female and a disappointingly slow narrowing of the gender gap in earnings. Furthermore, the presence of women in some high-growth office occupations, especially those related to computer technology, remains extremely low.

Second, the rapid inflation of educational requirements in office employment seems to have contributed to the slowed growth of Hispanic assimilation into office work environments and an absolute decline in the number and percentage of African Americans who work in Manhattan offices. In 2012, only 8.3 percent of black males ages 25 to 40 residing in the City were employed in Manhattan offices, compared to 34 percent of resident white males of similar age. It is key that young black and Hispanic New Yorkers have more opportunities, like attaining higher education degrees, in order to achieve an office workforce more representative of our population. Being that the greatest career growth opportunity is in office jobs, closing the education gap can be a way to achieve greater representation of blacks and Hispanics in the labor market.

Prepared by Frank Braconi, Chief Economist • Published by the Office of the New York City Comptroller, Scott M. Stringer, Bureau of Fiscal & Budget Studies • Tim Mulligan, Deputy Comptroller for Budget


CITY OF NEW YORK
SIGILLUM·CIVITATIS·NOVI·EBORACI·
·1625·
OFFICE OF THE COMPTROLLER

NEW YORK CITY COMPTROLLER

SCOTT M. STRINGER

MUNICIPAL BUILDING • 1 CENTRE STREET, 5TH FLOOR • NEW YORK, NY 10007
PHONE (212) 669-3500 FAX (212) 669-8878
WWW.COMPTROLLER.NYC.GOV