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In the five years since the end of the last recession, New York City’s economy has added 500,000 private sector jobs, far outpacing job losses experienced due to the 2008 Financial Crisis, and representing a rate of growth exceeding national gains in private employment. The city is gaining jobs at the fastest rate at least since comparable employment statistics began to be compiled in the 1970’s.

The unemployment rate, just 4.8 percent in April 2016, is on track to set a record 40-year annual average low. Many New Yorkers who lost work during the recession have re-entered employment, driving down the number of unemployed persons to below 200,000 and moving the city’s unemployment rate near federal targets for full employment.

Wide geographic distribution of employment gains resulted in new economic opportunities in almost every neighborhood in all five boroughs. While the majority of jobs were added in Manhattan below 59th Street, large increases within the food services and ambulatory health care sectors fueled new investment in commercial corridors in local neighborhoods, bringing both jobs and needed services to growing populations in all five boroughs.

Almost every major sector of the economy from health care to wholesale gained jobs between 2010 and 2015. However, the growth was highly concentrated in just three major sectors – health care, accommodation and food services, and professional services – continuing a long-term transition that began in the 1960’s away from an industrial economy dominated by manufacturing to a service economy. While these trends have diversified New York City’s economy, the patterns of growth have, like the rest of the nation, resulted in a highly bifurcated labor market and growing income inequality.
Introduction

This annotated presentation explores recent trends in New York City employment from a historical and geographic point of view. It is based on quantitative research completed by the NYC Department of City Planning to inform public policy and land use planning affecting economic growth, particularly in the context of local neighborhood studies.

The research explores employment changes since the 1950s, differentiating between different sectors of the economy. The sector definitions used in this analysis are based on the North American Industry Classification System (NAICS), the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

The following research questions guided this analysis:

• Which sectors of the city’s economy have grown since the end of the Recession?
• Which subsectors are growing the fastest?
• How do current trends compare to historic trends?
• What are the geographic patterns of the employment changes?
• How do the patterns differ by borough and zoning district?
The analysis of wage and salary employment described in this presentation is based primarily on data from the Quarterly Census of Employment Wages (QCEW) program (also known as ES-202). The series is produced by the New York State Department of Labor (NYSDOL), which collects employment and wage data from employers covered by New York State’s Unemployment Insurance (UI) Law. The QCEW serves as a near census of wage and salary employment, thus being a highly reliable source. However, the QCEW excludes the self-employed, the armed forces, proprietors, domestic workers, unpaid family workers and certain railroad workers.iv

City- and county-level data for 2010 and 2015 are derived from tables produced by the NYSDOL from the QCEW files for New York City, as well as from the Current Employment Statistics (CES) series. The CES survey summarizes monthly employment, hours and earnings data from a sample of approximately 18,000 New York State employers. The CES data are similar to QCEW data in that they reflect jobs by place of work; therefore, if a person holds two jobs, he or she is counted twice. However, since the QCEW program only measures employment covered by unemployment insurance laws, its totals will not be the same as CES employment totals due to the employee categories excluded by UI.v.

Sub-borough and citywide sub-sector data relied on establishment-level QCEW data for the third quarter of 2010 and 2014, provided to the NYC Department of City Planning (DCP) by the New York State Department of Labor. Under an agreement with NYSDOL permitting local governments to access firm-level data for economic development purposes, provided that certain confidentiality requirements are maintained, the Department of City Planning has geocoded the QCEW data to the tax lot; accordingly only QCEW records that were successfully geocoded to the lot were included in this analysis. Furthermore, non-privately-owned businesses and master records for multi-establishment employers were omitted. The “success rate” of DCP’s geocoding was 97 percent for 2010 and 98 percent for 2014.

Historical citywide numbers are from the Quarterly Census of Employment and Wages (QCEW) and its predecessor, ES-202, for the years 1978 to 2014. Since the ES-202/QCEW data are derived from information obtained from the administration of the UI program, the data are subject to breaks in continuity stemming from changes in coverage that are dictated by law. Therefore, some of the shift in employment patterns over time may be due to changes in the universe of firms covered by unemployment insurance and thus may result from administrative or legal changes rather than economic events.

Similarly, abrupt changes within certain sectors may be due to reclassification of industry categories. Historical data for the years 1975-2000 are based on the Standard Industrial Classification (SIC) system. With the release of data in March 2003, the North American Industry Classification System (NAICS) replaced the SIC system. Differences between the SIC and NAICS classifications may show certain shifts that are not entirely related to underlying economic trends. For instance, publishing companies, which were classified as manufacturing under SIC, were moved to “information” under NAICS. Despite these caveats, the time series data provided in the analysis should be seen as broadly representative of major trends.

Data for years prior to 1978 are taken from historical DCP publications, which were sourced from customized datasets provided by the NYSDOL or from staff surveys.
The analysis of unemployment and labor force participation derive from the NYSDOL's Local Area Unemployment Statistics (LAUS) program. The LAUS provides a monthly estimate of the employment and unemployment calculated using a statistical model that relies on data from the Current Population Survey (CPS); data from the monthly survey of business establishments (including 18,000 in New York State); and (UI) claims data. Unlike the QCEW employment data, which include jobs held by both residents and nonresidents, the LAUS data are derived from a household survey and only include New York City residents.
As of 2015, New York City had almost 4.1 million total jobs and may be near the all-time high. In the last five years alone, the city added almost 500,000 jobs. This is the largest gain over any five-year period since at least 1980, if not the largest five-year gain ever. These gains are almost equivalent to total private employment in a large American city. For example, employment in the City of San Francisco was approximately 580,000 in the third quarter of 2015. vii

New York City has recovered from tough economic times over the last several decades, but never has it been as rapid in its recovery as from the last recession, which disproportionately affected sectors that tend to be more concentrated in New York City, such as financial and real estate services.

In-commuters and New York City resident workers benefitted similarly from post-recession gains in employment. Data from the American Community Survey (ACS) show that the proportion of workers in New York City who are also residents has remained constant since 2005.

Not surprisingly, the increase in employment has meant lower unemployment, which dropped to a rate of 4.8 percent in April of 2016, down from the 9.5 percent average for 2010. This rate is nearing the 2006 and 2007 40-year annual average unemployment rate low of 5 percent.

Notably, April total unemployment dipped below 200,000 for the first time since 2007. Only four of the last 40 years (1987, 1988, 2006 and 2007) have had annual average unemployment of below 200,000, a milestone that is significant in that it represents near the statutory definition of full employment.
The diversity of the city’s employment may explain its economic resiliency and ability to recover from the recession. Of the 3.7 million private jobs in located in New York City in 2015, almost 24 percent, or 870,000 jobs, are in the health and education sectors.

This is followed by professional services and information, which accounted for over 650,000 private jobs in 2015. This section of the pie represents a very diverse profile of businesses, and accounts for much of the city’s creative, technical and innovative workforce. These sectors include legal services, accounting, architecture and engineering, advertising, computer systems design, scientific research, corporate headquarters, media, film and publishing. Over the last five years, this sector has grown steadily, in line with increases in highly educated residents and the growth of the tech industry.

Retail and other services includes both local and destination retail, grocery and department stores, as well as services such as Laundromats, nail salons, auto repair and civic organizations. Approximately 535,000 workers were employed in these sectors in 2015.

The finance, insurance and real estate sectors, which led New York City’s recovery from the financial crisis in the 1980’s, still represent a sizable proportion of the city’s private employment at 12 percent, or 450,000 jobs. Although the sectors are down from their 1988 peak, both have recovered significantly from the 2008 recession, which hit these sectors hard.
The leisure and hospitality sector includes establishments in the arts, entertainment, accommodation and food services sectors. At 12 percent of total employment, these sectors account for approximately 425,000 jobs, the majority of which are in food services. A steep increase in eating and drinking establishments in recent years has driven much of the growth, but these sectors also encompass establishments that contribute to the city’s artistic and cultural diversity and support growth in tourism and entertainment. Examples include the performing arts, museums, spectator sports and hotels.

The transportation and wholesale sectors represent 7 percent of total private employment, or 260,000 jobs. These companies are primarily engaged in the distribution of goods, such as groceries, apparel and freight, or the transportation of people via plains, school busses or taxis.

Administrative support represented 6 percent of the city’s economy in 2015, or about 230,000 jobs. Firms in this sector include companies that provide support services to other businesses, such as call centers and document preparation services; investigation and security services; building services; and waste management services.

The construction and utilities sectors provide the city’s residents and businesses with electricity, cable, and gas, and construct new roads, housing and office buildings. The construction sector also includes the thousands of companies that maintain and repair the city’s vast stock of aging buildings and infrastructure. It includes employment in Manhattan-based headquarters of international corporations as well as blue collar employment at contractors’ yards and workshops throughout the city’s manufacturing zones. In 2015, almost 154,000 people worked in these sectors, accounting for 4 percent of total private employment.

At 78,000 jobs, employment within manufacturing firms represented just two percent of the city’s economy in 2015, down from almost 33 percent in 1950. This includes companies engaged in active production in the city’s manufacturing zones, as well as office-based headquarters in commercial districts. While it includes a range of durable and non-durable goods, manufacturing employment in New York City is concentrated in apparel, food and construction-related manufacturing, such as fabricated metal and wood products.
New York City’s economy has not always been as diverse as it is today and was once heavily dominated by manufacturing. New York City’s transition from an industrial to a post-industrial city has been occurring over several decades.

Prior to 1950, manufacturing dominated New York City employment. Losses accelerated in the 1970s with the offshoring of production jobs and international wage competition.4

Manufacturing declines continued unabated until 2010, but have slowed considerably since, resulting in small net gains in recent years. Wholesale and construction also declined in significance, but overall losses were much less steep and in recent years, these sectors have added jobs. Recent gains in industrial jobs, however, have been dwarfed by rapid gains in service sector jobs, which range from low wage lower-skilled occupations in food services, to highly-paid occupations in legal and professional services. The service economy is quite broad and includes establishments in sectors as varied as professional services and health care to arts and entertainment and food services.

Finance, insurance and real estate remain significant sectors in terms of employment, but have not dominated recent growth in the way service sector industries have.
New York City’s job gains since 2010 represent a remarkable recovery from the 2008 Financial Crisis. Moreover, the growth occurred in every sector except utilities, which represents a small share of the city’s total private employment and was virtually unchanged between 2010 and 2014. Even manufacturing experienced growth, with a net gain of 1,700 jobs between 2010 and 2014, of which approximately 400 were located in manufacturing zones outside Manhattan.\textsuperscript{xii}

However, growth was dominated by three macro sectors – accommodation and food services, professional services, and health care – underscoring the ascendancy of the service sector economy. These three sectors accounted for more than half of all the job gains since 2010.

The major non-manufacturing industrial sectors also experienced substantial growth, with the construction, transportation and wholesale sectors adding over 47,000 jobs citywide.
The industry subsectors that experienced job gains of more than 10,000 between 2010 and 2014 accounted for more than half of total job gains.

Restaurants and home health care – subsectors dominated by lower skilled and often lower paid occupations – led the growth, but were followed by several sectors in professional and technical services that tend to be dominated by highly-skilled, creative and highly paid occupations, including computer systems design, advertising and consulting.\textsuperscript{xii}
The map above shows the distribution of the 2010 to 2014 job change aggregated by Neighborhood Tabulation Areas, or “NTAs”.

It should be noted that when analyzed at a small geography shifts in employment may be caused by changes related to a single large employer. The closing of a hospital, for instance, or an administrative change to the location out of which an employer reports employment can show steep declines or increases in employment. Therefore, additional research may be necessary to interpret trends at the neighborhood level, such as in neighborhoods that experienced steep declines, or big upswings in places with relatively little total employment, such as Borough Park and eastern Queens.

Job gains were heavily concentrated in the Manhattan central business district, which absorbed almost half of all the job gains between 2010 and 2014. There were also significant job gains in commercial centers in Long Island City, Downtown Brooklyn and Flushing. However, the rest of the job growth was highly distributed, with most neighborhoods across all five boroughs gaining employment.

Not every neighborhood experienced growth, however. Net job losses occurred in Breezy Point, the Rockaways, Forest Hills, Woodside, Cambria Heights and South Jamaica in Queens; central Staten Island; Highbridge, Kingsbridge Heights, Soundview, Crotona Park and Eastchester in the Bronx; and Brooklyn Heights, the western part of East New York, Rugby-Remsen Village and Mill Basin in Brooklyn.
Specific industry sectors cluster in locations according to zoning and predominant development and land use patterns.

- **Office**
  - Professional Services
  - Finance & Insurance
  - Real Estate
  - Admin Support
  - Highly concentrated in commercial districts and distributed throughout M zones

- **Retail & Entertainment**
  - Retail
  - Other Services
  - Food & Hospitality
  - Arts & Entertainment
  - Distributed throughout in commercial overlays and districts and many M zones

- **Community Facility**
  - Health Care & Social Assistance
  - Educational Services
  - Distributed throughout commercial districts, overlays and residence districts

- **Industrial**
  - Manufacturing
  - Wholesale
  - Transportation
  - Construction
  - Auto Repair
  - Utilities
  - Waste Management
  - Film Production
  - Concentrated in manufacturing and some commercial districts
There is a mutually reinforcing relationship between employment patterns and the city’s built environment. Employment growth occurs in locations where there is demand or competitive advantage for specific sectors, as well as where suitable space exists for businesses. When there is an inadequate supply of commercial space, rents rise. Economic activity and the supply of commercial space is influenced, to a certain degree, by zoning, which regulates where certain uses can locate.

Zoning also dictates the form of buildings through rules that regulate how large a building can be, whether parking and loading are required, and whether amenities, such as waterfront public access or public open space, are required as part of a new development. Consequently, the geographic patterns of employment growth reflect where suitable space already exists or where zoning permits suitable new space to be built. On the previous page is a high-level taxonomy of the land use patterns of New York City employment.

Office-using tenants, typically within the professional services, finance and insurance, real estate and administrative support sectors, are concentrated in the city’s commercial districts, which are widely mapped in all five boroughs. The highest density commercial districts are in the Midtown Manhattan, Downtown Brooklyn and Long Island City. Manufacturing zones in Manhattan – many of which are within the central business district and are built out with high density industrial loft buildings that are now obsolete for modern industry – also provide a significant resource for office-using tenants and have mostly converted to office districts. Increasingly, office-using sectors are also moving into manufacturing districts outside Manhattan.

Retail and hotel comprise two additional major commercial use categories. In addition to retail and hotel, the types of industries that typically fall under these uses include other services (such as Laundromats and nail salons), food services (bars and restaurants) and arts and entertainment (theaters, music venues and museums). Retail and food services usually serve either a local or regional customer base and therefore will choose to locate in places that either serve a local community, such as a commercial overlay, or are regionally accessible by road networks or transit, such as commercial districts.
Retail, hotels, dining, and arts and entertainment all also serve the city’s very large and growing tourism economy. Therefore, businesses serving the tourism market will often locate within or in close proximity to Manhattan. As tourism and population have also grown in other boroughs – Brooklyn and Queens in particular – there has been significant increase in these sectors within commercial districts, overlays and manufacturing zones in these boroughs, particularly in places like Long Island City, Greenpoint-Williamsburg, Gowanus and Flushing.

The very large and growing health care and social assistance, and educational services sectors would typically be classified as community facilities under zoning. Community facilities are broadly permitted in most zoning districts to allow for siting opportunities that are either regionally accessible or proximate to the local residential populations that they serve.

Industrial uses, collectively defined as “manufacturing” in the zoning resolution, typically include businesses with processes or operations that generate truck traffic, noise, odors or emissions; require relatively large sites; and may be incompatible with residential and high density commercial or community facility development. The industries typically classified as industrial include manufacturing, wholesale, construction, auto repair, utilities, film production, and waste management and recycling. Often, these uses are only permitted in manufacturing and C8 districts, a type of commercial zone that does not allow residential uses and is often mapped along automotive corridors. However, companies within these industries to also often have office operations, which is why some businesses within these industries may locate outside of manufacturing districts.

Although most economic activity does not occur in residential buildings, some employment does get reported out of residences. Often, this may be because the owner of the business does not have an office location and employees work at scattered job sites, which is common sectors like construction or consulting. Additionally, self-employed workers may also be working from home, although they may also lease space in an office building or, increasingly, in “co-working” spaces that have been growing throughout the city.
Manhattan absorbed the majority of job gains across all sectors, particularly in traditional office-using sectors, gaining over 280,000 jobs between 2010 and 2015. Almost one-third of the industrial sector job gains occurred in Manhattan and likely reflect growth in office-based employment within those industries.

The boroughs outside Manhattan also experienced significant economic growth, absorbing 44 percent of total jobs, just over 21 percent of the growth in office-based employment and the vast majority of employment increases in education, health and social assistance. Notably, approximately 44 percent of the jobs gained in the leisure and hospitality sectors – retail, food and other services, accommodations, arts and entertainment – occurred outside Manhattan.

After Manhattan, Brooklyn gained the most jobs between 2010 and 2015 at approximately 106,000, followed by Queens, with about 84,000 jobs. The Bronx gained over 26,000 jobs, with education, health care and social assistance leading job growth in that borough. Staten Island gained relatively few jobs. More than half of the almost 8,000 jobs gained in Staten Island were in the industrial sectors, accounting for seven percent of the citywide industrial job growth.

*Office-based employment is defined as: Information, Finance & Insurance, Real Estate and Rental and Leasing, Professional, Scientific and Technical Services, Management of Companies and Enterprises, Administrative and Support Services.
The majority of employment gains in Manhattan occurred within office districts, which are widely mapped in the Manhattan core and allow high density office development. Manufacturing districts in Manhattan gained approximately 40,000 jobs, with the majority within office-using sectors. Traditional industrial sectors comprised very little of the job gains within Manhattan manufacturing zones.
Outside Manhattan, however, the patterns of employment growth by zoning district look very different. Although significant commercial districts already exist in Downtown Brooklyn and Long Island City, commercial districts are less widely mapped outside Manhattan and gained relatively little of 223,000 jobs added outside Manhattan.

Approximately 42 percent of all job gains occurred within commercial overlays that are highly distributed through local streets in all neighborhoods. Residence districts and industrial districts (M and C8) gained about equal amounts of employment at approximately 20 percent.
The patterns of growth by zoning district begin to make more sense when industry sectors are taken into consideration. The sectors that have grown most within commercial overlays are retail and hospitality sectors and educational, health care and social assistance services. These are also among the fastest growing industries citywide and companies will often prefer to locate near the residential populations that they serve. Commercial overlays provide this opportunity.

Industrial districts also added a significant number of new jobs and, unlike Manhattan, industrial jobs comprised a large share. However, non-industrial job gains still represented the majority of job gains in M zones outside Manhattan, especially retail and entertainment uses.\textsuperscript{xiv}

Residence districts gained almost as many jobs as M zones, driven largely by increases in education and health care, sectors that are often considered community facilities and permitted widely throughout residence districts.
Conclusions

New York City’s economy is large, diverse and complex. The patterns of job growth over the last several decades and, in particular, in recent years highlight the extent to which the nature of employment has shifted and is being driven by trends in the service economy. Yet, while macroeconomic trends have a strong influence on the direction of the tides for the New York City economy, New York’s neighborhoods are often economies unto themselves, influenced by existing neighborhood character, zoning, legacy businesses and, perhaps most significantly, New Yorkers themselves.

A detailed and nuanced understanding of the city’s economic trends can inform thoughtful planning and policy making to encourage orderly growth and livability; maintain and enhance access to economic opportunity; grow a tax base to provide for high quality public services; identify interventions to encourage equitable economic development and greater income equality; and ensure that the private enterprise that keeps the city operating can continue to function.

The analysis summarized by this presentation provides important context for the development of public policy and land use planning in the city. Major conclusions include:

- The city’s economy is large and diverse and has fully recovered job losses from the recent recession.
- Employment is growing rapidly and has outpaced the nation.
- Growth is occurring in all sectors. While the service sector has dominated the growth, the industrial economy remains an important source of jobs and provides essential support for the city’s overall economy.
- However, growth has been highly concentrated in sectors that are traditionally a source of either highly-skilled and highly-paid occupations or low-paying, low-skilled occupations. This trend is resulting in a highly bifurcated labor market.
- Yet, Manhattan still dominates employment growth, particularly in office-using sectors.
- Employment growth has been geographically dispersed, occurring across a broad range of neighborhoods and providing highly localized employment opportunities.
i. A comparison between New York City and the United States of the Current Employment Statistics data on the total average private employment for the third quarters of 2010 and 2015 shows that New York City employment increased 15.2 percent compared with national employment gains of 11.2 percent.


v. See http://labor.ny.gov/stats/lstechnotesces.shtm

vi. See http://www.labor.ny.gov/stats/lstechlaus.shtm


viii. The unemployment rate is the number of unemployed as a percentage of the labor force. It is calculated using a statistical model that takes into account: 1) data from the Current Population Survey (CPS), a monthly nationwide survey of households conducted for the U.S. Bureau of Labor Statistics (BLS) by the U.S. Bureau of the Census, that interviews about 3,000 households in the state; 2) data from the monthly nationwide survey of business establishments (including 18,000 in New York State), that BLS uses for its monthly nonfarm employment report; and 3) Unemployment Insurance claims data. Model estimates are then revised at the end of each year. In New York, the model produces estimates for New York City and the Balance of State; these areas are summed to get statewide data. The labor force is considered the sum of civilian employment and civilian unemployment. The civilian labor force includes the non-institutionalized civilian population (not members of the Armed Services) ages 16. Civilian unemployment includes individuals who not working but were able, available and actively looking for work during the week including the 12th of the month.

ix. See Note ii.


Survey data from the Occupational Employment Statistics (OES) series produced by the New York State Department of Labor reveal the wage gap between occupations that predominate within high growth subsectors. The restaurant and home health care sectors are dominated by low wage occupations. Home health aides and personal care aides comprised majority (over 70 percent) of employment in the home health care services sector in New York State, according to Staffing Patterns produced by NYSDOL from the 2011-2014 OES. The median New York City wages across all sectors, adjusted for 2015 dollars, were $21,500 for a home health aide and $22,700 for a personal care aide, 2011 to 2014. Wages were similar for waitresses ($21,900), food preparation workers ($18,973), and cooks ($25,500) which comprised over 50 percent of restaurant employees in New York State. In contrast, wages were much higher for predominate occupations within general medical and surgical hospitals – registered nurses ($88,200), nursing assistants ($36,200) and physicians and surgeons ($115,800). Likewise, wages were high for occupations that are well-represented within the advertising, public relations and related services – advertising sales agents ($77,000), public relations specialists ($63,100) and market research analysts ($73,600). The top three predominant occupations within other financial investment activities had median wages in 2011-2014 of between $104,000 and $163,400; while median pay for the top three predominant occupations within the computer systems design sectors were between $93,000 and $112,000.

Neighborhood Tabulation Areas or NTAs, are aggregations of census tracts that are subsets of New York City's 55 Public Use Microdata Areas (PUMAs). Primarily due to these constraints, NTA boundaries and their associated names may not definitively represent neighborhoods.

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