New York City: The Great Reset

NYU SCHOOL OF PROFESSIONAL STUDIES

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EXECUTIVE SUMMARY

Over the past year, we examined New York City's economy in the wake of the Great Recession, the subsequent recovery, and the ongoing "Great Reset." We looked, in detail, at the changing economic structure of the city and its key industrial and occupational clusters, demographic trends, and real estate patterns.

Our research leads to the following insights:

- **Diversity is critical.** New York City's economic and demographic diversity is a key to its adaptability and resiliency.
- **More than Manhattan.** While Manhattan remains the key employment center for the city and metro and the location of its best-known cultural amenities, much of the city's economic dynamism comes from its outer boroughs.
- **On-ramp opportunities.** Despite its high living costs and steep economic divides, New York still offers a wide range of opportunities for upward mobility.
- **Strong rebound.** Between the low point of September 2009 and 2014, New York City's economy rebounded substantially, adding 423,000 jobs and bringing the city's level of total jobs to 4.1 million.
- **Immigrant gateway.** New York City remains a magnet for immigrants from around the world. Thirty seven percent of the city's population is made up of immigrants; between 55 and 60 percent of city residents are either immigrants themselves or have at least one immigrant parent.
- **High density.** New York City accommodates its 8.4 million residents on just 329 square miles of land, a population density of more than 27,000 persons per square mile. Already the densest city in the United States, demographers project that New York will add at least 600,000 new residents over the next 35 years. It will become even denser.
- **Creative powerhouse.** New York City's creative class—workers in science and technology; finance, business, and management; arts, culture, design, entertainment and media, healthcare, law, and education—numbers 1.4 million, which is 35.4 percent of the city's workforce, accounting for 52 percent of all wages. In addition to its strength in finance and business, NYC has solidified its advantage in arts, media, and design (that sector is more than three times as concentrated in New York than the U.S. on average). Likewise, the New York metro has become a magnet for Internet and mobile start-ups; the greater New York area is second only to the San Francisco Bay area for venture capital.
- **Fast-growing service sector.** 1.9 million New Yorkers work in the low-wage, low-skill services sector, spanning jobs in personal services, healthcare assistance, and food service. Not only does the service class have half a million more members than the creative class, it is growing faster, at a rate of nearly 9 percent. While comprising

more than half (51 percent) of the workforce, New York's service sector accounts for only 35 percent of all city wages.

- **Declining blue-collar jobs.** In 2014, the city's blue-collar workforce, those with skills in transportation, production, and construction, accounted for just 644,000 workers or 16 percent of the workforce, a 50 percent decline since 1970. They take home just 12 percent of New York's total wages.
- **Divided city.** New York's creative class is concentrated throughout Manhattan, from the southern tip of the Financial District through Tribeca, SoHo, the Village, Chelsea, Midtown, and the Upper East and West Sides, and in areas in Brooklyn within easy commuting distance to Manhattan, such as Williamsburg, Brooklyn Heights, Cobble Hill, Ft. Greene, Clinton Hill, DUMBO, and Park Slope. The lower-wage service class is mostly clustered in the city's outer boroughs, with the highest concentrations in Queens. The blue-collar working class has all but disappeared.
- **Uneven distribution of creative class.** Accounting for 970,415 creative class workers or 39 percent of its workforce, Manhattan is far and away the city's creative class center. More than 7 in 10 of the city's creative class works in Manhattan. Twelve percent works in Brooklyn, 9 percent in Queens, 6 percent in the Bronx, and just 2 percent in Staten Island.

The report also offers a series of key recommendations for ways that the city can leverage its assets to build an even stronger and more creative economy going forward. Simply put, we must ensure that the NYC economy continues to grow while addressing its divides.

- **Expand the entrepreneurial ecosystem.** The city needs to bolster its entrepreneurial ecosystem, providing it with the resources it needs to enable ambitious people at all levels of education and skill to turn their ideas into viable businesses.
- **Nurture start-ups and high-tech industry.** Supporting high-growth and high-potential start-ups is not the same as supporting small business growth; these entrepreneurs and enterprises need a well-connected ecosystem of mentors, capital, and advisers.
- **Establish new on-ramps for the creative economy.** As important as academics are, schools need to be relevant for all their students and not every career path requires an undergraduate or a master's degree. The city's community colleges can do much more than they are to upskill service workers and provide training for careers in creative industries.
- **Increase the minimum wage.** New York City should adopt a minimum wage of $15 per hour and index it to its cost of living.
- **Establish land trusts.** Private "land trusts" could buy out the landlords of idle properties in underutilized neighborhoods, maintaining continuity for local businesses and residents as the city's demand profile shifts. This would eventually provide sites to builders of high-density, affordable, walk-to-work housing that would enable and encourage not just more construction, but more place-making.

- **Provide renter assistance for "workforce" housing.** Direct assistance to renters in the forms of tax rebates or direct subsidies will be required to boost the supply of low- to moderate-income housing, not only for the non-working and the underemployed, but for households where combined incomes are as high as the low six figures.

- **Invest in a postindustrial infrastructure.** New York City's infrastructure not only needs to be repaired and brought up to date, it must be rethought and in many ways reconfigured for its postindustrial future.

- **Increase transit connectivity.** Massive new investments in transit corridors will promote better access to jobs. Mobility between poorly served neighborhoods also will promote more housing construction.

- **Wired for the future.** New York is inadequately wired and nowhere near as wireless as it should be; the city is lacking in sufficient bandwidth and speed. A public-private partnership with ConEd and the MTA to make their underground space available for fiber-optic cable would introduce much-needed competition.

INTRODUCTION

By Richard Florida

Over the past decade and a half, New York City has displayed incredible resilience. It endured the devastating attacks of 9/11, two recessions, a Wall Street crisis that nearly annihilated the world's economy, and a catastrophic superstorm that destroyed billions of dollars of its infrastructure. Extend the timeline back into the 1970s, and the city overcame even more daunting challenges. City payrolls shrank by 600,000; 800,000 New Yorkers left the city for good. As the city teetered on the brink of bankruptcy, images of abandoned and burned-out houses in the South Bronx and Bed-Stuy became the ruin porn of their day. Howard Cosell's oft-quoted (but actually apocryphal[1]) announcement during the 1977 World Series, "Ladies and gentlemen, the Bronx is burning," seemed as credible as it did because things were at such a low ebb.

> Thirty seven percent of the city's residents are immigrants; between 55 and 60 percent of city residents are either immigrants themselves or have at least one immigrant parent.

New York City has been through the proverbial mill: Yet as always, it has bounced back and is now stronger than ever.

Creative destruction has been in the city's DNA from its inception. Since New York's Dutch founders were supplanted by the English in the 17th century, successive waves of immigration have repeatedly disrupted its demography. The Knickerbocker ascendancy was overwhelmed by a flood of Irish in the wake of the famine of 1847 and then by successive waves of Germans, Slavs, Eastern European Jews, and Italians. The city's African-American population swelled during the Great Migration from the rural South between 1910 and 1960; tens of thousands of Puerto Ricans poured into New York in the decades after the Second World War.

More than three million New Yorkers, or 37.3 percent of the city's population, are immigrants. Between 55 and 60 percent of city residents are either immigrants themselves or have at least one immigrant parent. The majority of the city's new arrivals are Asian or Hispanic; the Dominican Republic and China are the countries from which the greatest numbers are coming, along with Bangladesh and Ecuador.[2]

New York City's economic mix is every bit as diverse and changeable as its demography. With the opening of the Erie Canal in 1825, the city became the gateway to the nation's western frontier. Its dominance in trade and transportation led to its ascendance in finance, insurance, factoring, brokerage, banking, and other functions that connected the flow of money to the flow of goods.

By the turn of the 20th century, New York was the hub of the nation's largest manufacturing region, producing textiles, machinery, refined petroleum, food products, ships, books, magazines, and later electronics, chemicals, and aircraft. For two decades after World War II, New York remained not just a center of production but the command-and-control center of U.S. industry, home to the headquarters of more Fortune 500 companies than any other city in the nation.

And then in 1973, Daniel Bell's book *The Coming of Post-Industrial Society*[3] heralded yet another tectonic shift—one that I expanded on in detail in my 2002 book, *The Rise of the Creative Class*.[4] Postindustrialism has been devastating for the city's blue-collar working class, which has declined from over a third of the metro workforce to just 16 percent (and from one-third to 17 percent in the city itself). The transition has been every bit as traumatic as the shift from agriculture to industry was two centuries ago. But New York hasn't just weathered it; it has transformed itself into a quintessential knowledge capital, a global center not just of finance but of culture and education.

Of course, finance, advertising, law, communications, accounting, and management have long been important pieces of the city economy—as have musical theater, the recording industry, advertising, and the broadcast and print media. But as the knowledge economy eclipsed the goods economy in the 1970s, New York became a major exporter of services, as it had once been a major exporter of goods.

As the city's working class declined, its creative class, which includes workers in science and technology; business and management; arts, culture, media, and entertainment; and law and healthcare professions ascended. They now make up 35.8 percent of the metro workforce and account for 34.9 percent of the city's workers, earning a median wage of $43.37 per hour or $90,200 per year (compared to $27.28 per hour or $56,742, the median wage for the city as a whole). A much larger share of city workers (48.5 percent) toil in comparatively low-paying, low-skill, service-class occupations in routine administration, retail sales, food service, healthcare, and so on, earning a median wage of $18.97 per hour or $39,451 per year.

New York City is vast and variegated, but it is supple; it gains strength from its stresses. As my colleague Hugh Kelly puts it, its resilience stems in large measure from its repeated capacity to turn disruption into a "change of state" as its elements are subjected to external pressures and interact with each other in new and different ways.

New York City is vast and variegated, but it is supple; it gains strength from its stresses … its resilience stems in large measure from its repeated capacity to turn disruption into a "change of state."

Considered in that light, the crash of 2008 signaled the tectonic shift from the old to the new economy. Over the last year, my colleagues Rosemary Scanlon, Steven Pedigo, Hugh Kelly and I have taken a look at the changes in the city at a granular level, tracing its industrial and occupational clusters, its changing real estate patterns, and the evolving makeup of its class structure and demography, and undertaking detailed interviews and focus groups with 57 experts and leaders in finance, real estate, technology/start-ups, education, media, arts and culture, and philanthropy.

The rest of this report is organized as follows. The next chapter by Rosemary Scanlon focuses on the patterns in the city's job market since 2008. Though 9 percent of its finance and banking jobs were lost in the wake of the crash, it has had a surprisingly fast and robust turnaround.

The third chapter by Steven Pedigo and me examines the city's evolving industry and occupational clusters and sheds light on both the opportunities and challenges that lie ahead.

The fourth chapter by Hugh Kelly examines the powerful effects that the city's 24-hour economy is having on commercial and residential real estate.

The last chapter sets out a series of policy and investment recommendations that will help the city meet its current shortfalls in physical and human capital and better equip it for its next era. Across our analysis, three observations come to the fore:

- New York City's economic and demographic diversity is now and always has been absolutely key to its adaptability and resiliency.

- The city's economy extends far beyond "Manhattan." While Wall Street and Fortune 500 industries still account for the lion's share of its payroll and output, Manhattan, where most of these employers are located, is an outlier in many respects. Some of the city's greatest assets lie in the broad diversity of the immigrant clusters that are found in its outer boroughs, and their lively, 24-hour economies.

- Even as inequality has grown and housing become less affordable, New York remains a city of opportunity—a place where people of a wide variety of means and educational backgrounds can still achieve upward mobility.

As daunting as the city's most pressing problems might be, it's important to keep things in perspective: it is solidly back on a growth trajectory. As Michael Gecan of the Industrial Areas Foundation put it, "The problem of insufficient housing and affordable housing is a good problem to have—we're not Cleveland or Detroit." Or as Seth Pinsky, the former president of the New York City Economic Corporation, noted: "Our problems today are the problems of our success. One of the dangers we face is that so many people living here now don't remember how bad things were in the late 1960s or early to mid-1970s, when crime was so high that whole neighborhoods were off limits, when the city was facing bankruptcy."

We do remember, and our recommendations are influenced by some of the best practices that emerged from the city's crisis management back then. As Hugh Kelly argues later in this report, the most successful cities are not problem-free cities, but problem-solving cities. As timely and important as Mayor de Blasio's focus on affordable housing is, we would remind him that it is just one piece of the city's economic development puzzle. To ensure that the city continues to prosper as it grows, a wide range of other investments in the areas of physical and human capital are needed.

As John Gilbert of Rudin Management remarked, "New York's got it. People want to be here. That's where the excitement is." This is true, but despite the city's rebound, there are many new challenges to be met. □

GREAT RESET NEW YORK CITY: THE EMPLOYMENT PICTURE SINCE 2008

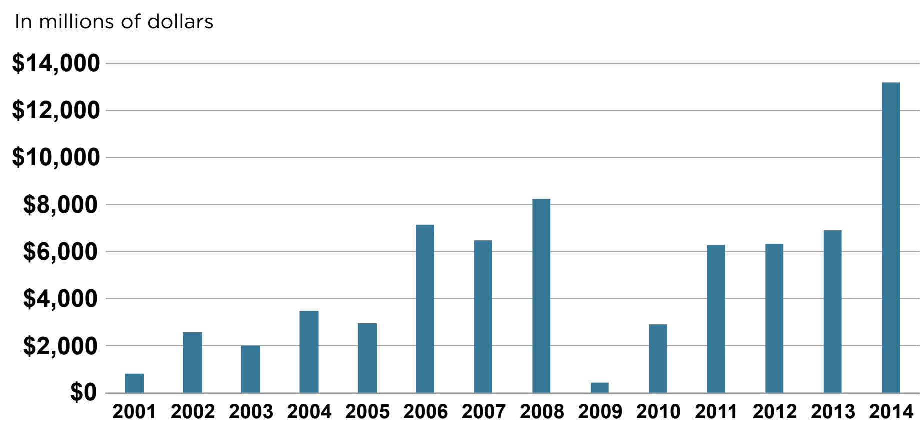
By Rosemary Scanlon

New York City's economy has recovered strongly since the darkest days of the global financial crisis in the fall of 2008, when the city was once again "ground zero" until the city's banking, insurance, and investment banking firms received vast amounts of funds from the Troubled Asset Relief Program (TARP). The city's wider economy also benefitted from the important early stimulus of President Obama's recovery efforts of 2009. The national economy was slow to recover from the Great Recession of 2008–2010, but the New York City economy rebounded early and strongly.

The past five years have seen a resurgence in demand for the city's business services industries and for its housing, retail, cultural, and civic amenities. The city's population has continued to increase, now to 8.4 million, thanks to a continuing supply of immigrants from overseas and by a tempering of domestic out-migration trends.[5] More people, particularly young people, have flocked to the city for its employment and entrepreneurial opportunities. "This, the most 'creative' of all cities," in Richard Florida's words, is drawing in young people from around the country and around the globe. High-tech firms from the West Coast have arrived to capture the talent and energy of the city, and hundreds of new venture capital-funded businesses have been started.

Neighborhoods that two decades ago might have been deemed "no-go" districts are filling up with destination restaurants, artisanal manufacturers, and luxury real estate, thanks in large part to what Mitchell Moss calls the "safety of the city—none of this would be possible without the safe streets and safe neighborhoods." Foreign capital has flowed in. Foreign funds seeking havens in commercial offices, hotels, and condominiums began rebounding in 2010, according to Real Capital Analytics, to reach a flow of $13 billion in 2014.

Exhibit 1: Cross-Border Investment in NYC Real Estate, 2001–2014



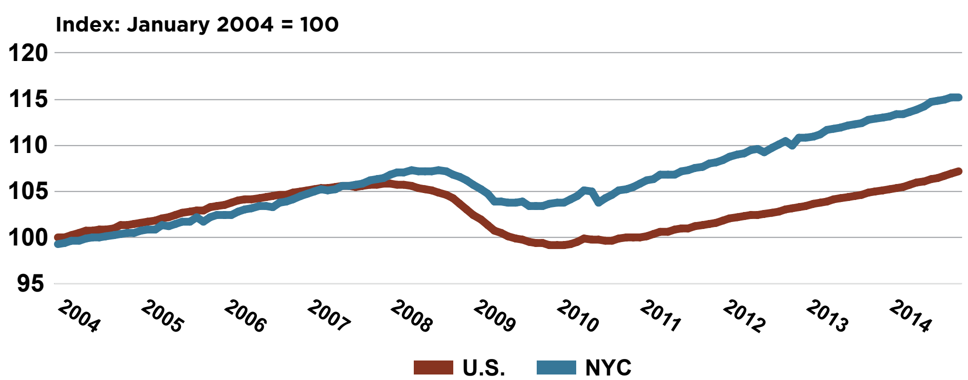
Source: Real Capital Analytics

New hotels and eventually new high-rise condominiums began construction, culminating in the completion of One57, the Extell luxury high-rise condominium tower on West 57th Street, and the topping off of the 1,376-foot 432 Park Avenue residential tower, officially now the second-tallest building in New York. By 2013, renewed investment began to move into new middle-income housing developments in downtown Brooklyn and along the Queens waterfront. By the end of 2014, restaurants and other retail were flourishing; office space was filling up with record-breaking volumes of leasing; and several new major real estate developments, such as the Brookfield Properties' Manhattan West project, the Related Company's vast Hudson Yards project, and the latest phase of the World Trade Center site reconstruction, were underway.

Since the low point of September 2009, New York City's economy had generated 423,000 jobs by 2014, a strong trajectory that has brought the city's total job levels to 4.1 million. This rapid recovery has not only surpassed the speed and extent of recovery following the terrorist attacks of 9/11, but also eclipses the rate of recovery for the national employment base.

Total employment levels in New York City matched peak 2008 employment levels by August 2011, whereas national employment did not reach this threshold until April of 2014 (although the rate of job growth in the U.S. accelerated notably in the closing months of 2014, and over 3.2 million jobs in total were generated nationally during the course of the year).

Exhibit 2:
NYC Employment Versus U.S. Employment, 2004–2014



Source: Data from U.S. Bureau of Labor Statistics, indexed to value and January 2003

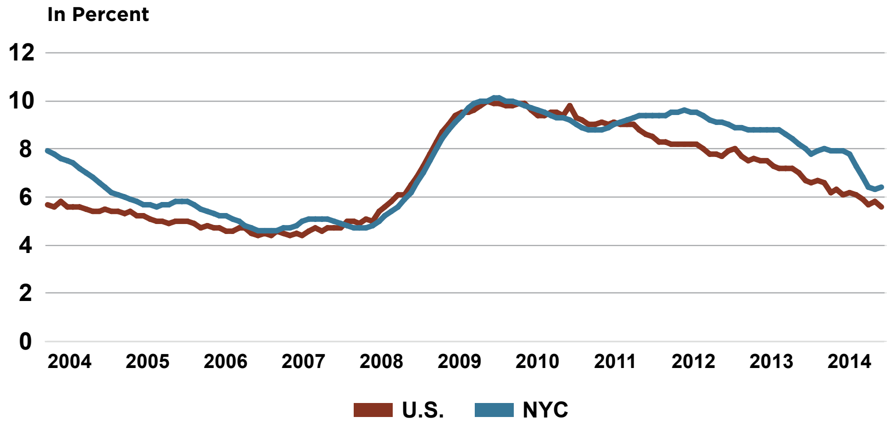
Unemployment Trends in the U.S.

Unique to this recession in the U.S. has been the record-setting months of high unemployment and underemployment and the sheer numbers of working-age people who have dropped out of the labor force. Nationwide unemployment, which hovered between 4.4 percent and 4.6 percent in the months between September 2006 and June 2007, peaked at 10 percent in October of 2009 and remained at high levels for the next 19 months. Only in November 2013 did the U.S. unemployment rate fall to as low as 7 percent; in the closing months of 2014, it declined to 5.6 percent.

Unemployment in New York City

Unemployment followed a similar pattern in the city, hovering between lows of 4.6 to 4.8 percent in the last three months of 2006, but then rising steadily to a high of 10.1 percent in November and December of 2009. Despite the rapid recovery in the city's job levels, unemployment has stayed stubbornly high, only falling to 6.4 percent by December 2014, still almost a full percentage point above the national rate at the time.

Exhibit 3: NYC Unemployment Versus U.S. Unemployment, 2004–2014



Source: U.S. Bureau of Labor Statistics

Strong Job Growth, but Wages and Household Incomes Continue to Lag

The high unemployment rates that pertained from 2009 until mid-2014 have no doubt restrained wage levels, as can be seen in the following table of median household incomes from 2009 through 2013. Despite the strong level of job growth in New York City, median household income has yet to return to the level reached in 2009.

The average level of income in the city during 2013 was $92,717. This reflects the large numbers of high-paying jobs in the city's finance, insurance, and corporate sectors, although wage levels in those industries have yet to return to the highs they reached in 2007.

Exhibit 4: NYC Median Household Income, 2009–2013

(Inflation adjusted to 2013 dollars)

2009	$54,184
2010	$51,996
2011	$50,957
2012	$51,996
2013	$52,223

Source: American Community Survey, as reported by Population Division, New York City Department of City Planning

Drivers of New York City's Economic Recovery
Since 2009, New York City's employment recovery has been led by strong growth in its largest industry sectors: education and health services, professional and business services, leisure and hospitality, and retail trade. Even the information sector, beset by rapid declines in publishing from 2008 through 2010 as it was, has produced job growth averaging almost 2 percent per year since 2009, largely on the strength of increased production volumes in the city's motion picture, television, and sound recording industries.

Exhibit 5:
NYC Growth Sectors, 2009–2014

	Employment in 2014	Growth 2009–2014	Per Annum Growth 2009–2014
Education and Health Services	840,000	+107,800	2.9%
Professional and Business Services	661,400	+92,000	3.2%
Leisure and Hospitality	394,000	+85,000	5.5%
Retail Trade	353,000	+61,100	4.2%

Source: U.S. Bureau of Labor Statistics, States and Areas Data Base 2014

Education and health services employ 840,000 workers in New York City and did not suffer any declines in employment during the Great Recession or after Superstorm Sandy in October 2012, despite the damage to several area hospitals. Colleges and universities account for 113,000 jobs in New York City.[6]

The category of professional and business services contains a wide range of important industry sectors—management and consultancy, advertising, computer and software consulting, legal services, and building services, totaling 661,400 jobs in 2014. While suffering substantial setbacks during the years 2008–2010, the city's advertising sector has since seen growth in jobs of 5.7 percent per year.

Since the low point of September 2009, New York City's economy has generated 423,000 jobs by 2014, a strong trajectory that has brought the city's total job levels to 4.1 million.

The U.S.'s largest destination for international as well as domestic visitors, New York City attracted 56.4 million business travelers and tourists in 2014. This has propelled strong growth in the construction of hotels, accounting for some 26,000 new or renovated rooms since 2008, for an estimated total of 102,000 rooms in the city by year-end 2014. Sky-high occupancy rates averaging 90 percent are stimulating the development of another 74 hotels across all five boroughs, with expected completions by 2017.[7]

The high volume of visitors together with increased job holding in the city's key professional industries have generated customer demand for the city's eating and drinking places. Together, jobs in the leisure and hospitality sector have grown at a 5.5 percent annual rate since 2008, employing 394,000 workers in 2014.

The city's retail trade sector has been a beneficiary of both the visitor industry and the strong recovery in employment. The retail trade industries have added 61,000 jobs since 2009, for a 4.2 percent annual rate of growth, bringing the total level of jobs to 352,000 in 2014.

> The rapid recovery has not only surpassed the speed and extent of recovery following the terrorist attacks of 9/11 but eclipses the rate of recovery for the national employment base.

The buzz around high-tech offers many challenges in data definition and data classification, as jobs are dispersed over a range of information and business services sectors. Several recent studies used specially designed analysis or surveys to capture the volume of employment and the number of emerging firms. An April 2014 report from HR&A Advisors, Inc.[8] identified 58,000 tech jobs in tech industries. These jobs paid $46.50 per hour, or 75 percent more than the average per-hour wage for the city's workforce. Many of these jobs reportedly require specialized skills, but not necessarily a college degree. "New Tech City," a report from the Center for an Urban Future published in May 2012, identified 53,000 tech jobs at that time and close to 1,500 start-ups, mostly in Manhattan's Midtown South and Brooklyn's Tech Triangle.[9]

The city's high-tech industry has not only been driven by new ventures but also by the arrival of major established technology companies from elsewhere in the U.S. Google's December 2010 purchase of 111 Eighth Avenue for $1.8 billion followed the opening of several highly successful Apple retail stores. Most recently, IBM's Watson Center opened on Astor Place in the East Village, and *The New York Times* recently reported that YouTube is opening a new production facility in Chelsea Market.[10] Amazon is reported to be taking over a large building across from the Empire State Building on 34th Street.[11]

As witnessed by the close relationship between Stanford University and Silicon Valley, the technology industry relies on academic research. The city government has accordingly made extensive investments in academic infrastructure. In 2011, Mayor Michael Bloomberg announced a $2 billion initiative to build a 2 million-square-foot applied science and engineering campus on Roosevelt Island; Cornell and the Technion-Israel Institute of Technology signed a 99-year lease in January 2014.[12] April 2012 saw the launch of the Center for Urban Science and Progress (CUSP), an applied science research institute in downtown Brooklyn that will be run by NYU Polytechnic School of Engineering, along with a consortium of world-class research universities and leading tech companies. Both projects will foster research on the application of technology to city management, whether in energy efficiency, public safety, or transportation congestion.[13]

In July 2012, Mayor Bloomberg and Columbia University announced plans to create a new Institute for Data Sciences and Engineering.[14] The establishment of the Alexandria Center for Life Sciences in 2010 and the New York Genome Center, which began operations in early 2012, will go far to strengthen the city's biomedical industries.

The Curious Case of the Once All-Important Finance and Banking Sector

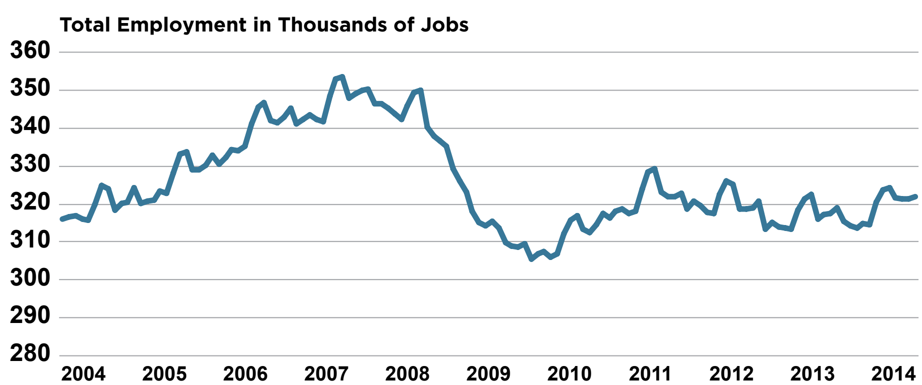
In 2007 and early 2008, the finance and insurance industries accounted for 9.3 percent of all jobs in the city. Moreover, the $97.7 billion of wages, salaries, and cash bonuses that their 341,430 employees earned accounted for a full 33.5 percent of all wages, salaries, and bonuses earned in the city. Their average take-home pay in 2007 dollars was $286,187.

The global financial crisis caused those two industries to lose almost 36,000 jobs between 2007 and 2008, a decline of 20 percent, and wages and salaries fell to $82.5 billion before adjusting for inflation, 15.6 percent below the 2007 peak. Job recovery has been sluggish, with 12,500 jobs gained since 2009, well below the prior peak (see chart below). What is more, the share that finance and insurance jobs contribute to total wage and salary incomes in the city measured just 26.7 percent of total in 2013, compared to 33.5 percent of total at peak in 2007.

In other measures, the city's commercial banking sector (enlarged now to include the major investment banks, once counted as separate entities) has regained profitability since 2010, and together with the securities industry has begun to pay out significant, if considerably reduced, cash bonuses, estimated to be approximately $25 billion in 2014, down from levels of $32–$34 billion reached in 2006 and 2007.[15]

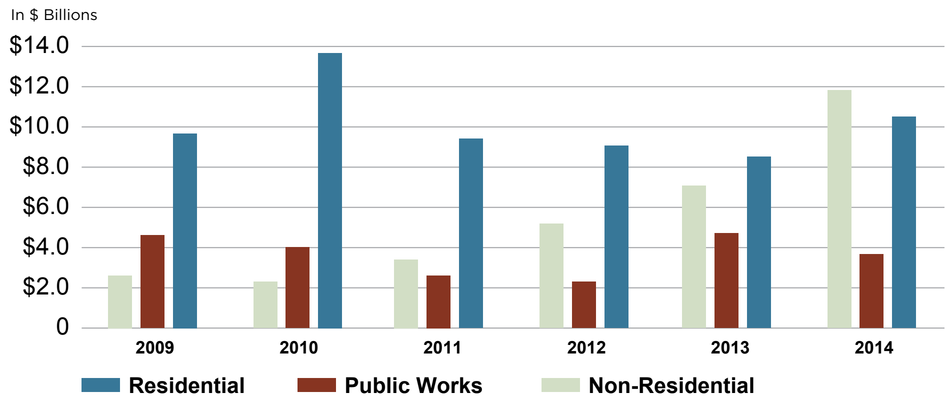
The strong recovery in employment and business activity has also led to a significant rebound in construction spending. The New York Building Congress estimates that total construction spending for infrastructure, commercial, and residential buildings reached $26 billion in 2014. Growth in 2014 was primarily due to an increase in residential construction, which soared to a value of $12 billion, up 73 percent over the previous year. Much of this gain occurred in luxury high-rise apartment buildings, with 15 residential projects totaling $5.9 billion or almost 60 percent of all new housing construction in the city. The total number of housing units under permits has also rebounded, to approximately 20,000 units in 2014, up from ranges of 6,000 units in each of 2009 and 2010.

Exhibit 6: NYC Finance and Insurance Employment, 2004–2014



Source: U.S. Bureau of Labor Statistics; data through December 2014

Exhibit 7:
NYC Construction Spending for Starts, 2009–2014



Note: Non-Residential includes Power Plants, Gas & Communications Systems

Source: Dodge Data & Analytics

A Great Reset Recovery Pattern for New York City

This is not the first time that New York City's economy has grown and recovered without being led by added jobs and incomes in the banking, securities, and insurance industries. Between 1976 and 1980, New York City's economy rebounded from the severe seven-year decline of 1969–76 without growing its securities and banking industries. In those long years of recession, the city lost over 600,000 jobs and more than 800,000 in population; municipal coffers were so severely drained as to threaten bankruptcy in 1975. The Dow Jones Industrial Average did not return to its late-1960s peak until the spring of 1980.

Yet the city's economy turned around, thanks in large part to a strong recovery in the national economy and the impact on the city's business services industries, which flourished as they serviced nationwide customers in accounting, law, advertising, and consulting. The resumption in tourism and visitor spending helped the retail and hospitality industries. For example, the city's 1976 Bicentennial celebration coincided with the opening of Windows on the World, the acclaimed restaurant at the top of One World Trade Center, and the opening of Mervyn LeRoy's Tavern on the Green in Central Park. The thousands standing in line each day to visit the "King Tut" exhibition at the Metropolitan Museum of Art signified the resurgence of the city's cultural industry. Theater attendance rose along a revitalized Broadway, and film production in the city soared.[16]

> The city's high-tech industry has not only been driven by new ventures, but also by the arrival of major established technology companies from elsewhere in the U.S.

New York City's transformation into a "post-industrial economy" led by its professional business services and its cultural and hospitality industries was widely acknowledged. And of course its finance and insurance sectors did ultimately recover by the end of the 1980s, achieving the dubious status of "Masters of the Universe," in Tom Wolfe's notable coinage.

In 1991, Mitchell Moss and Hugh O'Neill wrote an insightful, seminal report[17] that began with the premise that "the economy of the New York metropolitan area has been reshaped during the past decade, and continues to be reshaped, by the forces of global economic integration." New York City's future, they argued, could well be highlighted by businesses "that specialize in the creation and utilization of intellectual capital" rather than by "the routine production of goods and services." New York City could retain its role as "a global power in finance, manufacturing, business services, and the arts," they concluded, if the city and metropolitan region could strengthen air transport and telecommunications and allow its "economically disenfranchised minority" to share in the benefits of growth.

These past five years of recovery from the Great Recession, what Richard Florida calls, "The Great Reset NYC," have affirmed and vindicated the Moss-O'Neill outlook—with the added features of a high-tech revolution and the ascendancy of the creative class that is now the hallmark of New York's post-Great Recession economy. □

NEW YORK CITY'S ECONOMIES: A STUDY IN DIVERSITY

By Richard Florida and Steven Pedigo

Almost six years after the onset of the global economic and financial crisis, New York City's economy has recovered. What enabled it to do so? For one thing, the city's economy is so diverse that it has built-in redundancies—it can lose whole systems and keep going. Another is its sheer size, which gives it a vast reservoir of talent and skills to draw on, while its magnetism ensures that a stream of constantly-arriving talent from other places will keep it fresh. If some of its sectors (like finance, whose workforce had accounted for 44 percent of Manhattan's payroll before the crash and just 37 percent a year later) took a body blow, others found new opportunities and surged.

Back in 1961, in a classic article, "Contrasts in Agglomeration: New York and Pittsburgh,"[18] Benjamin Chinitz argued that it was New York's diversity that enabled it to constantly reinvent itself. Its garment industry at the time was the sum of hundreds of entrepreneurial small businesses that were continually introducing and refining new products. Pittsburgh's steel and aluminum industries, in contrast, were run by a handful of enormous vertical corporations, whose rigidity and top-down governance stifled innovation.

Amenities and quality of life matter a great deal as well when it comes to the economic health of cities. As former Mayor Michael Bloomberg wrote in *The Financial Times* in March 2012, "The most creative individuals want to live in places that protect personal freedoms, prize diversity, and offer an abundance of cultural opportunities. A city that wants to attract creators must offer a fertile breeding ground for new ideas and innovations."[19] A spectacular pedestrian walk like the High Line, a pop-up gallery in Williamsburg, or a cutting-edge performance space in Bushwick is no less a talent magnet than a Broadway play or a high-tech start-up. New York City has something for every taste and pocketbook.

Above and beyond these factors, New York has been a beneficiary of the shakeout in the global system of cities. What's happening to cities today is not dissimilar to what happened to the auto, electronics, computer, and steel industries over the past several decades. There used to be one auto industry in the United States and another in England and another one in Germany and another one in Japan and so on. With globalization, now there is just one: Toyota, Ford, and Audi all compete on a global scale. Thanks to its diversity and scale, New York dominates globally as well as regionally.

By year-end 2014, New York had gained back the jobs it lost in 2009 and then some, surpassing its all-time high of over four million jobs by more than 4 percent. Its creative sector is booming, and it has even become a national leader in high-tech, an industry that historically had little to no presence in the city. This is a resurgence to be sure; but it has also been disappointingly uneven.

The city's economy is so diverse that it has built-in redundancies—it can lose whole systems and keep going.

Though the city's economy is growing, its industrial and occupational clusters tell two stories: of creativity-fueled growth for the talented third of the city's workers who belong to its creative class, and of economic stasis, malaise, and struggle for the many more workers who work in the service sector. And this underpins its growing socioeconomic divide. If the city's glass is half full, it is also half empty. There is much to celebrate, but this is no time for complacency.

New York City's creative class—workers who have skills in finance, law, science, engineering, art, design, entertainment and academia—numbers 1.4 million, 35.4 percent of the city's workforce.

The Creative Economy

Though New York is no longer the manufacturing center that it was in Chinitz's day (indeed, its industrial base was already beginning to erode back then), it has always had powerful clusters of arts, culture, science, law, fashion, and media. As NYU President John Sexton likes to say, the city shifted from an economy dominated by "FIRE" (finance, insurance, real estate) to one of "ICE" (intellectual, culture, education).[20]

New York City's creative class—workers who have skills in finance, law, science, engineering, art, design, entertainment, and academia—numbers 1.4 million, 35.4 percent of the city's workforce and 28 percent more than the national average as a share of all jobs, a 6.5 percent increase since 2009. In general, creative workers are extremely well paid, earning an annual salary of $88,000, 35 percent above the city's median wage of $56,000. Many earn salaries of six figures and more. New York's creative class accounts for 52 percent of the city's total wages: nearly $117 billion.

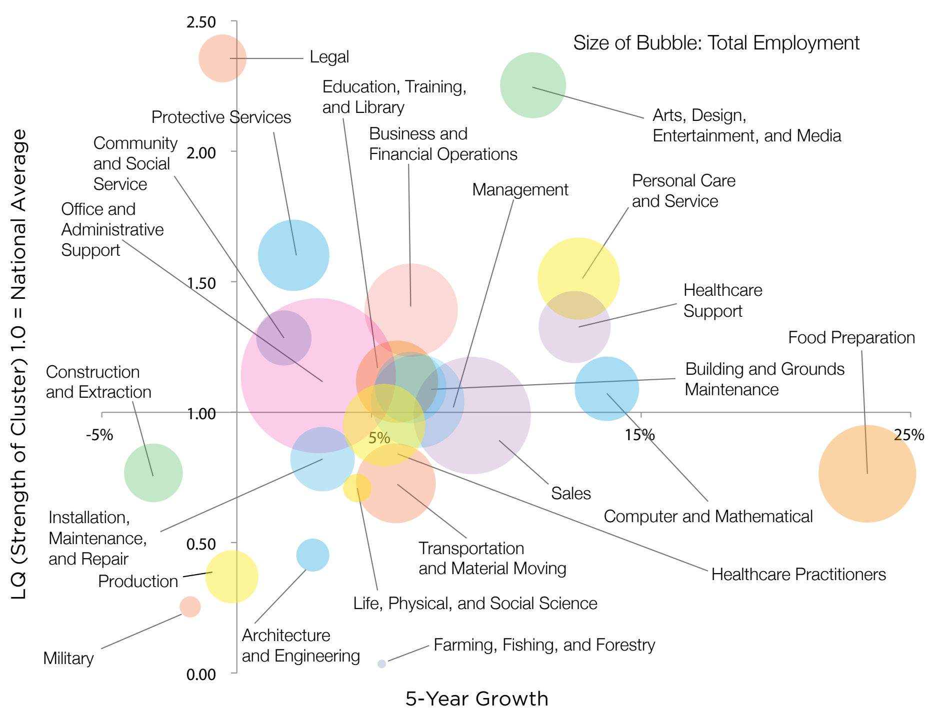
A key pillar of the city's creative economy remains finance, management, and business services. 262,000 workers or 6.6 percent of the workforce are employed in finance occupations, and 211,000 workers or 5.3 percent of the workforce are in management; both sectors have grown by more than 6 percent since 2009. With 66,000 workers or 1.7 percent of the workforce, law remains a major strength, though its rate of growth has declined to just 1 percent.

Arts, media, and entertainment is a second key pillar. All in all, there are 128,000 workers in arts, design, entertainment, and media (3.2 percent of the workforce and more than twice the national average); the sector has seen 11 percent growth since 2009. But when you look at the specialized industries and superstar occupations, New York's creative bias becomes even clearer.

There's a simple metric that urban economists use to understand the concentration of industries and occupations in a city relative to other regions and the nation as a whole: the location quotient (LQ). An LQ of 1.00 means a city's share is equal to the national share. If the number is greater than 1, the city has a higher concentration or share of that industry or set of occupations than the national average. In New York City, industries related to international finance have an LQ above 16; media buying and the media industry in general have LQs above 15, as do fashion and fashion-related industries. News and broadcasting have LQs above 9; public relations industries have LQs over 7. Dance, theater, and arts-related industries are over 5; nonprofit foundations are over 4. And though the city's manufacturing base has eroded to invisibility, some specialized manufacturing sectors—particularly those revolving around precious metals, jewelry, and furs—are still significantly more concentrated in New York than elsewhere. Real estate-related industries are twice as concentrated in New York as they are in the nation, as are information industries. Educational services (tutors and private and charter schools) are also twice as concentrated, a backhanded tribute to the inadequacies of New York's public school system.

Exhibit 8 below provides a detailed look into New York City's key occupational clusters. The x-axis charts employment growth from 2009 to 2014; the y-axis shows the location quotient; the size of the bubble reflects the total employment for these clusters.

Exhibit 8:
NYC Occupational Clusters, 2009–2014



Note: Occupational clusters are comprised of payroll employees.

Source: QCEW Employees, Non-QCEW Employees - EMSI 2014.1 Class of Worker

Looking at Exhibit 8: NYC Occupational Clusters, 2009–2014, a few key observations jump out. First, the arts, design, entertainment, and media cluster may well be the city's biggest asset, more significant even than business and finance. Second, as large as it is already, the city's legal cluster is essentially stagnant and hasn't experienced any growth in the past five years. Third, the city has a slight competitive advantage in computer and math skills (with high-tech start-ups becoming an increasingly important part of its economic mix), but it is well below the national average when it comes to science, architecture, and engineering skills. Fourth, the city's personal services cluster is well above the national average, and it is growing substantially.

Though healthcare practitioners is the strongest creative sector in the outer boroughs, with 202,000 workers (5.1 percent of the workforce), it is 5 percent below the national average. The healthcare support and social work sector, on the other hand, has grown 8 percent; with 638,000 employees, it is 28 percent above the national average.

Much has been made of the rise of the freelance economy. Self-employment in arts, design, entertainment, and media account for an additional 44,000 workers citywide, 94 percent above the average. Self-employment in the science and computer and math sectors has declined by 6 percent and 15 percent respectively (a sign of hiring by those emerging and established tech firms). Educational self-employment has grown by 20 percent (mostly tutors); and though the self-employed legal sector has declined by 6 percent, its 8,200 workers puts it 17 percent above the national average (see chart below).

Exhibit 9: Creative Class by Borough, 2009–2014

Borough	Total Employment	Share of Workforce	Median Wage	Location Quotient	Growth Rate
Manhattan	970,415	39%	$93,391	1.61	6%
Brooklyn	166,902	30%	$72,778	1.11	10%
Queens	121,651	22%	$79,092	0.84	6%
Bronx	80,544	32%	$75,313	1.32	5%
Staten Island	26,045	27%	$77,601	1.09	3%

Note: Occupational clusters are comprised of payroll employees.
Source: QCEW Employees, Non-QCEW Employees - EMSI 2014.1 Class of Worker

The table above shows how uneven the creative economy is and how unevenly the creative class is distributed across the city. Accounting for 970,415 creative class workers or 39 percent of its workforce, Manhattan is far and away the city's creative class center. Manhattan creative class workers take home the highest average salaries as well, $93,391. The creative class makes up only 30 percent of Brooklyn's workforce, less than the Bronx, though its share is growing at a rate of 10 percent, the fastest of any borough. The creative class may live in Brooklyn, but it does not substantially work there. The creative class makes up a slightly larger share of the Bronx's workforce, 32 percent. It comprises just 27 percent of Staten Island's workforce and just 22 percent of Queens'. In each of the four outer boroughs the creative class averages less than $80,000 in salary. More than 7 in 10 of the city's creative class works in Manhattan, 12 percent works in Brooklyn, 9 percent in Queens, 6 percent in the Bronx, and just 2 percent in Staten Island.

The Low-Wage Service Economy

If the creative class powers the New York City economy, its largest component in terms of workers is its nearly two million (1.9 million) service workers. With half a million more members than the creative class, the service class is also faster-growing, at a rate of 8.7 percent as opposed to the creative class's 7 percent. Most of its members work in routine, low-skill, low-pay jobs in retail sales, food preparation, clerical work, and personal services. Their annual pay is $38,900, less than half of what the creative sector makes and 31 percent below the city's median. Making up 51 percent of the city's workforce, their total wages and salaries amount to just $79 billion, 33 percent less than the creative class.

The single largest occupational cluster in NYC is office and administrative support, which accounts for 718,000 workers (18 percent of the workforce). Protective services (security guards, in other words—indirect evidence of the city's economic polarization) have grown 2.1 percent over the last five years and now account for 150,000 workers or 3.8 percent of the workforce. The personal care sector accounts for 193,000 workers (4.9 percent of the workforce) and has grown 13 percent since 2009; another 55,300 workers in this segment freelance. Accounting for fully 17 percent of the self-employed workforce, they are its largest cluster (and it's reasonable to assume that thousands more work off the books as well). Healthcare support accounts for 156,000 workers (3.9 percent of the workforce); the segment has grown 12.5 percent since 2009. On the freelance side, healthcare support employs another 6,100 and shows 28 percent growth since 2009—again, with thousands more likely working off the books as home care aides, companions, and the like.

Food service accounts for 287,000 workers or 7.2 percent of the workforce. Though it has grown 23 percent over the past five years, the sector is still 24 percent below the national average, a startling result for a city with such strong tourism and hospitality industries. 3,600 more work in the sector on a freelance basis, but the number of self-employeds has declined by 6 percent since 2009. It's reasonable to wonder how many more work off the books. 334,000 New Yorkers work in retail sales.

Exhibit 10: Service Sector by Borough, 2009–2014

Borough	Total Employment	Share of Workforce	Median Wage	Location Quotient	Growth Rate
Manhattan	1,183,022	48%	$44,916	1.15	7%
Brooklyn	287,122	51%	$28,840	1.45	16%
Queens	280,390	52%	$30,389	1.20	9%
Bronx	125,321	50%	$29,614	1.39	8%
Staten Island	51,906	53%	$29,211	1.28	3%

Note: Occupational clusters are comprised of payroll employees.
Source: QCEW Employees, Non-QCEW Employees - EMSI 2014.1 Class of Worker

The service class varies considerably across the five boroughs, as the table above shows. With 1.2 million service workers (61 percent of the sector citywide), Manhattan is the one borough where the service class makes up less than half of the workforce (48 percent). Service sector wages are the highest in Manhattan, where service workers make $44,916, far more than in the outer boroughs. In Brooklyn, Queens, and Staten Island, the service class averages less than $30,000 a year. The service class makes up a whopping 53 percent of the workforce in Staten Island, 52 percent in Queens, and 51 percent in Brooklyn. Brooklyn's service sector accounts for 15 percent of the service class citywide; it is growing at a rate of 16 percent, faster than all the boroughs and more than twice the rate of Manhattan; however, the wages are the lowest of all the boroughs.

With approximately 280,000 service workers, more than half (52 percent) of the borough's workforce, Queens accounts for another 15 percent of New York City's service class. Wages for Queens' service sector are 32 percent lower than Manhattan's. The Bronx's service sector is comprised of 125,320 workers, half of all employment in the borough but just 7 percent of the service sector citywide. Though Staten Island accounts for just 3 percent of the city's service sector, 53 percent of the borough's workforce belongs to it, the highest share for any borough.

> "We are spending plenty of money to react, but none to deal with the crisis of neighborhoods."
>
> – Rosanne Haggerty, President, Community Solutions

The Blue-Collar Economy

New York City's blue-collar working class is made up of occupations in manufacturing, transportation, construction, and building and grounds maintenance and cleaning. The sector has declined by half since 1970; it accounts for just 16 percent of the city's workforce (compared to about 22 percent of the nation's). Blue-collar workers make an estimated $43,000 in wages per year, which is significantly better than service workers but 24 percent below the city's median and less than half of what the lowest-paid members of the creative class earn.

All in all, the city has 644,000 blue-collar workers. The sector has actually experienced a modest bump (3.1 percent) over the past five years, but none of that has been in manufacturing, which declined by 10 percent over the same period, despite the much-hyped resurgence of artisanal manufacturing in places like Williamsburg. New York City's manufacturing industry clusters account for only 74,000 jobs—2 percent of its total and 88 percent less than the national average.

There has been growth in the building and grounds cleaning and maintenance sector (6.5 percent over the past five years), which employs 149,000 workers, 9 percent more than the national average. The construction occupations, which account for 109,000 workers (2.7 percent of the workforce, 23 percent below the national average), declined 3 percent between 2009 and 2013. If the pace of residential building comes close to the rate that Mayor Bill de Blasio has promised,[21] that is likely to change. Transportation, however, employs 183,000 workers (4.6 percent of the workforce) and has grown 6.8 percent since 2009 (but is still 27 percent below the national average). On the self-employment side, there are another 26,500 transportation workers (88 percent above the U.S. average), many of them taxi drivers.

> "Economically and geographically, we have a bifurcated city, the creative class and everyone else."
>
> – Bruce Schaller, Principal, Schaller Consulting

Exhibit 11: Working Sector by Borough, 2009–2014					
Borough	Total Employment	Share of Workforce	Median Wage	Location Quotient	Growth Rate
Manhattan	329,168	13%	$44,911	0.70	2%
Brooklyn	104,956	19%	$37,151	0.82	5%
Queens	142,861	26%	$43,844	1.23	4%
Bronx	46,539	18%	$39,003	0.84	1%
Staten Island	20,172	21%	$45,266	1.03	5%

Note: Occupational clusters are comprised of payroll employees.
Source: QCEW Employees, Non-QCEW Employees - EMSI 2014.1 Class of Worker

The table above shows how the working class breaks down across the five boroughs. Perhaps surprisingly, Manhattan has the largest number of blue-collar workers, nearly 330,000 or 51 percent of this city's total. That said, the working class makes up just 13 percent of Manhattan's workforce, 30 percent less than the national average. Queens has another 142,861 blue-collar workers, accounting for 26 percent of the borough's workforce. Brooklyn has 104,956 blue-collar workers, 19 percent of its total and 17 percent of New York City's blue-collar workforce overall. Brooklyn's blue-collar workforce is growing at twice the rate of Manhattan's.

Queens is home to 22 percent of New York City's blue-collar workforce—142,900 workers, or 26 percent of Queen's total workforce, the largest share by far of the five boroughs, and 23 percent larger than the national average. Much of this can be attributed to a very high presence of taxi cab drivers calling Queens their base and of course the presence of JFK and LaGuardia airports.

18 percent of the Bronx's workforce is blue collar, which is 7 percent of the blue-collar workforce citywide. Much of the Bronx blue-collar workforce is production and warehouse based.

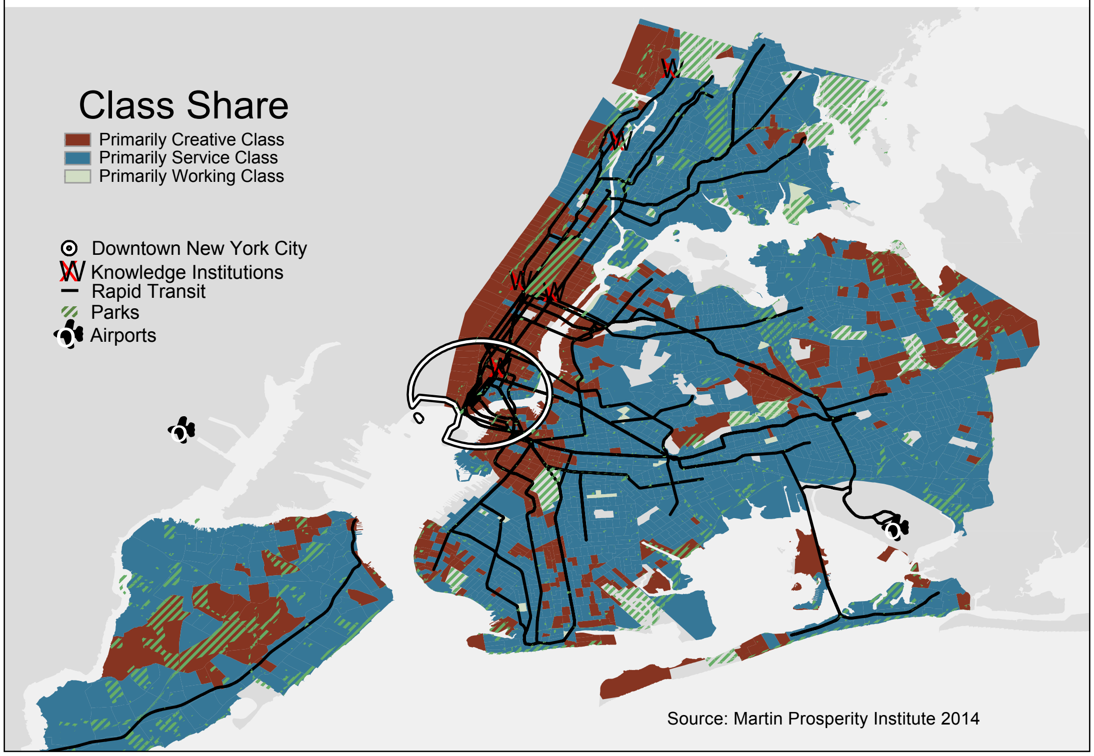
With annual wages of $45,000 per year, Staten Island's blue-collar workforce is the highest-paid of all the boroughs. This sector makes up 20 percent of the borough's total workforce (but just 3 percent of the blue-collar workforce citywide) and is growing at a rate of 5 percent (twice that of Manhattan).

> "This city can't function without those workers."
>
> – Ellen McDermott, Chief Operating Officer, Transportation Alternatives

Class Divide City

As we have seen, New York City's economy is divided between its affluent creative class and sagging service class. These class divisions are imprinted on the city's geography, as can be seen in the map on the next page, which traces the residential patterns for the three classes across census tracts, areas that are roughly the size of neighborhoods. The creative class (in purple) is mostly concentrated in Manhattan and the closest-in parts of Brooklyn and shows up in smaller clusters in the other boroughs.

Exhibit 12: NYC Class Share, 2014



The locations of the other two socioeconomic classes are mostly determined by default; they cluster in the neighborhoods that the creative class chooses not to live in, in general those that are the farthest away from the employment centers in Manhattan, and the most amenity- and transit-starved. The service class (in beige to pink) dominates in the outer boroughs, with just a few pockets in Manhattan, in the projects on the Lower East Side, in East Harlem, and in Washington Heights. There are a sprinkling of working-class enclaves in South Brooklyn and the Rockaways, Staten Island, Queens, and the Bronx.

The high price of housing costs plays a huge role in this. Though wages and salaries for all three social classes exceed the national average, only the creative class receives a premium after housing costs are taken into account.[22] The city's economic tide is rising, but it is only lifting about a third of its boats.

Conclusions/Observations

The employment picture in the boroughs (each of which is the size of a large city) is less creative-driven than it is in Manhattan. All of them are bedroom communities to a significant extent, so a disproportionate number of their local businesses are service-oriented.

At the same time, the economic and class divisions in the city are severe and threaten to smooth out the diversity that has historically given it so much of its energy and character. As more- and less-advantaged and educated segments of the population are sorted into their own enclaves, the city's entrepreneurial yeast may begin to fail.

New York's looming challenge—and the test of its true resilience—is whether it can extend the benefits of its size, scale, speed, and creativity-driven economy to all, providing opportunity for every New Yorker, whose creativity and resilience are the city's greatest assets. □

THE 24-HOUR CITY

By Hugh Kelly

In 1882, when the Edison Electric Illuminating Company threw the switch that turned night to day for a swath of Lower Manhattan, New York became America's premier 24-hour city. The city is burning brightly still, but to truly appreciate its resiliency, one must understand how it combines both continuity and innovation. In New York, the old and the new live side by side.

What Is a 24-Hour City?

In 1995, *Emerging Trends in Real Estate*, the most widely circulated publication covering the commercial property sector, asserted, "For the future, we believe that the premier investment opportunities will be available in the nation's '24-hour' cities … places where people can comfortably and securely live, work, and shop. In contrast, '9-to-5' markets—those with weak residential fundamentals—have poor investment prospects." Over the years, *Emerging Trends* elaborated on the attributes of 24-hour cities, characterizing their salient features as a mix of uses (housing, retail, office); good public transportation access; a safe and secure environment, with attractive neighborhoods proximate to downtown; and a multidimensional range of recreational/cultural amenities.

Such an approach presented a descriptive definition only. Recent research[23] has sought to measure the variables objectively. Using two sets of cities[24] discussed over the years as "24-hour" or "9-to-5" by *Emerging Trends*, a set of distinguishing operational elements were identified. 24-hour cities have at least four of the following six characteristics:

- More than 13 percent of daily automobile traffic between the hours of 9 p.m. and 5 a.m.
- More than 25 drugstores open 24 hours within 10 miles of the city center
- City population density of 9,000 per square mile or greater
- A Regional Distinctiveness Rank[25] above 20
- A crime rate lower than 6,000 per 100,000 population
- More than 38 percent of workers using non-auto transportation to commute

> "Office space problems have shifted to the suburbs, with high office vacancy and sluggish job growth."
>
> – Victor Calanog, Vice President of Research and Economics, Reis

None of the 9-to-5 cities (Atlanta, Dallas, Los Angeles, Minneapolis, Phoenix, Philadelphia, and Seattle) satisfied more than two of the stated criteria. New York satisfied all six; Boston, Chicago, San Francisco, and Washington, DC met five of the standards; Las Vegas and Miami achieved four. The identified criteria were found to be strongly correlated with other attributes, including high downtown residential populations, strong Walk Scores, large college and university populations, and the number of "edge cities" within the metropolitan area.

Commercial Real Estate

The most arresting claim made for 24-hour cities was that they would produce superior

"Before the financial crisis, New York was becoming too boring ... density is super important for design and fashion, but one needs diversity, together with density."

– Tim Marshall, Provost, The New School

performance for real estate investors. This may appear obvious in hindsight, but it was counterintuitive when originally asserted. In the early and mid-1990s, the urban discussion had been dominated by the expectation that "edge cities" were the wave of the future. This is still maintained by such analysts as Joel Kotkin, who regards post-World War II suburban sprawl as normative, the home of high-end job creation, and the affordable alternative to what he terms "boutique cities" such as New York and San Francisco.[26]

But 24-hour cities have shown measurable superiority to 9-to-5 cities in commercial real estate success over time.[27] Statistically significant differences in office space density, occupancy measures, rents, operating ratios, cumulative investment returns, and transaction prices all emerge from the data. Although roughly equal (within 2 percent) in population and employment at the time of the 2000 Census, the 24-hour cluster has 1.3 billion square feet at the MSA level versus 760 million square feet for the 9-to-5 cluster. At the CBD level, the 24-hour markets have 3.6 times the volume of office buildings when compared with 9-to-5 downtowns, 737 million square feet versus 207 million.

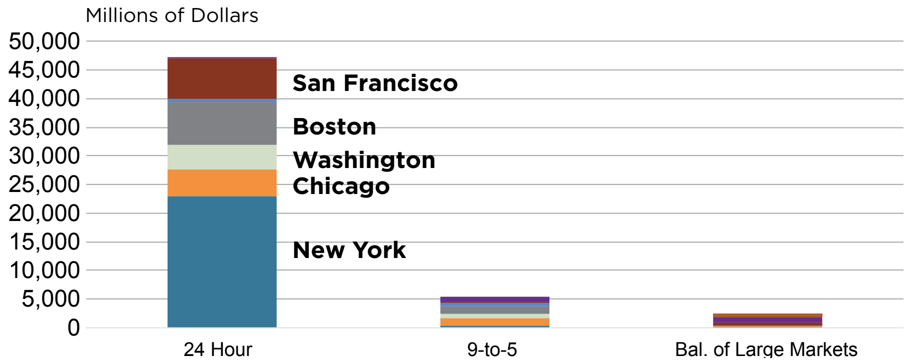
Over the past quarter century, 24-hour downtowns have averaged 5.4 percent better occupancy rates than 9-to-5 downtowns (88.5 percent versus 83.1 percent). In terms of real (inflation-adjusted) office rents, the 24-hour cities have enjoyed a $12.36 per-square-foot advantage over the 9-to-5 set of cities ($35.02 versus $22.66, in constant 2007 dollars). This is partly due to higher occupancy, but that just begs the question of why tenants would pay more for 24-hour-city locations instead of moving to lower-cost cities or suburbs.

Although operating expenses and real estate taxes are substantially higher in 24-hour downtowns, the "operating expense ratio" (that is, the costs of operation divided by rent received) averages 43.2 percent for 24-hour downtowns, compared with 48.7 percent for 9-to-5 CBDs.[28] In plain language, owners get to keep more of the rents in 24-hour markets.

With key urban attributes measured, it becomes possible to examine the relationship between socioeconomic variables and performance measures particular to the built environment, for example commercial real estate.

None of the 9-to-5 cities (Atlanta, Dallas, Los Angeles, Minneapolis, Phoenix, Philadelphia, and Seattle) satisfied more than two of the stated criteria. New York satisfied all six.

Exhibit 13:
Capital Attraction: 24-Hour Cities Versus Others, 2014



Source: Real Capital Analytics, Year-end 2014 Report.
Data are for CBD Office Buildings

Cumulative investment returns for 24-hour downtown offices have been twice as high as returns in 9-to-5 downtowns since 1987. Capital sources of all kinds, domestic and international, private and public market (REITs) firms, large institutions, and consortia of small investors have all combined to deploy investment disproportionately into the 24-hour cities, led by New York.

Influenced by the 24-hour cities' (and New York's in particular) continued actual and expected high investment performance, the trend of sustained high capital flows has remained in place, as shown by the investment sales data compiled by Real Capital Analytics through year-end 2014.

This confluence of real estate market factors has resulted in a reliable, deep, and broadly distributed commercial property tax base, a key to fiscal resilience for New York and other 24-hour cities in the face of shocks, whether economic, political, or environmental.

The General Property Tax represents approximately $21 billion of municipal revenue for New York City, or about 28 percent of the total budget.[29] New York commercial properties are taxed at a higher level by far than in any other city in the United States. But it bears repeating that, even with this heavy tax burden, more revenue flows to the bottom line for owners of New York City offices (as a percent of total) than in less heavily taxed jurisdictions.

The property tax burden has done nothing to discourage investment in NYC office properties, and the city has simultaneously been able to sustain higher rates of commercial occupancy[30]—an indication that, for office tenants, the cost of doing business has been more than adequately covered by business productivity and profits.

That profitability is enhanced in significant measure by the externalities of location or the attributes of the city itself.

24-Hour City Attributes and What They Mean for New York

Density

New York City accommodates its 8.4 million residents on just 329 square miles of land, a population density of more than 27,000 persons per square mile.

The first large city to adopt a full-scale zoning code, New York was also among the first to transcend the constraints of Euclidean zoning, which shapes land use by a strict delineation of functions. The use of zoning overlays provides the city with the capability of fine-tuning its land use regulations in response to evolving conditions. Such overlays allow the city to create ever more granular distinctions across the city's constricted geography, and the city has gotten very good at making efficient use of space and time.

Density is a contributing factor to property value. For commercial office buildings, the bivariate correlation of population density to transaction values (per square foot) has been measured at 0.792, with a statistical significance of p=.001. This is an encouraging observation for New York, of course, as it is already the most densely populated city in the U.S.

But as Jane Jacobs pointed out a long time ago, density itself—the sheer concentration of numbers—is not sufficient to create a vital and vibrant city. A mix of uses—commercial, residential, recreational, civic, social, religious, and others—must combine in ways that accomplish two aims. The first is complementarity of use, such as occurs when workers and residents together establish a larger market base than either would separately, supporting shops, restaurants, and cultural uses that would otherwise prove uneconomical. The second is the expansion of hours of use, with workers, residents, tourists, and others taking turns (with overlap) in both commercial and residential properties and in the infrastructure supporting them. Such mixing is a form of agglomeration, a key source of the efficiency and productivity of cities.[31]

Housing

Professor Eugenie Birch of the University of Pennsylvania published a study in 2005 for the Brookings Institution[32] that examined trends in downtown housing across the United States. Between 1970 and 2000, she found, Midtown and Downtown Manhattan had gained 52,225 residents. Over that same three-decade span, the remaining 43 cities in the study had experienced a net population decline of 63,431. The decade of the 1970s was particularly stressful for downtown residential populations, with only New York, Seattle, Los Angeles, and San Diego seeing growth in their core areas. New York's population increase in its Downtown and Midtown districts was 19,217. This was particularly significant as the city's overall population had plummeted by 823,924.

> New York has long sought not only to accommodate but also to promote a range of housing options along a broad spectrum of costs.

In the 1980s, the core Manhattan areas added another 17,515 residents, as the city as a whole reversed its outflow and added a quarter-million new residents. While many cities continued to see their downtown resident base eroding in the 1980s, the number of cities experiencing growth in their core areas rose to 24, among them Boston, Philadelphia, and Washington, DC in the Northeast Corridor; Atlanta and Charlotte in the South; Chicago, Cincinnati, Milwaukee, and Minneapolis in the Midwest; and Denver, L.A., San Diego, San Francisco, and Seattle in the West.

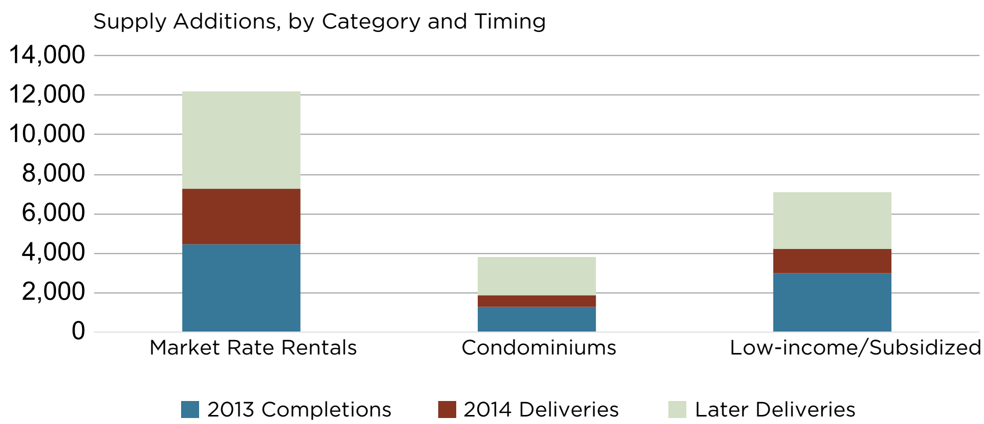
At the same time, significant losses were measured in Chattanooga, Dallas, Jackson (MS), New Orleans, Orlando, Cleveland, Columbus (OH), Des Moines, Detroit, and Indianapolis. The incidence of significant loss in an equal number of Southern and Midwestern cities over this pivotal decade suggests that the conventional narrative of Sunbelt success and Frostbelt (or Rust Belt) decline seriously oversimplifies the urban pattern of the 1980s.

The final decade of the 20th century saw the downtown population in the 44-city sample rise by 86,198, or 10.4 percent, slightly less than the 13.2 percent population increase for the nation as a whole. Manhattan's core areas increased by 45,493. Chicago and San Francisco—two other 24-hour cities—also gained significantly (16,798 and 10,625, respectively). Boston, Miami, and Washington, DC also added downtown population, albeit to a lesser extent.

Critics of 24-hour cities like to portray such places as "playgrounds for the elite." While income inequality is a real issue and housing affordability is strongly related to the income gap, there is much more latitude of choice for less-advantaged home buyers than is commonly acknowledged.

Housing affordability in New York City presents a variety of analytical difficulties when the local situation is measured against national benchmarks. For one thing, the homeownership rate in New York is almost a mirror image of the U.S. Whereas about two-thirds of U.S. households own their dwellings, only 32.3 percent of New Yorkers are homeowners. Many who do own live in multifamily dwellings (co-ops and condos), instead of the single-family home on its own lot, more typical of the U.S.

Exhibit 14: Housing Supply by Category and Timing, 2013

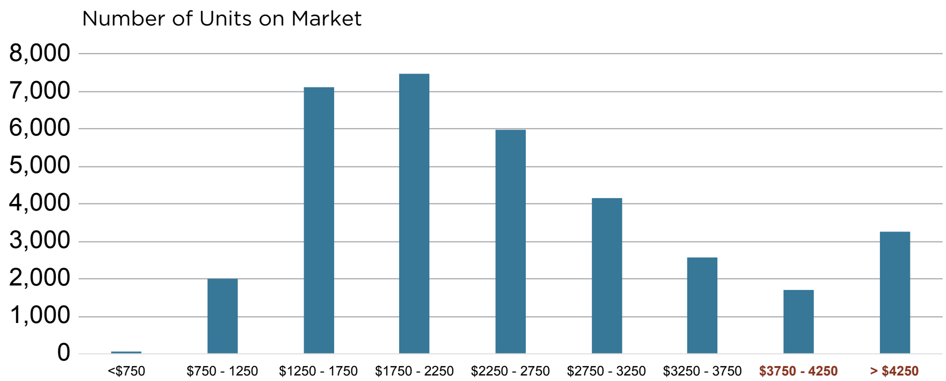


Source: Development Statistics from Reis, Inc. 3rd Quarter 2013 reports; Population Estimate from U.S. Census Bureau

According to Jones Lang LaSalle, the vacancy rate for New York City rental apartments is just 2.7 percent, compared to 4.1 percent nationwide. For a variety of reasons, the pace of new housing construction in New York is perennially low, and therefore the city's housing occupancy rate is consistently high. Normally, the law of supply and demand would act to increase production volumes. But land scarcity, high construction costs, and attractive profit margins for luxury housing constrain development patterns and skew supply additions toward the upper end of the market.

In recognition of such conditions, New York has long sought not only to accommodate but also to promote a range of housing options along a broad spectrum of cost by programs including direct rent regulation and indirect subsidies via housing incentive programs, such as the 421(a) tax programs and various other planning/zoning devices.[33] Former Mayor Michael Bloomberg sought to develop or retain as many as 165,000 "affordable" units during his administration, and his successor, Mayor Bill de Blasio, has made the goal of 200,000 affordable units a centerpiece of his agenda. This entails a $41 billion capital budget to be expended over 10 years and addresses a range of low- and middle-income housing needs.[34]

Exhibit 15:
Available NYC Apartments by Rent, 2014

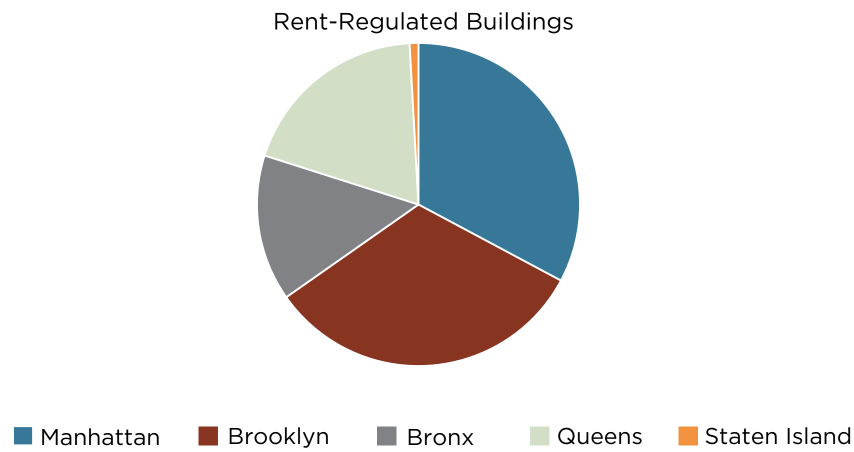


Source: Zillow.com

Studies by the NYU Furman Center indicate that, for the homeownership segment of the city's households, affordability has improved in the Great Recession and the subsequent "Great Reset."[35] The lower end of the spectrum is still "housing-burdened" and priced out of ownership nearly entirely, but affordability increases to more than 50 percent of NYC households once the bar is set at 120 percent of area median income (AMI). (The 120 percent of AMI level was set at $89,650 in 2012.)

Among renter households, however, the volume of "affordable" units for the very poor has been decreasing. As of 2012, "very poor" is defined as 50 percent of AMI ($37,925) or less. Since 2000, the number of households classified as "very poor" has risen by 176,000, but the supply of housing affordable to such households has declined by 211,000.

Exhibit 16:
Rent-Regulated Apartment Units, 2014



Source: NYC Rent Guidelines Board "Stabilized Buildings List"

Most housing studies, unfortunately, rely upon statistically convenient but terribly opaque measures of central tendency—medians and averages—to characterize conditions that have wide ranges of distribution in the data. The range of options at any given time can be quite large and quite diverse. For example, apartment asking-rent information accessed in November 2014 via the website Zillow.com showed 32,771 NYC apartments seeking new tenants. The median rent was $2,214 per month, meaning that half of the units could be leased for less. 9,175 were available for $1,750 per month or less. While pricey by national standards, those 9,000-plus apartments were "affordable" to those earning the AMI, if 30 percent of income was dedicated to rent. This analysis is not intended in any way to diminish the severity of the housing burden facing many New Yorkers, but it is intended to indicate that options do exist to a degree not generally appreciated by public advocates or even by some housing policy specialists.

While there are certainly concentrations of expensive neighborhoods, such communities are not necessarily where the majority of transactions take place. In Brooklyn, for instance, prices are highest in the areas proximate to the East River (Williamsburg, Greenpoint, and NW Brooklyn), but it is South Brooklyn (defined as extending from Prospect Park to the shoreline at Coney Island, Sheepshead Bay, and Mill Basin) that is the most actively traded real estate market.

The annual meeting of the Rent Guidelines Board, where rent increases are administratively set for those units subject to rent regulations, is a vivid exercise in civic theater. Tenant advocates vociferously resist any increase to monthly rent. The meeting is often the occasion also for free-market advocates to deplore the heavy hand of government. But by adjusting rents to the changes in operating expenses, it actually protects the properties' profit margins. Since 1990, inflation-adjusted net operating income for rent-regulated apartment buildings in all boroughs has risen—from a low "real" increase of 19 percent in the Bronx to a high of 59 percent in Brooklyn. A recent article in the trade publication *Commercial Observer* noted, "New York's rent regulation system, which dictates what rents can be charged for apartments covered by the program, has not dissuaded the overwhelming demand to purchase and finance these assets."[36]

New York surpasses all other American cities in sustaining high residential population densities at distance from its center.[37] Within the five- or six-mile arc around City Hall, practically the whole span of housing choices by rent and price range can be found. Neighborhoods within the arc include Battery Park City, Wall Street, Chinatown, Tribeca, SoHo, the Lower East Side, Greenwich Village, and all the rest of Manhattan up to the Lincoln Center area. In Brooklyn, the whole span of gentrifying areas along the East River can be found, but so can Sunset Park, Crown Heights, East Flatbush, and other less-affluent areas. Similarly, in Queens the arc encompasses Long Island City (still in transition) and older industrial/residential neighborhoods like Sunnyside and Maspeth. Luxury apartments, brownstone houses, NYCHA projects, and thousands of rent-regulated buildings concentrate within a semicircle with only 50 square miles of land area. Far from being a housing and economic mishmash, this income and housing mix has supported some of the most vibrant and dynamic urban transformation to be found anywhere.

> "New York will pass a key test when Ft. Greene Park is at the same level as Bryant Park."
>
> – Tim Tompkins, President, Times Square Alliance

All that said, however, if the variety of lower-end housing is often understated, finding affordable housing does remain a significant challenge—even for families whose earnings are well above the median.

Exhibit 17:
Affordable Housing by Income, 2014

Income Range	Distribution in Percent	Midpoint of affordable housing cost/month @30% of income	Midpoint of affordable housing cost/month @40% of income
Less than $10,000	10.5%	$125	$127
$10,000–$14,999	6.1%	$313	$417
$15,000–$24,999	10.6%	$500	$667
$25,000–$34,999	9.4%	$750	$1,000
$35,000–$49,999	11.9%	$1,063	$1,417
$50,000–$74,999	16.0%	$1,565	$2,087
$75,000–$99,999	10.8%	$2,188	$2,917
$100,000–$149,999	12.4%	$3,125	$4,167
$150,000–$199,999	5.4%	$4,375	$5,833
$200,000 plus	6.9%	$6,250	$8,333

Source: U.S. Census American Community Survey 2009–2013

The above chart breaks down the NYC population by income and the cost of "affordable" housing at 30 and 40 percent of median income per month. So long as the average rent for an apartment remains at the $3,000-plus level, assistance of some sort will clearly be required for half the population, including some who earn six-figure incomes.

Transportation

High levels of mass transit is another measurable distinction that separates the 24-hour cluster of cities from the 9-to-5 set. Of all the cities reviewed, none approaches the 71 percent level of non-automobile commutation found in New York City. Interestingly though, the 24-hour cities have this other distinguishing travel characteristic: Substantially higher percentages of automobile travel occur in the 9 pm to 5 am time slot in 24-hour cities than in the 9-to-5 markets. While all cities build highway infrastructure for peak capacity at rush hour, 24-hour cities get more efficient use of that infrastructure for more hours of the day. That's a significantly better return on public transportation investment for cars as well as for mass transit.

This is not to imply that New York, or its region, does everything well. We have missed, and continue to miss, significant opportunities to build on our transportation advantages.

Here are three instances:

- When the rebuilding of the World Trade Center was planned, a new "transportation hub" linking the PATH trains from New Jersey to the NYC subway system was heralded as a major infrastructure component. But while all eyes were on the photo op of the stunning PATH terminal building designed by starchitect Santiago Calatrava, the opportunity to integrate the two systems was foregone.

- The rail transit systems of New Jersey Transit and the Long Island Railroad both terminate at New York's Penn Station. Is there any reason, other than "turf rights," that NJ Transit couldn't continue its routes along MTA lines and vice versa?

- Finally, and most foolishly, the Access to the Region's Center project (the ARC tunnel, a second passenger rail tunnel under the Hudson) was vetoed by New Jersey's governor in 2010. With all trans-Hudson connections —not only rail but automobile connectors like the Holland and Lincoln Tunnels and the George Washington Bridge—at or beyond their rated capacities, the ability of New Jersey residents to access the high-paying jobs generated at the heart of the 24-hour city has been severely compromised.

The New York metropolitan region sorely needs a broad regional planning system for mass transit, integrating the tri-state network more efficiently.

> The real estate industry itself provides an excellent example of the potential for upward mobility. Entry-level jobs need not be dead-end jobs.

Schools and Income Mobility

Transportation is not the only area in which we find the "bad density" of congestion rather than the "good density" of productive agglomeration. New York's public school system suffers from the diseconomies of overcrowding as well. While the most sophisticated of New York families can and do get the most out of its best public schools, or at least have an effective alternative in the scores of private and religiously run schools that still accommodate tens of thousands of children, the less affluent have fewer and mostly inferior choices.

Income mobility is the strongest counter to the embedded problem if income inequality, and it must, of course, be one of the critical emphases of serious educational reform. The good news is that, relatively speaking, New York has a head start on many other urban areas when it comes to income mobility. A study by the "Equality of Opportunity" project shows that children born to parents in the 20th percentile of the income distribution in New York attain, on average, the 43rd percentile during their own working careers. Other cities with this kind of upward attainment are Boston, San Francisco, Los Angeles, and Minneapolis. By contrast, a child of similar background advances, on average, to just the 35th percentile of income in Atlanta, and the 39th percentile in Dallas.[38]

The real estate industry itself provides an excellent example of the potential for upward mobility. There are many entry-level jobs in real estate that need not be dead-end jobs. It is not uncommon for building service employees to move from being porters or janitors up to the level of superintendent—and there is no reason why they might not migrate into property management or asset management functions along the paths of their careers. The development of such upward-bound career mobility is an integral part of the mission of the NYU School of Professional Studies.

Real estate is not the only industry in which such a path is possible. The occupations highlighted elsewhere in this report as high location quotient jobs in New York City—in food, fashion, the media, and the growing technology sector—need not have short-dimensioned paths to success. The data on immigrants in a variety of industries and occupations offer multiple examples of the many jobs—at all levels of income—that new New Yorkers contribute to the local economy. A study by the New York State comptroller reveals that immigrants represent 76 percent of the cooks, 75 percent of the food preparation workers, and 57 percent of the waiters and waitresses in New York City. 61 percent of the city's truck drivers, 88 percent of its taxi drivers, and 49 percent of its first-line supervisors of retail workers are also immigrants. In higher-wage occupations, immigrants represent 67 percent of New York's skilled carpenters, 59 percent of its registered nurses, 49 percent of its physicians and surgeons, and 34 percent of its designers.[39]

New York's public employees—numbering nearly 300,000—cover the whole gamut of occupational descriptions and skills. John Jay College, a unit of CUNY, has long been helpful to police officers and firefighters, not only for advancement "on the job," but as an educational bridge to second careers in law, public administration, and private-sector business management. The vast numbers of service workers in the city's Health and Hospital Corporation and the employees of the MTA are also potential candidates for career paths to higher incomes.

A City of Nine Million

Already the densest city in the United States, demographers project that New York will have to accommodate 600,000 new residents over the next 35 years as its population grows to nine million. Where can we accommodate so many new New Yorkers? How can the city make the best use of its existing human capital as well as the human capital flocking here in search of opportunity?

The answer is simple: by leveraging the very attributes that have propelled New York to its status as the nation's leading 24-hour city.

In fact, New York has been dealing with this challenge for some time. Since 1980, the city's population has expanded by 1,336,000—more than the entire population of the city of Dallas, Texas (1,258,000). In 1980, of course, New York still had relatively abundant stocks of unused or underused land—from the as-yet-undeveloped acreage at Battery Park City to enormous swaths of east Brooklyn and the South Bronx, where block upon block had been depopulated and reduced to rubble. It is difficult to find vacant acres today, but substantial areas of the city that are close to employment centers and outstanding public amenities are significantly underdeveloped.

PLAN 2030 undertakes measurable efforts to make New York more sustainable and more resilient in the years ahead, and it has also guided the most comprehensive urban planning process the city has accomplished since the 1960s. As part of that process, “upzoning” has increased allowable density in strategically located areas of the city, particularly along mass-transit corridors (such as Fourth Avenue in Brooklyn). Planning has been well-fitted to 24-hour city desiderata, including walk-to-work housing, walkability to parks and neighborhood amenities, and the revitalization of local retailing corridors.

New York’s expanding economy has already prompted the private sector to produce new residential and commercial properties, either through infill development, adaptive reuse, or the creation of “mega-projects” such as the Hudson Yards and Atlantic Yards building programs. Such development is made feasible by the rising capital value of existing real estate—a trend that has been demonstrably correlated with 24-hour city characteristics.

One size does not fit all, nor should we try to take overly simplistic approaches. 24-hour cities are complex, and complexity, diversity, and heterogeneity play to our advantage.

The messiness of emergent problems is what generates solutions. The urban laboratory is not and should not be a sterile environment. The most successful cities are not problem-free cities, but problem-solving cities. □

CONCLUSIONS AND RECOMMENDATIONS

By Richard Florida, Hugh Kelly, Steven Pedigo, and Rosemary Scanlon

That the city emerged as well as it has from the crisis of 2008 is a tribute to its economic and demographic diversity. It also reflects the strength and integrity of its government institutions and the skills and professionalism of its public sector managers. As the management consultant Eric Lee observed when we met with him, "I think that New York survives crisis and catastrophe because we have a functioning local government. New Orleans did not have a functioning local government when Katrina hit; here, the transit works, the schools work, police and fire departments work; the mayor could mobilize all 300,000 local government employees after Sandy hit." The financial controls that were put into place in the wake of the city's fiscal catastrophe in the 1970s remain highly effective. City agencies are routinely audited according to GAAP standards; budgets are balanced, and there are high levels of transparency at all levels.

If the cost of shelter in the city is dauntingly high, it's important to remember that the city and its metropolitan region is much more extensive than Manhattan; half of all the city's rentals, by definition, cost less than the median, many significantly so. As former Port Authority Director Chris Ward remarked, "A lot of people who make $40,000–$60,000 per year are moving into new neighborhoods that are not yet fancy in outer Queens and the Bronx. Condé Nast's decision to take the million square feet at One World Trade Center was based strictly on the transit access for their young employees who graduate from top fashion and journalism schools, but who only make $40–$45K per year. This way, they could live in Brooklyn or Jersey City and get to work quickly."

New York is as much a city of immigrants today as it was a century ago; much of its entrepreneurial energy is being unleashed in the outer boroughs, in service jobs and the trades.

These are no small things, but they still fall short of the fundamental reset that the city's changing economy requires.

New York is as much a city of immigrants today as it was a century ago; much of its entrepreneurial energy is being unleashed in the outer boroughs.

CHALLENGES

The city has launched many economic development programs, but for too many years, too many of them have attempted to preserve and protect its irretrievable industrial past, when they should have been laying the groundwork for a prosperous postindustrial future.

The city's largest and fastest-growing job categories are in the low-skill, low-pay service sector; too many New Yorkers are losing ground.

Though it's better than many cities' (and has been improved substantially), New York's transit system is far from optimal; much of the city's critical infrastructure was planned and constructed more than a century ago. And if rising real estate values are a sign of economic strength, they are also a harbinger of crisis. Though there are more housing options than are commonly recognized, large parts of the city are threatening to become as unaffordable as London.

When he spoke to us, Bill Fair, then of the New York Genome Center, underlined the pitfalls of a city whose price of entry is too high. “How,” he asked, “do you support economic development without ripping out the soul that makes workers want to come here? How do we keep attracting young, cool people if we can’t provide housing for them?”

While New York has long always been home to rich and poor, the city’s inequality has grown to Gilded Age proportions and its classes literally occupy different worlds. The socioeconomic disparities that we are seeing today are unsustainable.

From our analysis and focus groups we recommend the following:

HUMAN CAPITAL

- Increase the minimum wage to $15 per hour and then index it to the local CPI measure maintained by the Bureau of Labor Statistics.
  Approximately 1.2 New Yorkers work for the minimum wage, recently reset to a paltry $8.75 per hour. In January 2015, Governor Andrew Cuomo proposed an $11.50 minimum wage for New York City, one dollar per hour higher than the level he suggested for the rest of New York State. While moving in the right direction, this is still inadequate in terms of New York City’s cost of living. NYC Comptroller Scott Stringer studied a more aggressive $13.13 per hour minimum rate for workers in New York City, noting that workers need such an increase in the face of rising living costs.[40] Meanwhile, Seattle and San Francisco have shown leadership in voting in minimum wages of $15 per hour.

This is absolutely fundamental; a living wage is a basic right and the core of the American dream.

The economist, Arindrajit Dube has authored a number of studies that show that the job losses stemming from such a rise in the minimum wage would be trivial.[41] As he noted in a *New York Times* op-ed, 50 percent of median is close to “the international standard and our own norm during the 1960s and ’70s.”

- Better schools.
  The city’s public schools need to be both expanded and improved. As a first step, the number of “elite” high schools (Stuyvesant, Brooklyn Tech, and Bronx Science) should be raised from three to 12 and their locations apportioned according to borough populations. For each of the 12 top high schools, a minimum of six “feeder” intermediate schools should be established to prepare students for the top high schools. These could serve 75,000 fifth- to eighth-grade students. That’s about 27 percent of all middle school students currently in the system. A mix of business, labor, higher education, and community groups would be asked to bring their resources to bear on the public schools’ “excellence” progress—and to establish the metrics for measuring success.

- Expand and nurture the city’s entrepreneurial ecosystem while making it more inclusive.
  The city is doing much to fund technology incubators on the one hand, and to provide practical assistance with traditional small businesses on the other. In addition to raising the minimum wage, it needs to make similar investments in training, upskilling, and other assistance for workers in retail, food service, and healthcare, whose potential contributions are so hugely unappreciated and whose productivity and wage levels could be much higher.

- Create on-ramps into the start-up and high-tech sectors.
  The creative economy isn’t just for the economically privileged and highly educated. It can’t be, if it’s going to continue to grow.

There are many existing programs that teach computer coding and make scholarships and internships available to promising STEM (science, technology, engineering, and math) students. These are good programs, but only half of New York City's 300,000 technology jobs are held by college graduates.

There are nontechnology jobs at high-tech companies and technology-related jobs at non-tech companies that can lead to high-paying careers. Many of the fastest-growing tech companies are consumer-oriented; they have as much need for customer-service and logistics professionals as they do for coders. Every local restaurant needs a website; bodegas can realize better profitability if they track their inventory electronically. As Alicia Glen, deputy mayor for housing and economic development, put it, technology is a "pipeline to the middle class."[42]

- <u>Support community colleges.</u>
  As important as academics are, schools need to be relevant for all their students and not every career path requires a BA or master's degree. The city's community colleges can do much more than they are to provide practical training for careers in creative industries and to upskill service workers.

FIT, which is a part of the SUNY system, is emerging as an important conduit to the design and fashion industries, attracting students nationally and internationally. But as the former commissioner for small business services, Rob Walsh, lamented in one of our conversations, community colleges as a group are falling far short of their potential, especially when it comes to forging active partnerships with the business community. The coding jobs available in the Brooklyn Tech Triangle, paying more than $60,000 per year, are just one example of career opportunities for which community colleges can provide training.

PHYSICAL CAPITAL

- <u>Substantial new investments in transit corridors are needed to promote better access to jobs.</u>
  New York City's infrastructure not only needs to be repaired and brought up to date; it must be rethought and in many ways reconfigured for the demands of the knowledge and creative economy. While the city's old manufacturing economy was about shipping goods and services, the creative economy turns on the rapid movement of people and ideas. A recent study from the Rudin Center for Transportation Policy[43] shows that neighborhood income and unemployment levels are closely correlated with their transit accessibility. The speed and mobility of the city are as important as its built attributes.
- <u>Mobility between poorly served neighborhoods, in turn, can stimulate more housing construction. More subways are needed, but faster and cheaper fixes can be made.</u>
  Part of the reason that housing is so expensive is because it clusters around transit hubs and there just aren't enough of them, especially in the outer boroughs. If new subways are unlikely to be built any time soon, existing assets can be leveraged much more aggressively than they are at present. There are existing transit corridors—along Atlantic Avenue in Brooklyn, for example, which extends from the East River almost all the way to Nassau County—that are still zoned for industry and are hence underdeveloped.

Targeted rezoning will lead to residential conversions, new construction, and much-needed densification, increasing the supply of affordable housing.

More dedicated bus lanes can be installed on wide boulevards, with stops at high-traffic subway connections; **more connections** can be built between neighboring subway stations on different lines (for example the Junius Street stop on the 3 line and the

Livonia Avenue stop on the L line in East New York, which would allow commuters to switch lines without paying additional fares).[44]

New bus routes can be established to serve transit-deficient neighborhoods. Bus and train schedules can be tweaked to provide faster service by including more skip-stop express runs; "smart" buses that can be summoned online can supplement regularly scheduled buses in out-of-the-way neighborhoods. **Ride and even bike-sharing technology** can be expanded, as can programs like **TransitChek and CityTicket**. The Port Authority's recent proposal to cut overnight PATH service is a step in precisely the wrong direction. Mayor Bill de Blasio's announcement of expanded express bus service in his 2015 State of the City speech is a good beginning.

As serious a missed opportunity as the cancelled ARC tunnel may be, **existing rail infrastructure can be used to relieve truck traffic** into the city and Long Island. Freight trains could be run through existing passenger tunnels during off-hours, **barge services** that once lightered freight to Brooklyn and Manhattan from New Jersey can be resumed. The Avenue H railroad right of way in Brooklyn is hardly used and it extends from the waterfront in Sunset Park to the LIRR main line in Jamaica, almost all the way to Nassau County.

If housing is a looming crisis, it's important to remember, as Rosanne Haggerty, one of the experts we interviewed, observed in a different context that housing "is not just a place, it is a process." On a basic, practical level, poor people who need housing must be able to produce the requisite official documents, have the language and arithmetical skills to fill out financial disclosure forms and, if necessary, have the wherewithal to obtain legal assistance, none of which can be taken for granted. On a macro scale, housing construction requires a favorable set of economic conditions, an encouraging regulatory climate, available credit, and so on. As things stand at year-end 2014, the ultra-luxury market is fully supplied; between Mayor de Blasio's 10-year housing plan and the curve of demand in the marketplace, the shortfall in affordable housing is beginning to be addressed. In the meantime, underutilized neighborhoods in close vicinity to anchor employers can be revitalized by any number of innovative private-public initiatives.

> "We must spend money on infrastructure. We need the Moynihan Station and a new rail tunnel to New Jersey. We should be running more ferries from the airports to Manhattan."
>
> – Frank Sciame, Jr., Chairman and CEO, F. J. Sciame Construction Company

- Private "land trusts" in underutilized neighborhoods could buy out existing landlords and provide neighborhood continuity for local business and residents as the city's demand profile gradually shifts, eventually providing sites to builders of high-density, affordable, walk-to-work housing, enabling and encouraging not just more construction but more place-making.

But the marketplace alone will not supply all the solutions.

- Direct assistance to renters in the forms of tax rebates or direct subsidies will be required to boost the supply of low- to moderate-income housing, not just for the nonworking and underemployed, but for households whose combined incomes are as high as the low six figures.

Another pressing infrastructure need is bandwidth. As a New America Foundation study reported, "Residents of Hong Kong have access to web service with symmetrical download and upload speeds of 500 Mbps, while residents of New York City and Washington, DC ... pay the equivalent price for Internet service with maximum download speeds that are 20 times slower."

- A public-private partnership with ConEd and the MTA to make their underground space available for fiber-optic cable would introduce much-needed competition.

  New York is inadequately wired and nowhere near as wireless as it should be; the city is lacking in sufficient bandwidth and speed. This is hard enough on students and job hunters and people who are trying to build their own businesses; it's potentially disastrous for the future of New York City's growing tech sector. The cable monopolies aren't doing the job.

FINANCIAL CAPITAL

Though the transit system is hobbled by excessive debt, income from general property taxes, sales taxes, and personal income taxes allows the city to meet its operational needs and to make significant investments. Thanks in large part to the vitality of its real estate industry and other growing high-end economic sectors, the city has the resources to start building a foundation for its future growth; PlaNYC2030 is a significant start.

Beginning now, New York City needs to use this capital to improve its capacity along the whole spectrum of services, from housing and education to communications and transportation. The city's challenge is to consolidate and enhance its present competitiveness while laying the groundwork for an infrastructure that can support a postindustrial city of nine million.

The above suggestions are all steps that can be taken immediately. They are both a call to action and an invitation to our colleagues in every aspect of civic life to join us in this important discussion. □

APPENDIX

Appendix 1: Great Reset NYC Discussion Participants

Joanne Arbuckle
Dean - School of Art and Design
Fashion Institute of Technology

Jonathan Askin
Founder and Director
Brooklyn Law Incubator and Policy Clinic

Rich Bell
Executive Director
Architecture Institute of America

Chris Bonanos
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