CEO Poverty Measure 2005–2014

An Annual Report from the Office of the Mayor

Mayor's Office of Operations
The City of New York
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Preface

This is the seventh release of the Center for Economic Opportunity's alternative poverty measure for New York City. The CEO measure, in comparison to the official U.S. measure of poverty, includes a poverty threshold that reflects the higher cost of housing in New York City. We also recognize the importance of non-cash benefits that are intended to alleviate poverty. The value of these programs, such as the Supplemental Nutrition Assistance Program (SNAP) and tax credits, are added to family incomes.

The poverty measure has become an important resource for how we think about poverty in New York City. We have gained a better estimate of the rate of poverty – what portion of the city is poor; what portion is near poor and thus living too close to the poverty threshold. We understand better the success of anti-poverty programs in lowering the poverty rate, and we have a better demographic and geographic profile of New Yorkers in poverty.

The data presented in this report covers the years 2005 to 2014. Our focus is on the most recent five years of these data, 2010 to 2014. Those years represent the slow recovery from the Great Recession. As of 2014, the recovery had not had sufficient strength to lower the rate of poverty. The poverty rate for 2014, 20.7 percent, and the near-poverty rate of 45.2 percent are statistically unchanged from 2013.

Data presented in this report shed light on reasons for this stagnation in the poverty rate: the poverty threshold continues to rise, driven, in part, by increases in housing costs in the city. On a positive note, employment and work hours have increased, but conversely, wages remain unchanged and most of the wages lost in the recession have yet to be recovered.

The year 2014 also marks the end of federal fiscal stimulus programs that are included in CEO's income measure. Direct tax cuts, some expanded tax credits, increased SNAP benefits, and increased unemployment insurance were gradually phased out over this period.

CEO's poverty measure gives us a greater understanding of the importance of better wages, affordable housing, and better employment opportunities. We draw on this knowledge in framing our poverty reduction programs, including the City's goal of reducing the number of New Yorkers in poverty or near poverty by 800,000 over the next decade.

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Executive Summary

Executive Summary

This annual report examines the state of poverty in New York City. In doing so, it offers policymakers and the public a more informative alternative to the official U.S. poverty measure – one adapted to the realities of life in New York, including our unusually high housing costs. The report also presents current anti-poverty initiatives informed by the data presented here, which spans from 2005 to 2014, the most recent years for which data are available.

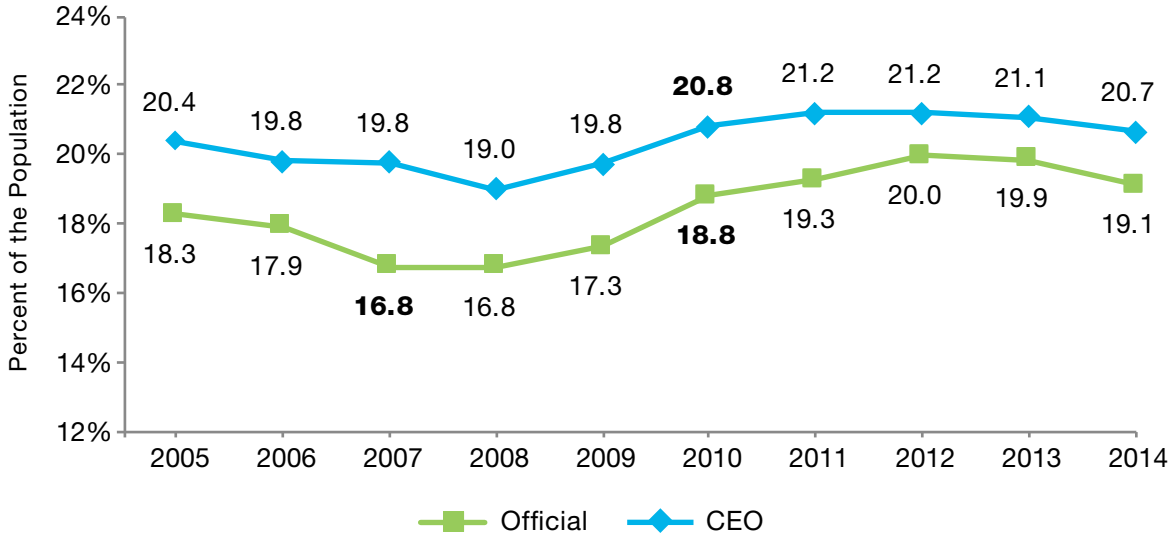
The Center for Economic Opportunity (CEO) poverty rate for 2014 is 20.7 percent. This is statistically unchanged from the 2013 rate of 21.1 percent and represents the fourth consecutive year with no significant change in the poverty rate. In 2014, 45.2 percent of the New York City population was living below 150 percent of the CEO poverty line, meaning they were in poverty or near poverty. This statistic is also unchanged from 2013.[1] The poverty threshold for a two-adult, two-child family increased to $31,581 in 2014 from $31,156 in 2013.

Changes in the CEO poverty rate continue to match trends in employment and earned income in the city, including tracking the damage of the Great Recession and the ensuing slow recovery. From 2005 to 2008 the local economy expanded and the poverty rate fell from 20.4 percent to 19.0 percent. But by 2011 the trend had reversed and the poverty rate rose to 21.2 percent. It has remained within a statistically similar range ever since. In 2014 there are signs of an improving employment situation. The employment population ratio is comparable to 2007 levels and there are indications of an increase in full-time work.

Figure 1 illustrates the trend in the CEO poverty rate. It is paralleled by the movement in the official poverty rate. This apparent similarity, however, masks important differences between the two measures. The official U.S. poverty threshold was set over fifty years ago at three times the cost of an economy food plan. This no longer represents a reasonable standard of living and is the same regardless of geography and differences in local costs of living. On the resources

1 This is a revision from last year's estimate of 21.5 percent in poverty. The revision consists primarily of incorporating updated data on medical spending and WIC benefits. Details can be found in Appendix J.

Figure 1
Official and CEO Poverty Rates, 2005–2014



Numbers in **bold** indicate statistically significant data from prior year. Absence of bold numbers indicates no statistical difference from prior year.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Note: Official poverty rates are based on the CEO poverty universe and unit of analysis.

side, only a family's pre-tax cash income is counted as income available to meet the threshold. This outdated measure of resources does not include most of the current anti-poverty measures that are not in the form of cash, such as the Earned Income Tax Credit or housing subsidies.

The CEO measure includes many of these additions to household resources on the income side, generating a higher estimate of income. But the CEO poverty threshold is adjusted to include the relatively higher cost of housing in New York City. The result, compared to the official poverty measure, is a greater measure of income that is surpassed by an even greater threshold to cover basic needs and, ultimately, a higher poverty rate. The section below, "Why an Alternative Poverty Measure for New York City," details the differences between the two rates and further explains the CEO methodology.

The first part of this Executive Summary provides context for this report: the economics and public policy influencing recent trends in the poverty rate followed by our key findings. We then summarize the current policy framework and initiatives for addressing poverty as defined in this report. In the final section we provide a history of U.S. poverty measures and the importance of an alternative measure for New York City.

This Report

This report incorporates data through 2014. Our focus is primarily on the years 2010 to 2014, which represents five years of data since the end of the Great Recession in June 2009.

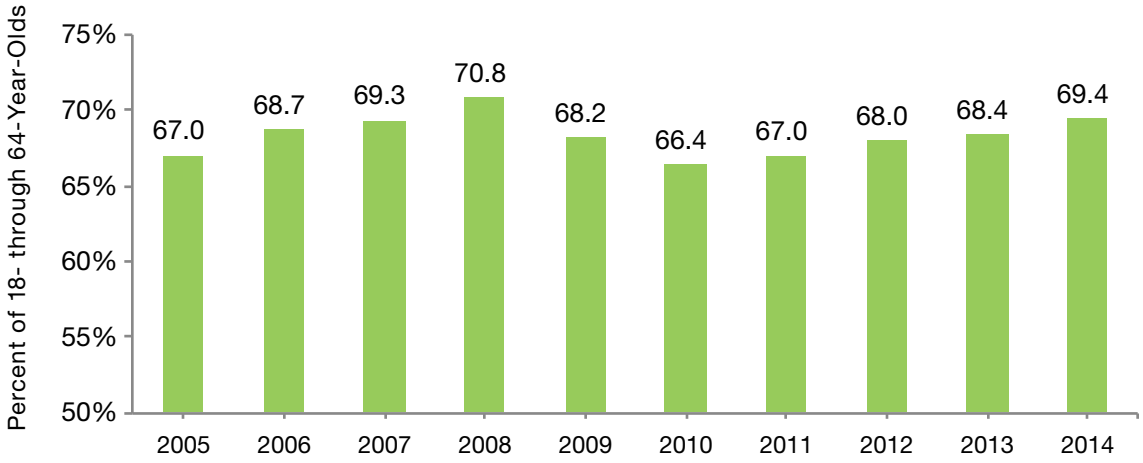
As Figure 2 illustrates, the share of New Yorkers 18 through 64 years of age who were holding a job at the time they were surveyed peaked in 2008 at 70.8 percent. That proportion declined to 66.4 percent in 2010. By 2014, it had inched back up to 69.4 percent. The trend is positive, and approaching the pre-recession peak.

Because poverty status is determined by annual income, employment over the course of a year is a particularly useful labor market indicator for understanding trends in the poverty rate. Employment conditions show improvement over prior years. Figure 3 shows that the share of the working age population with steady work, defined as 50 or more weeks in the prior 12 months, was 56.3 percent in 2010 and had increased to 58.6 percent in 2014. The proportion of the population that had no work at all fell from 27.3 percent in 2010 to 25.3 percent in 2014.

Annual earnings reflect the trend seen in the employment data. Table 1 reports cost of living (COL) adjusted per family earnings. We focus on those families whose earnings put them near the CEO poverty threshold (between the 25th and 40th percentile of the earnings distribution).[2] Table 1 shows that the decline in earnings due to the recession has steadily and slowly reversed. The 2014 data indicate an improvement from the prior year, with gains greatest at the low end

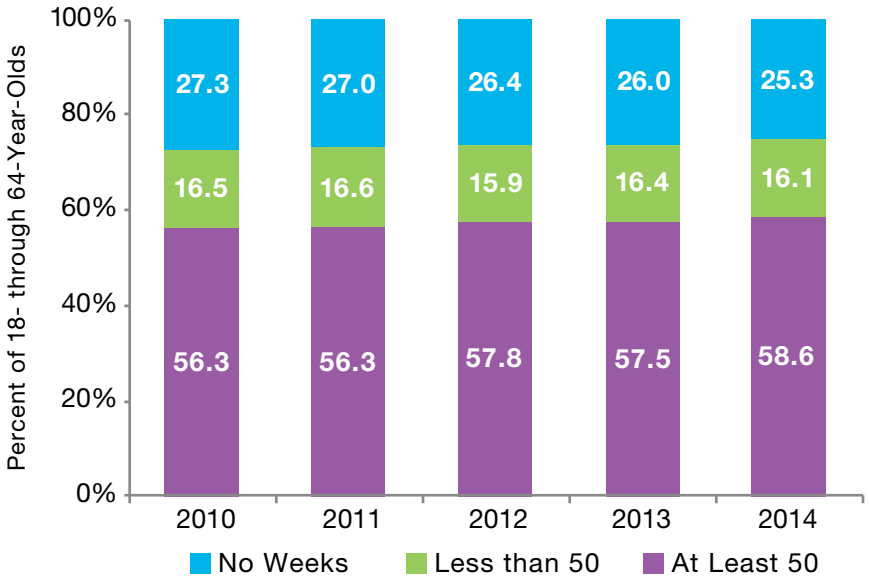
2 Earnings data are stated in 2014 dollars using the CEO threshold as a price index.

Figure 2
Employment/Population Ratios, 2005–2014



Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Figure 3
Weeks Worked in Prior 12 Months, 2010–2014



Source: American Community Survey Public Use Micro Sample as augmented by CEO.

of the income groups shown. But the combined gains from 2010 to 2014 fall short of the earnings lost in the recession. The average increase in the column labeled "A" of Table 1 was 4.1 percentage points. From 2008 to 2011 (data not shown), the average loss for earners in these same percentiles was 19.4 percentage points.[3]

The job market, we have seen, plays an important role in year-over-year changes in the CEO poverty rate. But its effect takes place within the broader scope of our

3 Data for 2008–2011 is discussed further in Chapter 1. See Table 1.

Table 1
Annual Family-Level Earned Income, 2010–2014

						Percentage Change	
						(A)	(B)
Percentile	**2010**	**2011**	**2012**	**2013**	**2014**	**2010–2014**	**2013–2014**
25	$16,941	$16,359	$16,633	$17,362	$18,139	7.1%	4.5%
30	$22,845	$22,422	$22,778	$23,380	$23,751	4.0%	1.6%
35	$29,231	$28,251	$28,978	$29,617	$30,253	3.5%	2.1%
40	$35,645	$33,985	$34,603	$35,745	$36,278	1.8%	1.5%
Average Gain						4.1%	2.4%

Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Notes: Earnings are stated in family size and composition-adjusted dollars. They are stated in 2014 dollars using the CEO threshold as a price index. Persons in families with no earnings are included.

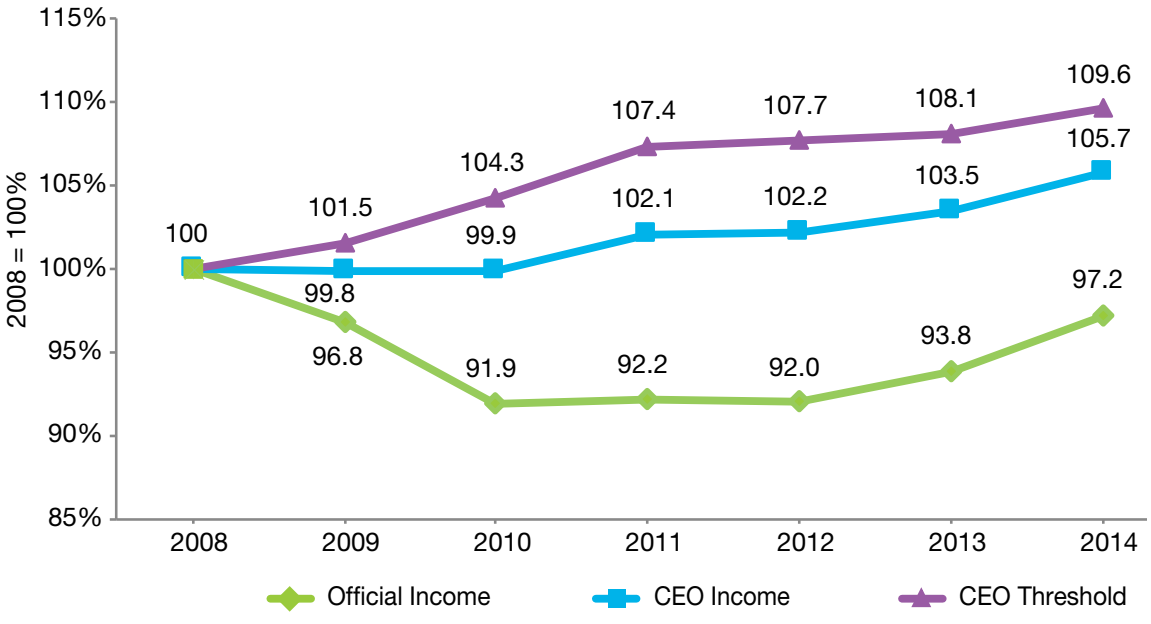
measure of family resources and the context of public policies intended to bolster family incomes. In addition to earnings, low-income families' ability to meet their needs is determined by public benefit programs. Over the last several decades there has been an important shift in the composition of these programs, especially for the non-elderly population, as a smaller proportion of means-tested assistance takes the form of cash payments such as public assistance, while a larger proportion is composed of tax credits and in-kind benefits. The federal economic stimulus programs of 2008–2012 reinforced the trend. Tax credits, an increase in SNAP (Supplemental Nutritional Assistance Program, formerly known as Food Stamps) benefits, and payroll tax cuts were important policy elements.

Because the CEO poverty measure accounts for all these resources, we find that CEO income was markedly more stable during the recession than the official resource, which is solely composed of pre-tax cash. As Figure 4 illustrates, official (pre-tax cash) income fell to 91.9 percent of its 2008 value by 2010. Although it increased over the post-recession years, by 2014 income under the official measure was only at 97.2 percent of its 2008 value. CEO income, which includes non-cash benefits, retained 99.9 percent of its 2008 value in 2010 and increased to 105.7 percent of its 2008 value by 2014. The CEO threshold, bolstered by high local area housing costs, increased to 109.6 percent of its 2008 value by 2014, growing faster than CEO income.[4]

4 The role of housing costs in the threshold is explained further in the section below on CEO's adoption of the NAS-SPM method.

Figure 4

Comparison of Income Trends with the CEO Poverty Threshold, 2008–2014



Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Notes: Incomes are measured at the 20th percentile of their respective distributions. All three measures are stated in current, not inflation-adjusted dollars.

Key Findings

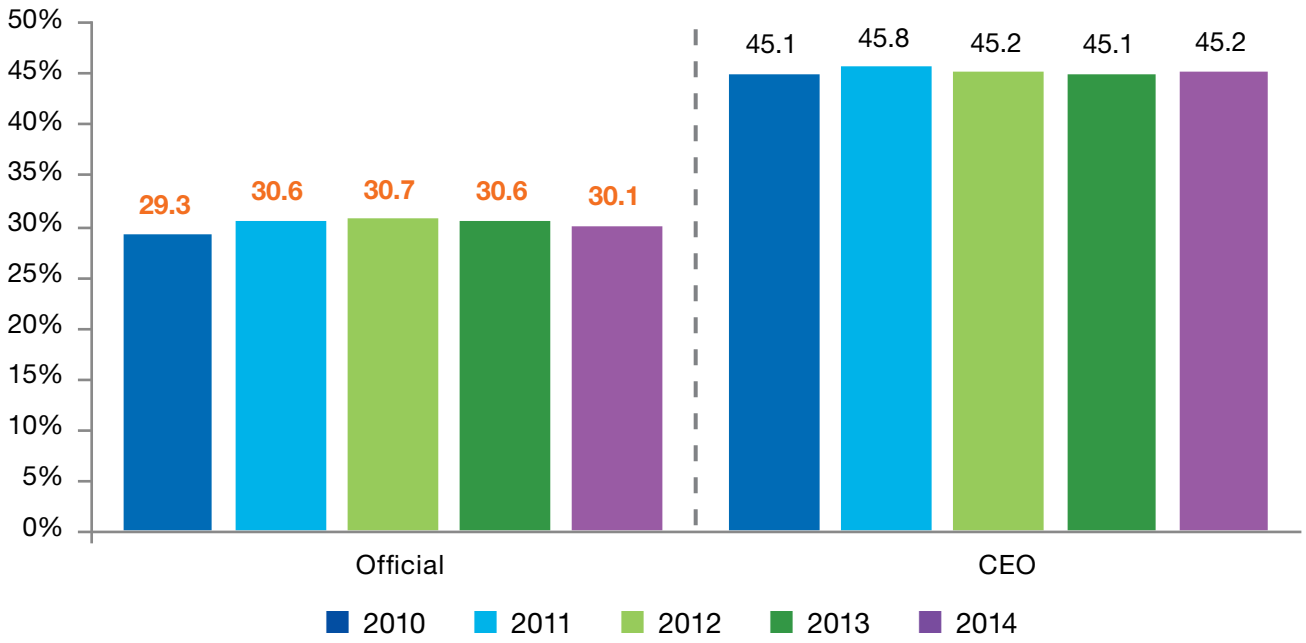
In the context of a labor market that is still slowly recovering from a sharp two-year slump, we find little change in the citywide poverty rate and a fairly consistent pattern in trends over time. The key findings noted below describe where those trends continue, and where new patterns emerge in the 2014 data.

- Both the CEO and official poverty rates remain statistically unchanged from 2013 to 2014. The CEO poverty rate fell to 20.7 percent in 2014, essentially unchanged from its 2013 level. The official poverty rate fell from 19.9 percent in 2013 to 19.1 percent in 2014. (See Figure 1.)

- The CEO measure categorizes a larger share of the population as living in "near poverty" – above, but uncomfortably close to, the poverty threshold – than the official measure. This is reflected in comparisons of the share of the population that is living below 150 percent of the respective poverty thresholds. In 2014, 45.2 percent of New York City residents were living below 150 percent of the CEO poverty threshold, statistically unchanged over five years from 45.1 percent in 2010. The corresponding shares for the official measure were 29.3 percent in 2010 and 30.1 percent in 2014. (See Figure 5.)

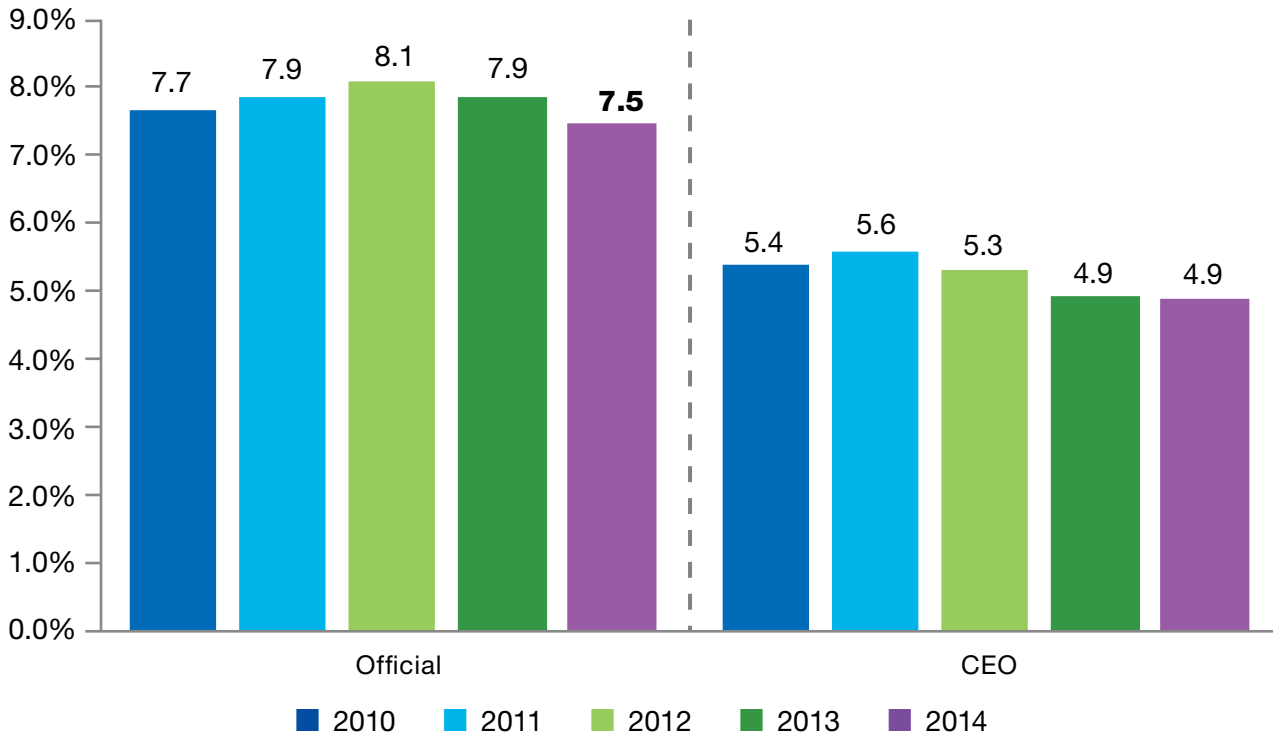
Figure 5

Share of the Population below 150 Percent of the Poverty Threshold, 2010–2014



Numbers in **bold** indicate statistically significant change between 2013 and 2014. Absence of bold numbers indicates no statistical difference from prior year.
Numbers in orange indicate statistically significant change between the years 2010 and 2014.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Figure 6
Share of the Population in Extreme Poverty, 2010–2014

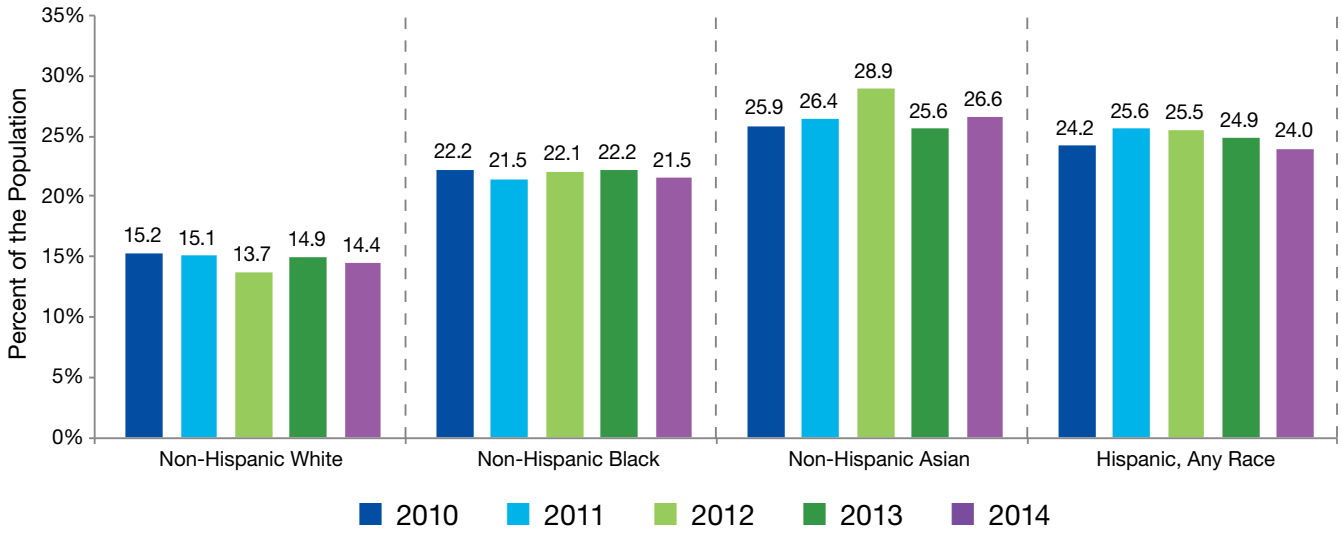


Numbers in **bold** indicate statistically significant change between 2013 and 2014. Absence of bold numbers indicates no statistical difference from prior year.
Numbers in orange indicate statistically significant change between the years 2010 and 2014.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.

- Although the CEO poverty and near poverty rates exceed the official rate in each year for which we have data, the CEO methodology finds that a smaller proportion of the city's population is living in extreme poverty – below 50 percent of the poverty threshold – than the official method (4.9 percent compared to 7.5 percent in 2014). The CEO extreme poverty rate fell from 5.4 percent in 2010 to 4.9 percent in 2014. The official extreme poverty rate fell from 7.7 percent in 2010 to 7.5 percent in 2014. (See Figure 6.)

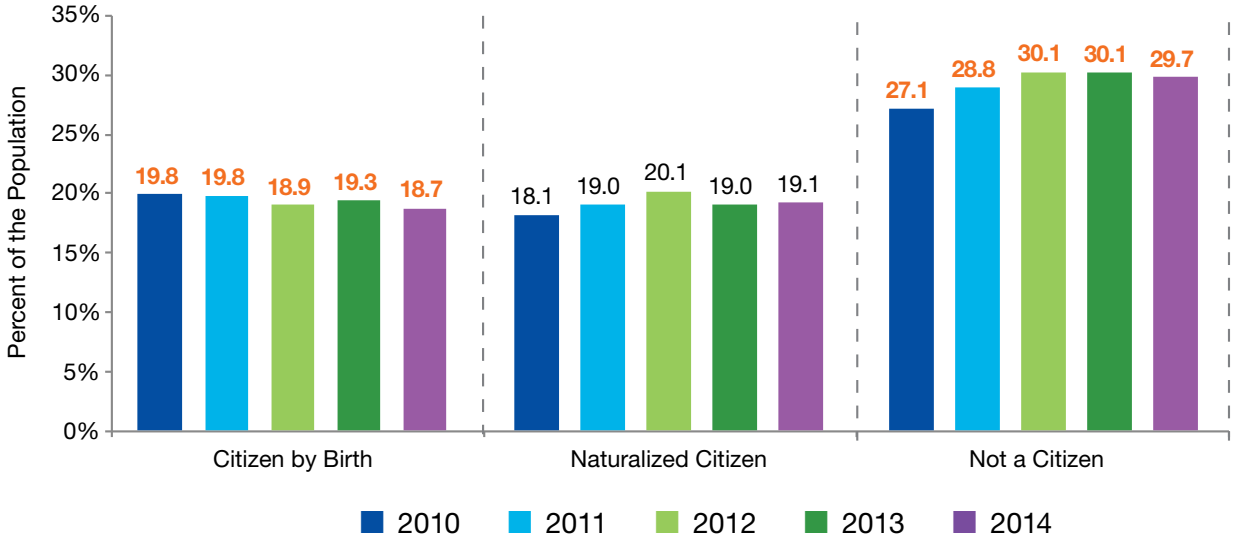
- The trend in CEO poverty rates by demographic characteristics such as age, race/ethnicity, nativity/citizenship, and family type generally follows the statistical stability of the citywide poverty rate from 2010 to 2014, with a few exceptions. Looking over the years 2010 to 2014, there are no significant changes in the poverty rate across the main demographic groupings. Poverty rates remain highest among Hispanics and Non-Hispanic Asians. The poverty rate for non-citizens continued to increase over this same time period, by 2.6 percentage points to 29.7 percent. (See Figures 7 and 8.) There is considerable overlap between these two demographic groups; one-third (33.1 percent) of the city's Asian population falls into the non-citizen category, as does 23.5 percent of the city's Hispanic population.

Figure 7
CEO Poverty Rates by Race/Ethnicity, 2010–2014



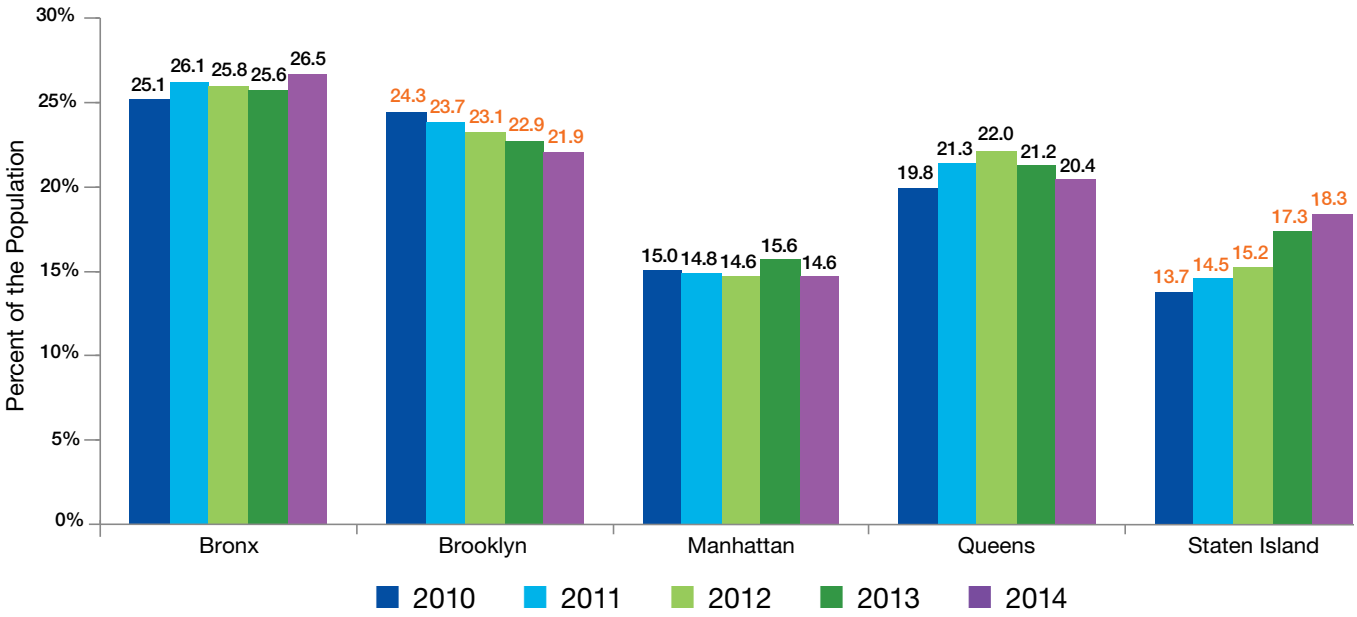
Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Figure 8
CEO Poverty Rates by Nativity/Citizenship, 2010–2014



Numbers in **bold** indicate statistically significant change between 2013 and 2014. Absence of bold numbers indicates no statistical difference from prior year.
Numbers in orange indicate statistically significant change between the years 2010 and 2014
Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Figure 9
CEO Poverty Rates by Borough, 2010–2014



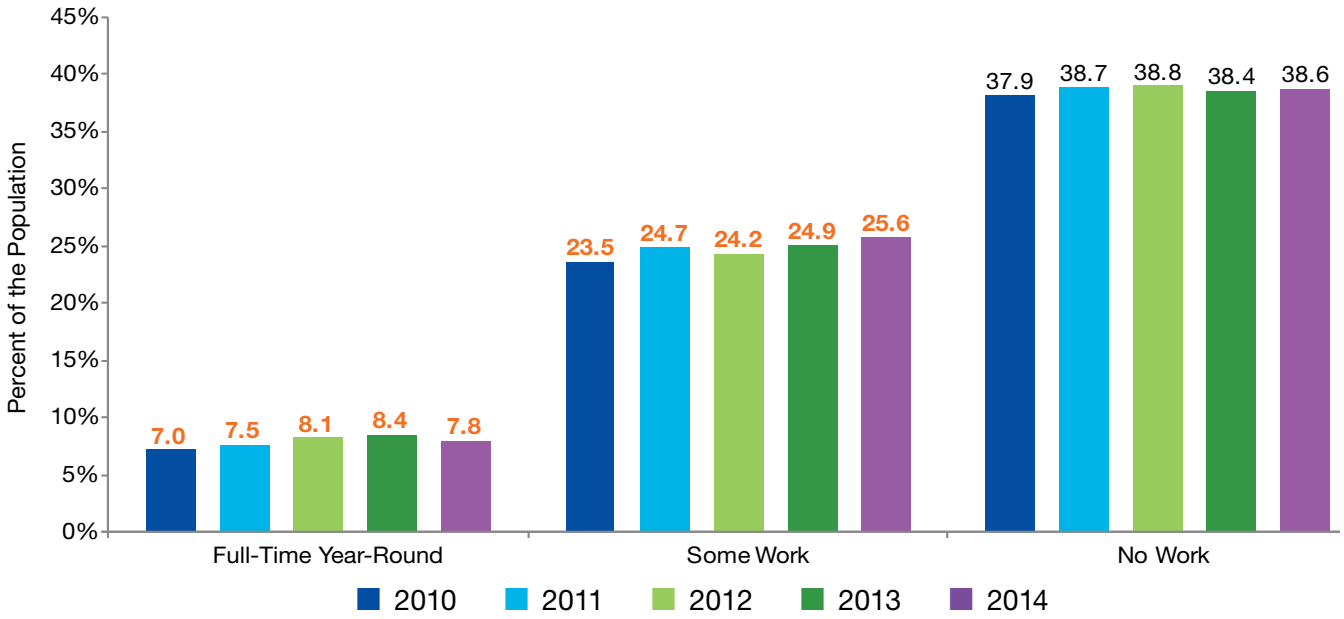
Numbers in **bold** indicate statistically significant change between 2013 and 2014. Absence of bold numbers indicates no statistical difference from prior year.
Numbers in orange indicate statistically significant change between the years 2010 and 2014
Source: American Community Survey Public Use Micro Sample as augmented by CEO.

- The poverty rate across boroughs remains uneven. Within boroughs, both Brooklyn and Staten Island show a significant change over 2010–2014. The Bronx is home to more individuals in poverty than any other borough (26.5 percent in 2014). Poverty is lowest in Manhattan (14.6 percent in 2014). The steepest decline in the poverty rate from 2010 to 2014 is found in Brooklyn, where poverty fell from 24.3 percent to 21.9 percent, a significant decline. In Queens, the poverty rate has remained statistically unchanged from 2010 to 2014 (19.8 percent to 20.4 percent). In Staten Island, year-over-year changes in the poverty rate are not significant, but the trend over 2010–2014 is a statistically significant increase of 4.6 percentage points in this time period (13.7 to 18.3 percent). (See Figure 9.)

- Poverty has not abated for workers and working families. The poverty rate for working age adults (persons 18 through 64 years of age) who were employed full time, year round rose from 7.0 to 7.8 percent from 2010 to 2014. Poverty rates also increased among adults working less than full time, from 23.5 percent in 2010 to 25.6 percent in 2014. (See Figure 10.)

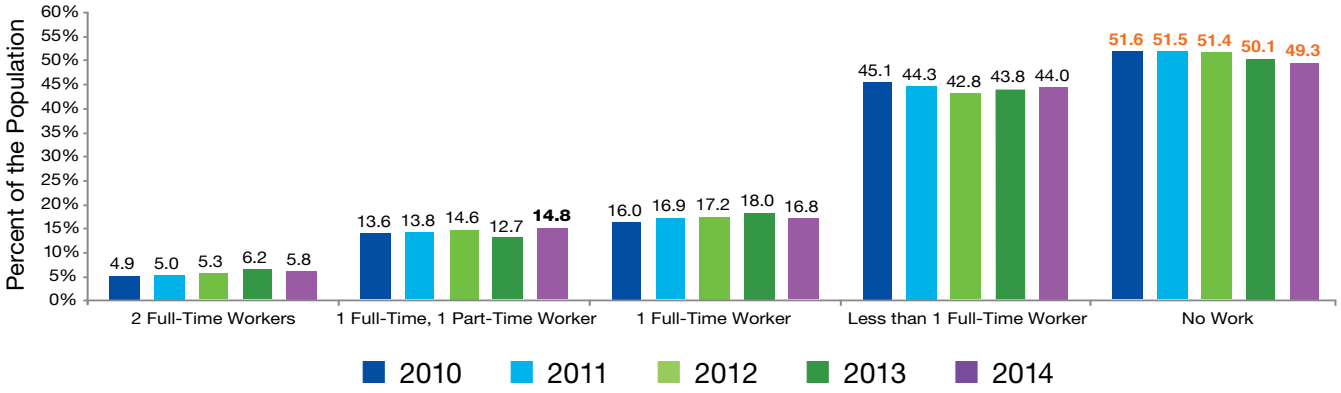
- Over the same time period, poverty rates remained statistically unchanged for persons living in families with the equivalent of two full-time, year-round workers; one full-time worker; and those with less than one full-time worker. The only statistically significant difference from 2013 to 2014 is found in

Figure 10
CEO Poverty Rates by Individual Work Experience, 2010–2014



Numbers in **bold** indicate statistically significant change between 2013 and 2014. Absence of bold numbers indicates no statistical difference from prior year.
Numbers in orange indicate statistically significant change between the years 2010 and 2014
Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Figure 11
CEO Poverty Rates by Family's Work Experience, 2010–2014



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Numbers in orange indicate statistically significant change between the years 2010 and 2014
Source: American Community Survey Public Use Micro Sample as augmented by CEO.

families with the equivalent of one full-time, year-round worker and one part-time worker, where poverty increased from 13.6 percent to 14.8 percent. (See Figure 11.)

- The pattern in poverty rates for the United States, based on the new Federal Supplemental Poverty Measure, resembles the CEO pattern for New York City.

In both the nation and the city, the two NAS-based poverty measures find a higher incidence of poverty than do the official measures. In the U.S., the SPM rate in 2014 was 15.3 percent as opposed to the official rate of 14.9 percent. In New York City, the respective poverty rates were 20.7 percent (CEO) and 19.1 percent (official) in that year. (See Figures 12 and 13.)

- Because the SPM and CEO measures count the value of non-cash assistance, both find child poverty rates lower than those found in the official measure: 16.7 percent compared to 21.5 percent for the nation and 24.0 percent rather than 28.5 percent for the city. (See Figures 12 and 13.)

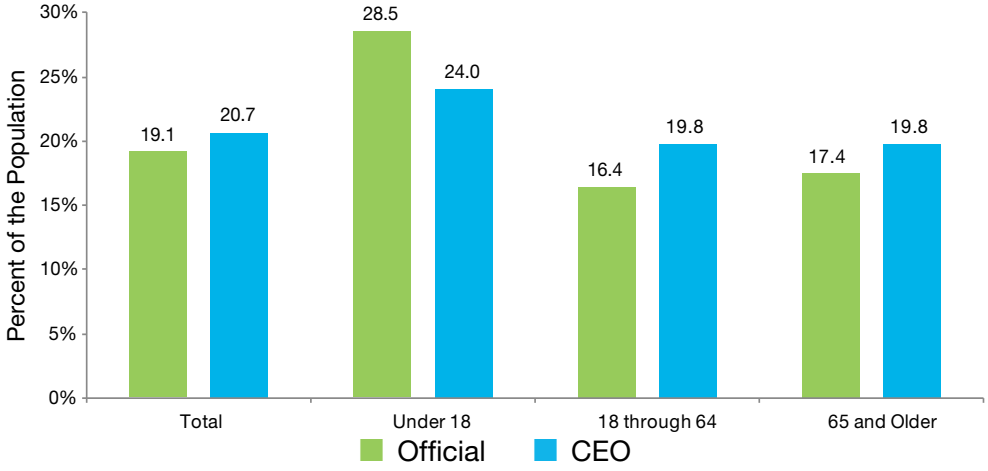
Figure 12

Official and SPM Poverty Rates for the U.S., by Age, 2014

Source: U.S. Bureau of the Census.

Figure 13

Official and CEO Poverty Rates for New York City, by Age, 2014



Source: American Community Survey Public Use Micro Sample as augmented by CEO. Official poverty rates are based on the CEO poverty universe and unit of analysis.

Policy and New York City's Poverty Reduction Goal

Last spring, in *One New York: The Plan for a Strong and Just City* (OneNYC), the City for the first time set out a definite poverty reduction goal. In that blueprint for New York City's future, and in the annual Poverty Report issued concurrently, the City announced a goal of reducing the number of people in poverty or near poverty by 800,000 by 2025. OneNYC declared that this benchmark could be met "through a broad set of anti-poverty measures including raising the minimum wage – a particularly effective tool for reducing poverty and income inequality."

The need for strong action to reduce poverty in New York City is clear, as the findings of this year's CEO report illustrates. In 2014, the CEO poverty rate was 20.7 percent and 45.2 percent of New Yorkers were living in near poverty – below 150 percent of the CEO poverty line. These rates are statistically unchanged from 2013. Poverty is particularly concentrated in certain segments of the city, including among non-citizens and Black and Hispanic New Yorkers.

Efforts to reduce poverty must overcome formidable trends. The cost of living, and thus the poverty threshold, continues to rise, driven in part by increases in housing costs in the city. Employment and work hours have increased over the last five years but wages remain far below pre-recession levels. Important programs that were part of the federal fiscal stimulus program, including direct tax cuts, some expanded tax credits, increased SNAP benefits, and increased unemployment insurance, have all ended. As New Yorkers returned to work in the post-recession years their increased earnings were partially offset by this loss of benefits as well as higher housing costs, which have risen steadily and continue to rise. So although more people were employed when the recession ended, they had to earn more to avoid poverty or near poverty.

The single most powerful tool to address these challenges is raising the minimum wage. In his 2015 State of the City address, Mayor de Blasio urged the state to increase the minimum wage, declaring that, "nothing does more to address income equality than actually raising people's income."

There has been considerable progress on the minimum wage front. The City on its own initiative put all of its employees, as well as employees of its social services

contractors, on a path to earning $15 by 2018. The state minimum wage was already rising, for both regular and tipped workers, and in the past year there have been more victories. Most significantly, a state law enacted in April 2016 established a new minimum wage regime that will incrementally increase the minimum wage for people who work for large businesses (those with at least 11 employees) to $15 by the end of 2018. Workers at smaller businesses will reach $15 a year later.

These minimum wage increases have already begun to lift a significant number of New Yorkers out of poverty or near poverty. A simulation conducted by the Center for Economic Opportunity based on 2013 data found that had the minimum wage been $15 in that year, 314,000 New Yorkers would have moved out of poverty and another 438,000 out of near poverty – for a total of more than 750,000 people. The poverty rate for New York City would have fallen from 21.1 percent to 17.3 percent, and the rate of people living in near poverty would have fallen from 45.1 percent to 39.6 percent.

As important as they are, increases in the minimum wage are only one step toward reducing poverty rates in New York City. The City also has a wide array of other initiatives to combat poverty and expand opportunity for all New Yorkers. In its anti-poverty work, the de Blasio Administration is committed to using proven methods that have three critical attributes: (1) they are evidence-based; (2) they are data-driven; and (3) they are cost-effective. An array of City programs in early childhood, child welfare, education, workforce, and other fields have the potential to reduce poverty and ameliorate its effects. In Chapter 5 of this report we reproduce performance data for many of these programs, and also highlight a few key initiatives that have seen significant progress over the last year.

One of the main policy areas with significant implications for poverty is housing – the single largest expense for New Yorkers, and a particular challenge because of the city's very low rental vacancy rate. In May 2014, Mayor de Blasio announced Housing New York, a ten-year plan to build or preserve 200,000 units of affordable housing that would leverage $41.1 billion in government and private sector funds. In January 2016, the City announced that it was on track to meet this goal, with 40,204 units of affordable housing built or preserved in the program's first two years.

The City took a historic step forward on affordable housing this past year when in March 2016 the City Council enacted new zoning regulations to establish the de Blasio Administration's Mandatory Inclusionary Housing program. The program will create a new supply of affordable housing by, for the first time, requiring developments that are rezoned for greater residential density to include units that are affordable to low- and moderate-income New Yorkers. The City has also been working to keep the rents of current tenants in check. Last year, for the first time, the Rent Guidelines Board voted to freeze rents for tenants in the city's more than one million rent-stabilized apartments.

The City has also launched new programs and expanded existing initiatives aimed at helping the homeless. In December 2015, Mayor de Blasio announced a major new initiative, Homeless Outreach & Mobile Engagement Street Action Teams (HOME-STAT), the most comprehensive street homelessness outreach effort ever taken on by a major American city. The City has increased by 500 the number of Safe Haven beds available for individuals coming off the streets who do not want to enter shelters, for a total of 1,174 beds. The Homebase program is preventing homelessness by providing tenants who are in danger of losing their homes with services such as eviction prevention and landlord mediation. The Tenant Harassment Prevention Task Force provides help to tenants who are being pressured by landlords to leave, including free or low-cost legal assistance. These initiatives and other reforms announced in connection with the City's review and reorganization of the Department of Homeless Services focus on addressing one of the starkest and most visible manifestations of economic hardship in the city.

Another important focus of the City's anti-poverty efforts is employment. The City has put an emphasis on workforce development initiatives designed to help people without jobs to get jobs and people in the workforce to increase their earnings. Mayor de Blasio launched Career Pathways: One City, Working Together, a new workforce development initiative, to expand access to jobs in fast-growing, well-paying industries and increase New Yorkers' earnings.

The City has also been investing in educational initiatives that help prepare New Yorkers for college success and higher-paying careers. In its education effort, the de Blasio Administration has put particular emphasis on supporting those who enroll in City University of New York (CUNY), the school attended by 58 percent of Department of Education (DOE) graduates who go on to college. The City has an array of programs designed to help students make the transition, including general programs like College Access for All, designed to promote college attendance among high school students. CUNY Pipeline is one of the more specialized programs, helping CUNY undergraduates from underrepresented groups obtain PhDs.

College Now, the nation's largest dual enrollment program, offers college credit CUNY courses to DOE high school students. The Early College Initiative (ECI) helps 14 public schools provide students with a rigorous college preparatory curriculum and the opportunity to earn as much as two years of college credit. Enrollment in ECI has increased by about 20 percent in the past two years.

The CUNY Accelerated Study in Associate Program (ASAP) has a strong record of helping students succeed at CUNY by providing financial, academic, and other support. ASAP students, including those who enter college in need of remediation, have twice the three-year graduation rate of their peers. The City has greatly expanded resources available to the program and total enrollment in ASAP, which was 4,238 in academic year 2014–2015, is expected to reach 25,190 in the 2018-2019 academic year.

CUNY is partnering with the Young Men's Initiative on programs to increase enrollment of young men of color and minority adults in ASAP through social media marketing campaigns and other forms of outreach. Another program, NYC Men Teach, has the goal of putting an additional 1,000 men of color on course to become New York City schoolteachers over the next three years. The City also offers cutting-edge behavioral intervention programs to help young people succeed in college, including a program designed to improve scores on CUNY Assessment tests and reduce the need for remediation. Along with increased training opportunities, these initiatives help break down barriers and prepare more New Yorkers for success.

The City is also continuing its success with IDNYC, the nation's largest municipal ID program that makes government identification available to New Yorkers, including many immigrants who previously had no form of ID. IDNYC makes the city more inclusive by opening up public and private sector services of many kinds to New Yorkers who were once relegated to the sidelines of city life.

Finally, over the last year, the City marked important progress in greatly expanding access to free and low-cost broadband, which will help low-income New Yorkers benefit from the enormous economic, employment, and other opportunities the Internet offers. Last year, for the first time, the Mayor created a budget line for broadband in the City's capital budget, committing $70 million over ten years to expand access, with a focus on increasing access for hard-to-reach communities. The City recently launched LinkNYC, the largest free Wi-Fi network in the world, which will replace more than 7,500 pay phones in all five boroughs with structures that provide free superfast Wi-Fi. The City is also launching NYCHA Connected, which brings free broadband to residents of public housing developments in all five boroughs.

New York City has taken an important stand by identifying a specific, and ambitious, goal for its poverty efforts – lifting 800,000 individuals out of poverty or near poverty. With the City's historic progress on minimum wage and affordable housing and its continued commitment to strengthening the policies and programs that address economic burdens and broaden opportunity, the past year may well prove to be a significant turning point in the fight against poverty.

Why an Alternative Poverty Measure for New York City?

Measures of Poverty

Official: The current official poverty measure was developed in the early 1960s. It consists of a set of thresholds that were based on the cost of a minimum diet at that time. A family's pre-tax cash income is compared against the threshold to determine whether its members are poor.

NAS: At the request of Congress, the National Academy of Sciences (NAS) issued a set of recommendations for an improved poverty measure in 1995. The NAS threshold represents the need for clothing, shelter, and utilities, as well as food. The NAS income measure accounts for taxation and the value of in-kind benefits.

SPM: In March 2010 the Obama Administration announced that the Census Bureau, in cooperation with the Bureau of Labor Statistics, would create a Supplemental Poverty Measure based on the NAS recommendations, subsequent research, and a set of guidelines proposed by an Interagency Working Group. The first report on poverty using this measure was issued by the Census Bureau in November 2011.

CEO: The Center for Economic Opportunity released its first report on poverty in New York City in August 2008. CEO's poverty measure is largely based on the NAS recommendations, with modifications based on the guidelines from the Interagency Working Group.

The Official Poverty Measure

The official U.S. poverty measure was developed in the early 1960s. Its threshold was based on the cost of the U.S. Department of Agriculture's Economy Food Plan, a diet designed for "temporary or emergency use when funds are low." Because survey data at the time indicated that families typically spent a third of their income on food, the cost of the plan was simply multiplied by three to account for other needs. Since the threshold's base year, 1963, it has been updated annually by the change in the Consumer Price Index.[5]

It is now over a half century later and this poverty line has little justification. The threshold does not represent contemporary spending patterns; food now accounts for less than one-seventh of family expenditures, and housing is the largest item in the typical family's budget. The official threshold also ignores differences in the cost of living across the nation, an issue of obvious importance to measuring poverty in New York City. A final shortcoming of the threshold is that it is frozen in time. Since it only rises with the cost of living, it assumes that a standard of living that defined poverty in the early 1960s remains appropriate, despite advances in the nation's standard of living since that time.

The official measure's definition of the resources that are compared against the threshold is pre-tax cash income. This includes wages, salaries, and earnings from self-employment; income from interest, dividends, and rents; and some of what families receive from public programs if they take the form of cash. Thus, payments from Unemployment Insurance, Social Security, Supplemental Security Income, and public assistance are included in the official resource measure.

Given the data available and the policies in place at the time, this was not an unreasonable definition. But over the decades an increasing share of what government programs do to support low-income families takes the form of tax credits (such as the Earned Income Tax Credit) and in-kind benefits (such as SNAP). If policymakers or the public want to know how these programs affect poverty, the official measure cannot provide an answer.

5 Fisher, Gordon M. "The Development and History of the Poverty Thresholds." Social Security Bulletin, Vol. 55, No. 4, Winter 1992.

The National Academy of Sciences' Alternative

Dissatisfaction with the official measure prompted Congress to request a study by the National Academy of Sciences (NAS). The NAS' recommendations for an improved measure were issued in 1995.[6] The NAS took a considerably different approach to both the threshold and resource side of the poverty measure. Its poverty threshold reflects the need for clothing, shelter, and utilities, as well as food. It is established by selecting a sub-group of families as reference families,[7] calculating their spending on these items, and then choosing a point in the resulting expenditure distribution.[8] A small multiplier is applied to account for miscellaneous expenses such as personal care, household supplies, and non-work-related transportation. The threshold is updated each year by the change in the level of this spending. This method connects the threshold to changes and growth in living standards. In further contrast to the official measure, the NAS proposed that the poverty line be adjusted to reflect geographic differences in housing costs.

On the resource side, the NAS measure is designed to account for the flow of income and in-kind benefits that a family can use to meet the needs represented in the threshold. This creates a much more inclusive measure of income than pre-tax cash. The tax system and the cash-equivalent value of in-kind benefits for food and housing are important additions to family resources. But families also have non-discretionary expenses that reduce the income available to meet their needs for food, clothing, shelter, and utilities (FCSU) that are reflected in the threshold. These include the cost of childcare, commuting to work, and medical care that must be paid for out of pocket. This non-discretionary spending is accounted for as deductions from income because dollars spent on those items are not considered available to purchase food, clothing, shelter, or utilities.

The NAS report sparked further research and garnered widespread support among poverty experts.[9] However, neither the federal government nor any state or local government had adopted the NAS approach until CEO's initial report on poverty in New York City in August 2008.[10]

More recently, the U.S. Bureau of the Census has issued annual reports on poverty using a Supplemental Poverty Measure (SPM). Like CEO's measure, the Census Bureau's SPM – first issued in November 2011 – is also shaped by the NAS recommendations, along with a set of guidelines provided by an Interagency Technical Working Group in March 2010.[11] Subsequent to the original NAS report, the guidelines incorporated work by researchers at the Census Bureau, the Bureau of Labor Statistics, and others. Many of these recommendations are reflected in our measure.

6 Citro, Constance F. and Robert T. Michael (eds.) Measuring Poverty: A New Approach. Washington, DC: National Academy Press. 1995.

7 The NAS reference families are composed of two adults and two children. The threshold for this family is then scaled for families of different sizes and compositions. See Appendix B.

8 The NAS suggested that this point lie between the 30th and 35th percentile. Citro and Michael, p. 106.

9 Much of the research inspired by the NAS report is available at: www.census.gov/hhes/povmeas/methodology/nas/index.html

10 New York City Center for Economic Opportunity. The CEO Poverty Measure: A Working Paper by the New York City Center for Economic Opportunity. August 2008. Available at: www.nyc.gov/html/ceo/downloads/pdf/final_poverty_report.pdf

11 Observations from the Interagency Technical Working Group on Developing a Supplemental Poverty Measure. March 2010. Available at: www.census.gov/hhes/www/poverty/SPM_TWGObservations.pdf

Poverty Thresholds

Official: The official threshold was developed in the early 1960s and was based on the cost of a minimum diet at that time. It is updated each year by the change in consumer prices. It is uniform across the United States.

CEO: The CEO poverty threshold is a New York City-specific threshold derived from the U.S.-wide threshold developed for the Federal Supplemental Poverty Measure. The threshold is based on what families spend on basic necessities: food, clothing, shelter, and utilities. It is adjusted to reflect the variation in housing costs across the United States.

CEO's Adoption of the NAS/SPM Method

CEO bases our New York City-specific poverty threshold on the U.S.-wide threshold developed for the SPM. We adjust the national-level threshold to account for the relatively high cost of housing in New York City by applying the ratio of the New York City Fair Market Rent to the U.S.-wide Fair Market Rent for a two-bedroom apartment to the housing portion of the threshold.[12] In 2014, our poverty line for the two-adult, two-child family comes to $31,581. We refer to this New York City-specific threshold as the CEO poverty threshold. The 2014 official U.S. poverty threshold for the corresponding family was $24,008.

Obviously, if this were the only change CEO had made to the poverty measure, it would lead to a poverty rate higher than the official rate. But, as described above, CEO also uses a far different measure of income to compare against the poverty threshold. Although our measure includes subtractions as well as additions to resources, CEO income is higher than pre-tax cash income at the lower rungs of the income ladder. At the 20th percentile, for example, CEO income was $31,198 in 2014. The corresponding official income figure for pre-tax cash was only $24,202. Thus, if a more complete account of resources had been the only change we had made to the poverty measure, the CEO poverty rate would fall below the official measure. Figure 14 illustrates official and CEO thresholds, incomes, and poverty rates for 2014. The effect of the higher CEO threshold (31.5 percent above the official) outweighs the effect of CEO's more complete definition of resources (which is 28.9 percent higher, at the 20th percentile, than the official resource measure), resulting in a higher poverty rate. In 2014, the CEO poverty rate stood at 20.7 percent while the official rate was 19.1 percent, a 1.5 percentage point difference.[13]

12 Details of this calculation are found in Appendix B.

13 Differences are taken from unrounded numbers.

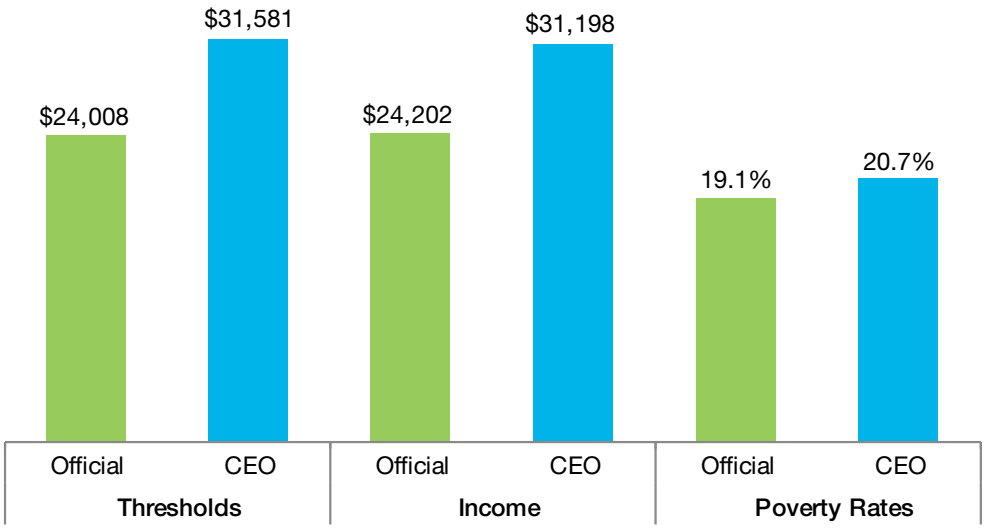
Measuring Income

Official Income: The official poverty measure's definition of family resources is pre-tax cash. This includes income from sources such as wages and salaries, as well as government transfer payments, provided that they take the form of cash. Thus, Social Security benefits are included in this measure, but the value of in-kind benefits, like Food Stamps or tax credits such as the Earned Income Tax Credit, are not counted.

CEO Income: Based on the NAS recommendations, CEO income includes all the elements of pre-tax cash plus the effect of income and payroll taxes, as well as the value of in-kind nutritional and housing assistance. Non-discretionary spending for commuting to work, childcare, and out-of-pocket medical care are deductions from income.

To measure the resources available to a family to meet the needs represented by the threshold, our poverty measure employs the Public Use Micro Sample (PUMS) from the Census Bureau's American Community Survey (ACS) as its principal data set. The advantages of this survey for local poverty measurement are numerous. The ACS is designed to provide measures of socioeconomic conditions on an annual basis in states and larger localities. It offers a robust sample for New York City (roughly 26,600 households) and contains essential information about household composition, family relationships, and cash income from a variety of sources.

Figure 14
Official and CEO Thresholds, Incomes, and Poverty Rates, 2014



Source: U.S. Bureau of the Census and American Community Survey Public Use Micro Sample as augmented by CEO.
Notes: Incomes are measured as the 20th percentile and stated in family size and composition-adjusted dollars.
Official poverty rates are based on the CEO poverty universe and unit of analysis.

But, as noted earlier, the NAS-recommended poverty measure greatly expands the scope of resources that must be measured in order to determine whether a family is poor. Unfortunately, the ACS provides only some of the information needed to estimate these additional resources. CEO has developed a variety of models that estimate the effect of taxation, nutritional and housing assistance, work-related expenses, and medical out-of-pocket expenditures on total family resources and poverty status. We reference the resulting data set in this report as the "American Community Survey Public Use Micro Sample as augmented by CEO" and we refer to our estimate of family resources as "CEO income."

Conclusion

Our findings in this report continue to demonstrate that policy affects poverty. The data emphasize the importance and success of existing programs that assist low-income families. Our recent data-driven policy goals show that even more is possible.

The full volume of this report explains the CEO poverty measure, our findings, and the full range of the City's anti-poverty initiatives in depth. A series of ten appendices explain our methodology in deriving our poverty threshold and income components. The full report and additional material, including expanded versions of some of the tables, CEO's research data files, a Poverty Data Tool, and past issues of this report are available on our website, NYC.GOV/CEO, under the link "Poverty Data and Research."

Chapter 1: Introduction

Chapter 1: Introduction

This is the seventh annual release of CEO's alternative poverty measure for New York City. Our data cover the years 2005–2014, dating back to the inception of the American Community Survey (ACS), our primary data source. Over the economic expansion and subsequent Great Recession, we have provided a unique perspective on poverty as incomes rose and then fell. During the recession we were able to measure the impact of income support programs. In the ensuing modest recovery, we have tracked poverty as both employment and wages remained below pre-recession levels.

This chapter establishes the context for our findings. We begin with an overview of the reasons why CEO developed a new measure of poverty and a description of our alternative measure. Because trends in poverty are so closely associated with economic conditions, the second part of the Introduction moves the discussion from methodology to trends in the local labor market. The chapter's final section summarizes the report's principal findings.

1.1 The Need for an Alternative to the Official Poverty Measure

It has been over a half century since the development of the current official measure of poverty. In the early 1960s the measure represented an important advance, serving as a focal point for the public's growing concern about poverty in America. But over the decades, discussions about poverty have increasingly included criticism of how poorly it was being measured. Society has evolved and public policy has shifted, yet the official Census Bureau poverty measure continues as if nothing had changed. This still widely used indicator is now sorely out of date.

The official poverty measure is income based. As such, two key questions must be addressed: First, how much is enough? The answer to this question gives us the income threshold (the poverty line) that separates the poor from the non-poor. The second question is, how much of what? Which resources available to families should be counted as income to meet their needs and compared against the poverty thresholds?

The official measure's threshold, developed in the early 1960s, was based on the cost of the U.S. Department of Agriculture's Economy Food Plan, a diet designed for "temporary or emergency use when funds are low." Because the survey data available at the time indicated that families typically spent a third of their income on food, the cost of the plan was simply multiplied by three to account for other needs. Since the threshold's 1963 base year, it has been updated annually by changes in the Consumer Price Index.[1]

A half century later, this poverty line has little justification. The threshold does not represent contemporary spending patterns. Food now accounts for less than one-seventh of family expenditures. Housing is the largest item in the typical family's budget. The official threshold also ignores differences in the cost of living across the nation, an issue of obvious importance when measuring poverty in New York City. A final shortcoming of the threshold is that it is frozen in time. Since it only rises with the cost of living, it assumes that a standard of living that defined poverty in the early 1960s remains appropriate, despite advances in living standards since that time.

1 Fisher, Gordon M. "The Development and History of the Poverty Thresholds." Social Security Bulletin, Vol. 55, No. 4. Winter 1992.

Measures of Poverty

Official: The current official poverty measure was developed in the early 1960s. It consists of a set of thresholds that were based on the cost of a minimum diet at that time. A family's pre-tax cash income is compared against the threshold to determine whether its members are poor.

NAS: At the request of Congress, the National Academy of Sciences (NAS) issued a set of recommendations for an improved poverty measure in 1995. The NAS threshold represents the need for clothing, shelter, and utilities, as well as food. The NAS income measure accounts for taxation and the value of in-kind benefits.

SPM: In March 2010 the Obama Administration announced that the Census Bureau, in cooperation with the Bureau of Labor Statistics, would create a Supplemental Poverty Measure (SPM) based on the NAS recommendations, subsequent research, and a set of guidelines proposed by an Interagency Technical Working Group (ITWG). The first report on poverty using this measure was issued by the Census Bureau in November 2011.

CEO: The Center for Economic Opportunity (CEO) released its first report on poverty in New York City in August 2008. CEO's poverty measure is largely based on the NAS recommendations, with modifications based on the guidelines from the Interagency Technical Working Group.

The official measure's definition of the resources that are compared against the threshold is pre-tax cash. This includes wages, salaries, and earnings from self-employment; income from interest, dividends, and rents; and some of what families receive from public programs, *if* they take the form of cash. Thus, payments from Unemployment Insurance, Social Security, Supplemental Security Income (SSI), and public assistance are included in the official resource measure. Given the data available and the policies in place at the time, this was not an unreasonable definition. But in recent years an increasing share of what government does to support low-income families takes the form of tax credits (such as the Earned Income Tax Credit) and in-kind benefits (such as housing vouchers). If policymakers or the public want to know how these programs affect poverty, the official measure cannot provide an answer.

1.2 The National Academy of Sciences' Alternative

Dissatisfaction with the official measure prompted Congress to request a study by the National Academy of Sciences. The NAS' recommendations, issued in 1995, sparked further research and garnered widespread support among poverty experts.[2] However, neither the federal nor any state or local government had adopted the NAS approach until CEO's initial report on poverty in New York City in August 2008.[3]

The NAS-based methodology is also income based, but takes a considerably different approach to both the threshold and resource sides of the poverty measure. The NAS poverty threshold reflects the need for clothing, shelter, and utilities, as well as food. It is established by selecting a sub-group of families as reference families,[4] calculating their spending on these items, and then choosing a point in the resulting expenditure distribution.[5] A small multiplier is applied to account for miscellaneous expenses such as personal care, household supplies, and non-work-related transportation. The threshold is updated each year by the change in the level of this spending. This connects the threshold to the growth in living standards. In further contrast to the official measure, the NAS-style poverty line is also adjusted to reflect geographic differences in housing costs.

On the resource side, the NAS-based measure is designed to account for the flow of income and in-kind benefits that a family can use to meet the needs represented in the threshold. This creates a much more inclusive measure of income than pre-tax cash. The tax system and the cash-equivalent value of in-kind benefits for food and housing are important additions to family resources. But families also have non-discretionary expenses that reduce the income available

2 Citro, Constance F. and Robert T. Michael (eds). Measuring Poverty: A New Approach. Washington, DC: National Academy Press. 1995. Much of the research inspired by the NAS report is available at: www.census.gov/hhes/povmeas/methodology/nas/index.html

3 New York City Center for Economic Opportunity. The CEO Poverty Measure: A Working Paper by the New York City Center for Economic Opportunity. August 2008. Available at: www.nyc.gov/html/ceo/downloads/pdf/final_poverty_report.pdf

4 The reference family proposed by the NAS is composed of two adults and two children. The threshold for this family is then scaled for families of different sizes and compositions. See Appendix B.

5 The NAS suggested that this point lie between the 30th and 35th percentile of the distribution. Citro and Michael, p. 106.

to meet needs for food, clothing, shelter, and utilities (FCSU) that are represented by the threshold. These include the cost of commuting to work, childcare, and medical care that must be paid for out of pocket. This spending is accounted for as deductions from income because dollars spent on those items are not considered available to purchase food or shelter.

1.3 The Supplemental Poverty Measure

Since November 2011, the U.S. Bureau of the Census has been issuing a Supplemental Poverty Measure (SPM).[6] The new federal measure is shaped by the NAS recommendations and an additional set of guidelines provided by an Interagency Technical Working Group in March 2010.[7] The guidelines made several revisions to the 1995 NAS recommendations. The most important of these are:

1. An expansion of the type of family unit whose expenditures determine the poverty threshold from two-adult families with two children to all families with two children.
2. Use of a five-year, rather than three-year, moving average of expenditure data to update the poverty threshold over time.
3. Creation of separate thresholds based on housing status: whether the family owns its home with a mortgage; owns, but is free and clear of a mortgage; or rents.

1.4 CEO's Adoption of the NAS/SPM Method

CEO has followed the first two of these three revisions to the NAS recommendations in our poverty measure. However, we do not utilize the SPM's development of thresholds that vary by housing status. We account for all differences in housing status – including residence in rent-regulated apartments and participation in means-tested housing assistance programs – on the income side of the poverty measure.[8] We calculate the ratio of the Fair Market Rent for a two-bedroom apartment in New York City to U.S.-wide Fair Market Rent for the same size unit and apply it to the housing portion of the SPM poverty threshold. We also adjust this national-level threshold (before its adjustment for housing status) to account for the relatively high cost of housing in New York City. In 2014, our poverty line for the two-adult, two-child family comes to $31,581, some 35.0 percent above the U.S.-wide SPM threshold of $25,178. We refer to this New York City-specific threshold as the CEO poverty threshold. (See Appendix B.)

6 The most recent SPM report is U.S. Bureau of the Census, The Research Supplemental Poverty Measure 2014. September 2015. Available at: https://www.census.gov/content/dam/Census/library/publications/2015/demo/p60-254.pdf

7 Observations from the Interagency Technical Working Group on Developing a Supplemental Poverty Measure. March 2010. Available at: www.census.gov/hhes/www/poverty/SPM_TWGObservations.pdf

8 The rationale for this decision is provided in Appendix B of an earlier report. See: The CEO Poverty Measure, 2005–2010: A Working Paper by the NYC Center for Economic Opportunity. Available at: http://www.nyc.gov/html/ceo/downloads/pdf/ceo_poverty_measure_2005_2010.pdf

Poverty Thresholds

Official: The official poverty threshold was developed in the early 1960s and was based on the cost of a minimum diet at that time. It is updated each year by the change in consumer prices. It is uniform across the United States.

CEO: The CEO poverty threshold is a New York City-specific threshold derived from the U.S.-wide threshold developed for the Federal Supplemental Poverty Measure. The threshold is based on what families spend on basic necessities: food, clothing, shelter, and utilities. It is adjusted to reflect the variation in housing costs across the United States.

To measure the resources available to a family to meet the needs represented by the threshold, we employ the Public Use Micro Sample from the Census Bureau's American Community Survey (ACS) as our principal data set. The advantages of this survey for local poverty measurement are numerous. The ACS is designed to provide measures of socioeconomic conditions on an annual basis in states and larger localities. It offers a robust sample for New York City (roughly 26,600 households) and contains essential information about household composition, family relationships, and cash income from a variety of sources.

But, as noted earlier, the NAS-recommended poverty measure greatly expands the scope of resources that must be measured in order to determine whether a family is poor. Unfortunately, the ACS provides only some of the information needed to estimate the additional resources required by the NAS measure. Therefore, CEO has developed a variety of models that estimate the effect of taxation, nutritional and housing assistance, work-related expenses, and medical out-of-pocket expenditures on total family resources and poverty status. We reference the resulting data set as the "American Community Survey Public Use Micro Sample as augmented by CEO," and we refer to our estimate of family resources as "CEO income."

Below is a brief description of how the non-pre-tax cash income items are estimated. More details on these procedures can be found in the report's technical appendices.

Housing Adjustment: The high cost of housing makes New York City an expensive place to live. The CEO poverty threshold, we noted above, is adjusted to reflect that reality. But some New Yorkers do not need to spend as much to secure adequate housing as the higher threshold implies. Many of the city's low-income families live in public housing or receive a housing subsidy, such as a Section 8 housing voucher. A large proportion of New York's renters live in rent-regulated apartments. Some homeowners have paid off their mortgages and own their homes free and clear. We make an upward adjustment to these families' incomes to reflect these advantages. For families living in rent-subsidized housing units, the adjustment equals the

Measuring Income

Official Income: The official poverty measure's definition of family resources is pre-tax cash. This includes income from sources such as wages and salaries, as well as government transfer payments, provided that they take the form of cash. Thus, Social Security benefits are included in this measure, but the value of in-kind benefits, like Food Stamps or tax credits such as the Earned Income Tax Credit, are not counted.

CEO Income: Based on the NAS recommendations, CEO income includes all the elements of pre-tax cash plus the effect of income and payroll taxes, as well as the value of in-kind nutritional and housing assistance. Non-discretionary spending for commuting to work, childcare, and out-of-pocket medical care are deductions from income.

difference between what they would be paying for their housing if it were market rate and what they are actually paying out of pocket. The adjustment is capped so that it cannot exceed the housing portion of the CEO threshold. The ACS does not provide data on housing program participation. To determine which households in the ACS could be participants in rental subsidy or regulation programs, we match households in the Census Bureau's New York City Housing and Vacancy Survey with household-level records in the ACS. (See Appendix C.)

Taxation: CEO has developed a tax model that creates tax filing units within the ACS households; computes their adjusted gross income, taxable income, and tax liability; and then estimates net income taxes after non-refundable and refundable credits are applied. The model takes account of Federal, State, and City income tax programs, including all the credits that are designed to aid low-income filers. The model also includes the effect of the Federal payroll tax for Social Security and Medicare (FICA). (See Appendix D.)

Nutritional Assistance: We estimate the effect of SNAP (Supplemental Nutritional Assistance Program),[9] the National School Lunch program, the School Breakfast Program, and the Supplementary Nutrition Program for Women, Infants, and Children (WIC). To estimate SNAP benefits, we make use of New York City Human Resources Administration SNAP records, imputing SNAP cases to the "Food Stamp Units" we construct in the ACS data. We count each dollar of SNAP benefits as a dollar added to family income.

The likelihood of participation in the school meals programs is calculated by a probability model. Participation is assigned to eligible families to replicate

9 In prior reports we refer to these benefits by their previous name, Food Stamps.

administrative data on meals served provided to us by the City's Department of Education. We follow the Census Bureau's method for valuing income from the programs by using the per-meal cost of the subsidy. We identify participants in the WIC program in a similar manner, matching enrollment in the program to population participation estimates from the New York State Department of Health. Benefits are calculated using the average benefit level per participant calculated by the U.S. Department of Agriculture. (See Appendix E.)

Home Energy Assistance Program: The Home Energy Assistance Program (HEAP) provides assistance to low-income households that offsets their utility costs. In New York City, households that receive cash assistance, Food Stamps, or are composed of a single person receiving Supplemental Security Income benefits are automatically enrolled in the program. Other low-income households can apply for HEAP, but administrative data from the City's Human Resources Administration indicate that nearly all HEAP households come into the program through participation in other benefit programs. We identify HEAP-receiving households by their participation in public assistance, Food Stamps, or SSI, and then add the appropriate benefit to their income. Beginning in 2011, we also make use of HEAP receipt reported in the Housing and Vacancy Survey. (See Appendix F.)

Work-Related Expenses: Workers must travel to and from their jobs, and we treat the cost of that travel as a non-discretionary expense. We estimate the number of trips a worker will make per week based on their usual weekly hours. We then calculate the cost per trip using information in the Census Bureau's American Community Survey about their mode of transportation and administrative data (such as subway fares). Weekly commuting costs are computed by multiplying the cost per trip by the number of trips per week. Annual commuting costs equal weekly costs times the number of weeks worked over the past 12 months. Families in which the parents are working must often pay for the care of their young children. Like the cost of commuting, the CEO poverty measure treats these childcare expenses as a non-discretionary reduction in income. Because the ACS provides no information on childcare spending, we have created an imputation model that matches the weekly childcare expenditures reported in the Census Bureau's Survey of Income and Program Participation (SIPP) to working families with children in the ACS data set. Childcare costs are only counted if they are incurred in a week in which the parents (or the single parent) are at work. They are capped by the earned income of the lowest earning parent. (See Appendix G.)

Medical Out-of-Pocket Expenditures (MOOP): The cost of medical care is also treated as a non-discretionary expense that limits the ability of families to attain the standard of living represented by the poverty threshold. MOOP includes health insurance premiums, co-pays, and deductibles, as well as the cost of medical services that are not covered by insurance. In a manner similar to that for childcare, we use an imputation model to match MOOP expenditures by families in the Agency for Healthcare Research and Quality's Medical Expenditure Panel Survey to families in the ACS sample. (See Appendix H.)

Figure 1.1
Comparison of Poverty Measures

	Official	CEO
Threshold	Established in early 1960s at three times the cost of "Economy Food Plan."	Equal to the 33rd percentile of family expenditures on food, clothing, shelter, and utilities, plus 20 percent more for miscellaneous needs.
	Updated by change in Consumer Price Index.	Updated by the change in expenditures for the items in the threshold.
	No geographic adjustment.	Inter-area adjustment based on differences in housing costs.
Resources	Total family pre-tax cash income. Includes earned income and transfer payments, if they take the form of cash.	Total family after-tax income.
		Includes value of near-cash, in-kind benefits such as SNAP.
		Housing status adjustment.
		Subtract work-related expenses such as childcare and transportation costs.
		Subtract medical out-of-pocket expenditures.

Figure 1.1 summarizes the discussion thus far, contrasting how the official and CEO poverty measures establish a threshold and account for family resources.

1.5 Comparing Poverty Rates

As noted above, the CEO poverty threshold for a two-adult, two-child family in 2014 was $31,581. The official poverty line for the equivalent family was $24,008 in that year. Obviously, if this were the only change CEO had made to the poverty measure, it would lead to a poverty rate above the official measure. But, as described above, CEO also uses a far different measure of income to compare against the poverty threshold. Although our measure includes subtractions as well as additions to resources, CEO income is higher than pre-tax cash income at the lower rungs of the income ladder. At the 20th percentile, for example, CEO income was $31,198 in 2014.[10]

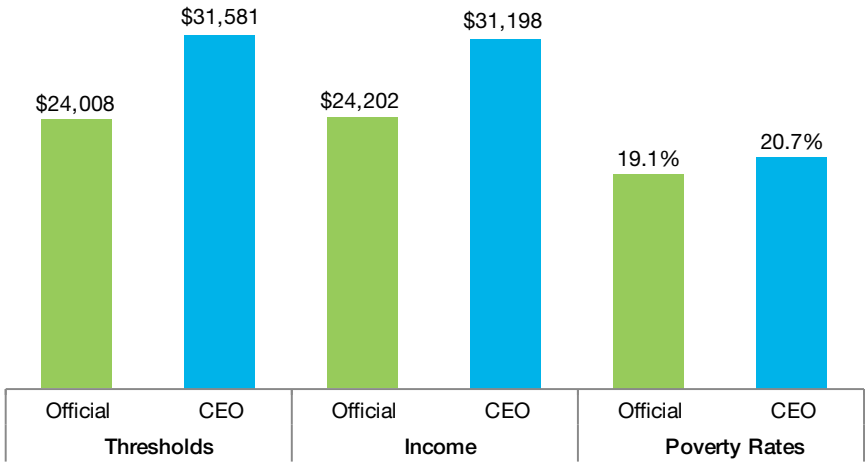
10 Throughout this paper we report income in family size and composition-adjusted dollars. This makes the income measures directly comparable to the two-child reference family poverty threshold.

The corresponding figure for pre-tax cash was only $24,202. Thus, if a more complete account of resources had been the only change we made to the poverty measure, the CEO poverty rate would fall below the official measure.

Figure 1.2 illustrates official and CEO thresholds, incomes, and poverty rates for 2014. The effect of the higher CEO threshold (31.5 percent above the official) outweighs the effect of CEO's more complete definition of resources (which is 28.9 percent higher at the 20th percentile than the official resource measure), resulting in a higher poverty rate. In 2014, the CEO poverty rate stood at 20.7 percent while the official rate was 19.1 percent, a 1.5 percentage point difference.[11]

11 Calculated with rounded numbers.

Figure 1.2
Official and CEO Thresholds, Incomes, and Poverty Rates, 2014



Source: U.S. Bureau of the Census and American Community Survey Public Use Micro Sample as augmented by CEO. Notes: Incomes are measured at the 20th percentile and stated in family size and composition-adjusted dollars. Official poverty rates are based on the CEO poverty universe and unit of analysis.

Official Poverty Rates

The official poverty rates reported in this study differ from those provided by the Census Bureau. To make them more comparable to the CEO poverty rates, they are calculated using CEO's poverty universe and unit of analysis. CEO excludes all members of the group quarters population and includes all members of the household population in its universe of persons for whom a poverty status is determined. The CEO poverty unit of analysis expands the notion of the family unit to include more members of the household than just those related by blood, marriage, or adoption. Unmarried partners, for example, are treated as members of the family unit. Both these changes lower the poverty rate. In 2014, for example, the Census Bureau's official poverty rate for New York City is 20.9 percent. The 2014 official poverty rate for the city that we report is 19.1 percent. See Appendix A for further explanation.

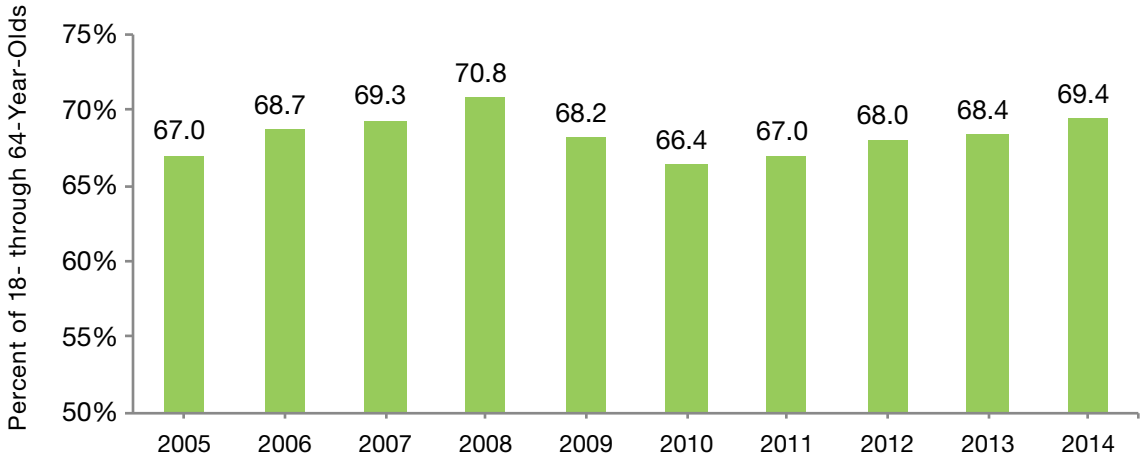
1.6 The New York City Labor Market

Poverty rates are influenced by the economic environment. The national economy began to contract sharply in early 2008, marking December 2007 as a peak in the U.S.-wide business cycle.[12] For this reason, U.S.-level studies tracking the effects of the Great Recession and subsequent period of sluggish employment growth have used 2007 as their point of comparison. In New York City the recession took longer to arrive. Here, employment did not begin to decline until the fall of 2008, making that year the last before the post-recession upturn for which annual indicators find increases in employment, earnings, and income. Therefore we use 2008 as our comparison point in time. From 2008 to 2010, labor market indicators for city residents show that a smaller proportion of the working age population was holding a job. Subsequent to 2010, a slow recovery is seen in the employment/population ratio. For this reason, many of the charts and tables presented in this report include 2008, the peak of the expansion, and 2010, the trough of the recession, as comparative data points against which we can measure our current situation. We also use 2012 as a point of comparison to 2013, where relevant, to measure progress of the economic recovery.

As Figure 1.3 illustrates, the employment/population ratio—the share of New Yorkers 18 through 64 years of age who were holding a job at the time they were surveyed—peaked in 2008 at 70.8 percent. That proportion declined to 66.4 percent by 2010 and began a reversal in 2011. Data for 2014 continues this upward trend, rising to 69.4 percent.

12 The National Bureau for Economic Research dates the start of the recession at December 2007.

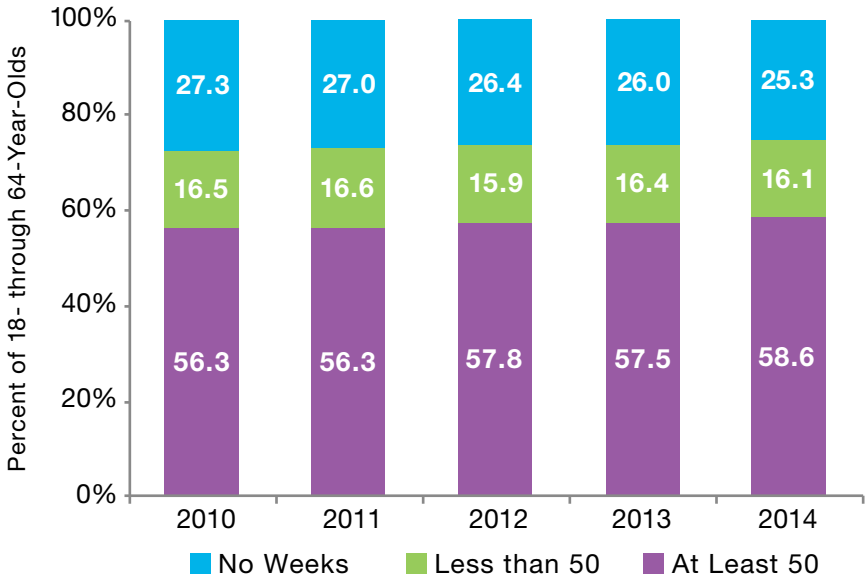
Figure 1.3
Employment/Population Ratios, 2005–2014



Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Because poverty status is determined by annual income, employment over the course of a year is a particularly salient labor market indicator. During the recovery, time spent at work has grown at the same slow, steady pace as employment. Figure 1.4 shows that the share of the working age population with steady work, defined as 50 or more weeks in the prior 12 months, rose from 56.3 percent in 2010 to 58.6 percent in 2014. The proportion of the population that had no work at all fell from 27.3 percent in 2010 to 25.3 percent in 2014.

Figure 1.4
Weeks Worked in Prior 12 Months, 2010–2014



Source: American Community Survey Public Use Micro Sample as augmented by CEO.

The trends in employment and weeks worked is reflected in measures of earnings. Table 1.1 reports cost of living (COL) adjusted earnings per family for those families that are in the lower half of the earnings distribution.[13] Panel A of Table 1.1 shows the steep decline in earnings from 2008 to 2011, the recession and ensuing years when income declines continued. Adjusted for the cost of living, the average decline in earnings for the bottom half of the income distribution was 18.7 percentage points. The average gains made from 2010 to 2014 do not nearly begin to compensate for this loss. Panel B of Table 1.1 shows that the share of families with no earnings has not improved in this recovery.

The labor market data from the 2014 ACS describe an economy with an improvement in the number of people employed and the amount of hours employees are working. The earnings data, however, are less encouraging. Despite the positive gains from 2010 to 2014, they suggest that while more New Yorkers have found employment, income growth during the post-recession period has been limited.

13 These earnings data are stated in 2014 dollars, using the CEO threshold as a price index.

Table 1.1
Annual Family-Level Earned Income, 2008, 2010–2014

	Percentile	2008	2010	2011	2012	2013	2014	Percentage Change 2008–2011	Percentage Change 2010–2014	Percentage Change 2013–2014
PANEL A	20	13,490	10,164	10,365	10,278	11,018	11,750	-23.2%	15.6%	6.6%
	25	20,491	16,941	16,359	16,633	17,362	18,139	–20.2%	7.1%	4.5%
	30	27,897	22,845	22,422	22,778	23,380	23,751	-19.6%	4.0%	1.6%
	35	34,860	29,231	28,251	28,978	29,617	30,253	-19.0%	3.5%	2.1%
	40	41,877	35,645	33,985	34,603	35,745	36,278	-18.8%	1.8%	1.5%
	45	48,913	42,351	41,151	41,178	42,920	43,362	-15.9%	2.4%	1.0%
	50	56,109	48,866	47,966	48,309	50,101	51,430	-14.5%	5.2%	2.7%
								Average Percentage Change		
								-18.7%	5.6%	2.9%
PANEL B	% Families with No Earnings	21.2%	22.4%	22.3%	22.2%	21.8%	22.0%	5.3%	-1.9%	0.6%

Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Notes: Earnings are stated in family size and composition-adjusted dollars. They are stated in 2014 dollars using the CEO threshold as a price index. Persons in families with no earnings are included.

1.7 Key Findings in This Report

We present our results in the context of an economy that continues to show slow, steady growth in employment and earnings but remains far from pre-recession levels. The citywide poverty rate and its underlying trends remain stable over the five-year time period (2010–2014) that is the focus of this report. The key findings noted below describe where those trends continue, and any new patterns found in the 2014 data.

- The CEO poverty rate for 2014 is 20.7 percent. This is statistically unchanged from the 2013 rate of 21.1 percent.[14] This represents the fourth consecutive year with no significant change in the poverty rate.
- The CEO measure categorizes a larger share of the population as living in "near poverty"– above, but uncomfortably close to, the poverty threshold – than the official measure. This is reflected in comparisons of the share of the population living below 150 percent of the respective poverty thresholds. In 2014, 45.2 percent of New York City residents were living below 150 percent of the CEO poverty threshold, statistically unchanged from the 45.1 percent in 2010. The corresponding shares for the official measure were 29.3 percent in 2010 and 30.1 percent in 2014.

14 This is a revision from last year's estimate of 21.5 percent. The revision consists primarily of incorporating updated data on medical spending and WIC Benefits. Details can be found in Appendix J.

Calendar Years and ACS Survey Years

The American Community Survey (ACS) is conducted as a rolling sample gathered over the course of a calendar year. Approximately one-twelfth of the total sample is collected in each month. Respondents are asked to provide information on work experience and income during the 12 months prior to the time they are included in the sample. Households that are surveyed in January of 2014, for example, would report their income for the 12 months of 2013; households that are surveyed in February of 2014 would report their income for February 2013 through January 2014, and so on. Consequently, estimates for poverty rates derived from the 2014 ACS do not, strictly speaking, represent a 2014 poverty rate. Rather, it is a poverty rate derived from a survey that was fielded in 2014. Readers should bear in mind this difference as they interpret the findings in this report.

- Although the CEO poverty and near poverty rates exceed the official rate in each year for which we have data, the CEO methodology finds that a smaller proportion of the city's population is living in extreme poverty – below 50 percent of the poverty threshold – than the official method (4.9 percent compared to 7.5 percent in 2014). The CEO extreme poverty rate fell from 5.4 percent in 2010 to 4.9 percent in 2014. The official extreme poverty rate fell from 7.7 percent in 2010 to 7.5 percent in 2014.

- The trend in CEO poverty rates by demographic characteristics such as age, race/ethnicity, nativity/citizenship, and family type generally follows the statistical stability of the citywide poverty rate from 2010 to 2014, with a few exceptions. Looking over the years 2010 to 2014, there are no significant changes in the poverty rate across the main demographic groupings. Poverty rates remain highest among Hispanics and Non-Hispanic Asians. The poverty rate for non-citizens continued to increase over this same time period, by 2.6 percentage points to 29.7 percent. (See Figures 8 and 9.) There is considerable overlap between these two demographic groups; one-third (33.1 percent) of the city's Asian population falls into the non-citizen category as does 23.5 percent of the city's Hispanic population.

- The poverty rate across boroughs remains uneven. Within boroughs, both Brooklyn and Staten Island show a significant change over 2010–2014. The Bronx is home to more individuals in poverty than any other borough (26.5 percent). Poverty is lowest in Manhattan (14.6 percent). The steepest decline in the poverty rate from 2010 to 2014 is found in Brooklyn, where poverty fell from 24.3 percent to 21.9 percent, a significant decline of 2.5 percentage points. In Queens, the poverty rate has remained statistically unchanged from 2010 to 2014 (19.8 percent to 20.4 percent). In Staten Island, the year-over-year

changes in the poverty rates are not significant, but the trend over 2010–2014 is a statistically significant increase in the poverty rate of 4.6 percentage points in this time period (13.7 to 18.3 percent).

- Poverty has not abated for workers and working families. The poverty rate for working age adults (persons 18 through 64 years of age) who were employed full time, year round rose from 7.0 to 7.8 percent from 2010 to 2014. Poverty rates also increased among adults working less than full time, from 23.5 percent in 2010 to 25.6 percent in 2014.

- Over the same time period, poverty rates remained statistically unchanged for persons living in families with the equivalent of two full-time, year-round workers; one full-time, year-round worker; and with less than one full-time, year-round worker. The only statistically significant difference from 2010 to 2014 is found in families with the equivalent of one full-time, year-round worker and one part-time worker, where poverty increased from 13.6 percent to 14.8 percent.

- The pattern in poverty rates for the United States based on the new Federal Supplemental Poverty Measure resembles the CEO pattern for New York City. In both the nation and the city, the two NAS-based poverty measures find a higher incidence of poverty than do the official measures. In the U.S., the SPM rate in 2014 was 15.3 percent as opposed to the official rate of 14.9 percent. In New York City, the respective poverty rates were 20.7 percent (CEO) and 19.1 percent (official) in that year. Because the SPM and CEO measures count the value of non-cash assistance, both find child poverty rates lower than that found in the official measure: 16.7 percent (SPM) compared to 21.5 percent (official) for the U.S. and 24.0 percent (CEO) rather than 28.5 percent (official) for the city. (See Figures 13 and 14.)

Chapter 2: Poverty in New York City 2005–2014

Chapter 2: Poverty in New York City, 2005–2014

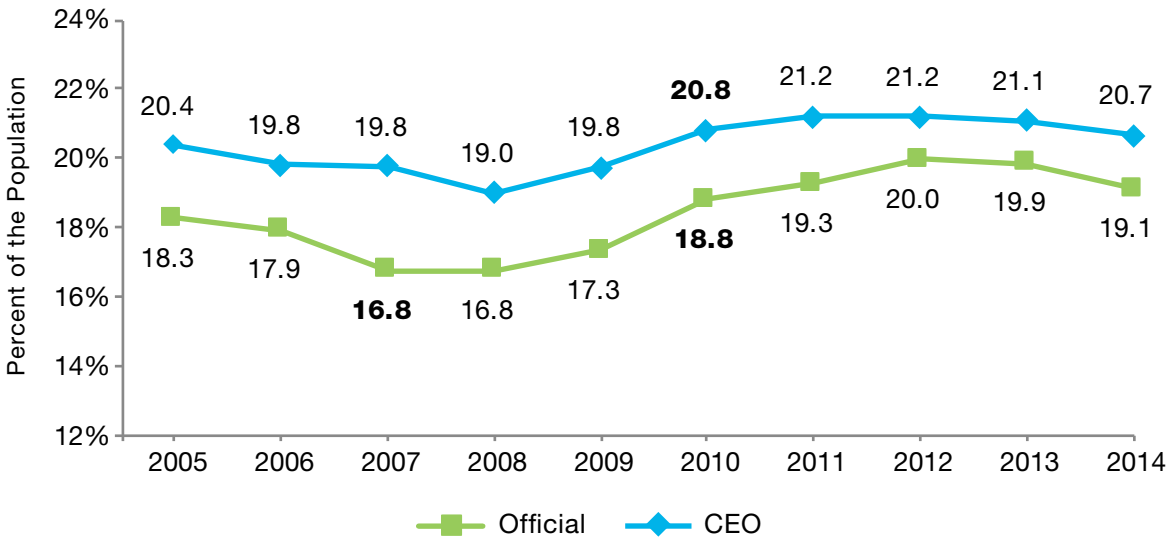
The Introduction noted that the CEO poverty rate exceeds the official rate in 2014. Indeed, it does so in each of the years for which we have comparable data. The focus of this chapter, however, is not on the different levels of poverty derived from the two approaches, but on how and why they change over time. The official and CEO poverty rates have taken parallel paths during the ten-year time span covered by this report. From 2005 to 2008, when the city economy was expanding, the two measures register declines of nearly equal magnitude. From 2008 to 2014, the official measure registers a greater increase in the rate, but both measures show a poverty rate with little change after 2010.

This chapter begins with an overview of how and why the official and CEO poverty rates changed from 2005 to 2014. The similarity in their trends masks important differences between the measures. This is most evident in how their gauges of income evolve after 2008. From 2008 to 2010, the recession-related decline in the official measure of income – pre-tax cash – is dramatic. Over the same time period, however, CEO income was remarkably stable.

A second section in the chapter explores the depth of poverty, the degree to which the poor are living close to or far below the poverty threshold, as well as the extent of near poverty (the degree to which the population resides above the poverty line but is uncomfortably close to it). Because CEO's poverty measure provides a more inclusive definition of income, it finds a smaller proportion of the population in extreme poverty than does the official measure. On the other hand, because eligibility for means-tested benefits ends and the value of tax credits phase out as incomes rise, the CEO measure finds a larger share of the population living in near poverty compared to the official measure.

The chapter's third section explores the role that non-cash resources and non-discretionary expenses play in the CEO poverty measure. We find that since 2008, income support programs have become an increasingly important resource for low-income families. This is not simply a "passive" outcome reflecting greater need in a bad economy. It is also a result of policy initiatives, most notably President Obama's American Recovery and Reinvestment Act. It is also the impetus behind current New York City initiatives described in Chapter 5.

Figure 2.1
Official and CEO Poverty Rates, 2005–2014



Numbers in **bold** indicate statistically significant data from prior year. Absence of bold numbers indicates no statistical difference from prior year.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Note: Official poverty rates are based on the CEO poverty universe and unit of analysis.

2.1 New York City Poverty Rates, 2005–2014

Changes in the official and CEO poverty rates from 2005 to 2014 move in tandem with the labor market conditions described in the Introduction. Poverty declines during the expansion, rises after 2008, and plateaus during the post-recession years. Figure 2.1 illustrates the official and CEO poverty rates for New York City over the ten-year time span. Table 2.1 provides these rates, indicates differences between them, and reports changes over time.

As noted above, the CEO poverty rate exceeds the official rate in each year, a difference that ranges from 1.2 to 3.0 percentage points. The overall change in the CEO poverty rate from 2005 to 2014 is 0.4 percentage points, not statistically significant. This relatively modest change is due to the stability of income measures in the CEO model. During the same time period, the official measure shows a significant increase in the poverty rate of 0.9 percentage points. From 2010 to 2014 neither measure shows a statistically significant change but the differences between the two rates become smaller. The non-pre-tax cash elements of CEO income are slowly winding down with the phasing out of economic stimulus programs. Both measures show the effect of a small increase in earnings, particularly from 2013 to 2014, as shown in Table 1.1 in Chapter 1.

Table 2.2 explores the changes in poverty rates from the vantage point of changes on the income and threshold side of their respective poverty measures.[1] As the

1 To make the income figures in the table comparable to the two-adult, two-child family poverty thresholds, they are adjusted for family size and composition. Pre-tax cash and CEO incomes are both reported at the 20th percentile of their respective distributions and both are stated in current, not inflation-adjusted, dollars.

Table 2.1
Official and CEO Poverty Rates, 2005–2014

Year	Official	CEO	Percentage Point Difference*
2005	18.3	20.4	**2.1**
2006	17.9	19.8	**1.9**
2007	16.8	19.8	**3.0**
2008	16.8	19.0	**2.3**
2009	17.3	19.8	**2.4**
2010	18.8	20.8	**2.0**
2011	19.3	21.2	**2.0**
2012	20.0	21.2	**1.2**
2013	19.9	21.1	**1.2**
2014	19.1	20.7	**1.5**

Percentage Point Change*	Official	CEO
2005–2014	**0.9**	0.3
2010–2014	0.3	-0.2
2013–2014	-0.7	-0.4

*Differences and changes are measured in percentage points and are taken from unrounded numbers; those in bold type are statistically significant.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Note: Official poverty rates are based on the CEO poverty universe and unit of analysis..

table's Panel A reports, the official measure of income – pre-tax cash – rose in each year from 2005 to 2008 on a nominal basis, declined over the recession years, and had minimal nominal growth until 2013. From 2005 to 2014 the overall increase in the official income measure was 14.4 percentage points. There was positive growth in official income from 2010 to 2014, ending with a 3.6 percentage point increase from 2013 to 2014.

Changes in income tell a story about the direction of poverty rates only when they are compared against changes in the poverty threshold. From 2005–2014, official income grew by 14.4 percentage points while the threshold rose by a greater amount, 21.2 percent. As a result, the official poverty rate rose nearly a full percentage point, with a statistically significant 0.9 percentage point change. The same pattern occurred from 2010 to 2014, with poverty increasing by 0.3 percentage points. From 2013–2014, the opposite occurs. Incomes increase more than the official poverty rate

Table 2.2, Panel A

Income, Thresholds, and Poverty Rates Official and CEO, 2005–2014

A. Official Income, Thresholds, and Poverty Rates

	Income (Pre-tax Cash)		Threshold		Poverty Rate	
Year	Level	Percentage Change*	Level	Percentage Change*	Level	Percentage Point Change*
2005	$21,154		$19,806		18.3%	
2006	$22,339	5.6%	$20,444	3.2%	17.9%	-0.3
2007	$24,083	7.8%	$21,027	2.9%	16.8%	**-1.2**
2008	$24,896	3.4%	$21,834	3.8%	16.8%	0.0
2009	$24,087	-3.2%	$21,756	-0.4%	17.3%	0.6
2010	$22,873	-5.0%	$22,113	1.6%	18.8%	**1.5**
2011	$22,944	0.3%	$22,811	3.2%	19.3%	0.5
2012	$22,900	-0.2%	$23,283	2.1%	20.0%	0.7
2013	$23,364	2.0%	$23,624	1.5%	19.9%	-0.1
2014	$24,202	3.6%	$24,008	1.6%	19.1%	-0.7
Year		Percentage Change*		Percentage Change*		Percentage Point Change*
2005-2014		14.4%		21.2%		**0.9**
2010-2014		5.8%		8.6%		0.3
2013-2014		3.6%		1.6%		-0.7

*Change from prior year.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Notes: Official poverty rates are based on the CEO poverty universe and unit of analysis. Incomes are measured at the 20th percentile and are stated in family size and composition-adjusted dollars. They are not adjusted for inflation. Differences in poverty rates are measured in percentage points and are taken from unrounded numbers; those in **bold** type are statistically significant.

and official poverty falls by 0.7 percentage points. We note that these last two nominal changes are not statistically significant.

Panel B in the table provides the same information for nominal CEO income, poverty thresholds, and poverty rates. From 2005 to 2014, the growth in CEO income and the CEO threshold are nearly equal, at 28.5 and 28.7 percentage points, respectively. The CEO threshold grew more than the official rate, but CEO income kept pace. From 2010 to 2014 and in the one-year interval of 2013–2014, income rose at a faster rate than that of the threshold, but both did rise. The result is small but statistically insignificant changes in the CEO poverty rate.

The changes over time in the official and CEO thresholds are a function of how each responded to the business cycle. The CEO threshold increased more rapidly than the official threshold during the economic contraction. From 2008 to 2009 the official threshold declined due to a rare fall in the Consumer Price Index. The CEO threshold, influenced predominately by housing costs, however, rose. Reflecting the post-economic bubble and subsequent falloff in city housing expenditures, the rate of growth in the CEO threshold slowed considerably after 2008 and has continued to rise slowly since then. From 2010 to 2014, however, growth in the official threshold (8.6 percent) still outpaced the change in the CEO threshold (5.1 percent).[2]

2 The connection between trends in housing costs and expenditures and the CEO threshold is discussed in Appendix B.

Table 2.2, Panel B

Income, Thresholds, and Poverty Rates
Official and CEO, 2005–2014

B. CEO Income, Thresholds, and Poverty Rates

	Income (Pre-tax Cash)		Threshold		Poverty Rate	
Year	Level	Percentage Change*	Level	Percentage Change*	Level	Percentage Point Change*
2005	$24,271		$24,532		20.3%	
2006	$25,725	6.0%	$25,615	4.4%	19.8%	-0.5
2007	$27,102	5.4%	$26,979	5.3%	19.8%	0.0
2008	$29,512	8.9%	$28,822	6.8%	19.0%	-0.8
2009	$29,458	-0.2%	$29,265	1.5%	19.7%	0.6
2010	$29,474	0.1%	$30,055	2.7%	20.8%	**1.2**
2011	$30,131	2.2%	$30,945	3.0%	21.2%	0.4
2012	$30,167	0.1%	$31,039	0.3%	21.2%	0.0
2013	$30,542	1.2%	$31,156	0.4%	21.1%	-0.1
2014	$31,198	2.2%	$31,581	1.4%	20.7%	-0.4
Year		Percentage Change*		Percentage Change*		Percentage Point Change*
2005-2014		28.5%		28.7%		0.4
2010-2014		5.9%		5.1%		-0.2
2013-2014		2.2%		1.4%		-0.4

*Change from prior year.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Notes: Official poverty rates are based on the CEO poverty universe and unit of analysis. Incomes are measured at the 20th percentile and are stated in family size and composition-adjusted dollars. They are not adjusted for inflation. Differences in poverty rates are measured in percentage points and are taken from unrounded numbers; those in **bold** type are statistically significant.

Figure 2.2 illustrates these patterns for official income, CEO income, and the CEO threshold since 2008. The figure measures nominal official income (pre-tax cash), nominal CEO income, and the CEO threshold relative to their respective levels in 2008.[3] Each income measure is scaled to equal 100 percent in that year. Pre-tax cash (the official poverty measure's definition of income) includes earnings, along with income from investments and – most importantly in this context – transfer payments if they take the form of cash. Despite the inclusion of income from public assistance, Supplemental Security Income (SSI), Social Security, and Unemployment Insurance, pre-tax cash in 2010 was 91.9 percent of its 2008 level, suggesting that the cash safety net provided a very modest cushion for low-income families as the economy was contracting. This measure of income was essentially unchanged from 2010 to 2012 but then rose to 97.2 percent of its 2008 level by 2014.

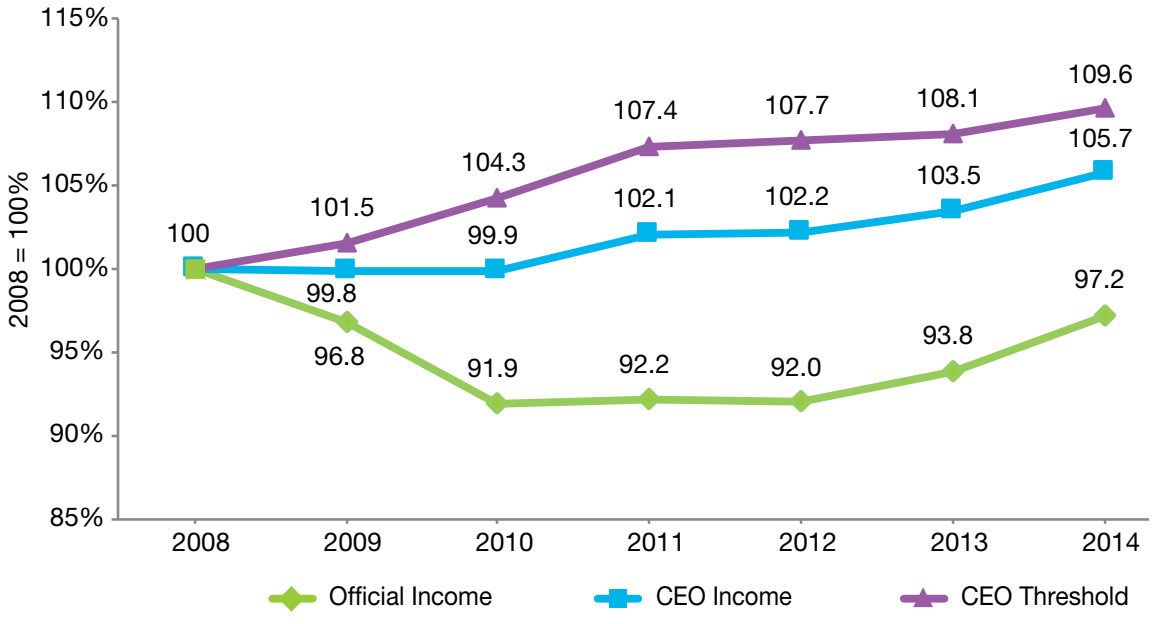
The stability of CEO income during the economic downturn is striking, reflecting the extent to which non-cash resources (such as tax credits and in-kind benefits) filled the income gap created by the recession-related decline in earnings. After two years of economic decline, it stood at 99.9 percent of its 2008 level. By 2014, CEO income stood at 105.7 percent of its 2008 level.

Figure 2.2 also illustrates how the trends in two income measures compare to the growth in the CEO threshold. By 2010 the CEO poverty threshold stood at 104.3

3 As in the prior tables, each income measure is stated in family size and composition-adjusted dollars. Official and CEO incomes are taken at the 20th percentile of their respective distributions. All three measures are stated in current, not inflation-adjusted, dollars.

Figure 2.2

Comparison of Income Trends with the CEO Poverty Threshold, 2008–2014



Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Notes: Incomes are measured at the 20th percentile of their respective distributions. All three measures are stated in current, not inflation-adjusted dollars.

percent of its 2008 value, illustrating a growing gap between the threshold and all the income measures, including CEO income. But that growth is modest relative to the chasm that would have occurred had CEO income fallen as rapidly as official income. By 2014, the CEO threshold stood at 109.6 percent of its 2008 value and the gap between the CEO threshold and official income remained as large as in 2010. (The chapter's third section discusses the expanding importance of non-cash resources in the CEO measure during this time period.)

2.2 The Depth of Poverty and Extent of Near Poverty

The poverty rate is a one-number summary measure. It simply tells us what fraction of the population lives below the poverty threshold. Because it is based on a binary classification – people are either poor or not poor – the rate makes no distinction between the poor who live far below the poverty line and those who live just under it. By the same token, the poverty rate does not indicate whether a relatively large share of the non-poor lives just above the line or far beyond it. These can be important distinctions. The distance between people just below and those just above the poverty line may only be a few dollars, while the distance between the poorest of the poor and those just below the poverty threshold can be $20,000 or more.

Table 2.3 compares the distribution of the population by percentages of the poverty threshold using the official and CEO poverty measures for 2014. We refer to these categories as degrees of poverty. For both measures we classify the population as living below 50 percent, 50 through 74 percent, 75 through 99 percent, 100 through 124 percent, and 125 through 149 percent of the poverty line. Because the two measures' thresholds differ, the table provides the corresponding values of the reference family's poverty threshold that define each interval. The next two columns in the table provide the percent of the population within each interval of the respective threshold and the cumulative percent of the population below the upper bound of the interval.

The table indicates that although a larger share of the population lives below 100 percent of the CEO poverty threshold than the official poverty line, a smaller share of the population under the CEO measure is living in extreme poverty (below 50 percent of the poverty threshold): 4.9 percent against 7.5 percent for the official measure. This difference is particularly striking given the higher CEO threshold. At the 50 percent level it was $15,791, while 50 percent of the official threshold was only $12,004. The lower incidence of extreme poverty under the CEO measure is the result of CEO's more inclusive definition of income, which captures the effects of tax credits and in-kind benefits that are missing from the official measure. (This is illustrated later in this section in Figure 2.3.)

The relatively smaller proportion of the population living below 50 percent of the poverty threshold implies that, using the CEO measure, a larger share of the city population lies between 50 through 99 percent of the poverty threshold than with the official measure. The table shows that under the CEO measure, 5.4 percent and 10.3

percent of the population were in the 50 through 74 percent and 75 through 99 percent intervals, respectively. The corresponding shares under the official measure were 5.5 percent and 6.2 percent.

In addition to classifying a larger share of the poor closer to 100 percent of the poverty line, the CEO measure also places a larger proportion of the non-poor near the poverty line. The "near poor" – people who are in the 100 through 124 percent and 125 through 149 percent of the poverty threshold groups – are 13.2 percent and 11.4 percent, respectively, of the city's population using the CEO measure. Under the official measure, these two categories respectively contain only 5.6 percent and 5.4 percent of the population.

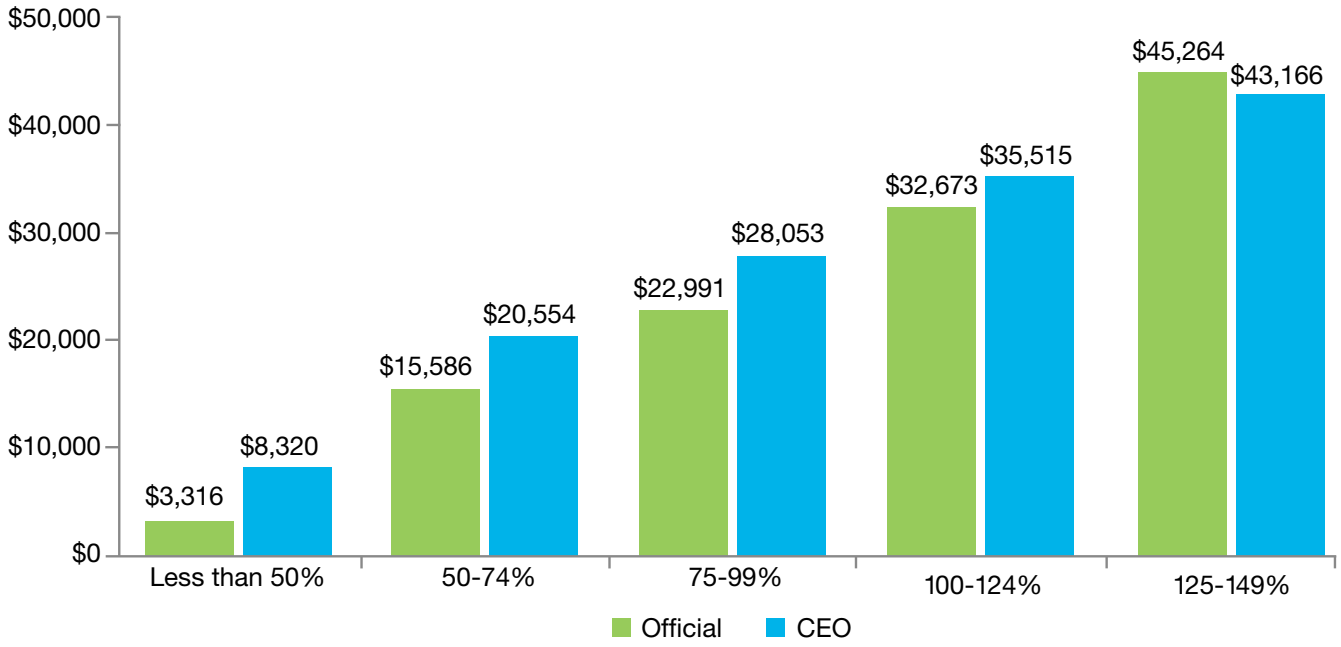
A greater share of the population is near poor using the CEO measure than the official measure for multiple reasons. First, as noted above, the CEO threshold creates wider income bands; all else equal they would contain more people. Second, those that lie above, but close to, the CEO threshold may be in the phase-out ranges of some tax credits. In addition, they are hitting income cutoff points that disqualify them for in-kind means-tested assistance such as Food Stamps. Their CEO income is no longer being bolstered by these resources. The effect of the more

Table 2.3
Distribution of the Population by Degrees of Poverty, Official and CEO, 2014

A. Official Poverty Measure			
Percent of Poverty Threshold	Threshold Range*	Percent	Cumulative Percent
Less than 50	Less than $12,004	7.5%	7.5%
50-74	$12,004 - $18,006	5.5%	12.9%
75-99	$18,006 - $24,008	6.2%	19.1%
100-124	$24,008 - $30,010	5.6%	24.7%
125-149	$30,010 - $36012	5.4%	30.1%
B. CEO Poverty Measure			
Percent of Poverty Threshold	Threshold Range*	Percent	Cumulative Percent
Less than 50	Less than $15,791	4.9%	4.9%
50-74	$15,791 - $23,686	5.4%	10.3%
75-99	$23,686 - $31,518	10.3%	20.7%
100-124	$31,518 - $39,476	13.2%	33.9%
125-149	$39,476 - $47,372	11.4%	45.2%

* We use the threshold range for the 2-adult, 2-child reference family as an example.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Note: Official poverty rates are based on the CEO poverty universe and unit of analysis.

Figure 2.3
Median Income at Intervals of the CEO Threshold, 2014



Source: American Community Survey Public Use Micro Sample as augmented by CEO.

inclusive CEO measure of income, therefore, is no longer offsetting the effect of the higher CEO poverty threshold. This brings a large share of the population into the near poverty group.

This change in income composition above the threshold is illustrated in Figure 2.3. Each pair of the figure's bars compares the median pre-tax cash and median CEO income for families within five intervals of the CEO threshold. CEO income is more than double the official income ($8,320 versus $3,316) for families below 50 percent of the CEO threshold. The difference between the two income measures narrows on the rungs further up the income ladder. For families residing at 100 percent through 124 percent of the CEO threshold, CEO income is only nine percent higher than pre-tax cash income, $32,673 compared to $35,515. On the next rung (families living at 125 percent through 149 percent of the CEO threshold) official income exceeds CEO income by five percent, $45,264 versus $43,166.

Given the similarities in trends in the CEO and official poverty rates noted in the prior section, does this finer grained perspective reveal differences in the poverty measures' change over time? Table 2.4 focuses on the 2010 to 2014 period and simplifies the groupings in Table 2.3. We track the share of population that is below 50 percent, 50 through 99 percent, and 100 through 149 percent of the poverty threshold. The final columns in the table give the percentage point change in the shares from 2010 to 2014 and 2013 to 2014. Panel A indicates that, for the official

Table 2.4
Distribution of the Population by Degrees of Poverty Official and CEO, 2010–2014 (Numbers are Percent of the Population)

	2010	2011	2012	2013	2014	Percentage Point Change* 2010–2014	Percentage Point Change* 2013–2014
A. Official Poverty Measure							
Below 50 percent	7.7	7.9	8.1	7.9	7.5	-0.2	**-0.4**
50 through 99 percent	11.1	11.4	11.9	12.0	11.6	0.5	-0.3
100 through 149 percent	10.5	11.4	10.8	10.7	11.0	0.5	0.2
Below 150 percent	29.3	30.6	30.7	30.6	30.1	**0.8**	-0.5
B. CEO Poverty Measure							
Below 50 percent	5.4	5.6	5.3	4.9	4.9	-0.5	0.0
50 through 99 percent	15.4	15.6	15.9	16.1	15.8	0.3	-0.4
100 through 149 percent	24.2	24.5	24.0	24.0	24.6	0.3	0.6
Below 150 percent	45.1	45.7	45.2	45.1	45.2	0.2	0.2

*Changes are percentage point changes. Those in **bold** are statistically significant.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Note: Official poverty rates are based on the CEO poverty universe and unit of analysis.

poverty measure, only two changes are statistically significant. One is the increase in the share of the population below 150 percent of the poverty threshold (0.8 percentage points). The other is the 0.4 percentage point decline in the population below 50 percent of the threshold.

Panel B shows groupings for the CEO poverty measure from 2010 to 2014. A notable difference between the two poverty measures in this context is that there was no significant shift in the degrees of CEO poverty from 2010 to 2014.

2.3 The Effect of Non-Cash Resources on the CEO Poverty Rate

The income data reported in Table 2.2 shows nominal pre-tax cash income plunged by a total of 8.2 percent in 2009 and 2010. We noted how the sharp drop in this income metric closely tracked the recession-related decline in earnings. Over that same period, nominal CEO income was essentially unchanged.

From 2010 to 2014, the post-recession years, the two income measures grew at the same pace but the distance between the two measures has not diminished. Clearly, components of CEO income other than pre-tax cash softened the blow the economic downturn delivered to low-income families. These components continue to result in a higher CEO income even after the downturn. Which income sources and what programs have had the most important impact?

The effects of the additional (non-pre-tax cash) income sources are identified in Table 2.5. The table's Panel A reports poverty rates. The first row, labeled "Total CEO Income," gives the poverty rate using the full CEO income measure. This is followed by poverty rates calculated by omitting one of the non-pre-tax cash elements of CEO income. The poverty rates that are based on the omission of an item that adds resources to CEO income – beginning with the row for the housing adjustment and

Table 2.5
Marginal Effects of Non-Cash Resources on CEO Poverty Rates
(Numbers are Percent of the Population)

A. Poverty Rates	2010	2011	2012	2013	2014
Total CEO Income	20.8	21.2	21.2	21.1	20.7
Net of:					
Housing Adjustment	26.4	27.5	27.5	27.7	27.3
Income Taxes	25.2	24.9	24.9	24.4	24.6
SNAP	24.3	24.8	25.1	24.5	24.3
School Meals	21.3	21.7	21.7	21.7	21.2
WIC	21.1	21.5	21.5	21.3	21.0
HEAP	20.9	21.2	21.2	21.1	20.7
FICA (Payroll Taxes)	18.8	19.5	19.5	18.6	18.4
Commuting	19.3	19.5	19.6	19.0	18.6
Childcare	20.5	21.0	21.0	20.8	20.4
MOOP	17.9	18.0	18.2	18.4	18.1
B. Marginal Effects	**2010**	**2011**	**2012**	**2013**	**2014**
Housing Adjustment	-5.5	-6.3	-6.3	-6.6	-6.6
Income Taxes	-4.4	-3.7	-3.8	-3.3	-3.9
SNAP	-3.5	-3.6	-3.9	-3.5	-3.6
School Meals	-0.4	-0.5	-0.6	-0.6	-0.5
WIC	-0.2	-0.3	-0.3	-0.3	-0.3
HEAP	0.0	0.0	0.0	0.0	0.0
FICA (Payroll Taxes)	2.1	1.8	1.7	2.4	2.3
Commuting	1.6	1.7	1.6	2.0	2.1
Childcare	0.3	0.3	0.2	0.3	0.3
MOOP	2.9	3.2	3.0	2.7	2.6

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

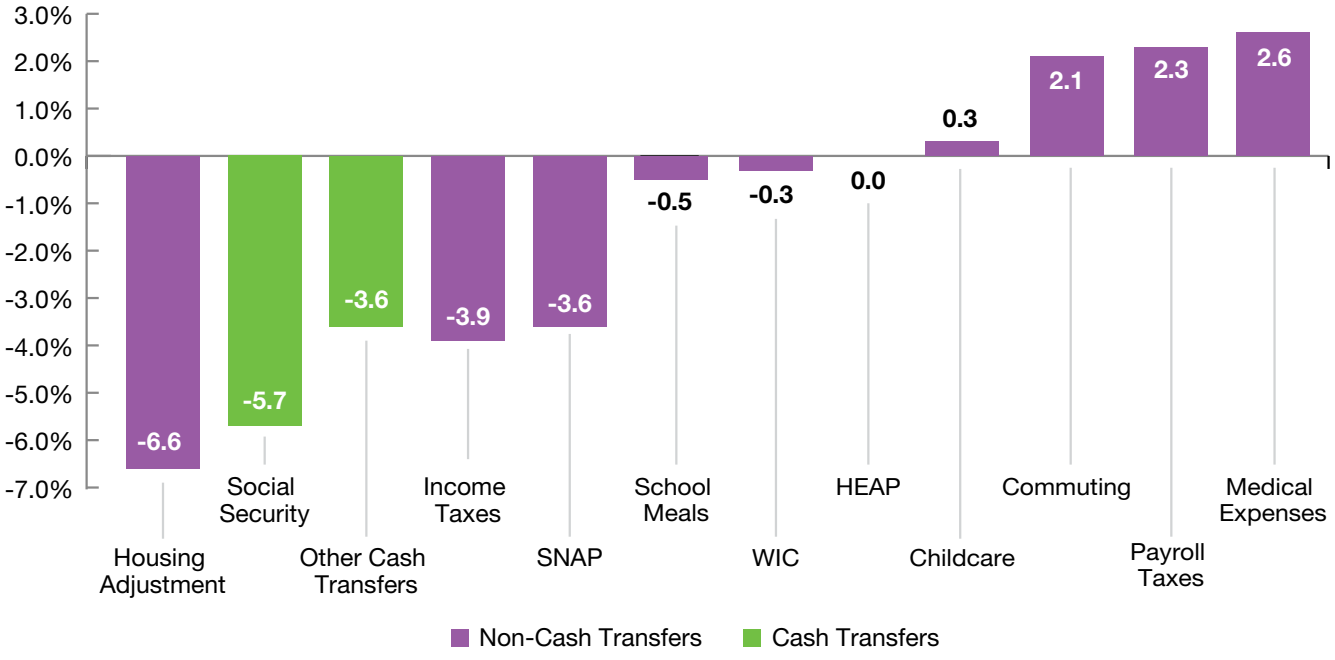
ending with the Home Energy Assistance Program (HEAP) – are higher than the total income rates. Likewise, the poverty rates that result from leaving out items that reduce resources – payroll taxes through medical out-of-pocket expenditures (MOOP) – are lower than the full resource poverty rate.

The effect of omitting each income element, reported in the table's Panel B, is the difference between the poverty rate without the income element and the full resource poverty rate. It gauges the percent of the city population that is moved in or out of poverty by the inclusion of the item in the CEO definition of income. For example, the 2014 poverty rate that is net of the housing adjustment to income is 27.3 percent. The difference between this poverty rate and the total income poverty rate of 20.7 indicates that, all else equal, the housing adjustment lifted 6.6 percent of the population over the CEO poverty threshold.

The table provides this information for 2010 to 2014. During this period the rankings of the marginal effects are quite stable. The housing adjustment has the largest poverty reducing effect in each year, followed by income taxes and SNAP (the income tax system reduces poverty because so many low-income tax filers benefit from tax credits that not only eliminate their tax liability, but generate refunds that create a net addition to their after-tax income). The other poverty-reducing income elements – school meals, the Supplemental Nutritional Program for Women, Infants, and Children (WIC), and HEAP – have relatively minor effects on the citywide poverty rate, either because they are narrowly targeted (WIC) or because their benefit levels are so small (HEAP).

Figure 2.4

Marginal Effects of Selected Sources of Income on the CEO Poverty Rate, 2014



Source: American Community Survey Public Use Micro Sample as augmented by CEO.

On the other side of the ledger, MOOP consistently has the largest poverty-increasing effect of the nondiscretionary expenses that reduce family incomes. This is followed by payroll taxes (FICA) and commuting costs, which have notable, and nearly equal, effects. Although childcare costs can be a considerable drain on a family's resources, they are incurred by too small a share of the total population to have much effect on the citywide poverty rate.

Figure 2.4 illustrates the marginal effect of non-cash resources in 2014. To put their magnitude in context, the figure includes the effect of cash transfer programs, income components also included in the official income measure. Given their relative importance, we group these programs into Social Security and all Other Cash Transfers. Social Security (which includes pensions, survivor benefits, and disability insurance) lifts 5.7 percent of the city's population out of poverty. Only the housing adjustment has a larger impact. The combined effect of all the other cash transfer programs (such as public assistance, Supplemental Security Income, Unemployment Insurance, Workers Compensation, etc.) is 3.6 percentage points, not that different from the impact of SNAP and income taxes.

Chapter 3: CEO Poverty Rates in Demographic Detail, 2010–2014

CEO Poverty Rates in Demographic Detail, 2010–2014

As noted in Chapter 1, CEO employs the American Community Survey (ACS) as our principal data set because it provides a large annual sample of New York City residents, allowing us to track poverty rates for key population groups. This chapter reports poverty rates by individual demographic characteristic, family composition, work experience, and borough over the 2010 to 2014 period. We also provide poverty rates for 55 city neighborhoods by averaging data for 2010 through 2014.

Where statistically significant, the text identifies differences between groups, such as the disparity between poverty rates by race and Hispanic ethnicity. The chapter's tables are organized so that readers can readily track changes over time. The first set of columns in the tables provides poverty rates. These are followed by calculations of change (measured in percentage points). Statistically significant changes are identified by bold type in the tables. The final column of each row provides context by giving the subgroup's share of the citywide population.

By and large, the pattern of change for subgroups of the city's population parallels the broad trends described in Chapter 2. The years 2010-2014 are marked by nominally declining, but not statistically significant, changes in the poverty rate.

Table 3.1 provides poverty rates by demographic characteristic. Table 3.2 reports poverty rates by family composition and work experience. Poverty rates by borough are given in Table 3.3. Figure 3.1 maps poverty rates across the city's neighborhoods, and poverty rates by neighborhood are listed in Table 3.4.

3.1 Poverty Rates by Demographic Characteristic of the Individual

There are no significant changes in the poverty rates by demographic characteristic from 2013 to 2014. Over the 2010–2014 time period, there are

Table 3.1
CEO Poverty Rates for Persons, by Demographic Characteristic, 2010–2014
(Numbers are Percent of the Population)

						Percentage Point Difference		Group Share of 2014 Population
	2010	2011	2012	2013	2014	2010-2014	2013-2014	
Total New York City	20.8	21.2	21.2	21.1	20.7	-0.2	-0.4	
Gender								
Males	19.7	19.9	20.2	20.2	19.8	0.1	-0.4	47.7
Females	21.9	22.4	22.1	21.9	21.5	-0.4	-0.4	52.3
Age Group								
Under 18	25.4	24.6	25.1	24.1	24.0	-1.4	-0.1	21.4
18 through 64	19.2	20.0	19.9	20.1	19.8	0.5	-0.4	65.9
65 and Older	21.4	21.8	21.1	21.0	19.8	**-1.6**	-1.2	12.7
Children (under 18), by Presence of Parent								
One Parent	36.7	35.5	37.6	34.8	36.1	-0.6	1.3	36.8
Two Parents	19.1	18.2	18.2	17.9	17.0	**-2.1**	-0.9	63.2
Race/Ethnicity								
Non-Hispanic White	15.2	15.1	13.7	14.9	14.4	-0.8	-0.5	32.2
Non-Hispanic Black	22.2	21.5	22.1	22.2	21.5	-0.8	-0.7	22.0
Non-Hispanic Asian	25.9	26.4	28.9	25.6	26.6	0.7	1.0	13.8
Hispanic, Any Race	24.2	25.6	25.5	24.9	24.0	-0.2	-0.9	29.1
Nativity/Citizenship								
Citizen by Birth	19.8	19.8	18.9	19.3	18.7	**-1.1**	-0.6	62.3
Naturalized Citizen	18.1	19.0	20.1	19.0	19.1	1.0	0.1	20.6
Not a Citizen	27.1	28.8	30.1	30.1	29.7	**2.6**	-0.4	17.2
Working Age Adults (18 through 64), by Educational Attainment*								
Less than High School	30.8	31.5	34.0	33.5	33.9	**3.1**	0.4	16.7
High School Degree	22.8	24.9	24.7	24.5	24.6	**1.8**	0.1	25.3
Some College	15.8	17.1	16.6	17.8	17.6	**1.8**	-0.2	20.5
Bachelor's Degree or Higher	9.2	9.3	8.5	8.8	8.8	-0.4	-0.1	37.4

* Category excludes people enrolled in school.
Notes: Differences are taken from unrounded numbers; those in **bold** type are statistically significant. Shares may not sum to 100 percent due to rounding error.

Table 3.1 (Continued)
CEO Poverty Rates for Persons, by Demographic Characteristic, 2010–2014
(Numbers are Percent of the Population)

						Percentage Point Difference		Group Share of 2014 Population
	2010	2011	2012	2013	2014	2010-2014	2013-2014	
Total New York City	20.8	21.2	21.2	21.1	20.7	-0.2	-0.4	
Working Age Adults (18 through 64), by Work Experience in Past 12 Months *								
Full-Time, Year-Round	7.0	7.5	8.1	8.4	7.8	**0.8**	-0.6	54.9
Some Work	23.5	24.7	24.2	24.9	25.6	**2.1**	0.6	22.4
No Work	37.9	38.7	38.8	38.4	38.6	0.6	0.2	22.8

* Category excludes people enrolled in school.
See text for definition of work experience categories.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Notes: Differences are taken from unrounded numbers; those in **bold** type are statistically significant. Shares may not sum to 100 percent due to rounding error.

a number of cases where poverty either statistically increased or declined. These cases are marked by bold type in Table 3.1 and we note these cases in the discussion below.

Poverty Rates by Gender: Females are more likely to live in poverty than males. In 2014, for example, the poverty rate for male New Yorkers was 19.8 percent, lower than the citywide rate of 20.7 percent. For females, the rate in 2014 was 21.5 percent.

Poverty Rates by Age: Children are poorer than adults. In 2014, the poverty rate for children under 18 was 24.0 percent, significantly higher than the 19.8 percent rate for working-age adults (18 through 64 years of age) and for elderly persons (65 and older). The poverty rate for the elderly has fallen significantly from 2010 to 2014. Historically, alternative poverty measures find higher poverty among the elderly than the official measure (see Chapter 4). The underlying cause has been high levels of medical spending. In more recent years, however, the growing market penetration of Medicare Advantage with prescription drug benefits (MA-PD) seems to be affecting the poverty rate for seniors. The share of Medicare beneficiaries enrolled nationally in MA-PD increased from 24 percent in 2010 to 30 percent in 2014. This change means that more elderly are benefitting from a limit on out-of-pocket spending. Traditional Medicare imposes no such limits on cost-sharing for Medicare Part A and B. Between 2010 and 2014, average premiums paid nationally by MA-PD enrollees decreased from $44 to $35. There were also steady increases in the share of enrollees in the zero premium MA-PD plans.[1]

1 Gold et al., Medicare Advantage 2014 Spotlight: Enrollment Market Update. 2014. The Henry J. Kaiser Family Foundation: https://kaiserfamilyfoundation.files.wordpress.com/2014/04/8588-medicare-advantage-2014-spotlight-enrollment-market-update.pdf

Poverty Rates for Children by Presence of Parent: Children in single-parent families are more than twice as likely to be living in poverty as children living in two-parent families, 36.1 percent versus 17.0 percent in 2014. Since 2010, the poverty rate for children in two-parent families decreased by 2.1 percentage points. The poverty rate for children in single-parent families was statistically unchanged over the same time period.

Poverty Rates by Race/Ethnicity: Poverty rates for racial and ethnic groupings remained statistically unchanged from 2010 to 2014, and in the one-year interval of 2013 to 2014. Non-Hispanic Asians are consistently the groups with the highest poverty rate: 26.6 percent in 2014, and consistently higher in each of the five years examined here, peaking at 28.9 percent in 2012. This higher poverty rate is correlated with the poverty rate for non-citizens and for residents of Queens, as described in the relevant sections below. The next highest poverty rates in 2014 are found among Hispanics (24.0 percent), Non-Hispanic Blacks (21.5 percent), and finally, Non-Hispanic Whites, who have the lowest poverty rate at 14.4 percent.

Race and Ethnicity

Race/Ethnicity categories are constructed as follows: First, individuals are categorized by ethnicity into Non-Hispanic and Hispanic groups; Non-Hispanic individuals are then categorized by race. We use three racial categories: White, Black, and Asian. Each includes persons who identify themselves as members of only one racial group. This sorting of the population omits 2.9 percent of the city population that is Non-Hispanic and multi-racial or Non-Hispanic and a member of some other race, such as Native American. We omit this residual category from Table 3.1.

Poverty Rates by Nativity/Citizenship: The 2014 poverty rate for non-citizens was 29.7 percent, which is significantly higher than poverty rates for both citizens by birth (18.7 percent) and naturalized citizens (19.1 percent). The increase in the non-citizen poverty rate from 2010 to 2014 was 2.6 percentage points. In that same time period the poverty rate for citizens by birth fell 1.1 percentage points. The poverty rate for naturalized citizens remained statistically unchanged.

Poverty Rates for Persons 18 through 64 by Educational Attainment: For working age adults, the probability of being in poverty is inversely proportional to the individual's educational attainment. Those with less than a high school education are nearly four times more likely to be in poverty than those with a bachelor's or more advanced degree (33.9 percent against 8.8 percent). The 2014 poverty rates for those with no more than a high school degree and those with some college (but less than a bachelor's degree) fell between these two extremes,

at 24.6 percent and 17.6 percent, respectively. The situation for those with less than a bachelor's degree has worsened through the recovery. Significant increases in the poverty rate from 2010 to 2014 are seen for those with less than a high school degree (3.1 percentage points), high school graduates (1.8 percentage points), and those with some college but not a completed bachelor's degree (1.8 percentage points).

Poverty Rates for Persons 18 through 64 by Work Experience: Poverty rates vary markedly by individuals' work experience over the prior 12 months. In 2014, the poverty rate for non-elderly adults that worked full time, year round was 7.8 percent; for those with no work it stood at 38.6 percent. Working age adults with some, but less than full-time, year-round work had a poverty rate of 25.6 percent. Both full-time, year-round and part-time workers saw a significant increase in their poverty rate during the recovery. The poverty rate for working age adults with full-time, year-round work as well as those with some work rose by 0.8 and 2.1 percentage points, respectively. The increasing poverty among workers raises questions about wage growth, an issue we will return to later in the chapter. The poverty rate for those with no work remained unchanged. This is a reflection on the efficacy of support programs and not directly attributed to a lack of wages.

3.2 Poverty Rates by Family Characteristic

Table 3.2 provides poverty rates for persons based on the characteristics of the family unit in which they live. As more fully described in Appendix A, "Family," from the perspective of the CEO poverty measure, is a broader concept than that used in the official poverty measure (persons who live together and are related by blood, marriage, or adoption). The CEO "Family" is the "Poverty Unit," persons living together who share costs and pool resources. This includes related persons, but extends to unmarried partners, their children, and other persons we believe to be economically dependent on other members of the household even if they are not kin. (See Appendix A.)

Panel A in Table 3.2 begins by categorizing people as living in families headed by a married/unmarried partner or in a single-head family.[2] A third category is unrelated individuals. Each family-type category includes everyone that is a member of the family. If a married couple has two children and two in-laws living with them, for example, then all six family members would be characterized as living in a married/unmarried partner family. Single heads are "householders" who do not have a spouse or unmarried partner but are living in families, for instance, a single mother with her children.[3] Within each of these family types we distinguish between those that do or do not include children under 18. Because single mothers have been a particular focus of public policy, we also provide the poverty rates for members of single-mother families (households headed by a

2 Beginning in 2013 the ACS provides data on same-sex partners. For this reason we have changed the family composition descriptors used in prior reports from "Husband/Wife/Unmarried Partner" to "Married/Unmarried Partner."

3 The householder is typically the person in whose name the dwelling is owned or rented.

single female with children under 18), as well as members of all families with children under 18 regardless of the number of parents in the family.

Not everyone is in a family or poverty unit with other persons. Unrelated individuals are people that do not have family members in their household. This would include persons that live alone (the typical case) and some persons living

Table 3.2
CEO Poverty Rates for Persons Living in Various Family Types, 2010–2014
(Numbers are Percent of the Population)

						Percentage Point Difference		Group Share of Population
	2010	2011	2012	2013	2014	2010-2014	2013-2014	2014
Total New York City	20.8	21.2	21.2	21.1	20.7	-0.2	-0.4	100.0
A. Family Composition								
Married/Unmarried Partner*								
No Children under 18	12.5	13.0	13.7	13.4	12.6	0.1	-0.7	22.5
With Children under 18	17.8	17.7	17.3	17.0	16.6	-1.2	-0.4	31.3
Single Head of Household								
No Children under 18	18.5	19.0	19.3	20.9	19.7	1.2	-1.2	11.8
With Children under 18	32.8	31.8	33.9	31.1	33.0	0.3	1.9	16.3
Single Mother Family	34.6	33.6	35.5	32.3	33.9	-0.7	1.6	13.8
All Families with Children under 18	22.7	22.6	22.7	21.8	22.2	-0.5	0.4	47.6
Unrelated Individuals	27.4	28.6	27.1	28.2	27.2	-0.2	-1.0	18.2
B. Work Experience of the Family**								
Two Full-Time, Year-Round Workers	4.9	5.0	5.3	6.2	5.8	0.8	-0.5	33.7
One Full-Time, Year-Round, One Part-Time Worker	13.6	13.8	14.6	12.7	14.8	1.2	**2.1**	15.8
One Full-Time, Year-Round Worker	16.0	16.9	17.2	18.0	16.8	0.9	-1.2	24.2
Less than One Full-Time, Year-Round Worker	45.1	44.3	42.8	43.8	44.0	-1.1	0.3	11.7
No Work	51.6	51.5	51.4	50.1	49.3	**-2.3**	-0.8	14.6

* In the CEO measure, unmarried partners are treated as spouses. See text for explanation.

** See text for explanation of work experience categories. Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Notes: Differences are taken from unrounded numbers; those in **bold** type are statistically significant. Shares may not sum to 100 percent due to rounding error. A change in the 2008 ACS questionnaire regarding work experience affects the comparability of estimates for 2008 and later with those for prior years.

with others, such as roommates or boarders, who we treat as economically independent from the people they live with. Unrelated individuals are one-person poverty units.

Panel B in Table 3.2 presents poverty rates for persons in families by different groupings of work experience. The categories range from families with no workers to families with two full-time, year-round workers. Both panels are organized in a similar fashion to Table 3.1. They report poverty rates, the change in the poverty rate, and the group share of the population.

The changes in the poverty rates from 2010 to 2014 and 2013 to 2014 in Table 3.2 are also consistent with the citywide pattern. From 2010 to 2014 there are no significant changes other than families containing no workers, whose poverty rates decreased. In the year 2013-2014, there is a significant change in families with "one full-time, year-round and one part-time worker," whose rates increased.

Married/Unmarried Partner: In 2014, the poverty rate for persons living in married/unmarried partner families without children under 18 was the lowest of any family type described in Panel A at 12.6 percent. The 2014 poverty rate for married/unmarried partner families with children under 18 was higher, at 16.6 percent.

Single Head: The poverty rate for single householders with no children was 19.7 percent in 2014. This rises to 33 percent for single householders with children and rises further for single mother families to 33.9 percent. This pattern has held over the five years, 2010 to 2014.

All Families with Children: The 2014 poverty rate for persons living in a family with children (a group that includes nearly half the city's population) was 22.2 percent. The rate remains statistically unchanged from 2010.

Work Experience of the Family

Work Experience of Family categories are constructed by summing the number of hours worked in the prior 12 months by persons 18 and older for each family. Families with over 3,500 hours of work are labeled as having the equivalent of "Two Full-Time, Year-Round Workers." Families with 2,341 through 3,499 hours are labeled "One Full-Time, Year-Round and One Part-Time Worker." Families with at least 1,750 through 2,340 hours are identified as "One Full-Time, Year-Round Worker." Families with at least one hour of work, but less than 1,750 hours, are called "Less than One Full-Time, Year-Round Worker." And finally, there are families that have "No Work."

Unrelated Individuals: Individuals in one-person "family" units are another high poverty group. In 2014, well over one quarter of this group was poor (27.2 percent), statistically unchanged from 2010.

Work Experience of Family: Panel B in Table 3.2 groups individuals by the work experience of the family in which they reside. (Work Experience of Family categories are defined in the accompanying text box.) Poverty rates rise sharply as work activity decreases, ranging from 5.8 percent for families with the equivalent of two full-time, year-round workers to 49.3 percent for persons in families with no work at all in 2014.

The data show that even a considerable level of work does not always spare people from poverty. Echoing the rise in poverty among workers reported in Table 3.1, poverty rates did not abate from 2010 to 2014 for persons living in families with the equivalent of two full-time, year-round workers. For families with the equivalent of one-full-time, year-round worker and one part-time worker, the poverty rate increased from 2013 to 2014 by over two percentage points. This trend is troubling, considering that nearly 50 percent of the city's population lives in one of these two family types.

3.3 Poverty Rates by Borough

Table 3.3 shows that in 2014, the poverty rate in the Bronx was the highest in the city at 26.5 percent. Brooklyn, at 21.9 percent, had the city's second highest poverty, followed by Queens (20.4 percent), Staten Island (18.3 percent), and Manhattan (14.6 percent).

Over the five-year period, 2010 to 2014, poverty rates fell in Brooklyn (by 2.5 percentage points), and rose in Staten Island (by 4.6 percentage points). The poverty rate in the Bronx remained stubbornly high but stable over the 2010-2014 period. There were no statistically significant changes in borough poverty rates from 2013 to 2014.

In Queens, the poverty rate remained relatively high but steady from 2010 to 2014. The stabilization of the poverty rate in this borough correlates with the high but unchanged Asian poverty rate. As noted in Chapter 1, approximately one half of the city's Asian population lives in Queens.

The most notable change in borough poverty rates has been the slow but steady increase in poverty on Staten Island, totaling 4.6 percentage points, from 13.7 percent in 2010 to 18.3 percent in 2014. This trend in Staten Island is due to a confluence of factors. The borough, when compared to the rest of the city, has a population that is older on average, with lower earnings among full-time workers and more post-recession job loss. The data from 2014 also continues to reflect the aftermath of Hurricane Sandy in late 2012. Finally, the Staten Island data consist of a smaller sample than other boroughs. This contributes to large margins of

Table 3.3
CEO Poverty Rates by Borough, 2010–2014
(Numbers are Percent of the Population)

						Percentage Point Difference		Group Share of Population
	2010	2011	2012	2013	2014	2010-2014	2013-2014	2014
Bronx	25.1	26.1	25.8	25.6	26.5	1.4	1.0	16.8
Brooklyn	24.3	23.7	23.1	22.6	21.9	**-2.5**	-0.7	31.0
Manhattan	15.0	14.8	14.6	15.6	14.6	-0.4	-1.0	19.0
Queens	19.8	21.3	22.0	21.2	20.4	0.6	-0.8	27.6
Staten Island	13.7	14.5	15.2	17.3	18.3	**4.6**	1.0	5.6

Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Note: Differences are taken from unrounded numbers; those in **bold** type are statistically significant.

error in the data; even seemingly large differences in the poverty rate, such as that which occurred from 2013 to 2014 (17.3 percent to 18.3 percent), are not statistically significant.

3.4 Poverty Rates by Neighborhood

Figure 3.1 illustrates and Table 3.4 lists CEO poverty rates for a total of 55 neighborhoods in New York City. The neighborhoods are the smallest geographical areas identified in the American Community Survey Public Use Micro Sample files. Each area contains approximately 100,000 people and their boundaries roughly coincide with New York City's Community Districts. However, the sample for each area is small, making it impossible to generate meaningful one-year estimates of poverty across the city's neighborhoods. Therefore, we have combined estimates from the 2010 through 2014 ACS data and report the average poverty rate for neighborhoods over the five-year period in the figure and table. The five-year citywide average poverty rate is 21.1 percent.

The disparities across New York's neighborhoods are striking, ranging from a poverty rate of 7.2 percent on Manhattan's Upper East Side to a 35.6 percent poverty rate in the Bronx neighborhood of University Heights/Fordham. Areas of the city with the lowest poverty rates (no more than 15 percent) are shaded in dark green in the map (Figure 3.1). These include Manhattan south of Harlem (except for the Lower East Side); Mid-Island and South Shore Staten Island; and eastern Queens. Poverty rates are also relatively low in "Brownstone Brooklyn" (Brooklyn Heights/Fort Greene and Park Slope/Carroll Gardens), as well as Flatlands/Canarsie.

Neighborhoods with the highest poverty rates (more than 25 percent) are identified in shades of blue. They are clustered together in the South Bronx and across a wide swath of Brooklyn, from Sunset Park and Borough Park to East New York and Brownsville. Queens is home to a third high-poverty cluster composed of Jackson Heights and Elmhurst/Corona.

Table 3.4

CEO Poverty Rates by Community District (CD)/Neighborhood, 2010–2014

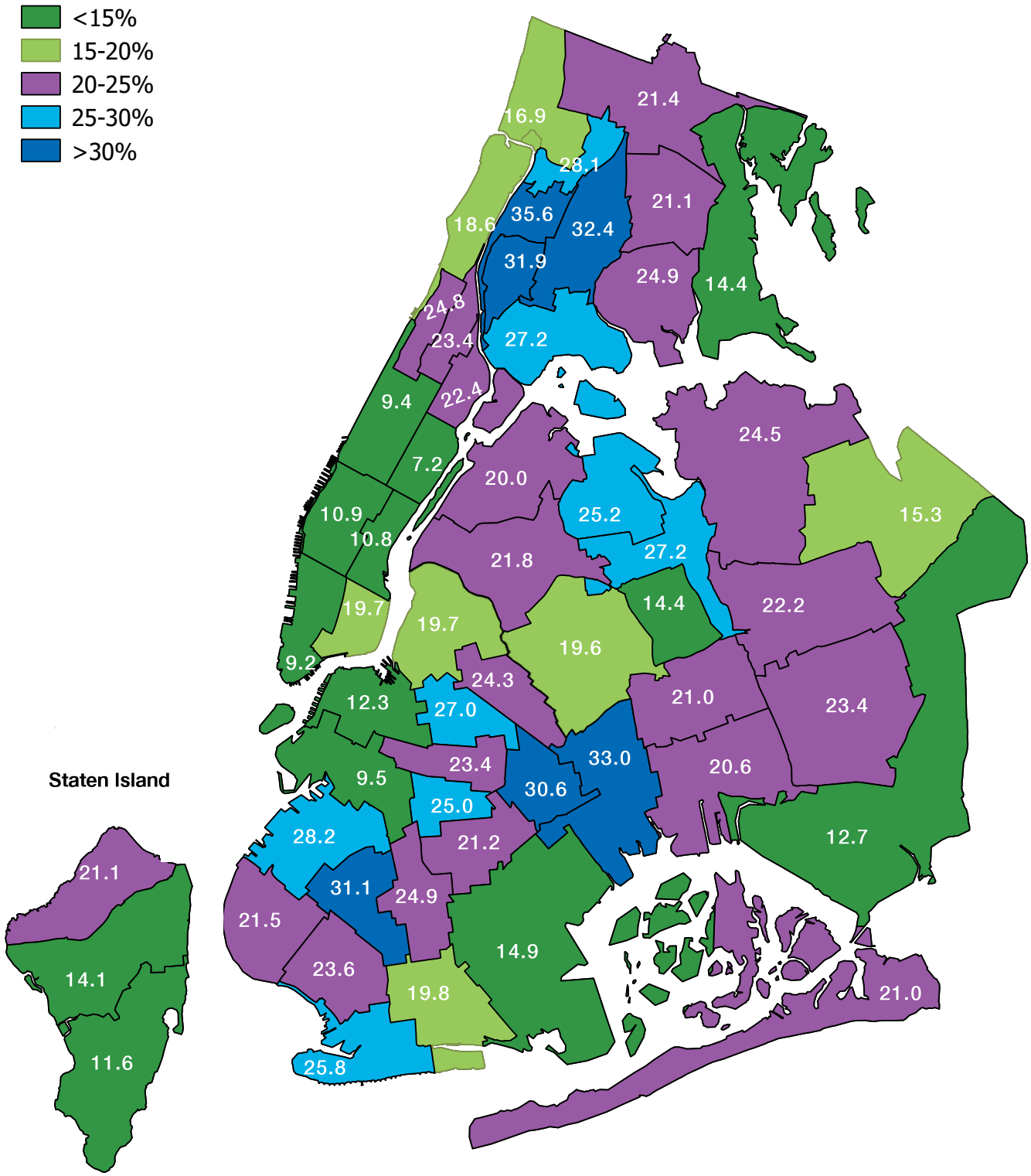
(Numbers are Percent of the Population) Citywide Poverty Rate, 5-Year Average = 21.1%

CD	Neighborhood	5 -Year Average
Bronx		
1 & 2	Mott Haven / Hunts Point	27.2
3 & 6	Morrisania / East Tremont	32.4
4	Highbridge / S. Concourse	31.9
5	University Heights / Fordham	35.6
7	Kingsbridge Heights / Mosholu	28.1
8	Riverdale / Kingsbridge	16.9
9	Soundview / Parkchester	24.9
10	Throgs Neck / Co-op City	14.4
11	Pelham Parkway	21.1
12	Williamsbridge / Baychester	21.4
Brooklyn		
1	Williamsburg / Greenpoint	19.7
2	Brooklyn Heights / Fort Greene	12.3
3	Bedford Stuyvesant	27.0
4	Bushwick	24.3
5	East New York / Starrett City	33.0
6	Park Slope / Carroll Gardens	9.5
7	Sunset Park	28.2
8	North Crown Heights / Prospect Heights	23.4
9	South Crown Heights	25.0
10	Bay Ridge	21.5
11	Bensonhurst	23.6
12	Borough Park	31.1
13	Coney Island	25.8
14	Flatbush	24.9
15	Sheepshead Bay / Gravesend	19.8
16	Brownsville / Ocean Hill	30.6
17	East Flatbush	21.2
18	Flatlands / Canarsie	14.9

CD	Neighborhood	5 -Year Average
Manhattan		
1 & 2	Greenwich Village / Financial District	9.2
3	Lower East Side / Chinatown	19.7
4 & 5	Chelsea / Clinton / Midtown	10.9
6	Stuyvesant Town / Turtle Bay	10.8
7	Upper West Side	9.4
8	Upper East Side	7.2
9	Morningside Heights / Hamilton Heights	24.8
10	Central Harlem	23.4
11	East Harlem	22.4
12	Washington Heights / Inwood	18.6
Queens		
1	Astoria	20.0
2	Sunnyside / Woodside	21.8
3	Jackson Heights	25.2
4	Elmhurst / Corona	27.2
5	Middle Village / Ridgewood	19.6
6	Forest Hills / Rego Park	14.4
7	Flushing / Whitestone	24.5
8	Hillcrest / Fresh Meadows	22.2
9	Kew Gardens / Woodhaven	21.0
10	Howard Beach / S. Ozone Park	20.6
11	Bayside / Little Neck	15.3
12	Jamaica	23.4
13	Bellerose / Rosedale	12.7
14	Rockaways	21.0
Staten Island		
1	North Shore	21.1
2	Mid-Island	14.1
3	South Shore	11.6

Source: American Community Survey Public Use Micro Sample as augmented by CEO. Note: Poverty rate is the average over the 2010-2014 period.

Figure 3.1
Percentage of Population Below Poverty Threshold, by Neighborhood, 2010–2014
Citywide Rate: 21.1%



Source: Five-year average of 2010–2014 American Community Survey Public Use Micro Sample as augmented by CEO.

Chapter 4: Alternative Poverty Measures in the U.S. and New York City

Alternative Poverty Measures in the U.S. and New York City

As noted in the Introduction, the U.S. Bureau of the Census has been issuing a Supplemental Poverty Measure (SPM) since November 2011. Like the CEO measure, the SPM is based on recommendations made by a panel of experts assembled by the National Academy of Sciences (NAS). The creation of the new federal measure allows us to compare poverty in New York City to the nation using a similar methodology. This chapter compares some of the principal findings from the Census Bureau's SPM reports with our findings for New York City. The Bureau provides comparisons between the SPM and the official poverty rates for the U.S., much as we have done with the CEO and official measure in Chapters 1 and 2. We find that the pattern of differences between the official and the National Academy of Sciences-style poverty rates in the nation and the city are quite similar. Changes in the SPM and CEO poverty rates from 2010 to 2014 are also alike.

4.1 Poverty Rates by Age Group

Given the focus that policymaking has had on children, differences in poverty rates by age group are a particularly important set of comparisons. Table 4.1 provides 2014 poverty rates by age using the official and NAS-style measures. Panel A reports these for the U.S.[1] The table's Panel B provides the New York City data. Differences between the official and SPM measures for the nation and differences between the official and CEO measures for the city follow the same pattern. Poverty rates for the total population using the alternative measures exceed the poverty rates using the official measure. For the U.S., the difference is 0.4 percentage points while the city's difference is 1.5 percentage points.

Another important difference between the official and alternative poverty measures – common to the city and the nation – is that, despite the higher poverty rate overall, the alternative measures yield poverty rates for children that are below the official poverty rates. The U.S. SPM poverty rate for children is 16.7

1 The U.S.-level poverty rates cited in this chapter are taken from Short, Kathleen, The Supplemental Poverty Measure: 2014. U.S. Bureau of the Census. September 2015. Available at: https://www.census.gov/content/dam/Census/library/publications/2015/demo/p60-254.pdf

Table 4.1
Comparison of Poverty Rates by Age Group Using Different Measures, 2014

A. United States			
	Official	**SPM**	**Percentage Point Difference**
Total	14.9	15.3	**0.4**
Under 18	21.5	16.7	**-4.8**
18 through 64	13.5	15.0	**1.5**
65 and Older	10.0	14.4	**4.4**
B. New York City			
	Official	**SPM**	**Percentage Point Difference**
Total	19.1	20.7	**1.5**
Under 18	28.5	24.0	**-4.5**
18 through 64	16.4	19.8	**3.3**
65 and Older	17.4	19.8	**2.4**

Sources: U.S. Bureau of the Census and American Community Survey Public Use Micro Sample as augmented by CEO. Note: Differences are measured in percentage points and are taken from unrounded numbers; those in **bold** type are statistically significant. Official poverty rates, reported in Panel B, are based on the CEO poverty universe and unit of analysis.

percent, 4.8 percentage points below the official rate of 21.5 percent. The New York City CEO poverty rate for children is 24.0 percent, 4.5 percentage points below the official rate of 28.5 percent.

The lower child poverty rates under the NAS-style measures shed light on the effectiveness of government benefit programs, many of which are targeted toward families with children.[2] Note that the declines in child poverty rates occurred despite the subtraction of nondiscretionary taxes, work-related expenses, and medical out-of-pocket costs. This implies that government benefits, not counted in the official poverty measure, reduce child poverty effectively – even when the nondiscretionary expenses limit the resources available for families with children to meet their needs for food and shelter.

Elderly poverty rates, however, are much higher under the NAS-style measures than under the official measure. This is primarily a result of the alternative measures' deduction of medical out-of-pocket expenditures (MOOP) from their measure of income. Without this deduction, the NAS-based measures would yield

2 Although the SPM and CEO poverty rates for children are lower than the official rates, both the SPM and CEO child poverty rates exceed those of working age and elderly adults.

poverty rates that are lower than those from the official measures. For the U.S. SPM, the 2014 poverty rate for persons 65 and older would fall to 8.8 percent if MOOP was not included in the poverty measure; for the CEO measure, the 2014 elderly poverty rate net of MOOP is 16.6 percent.[3] The U.S.-wide official poverty rate for the elderly in 2014 was 10.0 percent while the official poverty rate for the elderly in New York City was 17.4 percent.

4.2 Extreme Poverty and Near Poverty

In Chapter 2, we noted that the proportion of the population living in extreme poverty (below 50 percent of the poverty line) is smaller under the CEO poverty measure than it is with the official measure. Table 4.2 reports extreme poverty rates for the U.S. and New York City by age. A smaller fraction of the nation's population is in extreme poverty using the alternative poverty measure. For the U.S. as a whole, the difference is 1.6 percentage points. The corresponding difference in the city is 2.6 percentage points. The pattern of differences across the age groups is also alike. For the nation and the city, the largest difference

3 For details on MOOP estimates and the impact of MOOP on the elderly poverty rate, see Appendix H in this report and Table 4A in Short, Kathleen, The Supplemental Poverty Measure: 2014. Marginal effect of MOOP is discussed further in Table 4.5 below.

Table 4.2
Comparison of Extreme Poverty Rates by Age Group Using Different Measures, 2014

A. United States			
	Official	**SPM**	**Percentage Point Difference**
Total	6.7	5.1	**-1.6**
Under 18	9.7	4.3	**-5.4**
18 through 64	6.4	5.4	**-1.0**
65 and Older	3.2	5.1	**1.9**
B. New York City			
	Official	**SPM**	**Percentage Point Difference**
Total	7.5	4.9	**-2.6**
Under 18	11.6	4.5	**-7.1**
18 through 64	6.8	5.3	**-1.5**
65 and Older	4.2	3.7	-0.5

Sources: U.S. Bureau of the Census and American Community Survey Public Use Micro Sample as augmented by CEO. Note: Differences are measured in percentage points and are taken from unrounded numbers; those in **bold** type are statistically significant. Official poverty rates, reported in Panel B, are based on the CEO poverty universe and unit of analysis.

between the official and alternative measures of extreme poverty is for children, 5.4 percentage points and 7.1 percentage points, respectively. Differences between the measures for working age adults are more modest: 1.0 percentage points for the U.S. and 1.5 percentage points for New York City.

This pattern of lower rates of extreme poverty, when using alternative measures, is reversed for the elderly. Historically, the alternative measures have found a higher incidence of extreme poverty for persons 65 and older than do the official measures. For the U.S., the SPM extreme poverty rate for persons 65 and over is 1.9 percentage points above that of the official rate. In 2014, the CEO extreme poverty rate for the elderly is statistically the same as the official rate.[4]

Table 4.3 reports the share of the U.S. and New York City population that is near poor in the official and NAS-based poverty measures. The near poor poverty rate is defined here as the proportion of the population whose income ranges from 100 percent to 150 percent of the respective poverty thresholds. As Chapter 2 indicated, the CEO measure places a much larger share of the population in near

4 In part, this is a function of overall lower estimates of extreme poverty than in official measures. See also Appendix H for differences in CEO and SPM methodologies in estimating MOOP.

Table 4.3
Comparison of Near Poverty Rates by Age Group Using Different Measures, 2014

A. United States			
	Official	**SPM**	**Percentage Point Difference**
Total	9.3	16.7	**7.4**
Under 18	11.4	21.8	**10.4**
18 through 64	8.1	15.1	**7.0**
65 and Older	11.1	15.9	**4.8**
B. New York City			
	Official	**SPM**	**Percentage Point Difference**
Total	11.0	24.6	**13.6**
Under 18	14.1	31.6	**17.6**
18 through 64	9.6	22.2	**12.7**
65 and Older	12.9	24.8	**11.8**

Sources: U.S. Bureau of the Census and American Community Survey Public Use Micro Sample as augmented by CEO. Note: Differences are measured in percentage points and are taken from unrounded numbers; those in **bold** type are statistically significant. Official poverty rates, reported in Panel B, are based on the CEO poverty universe and unit of analysis.

poverty than does the official measure. Likewise, the Census SPM categorizes a larger share of the nation in this group than the official measure. For the population as a whole, the SPM near poverty rate is 16.7 percent, 7.4 percentage points above the official rate. The differences between the SPM and official measures for children are particularly high, at 10.4 percentage points above the official rate, while the near poverty rates for the elderly in the two measures are relatively closer.

In one respect, the pattern of difference between the measures for New York City is similar to that for the total U.S. The differences between the near poverty rates are greatest for children and more modest for the elderly. But the more eye-catching comparison between the city and the nation is how much larger the between-measure differences are for the city. The CEO measure, for example, categorizes 24.6 percent of the city population as near poor, while the corresponding proportion from the official measure is 11.0 percent.

One reason for the larger between-measure difference in New York City than the nation is due to the geographic adjustment that accounts for the relatively high cost of housing in New York City. The resulting CEO poverty threshold is higher than the U.S.-wide SPM poverty threshold. In 2014, the U.S.-wide SPM threshold for a two-adult, two-child family was $25,178 while the comparable CEO threshold was $31,581.[5] Thus, the near poor in the U.S.-wide SPM measure are defined as persons living in families with the equivalent income of $25,178 through $37,766 (1.5 times the threshold).[6] The near poor for the CEO measure are persons living in families with the equivalent income of $31,581 to $47,372. Thus, one reason why the CEO measure categorizes a much larger share of the population as near poor than does the SPM is simply because the income band that defines the group is larger, spanning $15,791 compared to $12,589. Thus, it is much harder in New York City to move poor or near poor people beyond near poor thresholds.

Another plausible reason for the larger between-measure difference in New York City than the nation is that the upper reaches of the near poor income band receive smaller benefits or phase out of eligibility altogether. In addition, nondiscretionary expenses that families incur rise as family income increases, making it even harder for near poor families in New York City to exceed 150 percent of the threshold.

4.3 Changes in the SPM and CEO Poverty Rates, 2010–2014

Table 4.4 reproduces the Census Bureau's estimates for the years 2010–2014, along with comparable data for New York City. However, it should be noted that in 2013, the Census Bureau implemented the redesigned instruments for the data

5 This is the SPM threshold prior to its adjustment for differences in housing tenure. See Appendix B.

6 We use the term "equivalent income" to remind readers that the thresholds are adjusted for family size and composition.

collection of the March Current Population Survey (CPS),[7] which caused a break in data series of the SPM. For this reason, we look at changes in poverty for the years 2010–2014 and 2013–2014, with emphasis on the latter period.

From 2010 to 2014, neither the SPM nor CEO measure showed statistically significant change in the poverty rate for the total population. Poverty rates derived from these measures fell by 1.3 percentage points for children in the U.S. and remained statistically unchanged for children in New York City. The working age adult poverty rates went down by 0.2 percentage points for the nation, but it remained statistically unchanged for the city over this time span. For the elderly, the SPM poverty rate fell by 1.4 percentage points while the CEO poverty rate fell by 1.6 percentage points from 2010 to 2014.

To a large degree, such declines in the elderly poverty rate are influenced by a significant drop in MOOP that occurred between 2013 and 2014. For example, the nationwide SPM poverty rate decreased for the elderly from 15.5 percent in 2013 to 14.4 percent in 2014, a change of 1.1 percentage points. Over the same time, the city's elderly poverty rate dropped by 1.2 percentage points to 19.8 percent under the CEO measure, a decline that was not significant.

7 See the technical documentation for the 2014 CPS Annual Social and Economic Supplement (ASEC): http://www2.census.gov/programs-surveys/cps/techdocs/cpsmar14R.pdf

Table 4.4
Change in Poverty Rates, U.S. SPM and NYC CEO, 2010–2014
(Numbers are Percent of the Population)

A. United States SPM						Percentage Point	
Year :	2010	2011	2012	2013*	2014	2010-2014	2013-2014
Total	16.0	16.1	16.0	15.8	15.3	-0.7	–0.5
Under 18	18.0	18.0	18.0	18.1	16.7	**-1.3**	**–1.4**
18 through 64	15.2	15.5	15.5	14.9	15.0	**-0.2**	0.1
65 and Older	15.8	15.1	14.8	15.5	14.4	**-1.4**	**–1.1**
B. New York City CEO						**Percentage Point**	
Year :	2010	2011	2012	2013	2014	2010-2014	2013-2014
Total	20.8	21.2	21.2	21.1	20.7	-0.2	-0.4
Under 18	25.4	24.6	25.1	24.1	24.0	-1.4	-0.1
18 through 64	19.2	20.0	19.9	20.1	19.8	0.5	-0.4
65 and Older	21.4	21.8	21.1	21.0	19.8	**-1.6**	-1.2

Sources: U.S. Bureau of the Census published data for 2010 through 2014, and American Community Survey Public Use Micro Sample as augmented by CEO.
Note: Changes are measured in percentage points. Those for New York City CEO rates are taken from unrounded numbers; those in **bold** type are statistically significant.
*Estimates are based on responses from a sample of the population who completed the redesigned income and health insurance questions.

Table 4.5
Elderly Poverty Rate and Impact of MOOP
U.S. SPM and NYC CEO, 2013–2014
(Numbers are Percent of the Population)

A. United States SPM	Percentage Point	
	2013	2014
Full SPM Income, Elderly	15.5	14.4
Net of MOOP	8.5	8.8
Marginal Effect of MOOP	7.0	5.6
B. New York City CEO	**Percentage Point**	
	2013	2014
Full CEO Income, Elderly	21.0	19.8
Net of MOOP	17.1	16.6
Marginal Effect of MOOP	3.8	3.2

Sources: U.S. Bureau of the Census and American Community Survey Public Use Micro Sample as augmented by CEO.
Note: Differences are measured in percentage points and are taken from unrounded numbers.

The 2013 to 2014 changes in elderly poverty rates in both the U.S. and New York City are primarily driven by the diminishing effect of MOOP. As Panel A in Table 4.5 shows, the subtraction of MOOP from seniors' family income increased the SPM poverty rate in 2014 by about 5.6 percentage points, whereas that impact in 2013 was an increase of 7 percentage points. MOOP plays a significant role in reducing the city's senior poverty rate, but the impact was smaller (3.2 percentage points).

The differences in the marginal effects of MOOP on elderly poverty when comparing New York City to the U.S. are a function of differences in the SPM and CEO methodology. The SPM estimate relies on self-reported data from the Current Population Survey for MOOP expenditures. CEO relies on Medical Expenditure Panel Survey (MEPS) data.[8]

The decline in CEO's elderly poverty rate in 2014 could also be influenced by an increase in elderly employment. In New York City, the employment-population ratio for the elderly increased from 15.1 percent to 16.2 percent between 2013 and 2014. In comparison, the employment-population ratio stayed flat for the elderly in the nation in the same period. (Data not shown.)[9]

8 See Appendix H for CEO's decision to use MEPS data.

9 ACS 1 Year Estimates from American FactFinder was used for the U.S. data and ACS PUMS was used for NYC data.

Chapter 5: Poverty in the City, Policy Responses, and the Path Forward

Poverty in the City, Policy Responses, and the Path Forward

Introduction

The de Blasio Administration is strongly committed to reducing poverty and inequality and creating a New York City that provides opportunity to all. This year, in his State of the City address, the Mayor underscored that "our vision means we have to use the tools of government to fight against inequality – and to fight for a strong future for ALL our families."

The annual poverty report provides an accounting of the City's progress on this crucially important issue. As noted above, this report finds that in 2014, poverty rates remained statistically unchanged from 2013, with the poverty rate at 20.7 percent and the near-poverty rate (those living below 150 percent of the poverty threshold) at 45.2 percent. This stagnation in the poverty rate has held through the five-year recovery from the recent recession. The poverty threshold continues to rise, influenced by rising housing costs. But with the end of the recession, stimulus programs such as increased Supplemental Nutrition Assistance Program (SNAP) benefits and tax credits are no longer a component of family incomes. Wages, the most important component of family income, are slowly increasing, but are far from pre-recession levels even as the employment situation improves (see Chapter 1). The CEO poverty measure is well positioned to measure the combined effect of a rising threshold and family incomes that are barely keeping pace.

Along with a general drive to confront these trends and reduce poverty and inequality, the City is now one year into a specific ten-year anti-poverty commitment. In April 2015, upon the release of the blueprint for the future of the city, OneNYC: The Plan for a Strong and Just City, Mayor de Blasio pledged to lift 800,000 New Yorkers out of poverty or near poverty by 2025. OneNYC anticipated that this goal would be met through a variety of means, starting with raises in the minimum wage, which are among the most effective methods of increasing household incomes at the low end of the income spectrum.

The past year has seen considerable progress on raising hourly minimum wages. The City on its own initiative put all of its employees, as well as employees of providers contracted to deliver social services, on a path to earning $15 by 2018. At the state level, pursuant to a previously enacted law, on December 31, 2015 the statewide minimum wage rose from $8.75 to $9. At the same time, tipped minimum wage earners in the state saw a larger increase: from an amount between $4.90 and $5.65, depending on the nature of the work, to $7.50. The state minimum wage for fast food workers is also increasing: it rose to $10.50 on December 31, 2015, and will increase incrementally to $15 at the end of 2018. These increases have already begun to lift New Yorkers' incomes.

There are, however, more increases coming in the minimum wage, most significantly, the state law enacted in April 2016 that will raise the minimum wage for many employees in New York City to $15 over the next few years. People in the city who work for large businesses (ones with at least 11 employees) will have a minimum wage of $11 at the end of 2016, a minimum wage of $13 at the end of 2017 and, finally, a minimum wage of $15 on December 31, 2018. For workers in the city employed by small businesses (those with ten employees or fewer), the minimum wage will rise to $15 a year later. Increases in the minimum wage, while important, will not by themselves solve the problem of poverty. Many New Yorkers are currently not employed, and therefore will not be helped by minimum wage increases. Even among people who are employed, the new minimum wages may not be enough to raise a family out of poverty or near poverty, depending on factors such as the number of hours worked, household size, and cost of living.

The City has launched or expanded an array of initiatives aimed at lifting more New Yorkers out of poverty and near poverty – and moving us further toward the 800,000 goal. These programs are wide ranging, including ones that promote job training, early childhood education, child welfare, and many other critical needs. Performance data for many of these programs are contained in this report, but in this discussion we highlight a select group of initiatives that have seen significant progress in the past year.

The City has also made a priority of working to increase the supply of affordable housing. Housing is New Yorkers' largest single expense, and the shortage of affordable units is a major factor that keeps people in poverty and near poverty. The de Blasio Administration has continued to move forward with its ambitious affordable housing program, which aims to build or preserve 200,000 units of affordable housing over ten years. The City also introduced a series of investments and reforms aimed at the challenge of homelessness, including a reorganization of the Department of Homeless Services and the launch of HOME-STAT, a new initiative that goes further than any other city has to identify people living on the streets and give them the help they need to live in permanent housing.

Another of the City's primary focuses is education, including initiatives that are designed to help students succeed in pre-k, primary, and secondary education,

and in college, which will increase their chances of obtaining high-paying employment. Some of the most important programs in this regard involve the City University of New York (CUNY), whose schools collectively represent the number-one destination of city public school students who move on to college.

The City has also expanded access to affordable broadband, narrowing the "digital divide" and allowing more people to access the employment, education, and other opportunities available over the Internet. Major new City initiatives are bringing free broadband to residents of five New York City Housing Authority developments – and to any New Yorker who accesses the Internet through one of the thousands of kiosks that are being placed around the city where pay phones once operated.

This chapter will deliver an update on progress toward the goal of lifting 800,000 New Yorkers out of poverty or near poverty; discuss the de Blasio Administration's approach to poverty reduction; describe some of the City's anti-poverty initiatives that have had noteworthy progress over the past year; and provide statistics about existing anti-poverty initiatives.

5.1 Lifting 800,000 New Yorkers Out of Poverty and Near Poverty Over the Next Decade

Last year, the City made a historic commitment, for the first time setting a numerical benchmark for lifting a concrete number of New Yorkers out of poverty or near poverty. The commitment to move 800,000 people of out poverty or near poverty by 2025 was set forth concurrently in this poverty report and in OneNYC, which declared that it could be achieved "through a broad set of anti-poverty initiatives including raising the minimum wage – a particularly effective tool for reducing poverty and income inequality."

The connection between wage earnings and poverty is something the data in this report has borne out, year after year. Wages are the largest component of income for most families in poverty, and even more so for families in near poverty. Last year's poverty report explored the effect of minimum wage increases on the poverty rate.

Our analysis demonstrated just how powerful an impact a significant increase in the minimum wage can have on poverty. Our simulation of a $15 minimum wage on the 2013 CEO data showed that more than 750,000 New Yorkers would move out of poverty (314,000) and near poverty (438,000), including both workers and their family members.[1] The overall poverty rate for New York City would fall from 21.1 percent to 17.3 percent. The number of New Yorkers in near poverty would fall 5.5 percentage points, from 45.1 percent to 39.6 percent.

1 Numbers are rounded to nearest thousand dollars. Full data for the minimum wage discussion presented in this section is found in Appendix I.

The simulation methodology first identified all workers earning between the 2013 minimum wage of $7.25 and the target wage of $15, and increased their wage to $15. We also assumed spillover effects—anyone earning $1 below the original minimum wage or $1 above the new minimum wage received an increase to keep them at or near parity with minimum wage workers. In addition, the simulation took into consideration the effect of rising wages on eligibility for tax credits and benefits such as SNAP. No job loss effects were incorporated into the model. The result was a total of 1.2 million workers who were assigned a wage increase.

A similar analysis conducted on our 2014 data file resulted in a similar drop in poverty. The poverty rate in the 2014 simulation falls from 20.7 percent to 17.2 percent. The near poverty rate falls from 45.2 percent to 41.3 percent.

5.2 The City's Evidence-based, Data-based, and Efficiency-based Approach to Poverty Reduction

In its initiatives to combat poverty, the de Blasio Administration is committed to using methods that have been proven over time to work and that use the City's resources as efficiently as possible. The Administration has adopted a three-part framework for this work, employing methods that are 1) evidence-based; 2) data-driven; and 3) cost-effective.

City agencies begin by examining economic, social, and demographic data to understand the nature of the problems to be addressed. The City has put a greater emphasis than ever on identifying inequities in all five boroughs, by geography and demographic subpopulations. This year's Social Indicators Report, a survey of social conditions across the city, disaggregates this data to isolate inequities in a wide array of measures, from air pollution levels to rates of premature mortality.

The problems that the City identifies in data are often reflected later in the anti-poverty initiatives it adopts. Previous poverty reports have pointed to the particular difficulties that immigrants confront and the struggles many New Yorkers face in finding well-paying jobs—problems that were later addressed by such programs as IDNYC, the municipal identification program, and Career Pathways, the City's re-imagined approach to workforce development. After last year's poverty report emphasized the critical role increases in the minimum wage play in reducing poverty, the City took the actions discussed above to raise the minimum wage for City workers and employees of City contractors.

Finally, the City evaluates its anti-poverty initiatives to ensure that they do what they were designed to do, and in the most cost-effective way. The Center for Economic Opportunity regularly evaluates programs aimed at reducing poverty and increasing opportunity, including such high-profile initiatives as Pre-K for All and the Community Schools Initiative. Program evaluations are used to make good programs operate even better and, in some cases, as a basis for discontinuing programs that do not constitute an efficient use of limited resources.

5.3 Affordable Housing

New York City suffers from a severe shortage of affordable housing. It has an extremely low rental housing vacancy rate – just 3.45 percent in 2014, well below the five percent benchmark that signals a housing emergency. Relatedly, rent levels are also extremely high. Almost 56 percent of New York City households were rent burdened in 2014, meaning that more than one third of their income went toward housing costs. More than 30 percent of renter households were severely rent burdened, meaning they spent more than half of their income on rent.

Earlier in this report, we noted the impact of subsidized housing on the poverty rate. In 2014, housing supports, including rent regulation, Section 8, and public housing were responsible for a 6.6 percentage point reduction in the poverty rate. In the absence of these subsidies, the poverty rate in 2014 would have been 27.3 percent in 2014.

Mayor de Blasio has made increasing the supply of affordable housing one of the highest priorities of his administration. In May 2014, he announced Housing New York, a ten-year plan to build or preserve 200,000 units of affordable housing throughout the city – 80,000 new units and 120,000 units preserved. That is enough to house 500,000 New Yorkers, more than the entire population of Atlanta or Miami. The City is making a special effort to target affordable housing for the lowest-income New Yorkers. The Extremely Low and Low Income Affordability (ELLA) program, a joint undertaking of the Department of Housing Preservation and Development (HPD) and the Housing Development Corporation (HDC), has financed 2,000 units over the past two years for families making less than $23,000 for a family of three. A separate program, Senior Affordable Rental Apartments (SARA), financed 2,722 apartments for very low income seniors over the past two years. The City is committed to allocating $8.2 billion in public funds to the ten-year affordable housing effort. With an additional $2.9 billion in federal and state funding, and $30 billion in private funds that the City anticipates attracting, the total investment in creating and preserving affordable housing is expected to be more than $41.1 billion over ten years.

In January 2016, the City announced that its plans are on track. Throughout 2015 at least 21,041 affordable units were built or preserved. Preservation projects, including major initiatives at Stuyvesant Town and Harlem's Riverton Houses, helped preserve 13,862 units while another 7,179 units were built. Last year's results brought the two-year total for 2014 and 2015 to 40,204 units of affordable housing, enough to house more than 100,000 New Yorkers.

The City took a historic step forward on affordable housing this past year when in March 2016 the City Council enacted new zoning regulations that established the de Blasio Administration's Mandatory Inclusionary Housing program. Under this program, the nation's most rigorous, developments that are rezoned for greater residential density will for the first time be required to include units that are

affordable to low- and moderate-income New Yorkers. In conjunction with City subsidies for affordable and supportive housing, these requirements will ensure that the new housing supply serves lower-income residents who would not otherwise be served by the private market for new housing. Other zoning changes, known as Zoning for Quality and Affordability, will help increase the supply of affordable housing for older New Yorkers and low-income housing in transit-accessible areas.

Working with local elected officials and communities, the de Blasio Administration has identified seven areas across all five boroughs where Mandatory Inclusionary Housing can help clear the way for more affordable housing: East New York in Brooklyn; Jerome Avenue in the Bronx; Bay Street on Staten Island; East Harlem and Inwood in Manhattan; and parts of Flushing and Long Island City in Queens. The affordable housing created through Mandatory Inclusionary Housing in these and other areas where future zoning changes occur will help the City construct 80,000 new units of low- to moderate-income housing by 2024.

To keep the city's existing rental apartments from becoming even more unaffordable, Mayor de Blasio appointed to the Rent Guidelines Board members who are concerned about the impact of runaway rents on New Yorkers, particularly low-income New Yorkers. In June 2015, for the first time in its 46-year history, the board voted for a one-year rent freeze for tenants in the city's more than one million rent-stabilized apartments.

In OneNYC, the de Blasio Administration set out an array of supporting initiatives that the City will employ to increase the availability of affordable housing. Among them is a commitment to maximize the use of City-owned land for new housing. This will be achieved through the New Infill Homeownership Opportunities Program (NIHOP), which works to promote home ownership in mixed-income communities, and the Neighborhood Construction Program (NCP), which aggregates sites to develop affordable housing.

Among the other supporting initiatives the City committed to in OneNYC is a plan to conduct collaborative, holistic neighborhood planning to support the creation of new mixed-income housing with infrastructure and services. DCP's borough offices will work closely with community organizations, neighborhood residents, and other agencies on planning at the local level.

5.4 Homelessness

Another major housing-related initiative the City has undertaken involves the persistent problem of homelessness. Although programs to address homelessness address the worst impact of economically driven housing hardship, they are generally classified with the City's social service work rather than its anti-poverty efforts. This is due, in part, to the fact that poverty surveys conducted in the city are

done at the household level, and do not include people living on the street or in institutional settings such as homeless shelters.[2]

Like many cities, New York has long struggled with the problem of homelessness. In New York City, the problem is made far worse by the extremely low rental housing vacancy rate as noted above. In addition to the challenges posed by the city's extremely difficult housing market, many New Yorkers end up on the streets because of mental disabilities, substance issues, and other problems that require intervention and support.

Over the last year, the City has rolled out a number of new homelessness-related initiatives, culminating in a comprehensive plan with over 40 reforms designed to prevent vulnerable New Yorkers from becoming homeless, move homeless New Yorkers off the streets, and re-house individuals and families in shelter into permanent housing. Among the initiatives underway is HOME-STAT (Homeless Outreach & Mobile Engagement Street Action Teams), the most comprehensive street homelessness outreach effort ever undertaken in any American city. Over 500 workers are helping homeless people move from the streets to shelters where they can get the services they need. Those workers include canvassers, outreach workers, and agency and nonprofit personnel who are dedicated to providing housing, medical care, and job training to homeless New Yorkers. The City is ensuring that every person living on the street has a case manager dedicated to helping him or her move toward permanent housing, and convening regular cross-agency meetings to address obstacles that may be slowing progress for HOME-STAT clients. To help gauge the progress of this effort, the City is supplementing the annual Homeless Outreach Population Estimate (HOPE Count) with three new homeless counts and publicly reporting the findings.

The City has been expanding a number of other initiatives that provide help to the homeless. Through the Opening Doors program, for example, the City is adding 500 Safe Haven beds for individuals coming in from the streets. These new beds, which will bring the total number of Safe Haven beds to 1,174, will be available to people who do not want to enter a traditional shelter. The program also offers meals, social services, and other support. Substantial improvements to shelters are also underway, with increased security and accelerated repairs, including a public repair scorecard that tracks shelter conditions. The City has also begun implementing a plan to create 15,000 new units of supportive housing over the next 15 years.

Critically, there is an array of homelessness prevention programs designed to help New Yorkers who currently have housing to keep it. The Tenant Harassment Prevention Task Force provides many forms of assistance to tenants being pressured by landlords to leave their homes, including free or low-cost legal assistance. In the HomeBase program, community-based providers develop

1 We note that the homeless are a population in poverty but they are not included in the 20.7 percent in poverty described in this report. The CEO population is based on census surveys of the population but excludes all those living in group quarters, such as shelters and institutions. The provision of basic needs (food, clothing, shelter) by institutional providers and the lack of income of most residents means we are unable to completely describe their resources or poverty threshold consistent with the rest of the population.

individualized housing stability plans with tenants who are in danger of losing their homes. The program offers services such as eviction prevention, landlord mediation, and short-term emergency funding.

5.5 City University of New York

The de Blasio Administration is working to increase the support students receive as they make the transition from high school to college and career, and in particular to help those who enroll in the City University of New York (CUNY) to graduate. The City is fortunate to have CUNY not only as one of the nation's leading institutions of higher learning but as one that places particular emphasis on meeting the educational needs of a highly diverse student body (42 percent of undergraduates are first-generation college students). CUNY works hard to ensure that financial challenges do not prevent students from pursuing higher education. More than 58 percent of CUNY undergraduates attend college tuition-free with the help of Pell Grants and other tuition assistance. The City has a particular interest in CUNY's community colleges, traditionally an important gateway for disadvantaged students into higher education, which it helps to fund.

The City has a variety of initiatives designed to make the benefits of college more widely available. In his address on "Equity and Excellence" in September 2015, Mayor de Blasio talked about the importance of ensuring that every child has the opportunity to go to college and succeed there. The City launched College Access for All to give every student the resources and individually tailored supports at their high school to pursue a path to college, including providing students with opportunities to visit college campuses, get help completing applications, be paired with a college student mentor, and connect with resources on how to pay for college. The City's interest in success in higher education continues throughout students' academic careers. The CUNY Pipeline program, for example, is designed to provide educational and financial support to CUNY undergraduates from underrepresented groups who are interested in pursuing a Ph.D. degree.

The City and CUNY work together to build strong connections between DOE high schools and CUNY schools. Among their collaborative efforts is College Now, the nation's largest dual enrollment program, which offers college credit, pre-college, and experiential learning opportunities to more than 20,000 students in more than 400 high schools every year. About one quarter of New York City public high school students who graduated in the 2013–2014 academic year had some type of College Now experience, and nearly 20 percent of all graduates earned college credit through the program. Ninety percent of students who participated in College Now and graduated went on to enroll in college, compared to 58 percent of city high school graduates overall. In addition, Black and Hispanic students taking college credit classes showed more positive gains in credits earned in the first semester, grade point average (GPA), and third-semester persistence than Asian and White students, helping to close the achievement gap in college outcomes.

Another collaboration of this kind is the Early College Initiative (ECI) at CUNY, which helps 14 public high schools provide their students with a rigorous college preparatory curriculum and the opportunity to earn up to two years of college credit. ECI has begun to create partnerships among public high schools, CUNY colleges, and industry stakeholders so high school students can earn both a high school diploma and an associate degree – and gain work experience in an industry that may lead to future employment. The City's commitment to this program continues to grow: Enrollment in ECI rose from about 6,500 in academic year (AY) 2013–2014 to 7,900 in AY 2015–2016, a roughly 20 percent increase.

The City is also placing more emphasis than ever on helping to ensure that students who make it to CUNY succeed in their studies and obtain a diploma. The CUNY Accelerated Study in Associate Program (ASAP) has a proven record of increasing a student's ability to obtain an associate degree in a timely manner. CUNY ASAP provides financial, academic, and support services in a group or cohort model that offers students classes with other ASAP students configured around their work schedules. ASAP participants, including those who enter the system in need of remediation, have twice the three-year graduation rates of their peers. ASAP has also been shown to raise the number of credits earned, lower the cost per degree, and increase the number of students who transfer to four-year colleges. As of spring 2016, 31.1 percent of all ASAP students were enrolled as STEM (science, technology, engineering, and math) majors.

The City has committed substantially greater resources to CUNY ASAP and the funding continues to grow. The program served 2,278 new students in AY 2014–2015, 5,681 new students in AY 2015–2016, and is scheduled to serve 12,420 new students in AY 2018–2019. Total enrollment, which was 4,238 students in AY 2014–2015, rose to 8,016 in AY 2015–2016 and is expected to reach 25,190 in AY 2018–2019.

CUNY is also partnering with the Young Men's Initiative (YMI) to run a targeted campaign aimed at increasing enrollment of young men of color and working minority adults in ASAP, with a goal of reducing disparities in college graduation for these groups. Promotional materials were broadly distributed to high schools and community-based organizations, and a three-month social media campaign focused on the YMI demographic reached 500,000 young men between the ages of 18-24 and generated 30,000 clicks to the online ASAP Eligibility Checklist. An Outreach Team has also been conducting workshops and presentations citywide, sharing resources with students and school-based counselors in targeted schools.

In addition, NYC Men Teach—a collaboration between YMI, CUNY, the Department of Education, the Center for Economic Opportunity, and Teach for America—announced in January 2015 the goal of putting an additional 1,000 men of color on course to become New York City public school teachers over the next three years. NYC Men Teach is currently building its Principals and Mentors Networks, developing culturally sensitive counseling and leadership workshops, and taking other steps toward meeting the three-year goal.

The City is also engaged in pioneering work that uses behavioral interventions to help young people succeed in college. A program of assessment test priming, which helps students perform up to their true abilities on standardized testing, is helping students improve their scores on CUNY Assessment Tests, reducing the number of students who need to take remedial coursework. A Free Application for Federal Student Aid (FAFSA) Renewal intervention uses tailored email and text reminders to get students to re-file their FAFSA, which increases the likelihood of re-enrollment the following academic year. And the Summer Melt initiative, a collaboration with New Visions Schools, Goddard Riverside Options Center, and CollegeLine, reminds students about critical college enrollment tasks over the summer to ensure their matriculation in the fall.

5.6 Broadband Access

In the age of Internet, making low cost high-speed broadband service widely available is a powerful way of promoting greater opportunity and reducing poverty. For New York residents, affordable high-speed Internet is an important gateway to finding new and better employment, identifying educational and training programs, and accessing City services. For neighborhoods, a strong and low-cost Internet infrastructure is critical to attracting technology start-ups and other growing companies that can provide high paying jobs.

The de Blasio Administration has made broadband access a priority, with an emphasis on low-income communities and underserved parts of the city. In OneNYC, the de Blasio Administration set an ambitious goal that every resident and business will have access to affordable, reliable high-speed broadband service everywhere by 2025. It also announced that it would focus, in particular, on 1) promoting competition in the residential and commercial broadband markets; 2) providing high-speed service to low-income communities that currently lack it; 3) increasing investment in broadband corridors to reach high-growth business districts, especially in the outer boroughs; 4) promoting a seamless user experience across public networks throughout the city; and 5) other innovative approaches.

The City has been working hard to make this vision of universal access a reality. Last year, Mayor de Blasio created a budget line for broadband in the City's capital budget for the first time, committing $70 million over ten years for expanding access. And in the past two-and-a-half years, the administration has launched an array of groundbreaking broadband initiatives, including LinkNYC, the largest free Wi-Fi network in the world, and NYCHA Connected, which is bringing free broadband service to public housing residents in all five boroughs.

LinkNYC, which launched in early 2016, is on its way to being the world's largest and fastest free network. The initiative is being overseen by the City's Department of Information Technology and Telecommunications, and is replacing more than 7,500 pay phones in all five boroughs with "Link" structures that provide free superfast public Wi-Fi, local and long-distance phone calls, and device charging.

Table 5.1
Households by Computer and Internet Access by CEO Poverty
New York City, 2014

	Total NYC		In Poverty Below 100% Threshold		In Poverty 100-149% Threshold	
	Number	Percent	Number	Percent	Number	Percent
Access to the Internet						
Total Households	3,148,063	100.0	639,533	100.0	691,270	100.0
Yes, with subscription to an Internet service	2,378,056	75.5	391,745	61.3	452,451	65.5
Yes, without a subscription to an Internet service	108,058	3.4	26,048	4.1	23,686	3.4
No Internet access at this house, apartment, or mobile home	661,949	21.0	221,740	34.7	215,133	31.1
Type of Service*						
Households with Access to the Internet	2,378,056	100.0	391,745	100.0	452,451	100.0
Cable Internet service	1,638,457	68.9	274,033	70.0	322,236	71.2
Mobile broadband plan	971,622	40.9	130,324	33.3	160,846	35.5
Fiber-optic Internet service	533,256	22.4	80,347	20.5	92,595	20.5
DSL	361,154	15.2	69,054	17.6	77,140	17.0
Dial-up service	93,315	3.9	21,901	5.6	25,652	5.7
Satellite Internet service	64,820	2.7	12,459	3.2	14,730	3.3
Other Internet service	60,026	2.5	15,267	3.9	13,340	2.9
Own or Use a Computer*						
Total Households	3,148,063	100.0	639,533	100.0	691,270	100.0
Laptop, desktop, or notebook computer	2,432,520	77.3	400,938	62.7	461,531	66.8
Hand-held compter	2,224,223	70.7	363,935	56.9	418,435	60.5
Laptop, desktop, notebook OR hand-held computer	2,634,142	83.7	461,056	72.1	517,900	74.9
Other computer equipment	272,280	8.6	41,780	6.5	55,517	8.0
None	507,677	16.1	176,503	27.6	172,109	24.9

*Numbers will not add to the total because a household can have more than one type of service or equipment.
Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Link structures also include a tablet for Internet browsing, which can be used to view maps, directions, and access to City services. In addition to providing all these services, advertiser-supported LinkNYC will generate a half billion dollars in revenue for the City.

NYCHA Connected is bringing free broadband service to more than 21,000 public housing residents across the city. The initiative starts in the spring of 2016 at Queensbridge Houses, the nation's largest public housing project, and expands to Red Hook Houses in Brooklyn, Mott Haven Houses in the Bronx, the Stapleton Houses in Staten Island, and the Jefferson Houses in Manhattan in the next year and a half.

In addition to those large-scale initiatives aimed at bringing free broadband to the streets and to public housing, the City is launching an array of more specialized programs aimed at expanding the availability of low-cost broadband. ConnectIBZ, a public-private partnership launched by the City's Economic Development Corporation (EDC), is helping to bring 21st century businesses to all parts of the city by bringing high-speed broadband service to "digital deserts."

The City's three library systems have lent 10,000 mobile hotspots to New Yorkers who might otherwise be unable to access the Internet from home. The libraries will be expanding this program in 2017. Mayor de Blasio also helped to lead a coalition of mayors who advocated for modernization of the federal Lifeline program to subsidize residential broadband service. That modification has now been made, and the City intends to use the program aggressively to reduce the cost of residential broadband service for low-income households citywide.

Table 5.1 above shows the extent of Internet and broadband access among the poor and non-poor in New York City.

5.7 Ongoing Portfolio Programs

The NYC Center for Economic Opportunity, which produced this report, supports the City's efforts to apply research and evidence to reduce poverty and advance equity. As part of this citywide function, CEO also serves as an innovation arm of the Mayor's Office, working in conjunction with City agencies and other partners to develop, manage, and evaluate program and policy initiatives to support low-income New Yorkers.

CEO also works closely with the Young Men's Initiative, the pioneering municipal strategy for addressing disparities faced by young men of color.

A selection of initiatives supported by CEO and YMI is listed in Table 5.2.

Table 5.2
Selected Performance Indicators from CEO and Young Men's Initiative (YMI)

EDUCATION		
CUNY Accelerated Study in Associate Programs (ASAP) (CUNY) **CEO launched 9/2007**	Fiscal Year 2015 Comparison Group	Fiscal Year 2015 Actual
Enrollees Cohort 9 (entered Academic Year 2015–2016)	TBD	5,681
Enrollees Cohort 8 (entered Academic Year 2014–2015)	2245	2,278
Enrollees Cohort 7 (entered Fall 2013)	1,837	1,847
Cohort 6 (Fall 2012) Graduation Rate after Three Years	28.9%	55.4%
Cohort 5 (Fall 2011) Graduation Rate after Three Years	24.8%	57.1%
Young Adult Literacy Program / Community Education Pathways to Success (DYCD/BPL/NYPL/QPL/DOP) **CEO launched 11/2007, YMI expansion began 8/2011**	Fiscal Year 2014	Fiscal Year 2015
New Enrollees	859	713
Gained 1 or More Literacy Grade Level	38% (329/859)	39% (276/713)
Gained 1 or More Numeracy Grade Level	25% (219/859)	37% (267/713)
EMPLOYMENT		
Jobs-Plus (NYCHA/HRA/DCA-OFE) **CEO launched 10/2009, YMI expansion began 3/2013**	Fiscal Year 2014	Fiscal Year 2015
New Enrollees	4,533	4,962
Placed in Jobs	1,268	1,377
3-Month Job Retention	726	617
Sector-Focused Career Centers (SBS) **CEO launched 6/2008**		
New Enrollees	13,523	14,091
Placed in Jobs Paying $10/hour or More, or Promoted	2,373	1,932
Young Adult Internship Program (DYCD) **CEO launched 11/2007, YMI expansion began 8/2011**		
Participants	1,805	1,857
Percent of Participants who Completed internship	83%	82%
Percent of Participants Placed in Employment or Education	49%	52%
ASSET DEVELOPMENT		
Financial Empowerment Centers (DCA/OFE), CEO launched 6/2008	Fiscal Year 2014	Fiscal Year 2015
New Enrollees	6,503	7,086
Financial Counseling Sessions	12,070	13,420
Cumulative Savings	$3.0 M	$3.6 M
Cumulative Debt Reduced	$23.9 M	$33.1 M

Table 5.2 continued on next page.

Table 5.2
Selected Performance Indicators from CEO and Young Men's Initiative (YMI)
(continued from previous page)

HEALTH		
School-Based Health Centers (DOHMH), CEO launched 6/2008	Fiscal Year 2014	Fiscal Year 2015
Program Participants	17,919	17,915
Program Participants Utilizing the Clinics	11,207	11,603
Number of Total Clinic Visits	55,987	59,398
Shop Healthy NYC (DOHMH), launched 1/2012		
Number of Stores That Are Promoting Healthy Foods	133	308
Number of Community Members Who Attended a Training Event	503	483
JUSTICE		
Arches: Transformative Mentoring (DOP),YMI launched 7/2012	Fiscal Year 2014	Fiscal Year 2015
Program Participants	892	412
Number of New Participants Receiving One-On-One Mentoring	345	451
Number Completed Program	42%	47%
Employment Works (SBS and DOP), CEO launched 8/2008		
Program Participants	2,805	2,849
Placed in Jobs	863	986
6-Month Job Retention	29% (230/799)	41% (223/697)
Justice Community (DOP), YMI launched 1/2012		
Program Participants	367	236
Placed in Job or Education	36%	20%

5.8 Selected Performance Indicators

Addressing poverty and its related challenges involves many parts of City government. Table 5.3 shows the breadth of this effort, presenting data on the performance of an array of City agencies drawn from the Preliminary Mayor's Management Report (PMMR) of February 2016. The PMMR includes data on the performance of City agencies during fiscal years 2013–2015, as well as the first four months of fiscal year 2016.

These charts reflect activity from fiscal years 2013–2015, which are the closest available comparisons to the 2014 poverty data contained in this report. For more detailed information on the agencies, initiatives, indicators, and their performance over time, see the full MMR report at: www.nyc.gov/mmr

Table 5.3
Selected Agency Performance Indicators

Agency/Program Area	Indicator Name	FY13	FY14	FY15
ADMINISTRATION FOR CHILDREN'S SERVICES				
Early Child Care & Education	Average EarlyLearn contract enrollment	30,096	30,422	30,079
	EarlyLearn - Average center-based enrollment	25,548	24,068	23,077
	EarlyLearn - Average family child care enrollment	4,549	6,354	7,002
	Average EarlyLearn Utilization (%)	71.4%	82.1%	81.8%
	Average EarlyLearn Utilization - Center-based (%)	76.2%	84.6%	82.0%
	Average EarlyLearn Utilization -Family child care (%)	52.9%	73.9%	81.4%
	Average mandated children voucher enrollment	56,649	54,852	55,000
	Average other eligible children voucher enrollment	15,107	12,689	11,801
	Average center-based child care voucher enrollment	27,552	26,401	27,052
	Average family child care voucher enrollment	21,503	21,507	22,177
	Average legally exempt (home-based) voucher enrollment	22,700	19,633	17,572
	Average legally exempt (home-based) voucher enrollment	22,700	19,633	17,572
CITY UNIVERSITY OF NEW YORK (CUNY)				
Academic Success	Six-year systemwide graduation rate (%) - CUNY associate degree students	30.1%	31.7%	30.5%
	Six-year systemwide graduation rate (%) - CUNY baccalaureate students	51.0%	52.6%	52.7%
	CUNY associate degree recipients who transfer to a CUNY baccalaureate program within one year (%)	52.3%	51.5%	54.0%
	One-year (fall-to-fall) retention rate of full-time first-time freshmen enrolled in CUNY associate degree programs	66.6%	67.1%	67.9%
	One-year (fall-to-fall) retention rate of full-time first-time freshmen enrolled in CUNY baccalaureate degree programs	86.5%	86.6%	87.3%
DEPARTMENT FOR THE AGING (DFTA)				
Administer in-home services	Total meals served (000)	11,521	11,597*	11,671
	Hours of home care services provided	890,232	996,105*	906,442
	Total recipients of home care services	2,835	3,250	2,928
Administer senior centers	Senior center utilization rate (%)	1	86%*	1
Administer the caregiver program	Persons who received information and/or supportive services through DFTA's in-house and contracted Caregiver programs		9,296	11,612

Table 5.3 continued on next page.

Table 5.3 **Selected Agency Performance Indicators** *(continued)*

Agency/Program Area	Indicator Name	FY13	FY14	FY15
DEPARTMENT OF HOMELESS SERVICES (DHS)				
Adult Services	Single adults entering the DHS shelter services system	16,448	17,547	18,091
	Adults receiving preventive services who did not reside 21 days or more in the shelter system (%)	96.7%	96.0%	93.5%
	Average number of single adults in shelters per day	9,536	10,116	11,330
	Average length of stay for single adults in shelter (days)	293	305	329
	Single adults who exited to permanent housing and returned to the DHS shelter services system within one year (%)	4.5%	4.4%	2.0%
Adult Services (Street Homelessness Reduction)	Unsheltered individuals who are estimated to be living on the streets, in parks, under highways, on subways and in the public transportation stations in New York City (HOPE)	3,180	3,357	3,182
Family Services (Adult Families)	Average number of adult families in shelters per day	1,723	1,866	2,110
	Adult families entering the DHS shelter services system	1,156	1,283	1,385
	Average length of stay for adult families in shelters (days)	469	515	534
	Adult families who exited to permanent housing and returned to the DHS shelter services system within one year (%)	15.0%	12.5%	14.2%
	Adult families receiving preventive services who did not enter the shelter system (%)	95.5%	97.3%	91.5%
Family Services (Families with Children)	Average number of families with children in shelters per day	9,840	10,649	11,819
	Families with children entering the DHS shelter services system	12,306	11,848	12,671
	Families with children who exited to permanent housing and returned to the DHS shelter services system within one year (%)	9.5%	12.5%	16.5%
	Families with children receiving preventive services who did not enter the shelter system (%)	93.0%	94.0%	94.5%
General Education Teaching and Learning	Students in grades 3 to 8 meeting or exceeding standards - English Language Arts (%)	26.4%	28.4%	30.4%
	Students in grades 3 to 8 meeting or exceeding standards - Math (%)	29.6%	34.2%	35.2%
Graduation and Dropout Prevention	Students in cohort graduating from high school in 4 years (%) (NYSED)	66.0%	68.4%	70.5%
	Students in cohort graduating from high school in 6 years (%) (NYSED)	74.7%		
	Students with disabilities in cohort graduating from high school in 4 years (%) (NYSED)	37.5%	40.5%	41.1%
	Students with disabilities in cohort graduating from high school in 6 years (%) (NYSED)	48.2%		
	Students in cohort dropping out from high school in 4 years (%) (NYSED)	10.6%	9.7%	9.0%

Table 5.3 continued on next page.

Table 5.3 **Selected Agency Performance Indicators** *(continued)*

Agency/Program Area	Indicator Name	FY13	FY14	FY15
DEPARTMENT OF HOMELESS SERVICES (DHS)				
Graduation and Dropout Prevention (con't)	Students with disabilities in cohort dropping out from high school in 4 years (%) (NYSED)	17.6%	15.8%	15.4%
Community Development Programs	Community anti-poverty program participants achieving target outcomes designated for clients in each program area (%)	60.0%	61.0%	67.0%
Literacy Programs	Participants in DYCD-funded English literacy programs meeting federal standards of improvement in their ability to read, write, and speak English (%)	59.0%	54.0%	52.0%
Out-of-School Time Programs (OST)	COMPASS NYC programs meeting minimum attendance rate goal - elementary (school-year) (%)	84.0%	83.0%	87.0%
	COMPASS NYC programs meeting target enrollment (school year) (%)	96.0%	95.0%	96.0%
	COMPASS NYC programs meeting target enrollment (summer) (%)	93.0%	95.0%	92.0%
Runaway and Homeless Youth (RHY) Services	Utilization rate for crisis beds (%)	98.0%	98.0%	99.0%
	Utilization rate for transitional independent living (TIL) beds (%)	91.0%	94.0%	96.0%
	Youth reunited with family or placed in a suitable environment from crisis shelters (%)	86.0%	83.0%	89.0%
	Youth reunited with family or placed in a suitable environment from Transitional Independent Living (TIL) centers (%)	91.0%	93.0%	92.0%
Youth Employment programs (OSY and ISY)	Youth who are out-of-school, attend a DYCD-funded training or employment program, and are placed in post-secondary education, employment, or advanced training in the 1st quarter after exiting the program (%)	70.0%	68.0%	68.0%
	Youth who attend a training program while in school and are placed in post-secondary education, employment, or advanced training during the 1st quarter after exiting the program (%)	77.0%	78.0%	82.0%
Health Insurance Access	Uninsured patients served	475,627	469,239	421,647
Tenant Resources	Section 8 voucher utilization rate	98.2%	98.2%	93.3%
Agencywide Management	Fair hearings upheld (%)		7.0%	5.2%
Cash Assistance Administration	Cash assistance unduplicated number of persons (12-month) (000)	607	589.1	591.1
	Cash assistance caseload (point in time)(000)	193.1	182.4	192.4
	Individuals and families at imminent risk diverted from becoming homeless (%)	93.9%	88.9%	
	Cash assistance application timeliness rate (%)	92.6%	93.6%	94.4%

Table 5.3 continued on next page.

Table 5.3 **Selected Agency Performance Indicators** *(continued)*

Agency/Program Area	Indicator Name	FY13	FY14	FY15
DEPARTMENT OF HOMELESS SERVICES (DHS)				
Child Support Enforcement	Child support cases with orders of support (%)	70.1%	71.5%	73.2%
	Current obligations collected (%)	70.9%	84.4%	68.4%
Employment Programs	Family cases engaged in training or education in accordance with New York City guidelines (%)	23.7%	24.3%	25.5%
	Clients whom HRA helped obtain employment (000)		48.1	46.6
	Cash assistance family cases participating in work or work-related activities per federal guidelines (official federal fiscal year-to-date average) (%)	34.1%	33.9%	34.1%
	HRA clients who obtained employment, and maintained employment or did not return to CA for 180 days (City fiscal year-to-date average) (%)		74.5%	73.9%
	Safety Net Assistance (SNA) cases engaged in training or education in accordance with New York City guidelines (%)	16.2%	19.0%	20.7%
Public Health Insurance	Application timeliness rate for Medicaid administered by HRA (%)	98.3%	91.7%	96.5%
Supplemental Nutrition Assistance Program	SNAP application timeliness rate (%)	96.0%	87.2%	81.4%
Public Housing Access	Occupancy rate (%)	98.8%	99.4%	99.5%
Resident/Social Services	Resident job placements	1,567	874	1,084
	Emergency Transfer Program disposition time (days)	54.25	45.91	48.17
	RETIRED - Average daily attendance in community centers ages 6-12	1,980	1,144	609
	RETIRED - Average daily attendance in community centers ages 13-19	1,437	646	571
Section 8 Program	Section 8 Occupied Units (vouchers)	91,892	88,529	86,167
	Utilization rate for Section 8 vouchers (%)	93.9%	91.2%	88.1%
Workforce1 Career Centers	Workforce1 systemwide job placements and promotions	28,166	36,097	26,952

Source: Preliminary Mayor's Management Report. February 2016. New York. See: http://www1.nyc.gov/assets/operations/downloads/pdf/pmmr2016/2016_pmmr.pdf

Appendices

Appendix A

The Poverty Universe and Unit of Analysis

The Introduction to this report noted that a measure of poverty must establish a threshold, a line that demarcates the poor from the rest of society. It must also define what resources a family can draw on to meet its needs. Once these parameters are in place, a method for measuring poverty needs to assess to which groups in the population it can be meaningfully applied. The "poverty universe" is the population whose poverty status can be determined.

Another important task is to create a "poverty unit of analysis." People live together for a variety of reasons. The ones that are relevant to poverty measurement are that they pool economic resources and satisfy material needs as a unit. As described below, CEO expands the definition of the unit of analysis beyond the family-based unit that is employed by the official measure.

Who Is Counted When Measuring Poverty?

Not everyone can be counted when measuring poverty. For example, the poverty universe used by the Census Bureau in its official poverty measure excludes most people living in "group quarters" such as college dormitories, nursing homes, military bases, and prisons.[1]

It is easy to see why. Much of this population is in no position to earn income. At the same time, group quarters residents typically receive housing, meals, and other services that are provided by the institutions in which they reside. The former condition could be used to judge that every individual in an institutionalized setting is poor. The latter condition could be used to judge that these individuals' basic material needs are being met and that they are not poor. Either choice reveals that a concept of poverty as material deprivation is an awkward fit for this group.

1 For a definition of group quarters, see: http://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2014_ACSSubjectDefinitions.pdf

Table A.1
The CEO Poverty Universe, 2014

	Number	Percent
Household Population	8,313,491	97.9%
Group Quarters Population	178,742	2.1%
Total Population	8,492,233	100.0%

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

An additional challenge when determining the poverty status of group quarters residents is the lack of information the American Community Survey (ACS) provides about them, particularly their relationship with others. A college student living in a dormitory, for example, may have little or no personal income, but might be comfortably supported by parents. That information is unavailable in the survey. All of these reasons make it very difficult to determine the poverty status of group quarters residents. CEO, therefore, excludes the entire group quarters population from our measure.

Another group that is excluded from the official poverty measure is unrelated individuals living in households who are under 15 years of age. They are not assigned a poverty status because, as unrelated individuals, whether they would be poor or not poor would depend on their personal income. The ACS, however, does not collect data on the incomes of persons under 15 years of age. CEO, by contrast, includes this group in our poverty universe. As explained below, unrelated individuals under 15 are placed in a poverty unit with other members of the household in which they reside and their poverty status is determined by the income of the unit as a whole.

In sum, the CEO poverty universe excludes the entire group quarters population, but includes the entire household population in the ACS sample for New York City. As Table A.1 illustrates, the universe for this study includes 8.313 million out of the 8.492 million city residents in 2014. All of the excluded, close to 179,000 people or 2.1 percent of the population are living in group quarters.

The Poverty Unit of Analysis: Who Is Sharing Income and Expenses?

From the perspective of the current official methodology, individuals are considered poor if the total income of the family in which they live fails to reach the appropriate poverty threshold for their family's size and type. The rationale for this is straightforward: family members who reside in the same household share resources and living expenses. Spouses typically pool their income and make joint decisions about major expenditures. Parents provide financial support to their children. Treating family members as lone individuals whose poverty status is determined by their own income would place nearly every non-working spouse and child in poverty.

Families in the official poverty measure are composed of people who are related to the household head by blood, marriage, or adoption.[2] CEO modifies this definition of the family unit in three ways:

1. People who are unmarried partners of the household head are considered part of that head's family rather than separate unrelated individuals.[3] Following a recommendation by the National Academy of Sciences (NAS) Panel, such people are treated as the householder's spouse.[4] If the household also includes children of the partner who have not already been identified as children of the reference person, they are included as children in the householder-unmarried partner family.

2. CEO creates additional family units, referred to as "unrelated subfamilies." These are family units within households that do not include someone who is related to the householder. An example of such a unit would be two persons who are married to each other and are boarders in someone else's home. Because of data limitations, unrelated subfamilies can only be observed when they are composed of married couple families, with or without their own children, or single persons with children.

3. We place other unrelated individuals who we identify as being claimed as dependents for tax filing purposes into the poverty unit of those claiming them. Individuals claimed as dependents are being supported by others in the household. Given that relationship, we judge that they should be members of the poverty unit of the person(s) upon whom they are dependent. This step assigns

2 The ACS does not identify unrelated subfamilies. See below for a definition of this group.

3 The ACS Subject Definitions defines an unmarried partner as "a person age 15 years and over, who is not related to the householder, who shares living quarters, and who has a close personal relationship with the householder." Beginning in 2013, the ACS allows same-sex married couples to identify themselves as such. We make no gender distinction in our analysis of married couples or unmarried couples.

4 Citro and Michael, p. 306.

Table A.2
The Unit of Analysis for Poverty Measurement, 2014

	Number of Persons	Share of Poverty Universe
People in CEO Expanded Families	6,913,680	83.2%
People in Unmarried Partner Families	454,537	5.5%
People in Unrelated Subfamilies	33,535	0.4%
Unrelated Individuals Living with Others	381,837	4.6%
Unrelated Individuals Living Alone	1,017,974	12.2%
Total Poverty Universe	8,313,491	100%

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

non-relative indigent adults and nearly all the unrelated children in private households to a poverty unit. In the few instances where the tax program cannot connect an unrelated child to a tax unit (see Appendix D describing the CEO tax model), the child joins the poverty unit of the household's reference person.[5]

Together, these three modifications bring over 451,000 individuals who would have been treated as single-person poverty units or excluded from the poverty universe in the official measure into multi-person poverty units in the CEO measure.

Thus, the poverty unit of analysis for this study is composed of:

1. Expanded families: all persons residing in the same household who are related to the household's reference person by blood, marriage, adoption, or are the reference person's unmarried partner (and any children and dependents of that partner not already identified as related to the reference person), or others who are claimed by the household head as dependents for tax filing purposes. As Table A.2 reports, this group accounts for 83.2 percent of the total poverty universe. Persons living in families that include an unmarried partner, a subgroup within the expanded family category, comprise 5.5 percent of the poverty universe.

2. Unrelated subfamilies. This subgroup accounts for only 0.4 percent of the poverty universe.

3. The remainder of the poverty universe is composed of "unrelated individuals." These are people who are either living alone (12.2 percent of the poverty universe) or are living in a household with others with whom they have no familial or obvious economic relationship (4.6 percent of the poverty universe). Both groups of unrelated individuals are treated as "single-person families" and their poverty status is determined using their individual CEO incomes.

A poverty threshold is assigned to each unit based on its size and composition (see Appendix B). The sum of the resources of all the people in the unit is computed and compared to the appropriate threshold to determine whether the members of the unit are poor.

5 For a detailed description of how these units are created and evaluation of the accuracy of CEO's methods, see Virgin, Vicky, "Creating the CEO Poverty Unit: An Evaluation Using the CPS ASEC." June 2011. Available at: www.irp.wisc.edu/research/povmeas/Poverty_ unit_analysis_CEO_2011.pdf

Appendix B

Deriving a Poverty Threshold for New York City

One of the primary goals of the CEO poverty measure is to establish a realistic standard of need for New York City. In our first three reports, we created a poverty threshold that was based on the 1995 recommendations of the National Academy of Sciences (NAS). The Interagency Technical Working Group's (ITWG) March 2010 guidelines called for a similar, but not identical, approach to drawing the poverty line.[1] These recommendations are reflected in the Supplemental Poverty Measure (SPM) the Census Bureau first released in November 2011.[2]

CEO revised the method we use to construct a New York City-specific threshold in light of the ITWG's guidelines. Bringing our threshold into closer alignment with the SPM makes our poverty rates more commensurable with those issued by the Census Bureau. However, we have not followed the SPM in all respects. This appendix briefly describes the SPM threshold and the ways in which CEO has followed or diverged from the SPM method. It then provides the steps we take to create our New York City-specific threshold. Because year-to-year changes in the threshold are important to understanding changes in poverty rates over time, it also compares growth in CEO's New York City threshold with the U.S.- wide SPM and the official thresholds.

From NAS to SPM

The NAS recommended that the first step in creating the poverty threshold was to compute a nationwide threshold based on the distribution of expenditures on food, clothing, shelter, and utilities by a reference unit composed of two-adult, two-child families.[3] Expenditures are measured using a three-year moving

1 Observations from the Interagency Technical Working Group on Developing a Supplemental Poverty Measure. March 2010. Available at: www.census.gov/hhes/www/poverty/SPM_TWGObservations.pdf

2 Short, Kathleen. The Research Supplemental Poverty Measure: 2010. U.S. Bureau of the Census. November 2011. Available at: www.census.gov/hhes/povmeas/methodology/supplemental/research/Short_ ResearchSPM2010.pdf

3 Two-adult, two-child units are referred to as the reference family because, as we discuss below, the thresholds for other families are calculated in reference to families of this type. This family was chosen by the NAS because it is the most common structure among families that include children less than 18 years of age.

average of data available in the Bureau of Labor Statistics' Consumer Expenditure Survey (CE). An additional factor is included in the base threshold to account for miscellaneous expenses, such as non-work-related travel, household supplies, and personal care products.

The NAS did not recommend a specific poverty line; instead, it suggested that the threshold fall between the 30th and 35th percentile of the distribution of what families spend on the items in the threshold. The NAS also offered an upper and lower bound for the factor that accounts for miscellaneous necessities, a multiplier ranging from 1.15 to 1.25 times the food, clothing, shelter, and utilities expenditure estimate.[4]

The SPM threshold is also based on CE measures of expenditures on the same group of necessities. However, the SPM differs from the prior NAS method in four respects:

1. The SPM expands the reference family to include all Consumer Units in the CE with exactly two children, not just those with two adults.

2. The SPM is based on the 33rd percentile of the expenditure distribution, not a fixed percentage of the median of the distribution.

3. The SPM uses a five-year moving average of expenditure data. The NAS had proposed a three-year moving average.

4. The SPM creates separate thresholds to reflect differences in housing status for owners with a mortgage, owners free and clear of a mortgage, and renters. The NAS-based research had used a common threshold for these groups.[5]

Accounting for Housing Status

CEO has adopted the first three of the changes listed above. However, we have not followed the fourth, the ITWG guidelines that call for the creation of separate thresholds by housing status. Instead, CEO accounts for all differences in housing status on the income side of the poverty measure, applying a housing status adjustment to all households that reside in "non-market rate" housing. This includes homeowners without a mortgage, renters living in rent-regulated units, and renters who do not pay cash rent, along with renters participating in means-tested housing assistance programs.

The different approaches reflect the availability of data that describe the unique features of the New York City housing market. The SPM method has been created for use with the Census Bureau's Current Population Survey (CPS). The CPS indicates whether respondents own or rent their housing. A newly added question identifies

4 Citro and Michael, p. 106.

5 The NAS report was aware of the limitations of this approach and suggested that one remedy would be to develop a separate threshold for homeowners with low or no housing costs. Citro and Michael, p. 245.

homeowners who make or do not make mortgage payments. The CPS, however, does not provide information about housing expenditures, and the Survey provides little other information (such as the size or condition of the housing unit) that would make estimating these feasible. The SPM's recourse is to create separate thresholds, by housing status, derived from the housing expenditure data available in the CE.

CEO, by contrast, uses the American Community Survey (ACS) as its principal data set. The ACS identifies homeowners who make mortgage payments, homeowners free and clear of a mortgage, renters who pay rent, and renters who do not pay cash for their shelter. In addition, the ACS provides data on what nearly all households pay out of pocket for their shelter and utilities.[6] The unique-to-New York City Housing and Vacancy Survey (HVS) provides CEO with the ability to identify households that are participating in the wide variety and far-reaching array of housing affordability programs available to renters in the city. This creates the opportunity to account for the advantages of home ownership free of a mortgage and participation in housing affordability programs on a household-by-household basis, without having to construct separate thresholds that try to capture them "on average."

Given the wealth of data available to us, CEO concluded that we should take advantage of it. Our income-side method for accounting for housing status is detailed in Appendix C.

Geographic Adjustment

The NAS argued that because living costs are not uniform across the United States, the poverty thresholds should be geographically adjusted. Since research indicates that the largest source of the disparity in inter-area living costs is a result of differences in housing costs, the NAS Panel recommended that only the part of the threshold that is made up of shelter and utilities expenditures should be adjusted. It further suggested that the ratio of area-specific to U.S.-wide Fair Market Rents (FMR) developed by the U.S. Department of Housing and Urban Development (HUD) could be used as the adjustment factor.[7]

Following the ITWG Guidelines, the SPM uses the ratio of median rents for two-bedroom units for its adjustment factor, but computes these from the ACS. CEO continues to use HUD's Fair Market Rents for two-bedroom units. The FMR ratio for New York City differs from the ACS ratio (1.51451 vs. 1.37413) in 2014 because they measure different things.[8] Fair Market Rents are representative of recently rented units of standard quality. The rent data from the ACS covers all rental units except the very small number that lack complete plumbing and kitchen facilities. Because rent regulation is so widespread in New York City, rents at the median of the ACS distribution are not an accurate reflection of the market rate rental housing market.

6 The exception is renters participating in tenant-based subsidy programs. CEO imputes their expenditures by a statistical match with the New York City Housing and Vacancy Survey.

7 Citro and Michael, pp. 182-201. The NAS Panel regarded this approach as provisional, pending further research.

8 Both ratios are computed using a five-year moving average from their respective data sources.

This creates two inconsistencies. First, the SPM method compares a New York City median rent that is influenced by housing affordability programs against a U.S.-wide median that (because of the very narrow scope of these programs nationally) is not. The impact of rent regulation on the ACS-based rents for New York City creates a second inconsistency in that CEO is already accounting for the effect of housing affordability programs on the income side of the poverty measure. CEO, therefore, continues to use the FMRs to create the adjustment factor.

Table B.1 provides the steps taken in creating the CEO threshold for 2014. The 2014 U.S.-wide SPM threshold (before the housing adjustment) is $25,178.[9] Housing (shelter and utilities) makes up nearly half (49.4 percent) of this threshold. The housing portion is multiplied by the ratio of U.S. to New York City Fair Market Rents (1.51451) and comes to $18,848. This is added together with the (unadjusted) non-housing portion of the threshold, yielding a New York City-specific threshold of $31,581. This CEO threshold is 25 percent higher than the U.S.-wide SPM threshold. The geographic adjustment implies that a New York City resident needs $1.25 to obtain a standard of living equivalent to what $1 would obtain, on average, across the United States

Table B.1
Creation of CEO Threshold, 2014

U.S.-wide SPM Threshold	$25,178
Housing Portion of Threshold	49.4%
Geographic Adjustment Factor	1.51451
Adjusted Housing Portion of Threshold	$18,848
CEO Threshold	$31,581

Sources: U.S. Bureau of Labor Statistics and U.S. Department of Housing and Urban Development.
Note: See text for explanation of concept.

Adjustment for Poverty Unit Size

Once a threshold for the reference family has been set, thresholds need to be calculated for families (or poverty units) of other sizes and compositions (i.e., number of children and number of adults). This study uses the three-parameter scale developed by David Betson after the release of the NAS report.[10] The scale has been used in the Census Bureau's NAS-based poverty reports and in the new SPM.

Table B.2 provides a selection of family size adjustments using Betson's scale. These are known as equivalence scales because they are used to compute the amounts of income needed by families of different types to be equivalently well off. The scales

9 For 2013, the Bureau of Labor Statistics did not report a pre-housing status adjustment SPM threshold. CEO calculated it from the data provided at http://www.bls.gov/pir/spmhome.htm#threshold

10 Betson, David. Is Everything Relative? The Role of Equivalence Scales in Poverty Measurement. University of Notre Dame. March 1996. Available at: http://aspe.hhs.gov/poverty/papers/escale.pdf

Table B.2
Factors Used by CEO to Adjust Reference Family Thresholds for Units of Other Sizes and Types

	Number of Children Under 18			
Number of Adults	**None**	**One**	**Two**	**Three**
One	0.463	0.699	0.830	0.953
Two	0.653	0.880	1.000	1.114
Three	1.000	1.114	1.223	1.328
Four	1.223	1.328	1.430	1.529

Source: Computed by CEO based on Betson, David, Is Everything Relative? The Role of Equivalence Scales in Poverty Measurement. University of Notre Dame. 1996.

give the adjustments that are needed to convert the threshold for the reference family of two adults and two children to thresholds for other family sizes. For example, to calculate the threshold for a family of two adults and one child, the table indicates that the reference family threshold of $31,581 would have to be multiplied by 0.88, which would yield a threshold of $27,797.

Table B.3 lists the resulting CEO poverty thresholds for a variety of families and compares them to the official thresholds for families of corresponding sizes and compositions. The CEO thresholds are always higher, but not by the same factor.

Table B.3
Comparison of Poverty Thresholds, 2014

Poverty Unit Composition	CEO	Official	Ratio CEO/Official
One Adult*, No Child	$14,637	$12,316	1.188
Two Adults*, No Child	$20,638	$15,853	1.302
One Adult*, One Child	$22,087	$16,317	1.354
One Adult, Two Children	$26,221	$19,073	1.375
One Adult, Three Children	$30,092	$24,091	1.249
Two Adults, One Child	$27,797	$19,055	1.459
Two Adults, Two Children	$31,581	$24,008	1.315
Two Adults, Three Children	$35,180	$28,252	1.245

*Adult is non-elderly in official threshold.
Sources: U.S. Bureau of the Census and CEO calculations from Tables B.1 and B.2.

This reflects the differences between the Betson scale and the scale implicit in the official thresholds. An important difference between the scaling methods (not reported in the table) is that the official method creates a different, and lower, poverty threshold for individuals and some families with a householder who is age 65 or older. The official threshold for a single adult is $12,316 if he or she is under 65, but $11,354 if that person is older. The CEO threshold makes no distinction by age. While the CEO threshold for a single, non-elderly person is 1.188 times the official threshold, it is 1.289 times the official threshold for a single, elderly person.

Changes in the Poverty Thresholds Over Time

Measuring poverty is an exercise in comparing incomes to thresholds. Thus, part of understanding changes in poverty rates over time is tracking how the thresholds are changing from one year to the next. Table B.4 provides the official U.S.-wide SPM and CEO reference family thresholds for 2005 through 2014. It also reports the percentage change in the thresholds from the prior year as well as the ratio of the SPM to official, CEO to official, and CEO to SPM thresholds.

From 2005 to 2010, the SPM and CEO thresholds grew at a faster rate than the official threshold. From 2010 to 2011, the percentage increases in the three thresholds are quite similar. But from 2011 to 2012, the official threshold rose by 2.1 percent while the SPM threshold edged down by 0.2 percent and the CEO threshold grew by 0.3 percent. A similar pattern was repeated in the next year. From 2012 to 2013, the official threshold increased by 1.5 percent while the SPM inched down by 0.1 percent and the CEO threshold grew by 0.4 percent. Between 2013 and 2014, the three thresholds return to a similar pattern of increase with the official threshold growing by 1.6 percent, the SPM threshold increasing by 1.0 percent, and the CEO threshold growing by 1.4 percent. What accounts for this unusual pattern?

Year-to-year changes in the official threshold are determined by the year-to-year growth in the U.S.-wide Consumer Price Index for All Urban Consumers. Annual changes in the SPM and CEO thresholds, however, reflect changes in five-year moving averages in consumer expenditures. The threshold is a combination of housing and non-housing expenditure, which may not move along the same trajectory in any given year. The two NAS-style thresholds for 2012 are determined by households' spending during the 2008 to 2012 period, that is, in the wake of the bursting of the housing bubble and the Great Recession-related fall in income. Both these factors would be expected to reduce housing expenditures, the largest component of the U.S.-wide SPM threshold. From 2011 to 2012, the housing share of the U.S.-wide SPM declined by $170, from $12,325 to $12,155 (table not shown).

For 2014, the SPM and CEO thresholds are based on households' spending during the 2010 to 2014 period, which includes the start of the slow-yet-steady economic recovery. We expect to see an increase in housing expenditures in the U.S.-wide SPM threshold. From 2013 to 2014, the housing share of the U.S.-wide SPM increased by $177, from $12,268 to $12,445, partially offsetting prior year declines.

Table B.4
Poverty Thresholds, 2005–2014

Reference Family Thresholds			
Year	**Official**	**U.S.-wide SPM**	**CEO**
2005	$19,806	$20,492	$24,532
2006	$20,444	$21,320	$25,615
2007	$21,027	$22,317	$26,979
2008	$21,834	$23,608	$28,822
2009	$21,756	$23,854	$29,265
2010	$22,113	$24,343	$30,055
2011	$22,811	$24,999	$30,945
2012	$23,283	$24,959	$31,039
2013	$23,624	$24,931	$31,156
2014	$24,008	$25,178	$31,581
Percentage Change from Prior Year			
Year	**Official**	**U.S.-wide SPM**	**CEO**
2006	3.2%	4.0%	4.4%
2007	2.9%	4.7%	5.3%
2008	3.8%	5.8%	6.8%
2009	-0.4%	1.0%	1.5%
2010	1.6%	2.0%	2.7%
2011	3.2%	2.7%	3.0%
2012	2.1%	-0.2%	0.3%
2013	1.5%	-0.1%	0.4%
2014	1.6%	1.0%	1.4%
Ratio of Thresholds			
Year	**SPM/Official**	**CEO/Official**	**CEO/SPM**
2005	103.5%	123.9%	119.7%
2006	104.3%	125.3%	120.1%
2007	106.1%	128.3%	120.9%
2008	108.1%	132.0%	122.1%
2009	109.6%	134.5%	122.7%
2010	110.1%	135.9%	123.5%
2011	109.6%	135.7%	123.8%
2012	107.2%	133.3%	124.4%
2013	105.5%	131.9%	125.0%
2014	104.9%	131.5%	125.4%

Sources: U.S. Bureau of Labor Statistics and U.S. Department of Housing and Urban Development.

In 2014, growth in the total U.S.-wide SPM was positive, reversing the decline from the last two years. This increase was the result of growth in both the housing portion of the threshold ($177) and the non-housing component ($70), as illustrated in Table B.5. As a result, the U.S.-wide SPM increased from $24,931 to $25,178, an increase of $247 or 1.0 percent.

The housing portion of the CEO threshold grew by $356 in 2014, increasing the total CEO threshold by $425 from 2013. The housing portion of the threshold is increasing at a faster rate in the CEO threshold than in the SPM threshold. Over time, this has resulted in the CEO poverty threshold growing faster than both the SPM and official thresholds. At the same time, the official threshold has been growing faster than the SPM since 2010, closing some of the gap between the two measures.

Table B.5
Change in SPM and CEO Poverty Thresholds, 2013–2014

U.S.-wide SPM	Portion		
Year	Housing	Non-Housing	Total
2013	$12,268	$12,663	$24,931
2014	$12,445	$12,733	$25,178
Change	$177	$70	$247
New York City CEO	**Portion**		
Year	Housing	Non-Housing	Total
2013	$18,493	$12,663	$31,156
2014	$18,848	$12,733	$31,581
Change	$356	$70	$425

Sources: U.S. Bureau of Labor Statistics and U.S. Department of Housing and Urban Development.
Note: Totals are computed from unrounded numbers.

Appendix C

Adjustment for Housing Status

Housing plays a central role in National Academy of Sciences (NAS)-type poverty measures. As noted in Appendix B, housing needs are represented in the creation of the threshold and account for nearly one-half of the U.S.-wide Supplemental Poverty Measure (SPM) poverty line. Differences in housing expenditures are also the basis for adjusting the SPM poverty thresholds to account for inter-area differences in living costs.

An ongoing concern among poverty researchers is how to account for differences in housing status. This has often been thought of as two distinct issues. One is the requirement to account for the lower spending needs that homeowners who are free and clear of a mortgage have relative to homeowners who are carrying a mortgage.[1] A second issue is how to value means-tested housing assistance, such as residence in public housing or participation in tenant-based subsidy programs.[2]

The Interagency Technical Working Group (ITWG) Observations addressed these concerns. The new SPM accounts for the first housing status issue by creating distinct thresholds for owners with a mortgage, owners without a mortgage, and renters. In addition, recent research by Census Bureau staff has established an approach to valuing means-tested housing assistance that has been incorporated into the SPM.[3]

Appendix B explained why CEO believes that a household-by-household adjustment on the income side of the poverty measure is the most appropriate way for us to measure the advantages of ownership free and clear of a mortgage, residence in rent-regulated housing units, or participation in a means-tested housing assistance program. This appendix begins with the conceptual issue of how best to define "advantage" in a way that can be measured in dollars that are added to a family's income. After describing our approach, the appendix details the steps we take to

1 See, for example: Garner, Thesia I., and David Betson, Housing and Poverty Thresholds: Different Potions for Different Notions. March 2010. Available at: www.bls.gov/pir/spm/spm_pap_housing10.pdf

2 A variety of approaches to valuing housing subsidies are discussed in Renwick, Trudi, Improving the Measurement of Family Resources in a Modernized Poverty Measurement. U.S. Bureau of the Census. January 2010. Available at: www.census.gov/hhes/povmeas/publications/overview/RenwickSGE2010.pdf

3 Johnson, Paul D., Trudi Renwick, and Kathleen Short. Estimating the Value of Federal Housing Assistance for the Supplemental Poverty Measure. SEHSD Working Paper #2010-13. July 2011. Available at: www.census.gov/hhes/povmeas/methodology/supplemental/research/ SPM_HousingAssistance.pdf

create the estimates needed to implement it. We conclude with a note about the housing adjustment for homeowners without a mortgage.

Measuring Advantage

Not all New Yorkers require the same level of expenditure to obtain shelter of comparable size and quality. Renters in public housing or rent-regulated units, renters who receive a tenant-based subsidy, and homeowners free and clear of a mortgage have lower housing costs than residents of "market rate" housing. To account for this advantage, the CEO poverty measure makes an adjustment to the income of the non-market rate households.[4]

The housing adjustment for non-market rate renters is calculated as the lesser of either:

1) Adjustment = the estimated market rate gross rent of their housing unit minus their actual out-of-pocket housing expenditures

Or

2) Adjustment = the housing portion of the threshold minus their actual out-of-pocket housing expenditures

The estimated market rate gross rent of a rent-regulated or subsidized unit is what the household would be paying for the unit if its costs equaled that of a market rate unit of similar size and quality. The housing adjustment for homeowners who are free and clear of a mortgage is always calculated using the second alternative. (The reason why we take a somewhat different approach for this group is taken up below.)

This approach rests on several judgments. The first is that the quality of non-market housing units is not inferior to market rate units of similar size and quality. If non-market housing residents were simply paying less for their housing because they were living in poorer quality homes, then there would be little or no advantage to their housing status. As we demonstrate below, our modeling of market rate rents indicates that many non-market rate renters, particularly those that are participants in means-tested housing programs, are able to secure housing whose market value is well in excess of what they actually spend to meet their housing needs.

A second judgment is that residence in non-market rate housing can take resources that would have been devoted to housing available to meet other non-housing needs. However, the advantage of residence in non-market rate housing is not fully fungible. By its construction, the adjustment cannot exceed the value of the housing portion of the threshold. Even if a household is enjoying shelter that would cost many times the value of the housing portion of the threshold, the entire difference between what it is paying for its housing and the housing's market value does not represent a resource it can use for other purposes. Thus a family will be

4 If more than one poverty unit resides in a household, the housing adjustment is prorated across the units according to their relative size.

counted as poor if its income, after meeting its housing needs, is not sufficient to meet its non-housing needs.

In our final judgment call, we do not allow for negative adjustments. If out-of-pocket expenditures exceed the housing portion of the threshold, the difference is not deducted from the poverty unit's income. This rule rests on the judgment that housing of adequate quality is available at a level of expenditure equal to the housing portion of the threshold. Or, more simply put, that the housing portion of the threshold is not too low. Expenditures in excess of the housing portion of the threshold, therefore, are discretionary and do not belong in a measure of poverty.

In order to implement this approach we need to: 1) Distinguish market from non-market rate housing units; 2) Measure out-of-pocket housing costs; and 3) Estimate market rents for non-market rate units. We begin with a description of how we make use of the New York City Housing and Vacancy Survey (HVS) to create the necessary data.[5]

Identifying Housing Status and Out-of-Pocket Rents

Participants in means-tested housing assistance programs, tenants in rent stabilized/controlled apartments, tenants who pay no rent, and homeowners free and clear of a mortgage receive a housing adjustment to their income. The American Community Survey (ACS) provides some of the information needed to identify these groups. The survey indicates which households own their home and whether or not they are carrying a mortgage. It also identifies those renter households who do not pay any cash rent.

There are, however, two crucial pieces of information that the ACS does not contain, both of which pertain to renters. First, the ACS does not indicate whether the household resides in public housing, a rent-regulated unit, or is receiving a tenant-based subsidy. The second piece of missing information is that the ACS does not identify a tenant-based subsidy recipient's out-of-pocket expenditures for shelter and utilities. There are two rent variables in the ACS – contract rent and gross rent. Contract rent is the rent received each month by the landlord. Gross rent is contract rent plus utility payments. These two variables do not represent renter out-of-pocket expenditures for shelter and utilities, if the household is participating in a rental subsidy program.[6]

To address these deficiencies we turn to the HVS, which collects detailed information on geographic, demographic, and housing-related characteristics of housing units and their occupants. By matching renter households in the ACS to renter households in the HVS, we are able to impute the missing housing program status and the out-of-pocket expenditures data to the ACS. Our matching routine is based on a set

5 A complete description of the HVS can be found at: www.census.gov/hhes/www/housing/nychvs/nychvs.html

6 Although ACS respondents are instructed to provide the rent received by the landlord, it is unclear whether subsidy recipients include the portion of the rent they do not pay in their answers. See: Parker, Julie. Rent: A Story of Misreporting? NAWRS 2010. Available at: http://www.nawrs.org/LA2010/Papers/t1c3.pdf

of household and head-of-household characteristics that identify corresponding households between the ACS and HVS. Listed below are characteristics used for matching renter households in the matching algorithm:

1. Neighborhoods: Community District (CD) or Public Use Microdata Area (PUMA).

2. Race/Ethnicity of the householder (Non-Hispanic White, Non-Hispanic Black, Hispanic, Non-Hispanic Asian, and Other Race).

3. Whether the householder was 65 or older.

4. Equivalized household income as a ranking based on the distribution. (Income is banded into septiles, sextiles, quintiles, and quartiles calculated for each respective data set.)

5. Contract rent as a ranking based on the distribution. (Contract rent is also banded similarly to equivalized household income.)

6. Number of bedrooms in the household (studio, 1 through 4+).

7. Household composition (husband and wife with and without children, male- and female-headed single households with and without children, households of unrelated people, and single person households).

8. Whether or not the household had wage income.

Our initial match is an attempt to match on all eight household characteristics. If we do not find a matching household in the HVS, we incrementally remove or relax characteristics and attempt to match again. Our goal is to preserve the geographical, racial, and family composition distribution of the housing statuses found in the HVS. Because the distribution of participation in means-tested housing assistance (in particular the location of public housing) varies by neighborhood, we attempted to match as many households as possible within the same neighborhood. We then move to adjacent neighborhoods and, finally, to neighborhoods within the same borough.

Once the ACS and HVS renter households are matched, a housing status variable to categorize the ACS households is created. This categorical scheme is derived from variables that are unique to the HVS[7] and variables that are common to the ACS and HVS: renter with no rent, homeowner free and clear of a mortgage, and homeowner with a mortgage. The housing status categories are summarized in Table C.1. It is important to note that when a household lived in public housing or Mitchell-Lama rental housing and received tenant-based subsidies, it is characterized as a tenant-based subsidy household. We use housing expenditures reported in the ACS for all housing statuses, except subsidy recipients, whose out-of-pocket rent is derived from

7 The variable used was Control Status, which indicates what type of housing development the unit is in, as well as identifying whether or not that household participated in at least one of the several tenant-based subsidy programs that are available to low-income renters.

Table C.1
The Unit of Analysis for Poverty Measurement, 2014

Renter	
Public Housing	Living in a building that is NYCHA-operated public housing.
Mitchell-Lama	Living in Mitchell-Lama rental housing.
Tenant-Based Subsidy	Receiving Federal Section 8, Public Assistance Shelter Allowance, Senior Citizen Rent Increase Exemption, "Jiggets" rent supplement program, Employee Incentive Housing Program, Work Advantage Housing program for the homeless, or some other federal, State, or City subsidy program.
Stabilized/Controlled	Living in an apartment under rent control or rent stabilization status.
Other Regulated	Living in an apartment under Article 4 or 5, HUD or Loft Board regulated building, or building owned by the City in "In Rem" status.
Market Rate	Living in a rental apartment that is neither public housing nor stabilized/controlled, and whose occupants do not receive a subsidy.
No Cash Rent	Does not pay cash rent to occupy apartment.
Owner	
Owned Free and Clear	Living in a housing unit that is owned with no mortgage.
Paying Mortgage	Living in a housing unit that is owned and has a mortgage.
No Mortgage Status Reported	There is no mortgage status reported in the HVS.

Sources: New York City Housing and Vacancy Survey and American Community Survey Public Use Micro Sample as augmented by CEO.
Note: Tenant-based subsidy takes precedence over all other housing statuses. For example, if someone lives in public housing and also receives a subsidy, they are categorized as receiving a subsidy.

variables in the HVS. A more detailed description of our ACS-HVS match can be found in the housing appendix of our poverty report for 2005-2009, published in 2011.[8]

Table C.2 provides the results of the match between the 2014 HVS (most recent available) and 2014 ACS. The percentage distribution of households between the donor HVS and the recipient ACS by housing status categories is extremely close. In no case does the difference between the distributions exceed 1.6 percentage points.

8 Available at: www.nyc.gov/html/ceo/downloads/pdf/poverty_measure_2011.pdf

Table C.2
Comparison of Housing Status Between 2014 HVS and 2014 ACS

	2014 HVS		2014 ACS		Percentage Point Difference
Housing Status	**Frequency**	**Percent**	**Frequency**	**Percent**	
Renter					
Public Housing	162,821	5.2%	182,159	5.8%	-0.6
Mitchell-Lama Rental	30,988	1.0%	30,124	1.0%	0.0
Tenant-Based Subsidy	257,717	8.2%	234,329	7.4%	0.8
Stabilized/Controlled	865,753	27.7%	856,302	27.2%	0.5
Other Regulated	26,503	0.8%	78,011	2.5%	-1.6
Market Rate	711,665	22.8%	724,397	23.0%	-0.2
No Cash Rent	53,391	1.7%	61,054	1.9%	-0.2
Owner					
Owned Free and Clear	374,869	12.0%	386,508	12.3%	-0.3
Paying Mortgage	640,431	20.5%	595,179	18.9%	1.6
Total	3,124,138	100.0%	3,148,063	100.0%	

Sources: American Community Survey Public Use Micro Sample as augmented by CEO and New York City Human Resources Administration.

Estimating Market Rents

Market value is a hypothetical level of expenditure that must be estimated. In the economics literature, the value of housing services is often thought of as a bundle of different physical and location-specific characteristics of a given unit. We can, therefore, estimate the market rent of non-market rate housing by fitting a hedonic regression model accounting for these factors to a sample consisting of market rate units, and then apply the resulting coefficients to the same set of characteristics of non-market rate units.

Before describing the model, a clarification should be made. The dependent variable in the regression is the gross rent currently paid for the unit. Thus, in this context, market value is not necessarily equal to what a unit would rent for if it were placed on today's market. Since our concern is differences in current spending needs between residents of market and non-market housing units, the former sense of market value is what we need to measure.

To estimate market rate rents, we rely on the 2005, 2008, 2011, and 2014 New York City Housing and Vacancy Surveys, which contain detailed information on the location and physical condition of rental units. For these years, we estimate a regression model on the subset of observations that are in market rate rental units. We employ variables that measure housing quality at three levels: the unit/tenant, the building, and the neighborhood. The unit/tenant-specific indicators are the number of rooms and the length of the tenant's tenure, which captures the negotiating power accrued by long-term tenants. At the building level, we use measures of building conditions, building size, building age, and whether the owner lives in the building. To capture neighborhood effects, we include a subjective "neighborhood quality" measure as reported by the tenant, as well as median PUMA income and dummy variables for the super-PUMA in which the building is located.[10] We use super-PUMA dummies rather than PUMA dummies due to the limited number of market-rate units in some of the PUMAs. By including median PUMA income in the model, however, we are able to capture some of the variation in neighborhood effects at the PUMA level.

The relationship between gross rent and many of its predictor variables is complex and nonlinear. In order to achieve the best possible fit to the data, we employ nonparametric techniques via a Generalized Additive Regression Model (GAM). A GAM is a regression model that allows different functional forms for each independent variable. Some of the variables used in the regression are included as dummy variables, while others are fit nonparametrically, using smoothing spline functions.[11] The regression variables are defined in Table C.3.[12]

10 Super-PUMAs are Census-defined geographic units that represent approximately 400,000 residents. In their level of geographic detail, New York City's 15 super-PUMAs stand between the city's five boroughs and its 55 PUMAs.

11 Smoothing splines are a particular type of nonparametric smoothing technique. For an overview of smoothing spline functions and GAM, see Keele, Luke John, Semiparametric Regression for the Social Sciences. West Sussex, England: John Wiley and Sons, Ltd. 2008.

12 Nonparametric variables do not have reported coefficients, but rather have smoothed bivariate plots. These plots are available from the authors upon request.

Table C.3
Regression Variables

Variable	Description	Variable	Description
Tenant Tenure	Years in Apartment	Number of Units	
Rooms	Number of Rooms	Super-PUMA Indicators	Northern Bronx Omitted
4+ Stories, No Elevator	Dummy (1 = Four or More Stories and No Elevator)		Southern Bronx
Median PUMA Income	Median Income within PUMA, in Thousands of Dollars		Northern Kings
Tenant Rating Indicators	Rated Fair Omitted		Western Kings
Rated Excellent	Buildings in Neighborhood Rated by Tenant		Central Kings
Rated Poor	Buildings in Neighborhood Rated by Tenant		Eastern Kings
Year Built Indicators	Built before 1947 Omitted		South Kings
	Built 2000+		Eastern Manhattan
	Built 1990–1999		Northern Manhattan
	Built 1980–1989		Western Manhattan
	Built 1970–1979		Richmond
	Built 1960–1969		Northern Queens
	Built 1947–1959		Eastern Queens
	Built 1930–1946		South Eastern Queens
	Built 1920–1929		Southern Queens
	Built 1901–1919		
	Built 1900 and earlier		

The results of the regression for 2014 are shown in Table C.4. The models for 2005, 2008, and 2011 (not shown) have a similar fit. The widest divergence in the coefficients across the years is in variables that are not statistically significant. In particular, the relationship between gross rent and median PUMA income in all four years' models is quite close and highly significant.

Table C.4
Regression Model of Market Rate Rents, 2014

Dummy Variables	Estimate	t-Statistic
Intercept	1642.43	23.07
4+ Stories, No Elevator	-265.11	-3.34
Rated Excellent	130.60	3.50
Rated Poor	81.66	0.78
Southern Bronx	-25.17	-0.12
Northern Kings	286.36	3.21
Western Kings	407.40	4.26
Central Kings	176.22	1.90
Eastern Kings	-104.01	-1.20
South Kings	-67.39	-0.79
Northern Manhattan	525.84	4.61
Eastern Manhattan	1459.57	12.75
Western Manhattan	1707.02	13.94
Richmond	-418.58	-3.92
Northern Queens	119.25	1.37
Eastern Queens	19.37	0.20
South Eastern Queens	-318.33	-3.30
Southern Queens	-151.91	-1.60
Nonparametric Variables	**EDF**	**F-Statistic**
Log of Median PUMA Income	6.76	11.19
Tenant Tenure	1.00	111.00
Year Built	8.61	3.89
Number of Rooms	4.64	124.88
Number of Units	3.94	14.48
N		3,403
R^2		0.574

Source: 2014 New York City Housing and Vacancy Survey.
Notes: Dependent variable is monthly gross rent. Data weighted with the New York City Housing and Vacancy Survey household weight.

We then use the regression models to compute estimated market-rate rent values for the non-market rental units. Table C.5 shows the reported gross rent, estimated market rent, and their difference for various categories of renters in the 2014 HVS. The data are presented as rent per number of bedrooms, since the average number of bedrooms tends to vary across rental groups. The small difference between the reported and estimated rents for market rate units highlights the quality of the model's fit. By contrast, there are large per-bedroom differences between the reported out-of-pocket rent and the estimated market rate rents for all the non-market rate groups. This is especially the case for public housing units, with a mean per-room difference of $473 in 2014. The considerably higher market rate estimates are consistent with our assumption that non-market renters are, indeed, advantaged relative to market rate renters.

Table C.5
Mean Reported Gross Out-of-Pocket Rent and Estimated Market Rate Rent, Per Bedroom

Housing Status	Gross Out-of-Pocket Rent	Estimated Market Rent	Difference
Market Rate	$837	$849	-$12
Public Housing	$193	$666	-$473
Mitchell-Lama Housing	$567	$889	-$322
Tenant-Based Subsidy	$548	$638	-$89
Stabilized/Controlled	$691	$874	-$183
Other Regulated	$480	$949	-$469
No Cash Rent	$0	$626	-$626

Source: 2014 New York City Housing and Vacancy Survey..

Table C.6 reports the mean difference between households' out-of-pocket housing expenditures and two values: 1) the housing portion of the threshold, and 2) the estimated market rent. These two differences correspond to the two income adjustment equations described previously. The differences that are based on the estimated market rate rents are uniformly higher (on average) than those using the housing portion of the threshold for all groups.[13] When we apply the rule of taking the smaller of the two differences to compute the housing adjustment to income, Equation (1) is used in the majority of cases, ranging from 19.5 percent of the time for renters in stabilized/controlled units to 76.2 percent of the time for renters who are not paying cash for their housing. This indicates

13 The mean adjustment using the housing portion of the threshold for rent-stabilized and controlled units is negative, indicating that a majority of these households' housing expenditures exceed that standard. This is not surprising, as rent control and stabilization are not means-tested programs.

Table C.6
Housing Portion of the Threshold vs. Estimated Market Rate Rent, 2014

Housing Status	(1) Adjustment Using Housing Portion of the Threshold		(2) Adjustment Using Estimated Market Rate		Share Using Household Portion of the Threshold
	Mean	Median	Mean	Median	
Public Housing	$6,589	$5,855	$14,002	$12,704	71.7%
Mitchell-Lama Housing	-$1,835	-$883	$7,980	$6,228	33.6%
Tenant-Based Subsidy	$7,572	$6,335	$11,409	$10,400	59.0%
Rent-Stabilized/Controlled	-$2,710	-$2,065	$5,026	$3,292	19.5%
Other Regulated	$2,928	$3,870	$11,441	$10,983	60.9%
No Cash Rent	$12,236	$10,662	$20,772	$18,167	76.2%

Source: American Community Survey Public Use Micro Sample as augmented by CEO. Note: Data weighted by the ACS household weight.

that, for the most part, renters of non-market units are not "paying" for their cheaper rents by living in housing that is of such low quality that it would rent for less than the housing portion of the threshold.

Impact of the Housing Adjustment on the Poverty Rate

The housing adjustment continues to have the largest impact on the CEO poverty rate of all the non-cash resource components. In 2014, it reduced the citywide poverty rate by 6.6 percentage points. As Table C.7 indicates, the reductions for recipients of means-tested assistance are particularly large. For example, valuing housing assistance reduces the poverty rates for individuals in public housing and those receiving tenant-based subsidies by 28.1 and 27.7 percentage points, respectively.

The effect of our housing status adjustment on the citywide poverty rate grew markedly over time, from 5.5 percentage points in 2010 to 6.3 percentage points in 2011 and 2012, and 6.6 percentage points in 2013 and 2014. What would have accounted for such a large increase in the impact of the housing adjustment? One possible explanation for the rise is that there was an unusual jump in the housing portion of the CEO threshold between the four years. Since the threshold caps the value of the housing adjustment, an unusually large rise in this part of the poverty threshold might explain a rise in the value of the housing adjustment and its effect on the poverty rate. However, no such jump occurred. From 2010 to 2011 the housing portion of the threshold for the reference family increased by 2.7 percent. This is smaller than the 3.4 percent increase from 2009 to 2010, and in fact, the housing portion of the threshold actually decreased by 0.2 percent from 2011 to 2012. In 2013 and 2014, with the economic recovery, the housing portion of the threshold increased, but only slightly – by 1.4 percent and 1.9 percent, respectively.

Table C.7
Effect of Housing Adjustment on the Poverty Rate, 2014

	Poverty Rate Based on Total CEO Income	Poverty Rate without Housing Adjustment	Percentage Point Difference
Total Population	20.7%	27.3%	-6.6
Renter			
Public Housing	30.3%	58.4%	-28.1
Mitchell-Lama Rental	26.0%	37.6%	-11.6
Tenant-Based Subsidy	36.2%	63.9%	-27.7
Stabilized/Controlled	22.8%	28.5%	-5.7
Other Regulated	18.3%	33.3%	-15.0
Market Rate	25.6%	25.6%	0.0
No Cash Rent	15.0%	38.7%	-23.7
Owner			
Owned Free and Clear	9.6%	16.5%	-6.9
Paying Mortgage	11.8%	11.8%	0.0

Source: 2014 New York City Housing and Vacancy Survey..

We used the 2011 HVS for imputing housing status for the 2011, 2012, and 2013 ACS. The 2014 HVS is matched with the 2014 ACS. This creates the risk that a new survey would cause an abrupt shift in the distribution of housing statuses beginning in 2014 and generate a marked change in the influence of the housing status adjustment on the poverty rate. To investigate this possibility, we matched the 2011 HVS to the 2014 ACS and computed the before and after housing status adjustment poverty rates. We found that there was only a 0.2 percentage point difference (6.8 percentage points compared to 6.6 percentage points) in the effect of the adjustment on the New York City poverty rate.

This suggests that the jump in the housing status adjustment effect is the result of something intrinsic to our method for valuing housing status, and that there is a growing gap between the market-equivalent value of the non-market rate rental units and what these renters are paying out of pocket for their housing. We see evidence of this in Table C.8. Across nearly all of the renter groups that receive a housing status adjustment, the estimated market rent continues to be higher than

the out-of-pocket gross rent. This difference is slightly higher in 2014 than we have seen in the previous year. A large (40.1 percent) increase in the difference between the estimated market rate rents compared to actual out-of-pocket rents for stabilized/controlled housing units for 2014 compared to 2013 is shown in Table C.8. We believe this rise is largely attributable to an adjustment in the Census Bureau's handling of that housing type starting in the 2014 HVS, which brought a number of higher rent units into that category that previously would have been categorized as deregulated market rate units.[14]

Table C.8
Mean Actual Gross Out-of-Pocket Rent and Estimated Market Rate Rent

	2013			2014			Percentage Change from 2013		
Housing Status	**Actual Out-of-Pocket Gross Rent**	**Estimated Market Rent**	**Difference**	**Actual Out-of-Pocket Gross Rent**	**Estimated Market Rent**	**Difference**	**Actual Out-of-Pocket Gross Rent**	**Estimated Market Rent**	**Difference**
Public Housing	$568	$1,760	$1,192	$583	$1,799	$1,215	2.8%	2.2%	1.9%
Mitchell-Lama Housing	$1,135	$2,015	$880	$1,330	$2,126	$796	17.1%	5.5%	-9.5%
Tenant-Based Subsidy	$466	$1,400	$935	$533	$1,541	$1,008	14.4%	10.1%	7.9%
Stabilized/Controlled	$1,311	$1,630	$319	$1,415	$1,862	$447	7.9%	14.2%	40.1%
Other Regulated	$735	$1,651	$915	$862	$1,878	$1,017	17.2%	13.8%	11.1%
No Cash Rent	$118	$1,636	$1,519	$114	$1,928	$1,813	-3.0%	17.8%	19.4%

Sources: 2013 and 2012 American Community Survey as augmented by CEO.

A Note on Accounting for the Advantage of Home Ownership Free and Clear of a Mortgage

As noted above, CEO does not take the same approach to valuing the advantage of owning a home free and clear of a mortgage as we do for non-market rate renters. We only use the difference between the housing portion of the threshold and out-of-pocket housing expenditures to make the housing adjustment for this group. In effect, we are assuming that the market value of the units that are owned free and clear would at least be equal to the housing portion of the threshold.

We attempted to test this assumption by applying our hedonic regression model to the housing units that are owned free and clear. The results we obtained were not credible. Table C.9 provides the distribution of estimated market rate rents for market rate units and units that are owned free and clear.

14 The rent regulation sequence for the 2014 NYCHVS was adjusted to give higher priority to the Division of Housing and Community Renewal's (DHCR) reported rent regulation status than in the past. If applied to the 2011 NYCHVS data, about 34,000 more rent stabilized units than previously reported would result, largely consisting of higher rent units that previously would have been coded as deregulated by virtue of high rent vacancy deregulation, but in fact were still listed by DHCR as stabilized. See: http://www.census.gov/housing/nychvs/

Table C.9
Distribution of Per-Bedroom Estimated Market Rent by Housing Status

	Renters Market Rate	Owners Free and Clear	Difference
Mean	$849	$694	-$156
Percentile			
5	$327	$319	-$8
10	$380	$355	-$25
25	$462	$434	-$28
50	$596	$544	-$52
75	$1,000	$757	-$243
90	$1,762	$1,280	-$482
95	$2,026	$1,692	-$334

Source: CEO estimates from the 2014 NYC HVS.

The monthly, per-bedroom market rate rent estimates for the free-and-clear homeowners are below those for the market rate renters, by $156 for the mean and $52 for the median. This would suggest that the housing services consumed by these New York City homeowners are inferior to market rate renters. There are reasons to be skeptical of this result. As a group, the homeowners enjoy higher incomes than do renters. Table C.10 shows the distributions of family-size and composition-adjusted CEO Income (net of the housing adjustment) for market rate renters and homeowners without a mortgage.

Table C.10
Distribution of Family-Size Adjusted CEO Income by Housing Status

	Renters Market Rate	Owners Free and Clear	Difference
Mean	$69,903	$91,008	$21,106
Percentile			
5	$12,259	$16,388	$4,129
10	$20,734	$23,934	$3,201
25	$31,263	$40,001	$8,737
50	$48,601	$66,283	$17,682
75	$82,541	$105,230	$22,689
90	$141,041	$174,199	$33,158
95	$195,597	$263,270	$67,673

Source: American Community Survey Public Use Microsample as augmented by CEO.
Note: Income is measured before the addition of the housing adjustment.

The free-and-clear homeowners enjoy considerably higher incomes than do market rate renters, by $21,106 for the mean and $ 17,682 at the median. Despite this, the hedonic model predicts that the rental value of their housing is inferior to the renters.

This seems highly implausible, suggesting that the hedonic model does not produce valid market rate rent estimates for this group. Hedonic models will only yield accurate estimates if the market rate apartments are sufficiently similar in their physical characteristics and geographic distribution to those owned free and clear in the city. This does not appear to be the case. For example, only five percent of the market rate rental units are in single-unit buildings, compared to 33 percent of homeowners free and clear of a mortgage. This five percent of market rate renters translates into only 178 unweighted observations in the HVS. A second important difference is geographic location of housing. Homes that are owned free and clear tend to be located in the periphery of the city – in Staten Island, Eastern Queens, etc. They are less likely to be located in the city's core, especially Manhattan. There, we are more likely to find market rate rental units. Given the limitations of our model, we conclude that simply using the difference between the housing portion of the threshold and out-of-pocket housing expenditures is a less error-prone approach to the housing adjustment for the free-and-clear owners than the method we use for the non-market renters.

Appendix D

The CEO Tax Model

Low-income families, especially those with children, often find that their refundable tax credits are greater than the taxes they owe. The result is that many low-income families have a negative tax rate – they receive more from the income tax system than they pay into it. The expansion of tax credits to low-income families, as well as to those more well off, has been a key component of federal economic stimulus programs since 2008. Some of the credits initiated during the Great Recession have been extended into 2013 and still affect the poverty measure. Tax programs remain an increasingly important component of the resources available to families to meet their needs. At the same time, all working families are also subject to payroll taxes under the Federal Insurance Contribution Act (FICA). FICA payments offset some of the gains derived from income tax credits. But even when payroll taxes are accounted for, the total tax effect on income leads to a reduction in the CEO poverty rate.

The Tax Model

The American Community Survey (ACS), our primary source of data, does not include information about taxes. CEO, therefore, has created a tax model. The model's first task is to create tax filing units within ACS households. It then applies the tax code to estimate the taxes owed and tax credits received for New York City tax filers.

Creating Tax Filing Units

ACS households consist of all persons residing in the same housing unit. Within the household, each member is identified only through their relationship to the person answering the ACS questionnaire. This person is designated as the reference person and is usually, but not always, the primary owner or renter of the household. The remaining residents of the household may form a complex network of relationships. Occupants may include a family embodying several generations; families unrelated to the respondent; and one or more unrelated

individuals, including roomers and boarders. Because residents are only identified in relation to the reference person, we cannot always see how they may be related to each other. For tax purposes, this presents a challenge. We need to use the information available in the ACS to estimate how many tax returns are filed from each household, and identify who on each return is the filer (along with their spouse and dependents). CEO addresses this problem by first dividing ACS households into Minimal Household Units (MHUs) that create a richer set of information about how persons in the household are related to each other. For example, two boarders individually listed as married will be linked together using age and other demographic characteristics. The children of unmarried partners (unless they are coded as children of the respondent) are identified in a similar manner and are then coded as the child of a specific parent.[1] The tax model then identifies MHU members who are tax filers, along with their spouse or dependent(s). Additional decisions are made about allocating children and indigent household members to filers as dependents.[2] Based on these decisions, each tax filer is then given a status of Married Filing Joint, Head of Household, Single, or Married Filing Separate.[3]

The Tax Calculator

A simulated federal, New York State, and New York City tax return is prepared for each tax filing unit based on income and other data provided in the ACS.[4] We identify adjusted gross income (AGI) for the tax unit, which is the sum of all earned income, interest income, and other income sources. Social Security income is included to the extent it is taxable. Personal exemptions and standard deductions are then subtracted from AGI to find taxable income. The federal tax liability on that income is calculated and then – going through the steps of a federal 1040 tax return – we compute each of the tax credits for which filers are eligible. Once the 1040 is completed, an IT-201 New York State tax return is modeled, which relies on income and credit calculation from the federal return. The IT-201 generates New York State and City tax liabilities and credits. In a final step, FICA payroll taxes are applied to all wage and salary income, and self-employment taxes are deducted from self-employment earnings.

Tax Policy

Poverty Rate Estimates for the years 2008 to 2012 contain deductions, credits, or expansion of existing credits that were a key feature of the Bush and Obama

1 The MHU methodology is derived from Jeffery Passel, "Editing Family Data in Census 2000 Public-Use Microdata Samples: Creating Minimal Household Units (MHUs)." August 23, 2002. The application of Passel's method to the CEO model is explained in Virgin, Vicky, Creating the CEO Poverty Unit: An Evaluation Using the CPS ASEC. June 2011. Available at: www.irp.wisc.edu/research/povmeas/Poverty_ unit_analysis_CEO_2011.pdf

2 The methodology used to create tax filing units is discussed at length in NYC Center for Economic Opportunity, The CEO Poverty Measure, 2005–2008. New York, NY: Center for Economic Opportunity. 2010. Available at: http://www.nyc.gov/html/ceo/downloads/pdf/ceo_poverty_measure_v5.pdf

3 The ACS does not provide enough information to identify widows, the other filing status used by the IRS.

4 Due to a lack of data in the ACS, tax estimates for middle to higher income households are less accurate than estimates for lower income households. We do not estimate itemized deductions, capital gains, and other tax items more common to higher income returns. For this reason, we confine our analysis to filers with AGI under $50,000.

Administrations' economic stimulus programs. In 2014, the Affordable Care Act Individual Responsibility Mandate was activated and several new income tax credits were enacted at the local level. We describe these policy initiatives in detail below.

- **Recovery Rebate Tax Credit for Individuals:** A one-time tax rebate included in the Economic Stimulus Act of 2008. The credit was based on information provided in the 2007 tax return, to be paid out in 2008. The maximum payment was $600 for single filers, $1,200 for married filers, and an additional $300 per qualifying child.[5]

- **Additional Standard Deduction for Real Estate:** Passed as part of the Housing Assistance Act of 2008 and extended for 2009 by the Emergency Economic Stabilization Act of 2009. Filers who took the standard deduction (all filers in the CEO tax model) and were homeowners could claim an additional standard deduction of up to $500 ($1,000 for married filers) against their local property taxes.

- **Additional Child Tax Credit:** The Additional Child Tax Credit is a refundable supplement to the Child Tax Credit. Prior to passage of the Emergency Economic Stabilization Act of 2008, the credit required a minimum earned income of over $12,050 in 2008 and $12,550 in 2009. The Act lowered the income threshold to $8,500 for 2008 and reduced it again to $3,000 in 2009. The result is that more filers with lower incomes receive a refundable credit.

- **Making Work Pay Tax Credit (MWP):** A credit of up to $400 ($800 for married filers). The CEO model added it as a refundable tax credit in 2009 and 2010. In 2009, the Economic Recovery Payment was deducted from the MWP for eligible recipients (see below).

- **Economic Recovery Payment:** A payment of $250 distributed in 2009 to recipients of Social Security or Supplemental Security Income (SSI) payments and Veterans or Railroad Retirement benefits. The ACS allows us to identify only Social Security and SSI recipients. Although not technically a tax credit, we included this payment as a tax offset.

- **Expansion of the Earned Income Tax Credit (EITC):** Two changes occurred in 2009. First, the increased maximum credit for married filers accelerated the already ongoing elimination of the marriage penalty in the EITC. Second, a third tier of credits was added to allow filers with more than two children to claim a larger credit. The maximum possible credit for a married couple with three children was $4,824 in 2008. In 2013, the maximum credit for this family rose to $6,044.

5 The Stimulus Act became law in early 2008, just as returns were being filed for 2007 taxes. It was paid as a tax refund, using 2007 income as an estimate for 2008 income. Filers who had already sent in a tax return could claim the rebate retroactively, carrying it into calendar year 2009. Filers whose 2008 income generated a different credit than that based on their 2007 returns had to reconcile the difference in their 2008 return, filed in early 2009. We assume that all filers received the credit in calendar year 2008, at an amount based on the model's 2008 estimates. We include no rebate credit in 2009. We assume this overestimates the amount of credit actually awarded in 2008 and underestimates it for 2009.

- **College Tuition Credits:** The tuition credit in the CEO model combines the Lifetime Learning Credit and, prior to 2009, the Hope Credit for college students in the tax unit. In 2009 the Hope Credit was replaced by the American Opportunity Credit. The newer credit is up to 40 percent refundable.

- **Payroll Tax Cut:** The Making Work Pay Tax Credit expired and was replaced by a two percentage point cut in the payroll (FICA) tax in 2011 and 2012. For most filers in the CEO model, this represented a cut in the tax rate for the Social Security portion of FICA from 6.2 to 4.2 percent of earned income.[6]

- **Health Care Individual Responsibility Mandate:** Included as part of the Affordable Care Act (ACA) in 2010 and effective with the 2014 tax year. This is a penalty payment for failing to acquire minimum essential health care coverage. The ACA also includes a tax credit for lower income families who purchase health care coverage. This credit is included in the price structure of public plans available in New York City. We include it in the premium costs of medical out-of-pocket expenses. (See Appendix H.)

The American Tax Reform Act of 2012 extended some of the changes described above to 2017. The expanded Additional Child Tax Credit, third child tier in the EITC, and the American Opportunity Credit were all extended. The elimination of the marriage penalty from EITC rates was made permanent.

Other changes occurred at the local level:

- **School Tax Relief Credit:** A credit against the income tax for New York City residents and funded by New York State. The credit was reduced significantly in 2009.

- **New York State and City Earned Income Credit:** No legislative change was made to these credits, but they are calculated at 30 percent and 5 percent of the federal EITC, respectively. Thus, changes at the federal level beginning in 2009 resulted in an expansion of the state and city EITC.

- **New York State Family Tax Relief Credit:** A refundable credit of $350 for taxpayers with one or more dependents under age 17 and adjusted gross income between $40,000 and $300,000 with a tax liability greater than 0.

- **Enhanced Real Property Tax Credit:** A refundable credit for homeowners and renters in NYC beginning in tax year 2014. For homeowners, the credit applies to excess real property tax above a percentage of household gross income, capped at $500. For renters, real property tax is assumed to be 15.75 percent of annual rent and the credit is applied accordingly.

6 The replacement of the MWP Credit with the Payroll Tax Cut was less effective for filers close to, or just below, the poverty line. For an explanation, see The CEO Poverty Measure, 2005–2011, New York, NY: Center for Economic Opportunity, 2013, pp. 61-62.

Taxes in Detail

This section compares tax liabilities and tax credits from 2010 to 2014. Table D.1 and Table D.2 divide tax filers into two groups: Panel A consists of those filers with AGI from $1 to $25,000 and Panel B consists of filers with AGI from $25,001 to $50,000. This divides filers into those who are most likely to be poor, with incomes close to or below the poverty threshold, and those filers with incomes close to or somewhat above the poverty line. The division roughly illustrates the impact of tax programs as income rises.

Major Tax Components

Table D.1 shows the major components of the tax model. Taxable Income is Adjusted Gross Income (AGI) after standard deductions and exemptions. Pre-Credit Liability is the total federal, state, and city income tax due on Taxable Income before any credits are applied. Federal, state, and city credits are the sum of tax credits received from each level of government. The Net Income Tax Effect is the total effect of the income tax system on resources. A positive value for Net Income Tax Effect indicates that tax credit refunds are greater than the taxes owed. In other words, the tax system generates a net gain to the taxpayer. A negative number indicates a net loss to the taxpayer, since taxes paid are greater than taxes refunded.

Panel A of Table D.1 shows that filers with AGI up to $25,000 have a positive value for their Net Income Tax Effect for each of the years shown, representing a net gain to CEO's measure of family income after taxes. Filers with AGI over $25,000 and up to $50,000, shown in Panel B, have an annual net loss to their household resources in all years after income taxes.

In addition to income taxes, FICA (payroll taxes for Social Security and Medicare) is another piece of the total tax picture. The combined rate for both is 7.65 percent of wages, with the exception of 2011 and 2012 when the combined rate was 5.65 percent.

The final line of each panel, Net Income Tax + Net FICA Effect, shows the combined effect of income and payroll taxes, including tax credits. Again, a positive number represents a net gain to the taxpayer and a negative number a net loss to the taxpayer.

Individual tax credits from 2010 to 2014 are detailed in Table D.2. Total Tax Relief is the sum of all credits. We include the Health Care Responsibility Mandate, effectively a tax penalty, in this table as a negative tax credit in 2014.

Taxes and the Poverty Rate

The poverty rate would be higher in the absence of net taxation. For low income New Yorkers, payroll and income taxes are offset by tax credits large enough so

Table D.1
Components of Net Income Tax Effect, 2010–2014
Total Dollar Value ($1,000s)

	2010	2011	2012	2013	2014	Percentage Change 2010–2014	Percentage Change 2013–2014
A. Adjusted Gross Income, $1 - $25,000							
Adjusted Gross Income	15,636,576	15,620,526	15,259,706	15,290,632	15,329,586	-2.0%	0.3%
Taxable Income	3,977,392	3,827,000	3,539,260	3,585,295	3,725,758	-6.3%	3.9%
Pre-Credit Liability	841,847	829,292	779,479	777,993	812,283	-3.5%	4.4%
Federal Credits*	2,035,158	1,763,460	1,802,694	1,737,540	1,753,053	-13.9%	0.9%
State Credits	492,475	513,595	527,040	510,948	515,422	4.7%	0.9%
City Credits	151,856	154,783	154,981	151,496	184,024	21.2%	21.5%
Net Income Tax Effect**	1,837,642	1,602,545	1,705,236	1,621,992	1,640,216	-10.7%	1.1%
Payroll Tax (FICA)	1,039,471	1,050,292	1,041,060	1,034,057	1,067,943	2.7%	3.3%
FICA Tax Cut***	N.A.	228,535	225,834	N.A.	N.A.	N.A.	N.A.
Net Income Tax + Net FICA Effect	**798,171**	**552,253**	**664,177**	**587,935**	**572,272**	**-28.3%**	**-2.7%**
B. Adjusted Gross Income, $25,001 - $50,000							
Adjusted Gross Income	36,384,290	34,888,967	34,031,744	34,581,850	35,673,611	-2.0%	3.2%
Taxable Income	21,995,236	20,670,794	19,965,056	19,927,377	20,408,917	-7.2%	2.4%
Pre-Credit Liability	4,925,799	4,644,232	4,451,957	4,442,270	4,526,742	-8.1%	1.9%
Federal Credits*	1,493,634	1,079,263	1,047,245	1,160,511	1,128,560	-24.4%	-2.8%
State Credits	287,329	296,076	295,701	319,470	339,555	18.2%	6.3%
City Credits	98,378	97,481	96,743	101,570	134,115	36.3%	32.0%
Net Income Tax Effect**	-3,046,457	-3,171,412	-3,012,267	-2,860,719	-2,924,512	-4.0%	2.2%
Payroll Tax (FICA)	2,629,931	2,540,607	2,458,788	2,496,569	2,595,869	-1.3%	4.0%
FICA Tax Cut***	N.A.	597,094	577,033	N.A.	N.A.	N.A.	N.A.
Net Income Tax + Net FICA Effect	**-5,676,388**	**-5,712,020**	**-5,471,055**	**-5,357,288**	**-5,520,381**	**-2.7%**	**3.0%**

Source: American Community Survey Public Use Micro Sample as augmented by CEO.
*Net of Affordable Care Act Penalty in 2014.
**Net Income Tax differs slightly from pre-credit liability net of credits due to rounding and limits on some nonrefundable credits by tax liability. The sign of net income tax effect indicates effect of taxes on household income. A negative tax is the same as a positive effect on household income.
***In 2011 and 2012, FICA Tax Cut is included in Net Income Tax Effect but shown separately for illustrative purposes.

Table D.2, Panel A

Selected Tax Credits, 2010–2014

Total Dollar Value (in $1,000s)

A. Adjusted Gross Income, $1 - $25,000							
Federal	**2010**	**2011**	**2012**	**2013**	**2014**	**Percentage Change**	
						2010–2014	**2013–2014**
Child and Dependent Care Credit	1,117	1,526	1,016	1,170	673	-39.7%	-42.5%
Child Tax Credit (+ACTC)*	319,401	337,043	335,133	312,395	322,006	0.8%	3.1%
Elderly and Dependent Credit	1,025	1,096	913	1,036	890	-13.1%	-14.0%
Education Credit**	114,939	115,743	117,464	110,980	102,138	-11.1%	-8.0%
Earned Income Credit, Federal	1,244,591	1,309,303	1,349,404	1,313,790	1,348,068	8.3%	2.6%
Making Work Pay Credit	356,024	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Payroll Tax Cut	N.A.	251,411	248,833	N.A.	N.A.	N.A.	N.A.
Affordable Care Act Penalty	N.A.	N.A.	N.A.	N.A.	-20,161	N.A.	N.A.
New York State							
Household Credit	39,234	39,348	38,776	37,239	35,565	-9.4%	-4.5%
Child and Dependent Care Credit	1,228	1,679	1,117	1,287	737	-40.0%	-42.7%
Child Tax Credit	20,715	21,143	20,560	15,189	16,363	-21.0%	7.7%
Tuition Credit	94,795	101,881	104,176	105,334	99,703	5.2%	-5.3%
Real Property Tax Credit	6,102	6,191	6,221	5,438	6,039	-1.0%	11.0%
Earned Income Credit, NY State	356,132	374,759	386,096	377,092	387,803	8.9%	2.8%
Family Credit	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
New York State							
Household Credit	9,934	10,144	10,117	8,803	8,811	-11.3%	0.1%
School Tax Credit (STAR)	101,782	104,232	101,444	101,707	100,401	-1.4%	-1.3%
Expanded Real Property Tax Credit	N.A.	N.A.	N.A.	N.A.	48,861	N.A.	N.A.
Child and Dependent Care Credit	355	607	418	557	204	-42.6%	-63.4%
Earned Income Credit, NYC	62,230	65,465	67,470	65,690	67,403	8.3%	2.6%
Total Tax Relief	**2,729,604**	**2,741,572**	**2,789,159**	**2,457,706**	**2,525,505**	**-7.5%**	**2.8%**

Source: American Community Survey Public Use Micro Sample as augmented by CEO.
*Includes refundable additional child tax credit.
**Combines American Opportunity Credit and Hope Credit in 2007–2008; American Opportunity Credit and Lifetime Learning Credit in 2009 and following years.
Notes: N.A. - Not applicable in that tax year. The sum of nonrefundable credits may be limited by total tax liability at the level of individual filers.

Table D.2, Panel B

Selected Tax Credits, 2010–2014

Total Dollar Value (in $1,000s)

B. Adjusted Gross Income $25,001 - $50,000							
Federal	**2010**	**2011**	**2012**	**2013**	**2014**	**Percentage Change**	
						2010–2014	**2013–2014**
Child and Dependent Care Credit	14,674	14,269	11,299	11,671	14,575	-0.7%	24.9%
Child Tax Credit (+ACTC)*	390,837	397,929	356,677	381,355	368,607	-5.7%	-3.3%
Elderly and Dependent Credit	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Education Credit**	217,204	214,620	213,853	216,654	208,829	-3.9%	-3.6%
Earned Income Credit, Federal	415,528	452,445	465,416	550,831	556,571	33.9%	1.0%
Making Work Pay Credit	455,391	597,094	577,033	N.A.	N.A.	N.A.	N.A.
Payroll Tax Cut	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Affordable Care Act Penalty	N.A.	N.A.	N.A.	N.A.	-20,023	N.A.	N.A.
New York State							
Household Credit	6,943	6,997	6,827	6,803	6,776	-2.4%	-0.4%
Child and Dependent Care Credit	15,116	14,703	11,709	12,080	14,973	-0.9%	24.0%
Child Tax Credit	77,414	78,209	72,978	72,978	70,421	-9.0%	-3.5%
Tuition Credit	67,642	64,949	68,796	66,807	69,555	2.8%	4.1%
Real Property Tax Credit	42	11	32	38	13	-68.4%	-64.9%
Earned Income Credit, NY State	120,172	131,208	135,359	160,765	162,792	35.5%	1.3%
Family Credit	N.A.	N.A.	N.A.	N.A.	15,025	N.A.	N.A.
New York State							
Household Credit	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
School Tax Credit (STAR)	77,137	74,567	72,889	73,534	76,055	-1.4%	3.4%
Expanded Real Property Tax Credit	N.A.	N.A.	N.A.	N.A.	29,698	N.A.	N.A.
Child and Dependent Care Credit	465	292	584	494	533	14.7%	7.9%
Earned Income Credit, NYC	20,776	22,622	23,271	27,542	27,829	33.9%	1.0%
Total Tax Relief	**1,879,342**	**2,069,914**	**2,016,722**	**1,581,551**	**1,602,230**	**-14.7%**	**1.3%**

Source: American Community Survey Public Use Micro Sample as augmented by CEO.
*Includes refundable additional child tax credit.
**Combines American Opportunity Credit and Hope Credit in 2007–2008; American Opportunity Credit and Lifetime Learning Credit in 2009 and following years.
Notes: N.A. - Not applicable in that tax year. The sum of nonrefundable credits may be limited by total tax liability at the level of individual filers.

that the tax system creates an addition to their total resources. Table D.3 illustrates the impact of taxation on the poverty rate. The table compares poverty rates calculated net of the tax effect against poverty rates calculated with total CEO income including a tax effect. Some of the income tax benefit is offset by mandatory payroll taxes. The marginal effect of FICA increases the poverty rate on average by 2.1 percentage points from 2010 to 2014, yet taxes still have an overall positive effect on household resources. The FICA tax cut in 2011 and 2012 provided some relief from the payroll tax, as shown in Table D.1 above. The effect of FICA on the poverty rate declined from 2.1 percentage points in 2010 to 1.7 percentage points in 2012, but rose again in 2013 to 2.4 percentage points. Measuring the combined effect of payroll and income taxes we find a 1.9 percentage point decline in the CEO poverty rate in 2014. In the absence of payroll and income taxes, the CEO poverty rate of 21.5 percent in 2014 would have been 22.6 percent.

Table D.3
Impact of Net Taxes on Poverty Rates, 2010–2014
(Numbers are Percent of the Population)

A. Poverty Rates	2010	2011	2012	2013	2014
Total CEO Income	20.8	21.2	21.2	21.1	20.7
Net of:					
Income Taxes	25.2	24.9	24.9	24.4	24.6
FICA (Payroll Taxes)	18.8	19.5	19.5	18.6	18.4
Income Taxes and FICA	23.1	23.5	23.6	22.8	22.6
B. Marginal Effects	**2010**	**2011**	**2012**	**2013**	**2014**
Income Taxes	-4.4	-3.7	-3.8	-3.3	-3.9
FICA (Payroll Taxes)	2.1	1.8	1.7	2.4	2.3
Income Taxes and FICA	-2.3	-2.2	-2.4	-1.7	-1.9

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Appendix E

Estimating the Value of Nutritional Assistance

SNAP: Supplemental Nutrition Assistance Program

Data in the American Community Survey (ACS) about SNAP participation are very limited. First, as of 2008, the ACS only indicates whether a member of a household received SNAP at any time in the prior 12 months, providing no information on the value or duration of the benefit.[1] This must be estimated. CEO's decision to make use of New York City administrative data as its source for imputing the value of SNAP received leads to a second problem: SNAP participation in the ACS is reported at the household level, which differs from a typical SNAP case. A household is comprised of persons who share residence in a housing unit. A SNAP case, in contrast, includes household members who purchase and prepare food in common. The distinction shows up clearly in the data. In 2014, for example, the average New York City SNAP case had 1.84 members, while the average ACS household reporting SNAP receipt had 2.90 members. A third problem is underreporting of program participation.

CEO's method for imputing the yearly value of SNAP thus entails three steps: 1) creating SNAP or Food Stamp units[2] within ACS household units; 2) estimating the value of yearly SNAP receipt; and 3) adjusting the number of SNAP cases created in the ACS data to correct for underreporting.

To create commensurable units, CEO developed a program to divide ACS households into the maximum number of "Food Stamp units" that the program rules allow. SNAP uses the following rules to determine who in a household must be in the same SNAP case:

1 The decision to drop the question about value of SNAP received was influenced by the Census Bureau's testing of the ACS questionnaire, which revealed that respondents were more likely to indicate receipt of the benefit if the follow-up question about the value of the benefit did not appear in the survey instrument. See: www.census.gov/acs/www/Downloads/methodology/content_test/H6_Food_ Stamps.pdf

2 SNAP is formerly known as Food Stamps, and therefore referred to as such in earlier reports. We change our terminology to SNAP for this year. However, for this report, we continue to refer to the units receiving benefits in our model as Food Stamp units.

1. Spouses.
2. Parents and children under 22, including spouses of these children, and grandchildren.
3. A child under 18 living with, and under the parental control of, an adult that provides 50 percent or more of the minor child's support.
4. Anyone else in the household that purchases and prepares food together.

The first three of these rules are based on familial relationships within the household. Some of these are readily described by variables in the ACS. Others are not and must be created. To construct these relationships, we used the minimal household unit (MHU) program, which was originally written by Jeff Passel, Senior Demographer at the Pew Hispanic Center. The MHU program is designed to parse an ACS household into its smallest family units.[3] The program loops through the data, linking individuals within the household by kinship and marriage. This work creates Food Stamp units that conform to the first three rules listed above.

Because CEO does not attempt to infer who else in the household is purchasing and preparing food together, the program creates the maximum number of Food Stamp units within each household allowable under SNAP rules. The size and composition of SNAP cases produced with this method accurately reproduce the number of cases reported in the administrative data. In 2014, for example, the proportion of single-person SNAP cases created in the ACS (61.1 percent) is quite close to the proportion of single-person cases in the administrative data (57.4 percent). Using the Food Stamp unit rather than the ACS household also increases the estimated number of SNAP cases in the 2014 ACS from 640,108 (57 percent of the administrative total) to 1,108,596 (99 percent of the administrative total). (See Table E.1.)

Once commensurable units are created, we begin the SNAP value estimation process by compiling administrative data on SNAP cases in New York City from the Human Resources Administration's internal database. The data include all cases in New York City that were active for any period between July and June of the appropriate year. This period is chosen because it represents the mid-point in the ACS rolling sample, helping to ensure that the timeframe for the administrative data is comparable to the ACS data. To preserve comparability with our poverty universe, individuals in group quarters are removed from both the administrative data and the ACS sample.

The administrative data set contains demographic information about the SNAP case heads and families, as well as relevant budget information such as household income. For each case, we sum the total amount of SNAP payments over the previous year. Using these data, we developed a regression model using the

3 Passel, Jeffrey. "Editing Family Data in Census 2000 Public-Use Microdata Samples: Creating Minimal Household Units (MHUs)." August 2002.

Table E.1
Percentage Distribution of SNAP Cases by Size, 2014

	ACS Households		CEO Food Stamp Units		Administrative Cases	
Size	Frequency	Percent	Frequency	Percent	Frequency	Percent
1	190,626	29.8	676,848	61.1	643,251	57.4
2	139,712	21.8	193,277	17.4	228,563	20.4
3	100,776	15.7	101,207	9.1	129,499	11.6
4	86,930	13.6	76,615	6.9	68,281	6.1
5	60,669	9.5	37,311	3.4	28,553	2.5
6	29,705	4.6	12,188	1.1	11,329	1.0
7	15,655	2.4	4,136	0.4	4,906	0.4
8	6,246	1.0	2,557	0.2	2,576	0.2
9	4,630	0.7	2,542	0.2	1,492	0.1
10 or More	5,159	0.8	1,915	0.2	1,659	0.1
Total	640,108	100.0	1,108,596	100.0	1,120,109	100.0

Sources: American Community Survey Public Use Micro Sample as augmented by CEO and New York City Human Resources Administration.

demographic characteristics present in both the administrative and ACS data sets in order to predict the yearly value of SNAP payments to families in New York City.

We focus on variables that are strongly predictive of SNAP benefits and for which high quality data exist in both the ACS and administrative data sets. Case size is, unsurprisingly, the strongest predictor of benefit level. Further, the number of children, and the dummy variables for elderly case head and elderly or disabled member in the case are also predictive of the benefit level. This is likely due to the fact that it is easier for these groups to remain on SNAP longer since they are not subject to work requirements. Age of the case head is included as a proxy for factors such as work status.[4] The coefficient on the age of the case head is positive, even when controlling for elderly status. This may be because the probability of employment among low-income New Yorkers declines after age 50, which would lead to an increasing benefit with age in the administrative data that are independent of elderly status.

The ACS and administrative data are constructed differently and are utilized for very different purposes, a fact that complicates the development of a regression model. This is a particular issue with regard to measuring income, an important determinant of benefit levels. While the ACS reports yearly cash income from all

4 While the New York City administrative database does contain information on work status of SNAP recipients, these data are generally low quality and contain large numbers of missing observations. As a result, we decided to use the age proxy in the regression model.

sources, the administrative data only contain the monthly income reported on the SNAP application. This creates two challenges. First, families often apply for SNAP after an income shock, such as a job loss, yielding a potentially biased estimate of the family's income over the past year. Second, SNAP applicants are allowed to make deductions from their gross income to qualify for the program, further complicating comparisons of the two variables.

In order to address this comparability issue, we construct a net income measure in the ACS that represents an estimate of what a Food Stamp unit would report on a SNAP application. We aggregate personal income to the Food Stamp unit and divide it by 12 to get a monthly estimate. We then apply the various income deductions allowed on the SNAP application, including a standard deduction and deductions for childcare expenses and medical expenses for elderly applicants.

This constructed net income measure has a similar distribution to that of the income reported in the administrative data, with positive values beginning at the 75th percentile. Given the highly skewed nature of this distribution, where most observations have a value of zero, we feel that a linear model would produce incoherent results. Instead, we convert the income data into a categorical variable with three categories: 1) income between zero and the 74th percentile; 2) income between the 75th and 89th percentile; and 3) income at or above the 90th percentile. We tested numerous regression specifications, evaluating them on the basis of fit. The final model is generally consistent over the years 2005–2014, as shown in Table E.2.

As noted above, the ACS contains data on whether a household received SNAP for some period over the previous year, but does not contain data on how many months the household participated in the program. This is, potentially, a source of unexplained variation, as a household receiving SNAP for six months will have a lower yearly value than a household receiving them for the full year, holding other factors constant. However, using a model that cannot include a months-of-receipt variable is justified for two reasons. First, the variables included in regression correlate with the months-of-receipt variable in the administrative sample. As a result, a good deal of the variation in the months-of-receipt variable is captured by the coefficients in the included variables. Second, since this model is used for prediction rather than inference, we are less concerned with potential omitted variable bias in the individual coefficients.

We then match the administrative data into the ACS through a predictive mean match (PMM).[5] First, we use the regression coefficients to estimate SNAP values for observations in the ACS and in the administrative data. These ACS and administrative values are then matched using a nearest neighbor algorithm, whereby an ACS case would be matched with the administrative case that has the closest estimated value, with the added constraint of both host and donor cases being in the

5 See O'Donnell, Sharon and Rodney Beard, "Imputing Medical Out-of-Pocket (MOOP) Expenditures using SIPP and MEPS," 2009, for an application of this method in a similar context.

Table E.2
Regression Model of Yearly SNAP Value, 2005–2014

Variable	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Intercept	-352.64	-473.88	-538.12	-498.71	-514.70	-483.60	-779.10	-949.30	-937.80	-733.60
	[-6.93]	[-9.15]	[-10.94]	[-10.16]	[-11.41]	[-8.80]	[-16.00]	[-20.47]	[-12.30]	[-15.39]
Income between 75th-89th Percentile	-179.44	-117.88	-166.38	-162.43	-478.60	-120.73	-176.30	-474.20	-187.60	-731.50
	[-10.12]	[-6.35]	[-8.93]	[-8.19]	[-27.41]	[-6.05]	[-11.53]	[-27.34]	[-8.19]	[-43.46]
Income at or above 90th Percentile	-950.89	-899.14	-784.82	-842.82	-1342.00	-874.46	-1222.00	-1369.00	-1305.00	-2004.00
	[-46.10]	[-43.01]	[-39.51]	[-39.76]	[-61.51]	[-35.36]	[-55.82]	[-64.48]	[-38.35]	[-92.19]
Household Size	860.69	874.84	834.70	846.46	1010.00	1051.50	1239.00	1297.00	1301.00	1158.00
	[103.83]	[102.70]	[100.75]	[53.45]	[67.35]	[64.28]	[85.37]	[89.44]	[58.69]	[82.15]
Number of Children	108.16	120.69	162.44	144.07	170.00	137.54	130.80	120.80	112.80	140.50
	[14.86]	[16.00]	[21.69]	[11.23]	[14.21]	[10.49]	[11.43]	[10.63]	[6.39]	[12.47]
Elderly Household Head	70.34	101.11	98.76	120.36	118.90	140.63	43.44	69.52	-81.48	52.10
	[2.51]	[3.47]	[3.55]	[3.93]	[3.75]	[4.10]	[1.45]	[2.38]	[-1.87]	[2.01]
Elderly or Disabled Person in Unit	101.34	91.31	189.05	194.13	372.00	312.45	509.70	451.40	525.50	329.50
	[6.04]	[5.27]	[11.14]	[10.91]	[21.67]	[16.23]	[29.40]	[27.12]	[19.27]	[20.83]
Age of Household Head	15.61	22.47	23.36	24.60	27.46	35.23	35.18	40.88	36.37	38.03
	[7.61]	[10.53]	[11.59]	[11.51]	[13.30]	[14.82]	[16.88]	[20.22]	[11.52]	[19.47]
Age of Household Head Squared	-0.10	-0.16	-0.16	-0.17	-0.22	-0.27	-0.25	-0.31	-0.23	-0.27
	[-4.57]	[-7.16]	[-7.57]	[-7.59]	[-9.49]	[-10.63]	[-11.55]	[-14.12]	[-7.19]	[-13.86]
R2	0.588	0.583	0.562	0.553	0.594	0.530	0.593	0.60	0.60	0.59

Source: New York City Human Resources Administration.
Notes: The dependent variable is the annual value of Food Stamps. “Income” is net of deductions allowable by Food Stamp program rules. t-statistics in brackets.

same Community District.[6] This additional match criterion is designed to capture neighborhood effects that were not explicit in the model. The ACS case was then given the actual SNAP value from the administrative case. Once an administrative case donates its value to an ACS case, it is removed from the donor pool.

The advantage of using PMM rather than simply using the estimated values is that PMM does a better job at preserving the actual distribution of SNAP values. Regression estimates accurately capture the mean and aggregate values of the distribution, but yield considerably less variation than seen in the administrative data. This is unsurprising, given the fact that regressions are designed to model means rather than full distributions.

Given the gap between the number of SNAP cases in the administrative data and the number of cases in the ACS households reporting SNAP receipt, CEO decided to assign participation in the SNAP program to some of the apparently eligible units that did not report receipt. There are several possible reasons for not reporting receipt. Unfortunately, none of these factors are directly measureable in the ACS, which limits our ability to model underreporting of participation.

What is known is that SNAP participation is highly correlated with participation in other income support programs such as Public Assistance (PA) and Supplemental Security Income (SSI). Analysis of administrative data shows that nearly all participants in means-tested cash benefit programs also receive SNAP. We assign SNAP values to individuals who were eligible for SNAP and reported PA or SSI receipt, but did not report SNAP receipt.[7] Adding these cases increased the number of Food Stamp units from 990,438 to 1,108,596 in 2014. (See Table E.3.)

6 The ACS's Public Use Micro Sample Areas (PUMA) are constructed to match New York City's Community Districts.

7 "Eligible" is defined using the SNAP program rules, requiring that the recipient be a citizen or legal resident for five years or more with a gross income less than 130 percent of the official poverty line.

Table E.3
Comparison of Self-Reported and Estimated SNAP Values, 2014

	Cases		Individuals		Aggregate Value	
	Number	Ratio	Number	Ratio	Number	Ratio
ACS Households, Self-Reported Participation	640,108	0.57	1,859,209	0.90	N.A.	N.A.
CEO Food Stamp Units, Self-Reported Participation, Estimated Value	990,438	0.88	1,859,209	0.90	$2,484,136,900	0.89
CEO Food Stamp Units, Estimated Value, Case Adjusted	1,108,596	0.99	2,027,462	0.98	$2,644,949,711	0.95
Administrative	1,120,109	1.00	2,058,961	1.00	$2,783,662,931	1.00

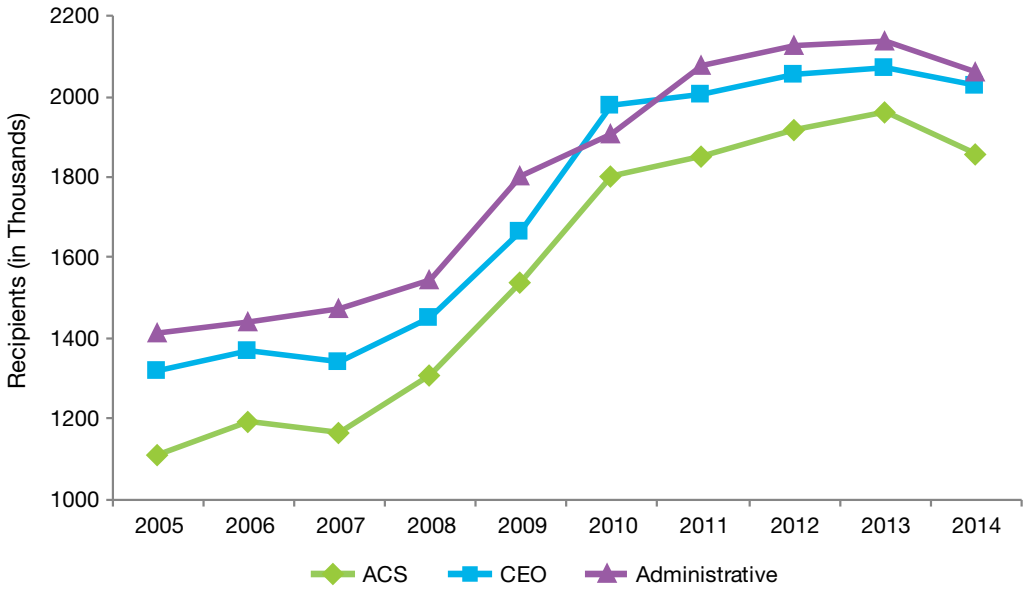
Sources: American Community Survey Public Use Micro Sample as augmented by CEO and New York City Human Resources Administration.
Note: "Ratio" compares the estimated value to administrative data.
N.A. - Not applicable due to the fact that the unadjusted ACS does not contain data on the value of the Food Stamp benefit.

Trends in the receipt of CEO Food Stamp estimates from 2005 to 2014 are reported in Figure E.1. The number of SNAP recipients increased by approximately 40 percent between 2008 and 2013. This rapid rise corresponds with the beginning of the Great Recession and subsequent economic stimulus programs that were put in place at the time. However, SNAP enrollment levels off in all three measures and begins to decline by 2014. At the same time, the dollar value of SNAP benefits were cut at the federal level.[8]

The CEO estimates of SNAP recipiency come close to replicating the observed trends in the administrative data with a few exceptions. Specifically, while the administrative data show a consistent upward trend over these years, the CEO estimates show a decrease in cases and aggregate value from 2006 to 2007, which interrupts the overall pattern of increases. This is likely the result of sampling variability in the ACS. Additionally, the CEO estimates show a larger spike in the number of cases between 2007 and 2008 than seen in the administrative data. This may be a result of the change in the question regarding SNAP in the 2008 ACS survey, described above. By 2014, the number receiving SNAP in the administrative data and CEO estimates converged at roughly 2 million persons. The effect of SNAP in lowering the poverty rate is shown in Table 2.5 and again in Table E.12 below.

8 Dean, Stacy and Rosenbaum, Dottie. SNAP Benefits Will Be Cut for Nearly All Participants in November 2013. Washington, DC: Center on Budget and Policy Priorities. See: http://www.cbpp.org/research/snap-benefits-will-be-cut-for-nearly-all-participants-in-november-2013

Figure E.1
Food Stamp Recipients, 2005–2014



Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Subsidized School Meals

The National School Lunch Program (NSLP) and the School Breakfast Program (SBP) offer free and reduced-price meals to low-income students. Free meals are provided to children with family income below 130 percent of the Federal Poverty Guidelines (FPL). Reduced-price lunches are provided to children with family income between 130 and 185 percent of the FPL. All school breakfasts in New York City are served free of charge.

The ACS does not contain information on whether children receive free or reduced-price school meals; therefore, we model participation in these programs in our augmented ACS data set. Although participation in the subsidized school meals programs is widespread, it is not universal among eligible families.[9] Table E.4 indicates, for example, that out of 694,922 eligible school children, only 487,621 free or reduced price meals were served, on average, per school day.

Table E.4
Comparison of Eligibility to Participation in the National School Lunch Program, 2014

Grade Level	Eligible for Free or Reduced-Price School Lunch	Receiving Free or Reduced-Price Lunch
Elementary	330,969	314,249
Middle	156,642	92,262
High	207,311	81,110
Total	694,922	487,621

Sources: American Community Survey as augmented by CEO and New York City Department of Education.
Note: "Receiving" is measured as the average number of meals served per day in the 2013–2014 school year.

Given this difference, we must estimate which families would be participating in the programs. We do so via a statistical model that assigns a probability that an eligible family would participate in either the NSLP or SBP program, given a set of characteristics that can be measured by variables that are available in the ACS. The model is estimated using New York City families that are included in the Census Bureau's Annual Social and Economic Supplement (ASEC) of the Current Population Survey (CPS). The CPS is a survey at the national level with a very limited sample for local areas. To muster a sufficiently large number of observations, we pool six years of data. For this report's analysis we use the 2010 through 2015 ASEC, which provides information on participation from 2009 through 2014. The model's householder characteristics and household variables, as well as their coefficient values and their statistical significance, are provided in Table E.5.

9 Research (much of it sponsored by the U.S. Department of Agriculture) suggests that only about 75 percent of eligible students participate in the NSLP and as children get older they are less likely to participate.

Table E.5

Logit Regression Model of School Meals Participation, Coefficient Definitions, and Values, 2010–2015

Variable			Estimate		
			B	S.E.	Exp(B)
Household Head Characteristics	Race/ Ethnicity	Non-Hispanic White	-.198	.006	.821
		Non-Hispanic Black	.084	.005	1.087
		Hispanic	.374	.005	1.454
		Other Race/Ethnicity (omitted variable)			
	Education	High School Graduate through College Graduate	-.098	.004	.907
		Master's Degree or Higher	-.414	.008	.661
		Less Than High School (omitted variable)			
	Citizenship	Foreign Born, Citizen by Naturalization	.232	.004	1.261
		Foreign Born, Not a Citizen	.447	.004	1.563
		Citizen by Birth (Omitted Variable)			
	Work Experience	Works Less Than Full Time, Year Round	-.230	.004	.795
		Does Not Work	-.009	.004	.991
		Works Full Time, Year Round (omitted variable)			
Household Characteristics		Female Householder	-.039	.004	.962
		Age of Householder	-.012	.000	.988
		Age of Youngest School-aged Child	-.079	.000	.924
		Single Householder	.555	.004	1.742
		Number of Persons in Household	-.095	.001	.910
		Household Receives Food Stamps	1.286	.003	3.620
		Household Income/Poverty Guideline Ratio	-.056	.001	.945
		Constant	1.547	.011	4.696

Source: Current Population Survey Annual Social and Economic Supplement, New York City Sample, 2010–2015.
Notes: All coefficients significant at the p< 0.01. Analysis used the household weight. Dependent Variable, HFLUNCH, recoded to a binary. N = 1304.

In the ACS, we flag as eligible for free or reduced-price meals poverty units with school-age children[10] that have incomes below 185 percent of the FPL or are receiving SNAP, or have a member that was receiving Public Assistance. We then apply the model's coefficients to calculate each eligible poverty unit's probability of participation. These values fall between 0 and 1, with 1 being the highest probability of participation. Once the probability is calculated, we use New York City Department of Education (DOE) administrative data as our target number for assigning participation.

10 Children were defined as school age if they were 5 or older and less than 18.

Our estimates account for those students that participated in Provision 2 of the NSLP, which is a program designed to reduce the administrative cost of determining eligibility by allowing schools to provide free lunch to everyone, regardless of eligibility, for four years. Provision 2 required us to assign free meal values to some students who – given their families' income – would be receiving reduced-price school meals. The adjustment is made so that the distribution of students in the ACS who are estimated as receiving free or reduced-price meals corresponds to the distribution in the administrative data. Because of the Provision, the number of ACS-eligible for free lunch elementary school students is considerably smaller than the average daily number of free lunches served. Therefore, all elementary-aged children who were eligible for free lunch were assigned participation in the program. Table E.6 compares the CEO-modeled estimates of participation in the two school meal programs with the administrative data.

Table E.6
Comparison of Administrative to Estimated Data on Participation in Subsidized School Meal Programs, 2014

	DOE Data		CEO Modeled Data	
Grade Level	**Receiving Free or Reduced-Price Meals**		**Receiving Free or Reduced-Price Meals**	
	School Lunch	School Breakfast	School Lunch	School Breakfast
Elementary	345,709	128,307	330,763	128,061
Middle	101,018	27,119	98,693	27,112
High	87,443	30,360	87,764	30,403
Total	534,170	185,787	517,220	185,576

Sources: American Community Survey as augmented by CEO and New York City Department of Education (DOE).
Note: "Receiving" in the DOE data is measured as the average number of meals served per day in the 2012–2013 school year.

The final step in our modeling is to assign a dollar value to each free and reduced-price meal received in a year. The Census Bureau provides school lunch values. For 2014, the free lunch was valued at $3.19 and the reduced-price lunch was valued at $2.79. For a free breakfast value we use $1.59; this is the "Non-severe Need" value of a free school breakfast for the school year 2013–2014 provided by the Food and Nutrition Service, USDA.[11] We assumed that students receive 175 school meals per year.[12] Table E.7 provides the estimated number of families receiving a free or reduced-price school meal and the mean, median, and sum of the school meal value for 2014.

11 See: www.fns.usda.gov/sites/default/files/NAPs12-13.pdf

12 The school year is required to be no less than 180 days; we used 175 days to account for occasional absences.

Table E.7
Participation and Value of Free and Reduced-Price School Meals, 2014

	School Lunch	School Breakfast
Number of Families	319,733	112,420
Mean Value	$914	$465
Median Value	$558	$278
Aggregate Value	$292,253,861	$52,289,853

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

The addition of school meals to families' resources decreases the citywide poverty rate by 0.5 percentage points, as Table E.8 illustrates. The effect is much larger for persons in families receiving school meals, a 2.1 percentage point decrease.

Special Supplemental Nutrition Program for Women, Infants, and Children

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides support for low-income pregnant and breastfeeding women, infants, and children who are at nutritional risk. To account for this additional income we include the value of WIC benefits in our measure of family income. As with the school meals programs, however, not every eligible family participates in the WIC program. New York State Department of Health (NYS DOH)

Table E.8
Impact of School Meals on CEO Poverty Rate, 2014
(Numbers are Percent of the Population)

	Total Population	Persons in Participating Families
A. Poverty Rates		
Total CEO Income	20.7	37.7
Net of School Meals	21.2	39.8
B. Marginal Effect		
School Meals	-0.5	-2.1

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

administrative data indicate that for 2008, only 53 percent of eligible infants, 31 percent of eligible children, and 32 percent of eligible women participated.[13] We model participation with a similar statistical match to the one used to model school meal participation. Prior to 2010, a fixed percentage of women, children, and infants were flagged as receiving WIC benefits based on characteristics derived from 2008 administrative data. Since that time we have received new administrative data from NYS DOH, which allows us to improve the match of the population count receiving WIC.[14]

14 See Appendix J for more details.

Table E.9

Logit Regression Model of WIC Participation, Coeffecient Definitions, and Values, 2010–2015

Variable			Estimate		
			B	S.E.	Exp(B)
Household Head Characteristics	Race/ Ethnicity	Non-Hispanic White	.100	.008	1.105
		Non-Hispanic Black	.604	.007	1.830
		Hispanic	.449	.007	1.567
		Other Race/Ethnicity (omitted variable)			
	Education	High School Graduate through College Graduate	-.366	.004	.693
		Master's Degree or Higher	-1.036	.011	.355
		Less Than High School (omitted variable)			
	Citizenship	Foreign Born, Citizen by Naturalization	-.154	.005	.857
		Foreign Born, Not a Citizen	.245	.004	1.278
		Citizen by Birth (Omitted Variable)			
	Work Experience	Works Less Than Full Time, Year Round	.233	.005	1.263
		Does Not Work	.249	.005	1.283
		Works Full Time, Year Round (omitted variable)			
Household Variables		Single Female Household Head	.039	.004	1.040
		Infant Present in Household	.709	.005	2.032
		Number of Persons in Household	.009	.001	1.009
		Household Receives Food Stamps	.592	.004	1.808
		Household Income/Poverty Guideline Ratio	.339	.002	1.404
		Constant	-1.614	.010	.199

Source: Current Population Survey Annual Social and Economic Supplement, New York City Sample, 2009–2014.
Notes: All coefficients significant at the p< 0.01 level. Analysis used the household weight. Dependent Variable was HRWICYN, "Does anyone in household participate in WIC program." N = 720.

The model is based on characteristics of WIC-eligible households that are common and consistently defined in the ASEC; the ACS assigns a probability that a given eligible family will participate in WIC. The model is estimated using New York City families that are included in the ASEC of the CPS. To muster a sufficiently large number of observations, we pool six years of data. For this report's analysis we use the 2010 through 2015 ASEC, which provides information on WIC participation from 2009 through 2014. The model's householder characteristics and household variables as well as their coefficient values and their statistical significance are provided in Table E.9. For more detailed information about our methodology, please refer to Appendix E of the CEO report on poverty, 2005–2010.[15]

After identifying WIC participants, we assign an annual benefit value of $663.60, which is the annualized USDA Food and Nutrition Services average monthly WIC benefit for New York State residents.[16] We then aggregate all individual WIC benefits to arrive at a family benefit value. Table E.10 shows that $664 is also the median benefit per family, indicating that the majority of poverty units contain only one WIC recipient.

Table E.10
Participation and Value of WIC, 2014

Number of Families	154,253
Mean Value	$997
Median Value	$664
Aggregate Value	$153,719,622

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

The addition of WIC benefits to resources has a negligible effect on the citywide poverty rate, a 0.3 percentage point fall as Table E.11 below indicates.[17] The effect is much larger, however, among those persons in families receiving WIC benefits, coming to 3.4 percentage points. Prior to 2010, the effect WIC had on the poverty rate was small. For the years 2005 to 2009 the poverty rate would have been 0.1 percent higher if not for the WIC benefits. However, with the new administrative data the impact of WIC played a bigger role in alleviating poverty. The addition of WIC benefits decreases the poverty rate by 0.3 percent in 2014.

15 See The CEO Poverty Measure, 2005–2010: http://www.nyc.gov/html/ceo/downloads/pdf/ceo_poverty_measure_2005_2010.pdf

16 The average monthly benefit for New York State residents is $55.30. See USDA Food and Nutrition Service data at: http://www.fns.usda.gov/pd/wic-program. We assume that WIC recipients participate for 12 months. This overstates the value of the benefit, but given the program's modest effect, we do not believe we have introduced much distortion in our poverty estimates.

17 This echoes the effect of WIC benefits for the nation in the new Federal Supplemental Poverty Measure. See: Short, Kathleen. "The Research Supplemental Poverty Measure, 2010." U.S. Census Bureau, Current Population Reports, Consumer Income, pp. 60-241. U.S. Government Printing Office, Washington, DC. November 2011.

Table E.11
Impact of WIC Benefits on CEO Poverty Rate, 2014
(Numbers are Percent of the Population)

	Total Population	Persons in Participating Families
A. Poverty Rates		
Total CEO Income	20.7	34.8
Net of WIC	21.0	38.2
B. Marginal Effect		
WIC	-0.3	-3.4

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Impact of Nutritional Assistance on the CEO Poverty Rate

Nutritional assistance is an important component of CEO income and has a considerable impact on the poverty rate. Table E.12 below pulls together the effects of the SNAP, school meals, and WIC programs on the city poverty rate for the years 2005–2014. SNAP accounts for the bulk of the impact of nutritional assistance, while school meals and WIC have more modest impacts for the city as a whole. This is unsurprising, given that the latter two programs are targeted at specific populations while SNAP is available more broadly. SNAP also accounts for the increase in the impact of Nutritional Assistance, particularly during the period from 2008 to 2012. As was discussed earlier, this is the result of the rapid expansion of the program during the period. We find that 2014 marks the second year since the recession where the importance of SNAP has declined.

Table E.12

Impact of Nutritional Assistance on the Poverty Rate, 2005–2014

(Numbers are Percent of the Population)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
A. Poverty Rates										
Total CEO Income	20.4	19.8	19.8	19.0	19.8	20.8	21.2	21.2	21.1	20.7
Net of:										
SNAP	22.3	21.8	21.5	21.1	22.4	24.3	24.8	25.1	24.5	24.3
School Meals	21.0	20.3	20.3	19.5	20.2	21.3	21.7	21.7	21.7	21.2
WIC	20.5	19.9	19.9	19.1	19.8	21.1	21.5	21.5	21.3	21.0
Total Nutritional Assistance	22.9	22.4	22.1	21.7	22.8	25.0	25.8	26.1	25.5	25.0
B. Marginal Effects										
SNAP	-2.0	-2.0	-1.8	-2.1	-2.6	-3.5	-3.6	-3.9	-3.5	-3.6
School Meals	-0.6	-0.5	-0.5	-0.5	-0.5	-0.4	-0.5	-0.6	-0.6	-0.5
WIC	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.3
Total Nutritional Assistance	-2.5	-2.6	-2.3	-2.7	-3.1	-4.2	-4.6	-4.9	-4.4	-4.3

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Appendix F

Estimating the Value of HEAP Benefits

The Home Energy Assistance Program (HEAP) is a federally funded subsidy that offsets the energy costs of low-income households. Unless a household faces a heating emergency, HEAP takes the form of a one-time annual payment. If the household's heating expenses are included in its rent or mortgage payments, it receives its HEAP benefit directly.[1] If the household pays a utility company for its heating fuel, the HEAP payment is sent to the provider, who then reduces the household's heating bill.

HEAP benefits are available to households whose income falls below the HEAP Benefit Income Guidelines.[2] In New York City, households are automatically enrolled in the program if they receive cash assistance, Supplemental Nutritional Assistance Program (SNAP) benefits, or are composed of a single person receiving Supplemental Security Income (SSI) benefits. Other low-income households can apply for HEAP, but administrative data from the City's Human Resources Administration (HRA) indicate that the vast majority of HEAP households are those whom it automatically enrolls. In 2010, for example, 689,745 households out of the 702,665 households that received HEAP benefits – 98.2 percent – were automatic enrollees.[3]

HEAP benefits are very modest. As of 2008, if the eligible household resides in public housing or receives a Section 8 subsidy it only receives an annual $1 HEAP payment, receipt of which entitles the household to claim a higher SNAP benefit. Otherwise, the household is eligible to receive an annual $20 or $25 payment, depending on whether its income is above or below 130 percent of the Federal Poverty Guidelines, or if the household contains a "vulnerable" individual: someone under age 6, over age 59, or under age 65 and receiving SSI benefits.[4]

1 Households with a Common Benefit Identification Card receive a HEAP benefit as an electronic benefit transfer.

2 These guidelines are based on household size and are available at: www.otda.ny.gov/programs/heap/program.asp#income

3 These figures do not include the small number of HEAP participants who pay their home heating bills directly.

4 OTDA (Office of Temporary and Disability Assistance). See: www.otda.ny.gov/programs/heap/program.asp#regular

There was no reliable survey data that collected information on HEAP benefits in New York City until the 2011 New York City Housing and Vacancy Survey, to which CEO was able to add a question about HEAP recipiency. This question unfortunately had a very low response rate, which is not surprising since HEAP benefits are one-time payments and are usually put on a recipient's Electronic Benefit Transfer card, and thus are easy to overlook.

CEO, therefore, continues to take advantage of the large degree to which beneficiaries are automatically enrolled and the simplicity of the program's benefit structure to estimate the value of HEAP payments for households in the American Community Survey (ACS). A poverty unit in which any member is receiving SNAP or public assistance, or is a single-person household with SSI benefits, is assumed to be receiving a HEAP benefit. One new criterion has been added to our measure: if, as part of the housing imputation process, an ACS household has been matched to a Housing Vacancy Survey (HVS) household that reported receiving HEAP payments, it is also assumed to be receiving a HEAP benefit.[5] Because administrative data show that very few households received a $20 HEAP payment, only $1 and $25 dollar values are distributed to eligible poverty units.

5 See Appendix C.

Table F.1
Comparison of CEO Estimates to Administrative Data for HEAP Program, 2014

A. Recipient Households	
CEO Estimate	631,443
HRA Administrative Data	651,336
CEO as a Percentage of HRA	96.9%
B. Total Benefits	
CEO Estimate	$10,909,411
HRA Administrative Data	$11,824,448
CEO as a Percentage of HRA	92.3%
C. Mean Benefit per Household	
CEO Estimate	$17
HRA Administrative Data	$18
CEO as a Percentage of HRA	95.2%

Sources: American Community Survey Public Use Micro Sample as augmented by CEO and New York City Human Resources Administration.

Once it has been estimated, the value of the HEAP benefit is added to a poverty unit's income. Since there can be more than one poverty unit in an ACS-defined household, the benefit is only given to one poverty unit in a multi poverty unit household. This follows program rules that limit payments to one per household. Table F.1 compares CEO's estimates to HRA administrative data for the number of New York City households that received HEAP benefits, the total value of the benefits, and the mean benefit per household in 2014. CEO's estimates come to 96.9 percent of the administrative data for the number of HEAP households, 92.3 percent of the administrative data for total benefits, and 95.2 percent of the administrative data for mean benefit per household.

The very low level of HEAP benefits explains the too-small-to-register effect of HEAP on the CEO poverty rate noted in Chapter 2.

Appendix G

Work-Related Expenses

Many families with children must pay for childcare in order to work. In addition, the expense of getting to and from work is an unavoidable cost for nearly every jobholder. These costs are nondiscretionary and limit the ability of families to meet the needs that are represented in the poverty threshold. The National Academy of Sciences (NAS) recommended that work-related expenses be deducted from family resources.[1] The American Community Survey (ACS) does not include data on childcare costs or commuting costs, nor does it contain all the data needed to calculate these expenses. This appendix describes our childcare cost imputation and the methodology used to calculate commuting costs.

Childcare Costs

CEO deducts the cost of childcare expenditures from income in the construction of our poverty measure. Because we are only interested in out-of-pocket childcare costs that are nondiscretionary – that is, necessary for work – we only count the expenses incurred when all of the parents are working. If one or both parents are not working, their childcare spending is uncounted. Since childcare spending is not reported in the ACS, CEO relies on an imputation model to estimate childcare spending. This childcare cost imputation model employs a predicted mean match (PMM) of observations in the Census Bureau's Survey of Income and Program Participation (SIPP) to observations in the ACS.

Creation of the SIPP Data Set

In order to generate a sufficiently large sample, we pool data from the two most recent childcare modules of SIPP files: the 2004 panel wave 4 and the 2008 panel wave 5. The sample in each wave consists of four rotation groups, each interviewed in a different month. The interview months were February through May 2005 for wave 4 of the 2004 panel and January through April 2010 for wave 5 of the 2008 panel. SIPP

1 Citro and Michael, pp. 70-71.

asks the designated parent about every childcare arrangement used regularly last month and the costs of care in a typical week for each of the arrangements for each child. In previous reports, we used pooled data from the 2001 and 2004 SIPP. The 2008 SIPP data was released in late 2011; we dropped the 2001 SIPP data in favor of these newer data. This way, the SIPP data used for imputation more closely reflect the 2005–2014 period covered by this report.

Setting up the pooled SIPP data involves several steps. First, we remove foster children from this sample, given that their childcare costs are subsidized by government programs and we are only measuring out-of-pocket costs for working parents. Next, we take several steps to ensure that the unit of analysis within the SIPP is consistent with the "poverty units" CEO creates in the ACS.

The SIPP is a longitudinal data set in which participants are sampled over a two-year period. Individual observations in the SIPP are linked by sampling unit, household address, and family. The sampling unit is the original household as of the first round of interviews. A "household" is defined, as in the ACS, as all members living within the household unit, including family members and all unrelated individuals, such as unmarried partners, roommates, or foster children. Over the two-year SIPP sampling period, some members of a sampling unit leave and form their own households at a different address. Thus, in order to form a unique identifier for each household, we concatenate the sampling unit ID (SSUID) and the household address ID (SHHADID). Further, since ID markers can be reassigned to new sampling units between survey panels, we also include panel year as part of the constructed household ID. This yields an unweighted count of 74,047 unique households.

Within a household, a "family" in the SIPP is comprised of a group of two or more persons related by birth, marriage, or adoption who reside together. Unlike the ACS, the SIPP identifies and links members of subfamilies, even if they are unrelated to the reference person (CEO creates unrelated subfamilies in the ACS).[2] Unique families within a sampling unit are identified with the RFID variable. The constructed family ID variable concatenates RFID with the constructed household ID. This yields 80,731 unique families.

The SIPP places unmarried partners of the reference person into a different family within the household, which does not include their own children, if there are any. This is inconsistent with CEO's unit of analysis, which treats unrelated partners as equivalent to spouses and includes them and their children in the reference person's poverty unit. Thus, in order to make "families" in the SIPP commensurate with CEO poverty units, we place unmarried partners of the reference person and their children into the reference person's family.

Individual relationships to the reference person are designated in the SIPP with a household relationship variable (ERRP). All unmarried partners of the reference person (ERRP = 10) are placed in the same family as the reference person.

2 For a more detailed explanation of CEO's poverty unit of analysis, see Appendix A in this report.

Additionally, all children of the unmarried partner (including non-biological children) are placed in the reference person's family. Finally, we have to address the issue of minors classified as "other non-relatives of the reference person" (ERRP = 13). For this group, we use the following rule: if there is no other parent or guardian in the household, the individual is placed in the reference person's family; otherwise, they are placed in their parent/guardian's family. Placing unmarried partners and unrelated minors in the reference person's family reduces the number of unique families to 77,220. Out of this number, 20.9 percent of the families (16,160) have all parents working at least part of the year,[3] at least one child 12 years of age or younger,[4] and live in an urban area. This number represents the sample of SIPP families that is used for the regression model and the match.

Matching SIPP and ACS Cases

Since SIPP data are measured for the reference month, the two income variables (total person income and earned income) are annualized and adjusted using Betson's

3 The CEO childcare model caps childcare costs by the weeks worked of the spouse that works less. If one spouse does not work, this family will have no childcare costs. In order to reflect this in the imputation procedure, we narrowed the SIPP sample to mirror the rules we apply to ACS observations.

4 The age range is consistent with the tax code, which provides childcare tax credits for children 12 and under.

Table G.1
Regression Model of Weekly Childcare Costs, 2014

Married-Parent Sample		
Dummy Variables	**Coefficient**	**t-Statistic**
Intercept	55.09	9.46
SNAP	-20.94	-4.03
High School	-6.45	-1.02
Some College	1.54	0.26
College	5.59	0.91
Graduate Degree	25.81	4.04
Nonparametric Variables	**EDF**	**F-Statistic**
Earned	8.68	67.61
Child 0-5	2.00	625.02
Child 13-17	1.85	8.12
Adults	3.93	11.66
Female Income Proportion	7.28	37.46
N		12,319
R^2		0.209

Single-Parent Sample		
Dummy Variables	**Coefficient**	**t-Statistic**
Intercept	33.25	6.74
SNAP	-17.49	-5.41
High School	2.82	0.52
Some College	7.74	1.50
College	24.64	4.03
Graduate Degree	16.66	2.18
Nonparametric Variables	**EDF**	**F-Statistic**
Earned	7.81	15.63
Child 0-5	1.86	103.64
Child 13-17	1.51	3.13
Adults	2.41	18.72
Female Income Proportion	1.90	9.74
N		3,841
R^2		0.120

Source: 2004 and 2008 Survey of Income and Program Participation (SIPP).
Notes: Dependent variable is weekly childcare expenditures in 2011 dollars. Sample comprised of SIPP families with at least one child under 13 and all parents working. Regressions were run using the SIPP person weight of the family head. This weight functions similarly to a family weight for each adjusted family unit within the household. "EDF" is the "equivalent degrees of freedom."

three parameter equivalence scales,[5] and inflated using the ratio of the Consumer Price Index (CPI) all-items index for the ACS data set year and the periods covered by the SIPP panels.[6] These data are aggregated from the person to the family level.

The SIPP divides childcare payments into 11 categories, organized by provider. These include: grandparents; other relatives; family daycare; daycare; preschool; Head Start; other nonrelative; after-school sports; clubs; other after-school activities; and private lessons. These payments are further subdivided in the SIPP by child, yielding a total of 80 childcare payment variables. Childcare payments are measured as the sum of all such childcare payment variables in the SIPP topical module. These values are inflated using the CPI childcare cost index.

5 See Appendix B for a description.

Table G.2
Comparison of Weekly Childcare Payments, ACS and SIPP, 2014

Working Parents		
	ACS	**SIPP**
Mean	$61	$55
Percent Zero	62.4%	62.7%
Percentile		
5	$0	$0
10	$0	$0
25	$0	$0
50	$0	$0
75	$69	$69
90	$207	$190
95	$304	$278
Working Parents with Non-Zero Expenditures		
	ACS	**SIPP**
Mean	$162	$149
Percentile		
5	$11	$11
10	$21	$22
25	$55	$55
50	$112	$111
75	$221	$201
90	$346	$330
95	$479	$422

Sources: American Community Survey Public Use Micro Sample as augmented by CEO, and 2004 and 2008 Survey of Income and Program Participation (SIPP) inflated to 2014 prices using the CPI childcare index.
Notes: Sample comprised of ACS and SIPP families with at least one child under 13 and all parents working. Values are reported at the level of the designated parent. Values are unweighted.

This SIPP data set is then used to develop a regression model to predict childcare costs for families. Following work by John Iceland and David Ribar,[7] we estimate separate regressions for the two-parent and single-parent sub-samples in the SIPP.

The relationship between childcare spending and many of its predictor variables is complex and nonlinear. In order to achieve the best possible fit to the data, we employ nonparametric techniques via a Generalized Additive Regression Model (GAM). A GAM is a regression model that allows different functional forms for each independent variable. Some of the variables used in the regression are included as dummy variables, while others are fit nonparametrically, using smoothing spline functions.[8] The regression output is summarized in Table G.1.[9]

These regression models are used to compute predicted means for childcare expenditures in both the SIPP and ACS files. ACS observations are then matched with SIPP observations based on their predicted means, and the actual weekly childcare cost value from the SIPP observation is donated to the ACS observation. We constrain the match so that SIPP observations can only match ACS observations with the same number of parents. Table G.2 compares the distributions of the SIPP childcare values and the matched values for the subset of families with at least one working parent and at least one child 12 years of age or younger in the 2014 ACS. The matched values closely reproduce the distribution of childcare costs in the SIPP and percentage of observations with zero childcare costs.

7 Iceland, John and David C. Ribar. "Measuring the Impact of Child Care Expenses on Poverty." Paper presented at the 2001 Population Association of America (PAA) meetings in Washington, D.C., March 29, 2001.

8 Smoothing splines are a particular type of nonparametric smoothing technique. For an overview of smoothing spline functions and GAM, see: Keele, Luke John. Semiparametric Regression for the Social Sciences. West Sussex, England: John Wiley and Sons, Ltd. 2008.

9 Nonparametric variables do not have reported coefficients, but rather have smoothed bivariate plots. These plots are available from the authors upon request.

Table G.3
Annual Nondiscretionary Childcare Expenditures, 2014

	All Working Parents	Working Parents with Non-Zero Expenditures
Mean	$2,553	$7,160
Percent Zero	64%	N.A.
Percentile		
5	$0	$346
10	$0	$559
25	$0	$2,053
50	$0	$5,030
75	$2,515	$9,859
90	$9,126	$15,902
95	$13,828	$22,470

Source: American Community Survey Public Use Micro Sample as augmented by CEO.
Notes: Samples are comprised of ACS families with at least one child under 13 and all parents working. Values are reported at the level of the designated parent. Data weighted by ACS household weight.
N.A. - Not applicable because these families all have positive childcare costs.

The weekly childcare values are then adjusted to reflect annual costs. In order to calculate childcare expenditures that are nondiscretionary, we multiply the weekly value by the lowest reported number of weeks worked among the parents and cap the childcare costs for the family by the wages of the lower-earning parent. Table G.3 below shows the distributions for the annualized values using the PMM procedure.

Commuting Costs

To estimate commuting costs we employ the ACS variables that provide information about means of transportation, travel time, usual weekly hours, vehicle occupancy, work location, and weeks worked in the past 12 months. We rely on administrative data to calculate the cost per trip of various modes of transportation. Listed below are the means of transportation and the cost per trip:

- Drove: $0.56 per vehicle mile – the average of the two IRS standard mileage rates[10] released in 2011, plus bridge and tunnel tolls.
- Drove with Others: Divide all driving costs by number of carpoolers.
- Motorcycle: IRS standard mileage rate with motorcycle rates for tolls.
- Bus, Subway, or Ferry: $2.32 per trip.[11]
- Railroad: $82.66 per week for out-of-city work locations and $59.17 per week for in-city work locations.[12]
- Taxi: We estimate each commute at $8.[13]
- Walk, Bike, or Work from Home: No cost per trip.
- Other Methods[14]: We assume a bus or subway fare of $2.32 per trip.

Once we have established a cost per trip for each means of transportation (other than railroad, which is already a weekly cost), we use the formula below to calculate the weekly commuting cost:

Weekly Commuting Cost = (Cost/Trip x Min ((WKHP/8 x 2), 14))

We assume an eight-hour work day and use the ACS variable "WKHP – Usual hours worked per week in the past 12 months" to calculate the number of days worked per

10 See: https://www.irs.gov/2014-Standard-Mileage-Rates-for-Business,-Medical-and-Moving-Announced

11 Metropolitan Transportation Authority (MTA) increased fares on March 3, 2013. We use $2.32 as the cost of a subway or bus trip, which is the average cost per ride of pay-per-ride, 7-day, and 30-day MetroCards, weighted by their usage. We assume that ferry riders take the free-of-charge Staten Island Ferry and then use an additional form of public transit.

12 A Long Island Railroad (LIRR) Zone 1 to Zone 1 weekly pass costs $56.75; a Zone 1 to Zone 4 pass costs $77.50. A weekly pass from Grand Central Station (GCT) to Harlem on Metro-North costs $53.50. A weekly pass from GCT to White Plains costs $81.74.

13 We use a slightly lower cost than the $9.61 per-trip cost in The New York City Taxicab Fact Book to account for outer borough trips, which are more likely to be with a non-medallion taxi. See: http:// www.schallerconsult.com/taxi/taxifb.pdf

14 The ACS only asks for means of transportation to work if the respondent worked last week. Therefore, for respondents that have worked in the past 12 months but not last week we assume a subway or bus fare.

week.[15] To account for a trip to and from work, we then multiply the number of work days by two and cap the number of possible weekly trips at 14. The cost per trip is then multiplied by the number of commuting trips per week to establish a weekly commuting cost. This is then multiplied by "WKW – Weeks worked in the last 12 months"[16] to establish the annual commuting cost.

Table G.4 shows that 49.8 percent of all New York City commuters used either the subway or bus with a median annual commuting cost of $1,160. The highest commuting costs were incurred by those taking a taxi, driving alone, or using the railroad.

15 We round to the nearest whole number for the number of work days.

16 In 2008, the WKW variable was changed from the actual number of weeks to a range format. For our 2008 through 2011 calculations, we used the midpoint of each range in our calculations. We cap the number of weeks worked at 50 to account for sickness or vacation.

Table G.4
Transportation Mode and Costs, 2014

			Weekly Cost		Annual Cost	
Mode of Transport	**Number of Commuters**	**Percent**	**Median**	**Mean**	**Median**	**Mean**
Drove Alone	879,691	20.4%	$46	$59	$2,296	$2,856
Drove with Others	170,039	3.9%	$22	$28	$957	$1,304
Bus	434,589	10.1%	$23	$21	$1,160	$1,009
Subway	1,712,560	39.7%	$23	$23	$1,160	$1,089
Railroad	57,954	1.3%	$59	$67	$2,959	$3,094
Ferry	8,798	0.2%	$23	$22	$1,160	$1,061
Taxi	35,036	0.8%	$96	$90	$4,800	$4,444
Motorcycle	1,889	0.0%	$46	$52	$2,296	$2,590
Bike	43,590	1.0%	$0	$0	$0	$0
Walked	373,473	8.7%	$0	$0	$0	$0
Worked at Home	156,032	3.6%	$0	$0	$0	$0
Other Method	25,313	0.6%	$23	$21	$1,160	$990
No Mode	413,074	9.6%	$19	$18	$459	$533
All Modes	4,312,038	100.0%	$23	$28	$1,160	$1,306
Percent Using Subway or Bus		49.8%				
Cost per Subway or Bus Trip		$2.32				

Sources: American Community Survey Public Use Micro Sample as augmented by CEO, using data from the following: "Regional Travel-Household Interview Survey." New York Metropolitan Transportation Council-New Jersey Transportation Planning Authority. February 2000; IRS Publication 463 (2012), Travel, Entertainment, Gift, and Car Expenses established the standard mileage rates for deductible costs of operating an automobile for business purposes; The New York City Taxicab Fact Book. Schaller Consulting. March 2006.
Note: Those that commuted via "Other Method" or reported no mode but did have work within the last 12 months were assigned the average cost per subway or bus trip.

The top panel of Table G.5 illustrates the impact of work-related expenses on the poverty status of the total population. It shows the combined impact, as well as the individual impact of both commuting costs and childcare expenditures. As expected, poverty rates are lower when we do not subtract work-related expenses from income. The effect of commuting costs was fairly consistent between 2005 and 2012, ranging from 1.3 to 1.7. However, there has been an increase in commuter costs beginning in 2013. As a result, the effect of commuting has increased the poverty rate by 2.1 percentage points in 2014, up from 1.6 percentage points in

Table G.5
Impact of Work-Related Expenses on Poverty Rates, 2005–2014
(Numbers are Percent of the Population)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
A. Total Population										
Total CEO Income	20.4	19.8	19.8	19.0	19.8	20.8	21.2	21.2	21.1	20.7
Net of:										
Commuting Cost	19.0	18.5	18.1	17.6	18.1	19.3	19.5	19.6	19.0	18.6
Childcare Expenses	20.1	19.5	19.6	18.7	19.5	20.5	21.0	21.0	20.8	20.4
Total Work-Related Expenses	18.8	18.2	17.9	17.4	17.8	19.0	19.3	19.4	18.7	18.3
Marginal Effects										
Commuting Costs	1.4	1.3	1.7	1.4	1.7	1.6	1.7	1.6	2.0	2.1
Childcare Expenses	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.3
Total Work-Related Expenses	1.6	1.6	1.9	1.6	2.0	1.8	1.9	1.8	2.4	2.4
B. Persons Living in Working Families with Children										
Total CEO Income	12.5	12.5	13.3	11.8	12.3	12.9	13.8	13.5	13.7	13.8
Net of:										
Commuting Cost	10.2	10.7	10.8	10.1	9.9	10.8	11.4	11.5	10.7	10.5
Childcare Expenses	12.0	11.9	12.9	11.2	11.6	12.2	13.3	13.0	13.0	13.3
Total Work-Related Expenses	9.8	10.1	10.5	9.6	9.4	10.3	11.0	11.0	10.0	10.0
Marginal Effects										
Commuting Costs	2.2	1.8	2.5	1.7	2.4	2.1	2.4	2.0	2.9	3.3
Childcare Expenses	0.5	0.6	0.5	0.6	0.7	0.7	0.5	0.5	0.6	0.5
Total Work-Related Expenses	2.7	2.4	2.8	2.2	2.9	2.6	2.8	2.5	3.6	3.8

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

2012. The impact of childcare expenses is stable, averaging about 0.3 percentage points from 2005 through 2014.

The second panel of Table G.5 shows the impact of work-related expenses for persons living in working families with children. This is the population that would be most affected by work-related expenses. Interestingly, while the impact of commuting costs for this group is notably larger than for the population as whole, this is not true for childcare costs, which continue to have a relatively small effect on the poverty rate.

Appendix H

Medical Out-of-Pocket Expenditures

Following the National Academy of Sciences' (NAS) recommendation, CEO's measure of income is net of what families spend for their medical care. Medical out-of-pocket expenditures (MOOP) are the sum of co-pays, deductibles, and the cost of health services that are not covered by insurance, including health insurance premiums. Since the American Community Survey (ACS) does not report this information, it must be imputed from an outside data source. We use the Medical Expenditures Panel Survey (MEPS) to impute MOOP into the ACS. MEPS data provide national estimates of health care utilization and spending, private and public health insurance coverage, and the availability, cost, and scope of private health insurance benefits for the U.S. population. MEPS files have a slightly longer processing time than the ACS, so for the 2014 CEO poverty measure we use the 2013 MEPS data adjusted by the medical care component of the Consumer Price Index for All Urban Consumers (CPI-U).[1]

MEPS data have several advantages over other survey data. First, they capture coverage dynamics (e.g., multiple spells and plans, and shifts from one plan to another) and the relationship between insurance and health care expenditure. Second, they measure MOOP with greater accuracy. Specifically, the MEPS collects health care expenses for all persons for each medical event (e.g., hospital stays, office visits, prescription drugs and other health care services and supplies) experienced in a given year, their health conditions, and the amount of each payment source (e.g., private, Medicare, Medicaid, and self or family). The MEPS then uses medical provider component data to verify and replace, if needed, information about spending for health care events reported by the household.

The MEPS contains two files that we use for our MOOP calculations. The Full Year (FY) file contains all the information pertaining to medical expenses except for

1 For further information about the MEPS, see the Agency for Healthcare Research and Quality website at: http://meps.ahrq.gov/mepsweb/

health insurance premiums. Premiums for persons that are privately insured are contained in the Person Round Plan Public Use (PRPL) file. To calculate MOOP for those on private insurance, we add the PRPL file's premium values to the FY file's medical expenses. For those on public insurance, we create premium values based on program rules and add them to the FY file's medical expenses.

Private Insurance Premiums

There are five different categories of private insurance in the FY file. They specify whether a policyholder has employer/union group insurance, private insurance with the source unknown, a non-group private policy, an "other group" insurance policy, or a self-employed (firm size of one) policy. All FY private insurance policyholders should have a corresponding private insurance premium in the PRPL file. However, there are a number of private insurance holder records in the FY file without corresponding records in the PRPL file. This occurs because health insurance premium values are only collected at the beginning of the year. Therefore, if a person began private insurance coverage in the middle of the year, a premium value would not be recorded in the PRPL file.

For records with missing premiums, we impute values via a hot-deck methodology. To insure that we are assigning an appropriate premium, we identify the policyholders as belonging to either an individual or a multi-person plan based on the number of persons in the FY health insurance unit (HIEUIDX). The health insurance unit variable is a MEPS-constructed variable which links adults, their spouses, and any unmarried children age 18 and under who would most likely be covered under one health insurance plan.[2] We then randomly assign non-missing premium values to records with missing premiums within their specified categories.

Public Insurance Premiums

We use program rules to assign appropriate premiums for those on public insurance. We assume all persons identified in the MEPS as Medicare recipients have Medicare Part B. All Medicare recipients with incomes above 135 percent of the Federal Poverty Guidelines (FPG) are required to pay a monthly premium for Medicare Part B. If the Medicare participant is not married, we use only personal income when calculating their percentage of FPG. For married participants we aggregate the income of both partners.

All persons enrolled in Medicare Part B also have the option of enrolling in Medicare Part C, Medicare Advantage. Medicare Advantage is a type of Medicare administered by a private health insurance company, which may include more services or benefits for additional premiums. For those identified in the MEPS as enrolled in Medicare Part C, we assign an additional annual premium of $420 for 2013.[3]

2 For the employer/union group, we also include whether or not the policyholder was in a union.

3 "Medicare Advantage 2013 Data Spotlight." The Henry J. Kaiser Family Foundation. See: https://kaiserfamilyfoundation.files.wordpress.com/2013/06/8448.pdf

Persons also have the option to enroll in Medicare Part D, prescription drug coverage, which also requires a supplemental monthly premium.[4] Many Medicare Advantage plans roll prescription drug coverage into their services and, therefore, for persons identified as enrolled in both Medicare Part C and Part D, we assign only the additional Medicare Part C premium.

To assign Child Health Plus premiums, we look at all children identified as public insurance recipients. We aggregate incomes for everyone in the same health insurance unit and compare that against the FPG. Families are required to pay a monthly per-child premium based on their income's percentage of the FPG. For all categories of participants there is also a family cap. For example, families with incomes between 160 percent and 222 percent of the FPG are required to pay a premium of $9 per child per month. The premium is capped at the payment for three children ($27 per family per month).[5]

New York State's Family Health Plus program does not have a premium but does require co-payments based on different types of procedures. These co-payments are captured in the MEPS Full Year file.[6] Medicaid participants have no premiums or co-pays.

Once the premium data is calculated, we aggregate all premiums within the identified family variable and add that to other medical expenses[7] to arrive at total medical out-of-pocket expenditures for the health insurance unit.

Predictive-Mean Nearest Neighbor Matching Method Combined with Hot-Deck Approach

To impute MOOP into ACS families, we employ predictive-mean nearest neighbor matching method (PMM), combined with a hot-deck approach. It involves regressing MOOP values on a vector of predictors in the sample of MEPS families that will donate their MOOP values. Predicted values are then computed for both MEPS donors and ACS recipient families. Finally, the donor with closest predicted value to a particular ACS recipient is chosen and that donor's observed value is transferred to the recipient. The donor-to-recipient match is only made within each cell of an allocation matrix that is constructed based on a few important predictors of MOOP. This hot-deck approach plays a crucial role in preserving covariance structures of MOOP. Otherwise, the relationships between those important predictors and MOOP will be biased toward zero in the post-imputed data. In what follows, we provide more details on how we specify our regression model and hot-deck allocation matrix. Then we compare the distribution of MOOP between the MEPS and the post-imputed ACS data.

4 For 2013 we assign an annual premium of $498, which is the weighted average by enrollment of Part D premiums for New York State. "Medicare Part D Prescription Drug Plans: the Marketplace in 2013 and Key Trends, 2006-2013." The Henry J. Kaiser Family Foundation. December 2013. See: https://kaiserfamilyfoundation.files.wordpress.com/2013/12/8524-medicare-part-d-pdp-market-place-2013-and-trends1.pdf

5 We used the health insurance unit as opposed to the family unit when capping the premium.

6 The TOTSLF variable identifies total out-of-pocket expenditures by patient or patient's family (other than premiums).

7 We aggregate each individual TOTSLF variable within the family to arrive at a total medical expenses value for the family.

MOOP values are regressed onto demographic and socioeconomic characteristics of the head of the poverty unit in MEPS.[8] Income, age of the household head, poverty unit size, and number of children are measured as continuous variables, while race, education, insurance status, and working status categories are included as binary variables. In 2008, the ACS began measuring insurance status, an important covariate of MOOP. Thus, the imputation model for 2008 and onward contains insurance status while the previous years cannot. This may create some discontinuity over time in our estimates. We address it by using Food Stamp receipt as a proxy for Medicaid status for the years prior to 2008. In addition, a good deal of the variation in insurance status is picked up by the full-time work and income variables (which proxies for private insurance) and the age of the poverty unit head variable (which proxies for Medicare enrollment). We tested the 2008 data using the model without insurance status and found similar outcomes to the model with insurance status, yielding a mean MOOP value of $2,867 compared with $2,895 for the model including insurance status.[9] This proxy method is imperfect, however, and may affect the quality of the statistical match.

The relationship between MOOP and many of its predictor variables is complex and non-linear. In order to achieve the best possible fit to the data, we employ nonparametric techniques via a Generalized Additive Regression Model (GAM) with a smoothing spline function. A GAM is a regression model that allows different functional forms for each independent variable. Binary variables used in the regression are included as dummy variables, while continuous ones are fit nonparametrically using smoothing spline functions.[10] The regression output is summarized in Table H.1 below.[11]

ACS and MEPS cases are matched based on their predicted means, using the regression model. When cases are matched, the actual MOOP value from the MEPS case is donated. The major drawback of the PMM method is that a donor can easily donate multiple times, which may lead to inefficiency.[12] A remedy to this issue would be to permit a single donation per donor. However, this would cause another issue given that there are slightly less than half as many donor cases in the MEPS as cases in the ACS. To ensure that all ACS cases can be matched, we apply a rule that a single MEPS case cannot donate more than ten times.

As mentioned above, we use a hot-deck allocation method to restrict the match. In doing so, we specify an allocation matrix based on two important predictor of MOOP values: health insurance status and the elderly status of the head of the poverty unit. MEPS and ACS observations can only be paired if they match on

8 See Appendix A for a description of the CEO poverty unit of analysis.

9 Additional information on the comparison of imputation models with and without insurance status is available upon request.

10 Smoothing splines are a particular type of nonparametric smoothing technique. For an overview of smoothing spline functions and GAM, see: Keele, Luke John, Semiparametric Regression for the Social Sciences. West Sussex, England: John Wiley and Sons, Ltd. 2008.

11 Nonparametric variables do not have reported coefficients, but rather have smoothed bivariate plots. These plots are available from the authors upon request.

12 Morris et al. Tuning multiple imputation by predictive mean matching and local residual draws BMC Medical Research Methodology. 2014. 14:75.

Table H.1
Regression Model of Medical Out-of-Pocket Spending, 2014

Dummy Variables	Estimate	t-Statistic
Intercept	7.63	183.70
Public Insurance	-2.16	-35.62
No Insurance	-2.26	-45.85
Work Full-Time	-0.06	-1.57
Black	-0.53	-11.10
Hispanic	-0.60	-12.32
Asian	-0.52	-7.07
Other Race/Ethnicity	-0.56	-5.70
Bachelor's Degree or Greater	0.16	4.21
Less than High School	-0.54	-10.64
Elderly Head	-0.76	-4.77
Elderly Present	0.37	4.04
Public Insurance × Elderly	1.79	20.73
No Insurance × Elderly	1.75	1.96
Non-Parametric Variables	**EDF**	**F-Statistic**
Income	8.26	64.70
Family Size	3.87	85.00
Age	8.87	86.79
Children	4.59	4.73
N		15,033
R^2		0.479

Source: 2013 Medical Expenditure Panel Survey inflated to 2014 prices using the CPI Medical Index.
Notes: Dependent is the natural log of family-level MOOP. Income measured as household income divided by 10,000. "EDF" is the "equivalent degrees of freedom."

health insurance status and the elderly status of their respective reference person. We did this because initial testing of the imputation model without these conditions yielded poor matches for certain sub-groups. Adding these matching criteria overcomes this problem.

The following table, H.2, shows the distribution of MOOP values in the MEPS and the PMM values for 2014. The matched MOOP values in the ACS are lower than those in the MEPS. Differences in the lower half of the distribution are particularly substantial. Low MOOP values in the bottom half of the distribution is partially due to more zeros in the post-imputed ACS data. As shown in Table H.2, the share of

families with zero MOOP is three times higher in the post-imputed ACS data than in the MEPS donor data.

There are two plausible reasons why our matching process results in a larger share of zeros in the imputed ACS data. First, our matching process does not determine whether and for which ACS family zero is a sensible impute. Without such an assessment, recipients are partitioned into an allocation matrix for match with all donors, including those who report zero expenditure. In turn, each donor with zero MOOP value can, by design, be used for a maximum of ten ACS recipients. Second, our matching procedure, by default, is programmed to assign zero value to ACS cases for which no MEPS match is found. This causes an issue for allocation cells that exhibit vastly different demographic composition between MEPS donors and ACS recipients.

Table H.2
Comparison of MOOP Distributions, MEPS and ACS, 2014

	MEPS	ACS
Mean	$3,524	$2,777
Aggregate (in $1,000s)	N.A.	$9,808,259
Percentile		
5	$0	$0
10	$18	$0
25	$410	$5
50	$2,174	$1,367
75	$4,948	$3,978
90	$8,685	$7,474
95	$12,043	$10,102
Proportion of Families with Zero MOOP Values	7.8%	24.4%

Sources: American Community Survey Public Use Micro Sample as augmented by CEO, and 2013 Medical Expenditure Panel Survey (MEPS) inflated to 2014 prices using the CPI Medical Index.
Note: N.A. - Not applicable due to the fact that the MEPS provides data at the U.S. level as opposed to the New York City level.

A better measure of the match quality is seen in the conditional distributions. By looking at the matched values conditional on the matching variables, we can see whether or not the medical spending patterns are reproduced in the ACS. Panel A in Table H.3 reports the mean and median MOOP expenditures in the MEPS and ACS by insurance and elderly status for all families. The mean and median values are relatively close to the MEPS data for the subgroups of people with private coverage. However, notable differences are found for families with public coverage only or no health insurance coverage.

To gauge the performance of our matching method free from the influence of the compositional differences between the two data files, Panel B compares the distribution of MOOP only for Non-Hispanic Whites in the MEPS and the imputed ACS. As shown in Panel B, our matching method reproduces the distribution of MOOP spending for Non-Hispanic Whites. This highlights a key drawback to our implementation of PMM method. It is crucial to replicate the distribution of MOOP in the post-imputed ACS data based on what we observed from MEPS donor data. However, it is equally important to pay close attention to differences in spending patterns between the city and the nation.

Table H.3
Comparison of MEPS and ACS MOOP Values by Age and Insurance Status, 2014

Panel A: All Families					
	Non-Elderly			Elderly	
	Private	Public Only	Uninsured	Private	Public or Uninsured
MEPS					
Mean	$4,484	$756	$1,223	$5,160	$2,918
Median	$3,181	$127	$212	$3,822	$2,121
ACS					
Mean	$3,842	$571	$918	$4,324	$2,004
Median	$2,626	$0	$69	$2,918	$608
Panel B. Non-Hispanic White Only					
	Non-Elderly			Elderly	
	Private	Public Only	Uninsured	Private	Public or Uninsured
MEPS					
Mean	$4,803	$989	$1,552	$5,354	$3,404
Median	$3,483	$222	$307	$3,936	$2,743
ACS					
Mean	$4,411	$1,063	$1,270	$4,887	$2,939
Median	$3,055	$0	$225	$3,765	$2,115

Sources: American Community Survey Public Use Micro Sample as augmented by CEO, and 2013 Medical Expenditure Panel Survey (MEPS) inflated to 2014 prices using the CPI Medical Index.

Note that MEPS data provide national estimates of health care spending, not specific to New York City families. New York City has a much more diversified population in terms of race and ethnicity. Our exploratory analysis (not reported here) also revealed that the city's families have higher income than MEPS families. It is not clear at this time whether imputations derived from the nationally representative data overestimate MOOP for New York City families (perhaps due to New York's relatively generous Medicaid and Child Health Plus programs), or whether imputations underestimate medical costs (perhaps because well-insured, low-income families use more medical care and, therefore, incur more related out-of-pocket medical costs). Thus, we are exploring other sources that may provide insights into differences between spending patterns of families in New York City and the nation as a whole with an eye to improving our imputation in future reports.

Impact of MOOP on the CEO Poverty Rate

Table H.4 reports the impact of MOOP on the poverty rate. MOOP has a substantial impact on the poverty rate, increasing poverty throughout the city by between 2.6 and 3.8 percentage points. The impact of MOOP on the poverty rate is larger in 2005–2007 than in 2008–2012. This is likely the result of the better statistical match that is generated with the inclusion of insurance status in the ACS as a matching variable.

Table H.4
Impact of MOOP on Poverty Rates, 2005–2014
(Numbers are Percent of the Population)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
A. All Persons										
Total CEO Income	20.4	19.8	19.8	19.0	19.8	20.8	21.2	21.2	21.1	20.7
Net of MOOP	16.8	16.4	16.0	15.8	16.5	17.9	18.0	18.2	18.4	18.1
Marginal Effect of MOOP	3.5	3.4	3.8	3.2	3.2	2.9	3.2	3.0	2.7	2.6
B. Elderly Individuals										
Total CEO Income	24.2	22.9	22.7	22.8	22.3	21.4	21.8	21.1	21.0	19.8
Net of MOOP	17.3	16.6	16.2	17.1	17.1	16.4	16.9	16.5	17.1	16.6
Marginal Effect of MOOP	6.9	6.3	6.5	5.7	5.2	5.0	4.9	4.6	3.8	3.2

Source: American Community Survey Public Use Micro Sample as augmented by CEO.

Table H.4 also reports the impact of MOOP on poverty among the elderly, the group most affected by medical spending. The MOOP adjustment raises elderly poverty by a much larger amount, ranging from 3.2 percentage points to 6.9 percentage points. The impact of MOOP on the elderly led to a considerable change in the way we understand their poverty. The elderly had a higher overall poverty rate than the city as a whole for every year from 2005 through 2011. Since then, the elderly poverty rate in New York City has fallen to below the citywide rate (19.8 as opposed to 20.7 in 2014).[13]

The decline in the elderly poverty rate is mainly driven by the reduction in MOOP. The impact of MOOP on elderly poverty rates decreased from 5.0 in 2010 to 3.2 percent in 2014. This may be a result of the growing market penetration of Medicare Advantage with prescription drug benefits (MA-PD) that are instituted with better protection for their enrollees from catastrophic medical costs. Starting from 2011, all MA plans have indeed been required to limit the out-of-pocket costs for services covered under Part A and B whereas traditional Medicare does not include such a limit.

Affordable Care Act of 2010

In 2010, President Obama signed the Affordable Care Act (ACA), putting in place comprehensive health insurance reforms. All Americans have access to affordable health insurance options as of 2014. The 2015 ACS data augmented with the 2014 MEPS data will allow the effects of this landmark legislation to be analyzed for the first time. The decline in elderly poverty coincides with growing enrollment in MA-PD plans that are required to observe Center for Medicare and Medicaid Service's (CMS) maximum out-of-pocket limits. This may have implications for similar provisions in the ACA for the wider population.

13 The same pattern is found in SPM data for 2013–2014. See Table 5 in the Census Bureau's report: https://www.census.gov/content/dam/Census/library/publications/2015/demo/p60-254.pdf.

Appendix I

The Effect of a Minimum Wage Increase on the Poverty Rate

Chapter 5 discusses our goal of lifting 800,000 people out of poverty or near poverty over the next decade. An increase in the minimum wage accounts for approximately 750,000 of this number, with the remaining 50,000 projected to stem from the array of City anti-poverty efforts, including those that lower economic burdens, such as affordable housing, and initiatives that increase earning potential, such as sector-based job training programs, improving college graduation rates of city residents, and broadening access to economic opportunities.

The CEO poverty measure has consistently shown that wages are inadequate relative to the poverty threshold, to the point where the poverty rate continues to rise even among families with two full-time workers. In 2014, the most recent year for American Community Survey (ACS) data, the minimum wage was $8 per hour in New York State (New York City was subject to state law in setting the minimum wage), a $0.75 increase from $7.25 per hour in 2013. After having reached a historic agreement with the state legislature, in April 2016 Governor Cuomo signed a $15 minimum wage plan into law.[1] For workers in New York City, the minimum wage is scheduled to rise incrementally, reaching $15 for employees of firms of 11 or more by December 31, 2018, and a year later for employees of smaller firms. Employing the 2014 and 2013 ACS, CEO simulated the effects of a $15 per hour minimum wage on the poverty rate. We first undertook this analysis last year, with the release of the annual CEO poverty report. That report included data from 2005 to 2013, the most recent data available at the time. We found strong evidence that a $15 minimum wage could lift many families above the poverty and/or near poverty lines. This year, we repeat our analysis, incorporating data from 2014. We also revisit our 2013 analysis. The CEO poverty rate for 2013 has been slightly revised to include recently available data for that year (see Appendix J for details). For this reason, the data presented below includes our work with the revised 2013 data and the more recent 2014 file.

1 New York State Governor. Governor Cuomo Signs $15 Minimum Wage Plan and 12 Week Paid Family Leave Policy into Law, 2016. See: https://www.governor.ny.gov/news/governor-cuomo-signs-15-minimum-wage-plan-and-12-week-paid-family-leave-policy-law

Methods and Assumptions

We began the simulation by identifying those workers in 2013 who earned the then current minimum wage of $7.25. The ACS, our primary data set, provides an annual wage income but not an hourly one. Consequently, an hourly variable was constructed utilizing the annual wage income, the number of weeks worked, and the number of hours worked in a given week. With this new variable, an hourly wage rate for all workers between the age of 16 and 64 was derived, excluding the self-employed. This allowed us to raise the wages of those earning between $7.25 and less than $15.

We then incorporated a spillover effect into the model, a standard practice in estimating wage effects. We assumed workers making anywhere between one dollar under the current minimum wage and one dollar over the new minimum wage would receive the new minimum wage or a commensurate increase in their wage. We repeated the same exercise for 2014, using the minimum wage in that year of $8 instead of $7.25. Table I.1 shows the earnings of workers who would receive the benefit of the new minimum wage, including the spillover effect, for 2013 and 2014. We include the new upper and lower bounds around each wage option. Wage growth increases from one dollar below the current minimum, and slows until the wage reaches one dollar above the new minimum of $15.

Several other assumptions were made:

- We made the assumption that income-dependent benefits, such as SNAP and WIC, would decline as wages rose, and tax credits would change with income.

Table I.1
Minimum Wage, Spillover Range, and Wage Parameters, 2013 and 2014

2013					
	Minimum Wage	**Spillover**	**Threshold**	**New Low Wage**	**New High Wage**
$15 per Hour Scenario					
Current	7.25	1.00	**6.25**	**6.25**	**15.00**
Proposed	15.00	1.00	**16.00**	**15.89**	**16.00**
2014					
	Minimum Wage	**Spillover**	**Threshold**	**New Low Wage**	**New High Wage**
$15 per Hour Scenario					
Current	8.00	1.00	**7.00**	**7.00**	**15.00**
Proposed	15.00	1.00	**16.00**	**15.88**	**16.00**

Source: American Community Survey Public Use Micro Sample as augmented by CEO, 2013 and 2014.

- No job loss effects were incorporated into the model.[2]
- We also made the assumption that there would be no short-run behavioral changes with respect to housing choice or medical-out-of-pocket (MOOP) expenses, and decided to hold those components of the model constant. An increase in expenditures on either component could erase some of the gains in moving out of poverty. In a long-run simulation, new minimum wage recipients would have more options and more discretionary income for housing and medical care. For housing, we expect, especially in the case of younger workers, that there would be more household formation. In other cases, some of the higher wage recipients may make a discretionary choice to increase their housing expenditures at some future date. In the case of medical care, the change is less predictable. The Affordable Care Act changed available options starting in 2014, but more data points are required in order to assess its impacts. Consequently, we do not yet know how much this would differ from the out-of-pocket medical expenditures that we have estimated using the 2013 or 2014 data.

We incorporated our assumptions and the increased wage estimates into family incomes in our model and re-estimated the poverty rate given this additional resource. The results have a notable effect. Table I.2 shows the impact of the new minimum wage on the poverty rates. Panel A shows the number of workers affected and the decline of the in-group poverty rates. Panel B shows the total number of individuals in these families and how their in-group poverty rate changes as family incomes rise. The reduction in the poverty rate for families with wage increases (Panel B) remains over 10 percent in both 2013 and 2014. The citywide poverty rate (Panel C) in both years falls to similar levels, 17.3 percent and 17.2 percent in 2013 and 2014, respectively.

2 For research supporting the zero job loss assumption, see: Institute for Research on Labor and Employment, Minimum Wage Effects Across State Borders: Estimates Using Contiguous Counties. California, 2010. http://escholarship.org/uc/item/86w5m90m. See also: Center for Economic and Policy Research, 2014 Job Creation Faster in States that Raised the Minimum Wage. Washington, D.C., June 30, 2014. http://www.cepr. net/index.php/blogs/cepr-blog/2014-job-creation-in-states-that-raised-the-minimum-wage

Table I.2

Minimum Wage Simulation: Effect on Poverty Rates, 2013 and 2014

Poverty Rate: Poverty units below 100% of poverty threshold
Near Poverty: Poverty units below 150% of threshold
(changes in poverty rates are percentage point changes)

	New Wage Per Hour	
	2013 $15.00	**2014 $15.00**
A. Workers with Wage Change		
Population	**1,214,723**	**1,134,255**
Poverty Rate Before Wage Increase	22.1%	21.1%
Poverty Rate After Wage Increase	10.5%	9.9%
Poverty Rate Change	-11.6%	-11.2%
B. Individuals in Poverty Unit with at Least One Worker with Wage Change		
Population	**3,023,633**	**2,857,643**
Poverty Rate Before Wage Increase	21.3%	20.4%
Poverty Rate After Wage Increase	11.1%	10.4%
Poverty Rate Change	-10.2%	-10.1%
C. Citywide Poverty Rates		
Poverty Rate Before Wage Increase	21.1%	20.7%
Poverty Rate After Wage Increase	17.3%	17.2%
Poverty Rate Change	-3.8%	-3.5%

Source: American Community Survey Public Use Micro Sample as augmented by CEO, 2013 and 2014.

Appendix J

Accuracy of the Data and Changes to the CEO Model

The principal data set for CEO's poverty estimates is the American Community Survey (ACS) Public Use Micro Sample (PUMS). The ACS is designed to sample three percent of the households in the U.S. each year. The PUMS is a subset of the full ACS sample. It provides information collected from roughly 26,000 households in New York City annually. Because the ACS is a survey, it is subject to two types of error: nonsampling error and sampling error.

Nonsampling Error: Nonsampling error is the error within survey data that is not specifically associated with the statistical sampling procedures of the sample data. Nonsampling error may occur because of erroneous responses by survey respondents, for example. Another source of nonsampling error may come from mistakes in the processing of the data by the Census Bureau, such as when data are edited or recoded.

Nonsampling error may affect the data in two ways: either randomly, which increases the variability of the data, or systematically, which introduces bias into the results. To minimize bias in the survey, the Census Bureau conducts extensive research of sampling techniques, questionnaire design, and data collection and processing procedures. For instance, after identifying a systematic underreporting of Supplemental Nutritional Assistance Program (SNAP) receipt and benefit dollar values in the ACS, the Census Bureau researched methods to increase the reported participation rate. The Census Bureau concluded through this research that changing the wording of the SNAP question to include "SNAP benefit card," as well as not asking about the SNAP benefit value, would significantly increase the number of households responding to whether they have received SNAP. [1]

1 John Hisnanick, T. Loveless, and J. Chesnut. U.S. Bureau of the Census. 2006 American Community Survey Content Test Report H.6-Evaluation Report Covering Receipt of Food Stamps. January 3, 2007. See: https://www.census.gov/content/dam/Census/library/working-papers/2007/acs/2007_Hisnanick_01.pdf

Sampling Error: Sampling error occurs in the ACS, as in other sample survey data, because inferences about the entire population, such as the poverty rate for New York City, are derived from a sample of individuals and housing units. Another sample drawn from the same population would provide a different estimate of the poverty rate. The sampling error is estimated by the standard error, which can be thought of as a measure of the deviation of an estimate drawn from one sample from the average estimate of all possible samples.

For this report, CEO employed the replicate weight method recommended by the Census Bureau to compute direct standard errors for our estimated poverty rates. The standard errors provide a measure of sampling error and some types of nonsampling error.[2] Using the standard errors, we tested the statistical significance of differences and changes in the report's poverty rates at the 10 percent level of significance. In the report's tables, we highlight, in bold, statistically significant differences between poverty rates.

An additional source of error in the data results from CEO's need to impute information on items such as the value of SNAP benefits, housing status, childcare expenditures, and medical out-of-pocket expenditures from other survey data into the ACS sample. We do not, however, account for the imputation error in this report.

Changes to the Poverty Model in This Report

Readers may notice that many of the statistics shown for the 2010–2013 period are slightly different from what we had reported in the previous editions of this report. We made small adjustments to our methodology and corrected some minor errors. These changes were incorporated into the model this year. In several instances, we adjusted which years of the administrative data were matched with the ACS data in the imputation models. The goal was to match on files with the most similar time period possible. The cumulative effect of these upgrades created small changes in our results.

These changes were applied to our 2014 estimate and also to the prior years, when appropriate. While each revision was small, the combined result generated changes in some of the poverty statistics. Because of the notable, combined impact, we detail the changes below:

Medical Out-of-Pocket Spending (MOOP): There is a recurring revision in the prior year of data using the current Medical Expenditures Panel Survey (MEPS) data. In order to estimate medical out-of-pocket expenses, we use data from the MEPS, which typically lags one year behind the ACS survey year. For example, 2014 MEPS data are scheduled to be released in September 2016. As a result, our report, which utilizes the ACS as our primary data set, has a one-year lag with respect to the MEPS data set. In order to keep dollars constant between the survey time periods, we use

2 U.S. Bureau of the Census. PUMS Accuracy of the Data (2013). Available at: http://www2.census.gov/programs-surveys/acs/tech_docs/accuracy/ACS_Accuracy_of_Data_2014.pdf

the Consumer Price Index for Medical Expenditures to adjust the variables derived from the MEPS data set.

At the same time, we take the opportunity to revise the prior year's data with what is now the matching MEPS data for that year. For example, the 2013 MEPS data is used with the 2014 ACS, which is also used to update the 2013 estimates. As a result, the 2013 poverty rate published in the previous report is slightly different from the same rate published in this report. The 2014 poverty estimate will be revised in the future to include 2014 MEPS data.

School Meals and WIC: School meals and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) estimates use several combined years of data (see Appendix E). For this report, we made adjustments in the combined Current Population Survey Annual Social and Economic Supplement (CPS ASEC) data set years, causing a change in the regression coefficients. For 2014, the WIC and school meals coefficients are now derived from the combined 2010 through 2015 CPS ASEC data sets.

We also changed the model for matching administrative data for WIC to the 2010 through 2013 ACS. We incorporate into the model new WIC population totals included in administrative data from the New York State Department of Health. This allowed us to improve the match of the population count of eligible women, infants, and children receiving WIC payments. In previous reports, a fixed percentage of women, infants, and children were flagged as receiving WIC benefits based on characteristics derived from 2008 administrative data. For 2013, with the new model, there are approximately 93,000 more weighted poverty units receiving WIC than under the previous model for 2013.

Childcare: Revised CPI series were used for inflation adjustments to the values taken from SIPP data.

Housing: A new 2014 release of the New York City Housing and Vacancy Survey was incorporated into the 2014 ACS data set. The data are used in CEO's estimation of housing expenses and control status of the housing that New Yorkers live in – a detail that is not covered in the ACS. The 2013 poverty rate was based on the 2011 release of the HVS, inflation adjusted to 2013.

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The need for an alternative poverty measure is seen in the increasing interest in a new measure. In recent years, New York City has been joined by other state and local poverty measurement initiatives. To date, state-level NAS-style poverty measures have been developed for New York, Connecticut, Georgia, Illinois, Massachusetts, Minnesota, Wisconsin, California, and the city (and metropolitan area) of Philadelphia. In addition, longitudinal estimates for the U.S. have been developed by the Population Research Center at Columbia University. All these projects have been enormously helpful to our work. We have benefited from the wisdom of many: Linda Giannarelli, Laura Wheaton, and Sheila Zedlewski at the Urban Institute; Julia Isaacs and Timothy Smeeding at the University of Wisconsin's Institute for Research on Poverty; Irv Garfinkel, Jane Waldfogel, and Christopher Wimer at Columbia; and Marybeth Jordan Mattingly at the Stanford Center of Poverty and Inequality.

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