Mark K. Levitan and Susan S. Wieler

Poverty in New York City, 1969-99: The Influence of Demographic Change, Income Growth, and Income Inequality

- Despite gains in employment, income, and educational attainment, New York City experienced a rise in poverty from 1969 to 1979 and a continued high rate from 1979 to 1999.
- A study of the impact of several purported causes of poverty in the city finds that certain key demographic changes are associated with the rise in poverty and its persistence.
- Dwarfing the impact of the demographic changes, however, was a dramatic increase in income inequality from 1979 to 1999 driven by a widening disparity in wage rates.

1. Introduction

The four-year rise in the U.S. poverty rate that began with the recession of 2001 and the images of devastation from New Orleans after Hurricane Katrina has led to a renewed interest in poverty among researchers and policymakers. Mayors of large cities have been prominent in the renewed discussion. In 2006, New York City Mayor Michael Bloomberg convened the Commission on Economic Opportunity, which offered recommendations for reducing poverty in the city and led to the formation of the City of New York's Center for Economic Opportunity.[1] In early 2007, the U.S. Conference of Mayors' Task Force on Poverty, Work, and Opportunity issued a report detailing an agenda for poverty reduction in America.[2]

Policies for addressing poverty are influenced by its perceived causes. For example, single parenthood is commonly thought to be a root cause of poverty. This perception suggests policies that promote marriage. Among those who see poverty

Mark K. Levitan, director of poverty research at the New York City Center for Economic Opportunity, was a senior policy analyst at the Community Service Society at the time this article was written; Susan S. Wieler, senior policy associate at the Citizens' Committee for Children of New York, Inc., was a community affairs associate at the Federal Reserve Bank of New York when this article was written.
<levitanm@hra.nyc.gov>
<swieler@cccnewyork.org>

The authors thank Robert Cherry, Andrew Haughwout, Martin Kohli, Wilbert van der Klauuw, and two anonymous referees for helpful suggestions as well as Irene Sanchez for excellent research assistance. The views expressed are those of the authors and do not necessarily reflect the position of the Citizens' Committee for Children of New York, the Community Service Society, the Federal Reserve Bank of New York, the Federal Reserve System, or the New York City Center for Economic Opportunity.

as the result of low wages, policies such as increasing the minimum wage or the earned income tax credit are often favored. In this article, we evaluate the impact of these and other purported causes of poverty in New York City from 1969 to 1999 and their policy consequences.

Factors influencing change in the poverty rate can be grouped into two categories: demographic and economic. This study examines the effect of the demographic factors of race, nativity, family structure, and educational attainment as well as the economic factors of income growth, income inequality, and earnings inequality on changes in the city's poverty rate. (See Box 1 for a discussion of this measure.) We find that demographic factors, coupled with a sharp drop in mean family income, played a leading role in the dramatic rise in the New York City poverty rate from 1969 to 1979. However, from 1979 to 1999—a period marked by a stable but stubbornly high poverty rate—growing income inequality largely explains why an impressive rebound in mean family income did not lead to a decline in the share of city residents living below the poverty line. This increase in inequality, in turn, can be traced to the stagnation of wages at the low end of the earnings distribution. Despite substantial demographic and economic differences between New York City and the United States, our results echo findings in research for the nation at large.

We evaluate the impact of . . . purported causes of poverty in New York City from 1969 to 1999 and their policy consequences.

The outline of our study is as follows: In Section 2, we show how two demographic shifts—growth in the share of the city's black and Hispanic populations and an increase in the share of those living in female-headed families—are clearly associated with the rise in poverty from 1969 to 1979 and the failure of the poverty rate to fall from 1979 to 1999. However, in the subsequent section, placing these factors in the context of New York City's income growth and expanding income inequality reveals that the rise in inequality (net of the influence of demographic change) plays a more influential role in the 1979-99 stability of the poverty rate than do the aforementioned demographic changes.[3] Section 4 explores the sources of this growing inequality and finds that the increasing inequality of earnings among persons living in full-year working families is a pervasive force underlying the overall rise in inequality. Section 5 briefly discusses policy responses.

Box 1
Measuring Poverty

The United States has an "official" poverty measure that federal statistical agencies such as the Census Bureau use in their reports. This study uses this official measure, which compares a family's pre-tax cash income to a set of thresholds that vary by family size and composition. Members of a family are considered to be in poverty if the family's total income is less than the appropriate threshold. For 1999, the last year of our analysis, the poverty threshold (in 1999 dollars) for a single parent with two children was $13,423; the threshold for a two-parent family of four was $16,895.[a]

While the federal poverty measure has its shortcomings, it remains a commonly used measure among researchers.[b] Given the limitations of the income data available in the decennial census, we did not attempt to use an alternative methodology.

[a]For information on how the poverty thresholds were first developed and have changed over time, see Gordon M. Fischer, "The Development and History of Poverty Thresholds," *Social Security Bulletin* 55, no. 4 (winter 1992): 3-14.

[b]For a critique and suggested alternative, see Committee on National Statistics, Commission on Behavioral and Social Sciences and Education, *Measuring Poverty: A New Approach. Report of the Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods.* Washington, D.C.: National Academy Press, 1995.

2. Poverty in New York City, 1969-99

New York City's poverty rate rose dramatically during the 1970s (Table 1). In 1969, 14.5 percent of residents lived below the poverty line, a rate comparable to the nation's 13.7 percent. By 1979, one in five city residents, or 20.2 percent, lived in poverty. In 1999, the poverty rate stood at 21.9 percent, more than 7 percentage points above the 1969 level and nearly

[1] New York City Commission for Economic Opportunity, "Report to Mayor Michael R. Bloomberg: Increasing Opportunity and Reducing Poverty in New York City," September 2006.

[2] U.S. Conference of Mayors, "Repairing the Economic Ladder: A Transformative Investment Strategy to Reduce Poverty and Expand America's Middle Class," January 2007.

[3] While there were striking events in the 1990s that might be expected to affect the official poverty rate—welfare reform, wage increases during the economic boom in the second half of the 1990s, the slowing of the increase in female-headed households—our analysis of the impact of demographic changes on the poverty rate did not reveal sharp differences between the 1980s and 1990s. Thus, we combine these periods to simplify the presentation.

Table 1

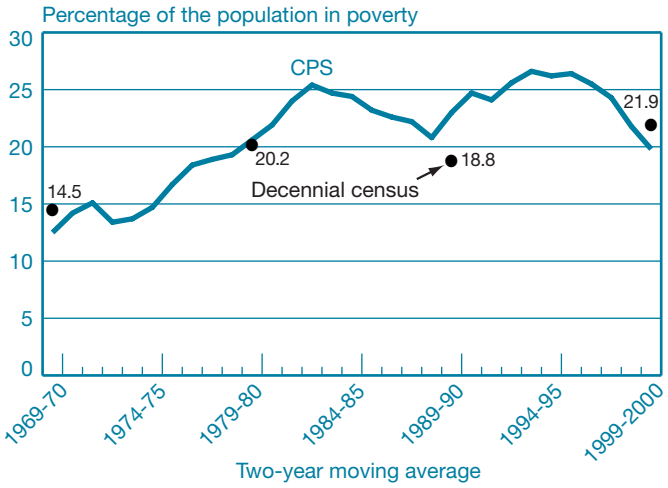
Poverty Rates for New York City and the United States

Year	New York City	United States
1969	14.5	13.7
1979	20.2	12.4
1989	18.8	13.1
1999	21.9	12.4

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census (1970-2000), Census Historical Poverty Tables (<http://www.census.gov/hhes/www/poverty/census/cph162.html>), and Census 2000 Summary Tape File 3.

Chart 1

The Cyclical Behavior of New York City's Poverty Rate



Source: Authors' calculations, based on the Current Population Survey (CPS) of the U.S. Bureau of Labor Statistics/U.S. Census Bureau and the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau.

Notes: The chart places the poverty rates estimated from the decennial census in the context of the cyclical pattern of change, measured by a two-year moving average for the poverty rate estimated from the CPS. Given the extended economic difficulties the city faced during the 1970s, the poverty rate rose steadily. Its continued climb into the early 1980s reflects the post-1979 recession. From 1982 to 1983, the poverty rate declined as the city economy rebounded, reaching a cyclical low of 20.8 percent (estimated from the CPS) in 1988-89. The corresponding poverty rate for 1989, derived from the decennial census, was 18.8 percent. The recession of the early 1990s brought another period of increased poverty to the city, peaking at 26.6 percent in 1993-94. The strong local economy of the second half of the 1990s pushed the poverty rate down to 19.8 percent in 1999-2000. The corresponding estimate from the decennial census was 21.9 percent.

10 points above the U.S. rate of 12.4 percent. (While the poverty rate tends to rise and fall with the business cycle—see Chart 1—the years 1969, 1979, 1989, and 1999 correspond closely to business cycle peaks and thus enable us to investigate the secular trend.)

The large increase in the poverty rate in the 1970s, a decade when the city struggled with the effects of a deep national recession and its own fiscal crisis, is not surprising. From 1969 to 1979, the city's population declined from 7.9 million to 7.1 million, payroll employment fell from 3.8 million to 3.3 million jobs, and median family income plunged from $36,543 to $29,878. Chart 2 illustrates that the post-1969 rise in poverty was not unique to New York.

In the 1980s and 1990s, the city enjoyed an impressive recovery. Payroll employment rose and fell with the business cycle, reaching 3.7 million jobs by 2000, only slightly below the city's 1969 all-time high. Population also recovered, reaching 8 million in 2000, and median family income rebounded to $35,000 by 1999. Despite these gains, however, the poverty rate did not decline. New York's poverty rate in 1999 was 21.9 percent, nearly 2 percentage points *above* the 1979 rate of 20.2 percent.[4,5]

Several recent studies (Freeman 2001; Danziger and Gottschalk 2003; Iceland 2003; Hoynes, Page, and Stevens 2006) have investigated an analogous question concerning the national poverty rate: Why, despite continued growth in median and per capita incomes, has there been so little change in the U.S poverty rate since the early 1970s? These studies find that the increase in female-headed families is the chief demographic factor impeding the translation of economy-wide income gains into poverty rate declines. But they also highlight the importance of the rise in income inequality—partially attributable to stagnant or declining wages at the low end of the earnings distribution—in the poverty rate's inability to fall. The studies uniformly conclude that rising earnings inequality had a greater influence on the nation's poverty rate than did demographic change.[6]

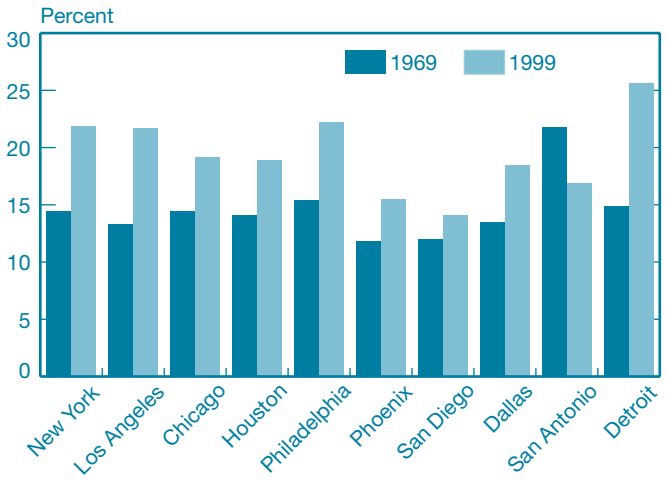
In the context of this literature, New York City is an interesting test case. Over the past three decades, the city has undergone dramatic demographic changes that have increased

[4] Income figures are based on the authors' calculations using the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census for 1970, 1980, 1990, and 2000. Income is expressed in 1999 dollars and is adjusted for inflation using the CPI-U. Population figures are from the Regional Economic Information System of the U.S. Department of Commerce's Bureau of Economic Analysis. Payroll employment figures are from the Current Employment Statistics Survey of the U.S. Department of Labor's Bureau of Labor Statistics.

[5] The restriction of family resources to pre-tax cash income means that tax credits and in-kind benefits are not accounted for in the official measure. Thus, the rise in the poverty rate from 1979 to 1999 may overstate the deterioration of conditions in the city. We do not believe that this possible effect undermines our analysis of the 1979-99 stability of the city poverty rate.

Chart 2

Poverty Rates in the Ten Largest U.S. Cities, 1969 and 1999



Sources: U.S. Census Bureau, 1970 and 2000 Decennial Census Summary Tape File 3; authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau (for New York City).

Notes: The chart places the New York City poverty rate in the context of rates for the ten largest cities in the nation. It shows that the post-1969 rise in poverty was common across large cities. It also suggests that the 1999 New York City poverty rate was not as high as the rate for other urban areas such as Detroit. However, New York City's rate was considerably higher than rates for the Sun Belt cities of San Antonio, Phoenix, and San Diego.

its share of poverty-prone groups such as immigrants, racial and ethnic minorities, and persons living in female-headed families. For example, in 1970 nearly half (47.6 percent) of New York's population was composed of non-Hispanic whites living in husband-wife families. By 2000, the proportion in this category had fallen to one in five (20.5 percent).[7] The city is also notable for its high and growing levels of income inequality. The ratio of family income at the 90th and 10th deciles of the income distribution rose from 11.5 in 1979 to 18.4 in 1999.[8] Among U.S. cities, New York had the eleventh highest level of income inequality in 1979; by 1999, it ranked fourth.[9]

[6] These studies represent only one line of inquiry in the recent literature. Another response to the question of why the U.S. poverty rate has failed to fall as incomes have risen is that the standard method by which poverty is measured is flawed and does not detect the considerable improvement in material well-being within the low-income population. For an example of this view of poverty, see Eberstadt (2006).

[7] Authors' calculations using the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census.

[8] Authors' calculations using the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census.

[9] Analysis by Andrew Beveridge, reported in "In Manhattan, Poor Make 2 Cents for Each Dollar to the Rich," *New York Times*, September 4, 2005.

These trends suggest that there are really two separate questions to be asked about changes in the New York City poverty rate from 1969 to 1999:[10] Why did the rate increase from 1969 to 1979? And why has it persisted in the low 20 percent range in the 1979-99 period? Our analysis in this and subsequent sections therefore treats these two time spans separately and focuses particularly on the 1979-99 period, in which the persistently high rate of poverty in the city stands in stark contrast to a coincident rise in both payroll employment and family income.

In this section, we quantify the effect of changes in the demographic composition of the city on New York's poverty rate relative to changes in within-demographic group poverty rates over time. We consider four demographic dimensions: nativity, educational attainment, family status, and race/ethnicity.[11] A simple decomposition framework provides two rather surprising results. First, the increasing share of the city population that is foreign-born had no *direct* effect on the poverty rate. Second, widespread gains in educational attainment—that, all else constant, should have reduced the city's poverty rate—were offset by increasing poverty rates *within* all the educational attainment groups. Two demographic factors—family status and race/ethnicity—have the expected effect: each had a notable upward influence on the city poverty rate.

There are really two separate questions to be asked about changes in the New York City poverty rate from 1969 to 1999: Why did the rate increase from 1969 to 1979? And why has it persisted in the low 20 percent range in the 1979-99 period?

[10] We use decennial census data rather than Current Population Survey (CPS) data because the latter include nativity data only as of 1994. While the CPS would allow for a time series analysis of intercensal fluctuations not possible with the decennial data, the large influx of immigrants to New York City during the 1969-99 period makes the ability to assess the effects of immigration on poverty critical to our analysis. Another drawback of the CPS is its limited sample of New York City residents, which complicates meaningful estimates of poverty rates for subgroups of the population. Note that because neither census nor CPS data allow for the tracking of individuals over time, the mobility of individuals in and out of poverty is not addressed.

[11] Two other potential factors are the age distribution of the population and family size. However, our analysis of the Census Bureau's 5-Percent Public Use Microdata Sample data indicates that New York City's population shifted away from the age group with the highest poverty rate, children under eighteen, and that mean family size decreased between 1970 and 2000. Children represented 28.9 percent of the city's population in 1970 and 24.0 percent in 2000. Mean family size declined from 3.6 to 3.3 persons per family from 1970 to 2000.

Box 2

Calculating the Demographic Share and Within-Group Effects

We estimate the demographic share and within-group effects of each of four demographic factors on the New York City poverty rate using a standard "shift share" analysis. For example, in the case of nativity (Table 2), we estimate that the shift toward foreign-born residents had little direct effect on the poverty rate between 1969 and 1979. The demographic share effect is -0.1, implying that the 5.7 percentage point increase in poverty during this period is the result of increases in the poverty rates for both native- and foreign-born New Yorkers (the "within-group rate effect"), rather than a shift toward the group with the higher rate in the initial period (the "demographic share effect").

The demographic share effect is estimated using equation 3. The first term in the equation is a hypothetical poverty rate that simulates what the poverty rate would have been if the city had undergone its actual demographic change but poverty rates for each nativity group had remained at their 1969 levels. The term is calculated as the sum of the products of the poverty rates for each nativity group in 1969 and their share of the population in 1980 (14.7(.764) + 13.5(.236)) and it equals 14.4 percent. The difference between this hypothetical poverty rate and the actual poverty rate in 1969 (14.5 percent) is -0.1 percentage point. The within-group rate effect (estimated using equation 5) is calculated in an analogous way, by the difference between a hypothetical poverty rate constructed from the sum of the products of the poverty rates for each nativity group in 1979 and their respective shares of the population in 1970 (21.2(.822) + 16.7(.178)) and equals 20.4 percent. The difference between this hypothetical poverty rate and the actual poverty rate in 1969, labeled the "within-group rate effect" in Table 2, is 5.9 percentage points.

A residual term (labeled "interactive effect") captures the change in the poverty rate attributable to the joint impact of the demographic share and within-group rate effect. In this case, it equals (after rounding) -0.2 percentage point. We repeat this analysis for educational attainment (Table 4), family status (Table 5), and race/ethnicity (Table 6).

2.1 Methodology

To illustrate the effect of population shifts on New York City's poverty rate, we present the results of a series of simulations that measure the effect of these shifts relative to the influence of changes in the within-group poverty rates. For example, we measure the effect of the shift toward groups with higher levels of educational attainment (fewer high-school dropouts, more college graduates) relative to the effect of changes in the poverty rate over time within these educational attainment groupings.

We use a standard "shift share analysis," which takes advantage of the fact that the citywide poverty rate can be expressed as an average of the poverty rates for groups within the population weighted by each group's population share (see Box 2). The difference between the poverty rates in any two years can therefore be written as:

(1) *Poverty rate year two - poverty rate year one*

$$= \sum_{i=1}^{N} R_{i2} * S_{i2} - \sum_{i=1}^{N} R_{i1} * S_{i1},$$

where R is the group i poverty rate, S is the group i share of the population, and Σ is an operator denoting the sum of the products.

This suggests a way to construct a hypothetical poverty rate for year two that would simulate the poverty rate for that year if group shares of the population had changed but each group's poverty rate was held constant:

(2) $$\sum_{i=1}^{N} R_{i1} * S_{i2}.$$

The difference between this hypothetical and the actual poverty rate in year one is the change in poverty that is associated with the direct effect of the change in size of each group's share of the population.

(3) *Demographic share effect* $= \sum_{i=1}^{N} R_{i1} * S_{i2} - \sum_{i=1}^{N} R_{i1} * S_{i1}$

$$= \sum_{i=1}^{N} R_{i1}(S_{i2} - S_{i1}).$$

Another hypothetical poverty rate can be constructed by simulating the poverty rate in year two if group shares were unchanged but each group's poverty rate had undergone its actual change:

(4) $$\sum_{i=1}^{N} R_{i2} * S_{i1}.$$

The difference between this hypothetical and the actual poverty rate in year one is the change in the poverty rate that is associated with the direct effects of changes that occurred in the within-group poverty rates.

(5) *Within-group rate effect* $= \sum_{i=1}^{N} R_{i2} * S_{i1} - \sum_{i=1}^{N} R_{i1} * S_{i1}$

$$= \sum_{i=1}^{N} S_{i1}(R_{i2} - R_{i1}).$$

A third term identified in the tables we present is labeled "interactive effect." It represents the (typically small) joint

Table 2
Decomposition of Change in Poverty Rate by Nativity

	1969 Poverty Rate	1970 Population Share (Percent)	1979 Poverty Rate	1980 Population Share (Percent)	1999 Poverty Rate	2000 Population Share (Percent)
Citizen by birth	14.7	82.2	21.2	76.4	22.1	63.5
Foreign-born	13.5	17.8	16.7	23.6	21.7	36.5
Total	14.5	100.0	20.2	100.0	21.9	100.0

Memo:	
1969-79	
Demographic share effect	-0.1
Within-group rate effect	5.9
Interactive effect	-0.2
Actual change	5.7
1979-99	
Demographic share effect	-0.6
Within-group rate effect	1.8
Interactive effect	0.5
Actual change	1.8

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1970-2000.

effects of changes in the group rates and group shares. By construction, the sum of these three effects equals the actual change in the poverty rate.[12]

2.2 Effects of Demographic Shifts on the City's Poverty Rate

Nativity

The share of city residents born outside the United States doubled over the 1970-2000 period, increasing from 17.8 to 36.5 percent (Table 2). Since many immigrants arrive in the country with few years of formal schooling and minimal English skills, it is often assumed that the growing share of the population that is foreign-born is exerting upward pressure on the city's poverty rate. But in each of the two periods studied, the demographic share effect for nativity is negative (-0.1 and -0.6, respectively) and negligible relative to the actual change in the poverty rate (5.7 percentage points from 1969 to 1979 and 1.8 percentage points from 1979 to 1999).[13]

The reason for this perhaps surprising result is apparent from the table. In each census year, the poverty rate for foreign-born New Yorkers is lower than it is for the native-born.[14] The negative sign in the decompositions is simply the result of the shift in the population toward the group with the lower poverty rate.

In Table 3, we investigate demographic changes within the two nativity groups that help to explain this seemingly counterintuitive result. The small size of the share effect indicates that changes in the citywide poverty rate were being

[12] Following Danziger and Gottschalk (1993) and Iceland (2003), we use simulations and decomposition methods to calculate hypothetical poverty rates under different counterfactual assumptions. This methodology allows us to estimate the relative size of the effects of various phenomena associated with changes in the poverty rate: nativity, race/ethnicity, family status, educational attainment, economic growth, and income inequality. While this methodology has intuitive appeal and allows us to quantify the relative strength of the associations between poverty and broad economic and demographic trends, it has several limitations. As is the case with multiple-regression and other social science statistical models, simulations only suggest how strongly phenomena are related; they cannot identify causal relationships. Another limitation is that the method abstracts from interactions among the variables. For instance, it assumes that an increase in the foreign-born population will not affect the poverty rate of the native-born.

[13] A peculiarity of decennial census data is that the data report demographic characteristics at the time of the survey but measure poverty for the prior calendar year. Thus, in Table 2 and other tables, the poverty rates are for 1969, 1979, and 1999, while the population shares are for 1970, 1980, and 2000.

[14] The group we refer to as "native-born" is more precisely categorized as "citizens by birth" because it includes persons born in U.S. outlining areas such as Puerto Rico as well as children born abroad of U.S. parents. For ease of exposition, we refer to the group simply as "native-born." Note that the census asks respondents for their place of birth and citizenship status but does not ask whether persons are legal entrants to the United States.

Table 3
Demographic Change within Nativity Groups

	Citizen by Birth			Foreign-Born		
	1970	2000	Change (Percentage Points)	1970	2000	Change (Percentage Points)
A. Educational attainment						
Less than high school	51.5	19.7	-31.8	60.1	26.8	-33.3
High school	27.8	30.7	2.9	20.5	31.0	10.4
Some college	9.3	23.5	14.1	8.4	18.5	10.1
Bachelor's degree or higher	11.4	26.1	14.7	10.9	23.7	12.8
B. Race/ethnicity						
Non-Hispanic white	62.7	42.0	-20.7	69.9	22.9	-47.0
Non-Hispanic black	21.7	27.2	5.5	7.4	19.2	11.9
Non-Hispanic other	0.7	6.2	5.5	4.8	27.0	22.2
Hispanic, any race	14.9	24.6	9.7	18.0	30.9	12.9
C. Family status						
Husband-wife	68.6	46.0	-22.7	69.7	57.8	-11.9
Female-headed	15.7	25.0	9.3	8.8	16.7	7.9
Male-headed	3.1	4.8	1.7	3.4	7.1	3.6
Unrelated individual	12.5	24.2	11.7	18.0	18.4	0.4

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1970-2000.

driven by changes in the within-group poverty rates. In each period, the within-group rate effect nearly equals the actual increase in the poverty rate. This result suggests that demographic changes were occurring within both groups that made each group poorer. Looking at demographic shifts within the city's population by nativity (Table 3), we see that in fact both groups were experiencing similar changes in their demographic composition. Although native- and foreign-born New Yorkers alike increased their level of educational attainment (panel A), both groups were increasingly composed of racial groups with relatively high poverty rates (panel B). In addition, a rising share of each was made up of persons living in poverty-prone family status groups (panel C).

These results indicate that, rather than immigration per se, it is the demographic changes that cut across the native/immigrant divide that matter. This does not mean that immigration played no role in the evolution of poverty in New York. Immigration was indeed bringing to the city more people who are at risk of living in poverty. However, it is also clear that similar demographic shifts among the native-born population (who are still a majority of the city's residents) are no less important an influence on New York City poverty.[15]

Educational Attainment

In 1970, slightly more than one in ten city residents lived with a household head who had a bachelor's degree or higher level of educational attainment; by 2000, this share had increased to one in four (Table 4).[16] In addition, the percentage of New Yorkers in a family headed by a person with some college, but not a bachelor's degree, increased from 9.1 to 21.6 percent. Thus, while only a little more than one in five city residents were members of a family headed by someone with at least some college in 1970, almost half were by 2000.

The decline in the percentage of the population living with a high-school dropout is almost the mirror image of this increasingly college-educated population. In 1970, more than half of all New Yorkers were in families headed by a high-school dropout; by 2000, this percentage had fallen to slightly more than one in five.

[15] As explained in footnote 12, our method abstracts from interactions among the variables. Thus, it does not, for instance, allow for the possibility that increased immigration might have an effect on native-born poverty.

[16] Since the calculation of whether or not an individual is in poverty is determined by family income, we use educational attainment of the household head in these calculations. Persons who are unrelated individuals, that is, not living in a family, are classified by their own educational attainment. They are treated as one-person families in this analysis.

Table 4

Decomposition of Change in Poverty Rate by Educational Attainment

	1969 Poverty Rate	1970 Population Share (Percent)	1979 Poverty Rate	1980 Population Share (Percent)	1999 Poverty Rate	2000 Population Share (Percent)
Less than high school	20.2	53.0	29.8	41.4	37.9	21.8
High school	9.8	26.6	17.2	29.2	25.1	30.9
Some college	7.1	9.1	12.9	13.0	17.4	21.6
Bachelor's degree or higher	4.4	11.3	6.9	16.4	8.4	25.6
Total	14.5	100.0	20.2	100.0	21.9	100.0

Memo:	
1969-79	
Demographic share effect	-1.6
Within-group rate effect	7.8
Interactive effect	-0.6
Actual change	5.7
1979-99	
Demographic share effect	-3.8
Within-group rate effect	6.5
Interactive effect	-0.9
Actual change	1.8

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1970-2000.

Table 5

Decomposition of Poverty Rate by Family Status

	1969 Poverty Rate	1970 Population Share (Percent)	1979 Poverty Rate	1980 Population Share (Percent)	1999 Poverty Rate	2000 Population Share (Percent)
Husband-wife	7.6	69.9	10.2	58.7	13.7	51.4
Female-headed	37.3	14.7	45.9	20.4	37.2	22.5
Male-headed	11.1	3.2	16.8	3.4	18.3	5.7
Unrelated individual	27.2	12.1	24.2	17.5	27.0	20.3
Total	14.5	100.0	20.2	100.0	21.9	100.0

Memo:	
1969-79	
Demographic share effect	2.7
Within-group rate effect	2.9
Interactive effect	0.0
Actual change	5.7
1979-99	
Demographic share effect	1.3
Within-group rate effect	0.8
Interactive effect	-0.3
Actual change	1.8

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1970-2000.

How are these large increases in educational attainment consistent with an overall increase in poverty, from 14.5 to 21.9 percent? Indeed, the decomposition results in Table 4 indicate that, all else equal, the rise in education should have led to declines in the city's poverty rate of 1.6 percentage points from 1969 to 1979 and 3.8 percentage points from 1979 to 1999. However, in both periods the rise in poverty rates within each group more than offset that effect.

The within-group effect was 7.8 percentage points in the earlier period and 6.5 percentage points in the latter period, reflecting the increase in poverty for all educational attainment groups during both periods. Not surprisingly, perhaps, the poverty rates for high-school dropouts and those with only a high-school degree rose dramatically over the period, from 20.2 to 37.9 percent for dropouts and from 9.8 to 25.1 percent for high-school graduates. More startling, however, are the

How are [New York City's] large increases in educational attainment consistent with an overall increase in poverty, from 14.5 to 21.9 percent?

increases in poverty for those groups with at least some college. The poverty rate rose from 7.1 to 17.4 percent among those with some college and from 4.4 to 8.4 percent among bachelor's degree holders.

Family Status

We define four mutually exclusive and collectively exhaustive family status categories: husband-wife, female-headed, male-headed, and unrelated individuals.[17] In 1970, more than two-thirds of the city's population resided in husband-wife families; by 2000, this share had fallen to slightly more than half (Table 5). Persons living in female-headed families and as unrelated individuals—the family status groups with the highest poverty rates—picked up most of the corresponding gain. Consistent with national trends, most of the increase in female-headed families occurred during the 1970s.

These shifts in family status account for almost half of the upward movement in poverty from 1969 to 1979 (2.7 of 5.7 percentage points) and roughly three-fourths of the increase from 1979 to 1999 (1.3 of 1.8 percentage points).

Once again, however, there has been within-group change that will also influence the overall poverty rate. In the first of the two periods, poverty rates rose for three of the four family status groups, resulting in a within-group effect that accounted for 2.9 of the 5.7 percentage point increase in the rate. In the latter period, the upward movement in poverty rates for three of the family status groups was offset by a sharp decline in the rate for persons living in female-headed families, resulting in a smaller within-group effect of 0.8 percentage point.

In 1970, more than two-thirds of the city's population resided in husband-wife families; by 2000, this share had fallen to slightly more than half.

Race/Ethnicity

The racial and ethnic makeup of the city changed dramatically over the 1970-2000 period. In 1970, the city was 63.8 percent non-Hispanic white, 19.2 percent non-Hispanic black, and 15.6 percent Hispanic (Table 6). Only a negligible share (1.4 percent) fell outside these three categories. By 2000, Hispanics had replaced blacks as the second-most populous group in the city, and half of all New Yorkers identified themselves as either black or Hispanic. The fourth category, "non-Hispanic other" (primarily Asian), had grown from 1.4 to 13.8 percent of the population.[18] These changes are, of course, mirrored by dramatic declines for whites, the only group to lose population share. Whites declined from almost two-thirds of the city's population in 1970 to slightly more than a third by 2000.

The poverty rate for whites in 1969, 8.4 percent, was the lowest of the four groups and 6 percentage points below the citywide average of 14.5 percent. The rate for Hispanics, 27.9 percent, was the highest among the four race/ethnicity groups, and the rate for blacks, 23.7 percent, was also substantially higher than the citywide average. All else equal, then, an increasingly black and Hispanic New York will also be a more impoverished New York.

Indeed, these shifts have the expected effect on the overall poverty rate, although the demographic share effect is rather modest in the 1969-79 period, accounting for only 1.9 of

[17] Female- and male-headed families are defined as those in which the person identified as the head of the household is not living with a spouse, but is living with at least one person to whom he or she is related. An "unrelated individual" household includes persons living alone (a majority) as well as those who are living with a roommate, friend, or domestic partner. They are treated as one-person families in this analysis.

[18] We refer to these four groups as white, black, Hispanic, and other going forward.

Table 6
Decomposition of Poverty Rate by Race/Ethnicity

	1969 Poverty Rate	1970 Population Share (Percent)	1979 Poverty Rate	1980 Population Share (Percent)	1999 Poverty Rate	2000 Population Share (Percent)
Non-Hispanic white	8.4	63.8	9.8	51.7	12.1	35.0
Non-Hispanic black	23.7	19.2	29.6	24.0	25.3	24.1
Non-Hispanic other	16.2	1.4	15.8	3.9	20.9	13.8
Hispanic, any race	27.9	15.6	36.0	20.3	32.2	27.1
Total	14.5	100.0	20.2	100.0	21.9	100.0

Memo:	
1969-79	
Demographic share effect	1.9
Within-group rate effect	3.3
Interactive effect	0.5
Actual change	5.7
1979-99	
Demographic share effect	2.4
Within-group rate effect	-0.5
Interactive effect	-0.1
Actual change	1.8

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1970-2000.

the 5.7 percentage point increase.[19] The much larger contribution of the within-group rate effect, 3.3 percentage points, was driven by the sharp rise in the poverty rate for blacks and Hispanics during the 1970s.

In the 1979-99 period, however, the demographic share effect (2.4 percent) overpredicts the 1.8 percentage point rise in the city poverty rate. This appears to be attributable to the considerable rise in the Hispanic share of New York's population, the group that suffers from the highest poverty rate. Over the same period, increases in poverty rates for whites and the burgeoning "other" (predominantly Asian) category were matched by poverty rate declines for blacks and Hispanics.[20]

Finally, in Table 7, we look at the *combined* effects of shifts in race/ethnicity and family status, the two demographic factors that our results indicate contribute positively to the increase in poverty in the 1969-79 period and its persistently high level from 1979 to 1999. The combined effect of shifts in the racial/ethnic and family status composition of the city in the 1969-79 period accounts for 4.3 of the 5.7 percentage point rise in poverty. In the 1979-99 period, the demographic share effect (3.5 percentage points) overpredicts the actual (1.8 percentage point) rise in poverty. Evidently, the changing family status and racial/ethnic composition of the city's population offset any positive effect that rising levels of educational attainment might have had on the city poverty rate. However, as we discuss in the next section, these demographic shifts were occurring in an economic context that also had an impact on poverty.

[19] Much of the difference in poverty rates by race and ethnicity can be associated with differences in educational attainment and family status. For example, for New York City in 1999, the poverty rate was 12.1 percent for whites and 25.3 percent for blacks, a 13.2 percentage point difference. If we compute a hypothetical black poverty rate using the distribution of the white population by education and family status and the poverty rates for blacks for each family status by education groups, the black poverty rate would be 17.5 percent. This scenario reduces the black/white difference to 4.2 percentage points and suggests that differences in education and family status account for more than 68 percent of the difference in poverty between blacks and whites.

[20] The 2000 census featured a major redefinition of racial categories by permitting respondents to describe themselves as members of more than one racial group. Most New Yorkers who did so were Hispanic and are therefore placed in that category. Those non-Hispanic New Yorkers who identified themselves as multiracial are included in the "non-Hispanic other" category.

Table 7

Decomposition of Poverty Rate by Family Status and Race/Ethnicity

	1969 Poverty Rate	1970 Population Share (Percent)	1979 Poverty Rate	1980 Population Share (Percent)	1999 Poverty Rate	2000 Population Share (Percent)
Non-Hispanic white						
Husband-wife	4.4	47.6	6.0	34.0	9.3	20.5
Female-headed	17.1	5.4	19.3	5.0	17.4	3.2
Male-headed	4.9	2.0	6.8	1.5	11.2	1.2
Unrelated individual	25.0	8.8	17.6	11.2	16.1	10.1
Non-Hispanic black						
Husband-wife	11.1	10.8	13.5	10.7	11.4	8.9
Female-headed	45.8	5.5	48.1	8.6	35.2	9.5
Male-headed	14.0	0.7	22.9	1.0	18.6	1.5
Unrelated individual	33.4	2.1	35.4	3.8	34.8	4.3
Non-Hispanic other						
Husband-wife	10.6	1.1	12.0	3.0	18.0	9.4
Female-headed	46.3	0.1	34.2	0.3	24.9	1.5
Male-headed	19.6	0.1	18.0	0.1	19.0	0.9
Unrelated individual	34.2	0.2	27.1	0.4	32.6	2.0
Hispanic, any race						
Husband-wife	18.2	10.5	19.6	11.0	19.2	12.6
Female-headed	54.2	3.7	64.5	6.4	49.1	8.4
Male-headed	30.1	0.5	27.8	0.8	21.8	2.1
Unrelated individual	32.1	0.9	38.3	2.1	43.4	3.9
Total	14.5	100.0	20.2	100.0	21.9	100.0

Memo:	
1969-79	
Demographic share effect	4.3
Within-group rate effect	1.3
Interactive effect	0.1
Actual change	5.7
1979-99	
Demographic share effect	3.5
Within-group rate effect	-1.3
Interactive effect	-0.4
Actual change	1.8

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1970-2000.

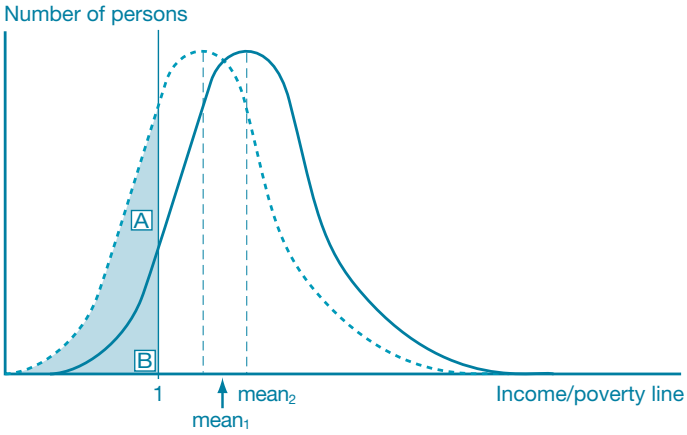
3. Secular Change in the Economic Environment: The Effects of Income Growth and Inequality

Absent from our account thus far is the effect of the economic environment in which demographic changes occur. During economic expansions, for example, the poverty rate generally declines as employment grows and earnings and family incomes rise. In recessions, the poverty rate generally rises. In this study, however, we are interested in differences in the poverty rate that control for these cyclical effects. Fortunately, the decennial census data lend themselves to an exploration of secular change because the years they cover—1969, 1979, 1989, and 1999—correspond closely to business cycle peaks. Across similar phases in the business cycle, therefore, we can measure the influence on the poverty rate not only of income growth but also of changes in income inequality.

To preview our results, when we add these economic factors it becomes clear that the decline in mean income from 1969 to 1979 contributed to the increase in the poverty rate during this

Exhibit 1

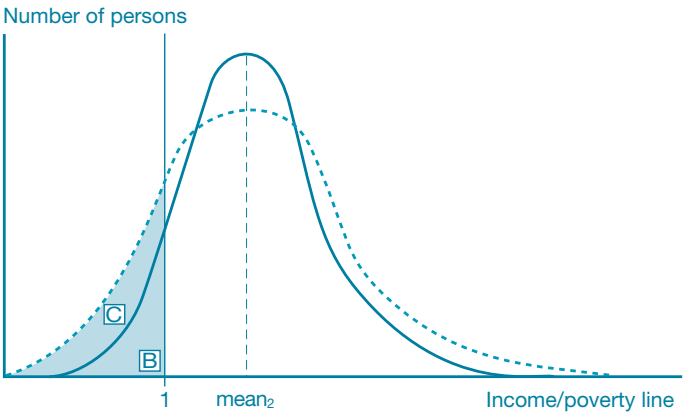
Effect on the Poverty Rate of an Equally Shared Increase in Real Income



Source: Danziger and Gottschalk (1993).

Exhibit 2

Effect on the Poverty Rate of an Increase in Income Inequality



Source: Danziger and Gottschalk (1993).

period. Its impact over the period, however, was less influential than the combined impact of the shift in the city's racial composition and the change in family status. In the 1979-99 period, however, a renewal of income growth did not translate into a decline in poverty. While demographic changes offset some of the effect of income growth, their influence is modest relative to the contribution of rising income inequality.

Our empirical strategy begins with the recognition that given a fixed poverty threshold, any equally shared increase in real income must lead to a fall in the poverty rate, because the increase will push some people above the threshold. This relationship is illustrated in Exhibit 1: equally shared increases in real income shift the entire income distribution to the right. Before the shift, the entire shaded area (segments A and B combined) lies below the poverty threshold (labeled "1"); after the shift, only segment B lies below the threshold.

Increases in income inequality (assuming a constant mean income) will generally have the opposite effect. As shown in Exhibit 2, increases in inequality (assuming they occur at least in part in the lower tail of the distribution) will raise the proportion of the population in poverty, in this case from segment B to segments B and C combined.[21] Thus, along with demographic factors, we can think of changes in the poverty rate over time as the result of two economic factors—those associated with income growth (or lack thereof) and those associated with changes in income inequality.

[21] It is possible for inequality to increase in the lower tail of the distribution without a concomitant rise in the poverty rate. For instance, if the population in poverty at time t became poorer still in time $t+1$, but no new individuals fell below the threshold, inequality would increase and the poverty rate would remain the same.

We introduce the effect of income growth and changes in income inequality into our analysis of the New York City poverty rate by employing a decomposition analysis utilized by Danziger and Gottschalk (1993) and Iceland (2003). We construct two hypothetical poverty rates that allow us to quantify the contribution of income growth, demographic change, and income inequality to the change in the poverty rate from an initial year to a second year.

Hypothetical poverty rate 1: This hypothetical poverty rate simulates a "year two" poverty rate for the city under the assumption that the rate of mean income growth from year one to year two had been spread evenly across families (and unrelated individuals) and therefore by demographic groups. Continuing with the notation used in equations 1-5, we observe that:

$$(6) \qquad \textit{hypothetical poverty rate 1} = \sum_{i=1}^{N} \hat{R}_{i2} * S_{i1},$$

where $\hat{R}_{i2}$ is the "hypothetical poverty rate 1" for each demographic group i in year two.

The hypothetical poverty rate holds constant both the demographic composition of the population and the distribution of income.

Hypothetical poverty rate 2: This hypothetical poverty rate simulates the year two poverty rate for New York as if income growth had been equally shared and the demographic composition of the population had undergone its actual change.

$$(7) \qquad \textit{hypothetical poverty rate 2} = \sum_{i=1}^{N} \hat{R}_{i2} * S_{i2}.$$

We can use these hypothetical poverty rates to decompose the difference between the actual poverty rates in years one and two into the sum of differences attributable to changes in: 1) income growth, 2) demographic composition, and 3) inequality.

The difference between the actual poverty rates in years one and two is:

(8) *poverty rate year 2 - poverty rate year 1*

$$= \sum_{i=1}^{N} R_{i2} * S_{i2} - \sum_{i=1}^{N} R_{i1} * S_{i1}.$$

This difference is equal to the sum:

(9) $$\sum_{i=1}^{N} \hat{R}_{i2} * S_{i1} - \sum_{i=1}^{N} R_{i1} * S_{i1}$$

(10) $$+ \sum_{i=1}^{N} \hat{R}_{i2} * S_{i2} - \sum_{i=1}^{N} \hat{R}_{i2} * S_{i1}$$

(11) $$+ \sum_{i=1}^{N} \hat{R}_{i2} * S_{i2} - \sum_{i=1}^{N} \hat{R}_{i2} * S_{i2},$$

where the first term (equation 9) is the income growth effect, the second term (equation 10) is the demographic change effect, and the third term (equation 11) is the income inequality effect. Since we have direct measures of demographic change and income growth, the income inequality effect is a residual term, picking up the influence of factors other than those controlled for in the demographic change and income growth effects.

Using this methodology, we break down the change in the city poverty rate from 1969 to 1979 and from 1979 to 1999 (Table 8) into changes produced by the change in mean income, the changes in race and family status, and the change in income inequality. Box 3 provides details on the mechanics of these calculations. For the 1969-79 period, the fall in mean income accounts for 3.1 of the 5.7 percentage point rise in the poverty rate. Race and family status have a somewhat larger impact, contributing 4.9 percentage points to the rise in poverty. Because the sum of these two effects exceeds the actual rise in poverty, the income inequality effect must by construction be negative and equal to -2.4 percentage points. This implies that the distribution of income became more equal over this period and that, all else constant, it would have produced a decline in the poverty rate.[22]

[22] By one measure—one that is key to changes in poverty rates—the income distribution did become more equal; from 1969 to 1979, the ratio of family income at the 50th-10th deciles fell from 4.9 to 4.2.

Table 8
Decomposition of Change in Poverty Rates

Change from 1969 to 1979	
Actual poverty rate, 1969	14.5
Actual poverty rate, 1979	20.2
Actual change	5.7
Hypothetical poverty rate 1	17.6
Hypothetical poverty rate 2	22.5
Income growth effect	3.1
Demographic change effect	4.9
Income inequality effect	-2.4
Total change in poverty rate	5.7
Change from 1979 to 1999	
Actual poverty rate, 1979	20.2
Actual poverty rate, 1999	21.9
Actual change	1.8
Hypothetical poverty rate 1	13.1
Hypothetical poverty rate 2	15.6
Income growth effect	-7.0
Demographic change effect	2.5
Income inequality effect	6.4
Total change in poverty rate	1.8

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1970-2000.

In the 1979-99 period, income growth resumed. Without any offsetting factors, the rise in median income would have resulted in an impressive 7.0 percentage point fall in the poverty rate. As expected, the income growth effect was partially offset by demographic change, which would have led to a 2.5 percentage point rise in poverty. However, the rise in income inequality plays a much more important role than demographic change during this period; its impact equals 6.4 percentage points.

Thus, bringing income growth and income inequality into the decomposition diminishes the relative contribution of the demographic effect. This stems from an important difference in the question addressed in the two decompositions. The decompositions in Tables 1-7 address how much of the actual change in poverty is associated with the change in the demographic composition of the city, thereby allowing for an identification of key demographic changes. Once the key demographic changes are identified, the analysis uses the decompositions in Table 8 to answer a more critical question: How much did demographic change and an increase in inequality offset what should have been a sharp decline in

Box 3

Calculating the Income Growth and Income Inequality Effects

The top panel of Table 8 ascribes to the income growth effect 3.1 of the 5.7 percentage point growth in the poverty rate from 1969 to 1979. We calculate this effect by taking the difference between a hypothetical poverty rate for 1979 (labeled "hypothetical poverty rate 1") and the actual poverty rate in 1969. (See equation 9, recalling that $\hat{R}_{i2}$ is the "hypothetical poverty rate 1" for each demographic group i in year two.) Hypothetical poverty rate 1 is calculated by adjusting each person's family income in the 1970 census microdata file by the citywide change in mean family income from 1969 to 1979. From the decennial census microdata, we estimate that mean family income (after adjusting for the change in the consumer price index) in 1979 was equal to 88.4 percent of its 1969 level. When we apply this decline in family income across the observations in the 1970 microdata file, we see that the citywide poverty rate climbs from 14.5 percent to a hypothetical poverty rate 1 of 17.6 percent. The difference between these two rates, 3.1 percentage points, represents the increase in the poverty rate that we would have obtained if the actual decline in mean income over the decade had been equally shared across the population.

Hypothetical poverty rate 2 adds the effect of demographic change to the effect of income growth. This hypothetical rate is created in two steps. First, we calculate poverty rates for each of the demographic groups from the 1970 census microdata file using the downwardly adjusted family income employed to compute the income growth effect. Second, we calculate a citywide poverty rate by summing the products of these poverty rates by demographic group and each group's respective share of the city population in 1980. This results in a (hypothetical) poverty rate 2 of 22.5 percent. (The rate is higher than hypothetical poverty rate 1 because demographic groups with above-average poverty rates increased their population shares between 1969 and 1979.) Thus, the 4.9 percentage point difference between hypothetical poverty rates 1 and 2 is the demographic change effect.

The income inequality effect is the residual calculated as the difference between the actual change in the poverty rate from 1969 to 1979 and the proportion of the change that is underestimated (or overestimated) by the income growth and demographic change effects. In this instance, it equals (after rounding) -2.4 percentage points (20.2 – (14.5 + 3.1 + 4.9)).

The bottom panel of Table 8 presents the results of this exercise for the 1979-99 period.

poverty between 1979 and 1999 attributable to the rise in mean income? According to the decomposition of poverty for those years, the effect of inequality was much greater than the effect of demographic change.

4. Exploring Inequality: Employment, Earnings, and Income

Our analysis assigns an important role to income inequality; methodologically, it is a residual, a measurement of what is left over after other factors have been accounted for. In this section, we look inside that "black box." Following the literature cited earlier, we focus on the role of changes in employment and earnings on trends in income inequality and poverty. Because growing inequality figures so prominently in the stability of the poverty rate from 1979 to 1999, we restrict our attention to changes between those years. Initially, we limit the scope of our analysis to a group we refer to as the "non-elderly population," defined as unrelated individuals under sixty-five and members of families headed by a person younger than sixty-five. This group, which we would expect to be most dependent on income derived from employment, accounted for 85.9 percent of the total city population in 2000.

We find that the poverty rate for the non-elderly population edged up from 21.2 to 22.4 percent from 1979 to 1999. The increase occurred despite higher levels of work activity, measured by annual weeks worked per family. When we narrow our focus further to the non-elderly population with "full-year" levels of work, we find a 3.1 percentage point rise in the poverty rate. Trends in earnings and income among the full-year working families by educational attainment exhibit a clear pattern of growing inequality driven by changes in earnings per week worked. This growth in earnings inequality appears to be a major source of the rise in income inequality that was responsible for the 1979-99 increase in the poverty rate.

4.1 More Poverty Despite More Work

Changes in levels of employment are a factor that our exploration of poverty has thus far omitted. In this section, we consider this factor by looking at work activity per family.[23] We divide the city's non-elderly population into three groups according to the total number of weeks worked per year by all family members eighteen and older: those with

[23] Recall that unrelated individuals are treated as a family of one.

Table 9

Poverty Rates and Population Shares of Non-Elderly Population, by Weeks Worked

	1979		1999		Percentage Point Change	
	Poverty Rate	Population Share (Percent)	Poverty Rate	Population Share (Percent)	Poverty Rate	Population Share
No work	77.7	15.6	80.6	12.0	2.9	-3.7
Less than full year	34.5	14.4	40.8	15.4	6.3	1.0
Full year	5.8	70.0	8.9	72.6	3.1	2.6
Total	21.2	100.0	22.4	100.0	1.3	NA

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1980 and 2000.

Note: Weeks worked are measured for the calendar year prior to the census.

no weeks worked, those with one to forty-nine weeks worked (labeled in Table 9 as "less than full year"), and those with fifty or more weeks worked (labeled "full year").[24]

From 1979 to 1999, the percentage of the non-elderly population living in families engaged in work increased. Most notably, the full-year category rose from 70.0 to 72.6 percent of the population. Over the same period, however, the poverty rate increased in each work activity group. What would have been a 2.3 percentage point decline in the population-wide poverty rate attributable to the rising share of persons living in working families was more than offset by the within-group poverty rate increases.[25] As a result, the poverty rate for the entire non-elderly population edged up by 1.3 percentage points. Of greatest relevance to the general rise in poverty among the non-elderly (owing to their large share of the population) was the 3.1 percentage point increase in the poverty rate for persons living in full-year working families.

4.2 Growing Earnings Inequality among Full-Year Working Families

The large and growing share of persons living in non-elderly, full-year working families along with the marked rise in poverty for this group invites closer scrutiny. Given the now vast literature documenting the rise in earnings inequality by level of education, we summarize trends in earnings, weeks worked, and wage rates for this group of families through the lens of educational attainment of the family head. The salience of these earnings trends to total family income—and, by extension, poverty—is evident from Table 10, which shows that earned income was a high (more than 90 percent) and stable share of total family income across the educational spectrum.[26]

Table 10

Earned Income as a Share of Total Income for Persons Living in Full-Year Working Families

	1979	1999
Less than high school	91.5	91.8
High school	93.7	93.2
Some college	94.5	93.5
Bachelor's degree or higher	96.9	92.4
Total	94.1	92.8

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1980 and 2000.

Table 11 depicts annual earnings, weeks worked, and weekly earnings for 1979 and 1999. The pattern of change it reveals is one of rising annual earnings inequality driven by growing inequality in weekly earnings. Panel A reports median annual family earnings (in 1999 dollars) by educational attainment for 1979 and 1999. As the panel shows, although median annual earnings rose 8.9 percent population-wide, the less-educated individuals suffered declines. Real earnings for those with less

[24] We use weeks worked per year per family because poverty is measured at the family, rather than at the individual, level. Since there may be a mix of full- and part-time workers in each family, the usual distinction between full- and part-time work does not apply.

[25] This estimate is based on a decomposition calculation similar to those reported in Tables 2-6.

[26] Earned income is income derived from employment either as wages or salaries or as proprietors' income for the self-employed.

Table 11

Family Earnings by Education for Full-Year Working Families

	1979	1999	Percentage Change
A. Median annual earnings			
Less than high school	36,946	35,000	-5.3
High school	44,828	42,000	-6.3
Some college	47,938	50,000	4.3
Bachelor's degree or higher	60,605	71,000	17.2
Total	45,907	50,000	8.9
B. Median weeks worked per year			
Less than high school	77	88	11
High school	72	82	10
Some college	65	78	13
Bachelor's degree or higher	62	76	14
Total	71	80	9
C. Median weekly earnings			
Less than high school	460	392	-14.7
High school	565	514	-9.1
Some college	629	621	-1.3
Bachelor's degree or higher	828	920	11.0
Total	574	603	5.1

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1980 and 2000.

Note: Earnings are expressed in 1999 dollars.

Table 12

Income Inequality among Persons Living in Full-Year Working Families

Percentages of the Poverty Threshold

	1979	1999	Change
A. Ratio of Total Earned Income to Poverty Threshold			
Percentile			
10	111	94	-17
20	162	145	-17
30	204	193	-11
40	247	243	-4
50	290	297	7
60	341	359	18
70	396	428	32
80	456	485	29
90	497	501[a]	NA
50/10 ratio	2.61	3.16	21.2
B. Ratio of Total Family Income to Poverty Threshold			
Percentile			
10	126	107	-19
20	177	160	-17
30	222	211	-11
40	266	264	-2
50	315	325	10
60	368	394	26
70	432	482	50
80	501[a]	501[a]	NA
90	501[a]	501[a]	NA
50/10 ratio	2.50	3.04	21.5

Source: Authors' calculations, based on the 5-Percent Public Use Microdata Sample Files of the U.S. Census Bureau's decennial census, 1980 and 2000.

[a]Ratios are top-coded at 501.

than a high-school education and only a high-school education fell 5.3 percent and 6.3 percent, respectively. In contrast, those with some college education and a bachelor's degree or higher saw earnings increase 4.3 percent and 17.2 percent, respectively.

The decline in earnings for the less-educated groups was not a result of fewer weeks worked. As panel B of Table 11 reports, all of the educational attainment groups increased their median weeks worked per year from 1979 to 1999.[27] (Recall that this is the median of total weeks worked by all members of full-year working families eighteen and older.) The disparate patterns of changes in earnings and weeks worked is reflected in panel C, which reports median weekly earnings (total earnings per family divided by total weeks per family). The decline in these wage rates is more widespread and dramatic than the decline in median annual earnings, indicating that increased weeks worked offset some of the decline in earnings per week.[28] Thus, declines in earnings per week drove the fall in annual earnings for the less-educated groups and resulted in an expansion of earnings inequality between the more and less-educated groups.

To be associated with the growth in poverty, the growth in earnings inequality must find its reflection in an expansion of the lower tail of the income-to-poverty threshold ratio distribution.[29] The effect of expanding earnings inequality on

[27] Interestingly, the number of weeks worked for the less-educated groups is somewhat higher than it is for the more educated groups. In 1999, for example, median weeks worked for those with less than a high-school education was eighty-eight per family, compared with seventy-six per family for those with a bachelor's degree or higher.

[28] This impressive rise in annual weeks worked per family is also evident in national-level data (see, for example, Mishel, Bernstein, and Allegretto [2007]).

[29] Recall from Section 3 the role of the expanded distance between the mean and lower tail of the income-to-poverty threshold distribution.

total income inequality and the growth of poverty among the city's full-year working families is illustrated in Table 12. Panel A reports the ratio of earned income to the poverty threshold (as a percentage) at deciles of the income-to-poverty threshold distribution. Panel B reports the ratio of total family earned income to the poverty threshold in a similar manner. Given earned income's large share of total income, it is hardly surprising that changes in the two ratios from 1979 to 1999 are quite similar. In both cases, there is a modest rise in the ratio at the median (50th percentile) of the distribution. Above the median, increases in the ratios rise with each decile until top-coding of the Census Bureau's income data prevents the measurement of further increases. Below the median, declines in the ratios from 1979 to 1999 grow more severe toward the lower tail of the distribution.

This pattern of change makes evident the increased income inequality that apparently drove a larger fraction of the lower tail of the income distribution below 100 percent of the federal poverty line. Because inequality between the median and the lower tail of the distribution is most relevant to trends in poverty, we measure the growth in inequality as the percentage change in the ratio of the 50th-10th income decile. By this criterion, dispersion rose 21.2 percent for earned income and 21.5 percent for total income.

In sum, we find a considerable expansion of earnings inequality within a major segment of the city's population—persons living in full-year working families. The expansion of earned income inequality is pervasive and appears to be a driving force behind the growth of income inequality. These labor market outcomes, it would seem, played an important role in preventing income growth from translating into poverty rate declines from 1979 to 1999 and in perpetuating New York City's high poverty rate.

5. Conclusion

Over the 1979-99 period, New York City enjoyed considerable gains in employment, income, and educational attainment. The poverty-reducing effects of these developments, however, were offset in part by a rising share of the city's population in poverty-prone groups such as blacks, Hispanics, and families headed by single women. Dwarfing the impact of these demographic changes was a dramatic increase in income inequality driven by a widening disparity in wage rates.

The promotion of work and marriage has become the mainstream solution to poverty in America (see, for example, Haskins and Sawhill [2003]). Our findings indeed support the view that fewer New Yorkers would be poor if more of them lived in working, two-parent families. The rate of single parenthood is higher in New York City than it is nationwide, making the phenomenon especially relevant to the city. However, our study also suggests that any comprehensive effort to address poverty in New York, and the nation, cannot ignore the need for labor market policies that raise earnings for workers on the lower rungs of the wage ladder. Local policymakers could consider a continued expansion of tax programs that supplement earnings, such as the state and city earned income tax credits. Increasing the availability of subsidized childcare would also make work more rewarding by defraying the costs of holding a job.

Furthermore, New York State can maintain the purchasing power of its $7.15 minimum wage by indexing it to the annual rise in the cost of living. We believe that modest yearly increases in the minimum wage would be preferable to the decades-old, politically driven pattern of stagnation followed by spikes in the value of the wage floor.

References

Committee on National Statistics, Commission of Behavioral and Social Sciences and Education. 1995. Measuring Poverty: A New Approach, eds. C. F. Citro and R. T. Michael. Report of the Panel on Poverty and Family Assistance: Concepts, Information Needs, and Measurement Methods. Washington, D.C.: National Academy Press.

Danziger, S. H., and P. Gottschalk. 1993. America Unequal. Cambridge, Mass., and New York: Harvard University Press and Russell Sage Press.

———. 2004. "Diverging Fortunes: Trends in Poverty and Inequality." In The American People: Census 2002. Washington, D.C.: Population Reference Bureau.

Eberstadt, N. 2006. "The Mismeasure of Poverty." Hoover Institution Policy Review, no. 138, August/September.

Freeman, R. 2001. "The Rising Tide Lifts…?" In S. H. Danziger and R. H. Haveman, eds., Understanding Poverty, 97-126. New York: Russell Sage Foundation.

Haskins, R., and I. V. Sawhill. 2003. "Work and Marriage: The Way to End Poverty and Welfare." Welfare Reform and Beyond, no. 28, September. Washington, D.C.: Brookings Institution.

Hoynes, H. W., M. E. Page, and A. H. Stevens. 2006. "Poverty in America: Trends and Explanations." Journal of Economic Perspectives 20, no. 1 (winter): 47-68.

Iceland, J. 2003. Poverty in America: A Handbook. Berkeley, Calif.: University of California Press.

Mishel, L., J. Bernstein, and S. Allegretto. 2007. The State of Working America, 2006/2007. Ithaca, N.Y.: Cornell University Press.

The views expressed are those of the authors and do not necessarily reflect the position of the Citizens' Committee for Children of New York, the Community Service Society, the Federal Reserve Bank of New York, the Federal Reserve System, or the New York City Center for Economic Opportunity.