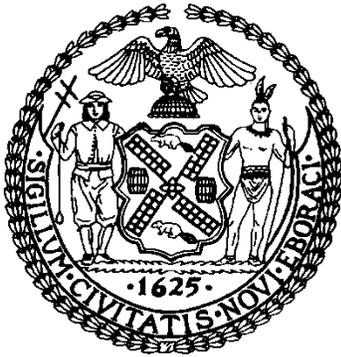


THE COUNCIL
THE CITY OF NEW YORK



February 2013

The Middle Class Squeeze

A Report on the State of the City's Middle Class

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The New York City Council Finance Division thanks John Mollenkopf and his colleagues at the City University's Center for Urban Research for their assistance with this project

The Middle Class Squeeze

Summary

- New York City's middle class – defined as households with incomes between 100 percent and 300 percent of area median income – has shrunk as a share of total population. At the same time it has become larger in absolute terms.
 - Since the last economic peak, the City's middle class has actually grown slightly in relative terms, to 42 percent of all households – but mostly because the number of upper income households shrank during the recession.
- New York City's middle class is more diverse which reflects the growing number of Asian and Hispanic households in the overall population ...
- ... but middle-class African-American and Hispanic households have done less well since 2008 than middle-class White and Asian households.
- The middle class is struggling during the recovery from the 2008-2009 recession
 - Middle class unemployment rates are higher than they have ever been at this stage in an economic recovery during the period reviewed ...
 - ... and middle class labor force participation has fallen.
- Jobs paying middle class wages are increasingly scarce.
- The City is one of the most expensive places to live in the country.
- Housing costs have risen faster than middle-class incomes.
 - In particular, the cost to buy a co-op or condo has grown at triple the rate of income growth.

Table of Contents

| | |
|---|----|
| Introduction | 1 |
| Defining the Middle Class | 2 |
| New York's Middle Class | 3 |
| The Middle Class Faces Unprecedented Employment Challenges .. | 7 |
| The Challenge of Becoming Middle Class in New York City | 8 |
| Educational Attainment in the Middle Class | 8 |
| The Middle Skill Job Squeeze | 10 |
| The Cost of Being Middle Class in New York City | 13 |
| Conclusion | 16 |
| Appendix: Methodology | 17 |

The Middle Class Squeeze

Introduction

In 1997, the New York City Council issued a report entitled “Hollow in the Middle: The Rise and Fall of New York City’s Middle Class”.¹ Two concerns motivated the report. The first stemmed from the observation that cities such as New York City (the City) need a middle class in order to thrive. For many cities a declining middle class imposed political, economic and social forces that made it impossible for a city to grow. Evidence abounded that for some time, and in much of the country, the middle class and jobs had been moving to the suburbs. The decline of cities like Newark, Camden and East Saint Louis was the period’s nightmare.

These fears, however, were not only a product of the late 1990s. The consequences of a shrinking middle class were observed by writers even as far back as Aristotle who wrote in his *Politics* that the lack of a middle class threatens the stability of a city.² He suggests that a healthy middle class is needed in order to balance the interests of the rich and the poor. Modern economists like Nobel Prize winner Joseph Stiglitz talk today about how inequality can undermine cooperation and trust in a society.³ Even Jane Jacobs noted that a middle class is necessary for a socially cohesive society.

The second motivation for the original Hollow in the Middle was a concern related to growing inequality in America. By the mid-1990s, economists were aware that income inequality had been growing since the late 1970s, evidenced by declining earnings of poorly paid workers while those of the best paid were simultaneously rising.⁴ The report asked two key questions: 1) how was New York City’s middle class doing and 2) what forces were behind any changes in the size or condition of the class.

Much has changed since 1997. City residents are no longer haunted by fears that New York City is collapsing into decay and abandonment. In fact, the City’s population and employment are at all-time highs. Today, economists talk about a new geography of jobs where New York City, Boston, San Francisco, Seattle and Denver are home to concentrations of highly skilled workers and innovation. The interactions of these skilled workers in dense urban areas and the incumbent knowledge and idea sharing, is increasingly seen as an important engine of growth for both the urban and national economies.⁵

¹ *Hollow in the Middle: The Rise and Fall of New York City’s Middle Class*, New York City Council, December 1997. An updated report was issued in December 1998.

² Aristotle, *A Treatise on Government*, translated by William Ellis, London, E. P. Dutton & Co, New York, 1928

³ Joseph E. Stiglitz, *The Price of Inequality*. W.W. Norton & Company 2012.

⁴ Lynn A. Karoly and Gary Burtless, “Demographic Change, Rising Earnings, Inequality and the Distribution of Personal Well-Being, 1959-1989”, *Demography*, Vol. 32, no 3, August 1995, p. 379.

⁵ In economist’s lingo these are human capital externalities and knowledge spillovers. On this and the new geography of jobs see Enrico Moretti, *The New Geography of Jobs*, Houghton Mifflin, Harcourt, Boston, 2007 Chapter 3. It also reminds one of the spillovers of knowledge talked about by Jane Jacobs in her renowned book, *The Economy of Cities*, Random House, New York, 1969.

Nevertheless, some of the concerns from 1997 remain. On the national level, income inequality has grown worse. Indeed, the real median income of Americans fell between the peak of the economy in 2001 and its next peak in 2008. This peak-to-peak decrease has never happened before in the 45 year history of the Current Population Survey, the government survey used to measure median income.⁶

On the local level, New Yorkers across the political spectrum are worried about the middle class. For example, the liberal Fiscal Policy Institute is worried that New Yorkers are ‘Pulling Apart’; an article in the conservative Manhattan Institute’s *City Journal* asks ‘Who Lost the Middle Class?’; the *New York Times* worries about the middle class in Manhattan; and a review in the *New York Observer* begins, “New York City’s middle class, long an endangered species, may be facing extinction”.⁷

This study will look at how New York City’s middle class has fared since 1989, generally following the methodology of the Council’s earlier reports. The 1989 starting date is not arbitrary. Income varies according to the vagaries of the business cycle. Using the ASEC Supplement to the Current Population Survey (CPS), this study takes snapshots of the economy at three peaks of the business cycle – 1989, 2001 and 2008 – and at the most recent year available, 2012.

Defining the Middle Class

According to a recent study by the Pew Research Center, a little under half of all Americans think of themselves as middle class.⁸ That self-identification goes beyond income to also reflect the values, expectations and aspirations of the respondents. Achieving economic stability, saving for retirement, owning a nice home, having your children attend good schools and even college are all typical middle-class aspirations. Achieving these aspirations for most families takes work, planning, savings and a middle-class income. When the Pew study asked respondents who identified themselves as middle class *how large an income a family of four required to be in the middle class*, they received a range of answers. For example, lower income households answered \$40,000, respondents in the Midwest \$60,000, African-Americans \$75,000, upper-income households \$100,000. The median response was \$70,000.⁹

In this report, we generally follow the approach used in the Council’s earlier report and use the Area Median Income (AMI) standard developed by the federal Department of Housing and Urban Development (HUD) to define the middle class. This income level is calculated from the American Community Survey for the New York City Metropolitan Statistical Area (MSA) and is adjusted for

⁶ Richard Burkhauser and Jeff Larrimore, “A ‘Second Opinion’ on the Economic Health of the American Middle Class”, *National Tax Journal*, March 2012, 65(1), p. 8. Note that in this report we are dating business cycles according to the expansions and contractions of the city’s economy rather than the more common NBER reference cycles. See the methodological appendix for an explanation.

⁷ Fiscal Policy Institute, “Pulling Apart: The Continuing Impact of Income Polarization in New York State” Nov. 15, 2012; Fred Siegel, “Who Lost the Middle Class?”, *City Journal*, August 2011; “What is the Middle Class in Manhattan?” *New York Times*, January 20, 2013, p. RE1; Oliver Haydock, “City to Middle Class: Just Not That Into You”, *New York Observer*, Feb. 5, 2009.

⁸ *Fewer, Poorer, Gloomier, The Lost Decade of the Middle Class*; Pew Research Center, August 22, 2012 p. 4.

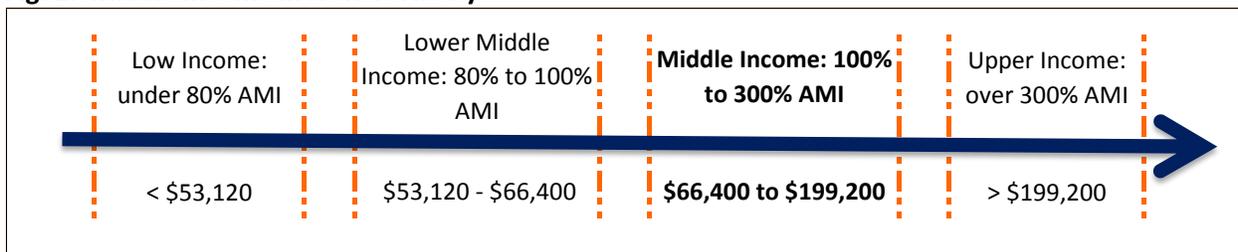
⁹ Pew (2012) p. 8.

family size.¹⁰ Since this very closely resembles median income for the City as determined by the CPS we have chosen to continue to use this part of Hollow in the Middle’s methodology.

Using this standard, the original Hollow in the Middle defined four classes based on family income: Low income was defined as families with incomes less than 80 percent of AMI; lower middle incomes was defined as between 80 percent and 100 percent of AMI; middle class as incomes of 100 percent to 200 percent of AMI and upper incomes as over 200 percent of AMI. Incomes were adjusted by family size to be consistent with the AMI for a family of four.

In this study, the Hollow in the Middle methodology was modified in one important way: the upper limit of the middle class was increased to 300 percent of AMI (Fig. 1). This decision was informed in part by the Pew study. Consideration of New York City costs of living suggested that 200 percent of the AMI (\$132,000 in 2012 for a family of four) was too low of a limit for the middle class in the City. Using this limit would have misrepresented the trajectory of the middle class because it would have excluded individuals that, while not necessarily struggling, are certainly not upper income. For example, an experienced, single public school teacher earning \$100,000 would have been upper income since 200 percent of AMI, adjusted for a single individual, is \$93,000.¹¹ It is hard to think of someone living on a school teacher salary as upper income.

Fig. 1: Middle Income in New York City



NOTE: NYCC Finance Division calculations based on 2012 HUD AMI for NYC MSA.

Like the original study, this study also focuses on adults aged 25 to 64. The rationale for this limitation is that the relationship between income and lifestyle may be different for younger or older respondents. For example, many young respondents may be borrowing for school or receiving aid from their families. Seniors also face different issues, such as those related to retirement that should be studied in a separate context.¹²

New York’s Middle Class

In absolute numbers, New York City boasts a huge middle class, totaling nearly 1.9 million working age adults. But, the City’s middle class is smaller as a percentage of its working age population than it is in the nation as a whole or in the City’s suburbs.¹³

¹⁰ FY 2012 HUD Income Limits Briefing Material, U.S. Department of Housing and Urban Development Office of Policy Development and Research.

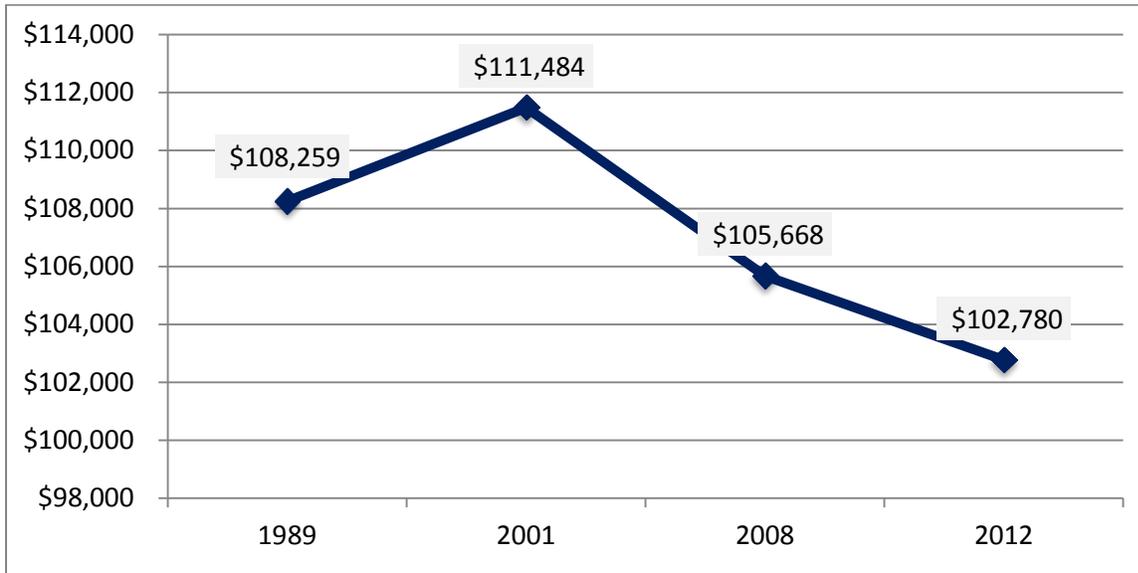
¹¹ A New York City public school teacher with 22 years of experience and full credentials earns \$100,049.

¹² Details of methodology and the Current Population Survey can be found in the appendix.

¹³ In the City the middle class is about 42 percent of the adult working age population, in our suburbs around 53 percent and in the Nation as a whole 47 percent.

Real median household income for all working age residents adjusted for a family of four peaked in 2001 at slightly over \$72,000, and for middle class households at just over \$111,000. During the 2001-2008 cycle, however, median middle income actually fell despite the strong growth of the City’s economy, and has continued to fall during the recovery – for reasons that will be discussed further on – declining 7.8 percent in inflation-adjusted terms.

Fig. 2: Median Middle Class Income in New York City
(inflation adjusted 2012 dollars)

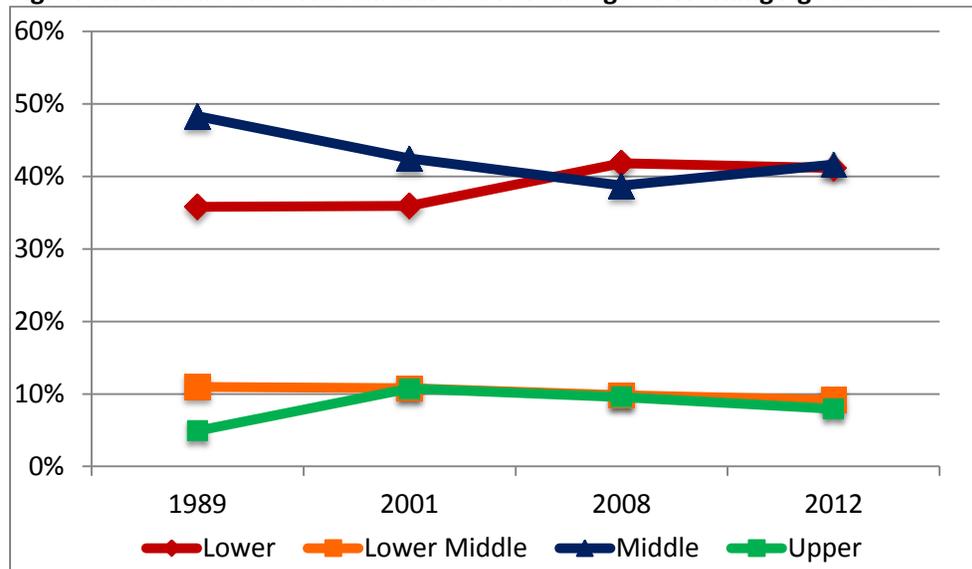


SOURCE: NYCC Finance Division calculations from Annual Social and Economic (ASEC) Supplement to the Community Population Survey (CPS) various years.

Over time the City’s middle class has been growing. Between 1989 and 2012 the City gained 129,000 middle class adults. This pattern is the inverse of median income trends previously described. Median income grew between 1989 and 2001, but the middle class actually shrank, by 86,000. Middle class expansion occurred during the 2001-2008 cycle despite falling median income.

While the middle-class population in the City has been growing in absolute numbers, its share of the City’s working age population has been simultaneously shrinking (Fig. 3). Since 1989, the middle-class share has been decreasing, a trend that has partially reversed during the recession and recovery of the current business cycle. The overall trend is similar to that of the nation as a whole, although the United States does not show the same rising share during the current recovery.

Fig. 3: The Middle Class Has Shrunk as a Percentage of Working Age Adults



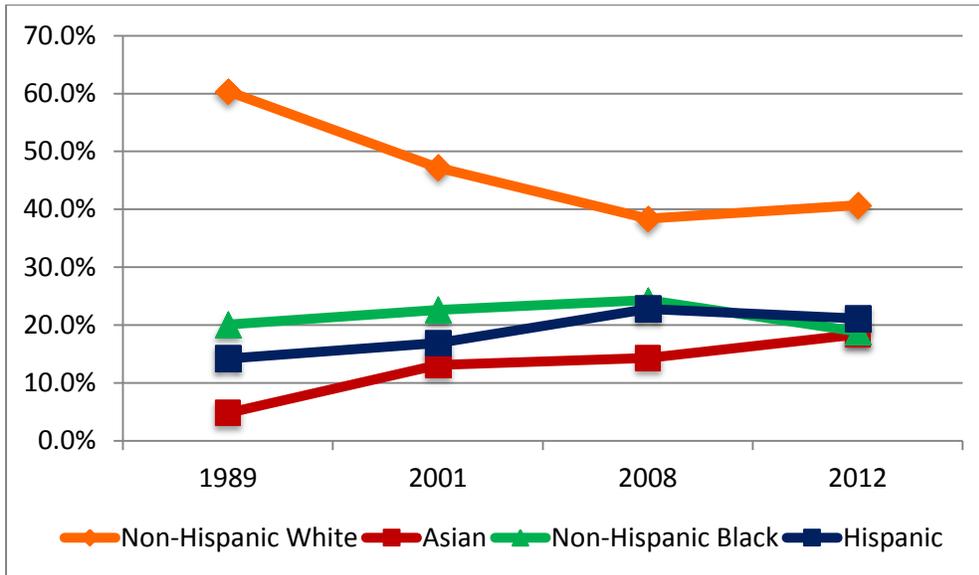
SOURCE: NYCC Finance Division calculations from ASEC-CPS various years.

The working age population in all four income groups is growing but the income shares are changing. The 1989-2001 cycle saw the City’s upper income households increase, but they have not kept up with population growth in 2001-2008. Over the same horizon, lower middle income households have essentially held steady. Similar to changes in median income over this cycle, an increase in the share of lower income households occurred despite the strong growth of the City’s economy.

The City’s middle class has grown more diverse over the years, a trend that largely reflects the growing Hispanic and Asian populations in the city (Fig. 4a). Between 1989 and 2012 the chance that a non-Hispanic white was in the middle class has fallen somewhat – mostly because the chance that they are upper income has risen. The chance that an African-American, Hispanic or Asian was in the middle class remained relatively stable throughout the period, although since 2008, the representation of African-American and Hispanic households in the middle class has fallen (Fig. 4b).

Fig. 4a: The Middle Class Reflects a More Diverse City ...

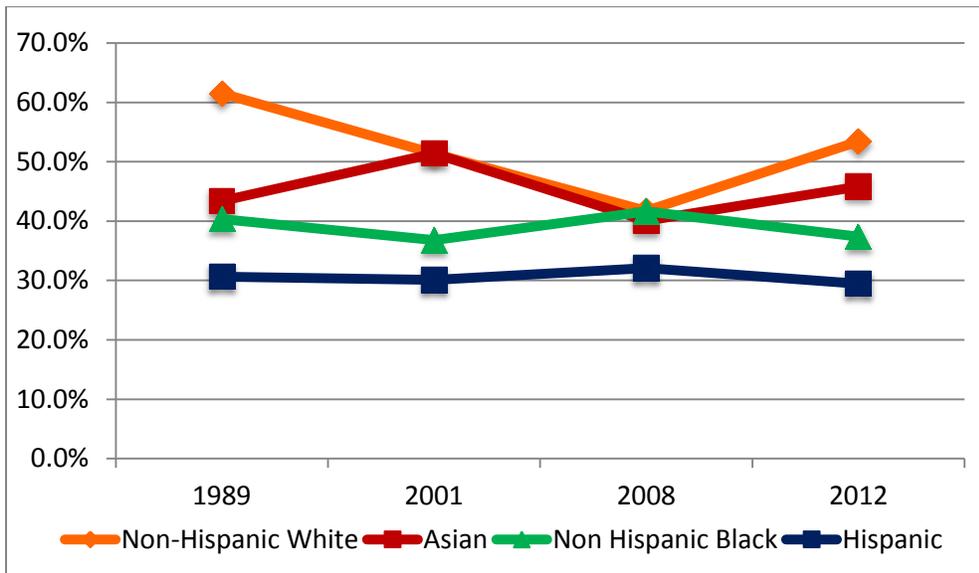
Middle class breakdown by ethnicity



SOURCE: NYCC Finance Division calculations from ASEC-CPS various years.

Fig. 4b: ... but African-American and Hispanic Participation Has Not Fared Well Since 2008

Middle class share of each ethnicity

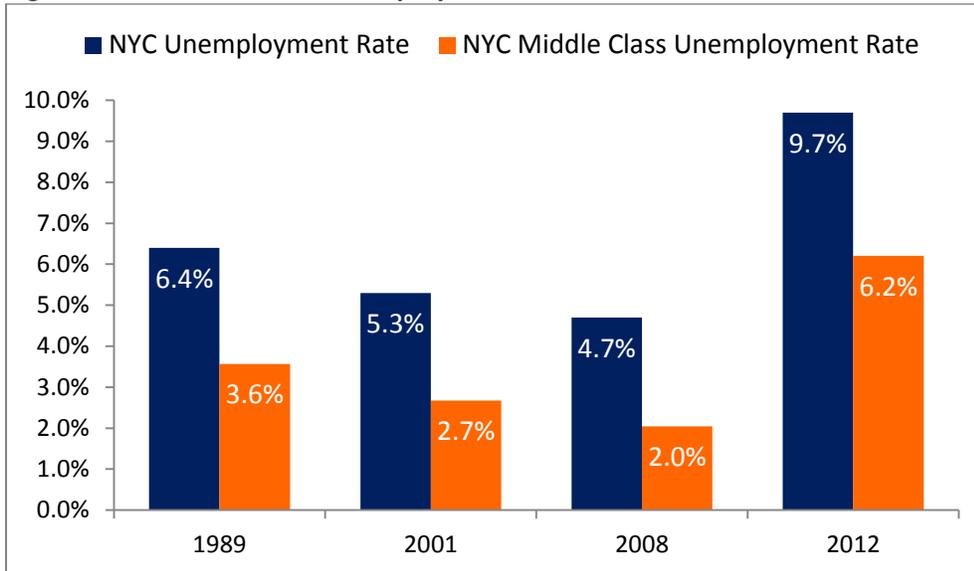


SOURCE: NYCC Finance Division calculations from ASEC-CPS various years.

The Middle Class Faces Unprecedented Employment Challenges

The 2012 average unemployment rate for workers in the City’s middle class was 6.2 percent, the highest rate for this stage of the business cycle during the period covered by this analysis (Fig. 5a).¹⁴ Prior to the recession in 2008, the middle-class unemployment rate – which is typically below the overall unemployment rate – was just 2.0 percent.

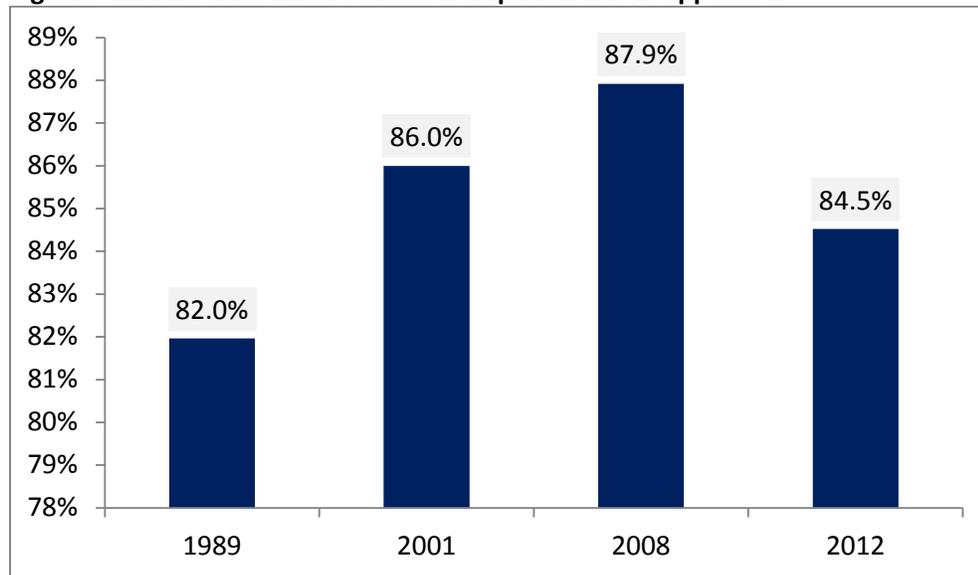
Fig. 5a: NYC Middle-Class Unemployment Rates



SOURCE: NYCC Finance Division calculations from ASEC-CPS for NYC Middle Class and March Local Area Unemployment Statistics (LAUS) for NYC unemployment rate, various years.

Labor force participation among working-age, middle-class households has also fallen markedly during the recession and has yet to recover its pre-recession peak (Fig. 5b). Of the 1.9 million working age (aged 25-64) residents in the City’s middle class in 2012, 85 percent were in the labor force. The rest were not seeking employment because they were retired, disabled, or homemakers. In addition, this share also includes the long-term unemployed who have become so discouraged that they have given up trying to find a job – a widely-noted characteristic of the recovery from the 2008-2009 recession. Before the recession began in 2008, 88 percent of middle-class, working-age adults were in the labor force.

¹⁴ The rate was 6.3 percent during the trough year of 2003.

Fig. 5b: Middle-Class Labor Force Participation Has Dropped Off

SOURCE: NYCC Finance Division calculations from ASEC-CPS, various years.

The Challenge of Becoming Middle Class in New York City

The shrinkage of the City's middle class is part of a process of growing income and earnings disparities that is sometimes referred to as income polarization. This process is found to varying degrees in virtually all wealthy countries.¹⁵ Behind this polarization is a broad set of forces that have economic, social and institutional causes.

Amongst the economic causes of growing income inequality are globalization and a bias in technical change. The impact of globalization is hard to illustrate at the City level. The implications of technical change, on the other hand, can be observed within the City context. They are closely linked to the skills needed in a changing economy.

Educational Attainment of the Middle Class

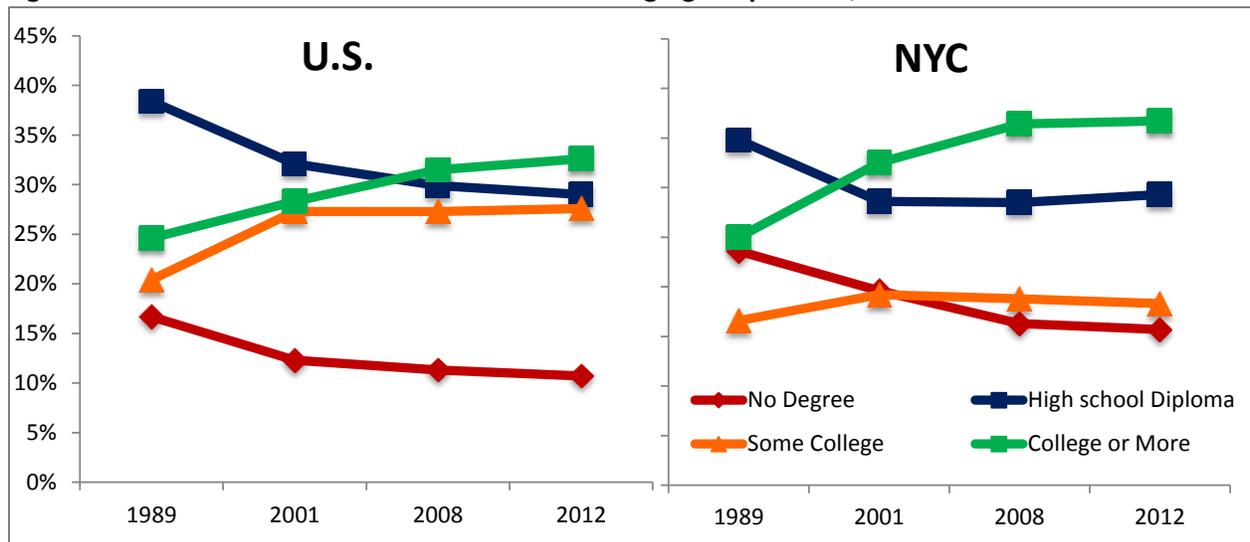
The title of a recent book, *The Race between Technology and Education*, sums up an important consequence of technical change on the middle class in the City.¹⁶ The authors argue that, over a long period of time, technical change has created a strong demand for the well-educated, especially those with college and advanced degrees. From World War II until around 1980 America's expanding university system kept up with this demand. After 1980, however, the number of university graduates continued to rise but at a slower rate, and the growth of demand for educated workers started to outstrip the growth of supply. When this demand started exceeding the supply, compensation for educated workers increased. Thus the earnings of those with college degrees rose relative to those without.

¹⁵ Gary Burtless, "Globalization and Income Polarization in Rich Countries", Brookings Institution Issues in Economic Policy, #5, April 2007.

¹⁶ Claudia Goldin & Lawrence Katz, *The Race between Technology and Education*, Harvard University Press, Cambridge 2008.

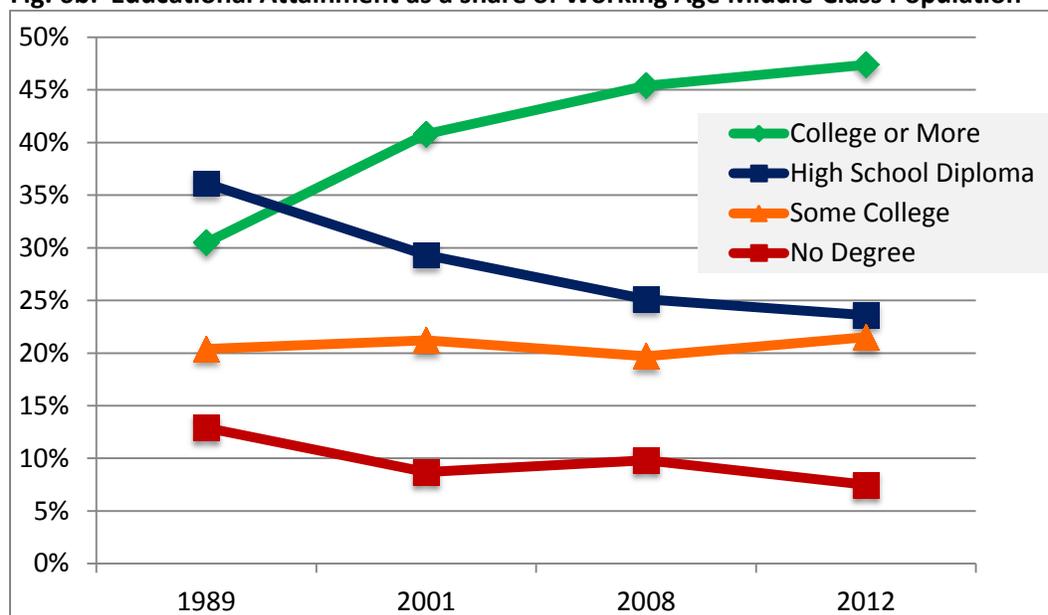
At the same time, the level of educational attainment of New York City residents has changed since 1980 (Fig. 6a). The City has transitioned from a city with a population share of college-educated or better residents in line with that of the nation to a city having a population that is significantly better educated than the nation. In contrast, the percentage of the population without a high school diploma fell, and currently remains above the national level. Most interesting perhaps are trends associated with the middle educated section of the City’s population, the “some college population”, which includes both those who failed to obtain a degree and those with an associate degree. The City’s share of this population is significantly below the national average. In some sense, the City’s educational profile itself reflects a ‘hollow in the middle’, displaying the same polarization as the median income analysis above.

Fig. 6a: Educational Attainment as a Share of Working Age Population, NYC and US



SOURCE: NYCC Finance Division calculations from ASEC- CPS, various years

This analysis reflects the fact that higher education is increasingly necessary to achieve and maintain a middle-class standard of living. The City’s middle class is increasingly college-educated (Fig. 6b). Looking at this from another perspective, half of all high school graduates were in the middle class in 1989 and one-third were lower income. Today, half of all high school graduates are lower income and one-third are in the middle class.

Fig. 6b: Educational Attainment as a share of Working Age Middle-Class Population

SOURCE: NYCC Finance Division calculations from ASEC-CPS various years

The Middle-Skill Job Squeeze

Technical change has also shown to have a different bias. Daron Acemoglu and David Autor have argued that computerization has taken many of the routine tasks that were previously done by middle skilled workers.¹⁷ Bookkeepers, typing pools, secretaries, file clerk, inventory clerks- all of which would have been common in the office, shop or production facility of the 1970s- have largely disappeared. Increasingly, the jobs that remain today either involve the abstract tasks that are typically filled by high skilled college educated workers or the manual tasks that are typically filled by low skilled, low wage workers. In addition, the routinized middle skilled jobs are also more vulnerable to globalization.

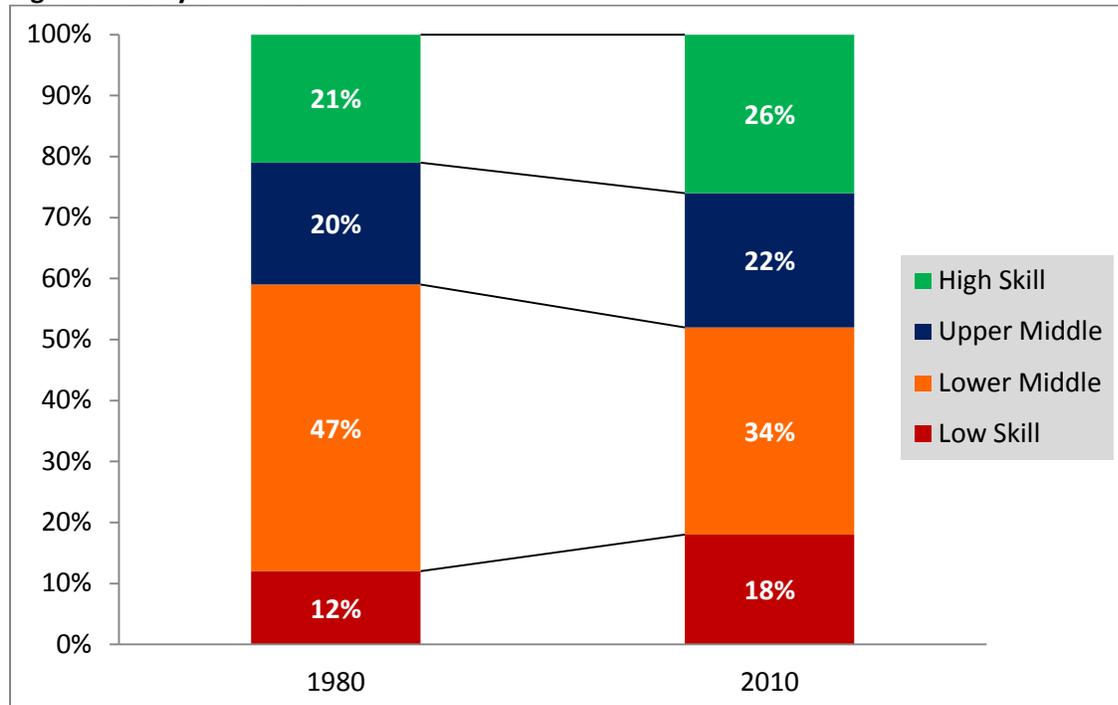
Jaison Abel and Richard Deitz at the Federal Reserve Bank of New York have investigated the impact of this skill bias on Downstate New York and found that the impact on lower middle income jobs was more severe in the New York region than in the country as a whole (see Fig. 6c).¹⁸ In Abel and Deitz's study, the most impacted jobs included those in administrative support, machine operation, sales and transportation. The most striking change was the loss of administrative services jobs. In 1980, administrative services accounted for a quarter of all jobs in New York City, but by 2010, it accounted for only 15 percent. Admittedly, jobs in this type of lower middle skill group would be unlikely to afford a person a middle-class lifestyle, but two wage earners in this

¹⁷ Daron Acemoglu & David Autor, "What Does Human Capital Do? A Review of Goldin and Katz's *The Race between Education and Technology*", NBER working paper # 17820 February 2012. Also see David Autor, "The Polarization of Job Opportunities in the US Labor Market", The Center for American Progress and The Hamilton Project, April 2010.

¹⁸ Jaison R. Abel & Richard Deitz, "Job Polarization and Rising Inequality in the Nation and the New York-Northern New Jersey Region", *Current Issues in Economics and Finance*, Federal Reserve Bank of New York, vol. 18, no7, 2012.

field could provide a middle-class lifestyle for a family. From 1980-2010, the region also experienced growth in high skill jobs such as legal, computer/math, management and engineers/architects and in low skill jobs such as health support, building maintenance and food preparation.

Fig. 6c: Jobs by Skill Level

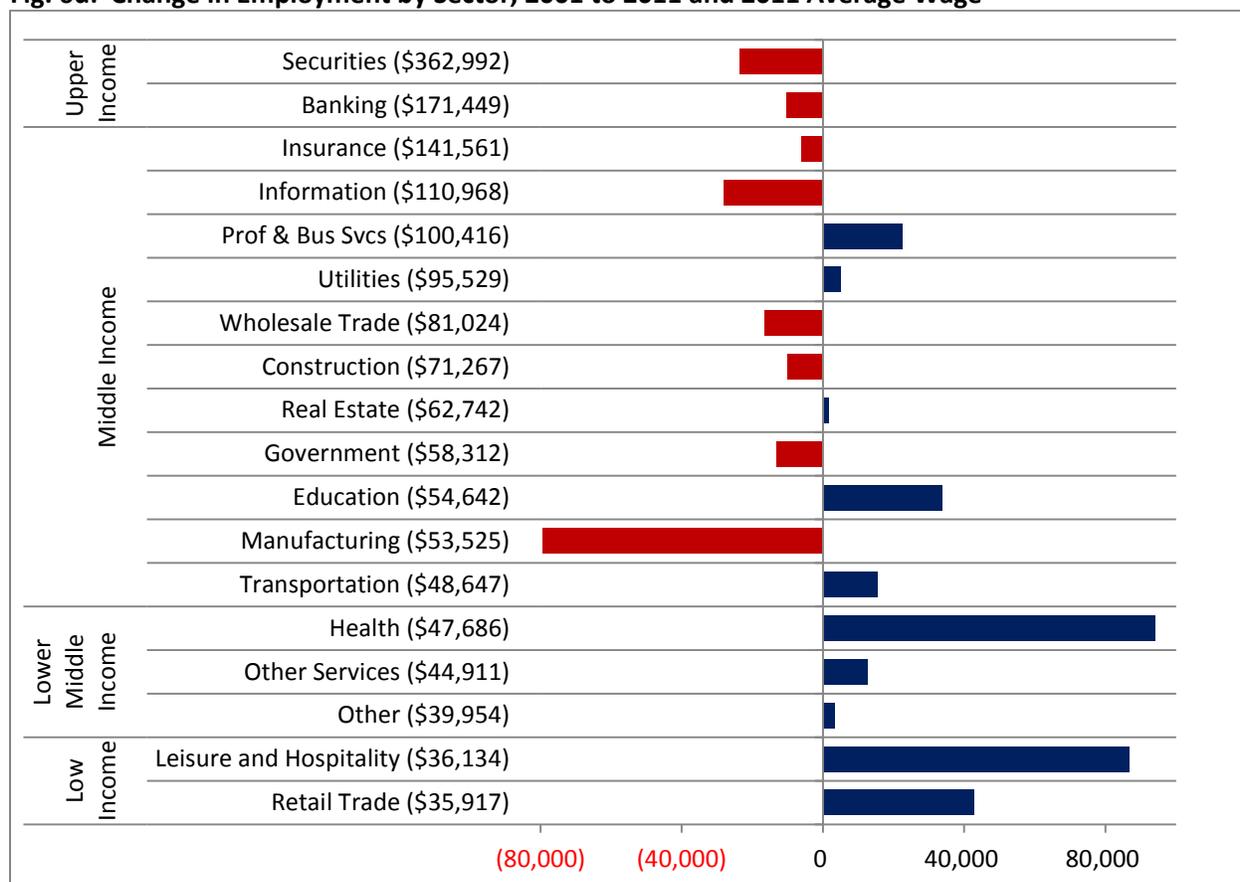


SOURCE: Abel & Dietz (2012)

It is possible that changes in income distribution could be function of shifts in the industrial structure of the city, rather than changes in the skills being used within existing industries. Separating out the two effects is difficult, but since 2001 the biggest job creators are sectors like health, retail and leisure and hospitality that generally pay lower and lower-middle income wages (Fig. 6d).¹⁹

¹⁹ In Figure 6d average industry incomes for 2011 are grouped assuming that they are for a family of 3 with one wage earner. Of course these are industry averages, each sector pays wages that go to families in all four of our classes.

Fig. 6d: Change in Employment by Sector, 2001 to 2011 and 2011 Average Wage



SOURCE: NYCC Finance Division calculations from Bureau of Labor Statistics Quarterly Census of Employment and Wages (BLS QCEW), 2001 -2011.

The decline in union membership has also affected middle-class wages. Frank Levy and Peter Temin note that from the end of World War II to about 1980, the growth in median wages tended to keep up with growth of labor productivity (output per hour worked).²⁰ This indicates that the benefits of growing efficiency were passed on in part to the worker. However, since 1980 median wages have grown more slowly than productivity, suggesting a weakening of that beneficial relationship. Levy and Temin argue that there were a set of institutions, including a framework of labor relations that helped to achieve this effect in the earlier period.

This framework of labor relations required government support. However, under President Reagan the control of inflation and tax cuts became the top economic priority. Maintaining the system of labor relations of the 1950's- 1970's was no longer a priority; in fact the contrary was true. The high interest rates and high value of the dollar used to control inflation wreaked havoc with the durable manufacturing firms that were the core of private sector unionization. Private sector union membership fell from 23 percent in 1979 to 16 percent of employees in 1985. The impact was

²⁰ Frank Levy & Peter Temin, "Inequality and Institutions in 20th Century America", Massachusetts Institution of Technology Department of Economics Working Paper, 07-17 June 2007.

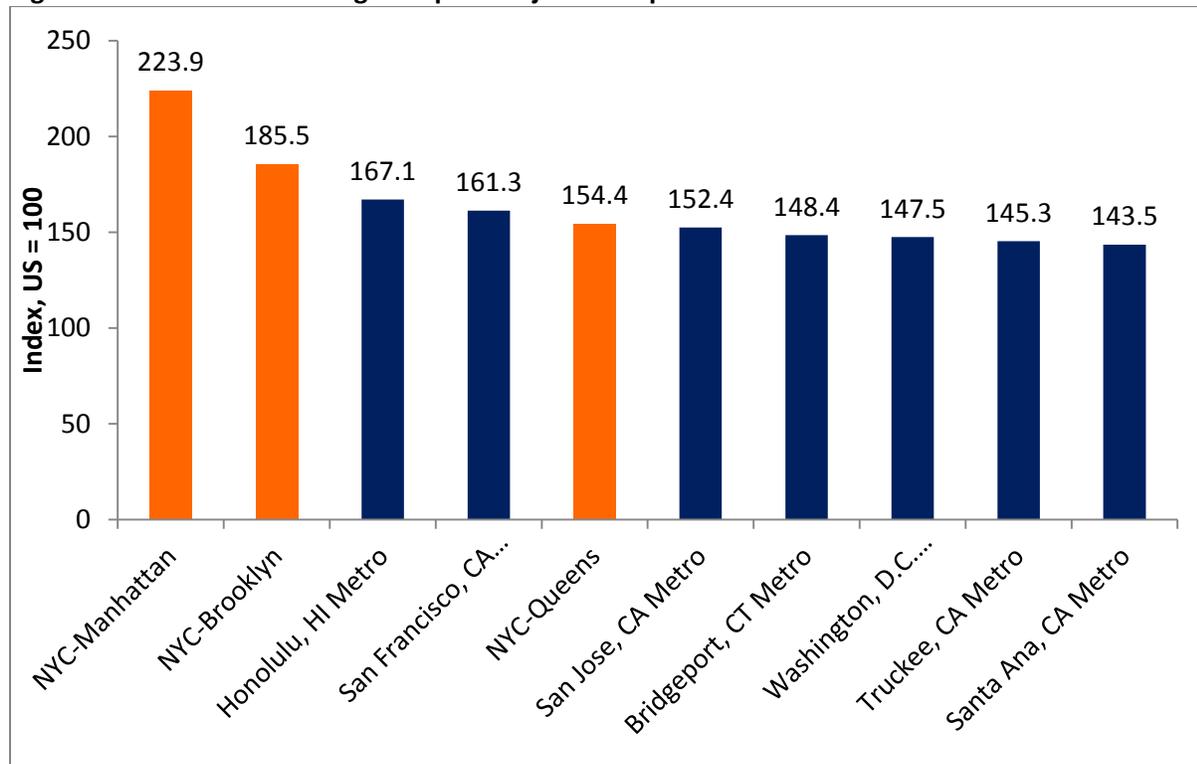
particularly hard on male high school graduates who made up the bulk of union members in this sector. The decline of unionization that started in the early 1980s has continued.

New York remains one of the more unionized parts of the United States. As of 2012, union density in the private sector in NYC was 12.8 percent compared to 6.8 percent nationally. For the public sector, it was 73 percent compared to 38 percent nationally.²¹ Nonetheless, overall unionization in the City fell dramatically during the recession of the early 1990s and has slipped gradually since then.

The Cost of Being Middle Class in New York City

It will not come as a surprise to anyone who lives here that New York City is expensive. The three boroughs in the ACCRA cost of living index rank in the top 5 of the list of most expensive urban areas in the country. Other high cost areas tend to be wealthy, densely populated metro areas like San Francisco and Washington, DC; wealthy suburbs like Bridgeport, Connecticut or Orange County, California; and remote urban areas like Honolulu, Hawaii or Fairbanks, Alaska (Fig. 7a).

Fig 7a: Index of Cost of Living in Top 10 Major Metropolitan Areas



SOURCE: The Council for Community and Economic Research, ACCRA Cost of Living Index, Third Quarter, 2011.

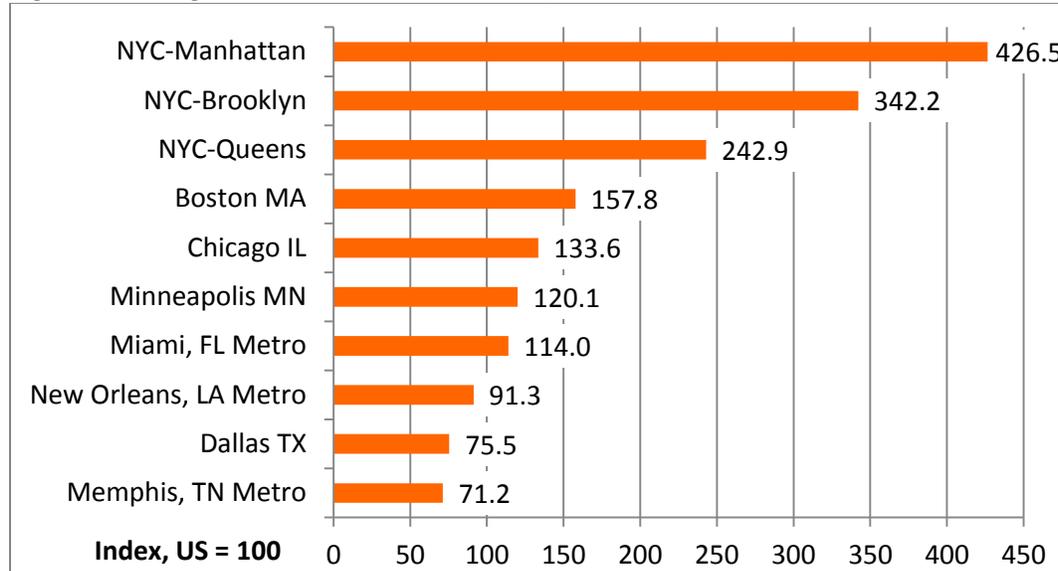
New York City living costs exceed the national average in all categories, with Manhattan ranking in the top 10 in all major categories. One area that stands out is housing; Manhattan costs are more

²¹ Ruth Milkman & Laura Braslow, “State of the Unions 2012”, The Joseph S. Murphy Institute for Worker Education and Labor Studies and the Center for Urban Research, CUNY.

than four times the national average and Brooklyn and Queens are close to three-and-a-half and two-and-a-half times the national average, respectively (Fig. 7b).

Living costs in New York City’s suburbs are lower than in these three boroughs, partially due to the City’s high costs of housing. All of the City’s suburbs in the index have lower housing costs than the City. Only Bridgeport, CT, with housing costs about twice the national average, approaches the costs of Brooklyn and Queens. Other high cost areas are in California, mostly in and around San Francisco and Los Angeles, Honolulu and around Washington, DC.

Fig. 7b: Housing Costs Index Around the U.S., Third Quarter, 2011



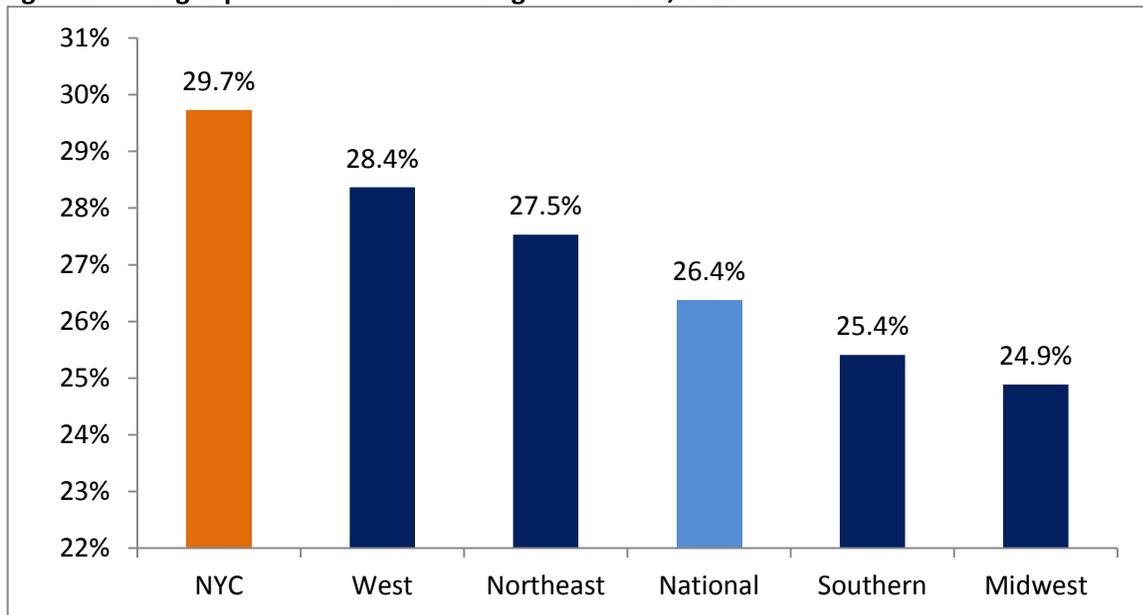
SOURCE: The Council for Community and Economic Research, ACCRA Cost of Living Index, Third Quarter, 2011.

New Yorkers spend an unusually large share of their income on housing. The consumer expenditure survey found that the typical New Yorker spends just under 30 percent of their income on housing – the highest percentage in the nation (Fig. 7c).

Homeownership remains a core middle-class aspiration but has become an increasingly challenging for middle-class families to attain. Housing costs have grown faster than median middle-class income – especially the price of purchasing a home, which has risen at three times the rate of income (Fig. 7d). This undoubtedly has contributed to a rise in the number of renters among the middle class in New York City, which rose from 51 percent of middle class households in 1999 to 55 percent in 2011.²²

²² NYCC Finance Division analysis of data from New York City Housing and Vacancy Survey.

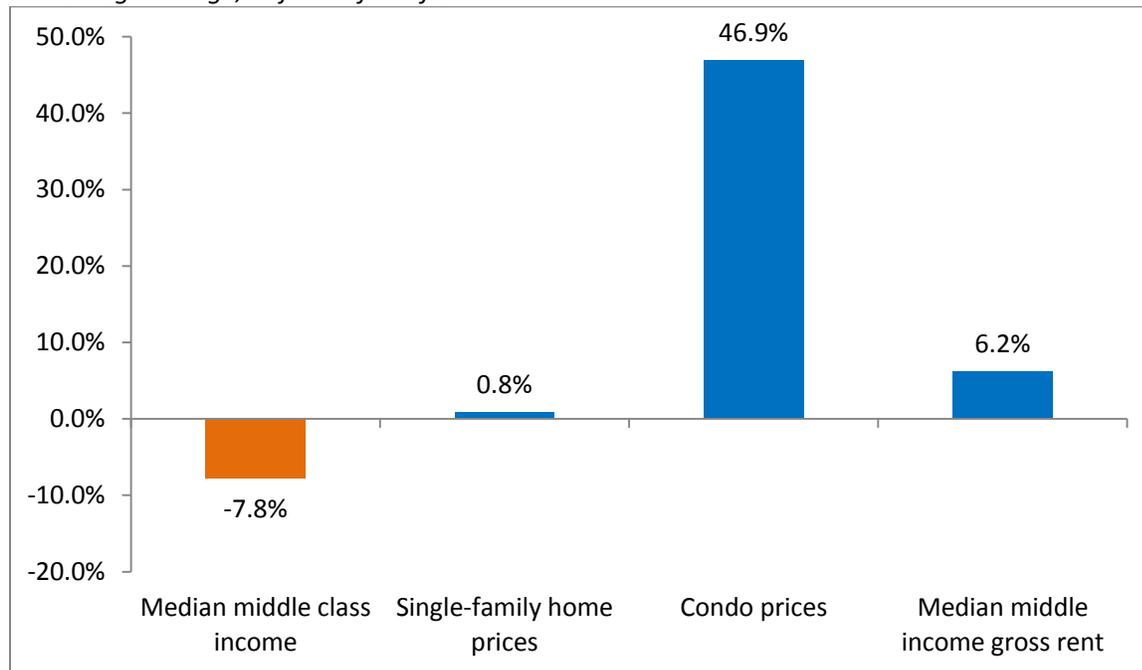
Fig. 7c: Housing Expenditure as a Percentage of Income, 2011



SOURCE: NYCC Finance Division calculations from Bureau of Labor Statistics Consumer Expenditure Survey (BLS CES), 2011

Fig. 7d: Housing Costs are Rising Faster than Middle Class Incomes

Percentage change, adjusted for inflation



SOURCES: NYCC Finance Division calculations from ASEC-CPS various years; S&P/Case-Schiller Home Price NYC Index; Furman Center Housing Price Appreciation Index, Condominiums (2001 to 2010); median rent for households with incomes from American Community Survey (2000 to 2011).

Conclusion

A thriving middle class is vital to a healthy democracy, economy, and society in our city. But today the middle class remains under threat from a broad set of economic, social and institutional forces that have made becoming, and remaining middle class increasingly difficult. And New York, with some of the highest costs of living in the country, faces particular challenges in nurturing its middle class.

Many of the forces pressuring a middle class existence are global or national in scope, and hence difficult to change at the level of the five boroughs. But City policy can help to address housing costs, to develop opportunities for middle class workers, and to help create a New York City that middle class families seek out as a place to call home.

Appendix: Methodology

The Current Population Survey

A significant portion of the data for this study originates from the Annual Social and Economic (ASEC) Supplement to the Community Population Survey (CPS). The CPS is the standard source of national employment and poverty estimates, and most notably it comprises the official estimate of the U.S. unemployment rate. In addition, the ASEC Supplement contains extra information on the income of survey respondents. The survey and supplement are maintained through the U.S. Bureau of the Census and the U.S. Bureau of Labor Statistics.

The CPS and its various supplements are commonly used in the literature that computes statistics on the middle class, including the Council's previous 'Hollow in the Middle' study. Nevertheless, there are many important considerations when using survey data such as CPS data,²³ and the choice of which data set to use should not rest on popularity alone. These considerations are the topic of this section, although they are not meant to be exhaustive.

The main advantage of the CPS is its long history. It was first conducted in 1940, and the survey data can easily be downloaded from the website of the National Bureau of Economic Research for years as far back as 1962.²⁴ For this reason, it is a popular source for comparing trends of the U.S. population over a long period of time. On the other hand, other, more comprehensive data sources generally have relatively short histories. For example, the American Community Survey, another common source for U.S. population statistics, only began collecting usable data in 2005.

Another desirable aspect of the CPS is that computer assisted field workers interview survey respondents by telephone and in person. These workers use specially designed software to question respondents and collect the data. This type of interviewing is helpful in reducing errors such as interviewer effects, framing bias and respondent error. Caution must be used when interpreting statistics generated from a survey, however, as it is impossible to avoid these errors entirely.

There are also several notable limitations in using the CPS data to produce statistics of New York City's Middle Class. A large disadvantage is the limited sample size which prohibits the study of small populations in detail or on examining minor yet significant changes.

In fact, the U.S. Census Bureau website warns against constructing estimates from sample sizes significantly smaller than the state or metropolitan statistical level.²⁵ The New York City sample is generally large enough to draw conclusions on broad subsets of the population. The conclusions drawn from the CPS data rely entirely on these broad subsets, however, since the legitimacy of CPS sample estimates for any groups finer than this level cannot be ensured.

²³ Chuck Nelson "Census Bureau Income Data: Presentation to the US Senate Population Health Subcommittee" Census Bureau, March 8-9 2012. BLS 2012.

²⁴ <http://www.nber.org/data/current-population-survey-data.html>

²⁵ <http://www.census.gov/cps/about/faq.html>

Another limitation is the wage data reported in the ASEC Supplement. Wages are “topcoded” or “masked” in the ASEC Supplement to the CPS in order to protect the identities of the respondents. This means that the data will not contain the wages of an earner who make above a certain limit. In addition, other income sources, such as investment income or annuities, are often understated possibly distorting measures of the financial conditions of the respondent.

Due to these limitations, the CPS should not be relied on to study high income earning groups. Researchers interested in the ‘the one percent’ often use of other data sets, especially income tax data.²⁶ In this study, we refrain from interpreting estimates on high income earners when possible.

In addition, reported income is pre-tax and measured without most fringe or government benefits. This tends to overstate income inequality and understate growth of middle and lower class incomes.²⁷

A final limitation is that the CPS has evolved significantly over its long history. Most notable is a major survey redesign which occurred in 1994. As a result the survey questions before and after the redesign changes, and as a result there may be difficulty in comparing the corresponding data. Nevertheless, much effort has been made to ensure that the study years are compatible.

Sample and Weighting

This section discusses the New York City sample of the ASEC Supplement to the CPS for the year 2012. However, the discussion of the sample here applies to every year used in this study.

The 2012 survey contains a total sample size of 201,398 representing 308,827,259 United States residents. This is slightly less than the July 2011 U.S. population of 311,591,917 reported by the Census Bureau. Of this sample, 3,888 (or 1.9 percent) are New York City residents representing 8,304,167 people (compared to the July 2011 survey which reports the NYC population as 8,244,910). Below is the NYC sample broken down by county, age 25-64 and householders age 25-64.

| New York City Residents | Sample | Weighted Sample | Percent | Sample Age 25-64 | Weighted Sample Age 25-64 | Percent |
|-------------------------|--------|-----------------|---------|------------------|---------------------------|---------|
| Bronx | 666 | 1,401,346 | 17% | 339 | 699,877 | 15% |
| Brooklyn | 1,170 | 2,523,862 | 30% | 626 | 1,349,347 | 30% |
| Manhattan | 697 | 1,567,624 | 19% | 415 | 946,195 | 21% |
| Queens | 1,156 | 2,352,336 | 28% | 645 | 1,279,035 | 28% |
| Staten Island | 199 | 458,998 | 6% | 108 | 247,213 | 5% |
| Total | 3,888 | 8,304,166 | | 2,133 | 4,521,667 | |

²⁶ For example see, “Income Inequality in New York City” Office of the New York City Comptroller, 2012.

²⁷ Richard V. Burkhauser, Jeff Larrimore & Kosali I. Simon, “A ‘Second Opinion’ on the Economic Health of the American Middle Class”, *National Tax Journal*, Vol. 65(1) 2012.

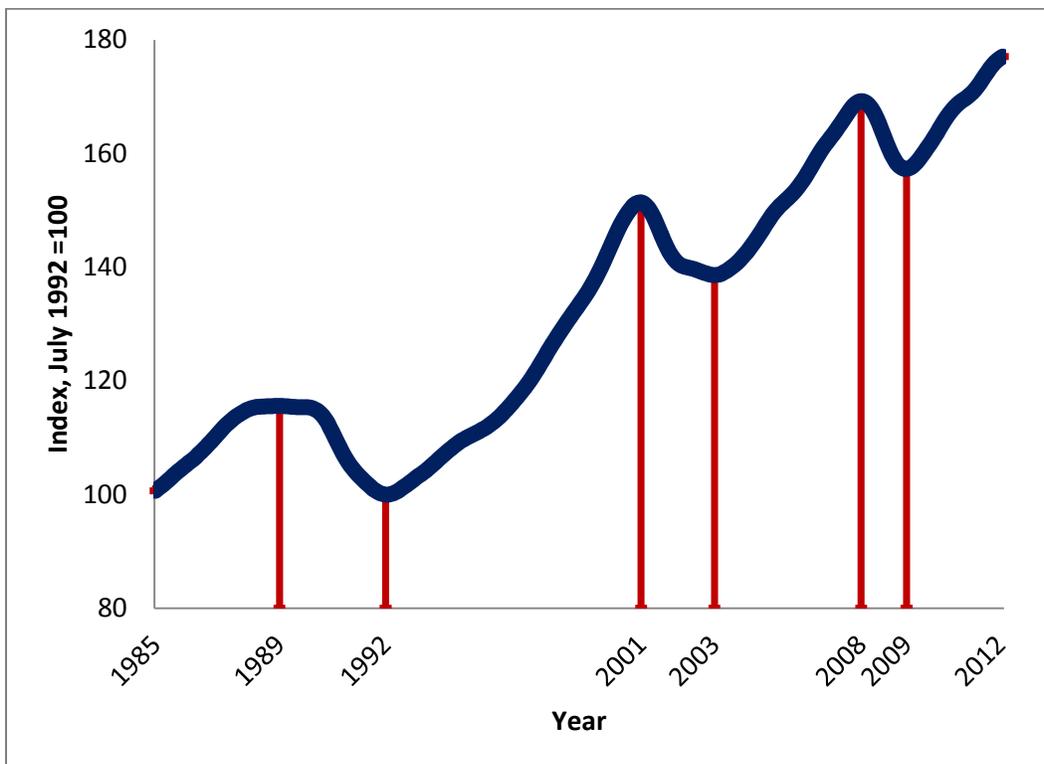
Weighting and standard errors

The CPS uses a complicated sampling scheme in order to select survey respondents. To calculate the variance of the estimates, users of CPS data rely on a system of replicate weights, and these weights have not been released for the most recent samples.

Cyclical Dating

The economic health of New York City varies according to the business cycle, and the City often appears significantly more prosperous during a boom period than a bust. In order to isolate the long-run trend of the middle class from the vagaries of the business cycle, this study only considers years over similar periods of prosperity – the cyclical peaks and troughs.

The business cycle is identified using the Federal Reserve Bank of New York (FRBNY) Index of Coincident Indicators for New York City.²⁸ The FRBNY index is computed using a variety of statistics – such as earnings and employment – and is meant to follow the state of the economy contemporaneously. As can be seen in the chart below, the index reaches its local peak in the years 2008, 2001 and 1989, while a trough is obtained in 2010, 2003 and 1993.



SOURCE: NYCC Finance Division calculations from FRBNY (2013).

²⁸ http://www.newyorkfed.org/research/regional_economy/coinident_summary.html

Defining the Middle Class

Few terms have been so widely used yet so vaguely defined as “the middle class”. In many contexts, membership to the middle class is defined by social characteristics: education, professional training and social mores. In others it is understood to be the income range between the poor and the rich, but exactly where that range is to be delineated varies extensively.

Despite the ultimately subjective considerations that go into any definition of the middle class, a definition can be constructed in an educated, consistent manner. In a recent report by the Pew Research Center, a middle class definition relied on self-identification in order to obtain an estimate of the middle class. Forty-nine percent of adult respondents self-identified as middle class in 2012,²⁹ down from 53 percent in a 2008 survey. Yet when the self-identified middle class respondents were asked ‘what annual income was needed for a family of four to lead a middle class lifestyle’ the median response was \$70,000. This was extremely close to the U.S. Census Bureau’s median income of \$68,274.

When estimating the middle class with an interval of incomes as done in this study, two possible approaches were considered. One approach would examine some middle percentile, such as the third quartile or the 30th to 70th percentile. This tactic would be ideal for tracking changes in income distribution through time.

Another approach would better address the question *“How many individuals belong to households with enough income to achieve a middle class standard of living at any point in time?”*³⁰ This study uses the latter approach. It sets to track the number of New Yorkers who have reached a threshold of prosperity, and then investigate what share of the population this group has consisted of across the two last business cycles.

To determine this middle income range, this study relies on a U.S. Department of Housing and Urban Development criteria used to determine which households are eligible for housing aid.³¹ HUD defines middle income as ranging between 80 percent and 200 percent of median income. This study modifies the upper bound to 300 percent to better represent NYC income earners who intuition would suggest are not in the upper class. It defines the range between 80 percent of the median and the median itself as the lower middle class. In addition, all household incomes have been adjusted to four members so that observations could be compared. This can be seen in the chart below.

²⁹ ‘Fewer, Poorer, Gloomier: The Lost Decade of the Middle Class,’ Pew Research Center, August 22, 2012, p.3.

³⁰ ‘Hollow in the Middle: The Rise and Fall of New York City’s Middle Class,’ New York City Council December 1997, p.11.

³¹ FY 2012 HUD Income Limits Briefing Material, U.S. Department of Housing and Urban Development Office of Policy Development and Research.

| Household Size Adjusted Middle Class Income \$2012 | | | | |
|---|---|------------------------------------|--|------------------------------|
| Household Size | 80% of Median Boundary: Class 1 & 2 | Median Boundary: Class 2 & 3 | 300% of Median Boundary: Class 3 & 4 | Ratio of Household Size to 4 |
| 1 | \$37,184 | \$46,480 | \$139,440 | 0.70 |
| 2 | \$42,496 | \$53,120 | \$159,360 | 0.80 |
| 3 | \$47,808 | \$59,760 | \$179,280 | 0.90 |
| 4 | \$53,120 | \$66,400 | \$199,200 | 1.00 |
| 5 | \$57,370 | \$71,712 | \$215,136 | 1.08 |
| 6 | \$61,619 | \$77,024 | \$231,072 | 1.16 |
| 7 | \$65,869 | \$82,336 | \$247,008 | 1.24 |
| 8 | \$70,118 | \$87,648 | \$262,944 | 1.32 |

A summary of the classes for New York City residents between the age of 25 and 64 (inclusive) is below. While membership in each class is based on adjusted household income as mentioned above, median income for each class is reported using both unadjusted (Household Median Income) and size adjusted household income (Household Median Adjusted Income). The “Percent” refers the population that belongs to a household which belongs to the corresponding Class.

| 2012 NYC Population Age 25-64 | | | |
|--------------------------------------|-------------------------|----------------------------------|--------------------------------------|
| Class | Household Median Income | Household Median Adjusted Income | Percent of Class to Total Population |
| 1 | \$24,297 | \$27,500 | 41.19% |
| 2 | \$55,000 | \$59,197 | 9.19% |
| 3 | \$92,960 | \$102,780 | 41.67% |
| 4 | \$235,200 | \$275,054 | 7.94% |

Throughout the report, unless stated otherwise, incomes of all years are reported in 2012 dollars.

