

Current Estimates of New York City's Population for July 2016

Summary

The U.S. Census Bureau has estimated New York City's population at 8,537,673, as of July 2016. This represented an increase of 362,500 residents (or 4.4 percent) over the April 2010 decennial census count of 8,175,133. The city has not witnessed such a robust pace of growth in over a half-century. Population growth has been fueled by the continued surplus of births over deaths, partly due to record high life expectancy, which has been partly offset by net outflows from the city.

Each of the city's five boroughs registered gains in population. The Bronx saw the largest increase, up 5.1 percent, followed by Brooklyn (5.0 percent), Queens (4.6 percent), and Manhattan (3.6 percent); Staten Island showed the smallest gain (1.6 percent) over the 75-month period. The increase for the Bronx brings it close to its historical high, achieved in 1970, when the population of the borough was at 1.472 million.

Complete Analysis of U.S. Census Bureau Estimates for July 1, 2016

Introduction

The U.S. Census Bureau prepares estimates of total population for all counties in the United States on an annual basis, using a demographic procedure known as the "administrative records method" (described below). This method assumes that post-census population change can be closely approximated with vital statistics data on births and deaths, along with other administrative and survey data that provide a picture of migration patterns.

Total Population

According to U.S. Census Bureau population estimates, New York City's population increased from 8,175,133¹ in April of 2010 to 8,537,673 in July of 2016. This is an increase of 362,500 residents or about 4.4 percent over the 2010 mark. Among the boroughs, the Bronx saw the largest change in population in this 75-month period, growing by 5.1 percent or 70,600 persons, followed by Brooklyn (5.0 percent or 124,500 persons), Queens (4.6 percent or 102,300 persons), and Manhattan (3.6 percent or 57,900 persons). The lowest growth occurred in Staten Island (1.6 percent or 7,300 persons).

New York City's population increase since April of 2010 represented 98.7 percent of the total increase in New York State, which raised the city's share of the state's population, from 42.2 percent to 43.2 percent.

Change in Population, Census Bureau Estimates April 2010 to July 2016				
	Census 2010	Estimates 2016	Change: Census 2010 and Estimates 2016	
			Number	Percent
New York State	19,378,102	19,745,289	367,187	1.9
New York City	8,175,133	8,537,673	362,540	4.4
Bronx	1,385,108	1,455,720	70,612	5.1
Brooklyn	2,504,700	2,629,150	124,450	5.0
Manhattan	1,585,873	1,643,734	57,861	3.6
Queens	2,230,722	2,333,054	102,332	4.6
Staten Island	468,730	476,015	7,285	1.6
<i>NYC as % of NYS</i>	42.2	43.2	98.7	

Source: 2010 Census; Census Bureau Current Estimates Program

Components of Population Change

Demographers divide population change into components. *Natural increase* represents the difference between births and deaths. *Net migration* represents the balance between persons entering and leaving an area. Together, these components describe how populations change over time. The U.S. Census Bureau constructs population estimates for all counties in the United States by separately estimating the components of change. Births and deaths are compiled using data from the national vital statistics system. Net migration is calculated by estimating the rate of net migration for persons coming in from and leaving for other counties in the 50 states (*net domestic migration*) and the balance of people who immigrate from and emigrate to other nations and Puerto Rico (*net international migration*). The net domestic migration rate is derived using income tax returns from the Internal Revenue Service and Medicare enrollment data from the Social Security Administration (see methods discussion below).

It is important to keep in mind that New York City has a very dynamic population, with several hundred thousand people coming and going each year. This “churn” has long characterized the city, and represents a fluidity that is difficult to characterize using the net migration measures presented herein. This dynamism is a testament to the city being a magnet for those seeking opportunities, then moving on, only to be replaced by the next set of individuals aspiring for a better life. This very vibrant picture is what makes New York City’s population extraordinary and different from most other places in the nation and, perhaps, the world.

The most recent estimates from the U.S. Census Bureau indicate the following for the 2010-2016 period:

- a) Positive natural increase—the surplus of births over deaths added 401,900 persons to New York City’s population between April of 2010 and July of 2016.
- b) In a return to its customary pattern of migration, New York City suffered a net loss through migration during the 2010-2016 period. This loss totaled 24,500 – the net result of domestic losses (-524,000) offset by gains internationally (499,500). Thus, population growth in the city was the result of natural increase—almost 402,000 more births than deaths for the 2010-2016 period.
- c) Most of the losses through migration were concentrated in Brooklyn (-32,300), with Manhattan and Queens experiencing small net gains through migration.

**Cumulative Estimates of the Components of Population Change for
New York City and Counties: April 1, 2010 to July 1, 2016**

Geographic Area	Total Population Change*	Natural Increase	Net Migration		
		(Births- Deaths)	Total	Net Domestic Migration	Net International Migration
New York City	362,540	401,943	-24,467	-524,013	499,546
Bronx	70,612	75,607	-3,358	-103,923	100,565
Brooklyn	124,450	160,580	-32,277	-169,064	136,787
Manhattan	57,861	54,522	7,189	-91,811	99,000
Queens	102,332	99,703	7,203	-148,045	155,248
Staten Island	7,285	11,531	-3,224	-11,170	7,946

*Note: Population change was calculated using the 2010 Decennial Census (as opposed to the 2010 Estimates Base) and the 2016 Population Estimate. The estimated components of population change will not equal the numerical population change also because of a small residual after controlling to the national totals.

Source: Population Division, U.S. Census Bureau

New Patterns of Recent Growth: 2015-2016 vs. 2010-2015

While still substantial, growth in the city has moderated, with population gains over the past year of just 21,200 or 0.2 percent, compared to 65,000 or 0.8 percent annual average growth for the 2010-2015 period.

Growth in Brooklyn and Manhattan were at the city average (0.2 percent) in the past year, while the Bronx (0.5 percent), Staten Island (0.4 percent), and Queens (0.3) had higher than average growth.

Change in Population, Census Bureau Estimates April 2010, July 2015, and July 2016							
	Census 2010	Estimates 2015	Estimates 2016	Annual Change 2010-2015		Change 2015 to 2016	
				Number	Percent	Number	Percent
New York State	19,378,102	19,747,183	19,745,289	70,301	0.4	-1,894	0.0
New York City	8,175,133	8,516,502	8,537,673	65,023	0.8	21,171	0.2
Bronx	1,385,108	1,449,196	1,455,720	12,207	0.9	6,524	0.5
Brooklyn	2,504,700	2,624,941	2,629,150	22,903	0.9	4,209	0.2
Manhattan	1,585,873	1,641,168	1,643,734	10,532	0.7	2,566	0.2
Queens	2,230,722	2,327,228	2,333,054	18,382	0.8	5,826	0.3
Staten Island	468,730	473,969	476,015	998	0.2	2,046	0.4

Source: 2010 Census; Census Bureau Current Estimates Program

Cumulative Estimates of the Components of Population Change for New York City and Counties: July 1, 2015 to July 1, 2016					
Geographic Area	Total Population Change*	Natural Increase	Net Migration		
		(Births- Deaths)	Total	Net Domestic Migration	Net International Migration
New York City	21,171	57,494	-36,390	-121,411	85,021
Bronx	6,524	10,785	-3,758	-20,956	17,198
Brooklyn	4,209	23,991	-20,309	-43,264	22,955
Manhattan	2,566	6,945	-4,340	-21,557	17,217
Queens	5,826	14,469	-9,040	-35,335	26,295
Staten Island	2,046	1,304	1,057	-299	1,356

*Note: The estimated components of population change will not equal the numerical population change because of a small residual after controlling to the national totals.

Source: Population Division, U.S. Census Bureau

U.S. Census Bureau Population Estimates Methodology

Each year, the U.S. Census Bureau produces estimates of the population for states, counties, cities and other places, as well as for the nation as a whole. They utilize data from a number of sources to estimate the change in the population for each year since the most recent decennial census. These population estimates use the 2010 Census counts as a base.

The U.S. Census Bureau subtracts the number of resident deaths from the number of resident births annually for each county in the U.S., to derive growth due to *natural increase*. Births are tabulated by residence of the mother, regardless of where the birth occurred. Similarly, deaths are tabulated by the most recent residence of the decedent, not where the death occurred. Birth and death certificates from the National Center for Health Statistics are used as the data source. The data on births and deaths are generally considered to be the most reliable part of the components of change analysis.

Net domestic migration represents the net exchange between a county and other counties in the 50 states. This component is estimated for three age groups (0-17, 18-64 and 65 years and older). For ages 0 to 64, the U.S. Census Bureau uses data on filers and dependents from federal income tax returns supplied by the Internal Revenue Service (IRS). In-migrants and out-migrants between counties as well as non-movers are identified by comparing the addresses of income tax filers from year-to-year to determine residence at two points in time. For example, to produce the July 1, 2016 estimates, the addresses of tax filers in 2014 and 2015 are compared. In-migrants to a county were defined as those with an address in the county in 2015, but outside the county in 2014; out-migrants are those with an address in the county in 2014, but outside the county in 2015; and individuals who filed tax returns at the same address at both points in time are non-migrants. Since every U.S. resident may not file or be claimed as an exemption on a tax return, these data cannot be used to directly estimate the number of county-to-county migrants. Instead a net domestic migration **rate** needs to be calculated by taking the difference between the numbers of in- and out-migrants (net-migrants) and dividing it by the sum of the non-movers and out-migrants.² Because many retired persons do not file tax returns, the U.S. Census Bureau uses addresses from Medicare enrollment data in much the same way as they use IRS data to determine domestic migration for the population 65 years and over.

Net International Migration is the result of net flows to and from foreign countries and Puerto Rico and is estimated in the following parts: immigration of the foreign-born, emigration of the foreign- as well as native-born, and net migration between the U.S. and Puerto Rico. Immigration of the foreign-born is estimated using the ACS question on residence in the prior year. Foreign-born persons who indicated that they lived abroad in the prior year are considered immigrants.

Emigration of the foreign-born is estimated using the residual method. For example, the foreign-born population is aged forward to obtain the expected population in the year 2016. The expected population is then compared to the population estimated in the 2016 ACS. Subtracting the estimated from the expected populations provides the residual, which then serves as the basis of emigration rates for the foreign-born. Emigration rates of the native-born are based on research by Schachter (2008) using data from over 80 countries.³ This work compares estimates of U.S. citizens living overseas measured for two consecutive time periods and uses the difference to develop estimates of net native migration.

¹ While there is little doubt that New York City has experienced a substantial population increase post-2010, it is probably overstated. Brooklyn and Queens likely experienced an undercount in the 2010 Census, the result of misclassifying housing units as vacant. A conservative estimate is that this problem understated the population of the two boroughs by 65,000 persons. This means that the population of the city in 2010 was easily in excess of 8,240,000 – and not the 8,175,100 base from the 2010 enumeration that is used in the calculations of change.

² One reason why small changes in estimates need to be interpreted with caution relates to the effects that tumultuous events can have on the administrative data used to create population estimates. Such is the case with super storm Sandy and its impact on the utility of tax return data to estimate migration levels for the boroughs.

³ Schachter, Jason. 2008. “Estimating Native emigration from the United States,” Memorandum dated December 24, delivered to the US. Census Bureau.