

Current Estimates of New York City's Population for July 2017

Summary

The U.S. Census Bureau has estimated New York City's population at 8,622,698, as of July 1, 2017. This represented an increase of 447,565 residents (or 5.5 percent) over the April 1, 2010 decennial census count of 8,175,133. Post-2010 growth translates into an average annual gain of about 62,000 persons, or a compounded 0.7 percent. 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 partially offset by net outflows from the city.

Each of the city's five boroughs registered gains in population. The Bronx saw the largest increase among all counties in New York State, up 6.2 percent, followed by Brooklyn (5.8 percent), Queens (5.7 percent), and Manhattan (5.0 percent); Staten Island showed the smallest gain (2.3 percent) over the 87-month period. The increase for the Bronx brings it within a whisker of its historical high, achieved in 1970, when the population of the borough was at 1.472 million.

While the city's population has shown a substantial increase since 2010, the pace of change has slowed. Growth between 2010 and 2011 stood at 1.2 percent and declined each year thereafter, to 0.1 percent between 2016 and 2017.

Complete Analysis of U.S. Census Bureau Estimates for July 1, 2017

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 8,622,698 in July of 2017. This is an increase of about 448,000 residents over the 2010 mark, or 5.5 percent. Among the boroughs, the Bronx saw the largest change in population in this 87-month period, growing by 6.2 percent or 86,000 persons, followed by Brooklyn (5.8 percent or 144,000 persons), Queens (5.7 percent or 128,000 persons), and Manhattan (5.0 percent or 79,000 persons). The lowest growth occurred in Staten Island (2.3 percent or 10,700 persons).

New York City's population increase since April of 2010 represented 95 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 43.4 percent. Although the city grew by roughly 448,000 persons since 2010, the rest of the state saw an increase of just 24,000, with 45 of the State's 62 counties losing population.

Change in Population, Census Bureau Estimates April 2010 to July 2017				
	Census 2010	Estimates 2017	Change: Census 2010 and Estimates 2017	
			Number	Percent
New York State	19,378,102	19,849,399	471,297	2.4
New York City	8,175,133	8,622,698	447,565	5.5
Bronx	1,385,108	1,471,160	86,052	6.2
Brooklyn	2,504,700	2,648,771	144,071	5.8
Manhattan	1,585,873	1,664,727	78,854	5.0
Queens	2,230,722	2,358,582	127,860	5.7
Staten Island	468,730	479,458	10,728	2.3
<i>NYC as % of NYS</i>	42.2	43.4	95.0	

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 2010-2017 period:

- a) Positive natural increase—the surplus of births over deaths added 463,000 persons to New York City’s population between April of 2010 and July of 2017.
- b) In a return to its customary pattern of migration, New York City suffered a net loss through migration during the 2010-2017 period. This loss totaled 15,000 – the net result of domestic losses (640,000) offset by international gains (624,000).
- c) Most of these migration losses were concentrated in Brooklyn (41,000), countered by net migration gains in Manhattan and Queens (17,000 and 13,000 respectively).

**Estimates of the Components of Population Change for
New York City and Counties: April 1, 2010 to July 1, 2017**

Geographic Area	Total Population Change*	Natural Increase	Net Migration		
		(Births- Deaths)	Total	Net Domestic Migration	Net International Migration
New York City	447,565	462,671	-15,299	-639,566	624,267
Bronx	86,052	87,250	-1,853	-129,913	128,060
Brooklyn	144,071	185,409	-40,797	-210,374	169,577
Manhattan	78,854	61,606	17,213	-104,006	121,219
Queens	127,860	115,142	12,550	-182,764	195,314
Staten Island	10,728	13,264	-2,412	-12,509	10,097

*Note: Population change was calculated using the 2010 Decennial Census (as opposed to the 2010 Estimates Base) and the 2017 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: 2016-2017 vs. 2010-2016

Growth in the city has been consistently declining each year in the post-2010 period. Growth between 2010 and 2011 stood at 1.2 percent and declined each year thereafter to 0.1 percent between 2016 and 2017.

The Census Bureau's estimates are prepared using a combination of administrative records from vital statistics, tax returns, and Medicare, along with data from the American Community Survey. Due to a change in their methodology, the Census Bureau revised earlier estimates for the city. These changes resulted in a series of upward revisions, which altered the pace of change since 2010.

	Change in Population, Census Bureau Estimates April 2010, July 2016, and July 2017						
	Census 2010	Estimates 2016	Estimates 2017	Annual Change 2010-2016		Change 2016 to 2017	
				Number	Percent	Number	Percent
New York State	19,378,102	19,836,286	19,849,399	73,309	0.4	13,113	0.1
New York City	8,175,133	8,615,426	8,622,698	70,447	0.9	7,272	0.1
Bronx	1,385,108	1,468,976	1,471,160	13,419	1.0	2,184	0.1
Brooklyn	2,504,700	2,650,859	2,648,771	23,385	0.9	-2,088	-0.1
Manhattan	1,585,873	1,662,164	1,664,727	12,207	0.8	2,563	0.2
Queens	2,230,722	2,356,044	2,358,582	20,052	0.9	2,538	0.1
Staten Island	468,730	477,383	479,458	1,384	0.3	2,075	0.4

Source: 2010 Census; Census Bureau Current Estimates Program

Estimates of the Components of Population Change for New York City and Counties: July 1, 2016 to July 1, 2017					
Geographic Area	Total Population Change*	Natural Increase	Net Migration		
		(Births- Deaths)	Total	Net Domestic Migration	Net International Migration
New York City	7,272	55,601	-48,520	-142,586	94,066
Bronx	2,184	10,480	-8,381	-27,949	19,568
Brooklyn	-2,088	23,354	-25,484	-50,598	25,114
Manhattan	2,563	6,344	-3,762	-22,412	18,650
Queens	2,538	14,068	-11,626	-40,874	29,248
Staten Island	2,075	1,355	733	-753	1,486

*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, 2017 estimates, the addresses of tax filers in 2015 and 2016 are compared. In-migrants to a county were defined as those with an address in the county in 2016, but outside the county in 2015; out-migrants are those with an address in the county in 2015, but outside the county in 2016; 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 compares addresses from one year to another in the individual Medicare enrollee records 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 2017. The expected population is then compared to the population estimated in the 2017 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.

See Salvo, J.J. and A.P. Lobo (2013). “Misclassifying New York’s Hidden Units as Vacant in 2010: Lessons Gleaned for the 2020 Census.” *Population Research and Policy Review*, 32(5), 729-751. <http://link.springer.com/article/10.1007/s11113-013-9298-1>

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.