POPULATION ESTIMATES FOR NEW YORK CITY AND BOROUGHS AS OF JULY 1, 2022

Summary of Findings

The U.S. Census Bureau has estimated New York City's population at 8,335,897, as of July 1, 2022. This represents a decrease of 123,104 from July 1, 2021, compared to a decrease of 281,646 between July 1, 2020 and July 1, 2021. The smaller population loss was largely the result of a rebound in international migration and mitigated net domestic migration losses.

The pandemic produced short-term shocks to New York City's patterns of population change. A large uptick in movement to the suburbs and exurbs of New York City resulted in larger than typical net domestic outflows. Net international inflows were near historical lows as national immigration was severely curtailed. In addition to changes in migration patterns, births decreased briefly during the pandemic, and mortality due to Covid-19 increased the total number of deaths, particularly early in the pandemic.

Each of these patterns was temporary, and has lessened or returned to pre-pandemic trends, as reflected in the Vintage 2022 estimates as well as additional data sources. Borders have reopened, facilitating international migration; net domestic outflows have attenuated; birth rates have rebounded modestly; and deaths due to Covid-19 are substantially lower than at the start of the pandemic.

In addition, Manhattan, the borough that experienced the largest net domestic outflows, experienced net domestic inflows between July 1, 2021 and July 1, 2022, a remarkable anomalous break from a long-term pattern of net domestic outflows, and a suggestion that there has been a strong rebound to the core of New York City. Combined with net international inflows and natural increase (more births than deaths), Manhattan's annual population increase was in stark contrast to its population losses between 2020 and 2021, when it experienced the largest annual loss among the five boroughs.

As a final note, the Census Bureau's population estimates are subject to annual revisions, as updated data and methodological refinements are incorporated. While the Census Bureau uses the most robust possible methods and has access to the highest quality data available, estimation is inherently imprecise. Year-to-year changes in particular must be interpreted with caution.

In summary, the estimated large decline in the population after the April 1, 2020 Census enumeration is a result of temporary, pandemic-related phenomena. Many of the trends contributing to the decline have attenuated or reversed. It is also important to keep in mind that the Vintage 2022 estimates provide us with a window onto the population as of July 1, 2022, not the current population in 2023.

COMPLETE ANALYSIS OF
U.S. CENSUS BUREAU ESTIMATES FOR JULY 1, 2022

Introduction

The Census Bureau's Population Estimates Program releases annual estimates of the national, state, and county populations, as well as components of population change – births, deaths, and net migration. Using a cohort-component method, the Census Bureau estimates the resident population each year by adding estimated births, subtracting estimated deaths, and adding estimated net migration. This method assumes that post-2020 Census population change can be closely approximated using vital statistics data on births and deaths, along with other administrative and survey data that provide a picture of migration patterns. The Vintage 2022 estimates include population estimates for July 1, 2020, 2021, and 2022, building in part on results from the 2020 Census. Since some critical results from the 2020 Census are not yet available, Vintage 2022 population estimates are also based on the 2020 Demographic Analysis Estimates and the Vintage 2020 population estimates using a process called the "blended base." More details on methodology are available below.

Population estimates are most useful for identifying patterns of change in the city's population. It is important to keep in mind that the Census Bureau's methodology is not robust enough to precisely quantify the magnitude of year-to-year changes, even without the added uncertainty due to the pandemic. It is also important to keep in mind that the county estimates are released with a nine-month lag, with the most recent estimate referring to July 1, 2022, and the Vintage 2022 population estimates do not account for population changes after July 1, 2022. Many of the impacts of the pandemic on patterns of population change in 2020 and 2021 have reversed or mitigated by late 2022 and into 2023.

Total Population

According to U.S. Census Bureau population estimates, New York City's population decreased from 8,804,190 on April 1, 2020 to 8,335,897 on July 1, 2022. This is a decline of 468,293 residents from the 2020 population, or 5.3 percent.

Among the boroughs, the Bronx experienced the largest percentage decrease, -6.3 percent or 92,708 persons, followed by Manhattan (-5.8 percent or 97,978 persons), Brooklyn (-5.3 percent or 145,558 persons), Queens (-5.3 percent or 127,534 persons), and Staten Island (-0.9 percent or 4,614) over the 27-month period.

Table 1. Population and Change, Census Bureau Estimates
New York City and Boroughs, April 1, 2020, July 1, 2020, July 1, 2021, and July 1, 2022

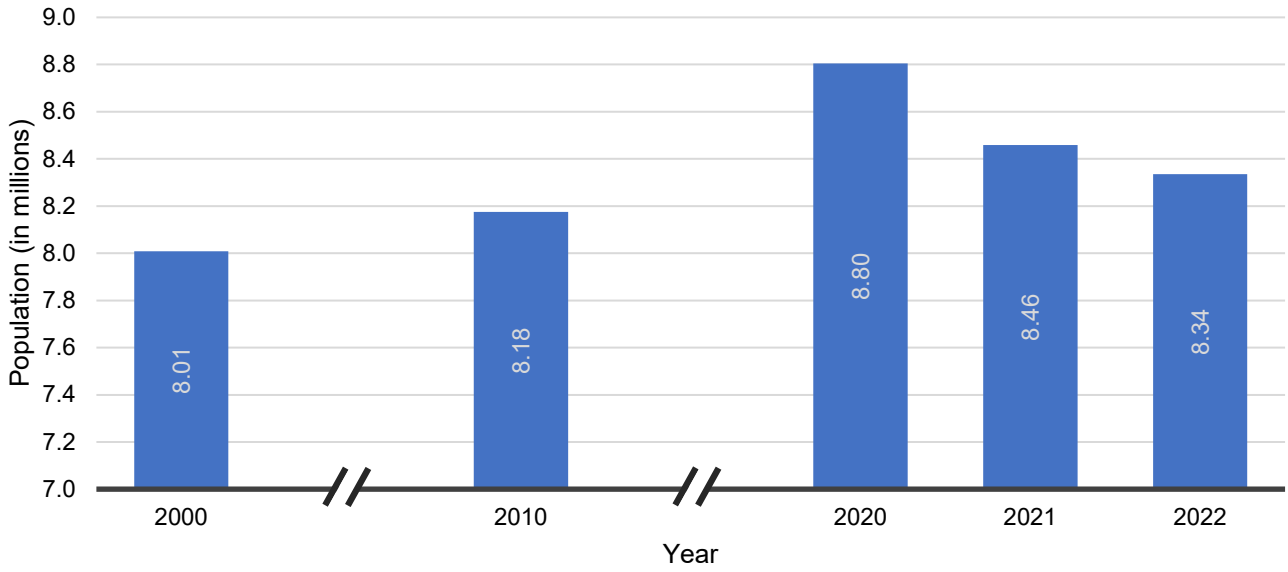
	Census	Estimates			Change		
	April 2020	July 2020	July 2021	July 2022	April 2020 - July 2022 Number (Percent)	July 2020 - July 2021 Number (Percent)	July 2021 - July 2022 Number (Percent)
New York City	**8,804,190**	**8,740,647**	**8,459,001**	**8,335,897**	**-468,293 (-5.3)**	**-281,646 (-3.2)**	**-123,104 (-1.5)**
Bronx	1,472,654	1,461,125	1,421,089	1,379,946	-92,708 (-6.3)	-40,036 (-2.7)	-41,143 (-2.9)
Brooklyn	2,736,074	2,719,044	2,637,486	2,590,516	-145,558 (-5.3)	-81,558 (-3.0)	-46,970 (-1.8)
Manhattan	1,694,251	1,677,306	1,578,801	1,596,273	-97,978 (-5.8)	-98,505 (-5.9)	17,472 (1.1)
Queens	2,405,464	2,388,586	2,328,141	2,278,029	-127,534 (-5.3)	-60,445 (-2.5)	-50,112 (-2.2)
Staten Island	495,747	494,586	493,484	491,133	-4,614 (-0.9)	-1,102 (-0.2)	-2,351 (-0.5)

Source: U.S. Census Bureau, Population Estimates Program (Vintage 2022)

Between July 1, 2021 and July 1, 2022, New York City's population decreased by 123,104. The largest percentage decrease was in the Bronx (-2.9 percent or 41,143 persons), followed by Queens (-2.2 percent or 50,112 persons), Brooklyn (-1.8 percent or 46,970 persons), and Staten Island (-0.5 percent or 2,351 persons). Manhattan's population increased by 1.1 percent, or 17,472 persons.

The annual decrease between 2021 and 2022 was substantially smaller than the population loss of 281,646 between July 1, 2020 and July 1, 2021. At the borough level, Manhattan's population change reversed direction from a loss of 98,505 between 2020 and 2021 to a gain of 17,472 between 2021 and 2022. Population losses were mitigated in Brooklyn and Queens, and population losses increased slightly for Staten Island and the Bronx.

Figure 1. New York City Population, 2000, 2010, and 2020 to 2022



Source: U.S. Census Bureau, 2000 Census, 2010 Census, 2020 Census, and Population Estimates Program (Vintage 2022)

While the city's population continued to decrease between 2021 and 2022, declines in the population are largely due to temporary phenomena caused by Covid-19, and have reversed or are mitigated in the most recent period. It is also important to note that the Vintage 2022 estimates do not reflect the current time point, but rather July 1, 2022.

Despite the decline in the population between 2020 and 2022, New York City's population gains in the 2010s have not been erased. The July 1, 2022 population estimate is higher than the 2010 Census enumeration for four of the five boroughs, with the exception of the Bronx. The short-term decline in New York City's population is likely an anomaly in a longer trajectory of population growth, and attenuated population losses between 2021 and 2022 suggest an approaching inflection point with a return to population growth. It is also important to keep in mind that population estimates are subject to revision, and the estimates for 2021 and 2022 may be revised upward in future vintages.

Components of Population Change, 2020 to 2022

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 a summation of two flows: migration of persons coming in from and leaving for other counties in the 50 states (**net domestic migration**) and the balance of people coming in from and leaving for areas beyond the 50 states (**net international migration**). The net domestic migration rate is derived using income tax returns from the Internal Revenue Service and Medicare enrollment data, as well as data from the Social Security Administration. The methods used by the Population Estimates Program are discussed in more detail below.

Since the 1940s, more people have moved out of New York City than have moved in. New York City's population growth is a result of net domestic migration losses offset by natural increase and net international inflows. The city's negative net migration figure also masks the remarkable volume of inflows and outflows each year, typically measuring in the hundreds of thousands. This "churn" has long characterized the city.

The most recent estimates from the U.S. Census Bureau indicate the following for the July 2021 to July 2022 period:

- Positive natural increase — The surplus of births over deaths added 32,058 persons to New York City's population between July 2021 and July 2022.
- Net out-migration — In New York City's customary pattern of migration, the city experienced losses through migration during the 2021 to 2022 period. The population decrease due to net migration totaled 161,724, the result of net domestic losses (-216,031) offset by net international gains (54,307).
- Variation in migration flows by borough — All five boroughs experienced positive net international migration. Manhattan experienced a small net domestic inflow, while Brooklyn, Queens, the Bronx, and Staten Island all experienced net domestic outflows.

Table 2. Estimates of the Components of Population Change
New York City and Boroughs, July 1, 2021 to July 1, 2022 and July 1, 2020 to July 1, 2021, and April 2020 to July 2022

		Total Population Change	Natural Increase			Net Migration		
			Total	Births	Deaths	Total	Net Domestic Migration	Net International Migration
July 2021 to July 2022	**New York City**	**-123,104**	**32,058**	**97,939**	**65,881**	**-161,724**	**-216,031**	**54,307**
	Bronx	-41,143	5,619	18,102	12,483	-49,283	-60,368	11,085
	Brooklyn	-46,970	15,308	34,912	19,604	-63,801	-77,746	13,945
	Manhattan	17,472	3,292	14,918	11,626	13,855	2,908	10,947
	Queens	-50,112	7,076	24,973	17,897	-59,444	-76,710	17,266
	Staten Island	-2,351	763	5,034	4,271	-3,051	-4,115	1,064

		Total Population Change	Natural Increase			Net Migration		
			Total	Births	Deaths	Total	Net Domestic Migration	Net International Migration
July 2020 to July 2021	**New York City**	**-281,646**	**28,511**	**95,037**	**66,526**	**-293,361**	**-313,358**	**19,997**
	Bronx	-40,036	4,923	17,555	12,632	-42,722	-46,890	4,168
	Brooklyn	-81,558	14,068	33,859	19,791	-90,759	-95,837	5,078
	Manhattan	-98,505	2,790	14,508	11,718	-94,588	-98,566	3,978
	Queens	-60,445	6,143	24,233	18,090	-63,368	-69,756	6,388
	Staten Island	-1,102	587	4,882	4,295	-1,924	-2,309	385

		Total Population Change	Natural Increase			Net Migration		
			Total	Births	Deaths	Total	Net Domestic Migration	Net International Migration
April 2020 to July 2022	**New York City**	**-468,293**	**48,464**	**217,278**	**168,814**	**-502,601**	**-577,886**	**75,285**
	Bronx	-92,708	7,860	40,112	32,252	-100,160	-115,707	15,547
	Brooklyn	-145,558	26,693	77,186	50,493	-168,175	-187,453	19,278
	Manhattan	-97,978	4,398	33,291	28,893	-94,209	-109,327	15,118
	Queens	-127,435	8,774	55,466	46,692	-134,470	-158,356	23,886
	Staten Island	-4,614	739	11,223	10,484	-5,587	-7,043	1,456

Note: Population change was calculated using the 2020 Census, July 1, 2020, 2021 and 2022 population estimates. 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: U.S. Census Bureau, Population Estimates Program (Vintage 2022)

Declines in the city's population from 2020 to 2022 are closely related to pandemic-influenced patterns, and each of the four components of change are showing signs of reversing course.

- New York City typically has negative net domestic migration. Domestic outflows from New York City were exaggerated during the pandemic,[1] as many more chose to move to suburbs or exurbs, a pandemic-era phenomenon occurring in urban areas across the country. Net domestic outflows have substantially attenuated from about 313,000 in 2020 to 2021 to about 216,000 in 2021 to 2022. Manhattan experienced net domestic inflows between 2021 and 2022, rebounding from what was the largest net domestic outflow among the boroughs between 2020 and 2021.
- Immigration to New York City, a destination for many international migrants, slowed as a result of pandemic shutdowns and federal policies restricting international movement. During the pandemic, international migration was at a multi-decade low, while national border crossings were severely restricted and many consulates were closed.[2] Net migration nearly tripled from about 20,000 between 2020 and 2021 to about 54,000 between 2021 and 2022.
- The number of births in New York City has been declining in recent years, estimated at about 121,000 from July 2010 to July 2011 and about 107,000 from July 2018 to July 2019. Births dropped to about 95,000 for the year leading up to July 2021, but experienced a modest rebound to about 98,000 in the year leading up to July 2022. The decline in births immediately after the onset in the pandemic, followed by a modest rebound mirrors national trends. Total births in the United States were estimated at 3.77 million in the period from July 2018 to July 2019, and 3.75 million

[1] New York City Office of the Comptroller. November 15, 2021. "The Pandemic's Impact on NYC Migration Patterns." Report, Available at https://comptroller.nyc.gov/reports/the-pandemics-impact-on-nyc-migration-patterns/

[2] Schachter, Jason, Pete Borsella, and Anthony Knapp. December 21, 2021. "Net International Migration at Lowest Levels in Decades: New Population Estimates Show COVID-19 Pandemic Significantly Disrupted Migration Across Borders." U.S. Census Bureau, America Counts: Stories Behind the Numbers. Available at https://www.census.gov/library/stories/2021/12/net-international-migration-at-lowest-levels-in-decades.html

from July 2019 to July 2020, but dropped to 3.58 million in the year leading up to July 2021, ticking up to 3.69 million in the year leading up to July 2022.[3]

- The number of deaths has been on an upward trend in recent years in New York City, as the population ages. Estimated deaths increased from 52,303 between 2010 and 2011 to 59,387 between 2018 and 2019. The pandemic, of course, increased the number of deaths; the New York City Department of Health and Mental Hygiene (DOHMH) indicates about 10,000 deaths due to Covid-19 alone during the year from July 1, 2020 through June 30, 2021, and 7,000 deaths from July 1, 2021 through June 30, 2022.[4] Trends in Covid-19 deaths are reflected in overall deaths: the number of deaths was estimated at about 67,000 in the year to July 2021, abating somewhat to about 66,000 in the year to July 2022.

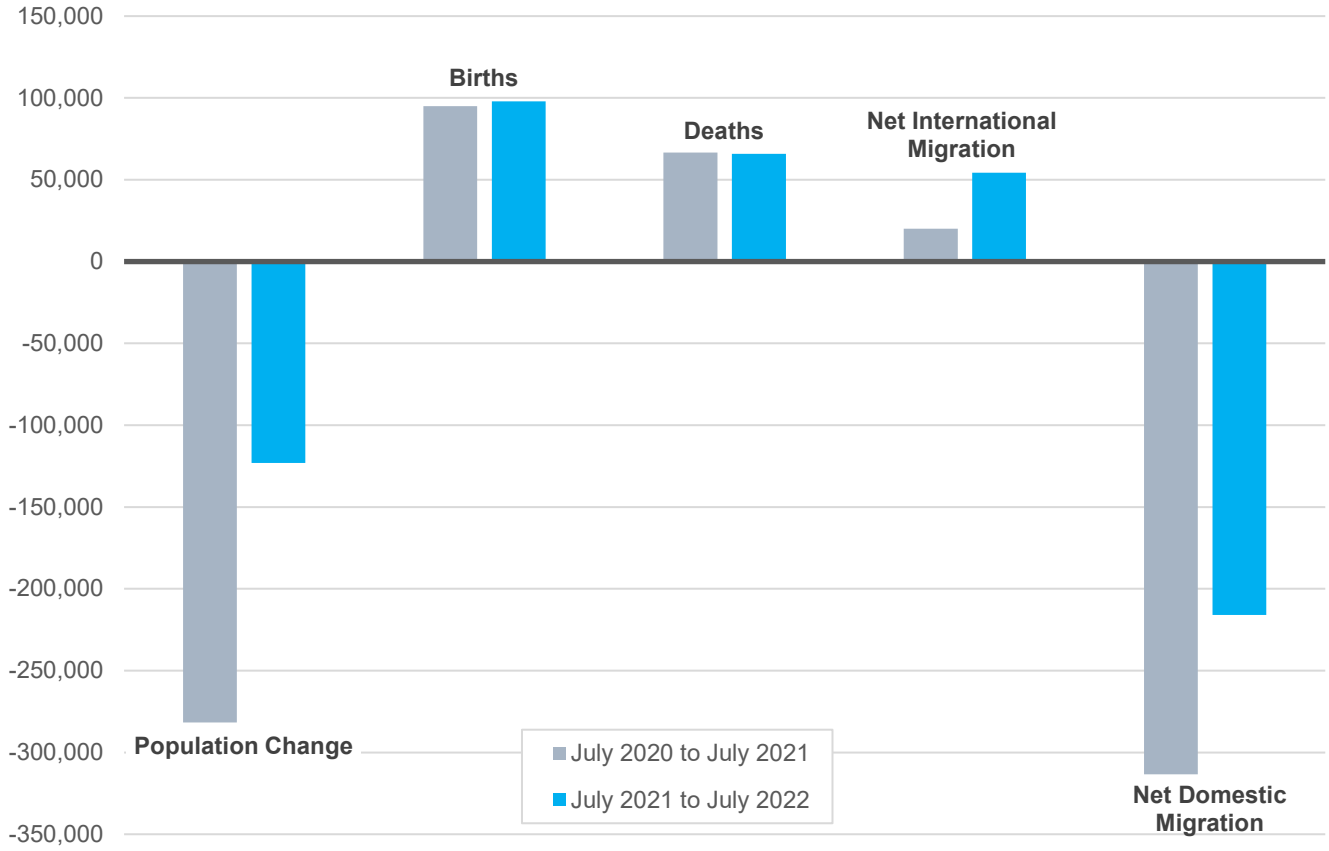
Figure 2 below shows estimated annual births, deaths, net domestic and net international migration for the New York City for 2020 to 2021 and 2021 to 2022 from the Population Estimates Program. The most dramatic changes are to net migration, with international migration sharply increasing and net domestic losses substantially attenuating. Births increased and deaths decreased more modestly. Taken together, the components indicate that the short-term shock to population patterns due to the pandemic are in the process of reverting back to pre-pandemic trends of population growth through natural increase and net international inflows offsetting net domestic losses.

---

[3] U.S. Census Bureau, Population Estimates Program Vintage 2020 and Vintage 2022 Population Estimates, Available at https://www.census.gov/programs-surveys/popest/technical-documentation/research/evaluation-estimates/2020-evaluation-estimates/2010s-counties-total.html and https://www.census.gov/data/tables/time-series/demo/popest/2020s-national-total.html

[4] New York City Department of Health and Mental Hygiene, NYC Coronavirus Disease 2019 (COVID-19) Data, Available at https://github.com/nychealth/coronavirus-data/blob/master/trends/data-by-day.csv, Retrieved March 28, 2023

Figure 2. Components of Population Change
New York City, 2020 to 2021 and 2021 to 2022



Source: U.S. Census Bureau, Population Estimates (Vintage 2022)

Comparing the Census Bureau Population Estimates to Administrative Indicators

The Department of City Planning regularly tracks various administrative data sources as indicators of recent population trends – those beyond the most recent Census Bureau population estimate. Administrative indicators of births, deaths, net international migration, and net domestic migration have suggested a rebound since their pandemic nadirs. The Census Bureau's Vintage 2022 population estimates also indicate a rebound from or mitigation of shocks to population processes due to the pandemic.

- While data from the Centers for Disease Control indicate that births in New York City dipped in the second half of 2020 and the first half of 2021, there was a rebound in the number of births by mid-2021.[5] The Vintage 2022 population estimates reflect this pattern, with an uptick in births between July 2021 and July 2022, compared to the year prior.
- Data from the NYC Department of Health and Mental Hygiene indicate that the number of deaths due to Covid-19 were largest at the start of the pandemic, with nearly 21,000 deaths in the three-month period between April 2020 and July 2020. In the following 12 months, there were approximately 10,000 deaths, and in the year to July 2022 there were around 7,000.[6] The Census Bureau's estimates reflect this reduction in deaths as well.
- International immigration to the United States dropped precipitously at the start of the pandemic, but recovered to pre-pandemic levels by mid-2021.[7] New York City is likely to have mirrored this national trend. The large increase in immigration from July 2021 to July 2022 compared to July 2020 to July 2021 is captured in the Census Bureau's estimates.
- While there were temporary large outflows from New York City, particularly early on in the pandemic, USPS data on changes-of-address suggest that New York City migration flows returned to their pre-pandemic patterns of more moderate losses through migration by mid-2021.[8] While the Census Bureau's estimates do reflect attenuated net domestic outflows, the estimated volume of migration losses is still elevated compared to annual migration patterns of earlier decades. It is possible that the Census Bureau's estimates overstate net domestic losses.

Population estimation is inherently uncertain, including for the Census Bureau. This uncertainty is reflected in the Census Bureau's annual revisions to its estimates, despite robust methods and access to

---

[5] Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, CDC WONDER Online Database. Available at http://wonder.cdc.gov/natality-expanded-current.html

[6] NYC Department of Health and Mental Hygiene, data available at https://www1.nyc.gov/site/doh/covid/covid-19-data-totals.page

[7] U.S. Department of Homeland Security, data available at https://www.dhs.gov/immigration-statistics

[8] New York City Office of the Comptroller. November 15, 2021. "The Pandemic's Impact on NYC Migration Patterns." Report, Available at https://comptroller.nyc.gov/reports/the-pandemics-impact-on-nyc-migration-patterns/

the highest quality data sources. The Census Bureau's estimates already indicate a rebound in or mitigation of each of the components of population change in the most recent year. It is possible that this rebound is more substantial than indicated in the current estimates, and future vintages might show further attenuation of net domestic losses, and consequently higher population estimates, for 2021 and 2022.

The most recent time point in the Vintage 2022 population estimates is July 1, 2022. We anticipate that New York City's population processes have continued to rebound from short-term pandemic-related disruptions since the middle of 2022. The average number of deaths per day due to Covid-19 in New York City has declined substantially from 20 over the period from July 2021 to July 2022, to seven in the first two weeks of March 2023.[9] Likely reflecting domestic migration patterns, USPS changes-of-address continue to show monthly net changes-of-address largely in line with 2018 and 2019 volumes, which suggests that net domestic outflows may be close to their more moderate pre-pandemic volumes.[10] Moreover, there are 120,000 permitted housing units slated for construction as of June 2022, an excellent indicator of near-term population growth. Taken together, administrative indicators suggest that pandemic-related population decline in New York City is a short-term phenomenon in a longer-term trajectory of population growth.

---

[9] New York City Department of Health and Mental Hygiene, NYC Coronavirus Disease 2019 (COVID-19) Data, Available at https://github.com/nychealth/coronavirus-data/blob/master/trends/data-by-day.csv, Retrieved March 28, 2023. Note: Average calculated by DCP using both confirmed and probable deaths.

[10] USPS, Change of Address Statistics available at: https://about.usps.com/who/legal/foia/library.htm; NYC Department of City Planning, Population Division

U.S. CENSUS BUREAU POPULATION ESTIMATES METHODOLOGY

The U.S. Census Bureau's Population Estimates Program (PEP) produces annual estimates of the population of the nation, states, counties, as well as cities and other places. Starting with a population base, PEP estimates the population using components of change, i.e. births, deaths, and migration.

Typically, the latest decennial census is used to produce the estimates base, however the Census Bureau needed to make use of additional data sources to produce the Vintage 2022 estimates base. While basic demographics are available from the 2020 Census, some key detailed data are not yet available; these data are required for the estimation process, for example to create linkages with administrative data sets used for births and domestic migration. To address these issues, the PEP has adopted a **blended base** for its Vintage 2022 estimates. The blended base draws information from three sources: the 2020 Census (Census Edited File), the 2020 Demographic Analysis (DA) Estimates, and the Vintage 2020 Population Estimates. The 2020 Census Edited File is infused with differentially private noise at the subcounty level, then summed to county, state, and national population totals. The age and sex distributions from the DA and the race and Hispanic origin distributions from the Vintage 2020 estimates for April 1, 2020 are applied to the national population total to produce national estimates. Finally, age, sex, race, and Hispanic origin distributions from the Vintage 2020 estimates are used to estimate state- and county-level populations by characteristics.

For each county in the U.S., the Census Bureau subtracts the annual number of resident deaths from the annual number of resident births to derive annual growth due to **natural increase**.[11] 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, regardless where the death occurred. Data are from the National Center for Health Statistics (NCHS), derived from birth and death certificates, as well as from the

[11] Data on births and deaths are generally considered to be the most reliable part of the components of change analysis.

Federal-State Cooperative for Population Estimates. Data on births and deaths are made available to the Census Bureau with a two-year delay. NCHS also provided provisional data on births (through March 2022) and deaths (through June 2022) at the state level. Data are distributed down to the county level using the last year of final data (2020) and reconciled with the FSCPE data on county-level vital events.

Net domestic migration represents the net exchange between one county and all other counties in the 50 states and the District of Columbia. This component is estimated for three age groups (0-17, 18-64, and 65 years of age and older).

For ages 0 to 64, the U.S. Census Bureau uses data on filers, spouses, and dependents from federal income tax returns supplied by the Internal Revenue Service (IRS). In-migrants to and out-migrants from counties, as well as non-migrants, are identified by comparing the addresses of income tax filers from one year to the next to determine residence at two points in time. For example, in-migrants to a given county in 2021 are defined as those with an address in the county in 2021, but outside the county in 2020; out-migrants as those with an address in the county in 2020, but outside the county in 2021; and non-migrants as individuals who filed tax returns in the same county at both points in time. Since not every U.S. resident files a tax return or is claimed as an exemption, these data cannot be used to directly estimate the number of county-to-county migrants. Instead, a net domestic migration rate is calculated by taking the difference between the number of in- and out-migrants (net migrants) and dividing it by the sum of the non-migrants and out-migrants, calculated separately for those age 0-17 and those age 18-64, and applied to the population within the applicable age range.

Since many retired persons do not file tax returns, to determine domestic migration for the population 65 years of age and older 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. The NUMIDENT and Demographic Characteristics File are used to allocate age, sex, race, and Hispanic origin.

Net international migration is the balance of migration flows to and from foreign countries and Puerto Rico. These flows are sub-divided into five sub-components: non-U.S.-born immigration, non-U.S.-born

emigration, net migration between the U.S. and Puerto Rico, net migration of the U.S.-born population to and from the United States, and net movement of the Armed Forces population to and from the United States.

To account for Covid-19, non-U.S.-born immigration, non-U.S-born emigration, and U.S.-born net migration totals were adjusted at the national level based on trends in visa issuances, new student enrollments, refugee admissions, and humanitarian migration cases. Migration totals for July 1, 2019 to June 30, 2020 were set to 76% of 2019 levels. Totals for July 1, 2020 to June 30, 2021 were set to 40% of 2019 levels. The total for July 1, 2021 to June 30, 2022 non-U.S.-born immigration was set to 103% of 2019 level and all other components of international migration were computed as normal. Estimation procedures for the five sub-components of net international migration are discussed below.

Net international migration sub-components are estimated at the national level, and then distributed down to states and counties using American Community Survey 1-year and 5-year data, except for estimating the movement of the Armed Forces population, which is estimated using a combination of data from the Defense Manpower Data Center and pooled American Community Survey 1-year data.

The Census Bureau relies on the ACS Residence-One-Year-Ago (ROYA) question to estimate non-U.S.-born immigration. Non-U.S.-born immigration is estimated separately for Mexico and All Other Countries. Net migration between the United States and Puerto Rico is also estimated using the ROYA question in the ACS and the Puerto Rico Community Survey, as well as Bureau of Transportation Statistics Airline Passenger Traffic data. Emigration of the non-U.S.-born is estimated using the residual method – by comparing change in the foreign-population that would be expected based on mortality and recent immigration to change in the foreign-born population estimated using ACS 1-year files. The difference between the expected non-U.S.-born population and the estimated change based on ACS data serves as the basis for estimating emigration rates. Emigration rates are estimated separately for several groups based on country or region of origin and number of years since entry into the United States.

Net emigration of the U.S.-born is estimated by the residual method on population register and census data from approximately 100 countries, comparing U.S.-born or U.S. citizen populations at two points in time after accounting for deaths. Country totals are aggregated to a global total, which is periodically updated as additional data become available.

Originally posted: March 30, 2023

Revised: March 31, 2023