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# Understanding the New 2021 Population Estimates

## Pandemic caused temporary reduction in population growth, which was already slowing.

By Steven A. Camarota and Karen Zeigler

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### Introduction

Population growth in the United States has been slowing for some time. The new population estimates released by the Census Bureau in December 2021 show the U.S. population was 331.9 million on July 1, 2021, an increase of 393,000 over 2020. The headline on the bureau website that accompanies the new estimates, described it as the “slowest growth on record”.<sup>1</sup> This analysis provides an overview of the population estimates with a focus on the slowdown in growth over the last decade, and since Covid-19 hit. The estimates themselves are important not simply because they provide insight into the size and composition of the U.S. population, but because they are used for planning purposes by governments and businesses. They are also used to allocate federal funds and to weight government and non-government surveys, among other things.

While the slowing rate of population growth has received a lot of attention in the media, there has been relatively little discussion of how the bureau’s estimates are generated or the special challenges associated with creating population estimates given the social disruptions, including in data collection, during the on-going Covid-19 pandemic. While population growth is unlikely to return to the level it was a decade ago, we do believe growth will likely rebound to something like one million in the year that began July 1, 2021 — more than double what it was in the prior year.

In addition to a generalized discussion of the estimates, this analysis also explores some possible issues with the way the bureau measures net international migration (NIM) — the difference between the number of people entering the country vs. the number leaving — both during the pandemic and more generally. Migration is a key component of population change. Any underestimation of net migration in a given year can only have a small impact on the estimates relative to the overall size of the U.S. population. However, if the Census Bureau is underestimating NIM each year, then over time it could have a larger cumulative effect on the estimates.

We think it is likely that the bureau did underestimate migration in the last decade and this is at least part of the reason their original estimate of the total U.S. population for 2020 was two million lower than their estimate once they got the results of the 2020 census. That said, measuring migration is always very difficult and the bureau has good reasons for measuring it as they do. The population estimates aside, measuring migration is important partly because immigration is something that can be shaped by policy. Having an accurate measure of it is necessary to formulate sound public policy.

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# Population Estimates

**Overview of the Estimates.** The Census Bureau’s annual population estimates measure the population from mid-year (July 1) annually, so growth is measured from the middle of one year to the middle of the next. They are based on the census taken every 10 years, which is then carried forward in the intercensal years based primarily on administrative data (e.g. birth and death records), along with the bureau’s American Community Survey (ACS), as well as other information. The estimates are adjusted each year as new administrative and survey data becomes available, and are then revised to reflect the decennial census when it is taken every 10 years, creating a new baseline.

The “vintage” year of a population estimate refers to the final year of the time series. The Vintage 2020 estimates “were based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results.”<sup>2</sup> The results shown in Table 1 show the Vintage 2020 estimates from 2010 to 2019. For the total population in 2020, we report both the Vintage 2020, the last year that used 2010 estimates as a starting point, and the Vintage 2021 population, which is the first to reflect the results of the 2020 census.<sup>3</sup> As the table shows, the new Vintage 2021 estimate is 331.5 million for 2020 — two million larger than the 329.5 million estimate.<sup>4</sup> The news headlines have been focused on the relatively modest level of growth (393,000), from 2020 to 2021 based on the Vintage 2021 estimates. Almost no public attention has been paid to how much the bureau revised upward the 2020 estimates after the census was conducted.

**Table 1. Population Growth and Components of Change 2010 to 2021**  
(Based on U.S. Census Bureau’s Vintage 2020 and Vintage 2021 Population Estimates)

Years (July 1 to June 30)	Population Growth	Natural Increase	Components of Change			Total Population in Ending Year
			Births	Deaths	Net International Migration	
2010-2011	2,256,338	1,461,043	3,973,485	2,512,442	795,295	311,583,481
2011-2012	2,294,181	1,435,445	3,936,976	2,501,531	858,736	313,877,662
2012-2013	2,182,285	1,332,557	3,940,576	2,608,019	849,728	316,059,947
2013-2014	2,326,382	1,380,747	3,963,195	2,582,448	945,635	318,386,329
2014-2015	2,352,665	1,292,550	3,992,376	2,699,826	1,060,115	320,738,994
2015-2016	2,332,761	1,267,744	3,970,959	2,703,215	1,065,017	323,071,755
2016-2017	2,050,373	1,101,981	3,890,144	2,788,163	948,392	325,122,128
2017-2018	1,716,071	996,200	3,835,477	2,839,277	719,871	326,838,199
2018-2019	1,491,754	923,115	3,770,397	2,847,282	568,639	328,329,953
2019-2020	1,154,170	677,141	3,748,000	3,070,859	477,029	V2021: 331,501,080 V2020: 329,484,123
2020-2021	392,665	148,043	3,581,986	3,433,943	244,622	331,893,745

**Source:** Population totals and components of change for 2010 through 2019 are from the Vintage 2020 estimates and those for 2020 through 2021 are from the Vintage 2021 estimates. For 2020, population totals from both the Vintage 2020 and Vintage 2021 estimates are shown. In 2010, the base year for the Vintage 2020 estimates, the total population was 309,327,143.

The Census Bureau Vintage 2021 population estimates and components of change can be found in the file: NST-EST2021-alldata.csv, [here](#). The Vintage 2020 population estimates and components of change can be found in the file: NST-EST2020-alldata, [here](#).

**Components of Change.** In addition to showing the total population at the bottom, Table 1 also reports what is referred to as the “components of change” that are used to estimate the nation’s population — births, deaths, and net international migration. Births and deaths in the United States are based on administrative records. If we take births and subtract deaths, we get what is known as “natural increase”. That is the increase in the population from the existing population of U.S. residents each year, excluding those who leave or arrive from abroad. As already mentioned, the third component of population change is net international migration, or NIM. This is the difference in the number of native- and foreign-born people arriving and leaving the country each year.

Because the release of administrative data used in the estimates often lags the current year for which the estimates are made, the bureau has to make short-term projections based on trends in prior years. While the sudden change in births and deaths caused by Covid-19 created significant challenges for the bureau, the Census Bureau did try to account for them in their estimates.<sup>5</sup> Even without the pandemic and the problems it created for data collection, migration is the most difficult component of change to estimate, particularly emigration and illegal immigration.

## The Impact of Covid-19

**Impact of Covid-19 on Mortality.** If we want to understand the slowdown in population growth, particularly in the last two years, we need to look at how the components of change differ from year to year. Covid aside, the number of deaths in the United States is slowly increasing due to population aging, a larger population from year to year, and some other factors such as the opioid and obesity crises. However, Table 1 shows a significant jump in the number of deaths estimated by the Census Bureau: up nearly 224,000 between 2019 and 2020. There likely should have been something like 2.88 million deaths from 2019 to 2020, so the Covid pandemic seems to have increased deaths by roughly 187,000 above what we might have expected.

The following year the bureau estimates that deaths jumped even more dramatically as the impact of Covid was felt for the entire 12 months from mid-2020 to mid-2021. There were 3.43 million deaths from 2020 to 2021, according to the population estimates. This is about 520,000 more than the roughly 2.91 million deaths we would have expected. It should be noted here that deaths refer only to total mortality during this time period. The increase in deaths caused directly by Covid-19 vs. the increase in deaths caused indirectly by the pandemic, (e.g. suicide, overdose, murder, and delayed medical care) are not considered separately. Whether direct or indirect, this tragic increase in deaths associated with the pandemic is a big part of the reason the U.S. population grew so much less in the last year than in prior years.

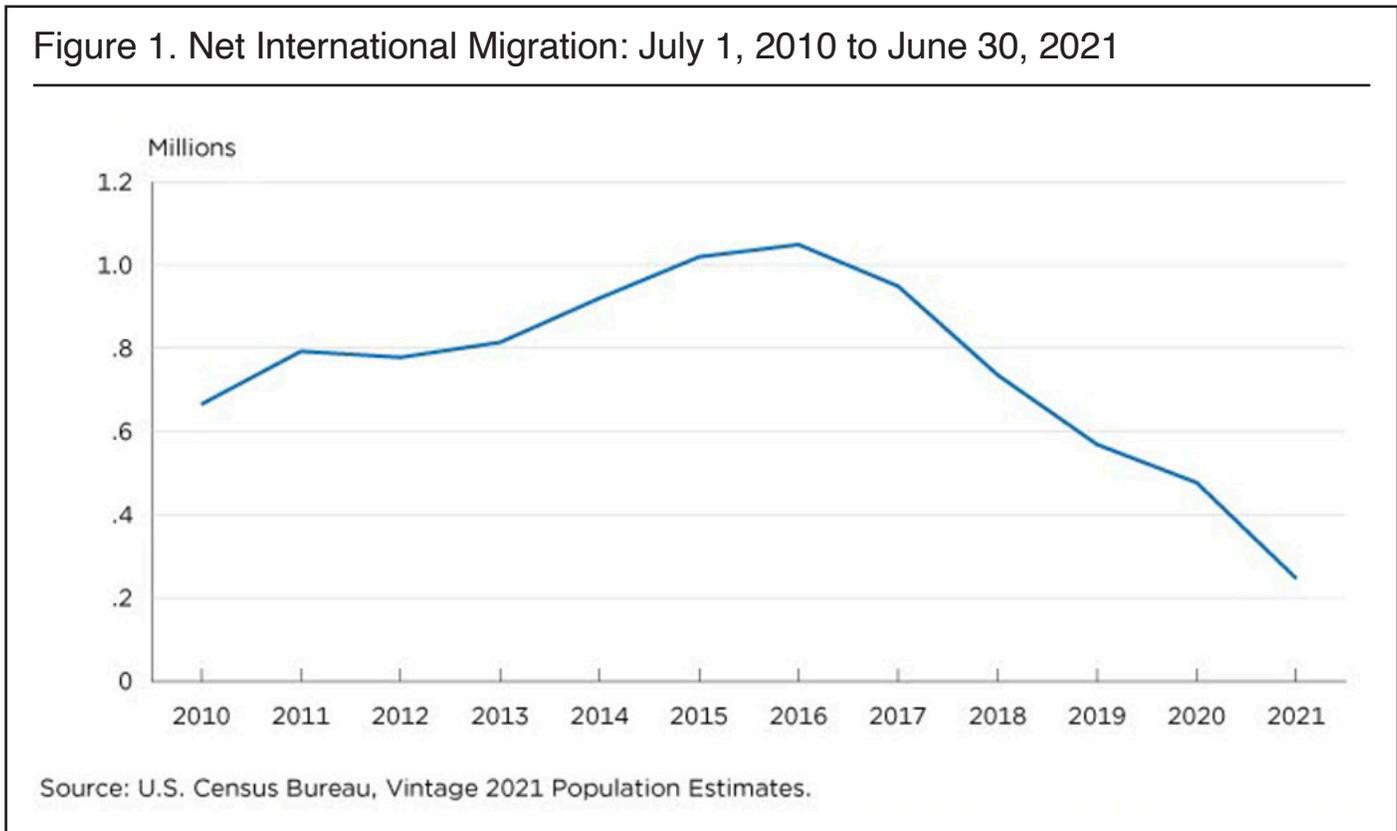
**The Impact of Covid-19 on Births.** In terms of the number of births, the Census Bureau estimates 3.748 million children were born between mid-2019 and mid-2020 and this was more or less what we would expect. Covid had relatively little effect on births in this time period as all the children born in the second half of 2019 or the first half of 2020 were conceived before March 2020, when Covid-19 became an issue. Putting aside Covid, from 2014 to 2019, the number of births was declining even though the economy was expanding. In fact, if we go back further, we find that the number of births never recovered from the Great Recession. The Center for Immigration Studies has published several reports on the dramatic decline in fertility among both the U.S.-born and the foreign-born since 2007.<sup>6</sup> In this report, we use the terms “immigrant” and “foreign-born” interchangeably.<sup>7</sup>

Focusing on births from mid-2020 to mid-2021, given prior trends, it seems likely there would have been about 3.72 million births instead of the 3.58 million births the Census Bureau estimates during this time. This suggests that the general uncertainty and economic dislocations caused by Covid-19 reduced childbearing by roughly 140,000. Looking at births and deaths together, it seems fair to say that there were roughly 520,000 more deaths and 140,000 fewer births between 2020 and 2021 because of the pandemic. So had it not been for Covid-19, natural increase (births minus deaths) would have been something like 810,000, or 660,000 more than the 148,000 that the Census Bureau estimates.<sup>8</sup>

**Impact of Covid-19 on Net International Migration.** A rise in deaths and a decline in births are not the only reasons population growth has slowed in the last two years. According to the headline of the bureau summary addressing net international migration (NIM), the “Pandemic Significantly Disrupted Migration Across Borders.”<sup>9</sup> Every year new immigrants arrive while others leave. Moreover, native-born people leave the country each year to live abroad, permanently or temporarily (including military personnel), while others return home. The Census Bureau attempts to measure all of this and incorporate

it into their population estimates. Mathematically, net international migration must equal population growth minus births plus deaths.

In addition to the summary page dealing directly with NIM for 2020 to 2021, there is a methodology page that has methodologies and “Release Notes” for both the Vintage 2020 and Vintage 2021 estimates which contain more detailed information about how the estimates are constructed.<sup>10</sup> Figure 1 comes directly from the bureau’s summary page and indicates that after peaking in 2016, net migration fell dramatically. The same information is also shown in Table 1 and comes from the spreadsheets the bureau provides for the Vintage 2020 and Vintage 2021 population estimates.<sup>11</sup> As recently as 2015 to 2016, net migration added over one million people to the U.S. population, but between 2018 and 2019 — before Covid-19 hit — it had already fallen to 569,000, as Table 1 and Figure 1 show. According to the Census Bureau, net migration fell further to 477,000 between 2019 and 2020 and then to 245,000 between 2020 and 2021.



In its discussion of NIM for the 2021 estimates, the bureau states that travel restrictions and other measures taken to mitigate the spread of Covid-19 that began in early 2020 significantly impacted migration. Given how much the estimates show net migration had fallen before Covid, it is not clear what share of the decline in the last two years was due to the pandemic and what was a continuation of the pre-Covid decline, assuming that trend would have continued had it not been for the pandemic and a change in administration.<sup>12</sup>

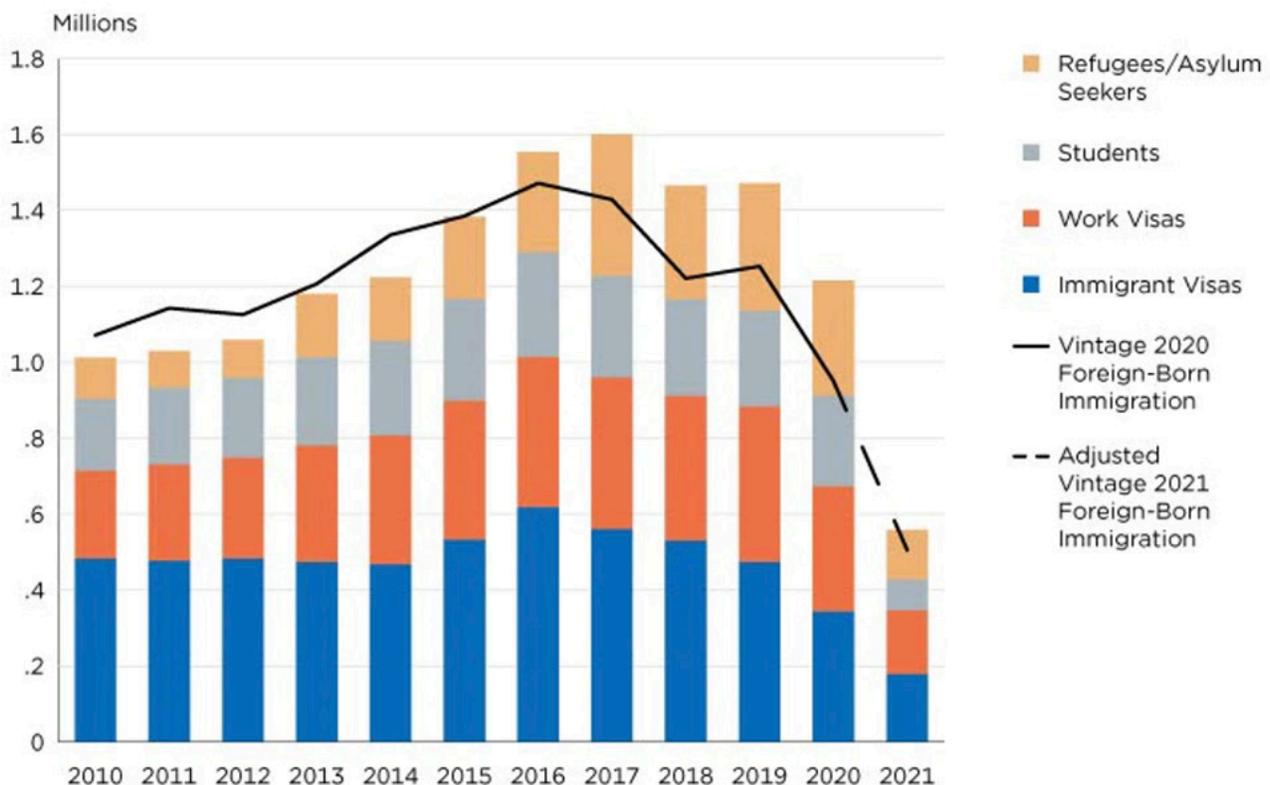
# Questions About Net International Migration

**NIM During the Pandemic.** We have concerns about how the Census Bureau estimated net international migration during Covid-19. Their summary page dealing with NIM states that the disruptions associated with Covid-19 “required an adjustment to our NIM estimates”.<sup>13</sup> Both the Vintage 2020 and 2021 methodology statements say that the American Community Survey (ACS), “residence one year ago” (ROYA) question would normally be used to estimate migration. But due to Covid-19 disruptions, the results from the 2020 ACS do not “satisfy statistical quality standards”,<sup>14</sup> As a result, the bureau states in its Release Note for the Vintage 2021 estimates, it was not possible to use the 2020 ACS.<sup>15</sup>

To account for trends from July 1, 2020, to June 30, 2021, the summary page says that the bureau used administrative data from the DOJ, DHS, Bureau of Consular Affairs, Refugee Processing Center, and Institute for International Education as it “more accurately reflected migration patterns during the pandemic period”. This resulted in “the lowest NIM totals in decades.”<sup>16</sup> The summary page also observes that, “Given immigration trends seen in 2019-2021 administrative data and the strong historical relationship between these data and foreign-born immigration ACS estimates, we reduced our 2019 ACS-based estimate by the same degree.” They go on to state that, “The adjustment factor was created by calculating the percent difference between administrative sources measuring immigration in estimates years 2019 and 2021.”

Figure 2 is taken directly from the summary page and shows the various components of the administrative immigration data the bureau used. In sum, the Census Bureau assumed that the decline shown in the administrative data reflected a decline in NIM. Our key concern with this approach is that it is likely to produce estimates of immigration of the foreign-born that are too low if there is a significant increase in immigration that is uncorrelated with the administrative data, such as the current surge of illegal immigration at the southern border.

Figure 2. Foreign-Born Immigration: 2010-2021\*



\* Vintage 2021 adjusted for COVID-19 pandemic.

Sources: U.S. Census Bureau Vintage 2020 and 2021 Population Estimates, U.S. Department of Justice, the Institute of International Education, U.S. Citizenship and Immigration Services, and the U.S. State Department Bureau of Consular Affairs and Refugee Processing Center.

**The Border Surge.** There is no question that illegal immigrants are included in the decennial census and ACS and are part of the estimates.<sup>17</sup> Use of the ACS allows the bureau to estimate illegal immigration in its estimates. However, the Census Bureau does not specifically discuss illegal immigration, including the ongoing border surge, in their method statements or release notes. From January 2021 to June 2021, 313,063 individuals in family units (FMUs), as well as unaccompanied children (UACs) and accompanied minors (AM), were encountered at the border — 276,202 more than in the same period of 2020.<sup>18</sup> The overwhelming majority of these children and family members were released into the United States.<sup>19</sup> Moreover, the number of single adults encountered at the border in the first half of 2021 was several times what it was in the same period in 2020. This increase in apprehensions very likely corresponds to an increase in “got-aways” — those who successfully evade the Border Patrol and settled in the United States.<sup>20</sup> The Census Bureau’s monthly Current Population Survey also shows an increase of about one million in the total foreign-born population, which includes illegal immigrants, from July 2020 to July 2021.<sup>21</sup> All of this indicates that illegal immigration increased from mid-2020 to mid-2021, but this is not reflected in the administrative data used by the bureau to estimate migration between 2020 and 2021.

The Census Bureau is aware of this issue, and in fairness, it is not clear how they should deal with a short-term problem like this. Moreover, assuming there is not a problem with collecting the ACS in the future, at some point the current surge in illegal immigration should be incorporated into the estimates when they are updated.<sup>22</sup> But in our view it is probably premature to conclude that NIM in the year prior to July 1, 2021, was at the “Lowest Levels in Decades”, as the headline of the bureau’s summary page dealing with NIM states. Given the scale of illegal immigration in the first half of 2021, it is possible that NIM was several hundred thousand larger than the 245,000 estimated by the bureau between mid-2020 and mid-2021.

Finally, there is the issue of emigration. We know from preliminary data that the number of deportations declined dramatically in 2020 and 2021 as a result of both Covid-19 and Biden administration enforcement priorities.<sup>23</sup> There was also an increase in the overstay rate — the share of visitors who did not leave by the deadline required by their visas — in FY 2020 compared to FY 2019.<sup>24</sup> These things could be an indication of lower rates of emigration among the foreign-born, which also may not be reflected in the administrative data used by the bureau for the last year.

**Net Migration in the Last Decade.** Putting aside the current unusual situation due to Covid-19, there is still the issue of why the Census Bureau’s Vintage 2020 estimates were two million lower in 2020 than the Vintage 2021 estimates for 2020, based on the new census.<sup>25</sup> The Census Bureau has not indicated why the population estimates were so low in 2020. But since births and deaths are the most well recorded and accurate parts of population change, it seems likely that net migration over the course of the last decade was underestimated. Even if the undercount of NIM is modest each year relative to the overall size of the U.S. population, over the course of a decade it can add up. This may be what happened. Of course, another possibility was a larger undercount in the 2010 census — used as the starting population for the estimates — relative to any undercount in the 2020 census.

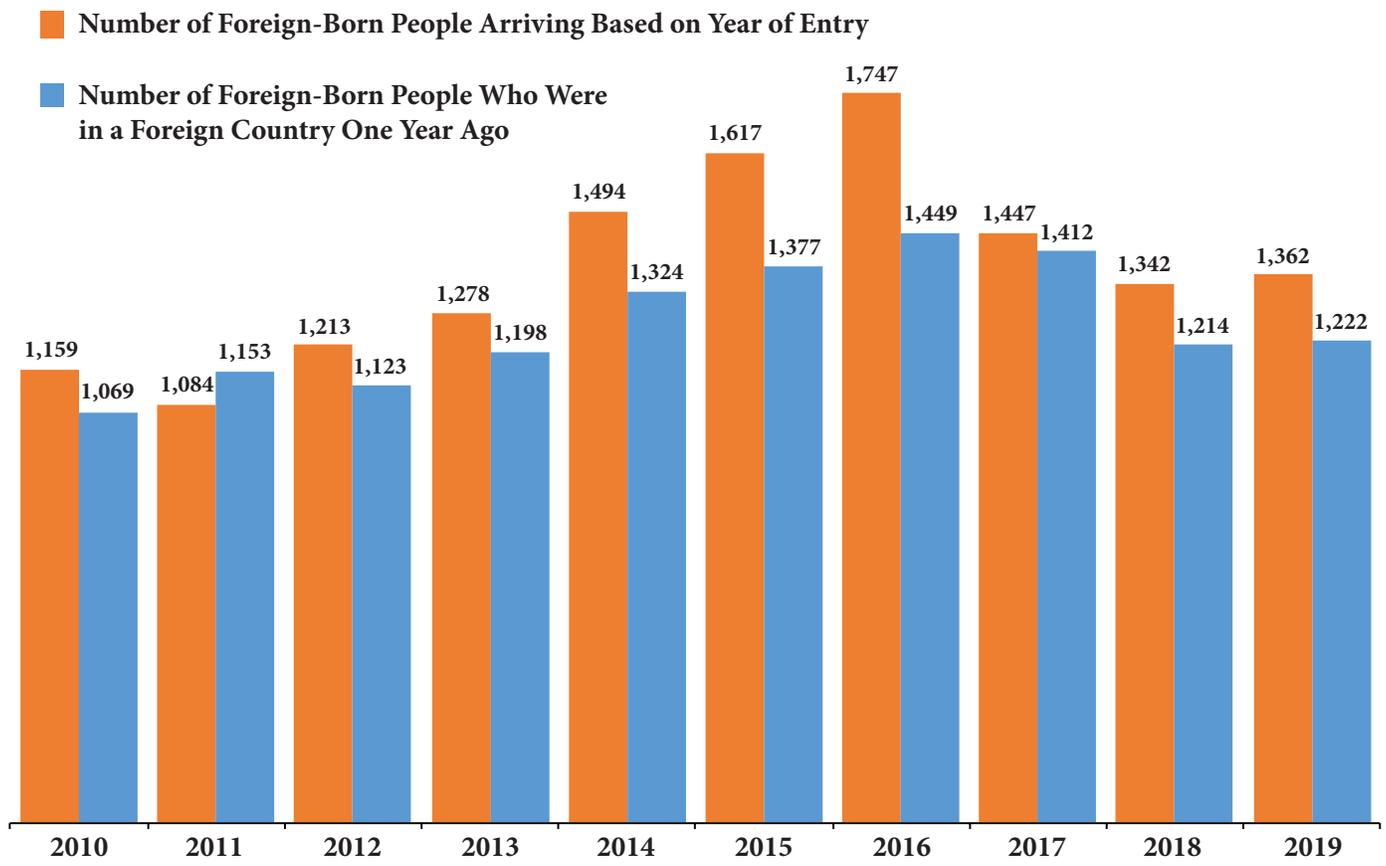
We think that one reason NIM was underestimated is related to the way the Census Bureau calculates it using the ACS. The methodology statement for 2020 states: “We use the ACS residence one year ago (ROYA) question to estimate foreign-born immigration.”<sup>26</sup> The ACS questionnaire asks, “Did this person live in this house or apartment 1 year ago?” There are boxes allowing the respondent to answer, “Yes, this house” and “No, in a different house in the United States or Puerto Rico”, They can also respond, “No, outside the United States or Puerto Rico”, and there is a blank for them to fill in the country. This information is always somewhat out of date because they have to use the prior year’s ACS to estimate current immigration. But they “revise the estimate the following vintage [year] when more current ACS data become available.”

The problem with using the ROYA question is that it may understate the number of new immigrants settling in the country each year. The bureau could use a different question in the ACS that asks, “When did this person come to live in the United States?” This is often referred to as the year of entry (YOE) question. The survey instructs respondents to provide the year they came. Thus, the ROYA question should measure immigration in the last 12 months, while the YOE measures it by calendar year. (The ACS reflects the population July 1 of each year.)

Although they do not measure the same time period, the simple comparison in Figure 3 shows that the YOE question consistently shows higher levels of new immigration than the ROYA question — 13.74 million vs. 12.54 million from 2010 to 2019. If the Census Bureau were to use the YOE question, it would result in higher levels of estimated NIM and it would have

created a higher rate of growth and larger overall population in the Vintage 2020 estimates for 2020. In our view, the Census Bureau should seriously consider using the YOE question to better capture the contribution of immigration to population growth. But no question is perfect, and the Census Bureau has good reasons for using the ROYA.<sup>27</sup>

Figure 3. Comparing Results of “Year of Entry” Question with “Residence Last Year” Question, Foreign-Born Only (in thousands)



**Source:** 2010 to 2020 public-use files of the American Community Survey (ACS). Year of entry data is based on the following year’s ACS, while residence last year is based on the same-year ACS. The “year of entry” question reported for 2019 is from the public-use ACS from 2020 and the Census Bureau believes there are significant problems with that data.

## Conclusion

The new estimates from the Census Bureau show that the U.S. population grew by nearly 400,000 people between 2020 and 2021, a good deal slower than in the recent past. These estimates are an important source of information for policymakers and inform many public policy debates. While population growth has been slowing for some time, the reason for the big slowdown after 2019 was Covid-19, which impacted all three components of population change — births, deaths, and net international migration. Using the Census Bureau's estimates of births and deaths, Covid-19 seems to have caused roughly 520,000 more deaths and 140,000 fewer births between 2020 and 2021. This means that had it not been for Covid-19, natural increase (births minus deaths) would have been something like 810,000 instead of the 148,000 that the Census Bureau reports.

As for net migration, the bureau reports it was about 245,000 between 2020 and 2021, the smallest number they have estimated in decades. However, in our view, there is uncertainty about this estimate. Disruptions and delays in data collection meant that the bureau had to rely on administrative data, which does not reflect the recent surge of illegal immigration at the border. In addition to the challenges associated with data collection during the ongoing pandemic, there is also the issue of why the Vintage 2020 population estimates for that year — which were based on the 2010 census carried forward — were off by two million people compared to the results of the 2020 census. Since births and deaths are the most well-measured parts of population change, it seems likely that the bureau underestimated migration over the last decade and this caused the discrepancy, at least in part. We think this may be related to how the Census Bureau uses the American Community Survey to measure immigration.

Natural population growth should rebound, at least to some extent, in the coming year. Deaths, while still elevated, have declined and are not likely to return to what they were at the height of the pandemic due to widespread vaccinations and better treatment options. Given the uncertainty Covid has created, births may not recover to pre-Covid levels in the coming year. But there is already some tentative evidence that the number of births is increasing.<sup>28</sup> It seems likely natural increase will be more like 500,000 in the year that began July 1, 2021, and perhaps 600,000 or maybe even 700,000 in the following year, compared to 148,000 between 2020 and 2021.

The ongoing border surge and the restarting of visa processing at American consulates also mean that foreign-born migration will be significantly higher in the coming years as well. It is very possible that the next set of estimates will show that the U.S.-population grew by 900,000 or even one million between July 1, 2021, and June 30, 2022 — more than twice the growth in the prior year. Of course, this assumes that the bureau is able to measure the significant increase in immigration that is occurring, including illegal immigration.

## End Notes

<sup>1</sup> The press release for the new estimates can be found at the Census Bureau website: [“New Vintage 2021 Population Estimates Available for the Nation, States and Puerto Rico”](#), December 2021. In terms of being the lowest growth, the current level is the lowest only in terms of percentage change. In the early years of the republic annual numerical growth was much less than 393,000 a year.

<sup>2</sup> [“Evaluation Estimates”](#), U.S. Census Bureau, October 8, 2021.

<sup>3</sup> [“National Population Totals and Components of Change: 2020-2021”](#), U.S. Census Bureau, December 21, 2021. There is another set of estimates produced by the Census Bureau referred to as the Demographic Analysis Estimates: [“National Demographic Analysis Tables: 2020”](#), U.S. Census Bureau, October 8, 2021. These are produced only in census years and are meant to help evaluate the accuracy of the decennial census. They are not based on the decennial census carried forward and instead are generated primarily from birth, death, and Medicare records, as well as the American Community Survey. These estimates produce a range of values for the U.S. population for April 1, 2020: low (330.7 million), middle (332.6 million), and high (335.5 million). Interestingly, all of them are higher than the Vintage 2020 population estimate based on the 2010 census carried forward.

<sup>4</sup> [“National Population Totals and Components of Change: 2020-2021”](#), U.S. Census Bureau, December 21, 2021.

<sup>5</sup> In terms of births and deaths, the Census Bureau tried to take into account how things changed as a result of Covid-19. Although the methodology statement observes that “the most current full-detail births and deaths data we used in Vintage 2021 were from calendar year 2019”, they do point out that they had access to “monthly provisional total numbers of births and deaths at the national level for all months of 2020” from the National Center for Health Statistics (NCHS). They recognize that birth trends changed with Covid, and they therefore “incorporated monthly total births for the nation in the first quarter of 2021 and used recent trends to project births for the second quarter of the year.” They also state that “to reflect the impact of COVID-19 on deaths, we had data for the first half of 2021 that includes recent trends and patterns of excess mortality from the pandemic.” They created these “short-projections” by using NCHS data along with data received from the Federal-State Cooperative for Population Estimates. See [“Methodology for The United States Population Estimates: Vintage 2021: Nation, States, Counties, and Puerto Rico – April 1, 2020, to July 1, 2021”](#), U.S. Census Bureau, December 2021.

<sup>6</sup> Steven A. Camarota and Karen Zeigler, [“Fertility Among Immigrants and Native-Born Americans: Difference between the foreign-born and the native-born continues to narrow”](#), Center for Immigration Studies, February 16, 2021.

<sup>7</sup> The foreign-born population includes all persons who are not U.S. citizens at birth — naturalized citizens, lawful permanent residents (green card holders), long-term temporary visitors (e.g. guestworkers and foreign students), and illegal immigrants.

<sup>8</sup> It should be noted that these comparisons are with the number of deaths and births reported in the 2020 and 2021 estimates and are not based directly on the final data for births and deaths from the National Vital Statistics System. It may also be of interest that the public-use file of the American Community Survey shows that there were 734,000 births to immigrant mothers in the United States from mid-2018 to mid-2019. We also estimate there were 322,000 deaths among immigrants in this time period. This means immigrants accounted for 412,000 or 45 percent of natural increase from 2018 to 2019. In total, net migration and births minus deaths among immigrants were equal to 66 percent of population growth 2018 to 2019 — the last full year before Covid-19.

<sup>9</sup> Jason Schachter, Pete Borsella and Anthony Knapp, [“New Population Estimates Show COVID-19 Pandemic Significantly Disrupted Migration Across Borders”](#), U.S. Census Bureau, December 21, 2021.

<sup>10</sup> [“Methodology”](#), Vintage 2020 and 2021, U.S. Census Bureau, December 20, 2021.

<sup>11</sup> The Census Bureau Vintage 2021 population estimates and components of change can be found in the file NST-EST2021-alldata, [here](#). The Vintage 2020 population estimates and components can be found in the file NST-EST2020-alldata, [here](#).

<sup>12</sup> The Census Bureau states on the summary page that the decline before Covid in NIM from 2016 to 2019 was caused by three factors: fewer foreign individuals coming, more leaving, and more migration from Puerto Ricans following Hurricane Maria. The Center for Immigration Studies has previously argued that there was a decline in net migration of immigrants after 2016 that was caused in part by Trump administration policies. The Census Bureau findings are consistent with our findings. See Steven A. Camarota and Karen Zeigler, [“Immigrant Population Growth Slows: ‘Trump Effect’ likely explains slowdown”](#), October 22, 2020.

<sup>13</sup> Jason Schachter, Pete Borsella and Anthony Knapp, [“New Population Estimates Show COVID-19 Pandemic Significantly Disrupted Migration Across Borders”](#), U.S. Census Bureau, December 21, 2021.

<sup>14</sup> Covid-related disruptions were such that the bureau decided “it would not release the standard set of 1-year products for the 2020 ACS.” In short, the ACS in 2020 was not useable for estimating NIM, among other things. See [“U.S. Census Bureau Statement on Differences Between 2020 Census and American Community Survey 1-Year Estimates”](#), Census Bureau July 29, 2021. The Census Bureau also has a detailed 58-page report on the problems with the 2020 American Community Survey. See Donna Daily, Patrick J. Cantwell, Karen Battle, and David G. Waddington, [“ACS Research and Evaluation Report Memorandum Series # Acs21-Rer-04”](#), U.S. Census Bureau, October 27, 2021.

<sup>15</sup> [“Vintage 2021 Release Notes”](#), U.S. Census Bureau, undated.

<sup>16</sup> In the Methodology section of the Vintage 2021 estimates, the Census Bureau refers to this as “auxiliary data”. It further explains that, “Trends in auxiliary data between 2019 and 2021 are used to adjust 2019 ACS data to account for the COVID-19 pandemic, and applied to our foreign-born immigration, foreign-born emigration, and net native components.” See [“Methodology for The United States Population Estimates: Vintage 2021: Nation, States, Counties, and Puerto Rico — April 1, 2020, to July 1, 2021”](#), U.S. Census Bureau, December 2021.

<sup>17</sup> The [bureau is clear](#) that illegal immigrants are included in the decennial census and are [part of the foreign-born population](#) in its surveys. The category of “asylum seekers” shown in Figure 2 includes some number of illegal immigrants, as most asylum seekers are illegally in the country, though many are not new arrivals. In response to our inquiry about the asylum seeker category, Jason Schachter, chief of the International Migration Branch at the Census Bureau in an e-mail on January 13, 2021, stated that the category includes, affirmative and defensive claims, as the bureau is not able to distinguish between recent and non-recent arrivals. For that reason, they included everyone in the asylee category. Further, he noted that the category does not include those released into the United States pending a credible fear claim that precedes a formal application for asylum. In sum, the asylum seeker category would account for a small share of illegal immigrants.

<sup>18</sup> These figures come from the Customs and Border Protection website for [“Southwest Land Border Encounters”](#).

<sup>19</sup> In his [testimony](#) in November 2021, DHS Secretary Alejandro Mayorkas stated that 375,000 of the [1.66 million illegal immigrants encountered at the border for all of FY 2021](#) were “still here”. This means they were released into the United States. This does not include the 125,000 unaccompanied alien children who were sent to the Department of Health and Human Services for placement with sponsors in the United States.

<sup>20</sup> An April 2, 2021, Washington Post story quoted anonymous Customs and Border Protection officials as saying 1,000 people per day are successfully making it past the Border Patrol, partly because agents are dealing with the huge number of families and unaccompanied children that take a long time to process. See Nick Miroff, [“Border officials say more people are sneaking past them as crossings soar and agents are overwhelmed”](#), The Washington Post, April 2, 2021.

<sup>21</sup> If we look at the CPS from the summer of 2020 (June, July, and August averaged) to the summer of 2021, to match the July control date of the population estimates, it shows that the immigrant population grew by one million. However, response rates from March 2020 through November 2021 for the survey were lower than prior to Covid-19, though rates have improved since hitting a low in June 2020. These lower rates increase the sampling error of the survey. The extent to which this problem impacted estimates of the foreign-born in the CPS is unknown. The Census Bureau collects the survey for the Bureau of Labor Statistics (BLS) as it is the nation’s primary source of information on the nation’s labor force, including the unemployment rate. See [“Impact of the coronavirus \(COVID-19\) pandemic on The Employment Situation for November 2021”](#), Bureau of Labor Statistics, undated. However, in June 2020, when the problem was most pronounced, the BLS stated that

“Although the response rate was adversely affected by pandemic-related issues, BLS was still able to obtain estimates that met our standards for accuracy and reliability.” See [“The impact of the coronavirus \(COVID-19\) pandemic on The Employment Situation for June 2020”](#), Bureau of Labor Statistics, July 2, 2020.

As already discussed, the Census Bureau states that the estimates produced from the 2020 American Community Survey did not conform to their standards. “U.S. Census Bureau Statement on Differences Between 2020 Census and American Community Survey 1-Year Estimates”, See [“Census Bureau Announces Changes for 2020 American Community Survey 1-Year Estimates”](#), U.S. Census Bureau July 29, 2021; and Donna Daily, Patrick J. Cantwell, Karen Battle, and David G. Waddington, [“ACS Research and Evaluation Report Memorandum Series # Acs21-Rer-04”](#), U.S. Census Bureau, October 27, 2021.

<sup>22</sup> In the same January 13 e-mail discussed in endnote 17, Jason Schachter of the Census Bureau agreed that they are not able to incorporate the current border surge into the Vintage 2021 estimates since the surge is not reflected in administrative data used to adjust our 2019 ACS-based NIM estimates. He added that once they are able to access more up-to-date ACS data the increase in illegal immigration should be reflected in the V2022 estimates. Moreover, he wrote that a large share of the surge occurred after July 2021, and would not be part of the estimates for the time period 2020 to 2021. All of these are reasonable points. Furthermore, because population estimates are supposed to be consistent, a sudden rise in illegal immigration, particularly during a pandemic when data collection is limited, is very hard to capture.

<sup>23</sup> Jessica M. Vaughan, [“Deportations Plummet Under Biden Enforcement Policies”](#), Center for Immigration Studies, December 6, 2021.

<sup>24</sup> [“Fiscal Year 2020 Entry/Exit Overstay Report Fiscal Year 2021 Report to Congress”](#), U.S. Customs and Border Protection, September 30, 2021.

<sup>25</sup> It should be noted that the census is taken in April, while the population estimates are for July, so the differences we referred to here are for the 2020 estimates based on Vintage 2020 vs. the Vintage 2021 estimates for that year. Both reflect the population in July 2020, though only the Vintage 2021 reflects the results of the 2020 census.

<sup>26</sup> See [“Methodology for The United States Population Estimates: Vintage 2021: Nation, States, Counties, and Puerto Rico – April 1, 2020, to July 1, 2021”](#), U.S. Census Bureau, December 2021.

<sup>27</sup> The full wording of the YOE question reads, “When did this person come to live in the United States? *If this person came to live in the United States more than once, print latest year.*” The italicized part of the question was only added to the questionnaire in recent years to help deal with some of the inherent ambiguity of the question. In a January 14 e-mail, Jason Schachter gave input from Peter Borsella, a Census Bureau statistician/demographer, and the lead author of a [paper on the two questions](#). Borsella, who also helped create the population estimates, pointed out that the bureau has done a lot of research on the differences between the ROYA and YOE questions. That research found that YOE-based estimates tend to come in higher and produce different demographic characteristics for recent arrivals. He pointed out two problems specifically with the YOE question in the Current Population Survey. First, the question is ambiguous. Follow-up YOE question responses are inconsistent with original responses. The second problem is that many responses do not match with either the first or most recent year of entry. The second concern creates data quality issues. There is also the well-known problem of “heaping,” which exists in many survey questions such as age and income. That is, respondents tend to answer with round numbers that are close but not the exact value. Finally, he pointed out that the YOE question also has higher rates of nonresponse than ROYA in the ACS. This creates higher imputation rates, which means that any estimate of migration derived from the YOE question would have another level of approximation built into it. There has also been [some discussion](#) by the bureau of combining the two questions.

<sup>28</sup> The Human Fertility Database based on provisional data by country shows some uptick in births in the United States beginning in March 2021. The 312,000 births in June 2021 are a good deal more than the 302,000 in June 2020 and 304,000 in June 2019. The number for June 2021 is similar to the 315,000 in June 2018. Additionally, preliminary state data for [Florida](#), [Arizona](#), and [California](#) after June also indicate some increase in births in 2021. See [“Short-Term Fertility Fluctuations”](#), The Human Fertility Database, December 12, 2021.