

What Primarily Contributes to U.S. Population Growth?

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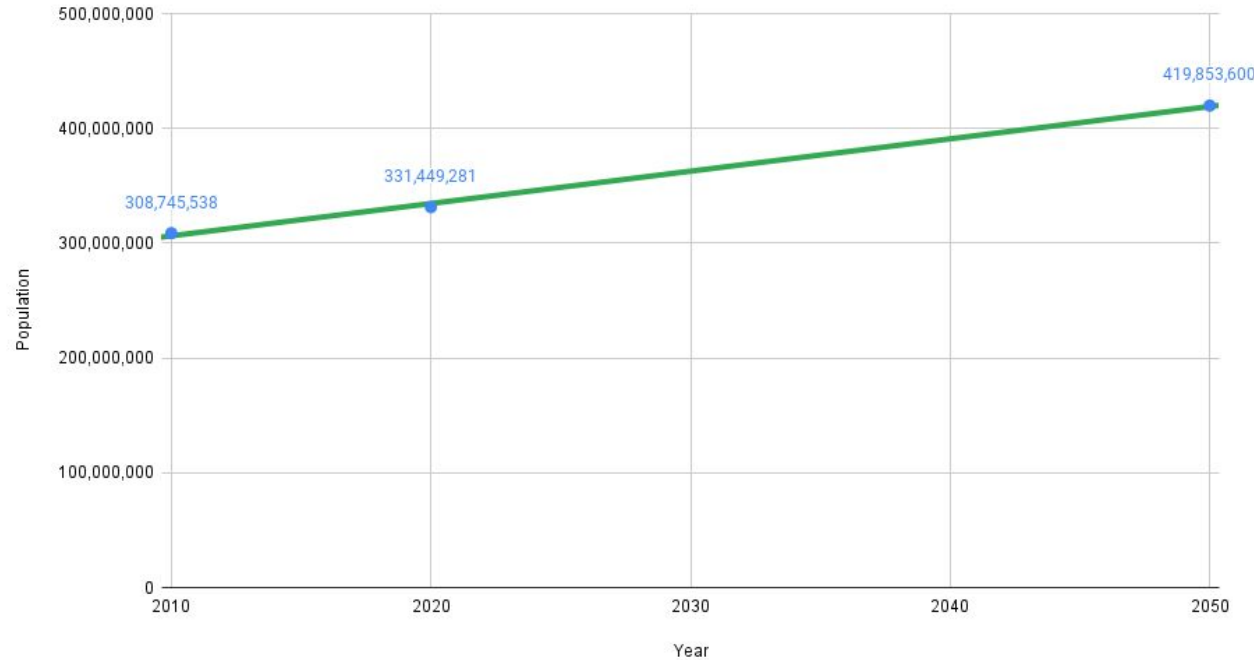
Issue

America's population exceeds 330 million, with a projected outlook of potentially reaching 400 million by mid-century. "Without a doubt, America's population growth is a major factor affecting domestic demand for resources, including water, food and energy, and the worsening of the environment and climate change.

- Joseph Chamie^[6]

- CDC estimates U.S. population to grow at faster rate from 2020-2050 compared to census in 2010-2020

Population According to the U.S. Census and CDC



What is the Main Contributor to the U.S. Population?

- The two factors contributing towards population are immigration and natural increase (difference in births and deaths)^[5]
- **Hypothesis:** Advanced medicine and technology has increased longevity and decreased death rates, making birth rates the primary contributor to the growing U.S. population

“...improvements in nutrition, water, medical care and other technological advances have contributed to a sharp decline in deaths while births continue to increase, resulting in population growth.”

- Study Session 2 Population Growth^[7]

U.S. Birth Trends

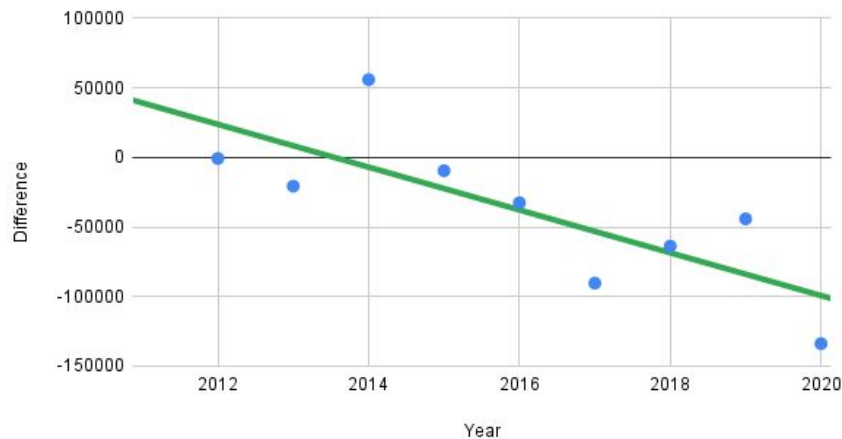
Population and Birth Data

- CDC birth data between 2011-2020^[4]
 - 2010 and 2020 census data^{[1], [2]} (for [approximate] population)
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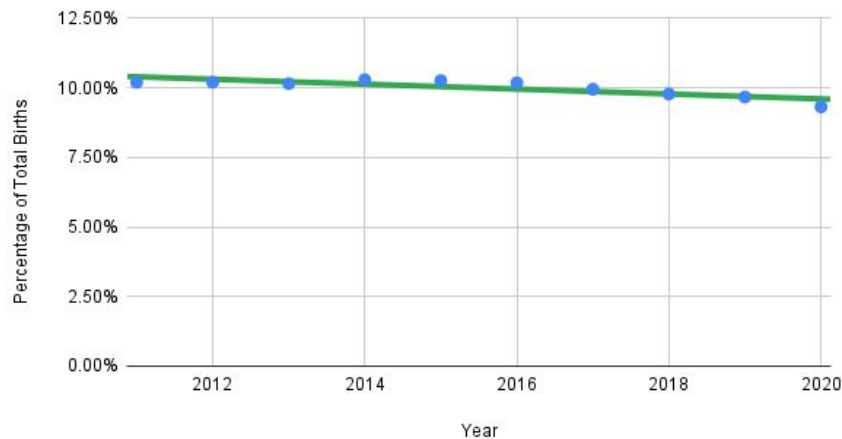
2011-2020 Birth Data

- 2014 is the only year with an **increase** in births from the previous year
- On average, a 37,771 **decrease** in live births from each previous year

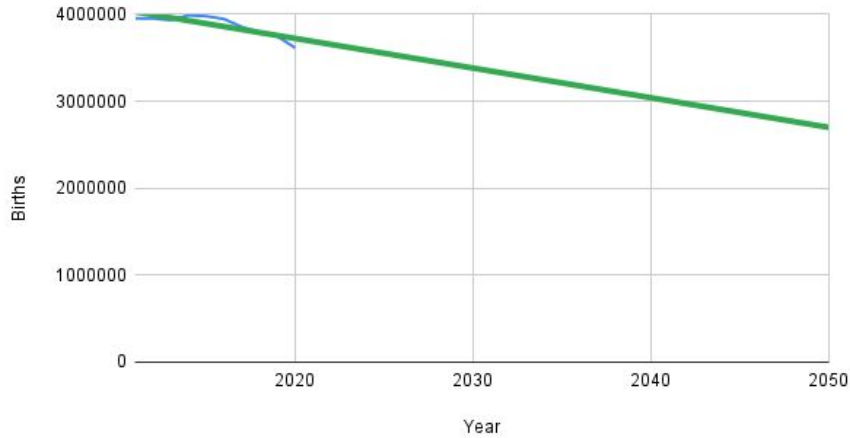
Difference In Births By Year



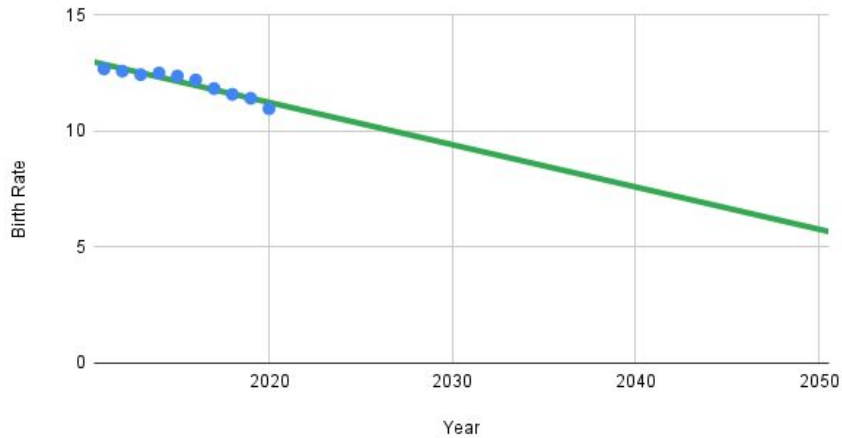
Percentage Of Total Births Each Year



Births Per Year



Birth Rate vs. Year



Trajectory for 2050

- Data estimates **less than 3 million births**
- Data estimates **birth rate** to be **only 6.9, about half of 12.69** in 2011

Birth rate^[8] - ratio of live births to total population [in that year], multiplied by 1000 - i.e. the frequency of births in a given population

But Population Still Increases Rapidly?

How Does Immigration Affect The U.S. Population?

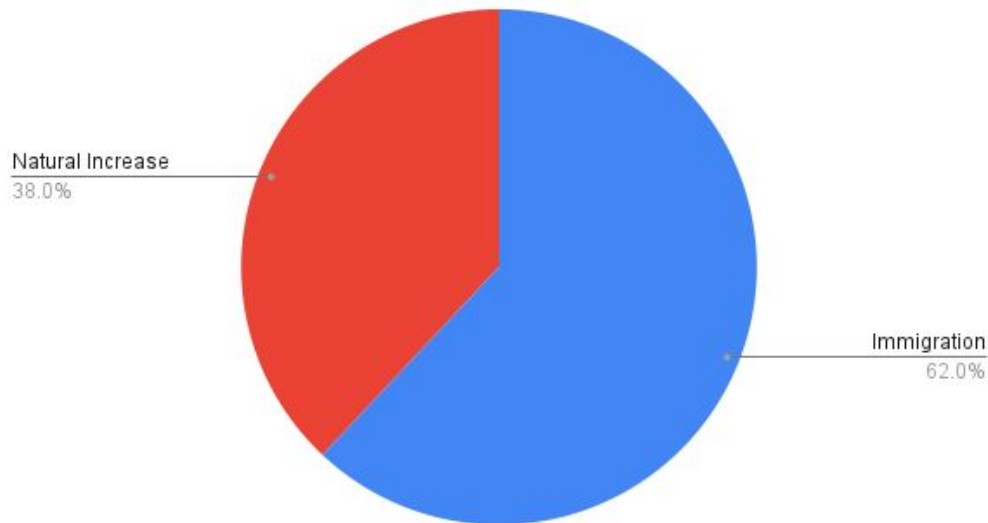
According to Joseph Chamie^[5]:

- Historic high of **46.2 million** immigrants in America; **14.2** percent of U.S. population
- Total immigrant population in 2030 expected to be **54 million**; about **15 percent** of total population
- Total in 2050 expected to be **65 million**; about **17 percent** of population

“With the aging of America’s overall population and baby boomers reaching the oldest ages, deaths are expected to increase more rapidly than births. Consequently, by mid-century immigration is expected to be contributing twice as many people to America’s population as natural increase.”

- Joseph Chamie (The Hill)^[5]

Contribution to U.S. Population in July 2020 - July 2021



So What is the Primary Population Contributor?

- **Original hypothesis:** Birth rates are the primary contributor to the growing U.S. population
- **Final conclusion:** Immigration is the primary contributor; birth rates are not.
- While birth rates previously were on the high end, they are NOT the primary contributor anymore.
- Birth rates decreased over 37,771 a year on average between 2011 and 2020
- Immigration trends expected to continue rising and making up larger portions of population than previous years

References and Appendix

DATA

[1] Bureau, U. S. C. (n.d.). Explore census data. Retrieved October 30, 2022, from <https://data.census.gov/cedsci/table?q=us+population+2010&tid=DECENNIALPLNAT2010.P1>

[2] Bureau, U. S. C. (n.d.). Explore census data. Retrieved October 30, 2022, from <https://data.census.gov/cedsci/table?q=us+population+2020&tid=DECENNIALPL2020.P1>

[4] Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from the Natality Records 2007-2020, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/natality-current.html> with requested records 2011-2020 on Oct 29, 2022 5:51:00 PM.

[5] Joseph Chamie, opinion contributor. (2022, January 11). For the foreseeable future, immigration will fuel US population growth. The Hill. Retrieved October 31, 2022, from <https://thehill.com/opinion/immigration/589178-for-the-foreseeable-future-immigration-will-fuel-us-population-growth/>

QUOTES

[3] Causes and consequences of overpopulation. Sustainability for all. (n.d.). Retrieved October 30, 2022, from https://www.activesustainability.com/sustainable-development/causes-consequences-overpopulation/?_adin=02021864894

[6] Npg. (2022, April 13). Opinion piece offers valuable insight on population growth. Negative Population Growth. Retrieved November 3, 2022, from <https://npg.org/npg-commentary/em-041322.html>

[7] *Study session 2 population growth*. Study Session 2 Population Growth: View as single page. (n.d.). Retrieved October 31, 2022, from <https://www.open.edu/openlearncreate/mod/oucontent/view.php?id=79927&printable=1>

[8] World Health Organization. (n.d.). Indicator metadata registry details. World Health Organization. Retrieved October 31, 2022, from <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/1139#:~:text=The%20ratio%20between%20the%20number,year%2C%20usually%20multiplied%20by%201%2C000.>

Thank You.