Growth or Decline: Understanding How Populations Change

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With the release of the 2015 county and metro/micro area population estimates and components of change, we can explore the question: How did the United States population change in the last year?[1,2]

Demographers (researchers who study population change) begin to answer this question by looking at the three *components of change*: births, deaths and migration. The change in the population from births and deaths is often combined and referred to as *natural increase* or *natural change*. Populations grow or shrink depending on if they gain people faster than they lose them. Looking at an area's unique combination of natural change and migration helps us understand why its population is changing and how quickly the change is occurring.

Natural Increase

Natural change is the difference between births and deaths in a population. Oftentimes, natural change is positive, which means that more babies are being born than people are dying. This positive natural change is referred to as *natural increase*. Examples of natural increase exist across the United States, one being the Salt Lake City metro area in Utah. Between 2014 and 2015, Salt Lake City had around 19,100 births and 6,400 deaths. This gave Salt Lake City a natural increase of about 12,700 people, making it a key reason why its population grew over the year.

The opposite of natural increase is called *natural decrease*, where more people are dying than babies being born, which can cause a population to shrink. Areas with aging populations often have natural decrease. Between 2014 and 2015, Maine had 450 more deaths than births and West Virginia had 940 more. In both cases, natural decrease was one of the reasons why their populations shrank between 2014 and 2015 in our latest estimates.

Migration

Net migration is the difference between how many people move into and out of an area. When net migration is positive, a population has more people moving in than out. We split migration into *domestic migration* and *international migration*.

[1] The Office of Management and Budget's statistical area delineations for metro areas are those issued by that agency in February 2013. Metro areas contain at least one urbanized area of 50,000 or more population, and consist of one or more whole counties or county equivalents. Some metro area titles are abbreviated in the text of the blog.

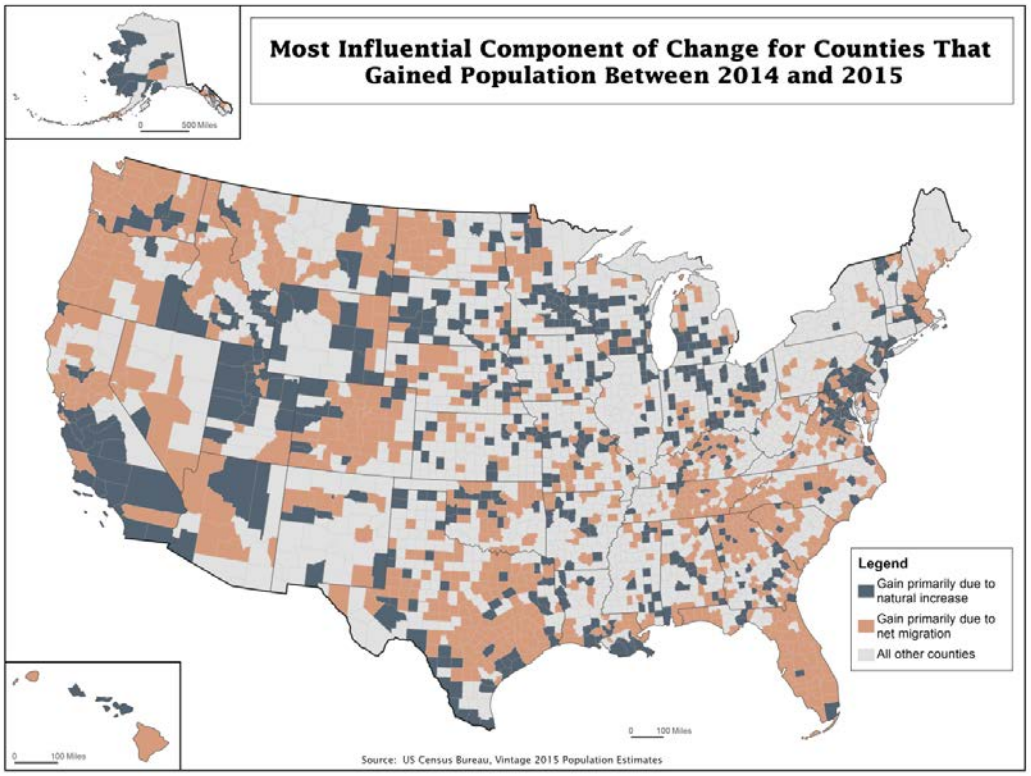
[2]The Census Bureau develops annual population estimates by measuring population change since the most recent census. The Census Bureau uses births, deaths, administrative records and survey data to develop estimates of the U.S. population. For more details regarding the methodology, see https://www.census.gov/popest/methodology/.

Domestic migration refers to people moving between areas within the United States, and is often one of the largest contributors to population change. Regionally, the South gains the most net domestic migrants, with roughly 440,000 more people moving into Southern states than leaving them between 2014 and 2015. The Chicago metro area in Illinois, Indiana and Wisconsin lost about 80,000 people through migration between 2014 and 2015, which is consistent with a long-standing pattern of negative net domestic migration for that metro area.

International migration consists of a diverse group of people, such as foreign-born immigrants from many countries around the world, members of the U.S. armed forces and U.S. citizens working abroad. Tthe Miami metro area in Florida gained about 70,000 net international migrants between 2014 and 2015, making it a major factor in that area's population growth.

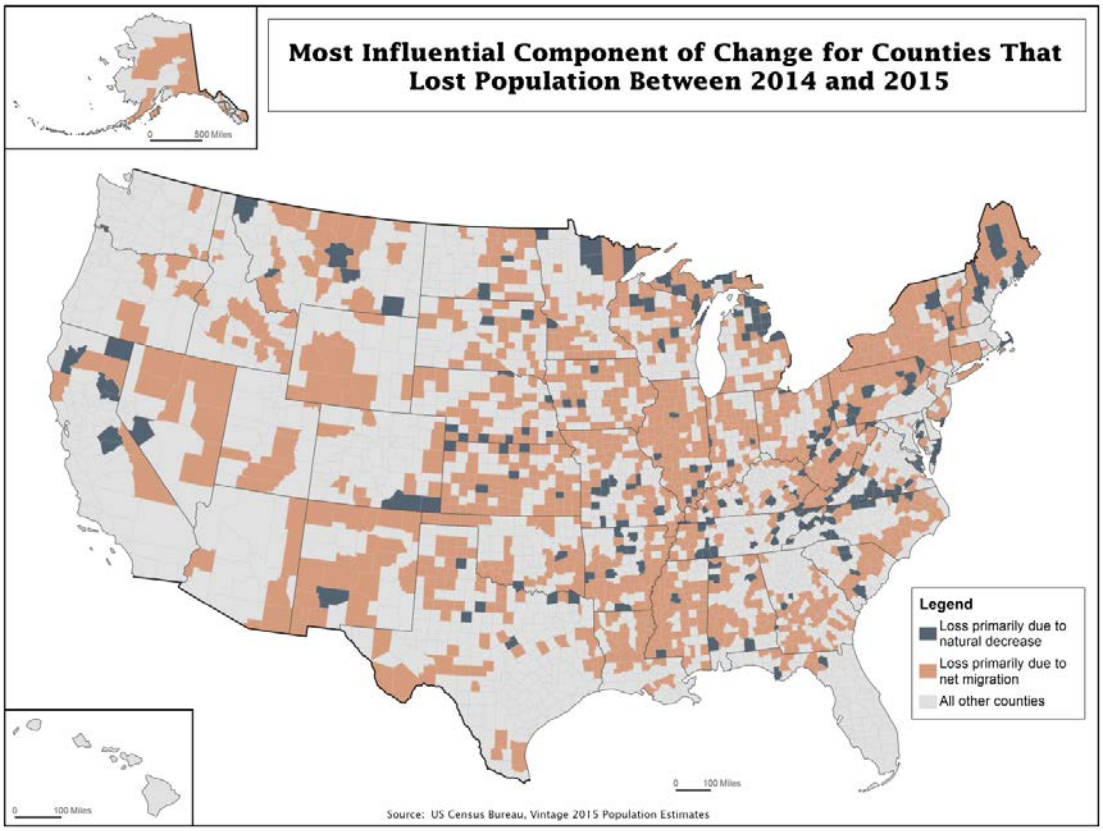
The Big Picture

Analyzing the components of change is an enlightening way to understand how the U.S. population shifts. We can identify clusters of counties that grow mainly from migration and others that grow from natural increase. Clusters in Florida and Texas, which grew primarily from net migration, are visible in Map 1. Other clusters, such as those in California, Utah and along the East Coast from Virginia to New York, grew over the same span of time in large part because of natural increase.



Map 1: Most Influential Component of Change for Counties That Gained Population Between 2014 and 2015

Counties with shrinking populations are also clustered geographically. For many of these shrinking counties, net migration is the primary cause. How these counties can cluster together is shown in Map 2, where several areas along the Mississippi River (Arkansas, Louisiana and Mississippi) had net migration loss. Illinois, Kansas, New Mexico and New York also had several counties that experienced net migration loss. Areas that declined mainly from natural decrease are similarly clustered, as seen along the Virginia/North Carolina border and in northern Michigan.



Map 2: Most Influential Component of Change for Counties That Lost Population Between 2014 and 2015

Natural change and net migration both contribute to population change, sometimes with unexpected results. Frequently, natural change and net migration push a population in opposite directions, making it more difficult to determine whether a population is growing or shrinking. Los Angeles County, Calif. — the largest county in the United States — experienced both natural increase and net migration loss between 2014 and 2015. This can beg the question, how might a population change when subjected to seemingly contradictory components? The answer is that it depends. In the case of Los Angeles, the growth from natural increase was much larger than the loss from net migration, and the county saw a sizable population increase. All across the United States, stories like the one playing out in Los Angeles exist, with each area having a unique combination of natural change and net migration that determines whether they grow or shrink. By looking at these basic components of population change, demographers gain insight into the complexities of how populations change over time.

Summing It All Up

Overall, population grows or shrinks through two very basic components: natural change (births minus deaths) and migration (domestic plus international). As illustrated in this blog, the balance between these components is unique in each area, while following general patterns across states or regions. This balance gives areas their own unique story as they change over time. Through the production of annual population estimates, and the types of analysis provided here, demography continues to be an important, ongoing focus of study at the Census Bureau that contributes to our understanding of where we've been and where we're headed in the future.