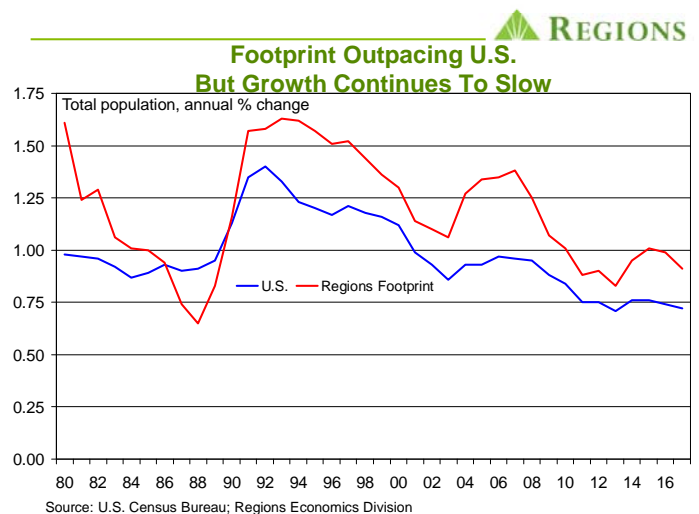


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## State Population Trends: Regions Footprint

The U.S. Census Bureau recently released comprehensive 2017 data on state level population, including the components of change in population. We thought it would be useful to examine not only the 2017 data but some of the longer-term trends in the data on state level population, the details of which will come as a surprise in some quarters. After all, in light of what for some time now has been considerable discussion about the virtues of putting up walls along borders, the reality is that net international migration has been a key source of growth in the total population. Then again, putting up walls may seem a tempting option for some states, not so much to keep foreigners out but to keep current residents in, at least those states for which net domestic out-migration has acted as a persistent drag on growth in the total population. In any event, the following discussion will highlight what we think are some of the more interesting trends in state level population over recent years (comparable 2017 metro area data are not yet available).

As seen in the chart to the side, total population growth in the Regions footprint has consistently outpaced growth for the U.S. as a whole. Indeed, the last year in which population growth in the footprint lagged growth for the U.S. as a whole was 1989. Overall population trends have been similar, i.e., growth has been decelerating for some time, mainly due to falling birth rates. In addition, net domestic in-migration in the Regions footprint remains much lower in the post-recession years than was the case prior to the 2007-09 recession, which has acted as a brake on the rate of population growth within the footprint. Still, the population within the Regions footprint has consistently grown at a faster pace than the U.S. as a whole. But, as we routinely point out in our presentations of data on the state and metro area levels, looking at the data for the footprint as a whole masks what are often stark differences across individual states/metro areas. The same is true with the data on population and the components of change.

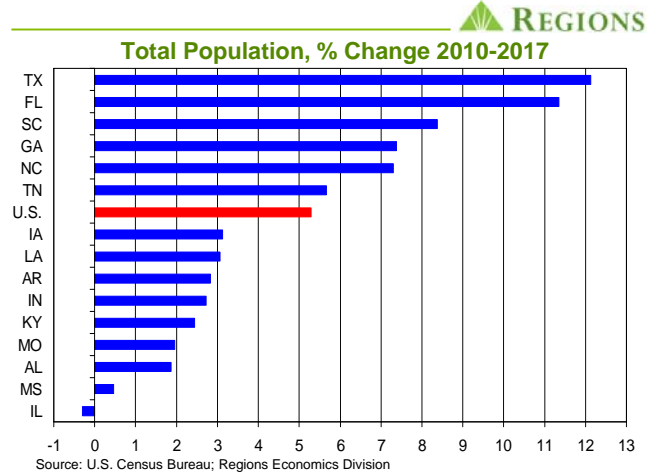
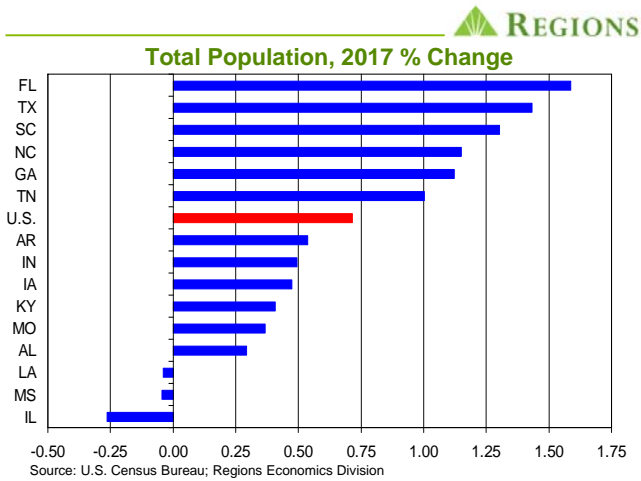


For the U.S. as a whole, total population increased by 0.72 percent in 2017 (reflecting an increase of 2,313,243 persons). With the exception of 2013, when the total population increased by 0.71 percent, 2017's population growth is the slowest for the U.S. since 1934. The total population of the 15-state Regions footprint grew by 0.91 percent in 2017, reflecting an increase of 1,172,654 persons, which means the footprint accounted for 50.69 percent of the net increase in U.S. population in 2017. This was the third consecutive year in which the footprint accounted for more than half the net increase in the U.S. population, which was also the case in each year from 2004 through 2008. As of 2017 the footprint population stood at 130,461,879 persons, which accounts for 40.05 percent of the total U.S. population, similar to the footprint shares of total nonfarm employment and total personal income, amongst other metrics. The footprint share of total U.S. population has obviously increased over time given the faster rate of population growth within the footprint – for instance, in 1990 the footprint accounted for 37.45 percent of the total U.S. population.

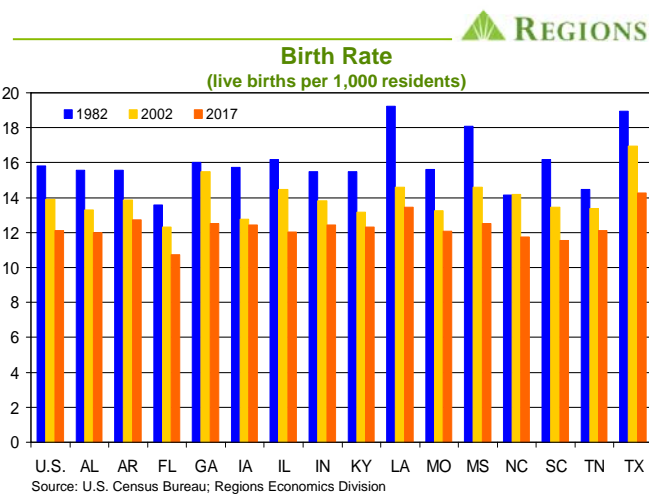
With any given data series, no single observation is nearly as telling as the longer-term trends, which is also the case with the population data. For instance, the nature and severity of the 2007-09 recession and the stubbornly slow rebound introduced some cyclical distortions to migration patterns – both domestic and international – that were layered on top of steadily declining birth rates. This helps account for the persistent deceleration in the growth of the U.S. population over the past several years. Over the 2010-2017 period the total population of the U.S. grew by 5.30 percent, compared to growth of 6.66 percent for the Regions footprint. Over this period, the footprint accounted for 49.74 percent of the total increase in the U.S. population.

But, as noted above, there are stark differences in growth rates for the individual states that comprise the Regions footprint, both for 2017 and for the 2010-2017 period. So, while population growth in the footprint has easily outpaced the national average, the reality is that population within the footprint has been highly concentrated amongst a subset of the 15 states. In 2017, Florida's population grew

by 1.59 percent, the fastest of any state within the footprint with Texas, at 1.43 percent, posting the second fastest growth. Georgia, North Carolina, South Carolina, and Tennessee all logged population growth in excess of the national average in 2017. At the other end of the spectrum, however, Illinois, Louisiana, and Mississippi each saw their populations decline in 2017 (the fourth consecutive year of decline for Illinois) while the remaining states each registered population growth well shy of the national average. As a side note, Florida's 2017 rate of population growth was the fifth fastest in the U.S., behind Idaho (2.20 percent), Nevada (2.00 percent), Utah (1.89 percent), and Washington (1.71 percent).



Similar patterns are seen in the data over the 2010-2017 period – Florida, Georgia, North Carolina, South Carolina, Tennessee, and Texas all posted population growth in excess of the national average, with Illinois seeing its population decline, only a modest increase in Mississippi's population, and the remaining states seeing population growth well below the national average. Over this longer period Texas saw the fastest population growth of any state in the footprint with growth of 12.13 percent, topping Florida's 11.34 percent increase. Conversely, Illinois posted a 0.31 percent decline in total population over the 2010-2017 period while Mississippi's population increased by just 0.46 percent. As seen in the above charts, population growth has been highly concentrated amongst the group of the six fastest growing states. While the relative size of Florida and Texas somewhat skews the math, these six states accounted for 93.05 percent of total population growth within the footprint in 2017 and 90.40 percent of population growth over the 2010-2017 period. Texas ranked second nationally in terms of population growth over the 2010-2017 period, behind only Washington DC (14.70 percent).

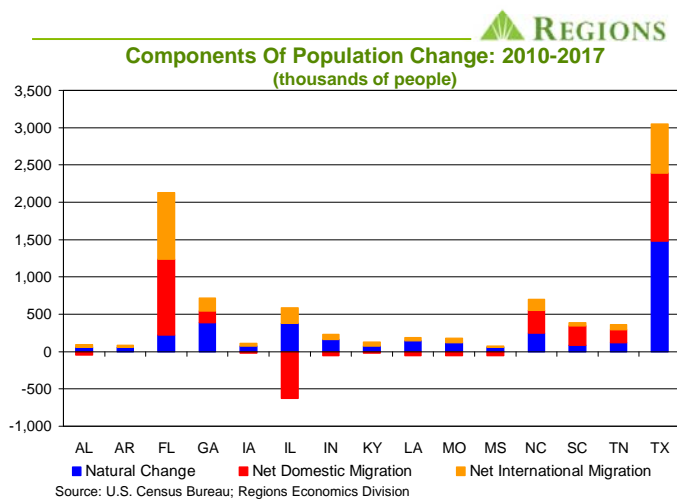


We think it also useful to look at the components the change in the total population over time. One component of the total change in population is what is referred to as the "natural change," which is simply the difference between the number of births and the number of deaths in any given period. To our earlier point about a steadily declining birth rate, the chart to the side shows the birth rate for each state in the Regions footprint in 1982, 2002, and 2017. In each state, and for the U.S. as a whole, the birth rate has steadily declined over time (and birth rates declined again in 2017), which has contributed to natural change becoming less of a driver to overall population growth. Net migration is the other component of change in the total population, in other words, the difference between the number of people who move into and out of a given area over a given time period. Net migration can further be decomposed into domestic migration and international migration, a difference we find it instructive to highlight. Obviously for the U.S. as a whole net domestic migration is by definition zero.

The final page of this document presents a detailed table showing, for each state, the components of the net change in population over the 2010-2017 period, but we'll note some of the more interesting observations here. For instance, Florida relies heavily on migration, both domestic and international, to fuel its rapid population growth. As might be expected given the composition of its population (specifically, a relatively high median age), Florida has a birth rate (defined as the number of live births per 1,000 residents) below the

U.S. average and a death rate (defined as the number of deaths per 1,000 residents) above the national average. As such, the natural change in Florida's population tends to be fairly small in any given time period. At the same time, however, Florida is a domestic and international draw, and this inflow of new residents, such as retirees, in turn attracts additional residents who become part of the state's work force. So, over the 2010-2017 period Florida's population grew by more than 2.128 million persons, but natural change accounted for just 10.62 percent of this growth, with net domestic migration accounting for 47.68 percent and net international migration accounting for 41.70 percent of total population growth. For the sake of comparison, natural change accounted for 57.01 percent of the growth in the total population of the U.S. over the 2010-2017 period, with net international in-migration accounting for 42.99 percent.

Next to Florida, South Carolina has been heavily reliant on in-migration to fuel overall population growth over recent years; over the 2010-2017 period net in-migration accounted for 77.461 percent of the state's total population growth with the natural change accounting for 22.54 percent of total population growth. Unlike Florida, however, net in-migration in South Carolina is heavily skewed towards domestic in-migration, which accounted for 67.44 percent of all population growth while international in-migration accounted for just 10.01 percent (the lowest of any state in the footprint). The remaining four states amongst the group of six states that have driven much of the recent growth in total population within the Regions footprint are also heavily reliant on in-migration as a source of growth in total population, with net in-migration accounting for 66.86 percent of total population growth over the 2010-2017 period in Tennessee, 64.51 percent in North Carolina, 51.58 percent in Texas, and 46.25 percent in Georgia.



Conversely, Illinois, Louisiana, Mississippi, and Missouri all saw net out-migration (i.e., more people moved out of than into the state) over the 2010-2017 period. The latter three states did see growth in total population due to natural change over this period but the natural change in Illinois was not sufficient to offset the flow of out-migration, hence the decline in total population in Illinois over the 2010-2017 period. This is where the distinction between domestic and international net migration takes on added significance. Over the 2010-2017 period, eight of the fifteen states in the footprint – Alabama, Iowa, Illinois, Indiana, Kentucky, Louisiana, Mississippi, and Missouri – all saw net domestic out-migration. Each of these states, however, saw net international in-migration which, with the exception of Illinois, was more than sufficient to offset their net domestic out-migration thus yielding positive net total migration. In other words, international in-migration was a significant source of growth in total population for each of these states over the 2010-2017 period.

It is worth noting that in some of these states, such as Alabama and Kentucky, weakening domestic migration trends are a relatively recent development, i.e., in the post-recession years, while in other states, such as Illinois and Mississippi, weak domestic migration trends date back much further. It should be noted that Alabama saw positive net domestic migration in 2017, but not to a sufficient magnitude to offset the net decline over the 2010-2016 period. There are some states in which economic growth remains soft and uneven with no clear-cut driver of job growth, which has likely contributed to some residents moving elsewhere in search of better economic opportunities and also made these states less attractive as potential new homes to residents of other states looking to move.

Longer-term patterns of economic growth – factors such as slower overall growth, larger shares of population in rural areas that offer more limited opportunities for industrial development and growth, or over-reliance on one key industry as an economic driver – no doubt contributed to longer-running patterns of domestic out-migration in other states. To be sure, rapid growth in one key industry can also be a driver of net domestic in-migration, such as the energy industry in North Dakota. While North Dakota posted the nation's third fastest population growth over the 2010-2017 period, much of that growth was tied to the post-recession emergence of the energy industry. But, as energy's fortunes soured starting in 2015, North Dakota saw its population barely budge in 2016 before posting an outright decline in 2017 thanks in large measure to net domestic out-migration. In contrast, though heavily exposed to energy, a far more diverse economy helped Texas withstand weakness in the energy industry. Both domestic and international migration into Texas has remained strong, thus helping ensure Texas continues to see rapid rates of population growth.

Housing is an industry which has also had an impact on domestic migration trends over the past several years, even if not in an intuitively obvious way. One implication of the housing market bust associated with the 2007-09 recession is that sizeable numbers of homeowners across the U.S. were, in essence, trapped by negative equity positions in their homes. In other words, they owed more on mortgage

loans than their home was worth, thanks to sharp declines in house prices across much of the U.S. This is one factor which significantly limited geographic mobility in the United States over the past several years, to which a slow and uneven recovery in the broader economy also contributed. But, as the housing market has recovered fewer and fewer homeowners are in negative equity positions and, as such, have the latitude to move should they desire or should they feel economic opportunities are better elsewhere. At the same time, recoveries in equity prices over recent years have likely helped more people feel more comfortable about retiring, which would have helped support domestic in-migration not only into Florida but in states such as the Carolinas that over recent years have become more popular as retirement destinations. And, as noted earlier, in a state such as Florida that persistently sees a high degree of in-migration, this in turn creates demand for housing and a variety of goods and services, which creates employment opportunities that attract migrants from other states, i.e., a virtuous demographic cycle if you will. There are of course many factors that go into this, such as climate, the tax structure, the availability of land, among others, and clearly some states are better positioned than others to draw in-migrants. To the point about the tax structure, recent changes to federal tax law, specifically the provision to cap the deductibility of state and local taxes on one's federal tax return, will make it that much harder for Illinois to reverse its ongoing population decline and will likely make states such as Florida, the Carolinas, Tennessee, and Texas more attractive to those fleeing states with heavy state/local tax burdens.

This in turn ties back to an age-old economic development question – which comes first, the industry or the workers? States with weaker demographic trends tend to be at a competitive disadvantage when it comes to attracting economic development. In terms of tax and other incentives to attract new development, the playing field is often more level, even states with less business friendly tax structures can always offer incentives to ease tax burdens. But, firms looking to build new production facilities are also concerned as to whether they will have an adequate supply of skilled labor, not only today when they start an operation but also tomorrow should they opt to expand. This is a much tougher hurdle for some states than for others. It is true an announcement of a new corporate facility can itself be a draw to prospective workers, but the reality is firms do not choose a location first then hope the labor supply follows. While demographic trends can change, this is not something that typically happens quickly, so this points to the need for demographically challenged states to make the most of what they do have, in this case in the form of taking steps to enhance the quality of labor.

Population trends may not necessarily strike one as being the most riveting of topics, but nonetheless it is important to have an understanding of not only what the top-line numbers are but also why they are what they are. Hopefully this discussion has answered at least a few basic questions along these lines.

Regions Footprint and U.S.

2010 through 2017, 000's

<u>STATE</u>	Total Births	Total Deaths	Net Domestic Migration	Net International Migration	Net Change In Total Population	"Natural" Change	Net Migration
Alabama	412.724	354.009	-0.074	30.999	89.640	58.715	30.925
Arkansas	268.765	212.448	4.773	21.060	82.150	56.317	25.833
Florida	1,531.161	1,305.200	1,015.056	887.663	2,128.680	225.961	1,902.719
Georgia	916.461	532.696	160.708	169.534	714.007	383.765	330.242
Iowa	272.594	200.849	-17.139	41.117	95.723	71.745	23.978
Illinois	1,106.987	731.086	-629.437	213.432	-40.104	375.901	-416.005
Indiana	584.160	421.581	-54.792	70.848	178.635	162.579	16.056
Kentucky	388.873	309.783	-16.685	44.751	107.156	79.090	28.066
Louisiana	442.995	302.144	-51.779	49.728	138.800	140.851	-2.051
Missouri	526.004	403.358	-56.837	53.575	119.384	122.646	-3.262
Mississippi	270.298	212.555	-58.626	14.036	13.153	57.743	-44.590
North Carolina	842.538	595.434	307.086	141.995	696.185	247.104	449.081
South Carolina	403.015	316.001	260.316	38.645	385.975	87.014	298.961
Tennessee	564.577	445.542	175.298	64.824	359.157	119.035	240.122
Texas	2,749.408	1,271.366	916.065	658.154	3,052.261	1,478.042	1,574.219
Regions Footprint	11,280.560	7,614.052	1,953.933	2,500.361	8,120.802	3,666.508	4,454.294
U.S.	27,715.322	18,377.020	0.000	7,042.455	16,380.757	9,338.302	7,042.455

Source: U.S. Census Bureau; Regions Economics Division