Demographic Trends Are Major Factors in Today's Weak Labor Force Growth
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April 21, 2022

The size of the US labor force declined by 2.3 million people between December 2019 and December 2021, sparking widespread debate about the underlying factors constraining labor supply. Broadly speaking, changes in the overall size of the labor force come from changes in labor force participation rates (LFPRs), changes in the demographic makeup of the population, and changes in the size of the population. Research has documented the role of changes in LFPRs, especially the jump in the number of retired people (Briggs, 2021; Faria e Castro, 2021; and Kaplan et al., 2021) and the drop in the LFPR of mothers of young children (Aaronson and Alba, 2021, and Pitts, 2021). However, demographic trends have also constrained the size of the labor force.

The labor force is defined as the number of people aged 16 and older who are either employed or unemployed, where unemployed is defined as not having a job, being available for work, and having actively searched for a job in the past four weeks or waiting to be recalled from a temporary layoff. Unless otherwise indicated, when we refer to the population or labor force, we are referring to people who are neither institutionalized nor in the military (which is called the non-institutionalized civilian population) and who are aged 16 and older.

Changes in the labor force participation rate

There has been a decline in the LFPR. Men's LFPR has drifted downward since 1950, for instance. Between 1950 and 2000, this decline was offset by increases in women's LFPR. However, women's LFPR peaked in 2000, and the overall LFPR for both men and women has trended downward since.[1] The decline in the LFPR in recent decades has been a widespread phenomenon, with rates declining for most races, ethnicities, age groups, and educational attainment groups (Dotsey, Fujita, and Rudanko, 2017).

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[1] Since 2000, there have been two periods during which the overall LFPR rose, both occurring late in economic expansions: February 2005–January 2007 and February 2018–February 2020.

The LFPR fell sharply during the COVID-19 pandemic and has been slow to recover, falling from 63.3 percent to 61.5 percent between December 2019 and December 2020 and then rising to 61.9 percent in December 2021.

Changes in the demographic makeup of the population

Because different demographic groups have different LFPRs, the size of the labor force is affected by changes in the demographic composition of the population. One such change the United States is experiencing is the aging of the population, a circumstance which has increased the share of the population that is retired. As life expectancies have risen, the percentage of the US population aged 60 and older, the most likely demographic to be retired, rose from 16 percent in 2000 to 24 percent in 2021.[2] The percentage of the population aged 60 and older has also increased because the large baby boom generation started reaching this age range in 2006. As noted above, recent studies have highlighted the role that retirements have played in the drop in the size of the US labor force since the start of the pandemic (Briggs, 2021; Faria e Castro, 2021; and Kaplan et al., 2021). Estimates for the number of retirements that occurred during the pandemic, above and beyond the number of retirements expected based on prepandemic trends, range from 1.5 million to 2.4 million individuals. The unusually large number of retirements in 2020 and 2021 can be attributed to both a drop in the LFPR of people aged 55 and older and the larger number of baby boomers reaching peak retirement ages.[3] The LFPR of people aged 55 and older fell from 40.3 percent in December 2019 to 38.5 percent in December 2021. The ages at which people are most likely to retire are 62 through 65, and the percentage of the US civilian population (regardless of age) that is in this age range has steadily increased since 2000 and reached a new peak of 4.9 percent in December 2021, which is up from 4.6 percent 5 years earlier and 4.4 percent 10 years earlier.

Changes in the size of the population

Population growth is another key factor that influences labor force growth. One demographic trend that has slowed population growth is falling fertility rates. In the past, fertility rates were high enough that the size of the birth cohort, or the group of people born during a particular period, reaching working age was significantly larger than the birth cohort reaching retirement age. This led to natural growth in the size of the labor force. However, since 1972, the US total fertility rate has been at or below the fertility rate at which a population replaces itself from one generation to the next if net immigration is zero (Chappell,

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[2] Figure 10 in Dotsey, Fujita, and Rudanko (2017) shows that, in both 2012 and 2016, approximately 50 percent of people entering retirement were between the ages of 60 and 69, with the greatest concentration between the ages of 62 and 65.
[3] In 2021, members of the baby boom generation were aged 57 to 75 years old.

2021 and World Bank, 2022). As a result, the size of the birth cohort reaching working age (roughly 20 through 29 years) has been converging with the size of the birth cohort reaching retirement age (roughly 60 through 69 years), thereby limiting the growth of the labor force. In fact, there were fewer people born in the United States between 1992 and 2001, or those who are now 20 through 29 years old (39.6 million), than between 1952 and 1961, or those who are now 60 through 69 years old (41.7 million).[4]

By restraining population growth, slowing immigration also reduces labor force growth. The net change in US population because of in and out migration per 1,000 residents (the net immigration rate) fell from 6.5 in the second half of the 1990s to 3.2 in the first half of the 2010s (United Nations, 2019). In addition to this long-term trend, there was a dramatic drop in immigration during the pandemic. The US Census Bureau estimates that net immigration added just over 250,000 people to the US population in 2020 and 2021 together, a number which is less than half of the population gain from net immigration in 2019 alone (US Census Bureau, various years).

The 20/60 differential

All three of the above demographic trends are reflected in the percentage difference between the population aged 20 through 29 and the population aged 60 through 69, which we call the 20/60 differential (Figure 1). The relationship of this differential to the aging of the baby boom cohort and the decline in birth rates is straightforward; the differential also reflects immigration because more than half of immigrants to the United States arrive before the age of 30.[5] Generally, the smaller the 20/60 differential, the smaller (in percentage terms) the net flow of people into the labor force is likely to be.

In the states that make up the Fourth Federal Reserve District—Ohio, Pennsylvania, Kentucky, and West Virginia—and in the nation as a whole, the 20/60 differential has fallen relatively quickly since 2006, the year the oldest members of the baby boom generation turned 60.[6] Nationally that same year, there were 71 percent more people in their 20s than people in their 60s. In 2020, however, this 20/60 differential reflected just 16 percent more people in their 20s than in their 60s.[7]

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[4] Authors' calculations from estimates of annual birth rates and population in the United States.
[5] See Figure 3 of https://cis.org/Report/Immigrants-Coming-America-Older-Ages.
[6] The Fourth Federal Reserve District encompasses all of Ohio, western Pennsylvania, eastern Kentucky, and the northern panhandle of West Virginia.
[7] Nationally, the 20/60 differential is close to the 75th percentile of state differentials because a few more populous states have especially large 20/60 differentials, thereby raising the national figures. These states (and their differentials in 2020) are California (31 percent), Georgia (27 percent), and Texas (43 percent).

Figure 1. 20/60 Population Differential: Fourth District States and the Nation
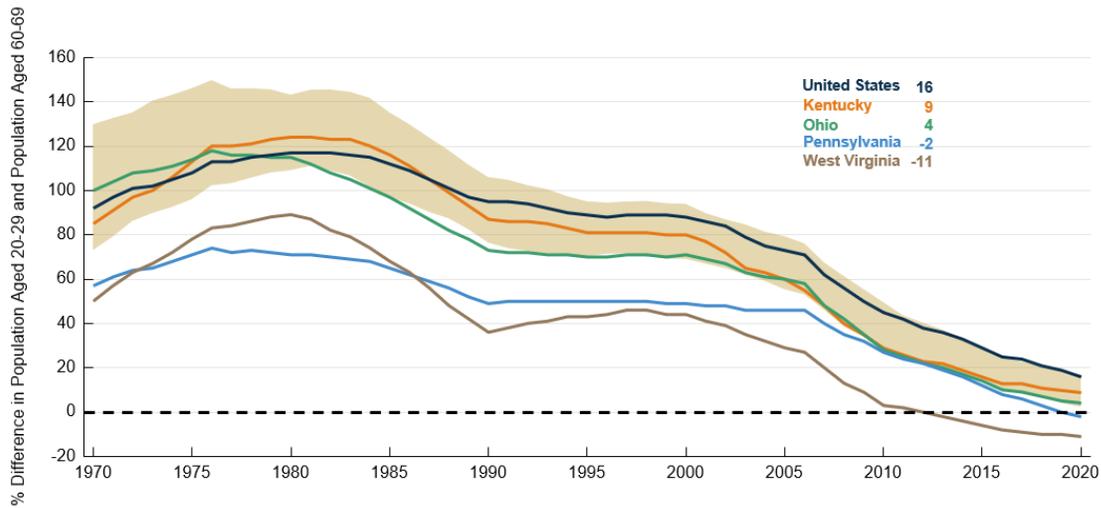
Notes: Shaded area shows values from the 25th to the 75th percentiles of the distribution across all states and the District of Columbia. The last data point is 2020.
Source: US Census Bureau via Haver Analytics.

Since the late 1980s, all four Fourth District states have had 20/60 differentials that are lower than the nation's. West Virginia has a particularly low 20/60 differential: Each year since 1984, it has had the second- or third-lowest 20/60 differential of any state. In fact, since 2012, West Virginia has had a negative 20/60 differential, meaning the state has more people in their 60s than people in their 20s; Pennsylvania reached this same milestone in 2019. While both Kentucky and Ohio still have positive 20/60 differentials, their differentials fell dramatically between 2010 and 2020: from 29 percent to 9 percent in Kentucky and from 28 percent to 4 percent in Ohio.

The convergence in the number of people in their 20s and the number of people in their 60s has contributed to slower growth in the labor force. Figure 2 shows the year-over-year percentage change in the US labor force and the US 20/60 differential for each year from 1970 through 2021.[8] The growth of the labor force varies substantially from year to year, with the labor force typically growing more when the economy is strong (such as in 2018) and growing less when the economy is weak (such as in 2009). However, the long-run trend in labor force growth is strongly correlated with the 20/60 differential. The orange line in Figure 2 summarizes this association from 1970 to 2019.[9] The positive slope of this line

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[8] The annual labor force size is the average of the seasonally adjusted monthly labor force for the year. The labor force estimates have been adjusted to account for population adjustments after decennial censuses, through Census 2010.
[9] Data from 2020 and 2021 were excluded from the sample for estimating this line to avoid having the pandemic unduly influence the slope of the line.

shows that labor force growth tends to be greater when the 20/60 differential is higher, with more people in their 20s as opposed to their 60s.

Figure 2. National Labor Force Growth Rate and 20/60 Differential: 1970 to 2021
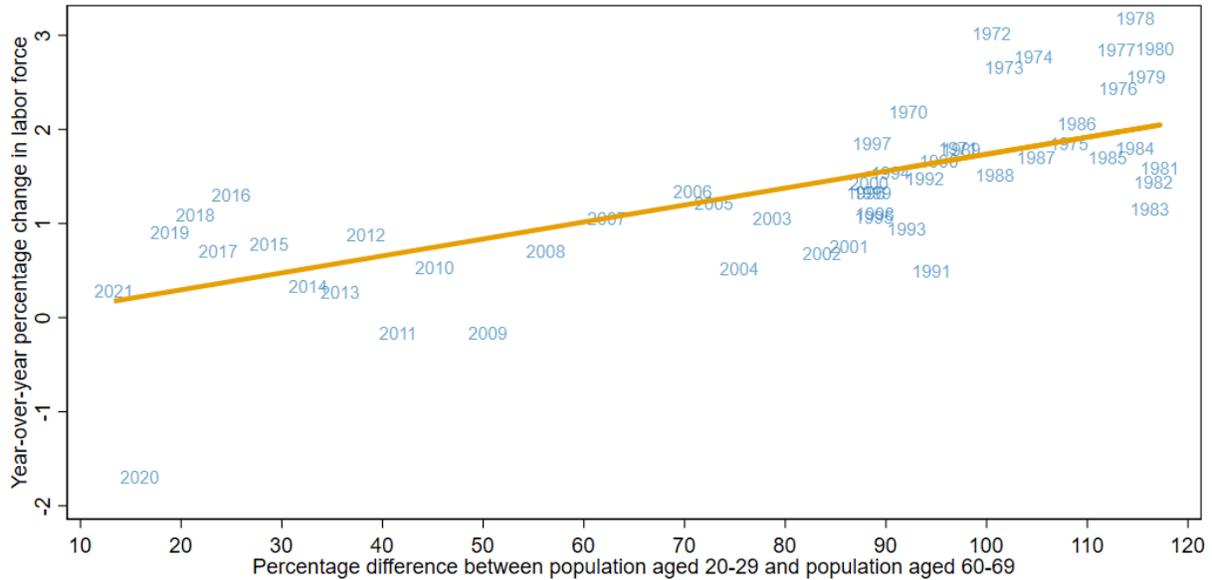
Notes: The line shows the predicted value from a bivariate regression of percentage change in labor force on the percentage difference between population aged 20 through 29 and population aged 60 through 69. To prevent the slope being distorted by the COVID-19 pandemic period, 2020 and 2021 were excluded from the sample for that regression.
Sources: Bureau of Labor Statistics, US Census Bureau, and Haver Analytics via Haver Analytics.

Figure 2 illustrates two other important facts. The first is that the 20/60 differential has been unusually low in recent years. This differential was consistently above 85 percent between 1970 and 2000, but it has been below 50 percent every year since 2009. The second is that labor force growth in 2021 was close to what one would expect based on the 20/60 differential alone. This suggests that the COVID-19 pandemic was not the sole cause of the weak labor force growth in 2021; rather, this weak growth is due in part to the aging of the population and the downward trends in birth rates and immigration.

Conclusion

Based on population projections, the 20/60 differential will remain near 10 percent through 2040. Therefore, we should expect these demographic trends to limit the growth of the labor force for the foreseeable future. In other words, 2021's slow labor force growth may not be an anomaly, but rather a harbinger of what is to come. Slow labor force growth typically brings with it slower employment growth and, unless demand for labor falls, increased bargaining power for workers.

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