

Where Is Everybody? The Shrinking Labor Force Participation Rate

More Americans are neither working nor looking for work. What is going on?

BY MICHAEL DOTSEY, SHIGERU FUJITA, AND LEENA RUDANKO

The labor force participation rate has been falling in this country for nearly two decades. For men of prime working age, it has been falling for more than half a century. And the fall has been particularly acute among black men. The decline in participation has also accelerated since the Great Recession, largely due to the start of retirement by baby boomers. Low participation is distinct from unemployment—looking for a job but not finding one—which has fallen sharply since the recession. It is also distinct from the lingering problem of underemployment—settling for part-time or occasional work but wanting full-time work that matches one’s skills. Rather, a falling participation rate means more people are simply unable or unwilling to work at current wages.

The effects of nonparticipation on society are potentially severe: slower economic growth and a rising *dependency ratio*. The U.S. civilian labor force participation rate is the sum of all those who are either employed or officially considered unemployed divided by the total population over age 16. So a steadily shrinking participation rate means that the fraction of the population that is either gainfully employed or actively seeking work is steadily dwindling. This slows the growth of GDP, because fewer people are contributing to the nation’s output of goods and services. In addition, the economic returns generated by fewer workers must be spread more thinly via transfers through government programs such as Social Security and Medicare, or through family assistance or charity, to support the growing fraction of the population out of the labor force. As a result, a society with a lower participation rate is also burdened with higher tax rates because the government has a narrower tax base from which to draw revenue.

Whether nonparticipation is a good or bad thing for an individual worker and his or her family is more ambiguous. Some workers leave the labor force to raise their children or care for their elderly parents; many women in particular report deriving meaning from the activities they choose to pursue while not employed. The benefits of being out of the labor force for a few years while going to school are tangible: Educated workers earn

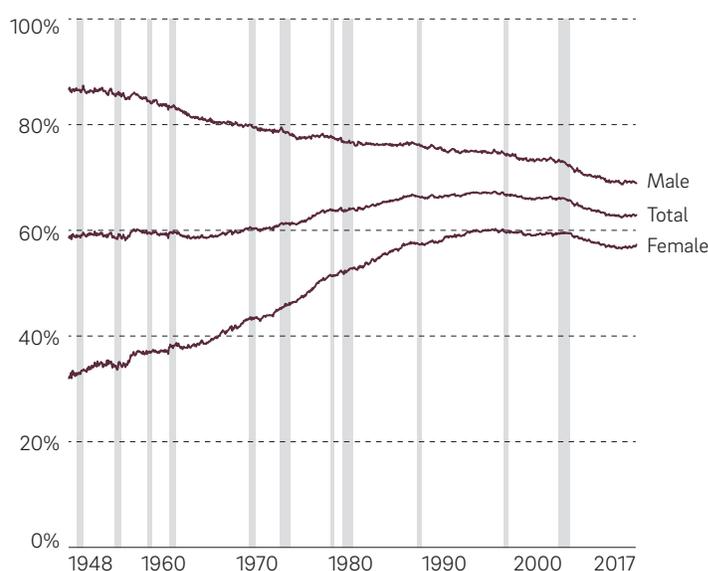
more, and the economy gains more productive workers. And to the extent that unpaid work benefits the larger society, nonparticipation in the labor force can arguably have economic benefits that resist quantification.

But because the declining participation rate in the United States has consequences for the overall economy, it is important to understand what forces are driving participation downward, how it affects output growth, whether it is likely to continue to drop, and what could ameliorate its fall. To delve into these questions, we first trace the path of participation over time.

FIGURE 1

Overall Participation Has Been Falling Since 2000

Labor force participation rate for males, females, and total population over age 16.



Source: Bureau of Labor Statistics Current Population Survey.

Note: The labor force participation rate is the sum of those employed and the unemployed divided by the U.S. civilian population over age 16.

Trends in Labor Force Participation

In the 1950s and 1960s, the share of working-age Americans in the labor force was fairly stable, hovering around 58 percent to 60 percent. But as many women began working outside the home in the 1970s, participation soared, peaking at slightly above 67 percent at the turn of this century. Ever since then, however, total participation has been falling and today approaches 63 percent (Figure 1). And since the Great Recession, this decline has accelerated.

Is the declining overall participation rate of recent years mainly a lingering effect of the severe recession, or is it arising from some underlying factor in the economy?

Labor force participation rates are influenced by two types of forces: cyclical ups and downs associated with recessions and economic expansions, and secular forces such as long-term changes in demographics. In a recession, especially a deep one like the one we just experienced, output declines precipitously and firms rapidly shed workers. The average amount of time that a worker is unemployed also increases dramatically in a recession, leading some workers to abandon their job search and, by definition, drop out of the labor force. By not looking for work, they no longer participate. As the economy recovers, however, firms once again begin posting job openings and hiring, the unemployment rate falls, and people who had previously given up on the job market regain employment, thereby re-entering the labor force. The labor force participation rate thus begins its cyclical recovery.

Yet, this cyclical pattern of the participation rate explains only a small fraction of its overall behavior. By far the main drivers of the overall participation rate are secular forces, usually demographic trends and cultural shifts in society. In the final 25 years of the 20th century, the secular force driving the dramatic increase in participation was women’s entry into the labor force. That steady increase has now ended, and women’s participation has largely stabilized. The largest demographic factor influencing participation now is the aging of the population and the start of retirement for the baby boom generation. During the current recovery, the rising tide of retiring baby boomers has outweighed any modest cyclical recovery in participation.

A simple way to gauge the determinants of labor force

participation is to split the people that are out of the labor force into different groups based on the reasons they give for having stopped working or looking for work, namely, they are retired, disabled, want a job but are not looking, are in school, or other. Looking at the distribution tells us how much each group has contributed to the decline in the overall participation rate.

Tallying this evidence shows that the decline in labor force participation since the turn of the century has been due to increases, of relatively equal size, in the number of nonparticipants citing “in school,” “disabled,” or “retired” as the primary reason for their nonparticipation. However, since 2010, the decline in the participation rate has been driven almost exclusively by retirement, with the other reasons having leveled off. This feature is displayed in Figure 2, which graphs the reasons for not participating in the labor market.

To illustrate how the U.S. population is aging and the share of retirees is growing, Figure 3 shows how the age distribution has evolved since the baby boom began after World War II. In the 1950s, the largest group was infants and small children, those age 0–4, the beginning of the baby boom. As the boomers grew up and came of age, they consistently represented the largest fraction of the population—until just recently. Now, as this generation retires, the repercussions will be felt in the labor force participation rate, the magnitude of which we will seek to quantify in this article.

As significant as this wave of retirements is, it is not the only trend that is reducing participation. Trends among workers in their prime earning years are also unfavorable. After peaking at 98 percent in 1954, the participation of American men 25 to 54 years old began slipping in the late 1960s and has fallen steadily to 88 percent (Figure 4). This is one of the lowest participation rates for prime-age men among developed countries, and only Italy has experienced a greater decline (Figure 5).

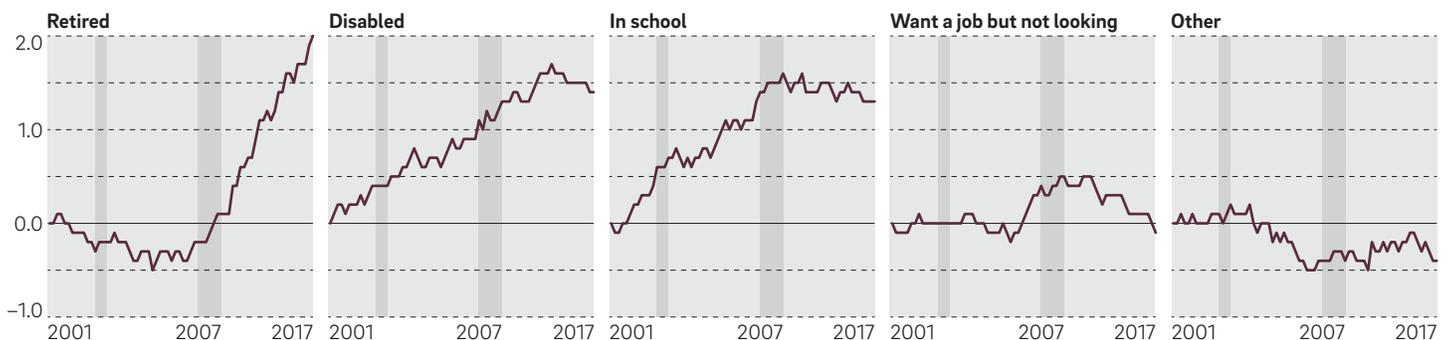
Aging has played some role in explaining this trend among prime-age men as well, as there is a pronounced life-cycle pattern to prime-age men’s participation in the U.S. labor force. Men participate more intensively in their 30s and 40s than they do earlier or later in life; thus, the hump-shaped pattern in Figure 6. This pattern also stands to reason. Many young men are still in school, and failing health or retirement can prompt older men to drop out of the labor force.

Even so, aging is not the key driver of the longer-run decline in prime-age male labor force participation. What turns out to be more important for explaining this trend is the fact that

FIGURE 2

Retirement a Key Reason in Recent Years

Cumulative change in the nonparticipation rate, relative to 2000 Q1, percentage points.

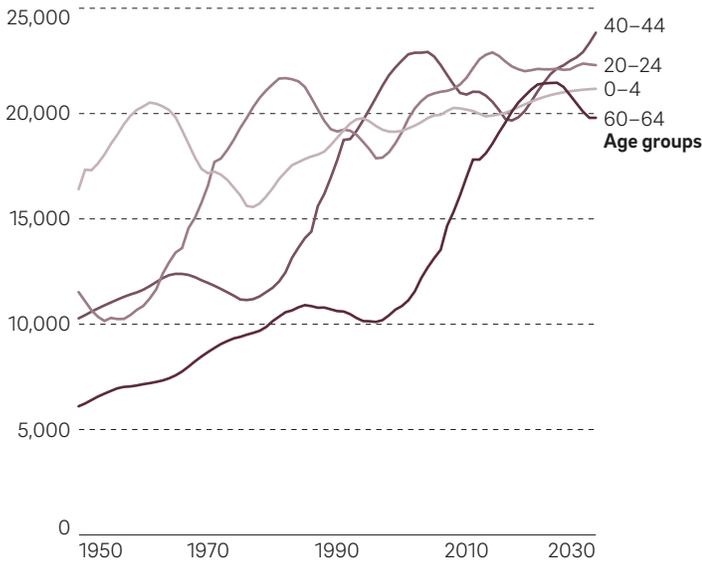


Source: Fujita (2014).

FIGURE 3

Boomers Having an Impact Even on the Way Out

U.S. population by age group, since 1950 and projected to 2030, thousands.

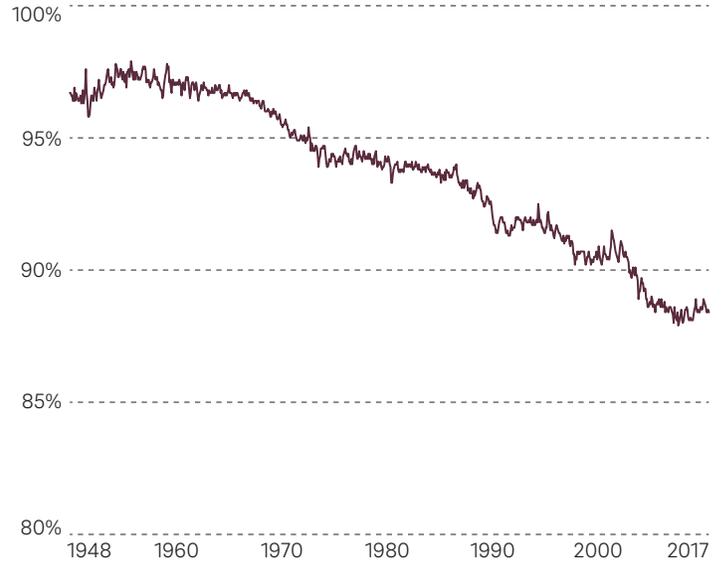


Source: Census Bureau.

FIGURE 4

A Long Fall—and Falling Faster

U.S. prime-age male labor force participation rate, 1948–2017.



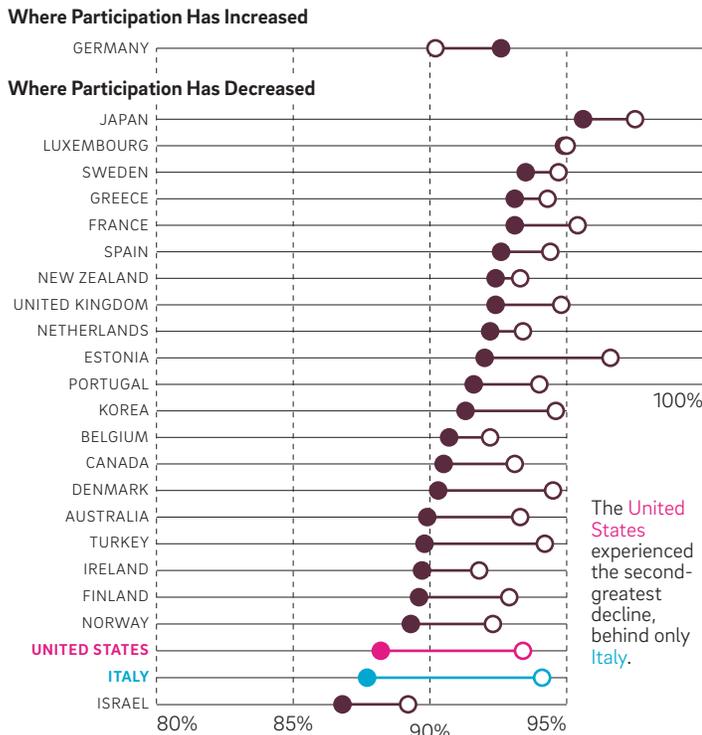
Sources: Bureau of Labor Statistics Current Population Survey.

FIGURE 5

Male Participation Down Across Developed World

Prime-age male labor force participation rates among OECD countries.

○ 1990 ● 2014

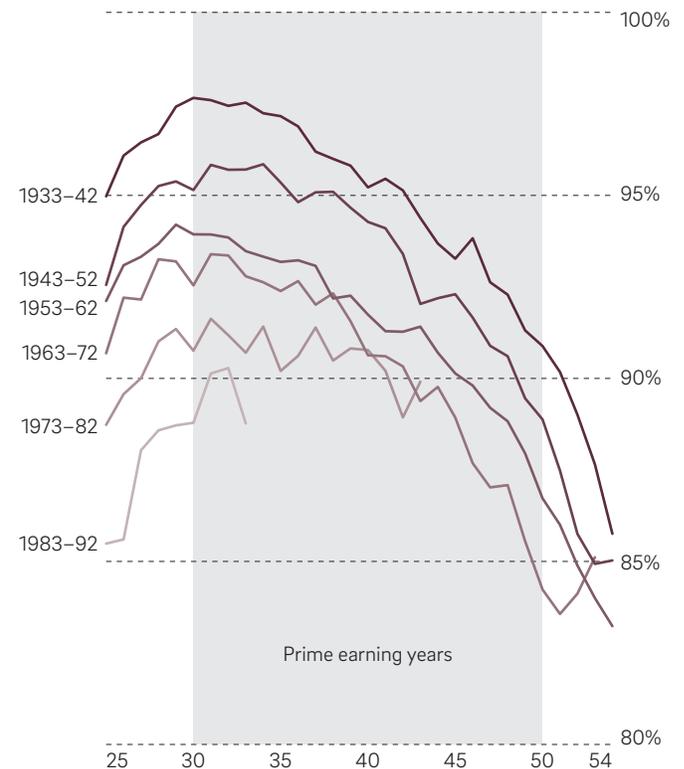


Source: Organization for Economic Cooperation and Development.

FIGURE 6

Men Most Likely to Be in Labor Force in Their 30s

U.S. prime-age male labor force participation over the life cycle, by birth year cohort.



Sources: Bureau of Labor Statistics Current Population Survey Annual Social and Economic Supplement; Council of Economic Advisers.

more recent generations of men are participating less than their predecessors did. To see this cohort effect in the figure, note that each successive cohort's participation rate lies below that of the preceding one. Decomposing the overall effect into these two prominent patterns—life cycle and generational—it is the latter that dominates. Falling participation rates by men born more recently are thus largely responsible for the overall decline in participation by prime-age males, adding to the effects of the retiring baby boomers.

The declines also show tremendous variability depending on educational attainment. While there has been a secular decline for men in all educational groups, the decline has been more pronounced for those with only a high school education or less, than for those with a bachelor's or more advanced degree (Figure 7).

Furthermore, labor force participation rates and their trends vary markedly by race. Black men in the United States have a lower participation rate than Hispanic or white men, and participation rates among black men have also been falling more rapidly (Figure 8).

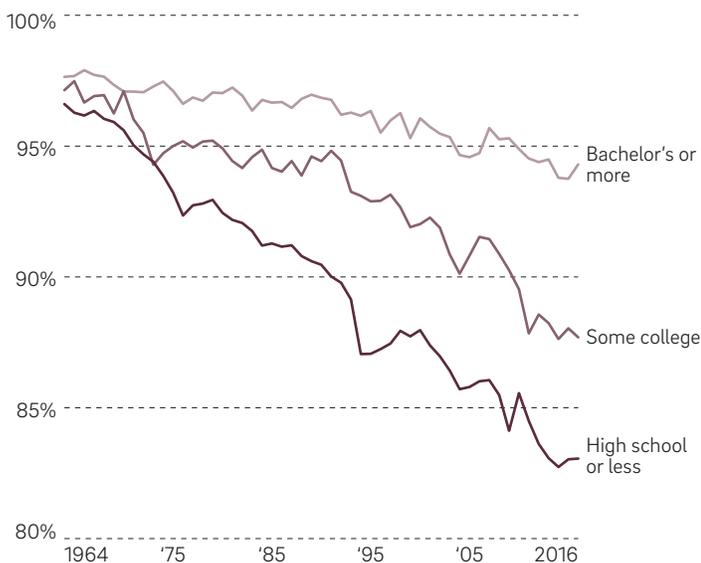
The reasons behind the decline in prime-age male participation remain less well understood than the predictable impact of aging baby boomers on the overall participation rate. One factor that is likely playing a role in the decline in participation of less-educated men versus more-educated men is the increasing wage gap between high- and low-skill workers. This gap may be attributable to skill-biased technological change—that is, advances in production methods or in the types of services and how they are

See the related article in this issue, "Why Are Men Working Less These Days?"

FIGURE 7

The Less Education, the Less Likely to Participate

U.S. prime-age male labor force participation by educational attainment, 1964–2016.



Sources: Bureau of Labor Statistics Current Population Survey Annual Social and Economic Supplement; Council of Economic Advisers.

provided that end up creating more demand for workers with more education or high-tech training. The ratio of the wage of a male with a high school education to that of one with a college degree declined from 72 percent in 1973 to 51 percent in 2016.

Note also that high school graduates' average wage fell not only in relative terms, but also in absolute terms, by about 15 percent between 1973 and 2016. Increasing globalization and the corresponding decline in U.S. manufacturing jobs may also be a factor, as the share of manufacturing in total nonfarm employment has fallen from over 30 percent after World War II to less than 10 percent today. Another factor may be the increasing incarceration rate and the resulting difficulty in finding work for those who have committed a felony: The male incarceration rate rose from 564 out of 100,000 men in 1990 to 890 in 2014.

Cause for Concern?

What does this slide in participation mean for the U.S. economy? To get some sense of it, we can use a simple accounting framework in which the economy's gross domestic product is a function of three components: labor inputs, capital inputs, and technological advances. All else equal, a slowdown in any of these components will cause a slowdown in output.

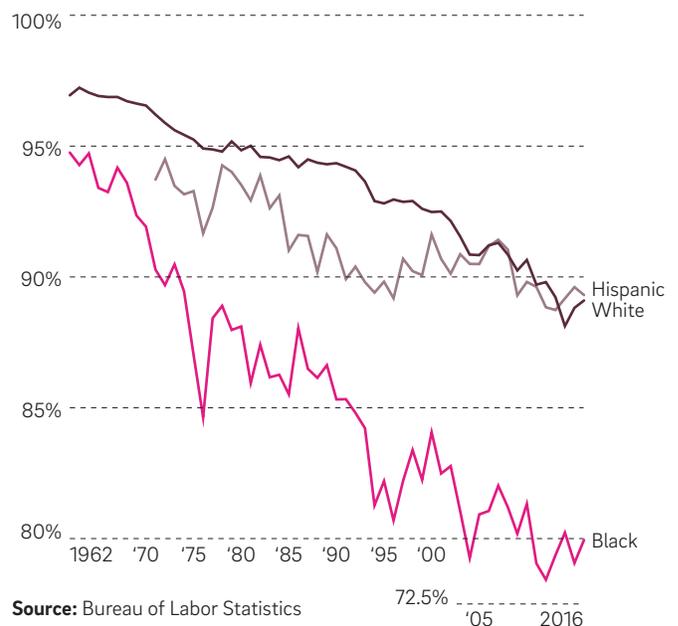
Recently, output growth has averaged a mere 2.0 percent compared with the 3.5 percent average growth rate over the previous half-century. Of that previous output growth, 1.3 percentage points was attributable to growth in the U.S. labor force. Since the recession, the labor force has grown only 0.5 percent, less than half its historical average, accounting for roughly a third of the decline in output growth.

The slower growth of the labor force is due to two basic

FIGURE 8

Black Male Participation Is Falling Faster

U.S. male labor force participation, white, black, Hispanic.



Source: Bureau of Labor Statistics Current Population Survey via IPUMS.

reasons. One is that the U.S. population is growing more slowly. The other is that a diminishing share of the population has been participating in the labor force over the past seven years.

The aging of the population may also drag on productivity growth directly. It is well known that workers experience rapid wage growth in their 20s through their 40s as they accumulate human capital through on-the-job training or postgraduate education. In other words, a large part of workers' growth in their productivity materializes in the early and middle parts of their careers. But those baby boomers who are still in the labor force are now approaching retirement age, implying that the current makeup of the labor force is not favorably composed toward strong growth in labor productivity.

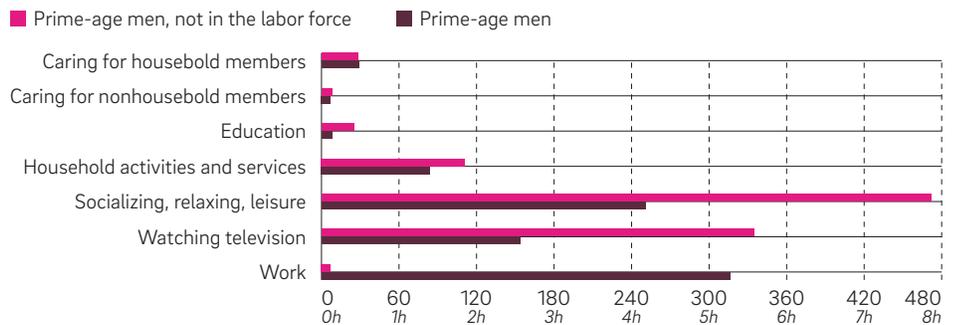
From an individual well-being perspective, a number of features of the decline in prime-age male participation are also troubling. First, dropping out of the labor force appears not to be a transitory event, in that the majority of men who reported not working in a given month had also not worked over the previous year. Nonparticipation is also associated with a number of deleterious outcomes. Approximately one-third of male nonparticipants live below the federal poverty line, and most of these men get by on government assistance—they receive more government aid than participants do—and on the earnings of their spouses or other members of their households. These men generally do not appear to be engaged in constructive activities such as home production or acquiring more education and skills, but rather, according to time use surveys, they appear to be watching more television and playing more video games (Figure 9).

In studies of individual happiness, prime-age men who are out of the labor force report being less happy, more sad, and more stressed than unemployed men. Men out of the labor force also spend nearly 30 percent of their time alone. By comparison, both younger men and all women who are out of the labor force appear quite content. In fact, young men out of the labor force appear to be happier than young men who are employed. Women who are out of the labor force and employed women appear equally happy.

FIGURE 9

How Men In and Out of Labor Force Spend Their Days

Number of minutes prime-age males report spending on daily activities.



Source: American Time Use Survey; Council of Economic Advisers calculations.

Note: Columns do not sum to 1,440 minutes (24 hours) per day because some survey respondents did not account for every minute.

Unlike men, women who are not in the labor force report deriving significant meaning from their daily activities.

Will Participation Keep Dropping?

As we have seen, it would appear that the ongoing surge in retirements has largely been driving the decline in labor force participation in recent years. Given the large number of people approaching retirement age, this trend of increasing retirements is likely to continue. How long will retirements keep increasing? With the data that are available on the age distribution of the population and mortality rates, it should be simple to provide some estimates.

To this end, we start by forecasting the retirement rate in the near term. That rate is determined by multiplying the retirement rate (the share of retirees) in each age group by the percentage of the population in that age group. How the working-age population is distributed by age is fairly straightforward to calculate, as we know the current age distribution of the population and can use that distribution to estimate the mortality rate at each age. And the age distribution and mortality rate are unlikely to change significantly in the near term.

What may be more difficult to forecast is the retirement rate of each age group. These rates naturally increase as a function of age (Figure 10), and since they also

appear to have changed little in recent years, we will assume they will remain constant over our forecast horizon as well.

Based on this simple calculation—each age group's retirement rate times its share of the population—we project that the retirement rate will increase by 1.1 percentage points by 2019 (Figure 11). This increase in retirement, in turn, will push down the participation rate by the same amount.

Based on the changing age distribution of the population, we also expect retirements to keep rising through the 2020s, implying a roughly 4 percentage point decline in the participation rate by the late 2020s. Of course, this longer-run projection involves more uncertainty, because in time retirement rates may change significantly for other, unknown reasons. But the forecast illustrates the magnitude of the demographic force facing our economy today.

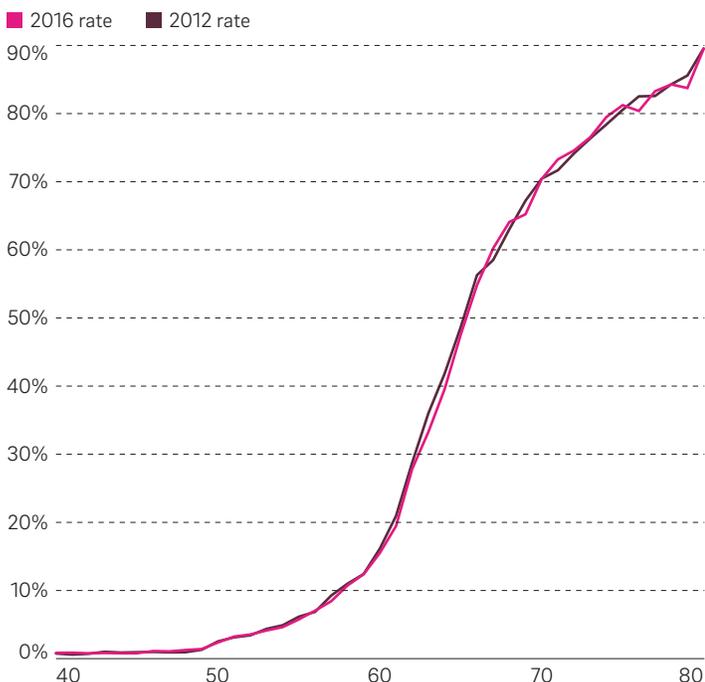
As a check on our forecasting methodology, we also apply it to the period 2011–2015 using the data up to 2010 (Figure 12). The exercise yields retirement rates that are close to the actual rates for those years, showing that our forecast is quite accurate.

Thus, we expect that because of the ongoing surge in retirements, the U.S. will experience a pronounced decrease in labor force participation in coming years, with the resulting loss in economic output discussed.

FIGURE 10

Retirement Rates at Different Ages Have Changed Little

Percentage of U.S. population entering retirement by age, 2012 vs. 2016.



Sources: Bureau of Labor Statistics Current Population Survey and author calculations.

Increasing the Pool of Workers: Immigration?

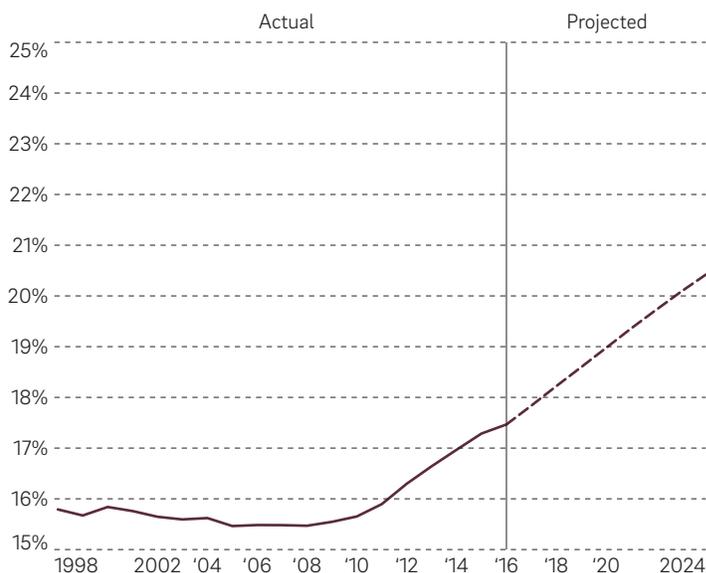
As we have seen, the aging of the population is largely responsible for the recent and projected decline in labor force participation. Aging is obviously not reversible, but the pool of available workers could be increased by expanding immigration. If done intelligently, increasing the flow of immigrants with the right skills could accelerate economic growth and could also remedy the age imbalance by adding to the working-age population. Immigrants also tend to have higher labor force participation rates. Foreign-born men residing in the United States have a higher participation rate than native-born U.S. men, and the participation rate of foreign-born men has actually been rising.

While politically sensitive, immigration has played a major role in expanding the U.S. economy over its history. Our country is still a land of immigrants: In 2015, more than 13 percent of the current U.S. population consisted of immigrants—legal and illegal. And this share has been steadily increasing; it was less than 8 percent in 1990.¹ Between 2008 and 2016, the foreign-born U.S. population grew 1.9 percent each year on average, whereas the native-born population grew at the much slower rate of 0.8 percent per year.²

FIGURE 11

Retirements Expected to Keep Rising for Years

Actual and projected overall retirement rate.



Sources: Bureau of Labor Statistics Current Population Survey and author calculations.

Although many of these newcomers were less-skilled illegal immigrants, over the past 15 years the college-educated immigrant population has almost doubled, from 5.9 million to 10.5 million.³ Meanwhile, H-1B visas, which allow companies to fill specialized jobs with foreign workers, are generally in short supply.

Countering a common belief that immigration hurts native-born Americans, it can be a complementary force, increasing the wages of the native born. That is not to say that there are no individual losers from immigration, but on balance the native-born appear to benefit. For example, Gaetano Basso and Giovanni Peri find that immigration has no significant effect on the wages of the less educated (those with at most a high school education) and a small and generally significantly positive effect on workers who are highly educated (those with at least a college degree). But there are losers, as Gianmarco Ottaviano and Peri show, and those who lose out seem to be largely concentrated among American foreign-born workers.

Another interesting example is found in a study by Peri, Kevin Shih, and Chad Sparber, which shows that a 1 percentage point increase in the share of foreign workers in science, technology, engineering, and mathematics (STEM) actually results in a 7 to 8 percentage point increase in the wage growth of college-educated native workers. The increase in the wages of noncollege-educated native workers was smaller but still significant, at 3 to 4 percentage points, and did not reduce employment among this group.⁴ Research also suggests that STEM immigrants may

FIGURE 12

Forecast Methodology Produces a Close to Actual Pace

Retirement rate forecasting performance, 2011–2015.



Sources: Bureau of Labor Statistics Current Population Survey and author calculations.

increase productivity in the sectors in which they are employed.⁵

These empirical results are consistent with certain economic theories. In principle, greater population growth is tied to higher per capita economic output growth rates, through a so-called scale effect. The scale effect suggests that per capita output growth is related to higher population growth because more ideas are developed in environments where more people are engaged in research. Because ideas are

nonrival—we can all use the same idea at the same time—any single idea can be used by lots of people to produce economic growth. Thus, the scale effect: the more people, the more ideas, the more growth.⁶

Immigration is not the only means of increasing the labor force and its productivity, and it would not solve the decline in prime-age male participation—a difficult problem that should certainly be addressed. But combining the growth in skills that would accompany increased

immigration with the productivity spillovers that would occur from having a larger and more highly skilled labor force can have near-term first-order effects on U.S. economic growth, ameliorating the inevitable negative effects of an aging U.S. population that is participating less intensively in labor markets. [E](#)

Notes

1 This share is based on the American Community Survey and was calculated by the Migration Policy Institute. See the 2017 article by Jie Zong and Jeanne Batalova.

2 The Current Population Survey Table A-7.

3 See the 2016 article by Zong and Batalova.

4 Note that the 1 percentage point increase in the share of foreign-born STEM workers is quantitatively very large and comparable to the increase that actually occurred between 1990 and 2010.

5 These authors also found that immigration of foreign STEM workers increases productivity growth more generally, explaining 30 percent to 50

percent of aggregate U.S. productivity growth between 1990 and 2010. Similar findings have been presented in papers by William Kerr and William Lincoln and Jennifer Hunt and Marjolaine Gauthier-Loiselle. Furthermore, work by Gordon H. Hanson and Matthew J. Slaughter finds that foreign-born workers account for more than half of all STEM workers with Ph.D.s and are significantly represented among those with bachelor's and master's degrees. They find no evidence that the hiring of foreign-born workers undercuts the opportunities of the native born. Immigrants in this area also make meaningful contributions to research and development, thus increasing the growth of knowledge in these subjects.

6 See, for example, the work of Chad Jones and Paul Romer. Also see Chad Jones' 2002 paper.

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