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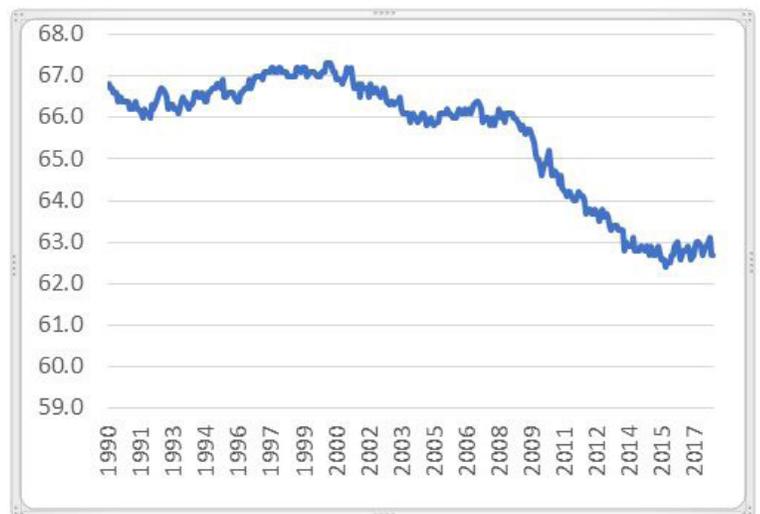
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The Decline in the U.S. Labor Force Participation Rate

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The Labor Force Participation Rate (LFPR) represents the available workforce of the country, and it is measured as the percentage of the population 16 and older who are either employed or actively looking for employment. After reaching a historical peak around the year 2000, the LFPR of Americans declined substantially, with a more pronounced drop following the financial crisis of 2007. Since 2015, the LFPR has remained stable at a low level, comparable to its level four decades ago when the LFPR was still in its growing stage. The overall LFPR declined from 67.3 percent in 2000 to 62.8 percent in 2017, as shown in Figure 1.

FIGURE 1. LABOR FORCE PARTICIPATION RATE, 16 AND OLDER



Source: Bureau of Labor Statistics

From a macroeconomic policy standpoint, understanding the reasons of the decline is crucial for a couple of reasons. First, the LFPR decline has implications for the evolution of the unemployment rate: If unemployment is mechanically decreasing due to a shrinking workforce, it does not reflect an improvement in labor market conditions, and monetary policy should take this into account. Second, this declining trend has implications for the outlook of the production structure of the American economy and

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the distribution of economic activity across production factors. Understanding the decline's causes also is of fundamental importance in assessing the American workforce's future, the long-term implications for retirees, and relevant policy actions.

This study responded to the need for a systematic review of the literature to establish what is known about the causes of the decline in the LFPR, establish priorities for future research, and to help policymakers analyze which actions are necessary. We conducted a systematic and comprehensive review of the literature on the causes of the decline in the LFPR since the year 2000. We searched for recent literature investigating the causes of the LFPR's recent decline. Since the decline started after 2000, we limited our search to studies dated 2005 or later. We conducted database searches of the academic literature using Google Scholar, JStor, and EconLit, and complemented it by doing a search of gray literature on the websites of research institutes (such as Brookings Institution, RAND, etc.) and public sector institutions (such as the Federal Reserve Banks). The searches included published and unpublished studies.

After an initial review of the literature, we identified a list of factors affecting LFPR addressed by the literature. In order to find as many relevant studies as possible, we conducted further database searches using terms relevant for each of the factors. We selected only articles that quantified the impact of one or more factors, either through statistical or econometric analysis or economic modeling.

There are multiple causes behind this decline. The labor economics literature of the early years after the Great Recession discusses the extent to which the recent economic decline had caused the decline in LFP. But while the Great Recession may have accelerated the decline in Labor Force Participation (LFP) around 2007, research shows that most of the decline cannot be explained by a cyclical component.

A large literature uses different approaches to measure the impact of long-running demographic trends on aggregate LFP. The consensus in that literature is that demographic trends explain a significant part of the decline, but not all of it. Among such demographic trends the most important is the aging of the Baby Boomer Generation, a large cohort that neared typical retirement ages (60 or 65 and older) in the early 2000s. The literature reaches the conclusion that demographic factors can explain between half and two-thirds of the decline in the overall LFPR, and research has pointed to other factors that have also contributed.

The evolution of LFPR differs by subpopulations defined by the interaction of gender, age groups, education, and race. We summarize the literature's evidence on how each of the factors has affected each of the subgroups. These include factors that have made it more difficult to work (such as health conditions); those that may have made it less attractive to work due to the availability of other sources of income (either through social programs or other sources of family income); and those that make alternative activities more productive (such as studying) or more attractive (leisure).

There is a rich literature on some of these effects. For example, there are studies that document the effects of Social Security and welfare programs. The research finds that past changes in Social Security retirement benefits

have worked as incentives for older adults to stay in the labor force longer, with an impact on older adult's labor participation of around 30 percent, whereas changes in other social programs, including Social Security Disability Insurance, may have increased the incentives to leave the labor force. However, in most cases, the existing research does not quantify how much impact changes in the program have had on the declining trend of the LFPR, but focus instead on marginal impact. This is the case for several of the factors analyzed. It would be useful for future research to tackle that question, in particular for the case of disability insurance.

In some cases, there is only suggestive evidence on a factor affecting LFP, but not enough evidence on its causality. This is the case for health trends, such as the recent opioid addiction epidemic, identified in the literature as a potentially important factor weakening LFP. The literature establishes correlation, but there is scant evidence on the direction of causality. Research that aims to fill that gap is necessary.

For other factors, their immediate importance is well established, but the root cause is not. For example, the group that has experienced the strongest decline in participation is that of young adults. The reviewed studies showed that this can be traced partly to higher rates of school enrollment, but more importantly, to lower proportions of students who simultaneously participate in the labor force. However, whether this enrollment increase is indeed caused by the increased return to schooling or by other causes is not well established. Moreover, the reasons for lower LPR among students are an important research gap. Understanding these reasons would allow us to explain a significant share of the decline in the LFPR among youth.

The behavior of women's LFP has mostly differed from that of men, and many factors have affected its evolution in the last few decades. While the increasing participation rate of women contributed to the rise in the LFPR during most of the 20th century, it leveled off and stagnated after the 1990s and has even declined recently. Women are still increasing their investments in education, but this is not translating into a higher LFP. Some studies investigate the role of public policy (such as lower maternal benefits), others argue that persistent gender gaps in compensation and career opportunities have caused a slowdown of labor force participation of prime-aged married women in the United States. More research is needed to understand the current behavior of prime-aged women's LFP, as well as the future trends in female LFP. It would be useful to quantify how policies can affect these trends.

We review the evidence showing that changes in international trade and some technological advances have affected labor demand and have reduced employment and labor force participation rates in geographic areas where the labor markets were more vulnerable to them. This literature finds substantial trade effects on employment, suggesting for example that the rise of China in international trade has resulted in a reduction of 2.4 million jobs (Autor et al. 2013). A similar approach applied to technology finds no overall effect, with automation reducing wages and employment in "middle-skilled" occupations, but increasing it in low-skilled services not subject to automation and in high-skilled occupations. On the other hand, recent work focusing on one specific innovation, industrial robots, has found an important effect by which the latest advances in this area reduced employment by about 0.34 percentage points. Though the research is compelling, these results arise from local estimations, thus more research is needed to translate these results into what they imply for

employment in equilibrium and the LFPR for the country as a whole. A macroeconomic approach may be useful for this purpose.

Among the main gaps that we identify are the following: the extent to which the opioid epidemic is causally affecting the LFPR; the reasons behind increased school enrollments and lower participation rates of students; translating the effects of trade and technology on employment in local labor markets and specific industries to the national economy; the effects of the declining minimum wage on overall participation rates. Future research on these areas would allow a more complete understanding of the decline in participation and provide useful knowledge to inform policy decisions. Additionally, the literature offers evidence on how several factors affect different subgroups' LFP, but those factors' aggregate impact on the secular trend over the last couple of decades has not been measured. It would be especially interesting to compute a decomposition of the relative importance of each factor. A general equilibrium setting would account for the indirect effects of changing trends and policies.

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