



Policy Note

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LOSING GROUND: DEMOGRAPHIC TRENDS IN US LABOR FORCE PARTICIPATION

FERNANDO RIOS-AVILA

The US labor force participation rate for people aged 25–64 has continued to fall since the Great Recession. Much of the improvement in the US unemployment rate is due to an increasing number of people not being counted as working or looking for work, as reported by Papadimitriou, Hannsgen, and Nikiforos (2013). Our analysis shows that while virtually all groups have suffered in terms of employment rates and real wages, the impact of declining labor force participation has not been uniform across all groups—some groups have experienced greater declines than others, while rates for some groups have actually increased—just as the declines in real wages have not been uniform across demographic groups (Rios-Avila 2015). This policy note examines the trends in labor force participation rates since 1989 for the US population aged 25–64.

Although it is commonly understood that part of the broader decline in US labor force participation is due to the aging of the population, this is not the only significant demographic transformation that has been affecting the participation rate. This policy note presents an alternative, “adjusted” measure of labor force participation that takes into account the changing demographic profile of the population aged 25–64. This alternative measure allows us to isolate changes in labor

FERNANDO RIOS-AVILA is a research scholar at the Levy Economics Institute of Bard College. Thanks to SIMON POPKIN for the superb research assistantship.

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force participation that are not attributable to shifts in the gender, age, education, or racial composition of this population. In addition, the policy note analyzes changes in participation rates *within* particular demographic groups over the period 1989–2013. Our analysis examines the trends in labor force participation by gender, age, education, and race in order to better understand the changing landscape of the US labor market and to provide a solid foundation upon which to craft public policy going forward. Distinguishing the various forces affecting labor force participation rates can aid in the selection of well-targeted policy tools. We begin with a brief overview of labor force participation as a measure of the job market and workers’ expectations for finding paid work.

Labor Force Participation and Labor Markets

Labor force participation is often seen as a personal choice to enter the paid workforce, balancing priorities for income, leisure, household production, and other activities. However, as is often noted by economists who study gender or race issues, labor force participation is also a function of economic and institutional forces that shape the labor market, as it reflects the capacity of the economy to create jobs that motivate and sustain labor force participation over time. Individuals may face competing demands between earning a wage and household production, particularly when they cannot afford to purchase substitutes for foregone household production. Thus, labor force participation may serve as an indicator of the ability of people who are willing and able to work to enter the labor market, either by working for wages or by actively looking for a job. In this sense, while labor force participation reflects a personal decision about how to balance life and work, it should also be considered in the context of the economic and institutional barriers that might support or constrain entering the labor market.

Given the protracted fall in real wages in recent decades for the majority of American full-time workers (Rios-Avila and Hotchkiss 2014), the modest progress seen for workers with a college or graduate education (Rios-Avila 2015), and the continued growth of income inequality (Alvaredo et al. 2013; Papadimitriou et al. 2015), labor force participation can be seen as a combined measure of labor market health (i.e., the share of employed people) and job seekers’ expectations of finding employment. Given the weak labor market in the current recovery and declines in real wages for most workers, it is difficult to

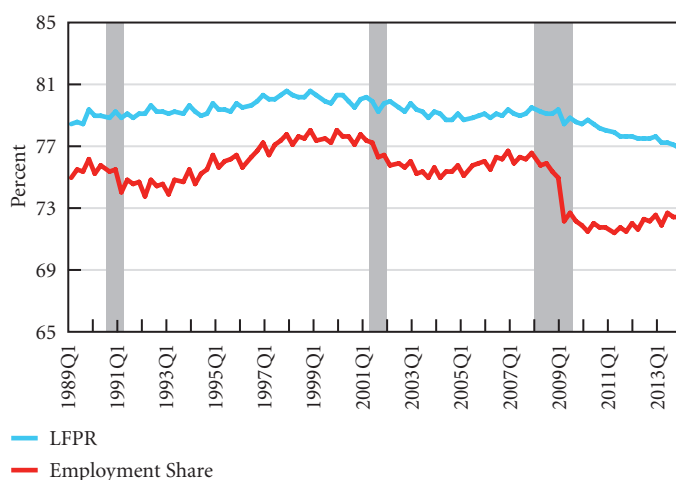
argue that the most vulnerable segments of the population have decided to choose leisure over earning wages. It seems more plausible that these workers have become discouraged or have fallen out of the labor market, and are being “left behind” by the economy. This concern might be especially relevant for people of prime working age (25–44) and among the least educated, with the lowest potential income.

The following examines trends in the labor force participation of people aged 25–64 in the United States between 1989 and 2013.¹ The analysis includes both the nominal trends in labor force participation and trends controlled for changes in the demographic structure of the labor force, in terms of age, education, sex, and race.² It includes broad trends in the labor force participation rate (LFPR) as well as trends for specific demographic subgroups.

The US Labor Force Participation Rate: The Big Picture

The labor force participation rate is defined as the share of the civilian, noninstitutionalized population currently working or actively seeking a job. While official statistics typically provide the LFPR for the population 16 years of age and older, this analysis focuses on the population between 25 and 64 years old. This group represents the core of the working population—

Figure 1 Labor Force Participation and Employment Rates, Ages 25–64



Note: Shaded areas in all figures indicate US recessions.

Source: Author’s calculations based on IPUMS-CPS basic monthly data

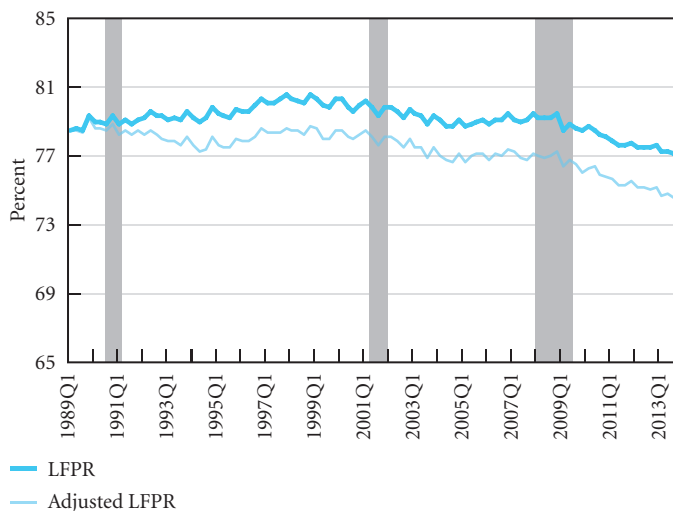
66.5 percent of the 16-and-over population and 81 percent of the 16-and-over labor force—and thus should provide a robust indication of the trends in labor force participation. Using Current Population Survey (CPS) basic monthly data, arranged by quarters, we first estimate the LFPR and employment rate for the period 1989–2013 (Figure 1).

The overall trends in the nominal LFPR (for ages 25–64) reflect the same general developments reported by the official statistics from the Bureau of Labor Statistics (for the 16-and-over population).³ Between 1989 and the end of 1999, the LFPR exhibits an upward trend. This is partially explained by the faster rates of job creation compared to job destruction (Shimer 2012) and changes resulting from welfare reform in the early 1990s and in 1996, which reduced public assistance participation and increased the labor force participation of households (Schoeni and Blank 2000). After 1999, however, this upward trend was followed by a decline that accelerated after the Great Recession. Based on the trends in the employment share,⁴ this pattern suggests that the sharp increase in the unemployment rate had a large impact in terms of discouraging labor force participation, which could explain the rapid decline in the overall LFPR.

While this measure of the raw labor force participation rate is useful for a quick assessment of the labor market as a whole, it has limitations, as it can mask the role that demographic forces play in a changing LFPR. Using a reweighting strategy,⁵ it is possible to estimate the LFPR by holding the demographic profile of the population—in terms of age, education, sex, and race—constant at the proportions observed in 1989. This approach allows for a better comparison of the trends in the LFPR and permits us to conduct an “apples-to-apples” analysis of labor force participation rates for the period 1989–2013, adjusting for the changes in demographic characteristics since 1989. In other words, this strategy enables us to analyze the changes in labor force participation absent shifts in the demographic characteristics of the labor force. As we shall see (Figure 2), a different picture of labor force participation emerges when we control for age, sex, education, and race.

Following the 1990 recession, rather than observing an increasing LFPR, workers would have seen a decline in their job market opportunities but for demographic changes over this period. We observe similar patterns following the recessions in 2001 and 2008–9. By the end of 2013, the adjusted LFPR had fallen from 78.5 percent in 1989 to 74.1 percent. This is more than double the decline observed in the unadjusted LFPR (i.e.,

Figure 2 Labor Force Participation Rates, 1989–2013



Source: Author’s calculations based on IPUMS-CPS basic monthly data (quarterly)

78.5 percent to 76.9 percent). In other words, if not for changes in the demographic characteristics of the US population, an additional 4.6 million workers would have been left out of the labor force as a result of an increasingly weak US labor market.

Based on the analysis in Hotchkiss and Rios-Avila (2013), Aaronson et al. (2012), and Van Zandweghe (2012), these LFPR declines, and in particular those following the Great Recession, appear to be linked to the business cycle, a rising unemployment rate, and increases in the duration of unemployment. These trends in the macroeconomic indicators and unemployment are reflected in weak job creation and reduced expectations for finding a job. The combined effect is a larger number of discouraged workers leaving the labor market. We note that this pattern accelerated during and after the Great Recession. The most recent recession was followed by a “jobless” recovery in which high unemployment and historically long unemployment duration for many workers further lowered the expectations of job seekers.⁶

In order to create policies to reverse the trend of declining labor market participation we must first identify the groups that have been most affected by this process. The first task is to investigate whether the decline in labor force participation has been even across all groups, and therefore a reflection of a weak job market for all, or if some groups have been left behind more than others, which would suggest that policies targeting specific

types of job creation are needed. We begin with a decomposition of labor force participation rates by gender.

Gender and Labor Force Participation

It has been widely reported that one of the major contributors to growth of the LFPR, from the 1960s to the early 2000s, has been the higher labor force participation of women (Juhn and Potter 2006; Hotchkiss 2006; Aaronson et al. 2012). Despite the growth of the US economy, however, men have experienced a declining trend in their LFPR since at least the 1960s (Juhn 1992). As indicated in Figure 3, men have continued to experience a steady decline in their labor force participation rate over the 1989–2013 period in both “nominal” and “adjusted” terms, a continuation of a long-term decline in their participation rates that started before 1989. Since 1989, male nominal LFPRs have declined five percentage points, from about 89 percent to 83.8 percent (80 million in 2013). Controlling for demographic changes, men’s labor force participation rate is slightly lower, at 82.4 percent. Similar to Juhn and Potter (2006), and as discussed below, much of this change appears to be tied to lower participation by less skilled workers (e.g., men with less than a high school education), although it also seems to be related to a decline in the labor force participation of white, middle-aged workers.

Women, representing just over half of the population, have been the driving force behind the steady increase in US labor force participation rates between the 1960s and the early 2000s. As indicated by Juhn and Potter (2006), the reversal in women’s

labor force participation represents a setback to the long-term trend of nearly four decades of rising rates for women.

Women’s nominal LFPR reflects many of the changes observed for the population as a whole. Between 1989 and the end of 1999, the LFPR of women shows a rapid increase from 69 percent to almost 73 percent. While this rate remains below the participation rates of men during the same period, the continued increase in the participation rates of women in the early 1990s compensated for the decline of the LFPR of men. After the 2001 recession, however, the decline in men’s labor force participation was not offset by a continuing increase in the LFPR of women. During and after the Great Recession, the halt in economic growth and subsequent slow recovery further accelerated the contraction in the labor force participation of both men and women. Given the historical wage disparities between men and women, this decline in the male LFPR represents a substantial loss of household income; a loss that was not, in contrast with the early ’90s, compensated for by higher female participation rates.

Using the adjusted LFPR reveals that while the labor force participation of women still increased during the 1990s, it did so at a slower pace than the official statistics suggest, with an increase of only two percentage points between 1989 and 2000 (compared to four percentage points as per the official statistics). However, after the 2001 recession and the period of stagnation that followed, the labor force participation of women fell. After the Great Recession, it fell again (by three percentage points), this time over an even shorter period. The recession of

Figure 3a LFPR: Men

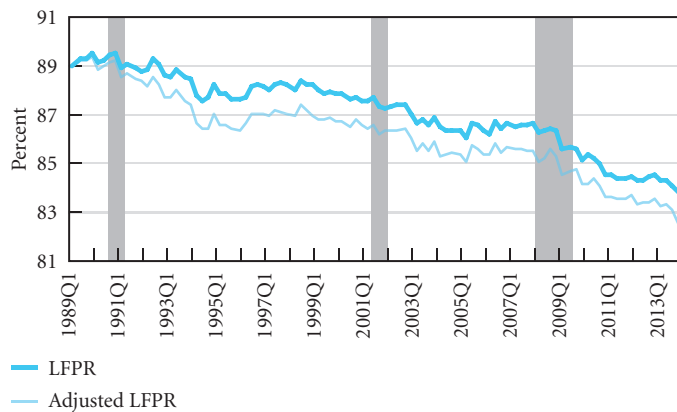
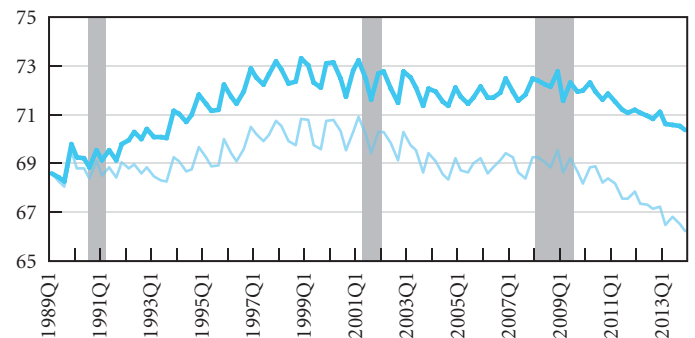


Figure 3b LFPR: Women



Source: Author’s calculations based on IPUM-CPS basic monthly data (quarterly)

2001 and the Great Recession both contributed to the deterioration of labor market conditions women faced, and their adjusted LFPR declined at the same pace as the adjusted LFPR for men. The probability of a “typical” woman (i.e., with the demographic characteristics of a woman in 1989) participating in the labor market declined from about 69 percent before the Great Recession to 66.2 percent in 2013 (Figure 3b), which is more than four percentage points lower than the official statistic of 70.2 percent. In other words, if the demographic composition of women (e.g., age, education, and race) had been the same as in 1989, roughly 3.5 million fewer women would have been in the labor market in 2013.

Age and Labor Force Participation

One of the most notable changes in the demographic composition of the US population has been the change in its age structure. As the baby boom generation ages, there has been an increasing representation of older cohorts in the labor force and slower replenishment of younger cohorts in the labor force. At the beginning of 1989, the population age 25–44, arguably the group with the strongest motivation to participate in the labor force (e.g., completed their initial formal education, forming households, etc.), represented nearly 63 percent of the population, while the population 55–64 years old, a group that would,

historically, be approaching retirement age, represented 17.3 percent of the population. By the end of 2013, the share of the youngest cohort had been reduced to less than 50 percent of the population, or 81.4 million people, while the share of the oldest group had increased to 24 percent, or 39.3 million people. While continued aging of the population might have an impact on the sustainability of the Social Security system in the United States, this age 55–64 group might also have a large impact by significantly reducing the potential labor force when they retire. In the short term, however, older people are not only growing as a share of the population, but also as a share of the labor force itself, as more and more of them seem to be postponing retirement (Goda et al. 2011) and remain active in the labor force.

Workers Aged 25–34 and 35–44

Men between 25 and 44 years old (Figure 4a) experienced trends similar to those observed for men as a whole (Figure 3a). While their participation rates declined up to 1994, mostly due to the continuing long-term slide in the LFPR of men in general, this decline stalled in the years leading up to the 2001 recession. From the beginning of the 2001 recession to the end of 2013, the nominal LFPR of men aged 25–34 fell about four percentage points, nearly twice the drop experienced by men 35–44 years old. It may be that younger men, facing a discouraging job market, were more likely to remain in school or to

Figure 4a LFPR: Men, Ages 25–44

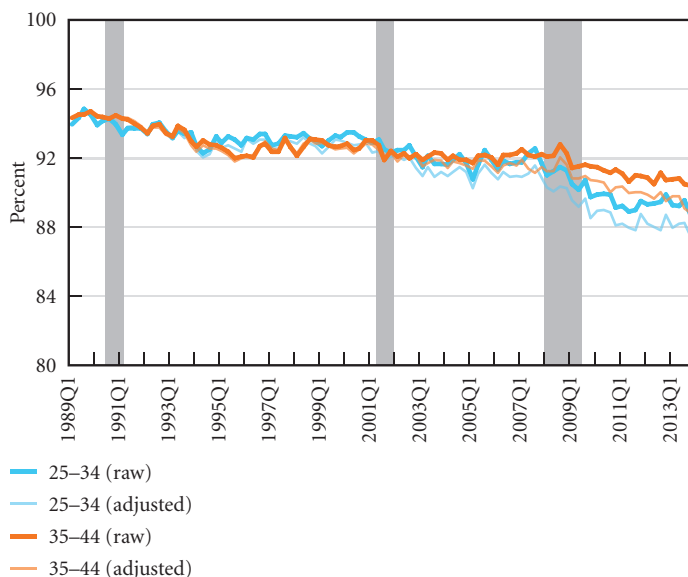
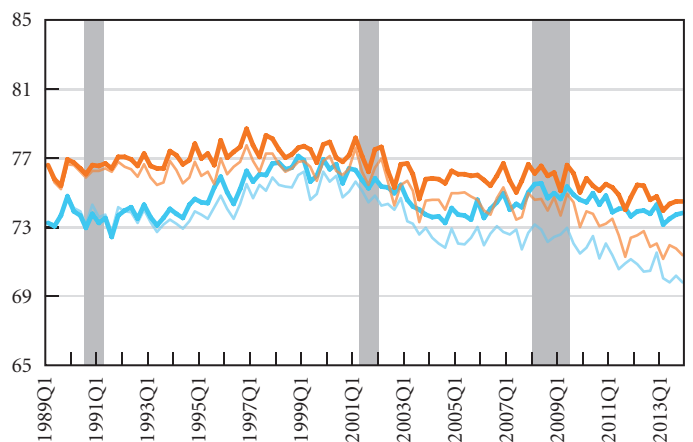


Figure 4b LFPR: Women, Ages 25–44



Source: Author’s calculations based on IPUM-CPS basic monthly data (quarterly)

return to school (Hotchkiss et al. 2012) in order to avoid looking for a job during the recession and to acquire new skills. The trends in the adjusted LFPR rates for men 25–44 years of age show small differences compared to the unadjusted figures, albeit more pronounced toward the end of the period.

Women aged 25–34 and 35–44 have notably lower LFPRs than men, and have not shown a clear trend in their LFPR compared to their male counterparts. While women aged 25–34 saw a relatively flat trend in their labor force participation (both nominal and adjusted) between 1989 and 1993, they saw a rapid increase in their LFPR between 1994 and 1999. Some researchers have linked this change to the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (Juhn and Potter 2006), which created incentives to participate in the labor market, particularly for married women. In a similar manner, women 35–44 also experienced an upward trend around the same period, albeit to a lesser degree, probably due to the same effects of welfare reform.

Following a short period of stalled participation rates after the 2001 recession, the rates for both groups of women (25–34 and 35–44) show a steep decline—steeper than that experienced by their male counterparts. By the beginning of 2004, female nominal LFPRs were almost four percentage points below peak levels in 1999, and after a brief period of recovery, the combined nominal LFPR for women aged 25–44 declined to about 74 percent by 2013. The adjusted LFPR trends indicate

that the pre–Great Recession recoveries in the labor supply were caused by demographic changes. After the Great Recession, the adjusted LFPR indicates women from both age groups withdrew from the labor force in large numbers, showing larger declines than their male counterparts aged 25–44. Between 2000 and 2013, the LFPRs for women aged 25–34 and 35–44 declined by almost four percentage points, or up to seven percentage points when adjusted for changes in demographics. While women in these age groups may have also opted to exit the labor market to go back to school, evidence from time-use survey research (Khitarrishvili and Kim 2014) also suggests that women and men in poverty may have decided to leave the labor market to engage in household production.

Workers Aged 45–54

The nominal LFPR for men aged 45–54 (Figure 5a) follows the pattern of the 25–64 population, with a higher level of labor participation, albeit lower than younger cohorts, and a faster decline, particularly after the Great Recession. From 1989Q1 to 2013Q4, the nominal LFPR for men in this age group fell from just under 91 percent to 85 percent. The adjusted rate shows a much sharper decline of 9.6 percentage points, compared to the 5.8 points indicated in the official statistics—one of the largest declines in the adjusted LFPR experienced by the groups in this analysis. Most of the divergence between the adjusted and nominal LFPRs comes from a rapid decline in participation rates

Figure 5a LFPR: Men, Ages 45–54

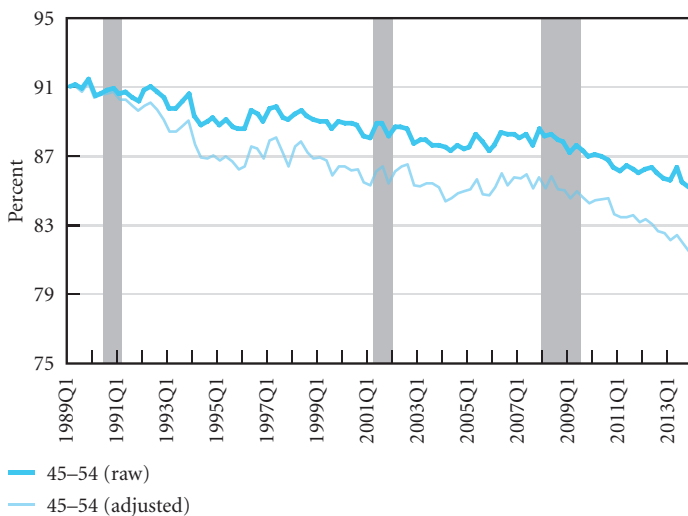
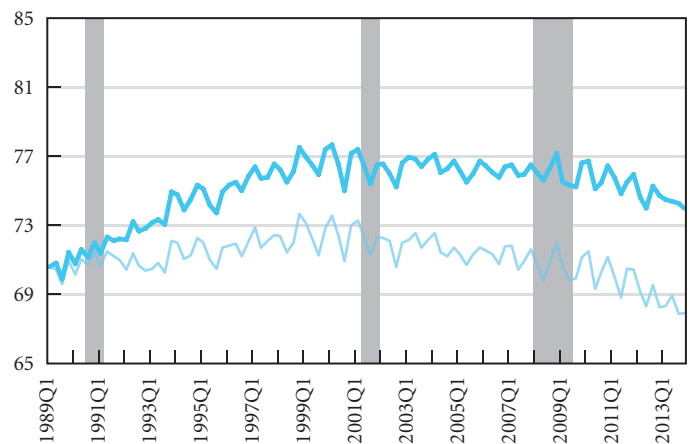


Figure 5b LFPR: Women, Ages 45–54



Source: Author’s calculations based on IPUM-CPS basic monthly data (quarterly)

before 1994. To some extent, this decline can be explained by a shift in the demand for labor toward better-educated and more-skilled workers, and toward younger and lower-paid workers, as evidenced by the slower decline in the LFPR of young workers.

Women between 45 and 54 years of age (Figure 5b) show a relatively rapid increase in their nominal labor force participation beginning in 1989, rising from 70 percent to around 77 percent by 2000. After 2000, this group’s participation rate remained relatively flat, with a minor decline during the Great Recession (about two percentage points). However, after controlling for demographic changes, women’s LFPR increased more modestly until 2000. After the 2001 recession, their adjusted labor force participation fell steadily, with an accelerated decline after the Great Recession (an overall decline of four percentage points), almost at the same rate as their male counterparts aged 45–54.

Workers Aged 55–64

Partially due to changes in the Social Security system, the aging of the baby boom generation, and attendant shifts in their expectations for retirement, the share of people 55 to 64 years old—relative to the population, the labor force, and the employed population—has shown a dramatic increase in recent decades (Goda et al. 2011; Juhn and Potter 2006). The rapid increase in education level among this cohort, in particular the declining share of 55–to-64-year-old workers with less than a high school education, accounts for almost all of the gap between the observed

and adjusted labor force participation rate. In the absence of job creation, this trend can be considered one of the obstacles for younger workers hoping to enter the labor force, as they are facing a market that includes a greater number of older and more highly educated workers who are not leaving the labor force as fast as other cohorts.

While people aged 55–64 have a lower participation rate than any other group in our analysis, they are the only group that shows a clear increase in their nominal LFPR since 1994.⁷ Based on this trend, it is tempting to assume that older workers are staying in their jobs longer than in the past and therefore blocking the turnover for younger workers. However, our analysis suggests that men aged 55–64, after controlling for changes in education and racial composition, have experienced a modest decrease in their LFPR since 1989, compared to younger cohorts (Figure 6a).

For women, the story seems to be different. Historically, women aged 55–64 have had a relatively low LFPR, but they have shown a dramatic increase in their participation rates in the 25 years studied. Their nominal LFPR rose 14 percentage points compared to 1989, and almost 4.5 percentage points after adjusting for demographic factors. It is only in the most recent years analyzed (after the Great Recession) that they have shown a small decline in their adjusted LFPR.

Overall, older workers, and in particular older female workers, are faring better in the labor market compared to their

Figure 6a LFPR: Men, Ages 55–64

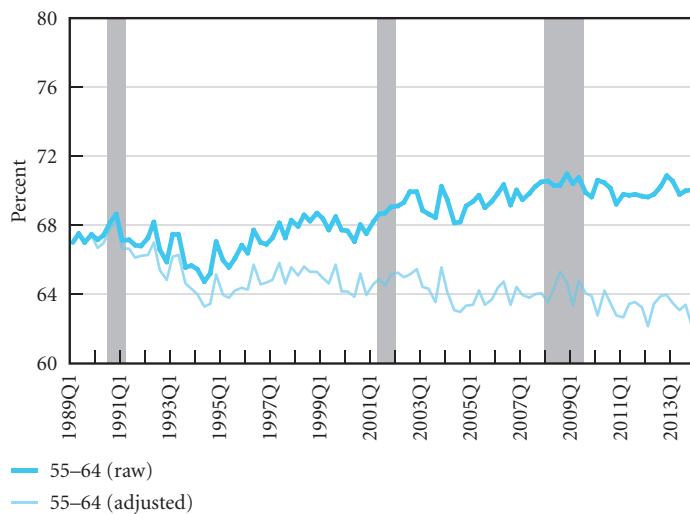
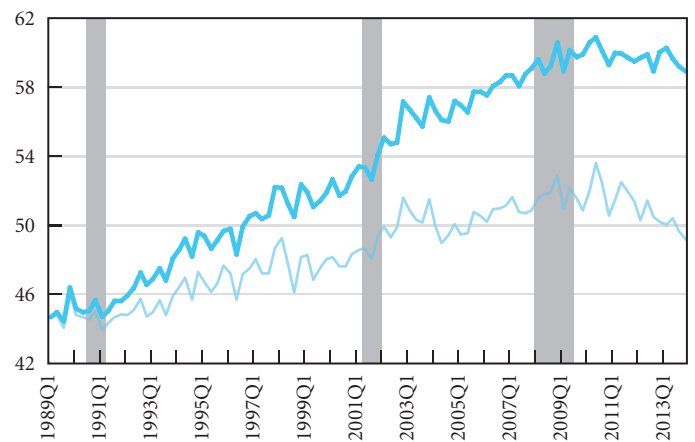


Figure 6b LFPR: Women, Ages 55–64



Source: Author’s calculations based on IPUM-CPS basic monthly data (quarterly)

younger counterparts. Older workers on the whole have been able to maintain their participation in the labor force, while younger groups have shown declines. In an environment of weak job creation, the lower turnover reduces the opportunity for people to move into senior positions. However, given the fact that the education level of older workers is higher than in the past, their participation rates are not out of line with those of older, more educated workers in the past. The problem is the absence of job creation rates that would enable younger workers to enter the labor market while sustaining the longer job tenure associated with more highly educated older workers.

Education and Labor Force Participation

One very important change in the US population between 1989 and 2013 was the growing level of educational attainment. Whereas in 1989 about 18 percent of the population between 25 and 64 years of age had less than a high school education, by 2013 only about 9 percent of the population (approximately 14.8 million people) had less than a high school education. Similarly, while only 23.3 percent of the population had at least a college degree in 1989, 33.5 percent held a college diploma in 2013. While higher education can increase an individual’s job oppor-

tunities—as higher education is associated with higher rates of labor force participation, lower unemployment rates, and higher wages and productivity—in the aggregate, people at all levels of educational attainment have experienced declines in their LFPRs, albeit to varying degrees. In addition, while men continue to present the highest levels of labor force attachment at all education levels, women have been gaining ground as men’s skills and educational attainment have declined (Juhn and Potter 2006; Autor and Wasserman 2013).

Both men and women with either a high school education or some college have experienced trends similar to the population as a whole (25–64 years of age). While the declines are less pronounced after adjusting for demographics, they remain larger than those observed for the overall population. For both groups, people with a high school education and those with some college, the rapid decline in LFPRs observed during and after the Great Recession may reflect their decisions to return to school and acquire more education (Hotchkiss et al. 2012). However, for those coming from the poorest households, it is possible that they left the paid workforce and decided to engage in household production activities (Khitarishvili and Kim 2014).

Men and women with less than a high school education present the lowest levels of labor force attachment compared to

Figure 7a LFPR by Education Level: Men

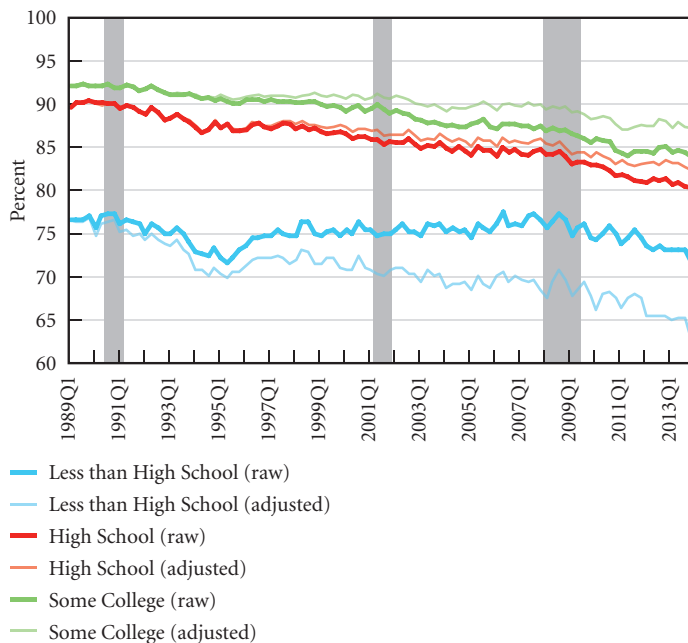
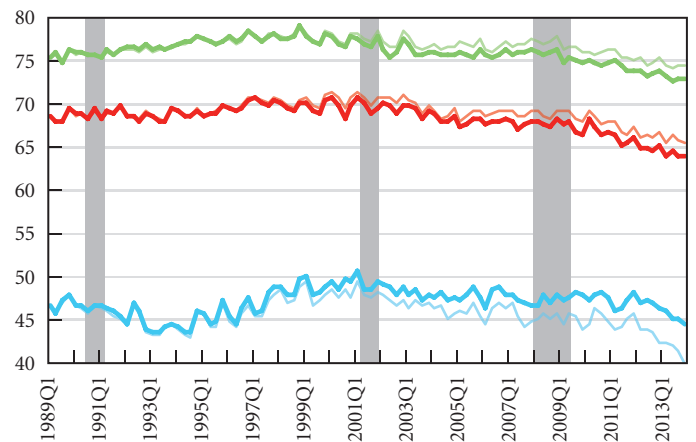


Figure 7b LFPR by Education Level: Women



Source: Author’s calculations based on IPUM-CPS basic monthly data (quarterly)

other education groups, and show different trends compared to any other demographic group (Figure 7). Men, except for a brief decline in the nominal LFPR between 1989 and 1994,⁸ showed a rather stable, and even slightly increasing trend in their labor force participation until 2007. However, after 2007 men’s nominal LFPR declined rapidly, by approximately five percentage points. Women with less than a high school education exhibit a similar trend. After experiencing a steady increase in their nominal LFPR between 1994 and 2000—at a rate faster than their male counterparts—they saw very little decline in the years leading up to the Great Recession, only to experience a relatively sharp decline after the recession ended. As noted in Rios-Avila (2015), this group of high school dropout workers experienced some of the largest wage declines. Thus, the sustained labor force participation of this group in a weakening job market and declining real wages could have been the result of a population desperately seeking employment and trying to maintain their standard of living.

After adjusting for demographic changes, the labor force participation rate of the least educated groups has indeed fallen, particularly for men. A detailed analysis of this group (not included in this note) shows that this faster decline in the adjusted LFPR among the least educated workers can be observed across all age groups, and that it is concentrated

among white and black workers.⁹ Among those with less than a high school education, only Hispanic workers have experienced a flat or increasing level of labor force participation (up until 2007). In other words, the higher labor force attachment of Hispanics with less than a high school education, combined with the rapidly increasing representation of this population among high school dropouts, has sustained an apparently high level of LFPR among people with less than a high school education.¹⁰

These results should be regarded with caution. It is possible that both white and black workers with less than a high school education are showing declines in their labor force attachment because they have become discouraged by the lack of jobs with fair wages and face increasing competition from workers of Hispanic descent. However, one must keep in mind that both white and black workers are rapidly gaining more education, and only a small share of these workers remain in this segment of the labor market.

Finally, both men and women with at least a four-year college or graduate degree have been the least affected, relative to other educational groups, in terms of changes in their LFPRs, even after accounting for demographic shifts (Figure 8). After some fluctuation between 1989 and 2001, women’s nominal LFPR remained, on average, stable/flat during and after the 2001 recession, and rose slightly after adjusting for the demo-

Figure 8a LFPR by Education Level, Postsecondary: Men

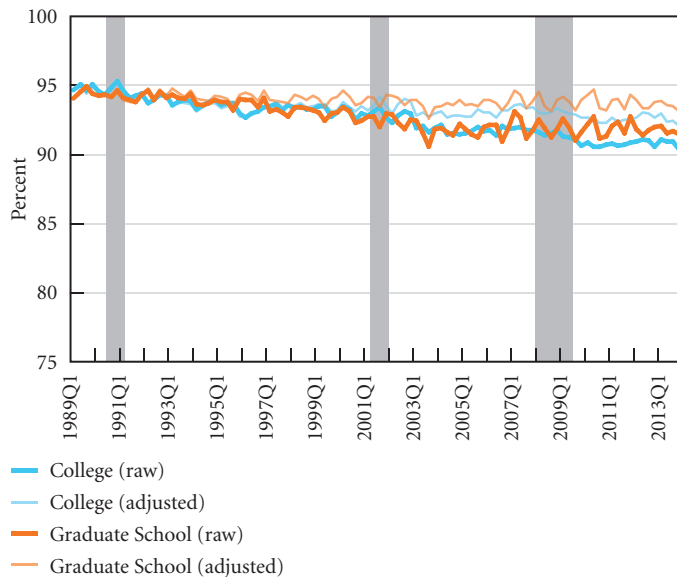
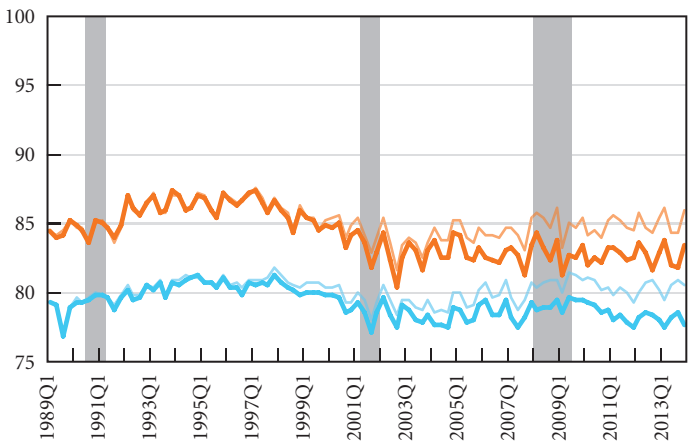


Figure 8b LFPR by Education Level, Postsecondary: Women



Source: Author’s calculations based on IPUM-CPS basic monthly data (quarterly)

graphic changes in the population. As suggested by Autor and Wasserman (2013), this is also an indication that the technological shift that has increased the relative demand for high-skilled workers has benefited the labor force attachment of women with a college or graduate education more than men with the same educational attainment.

Race and Labor Force Participation

Due to the constant waves of immigration, higher birth rates, and increasing rates of intermarriage, the number of people with Hispanic ancestry has risen dramatically, creating a shift in the racial composition of the United States. In 1989, about 23 percent of the population between 25 and 64 years of age was classified as nonwhite;¹¹ by the end of 2013, 36 percent—roughly 59 million people—fell under this classification. This change was largely driven by the growth of the Hispanic and Asian communities. As mentioned above, both groups have seen their LFPRs trend rather differently.

Figures 9a and 9b present the labor force participation trends for white, black, and Hispanic workers, by sex. White and Hispanic men have the strongest attachment to the labor market, with black men showing the lowest participation rates.

While black and white workers have very similar nominal LFPR trends (albeit at different levels), black men exhibit a faster decline in their LFPR once we adjust for demographic characteristics. Hispanic men, who are part of the fastest-growing segment of the US population, not only show levels of labor force participation comparable to those of white men from 1989 until the 2001 recession but even surpass their labor force participation rates after 2003. This, as suggested in the previous section, can be related to the fact that workers of Hispanic descent with low levels of education show a stronger attachment to the job market compared to men from other groups.

Comparing white and black women, it seems they have experienced virtually the same trends in their LFPRs across the period analyzed. However, the 1990 recession and, more recently, the Great Recession had a stronger impact on the labor force attachment of black women, which can be observed in the adjusted statistics. In the case of Hispanic women, while they have a much lower attachment to the labor market compared to both white and black women, they are the only group that shows a mild increase in their LFPR since 1996. After adjusting for the changes in demographics, Hispanic women maintained basically the same level of participation in the labor market through the last two recessions.

Figure 9a LFPR by Race: Men

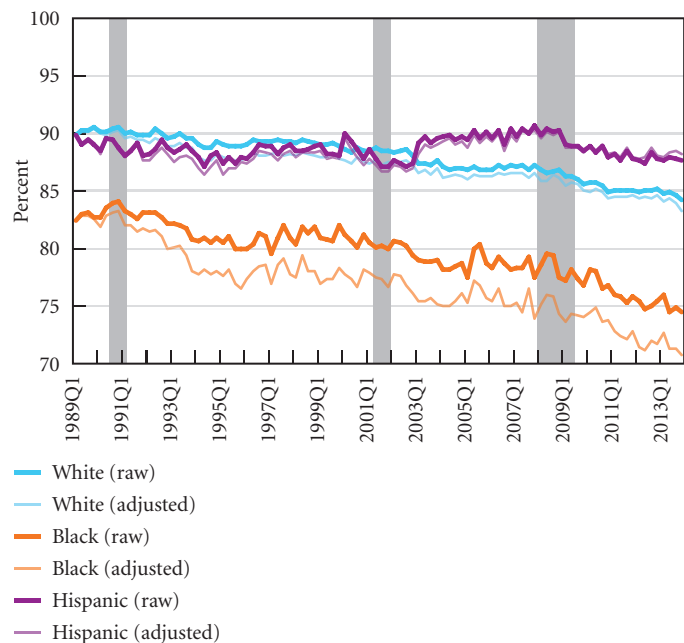
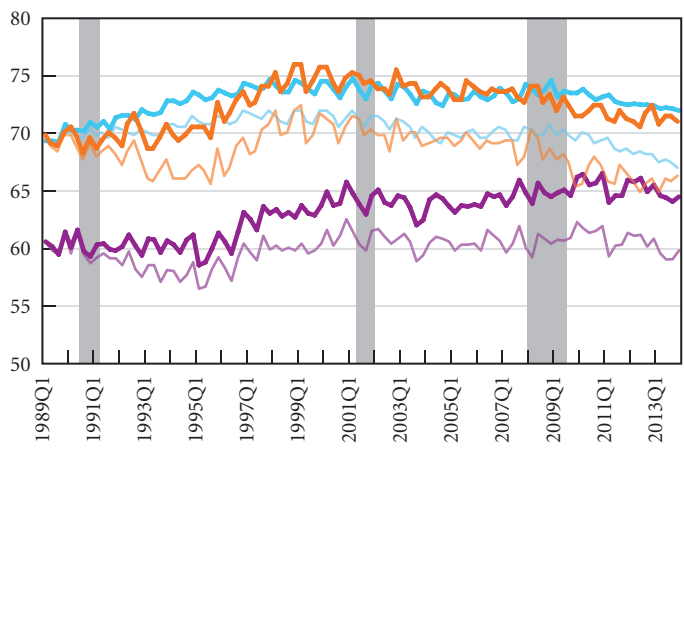


Figure 9b LFPR by Race: Women



Source: Author's calculations based on IPUM-CPS basic monthly data (quarterly)

Conclusions and Policy Implications

This analysis shows that there has been a substantial degree of heterogeneity in the LFPR across different segments of the population aged 25–64. In contrast to the official statistics, we find that the labor force participation rate showed a more drastic decline between 1989 and 2013, with only a brief recovery before the 2001 recession that was driven by an increase in the LFPR of women.

While the decline in men’s labor force participation over the 1989–2013 period was a continuation of a long-term trend, the post-2001 decline of women’s labor force participation—the main engine driving the rising LFPR of the population as a whole before the 2001 recession—has played a large role in the overall declining LFPR observed in the economy since 2001. We infer that the combination of economic conditions and institutional forces that supported expanding labor force participation for decades is either no longer effective or has been outpaced by other negative developments in the labor market. In other words, declining wages and the slow pace of job creation have discouraged workers, and large numbers have dropped out of the labor force. For both men and women, worsening labor market conditions might have created incentives to return to school and/or attempt to alleviate income shocks by engaging in more household production. The results also suggest that, but for changes in the demographic characteristics of the US population, an additional 4.6 million workers would have fallen out of the labor force during this same period. Our analysis also shows that after every US recession since 1989, the labor market did not fully recover, as seen in the accelerating decline in the LFPR.

While the youngest and most educated cohorts exhibit the smallest changes in their labor force attachment, older male and female workers have been the “winners” in this story, with a strong and stable participation in the labor market. Their participation has helped somewhat to stabilize the labor supply, in the same manner that women’s rising participation has done in the past. In contrast, workers aged 45–54 and the least educated (less than a high school education) have suffered the largest declines in their participation in the labor force compared to their peers.

Looking to the future, unless there are changes in the conditions of the economy and the labor market, one might expect the current trends of declining labor force participation to continue, which might have deleterious effects on the economy. While the changes to Social Security, combined with financial

pressures, might continue to create incentives for more and more older workers to remain in the labor market, they will eventually have to retire, leaving a vacuum in the labor force that younger generations might not be able to fill (i.e., there are fewer younger workers), especially in terms of the Social Security system’s long-term sustainability.

The United States must create policies to improve labor market conditions; create new jobs with a living wage for all workers, but especially for younger and less educated workers; halt the long-term decline of men’s labor force participation; and reignite the entry of women into the labor force.

Notes

1. We use 1989 as the base year, as it is the first year for which month-to-month data are available in the Integrated Public Use Microdata Series, Current Population Survey. IPUMS-CPS, University of Minnesota, www.ipums.org.
2. While there have been a number of important demographic changes in the overall population (e.g., decreasing household size, declining shares of married couples, delayed procreation), we control only for these factors for two reasons: (1) to maintain consistency and continuity with previous policy notes (Rios-Avila 2015; Rios-Avila and Hotchkiss 2014), and (2) these four factors explain the majority of the demographic changes observed in the data (i.e., controlling for other variables does not affect the descriptive power or conclusions drawn from this analysis).
3. For trends on the official LFPR, see <http://data.bls.gov/timeseries/LNS11300000>.
4. The employment share is defined as the total number of people employed divided by the total noninstitutionalized population.
5. In order to control for the demographic changes that occurred in the working-age population (ages 25–64) from 1989 to 2013, we apply a strategy akin to the semiparametric strategy used in DiNardo, Fortin, and Lemieux (1996) and Juhn and Potter (2006). To do this, we first estimate the overall labor force participation as the weighted average of the estimated labor force participation of the different groups, as defined by sex, race, education level, and age. The relative weight of each group is based on the size of the group relative to the overall sample in a given year and quarter. In order to keep the demographic proportions

- observed in 1989 fixed, we reestimate the labor force participation for each year and quarter, using the relative weights of each population group calculated in 1989.
6. These patterns have also been described in Fujita (2014).
 7. According to the official statistics from the BLS (see <https://research.stlouisfed.org/fred2/series/LNS11324230>), the labor force participation of older workers began to rebound before the 1990 recession.
 8. This decline is largely explained by changes in the definitions of educational attainment used by the CPS.
 9. The group classified as “other races,” mostly Asian descendants, also experienced some decline in their LFPR, but not to a lesser extent compared to whites and blacks.
 10. For the total population of 25- to 64-year-olds, the share of Hispanics increased from 8.8 percent to 16.1 percent between 1989 and 2013. Among the least educated, however, their share rose more sharply, from 21.8 percent to 49 percent.
 11. “Nonwhite” refers to anyone other than non-Hispanic whites.

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