

RESEARCH BRIEF

Lifetime Earnings in the United States over Six Decades

Based on BFI Working Paper No. 2021-XX, "[Lifetime Earnings in the United States over Six Decades](#)," by Fatih Guvenen, University of Minnesota and Federal Reserve Bank of Minneapolis; Greg Kaplan, Professor in Economics and the College, University of Chicago; Jae Song, Social Security Administration; and Justin Weidner, Deutsche Bank

KEY TAKEAWAYS

- ✓ Economists and policymakers have long focused on stagnating median earnings and rising income inequality
- ✓ Most existing research, though, is focused on point-in-time comparisons and analysis. This research takes a novel approach to this important issue by focusing on lifetime earnings of those who enter the workforce in particular years
- ✓ The lifetime earnings of the median male worker declined by at least 10 percent from the 1967 cohort to the 1983 cohort. Further, more than three-quarters of the distribution of men experienced no rise in their lifetime earnings across these cohorts
- ✓ The gender gap in lifetime earnings has been closing steadily since the mid-1960s; by the 1983 cohort, the lifetime earnings of women reached more than 60 percent of their male counterparts

The stagnation of average earnings and rising income inequality in the United States since the 1970s has not only motivated economic research but has also informed discussions about political shifts among various demographics, as well as inspired policy debates about how to address this long-run phenomenon. This is especially true when it comes to the fate of male workers.

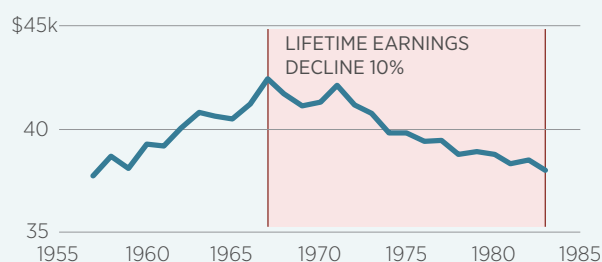
Despite this attention, existing research has focused on annual measures due to a lack of long and clean panel data on earnings, and has thus provided little insight into trends in lifetime earnings. In other words, what are the differences in lifetime earnings among workers who entered the workforce over ensuing years? In "Lifetime Earnings in the United States over Six Decades," Fatih Guvenen, Greg Kaplan, Jae Song, and Justin Weidner, address this question by analyzing lifetime earnings for millions of Americans over nearly six decades. This first-of-its-kind study offers key insights into generational income stagnation and income inequality in the United States. In so doing, it offers informative analysis for policymakers hoping to understand, and address, these important trends.

This Research Brief highlights the paper’s top-level findings, beginning with an examination of an often-overlooked fact—the significant drop in lifetime earnings of the median male worker—and then continues with an analysis of the trends between genders. A section at the end provides a high-level description of the paper’s methodology.

Lifetime Earnings for Men Have Declined

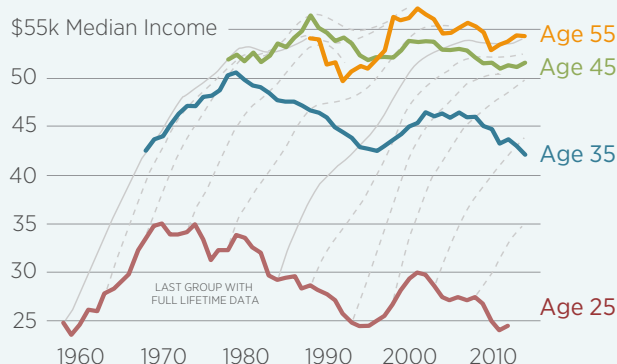
The lifetime earnings of the median male worker declined by 10 percent from the 1967 cohort to the 1983 cohort. Further, more than three-quarters of the distribution of men experienced no rise in their lifetime earnings across these cohorts. Accounting for rising employer-provided health and pension benefits partly mitigates these findings but does not alter the substantive conclusions.

Figure 1 • Median Lifetime Earnings by Cohort for US Males



Notes: Each marker/observation represents the median lifetime earnings of a cohort that turned age 25 (entered the labor market) in the year indicated on the x-axis. Values are displayed in thousands of 2013 US dollars. Earnings are deflated by the Personal Consumption Expenditure (PCE) deflator.

Figure 2 • Age Profiles of Male Median Earnings by Age Groups



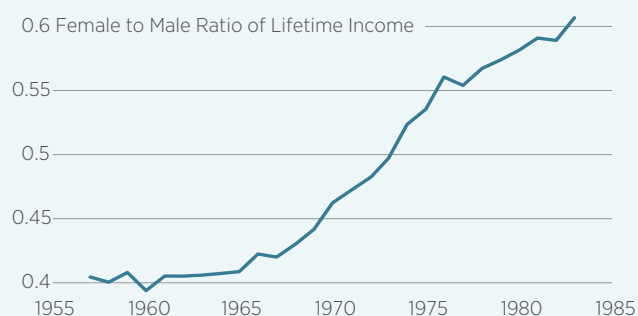
Notes: Each observation represents the median earnings of men of a particular age in a particular year. For example, the 1957 cohort is represented by an Age 25 observation in 1957, an Age 35 observation in 1967, an Age 45 observation in 1977, and an Age 55 observation in 1987. The dotted lines (solid for the first and last cohort with full life cycle profiles) connect all available age-year observations for every fifth cohort. All values are displayed in thousands of 2013 dollars and deflated using the PCE.

How are these changes reflected in wage/salary earnings? When nominal earnings are deflated by the personal consumption expenditure (PCE) deflator, the annualized value of median lifetime wage/salary earnings for male workers declined by \$4,400 per year from the 1967 cohort to the 1983 cohort, or \$136,400 over the 31-year working period.

Women have Experienced Large Gains vs. Declines for Men

The gender gap in lifetime earnings has been closing steadily since the mid-1960s. Figure 3 plots the ratio of the mean lifetime earnings of females to that of males and shows that for entry cohorts before 1965, the gender gap was stable, with women in these cohorts earning on average 40% of the lifetime earnings of men. After 1965, the gap started to close quickly (showing an almost linear trend), and by the 1983 cohort, the lifetime earnings of women reached more than 60% of their male counterparts.

Figure 3 • Mean Lifetime Earnings Gap by Gender

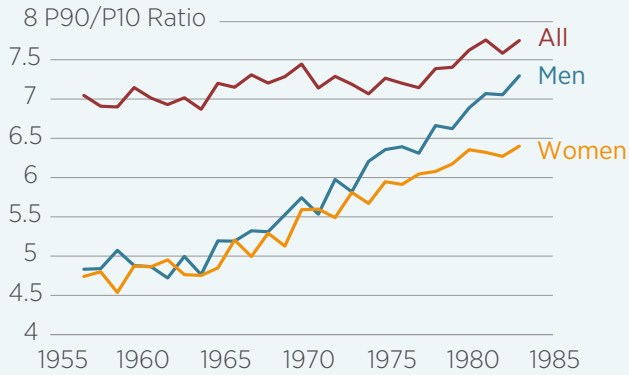


Notes: This figure displays the ratio of mean lifetime earnings of female cohorts to the mean lifetime earnings of the male cohort that entered the labor market in the same year.

Digging Deeper Within Genders

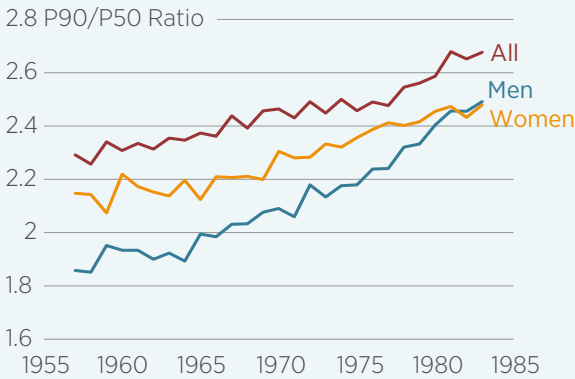
These broad measures mask significant changes over time within genders. Figure 4 below shows how inequality in lifetime earnings in the overall population has been mostly flat. Figure 5 plots the P90-P50 ratio, which measures inequality above the median (or P50), and Figure 6 plots the P50-P10 ratio, which measures inequality below the median. Starting with the trends for the whole population (red line), the P90-P50 ratio of the lifetime earnings distribution increased throughout the period, rising from 2.3 for the 1957 cohort to 2.7 for the 1983 cohort. In contrast, the P50-P10 ratio fell throughout the period, from 3.1 to 2.9.

Figure 4 • Overall Lifetime Inequality by Gender



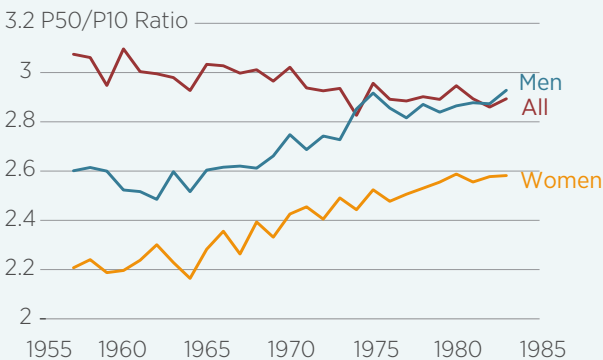
Notes: This figure displays P90/P10 of lifetime earnings distribution.

Figure 5 • Lifetime Inequality by Gender Measured Above Median



Notes: This figure displays the ratio of the 90th percentile to the 50th percentile of lifetime earnings within each cohort, separated by male cohorts, female cohorts, and men and women combined.

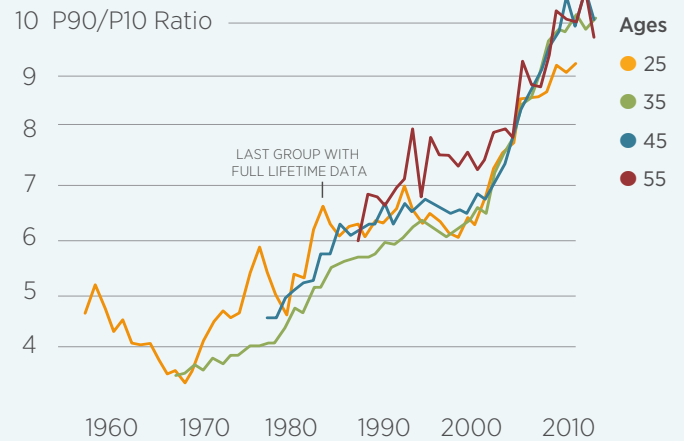
Figure 6 • Lifetime Inequality by Gender Measured Below Median



Notes: This figure displays the ratio of the 50th percentile to the 10th percentile of lifetime earnings within each cohort, separated by male cohorts, female cohorts, and men and women combined. Earnings is deflated using the PCE.

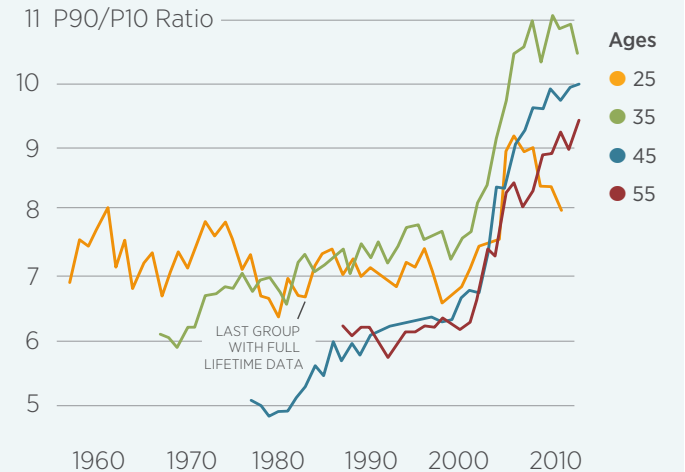
For men, inequality at entry rises for subsequent cohorts, and this is what drives the increase in lifetime inequality for men—not greater growth in inequality over the lifecycle. The same is not true for women, at least until 2000s, which display a more complex pattern. For women, the rise in inequality is due to steepening lifecycle profiles in newer cohorts. In fact, inequality was declining for women in the first 15-20 years of their lifecycle for the first 20+ cohorts. This pattern reversed to rising inequality with age after that.

Figure 7 • Cross-Sectional Inequality in Men, by Age



Notes: This figure displays the ratio of the 90th percentile to the 10th percentile of earnings for men within each age-year group.

Figure 8 • Cross-Sectional Inequality in Women, by Age

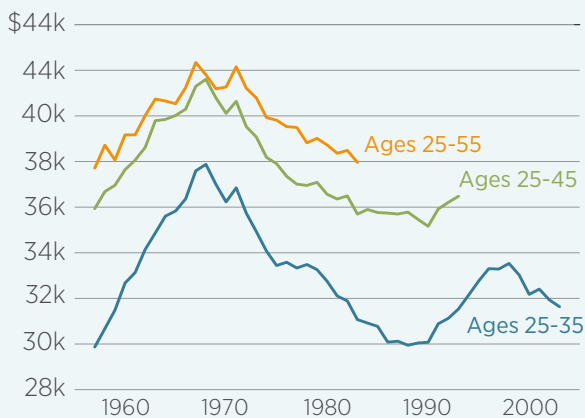


Notes: This figure displays the ratio of the 90th percentile to the 10th percentile of earnings for men within each age-year group.

Is the Past Prologue for Likely Long-Run Earnings?

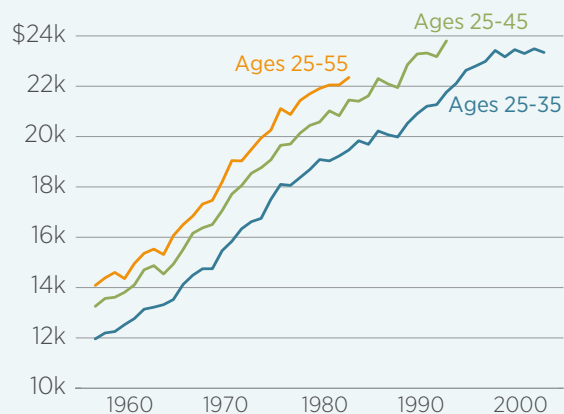
For men, median total earnings in the 11 years from ages 25 to 35 follow a trend across cohorts that is like the trend in lifetime earnings; however, it is substantially more pronounced. Figure 9 below shows that between the 1957 and 1967 cohorts, median total earnings increased by 26 percent (from \$29,900 to \$37,600), and then declined by 17 percent from the 1967 to 1983 cohorts (from \$37,600 to \$31,100). In other words, trends in earnings at young ages are particularly informative about trends in lifetime earnings.

Figure 9 - Median Earnings for Men by Age Groups



Notes: Each observation represents the median earnings of a cohort, measured over the first 10 years, first 20 years, or full 30 years of a cohort's working lifetime, for the year the cohort entered the labor market. Values are displayed in thousands of 2013 US dollars and deflated using the PCE.

Figure 10 - Median Earnings for Women by Age Groups



Notes: Each observation represents the median earnings of a cohort, measured over the first 10 years, first 20 years, or full 30 years of a cohort's working lifetime, for the year the cohort entered the labor market. Values are displayed in thousands of 2013 US dollars and deflated using the PCE.

For women, Figure 10 shows that the approximately linear increase in lifetime earnings between the 1967 and 1983 cohorts is echoed in the average earnings between ages 25 and 35. This growth continued for more recent cohorts, up until the cohort entering the workforce in 1998, after which time the median early career earnings have flattened. It is difficult to know whether this flattening is part of a trend or is a temporary consequence of the 2008-9 recession and slow recovery.

Conclusion

By focusing on lifetime earnings for US workers over the last six decades, this research makes important contributions to the ongoing debate about stagnating median earnings and income inequality. In particular, the authors reveal that most men who entered the US labor market since the late 1960s have seen little-to-no gains in lifetime earnings relative to earlier cohorts, despite that the US economy has grown significantly during the same period.

Further, much of this stagnation for men can be traced to the conditions during the labor market entry of a particular age cohort: newer cohorts of men faced declining or stagnant median initial earnings relative to previous cohorts and did not experience faster earnings growth over their lifecycle to make up for the lower entry earnings. Women, on the other hand, experienced a sustained increase in median lifetime earnings from one cohort to the next, but starting from very low levels.

The authors also reveal that since 1970, inequality in lifetime earnings increased significantly within each gender but remained virtually flat in the combined population, thanks largely to the closing lifetime gender gap. Significantly, the authors' analysis of partial lifecycle data from more recent cohorts suggests that both the stagnation of median lifetime earnings and the rise in inequality is likely to continue.

For policymakers, these findings shine a harsh light on the challenges facing many workers entering the US workforce. For example, the authors show that newer cohorts of workers were already different from older ones by age 25.

Once in the labor market, the earnings distribution for these newer cohorts evolved similarly to those of older cohorts. Further, the authors' findings suggest that the sources of the dramatic changes in the US earnings distribution over the last 50 years may be found in the experiences of newer cohorts during their youth (and possibly earlier). Many workers are starting behind, in other words, and finishing further behind.

Methodology and Accounting for Inflation

The authors construct measures of lifetime earnings for millions of individuals using a 57-year-long panel (1957–2013) from US Social Security Administration (SSA) records. The authors' lifetime earnings measure is based on 31 potential working years between ages 25 and 55, which allows them to construct lifetime earnings statistics for 27 year-of-birth cohorts. The oldest cohort turned age 25 in 1957, and the youngest one turned age 55 in 2013, the last year of their sample.

Specifically, the authors' data come from the Continuous Work History Subsample (CWHS), which is a 1 percent representative sample of US workers in jobs covered by the US Social Security system. The primary advantage of the CWHS is the long span of time covered, starting in 1957, during which time the SSA increased the set of industries that it covers. To ensure representative job sampling over time, the authors restricted their attention to workers employed in "commerce and industry," a group of sectors that was continuously covered by the SSA during this period. Workers in commerce and industry accounted for approximately 70 percent of private sector employment in 2004, and the authors compared annual earnings in the Current Population Survey (CPS) for workers in all sectors with workers in commerce and industry.

When considering such data as wages over time, economists make a distinction between nominal wages, which reflect a certain point-in-time, vs. real wages, which are adjusted for inflation. A nominal salary of \$20,000 in 1957, for example, would not have the same purchasing power as \$20,000 in 1983. To convert nominal wages to real wages (among other prices), economists employ two commonly used price indexes: the personal consumption expenditure (PCE) deflator from the Bureau of Economic Analysis and the consumer price index (CPI) from the Bureau of Labor Statistics.

The PCE is generally accepted as the superior index for measuring the overall price level and its evolution over the business cycle; likewise, it is the primary index by which data are reported in the paper and in this Research Brief. However, the authors do include analysis of CPI data where appropriate; please see full paper for details.

READ THE WORKING PAPER

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Lifetime Earnings in the United States over Six Decades

bfi.uchicago.edu/working-paper/2021XX

ABOUT OUR SCHOLAR



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