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# Changing Stability in U.S. Employment Relationships: A Tale of Two Tails

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**Raven Molloy**

*Board of Governors of the Federal  
Reserve System*

**Christopher L. Smith**

*Board of Governors of the Federal  
Reserve System*

**Abigail Wozniak**

*Federal Reserve Bank of  
Minneapolis*

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# Changing Stability in U.S. Employment Relationships: A Tale of Two Tails

Raven Molloy

Christopher L. Smith

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**Abstract:** We examine how the distribution of employment tenure has changed in aggregate and for various demographic groups, drawing links to trends in job stability and satisfaction. The fraction of workers with short tenure (less than a year) has been falling since at least the mid-1990s, consistent with the decline in job changing documented over this period. The decline in short-tenure was widespread across demographic groups, industry, and occupation. It appears to be associated with fewer workers cycling among briefly-held jobs and coincides with an increase in perceived job security among short tenure workers. Meanwhile, the fraction of workers with long tenure (20 years or more) has been rising modestly since the early 1980s owing to an increase in long tenure for women and the ageing of the population. The rise in long tenure for women was broad-based across industries and occupations but limited to married women. By contrast, long tenure has declined markedly among older men. This is only partly explained by changing demographics and employment patterns such as the decline in manufacturing and unionization. In addition, an increase in mid-career separations during the 1970s and 1980s appears to have reduced the likelihood of reaching long-tenure for men. Survey evidence indicates that – despite these substantive changes over time – longer-tenure workers report no greater concern about job insecurity or decreases in job satisfaction than four decades ago.

JEL codes: J11, J62, J63

**Data Replication Statement:** The code and all associated replication materials used to produce the results in this paper can be obtained from <https://www.abigailwozniak.com/datacode>. Data, or instructions for obtaining data used by the authors from publicly available sources, is also available there.

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An Online Appendix has been included.

## **I. Introduction**

A worker's tenure with an employer is often seen as a measure of employment stability, as well as a sign of the worker's and employer's satisfaction with the current employment relationship. Among economists, this view derives from models of job search where a long-lasting relationship is the result of a relatively good match for both the worker and the employer. If the match was not good, then a small shock or the arrival of another offer could easily sever the relationship. Stability may be valued by employers, as turnover can be costly and longer tenure can allow workers to develop firm-specific human capital. Stability may also be valued by workers, who list job security as important in surveys.<sup>i</sup> Tenure is also a relevant outcome for those studying dynamism in firm creation and mobility in the labor market (Hall and Kudlyak 2019; Jung and Kuhn 2019; Molloy et al. 2016; among others). Despite the importance of tenure for these topics, job tenure has received relatively little study from economic researchers.

One reason for the lack of studies on employment tenure might be that measures of aggregate job tenure have changed little in recent decades. Average and median tenure have been essentially flat since at least the mid-1990s, suggesting at face value that employment stability has also been fairly stable over this period. However, other indicators of job stability have changed notably. For example, recent research has identified a decline in job changing among U.S. workers since the 1980s, potentially signaling an increase in job stability, at least for some workers (Hyatt and Spletzer 2013; Davis and Haltiwanger 2014; Molloy et al. 2016; Molloy, Smith, and Wozniak 2017).<sup>ii</sup> Meanwhile, employment rates for some demographic groups have changed substantially over the past four decades, which may also reflect changes in employment stability and have implications for longer-tenure employment relationships (Coglianese 2018, Aguiar et al. 2021).<sup>iii</sup> At the same time, there appears to be a perception among some labor market observers that long-term

employment relationships have become *less* common and that the labor market provides less stability than it did in past decades, perhaps owing to structural changes in the labor market such as the decline in manufacturing employment, the rise in service sector employment, and employment displacement related to automation and globalization.<sup>iv</sup>

In this paper, we examine changes in the distribution of job tenure since the 1980s and assess how these trends relate to changes in other measures of job stability and job satisfaction. Our analysis focuses on the upper and lower tails of the tenure distribution—that is workers with tenure greater than 20 years and workers with tenure less than 1 year—because the tails turn out to reveal interesting dynamics over the past several decades. Specifically, decreases in the lower tail of the distribution are consistent with the decline in labor market fluidity that has been documented in previous research. At the same time, decreases in the upper tail of the distribution for men illustrate a reduced prevalence of long-term employment relationships, while increases in the upper tail of the distribution for women illustrate the opposite.

Our evidence is derived from major publicly-available data sources on worker tenure combined with auxiliary data sets that allow us to investigate the nature of job changing and worker perceptions of job stability over time. We first use the Current Population Survey (CPS) to investigate changes in the aggregate distribution of job tenure over three and a half decades. We show that short-tenure jobs have become less common since 1980, while the fraction of workers with long tenure spells (20 or more years) has *risen* a bit.

The small increase in long tenure in the aggregate masks several important and offsetting influences. First, the ageing of the population has boosted the fraction of workers with long tenure spells (because older workers tend to have longer tenure), as has growing female labor force attachment (leading to an increase in long tenure among married women). Pushing in the other

direction, we find a substantial decline in the fraction of older men who have worked with the same employer for more than 20 years—which may be the source of the perception among some that employment relationships have become less stable than decades past. For men, the decline in long tenure appears to partly reflect the shift away from manufacturing (which was traditionally a high-tenure industry); declining unionization also appears to have some importance. That said, the decline in long tenure for men is apparent in many industries, and for many types of workers. Exploring differences across birth cohorts, we provide evidence that the decline in long-tenure for men appears to be associated with an increase in mid-career separations. Specifically, more recent cohorts have had a greater likelihood of employment separation in their mid-30s to mid-50s, making it more difficult to attain long-tenure employment. For women, the reverse is true: for more recent cohorts, long tenure rates are higher and their mid-career separation rates were lower than earlier cohorts.

Next, we turn to the short end of the tenure distribution. Unlike the long end, we find that only a small portion of the change in workers with short tenure (less than one year of tenure) can be explained by age or any other observable factors. This result parallels findings for the decline in job-to-job mobility, which is also largely unrelated to observable worker characteristics (Molloy, Smith, and Wozniak 2017). This result is also consistent with Hyatt and Spletzer (2017) and Pries and Rogerson (2019), which both find that observable characteristics explain little of the decline in the fraction of jobs that last for only one quarter.

To further understand what has caused the decline in the fraction of workers with less than one year of tenure, we use data from the Survey of Income and Program Participants (SIPP) to examine trends in inflows to the shortest tenure group. We find that a decline in job-to-job transitions has been an important factor in reducing the fraction of short tenure workers, whereas the

fraction of workers that entered short tenure from non-employment has remained fairly steady. A decline in job-to-job transitions for workers with less than one year of tenure is a primary driver of the overall decline in job-to-job transitions, and hence declining churn among low-tenure workers is an important explanation for the decline in short-tenure employment. Complementary analysis using data from the National Longitudinal Survey of Youth (NLSY) and the CPS also suggests that separation rates have declined the most for the lowest-tenure workers.

Our analysis naturally leads to questions about how these long-run shifts in employment tenure may be related to changes in worker perceptions of job stability or job satisfaction. Has the decline in churning among short-tenure workers been accompanied by an increase in perceived job stability or satisfaction? Conversely, have the decreases in men's long-tenure spells been associated with reductions in perceived job stability or satisfaction? To address these questions, we examine survey data on worker perceptions in the 1970s and 2000s. Consistent with the rise in retention rates for short-tenure workers, short tenure workers are more likely to report that their "job stability is good" in the 2000s than in the 1970s. Meanwhile, perceptions of job satisfaction and job security for older men who are working have been stable from the 1970s to the 2000s, suggesting that the declines in long employment spells have not been associated with an increase in anxiety about their current employment.

Our paper makes several contributions. First, we present an updated and more comprehensive set of facts about changes in employer tenure among U.S. workers. This is an opportune time to re-examine these facts given the significant changes over the last two decades in measures of job mobility and separations. Although other authors have documented changing patterns in the tails of the tenure distribution, they have focused on either long or short tenures separately.<sup>v</sup> By bringing together analysis of long-run changes at both ends of the tenure distribution, we provide

a more comprehensive assessment of trends in job changing and employment relationships. Jointly analyzing the two tails of the distribution together helps to illustrate how people are generally changing jobs less often even as long-term employment relationships are becoming less common for men. Moreover, by analyzing distributional changes at the ends of the job tenure distribution in tandem, we can describe the relative importance of a common set of factors for explaining these changes. Our analysis shows how several trends in the U.S. economy—the ageing of the population, the rise in female labor force attachment, and the decline in the manufacturing sector—are all important in understanding the upper tail of the distribution but do not explain much at the lower tail.

Our second contribution is to revisit and expand on the separate literatures on long and short tenure to better understand the distinct reasons for changes in these tenure types. Specifically, we demonstrate the importance of trends in mid-career separation for explaining the cross-cohort pattern of long tenure for both men and women, and differences in the evolution of long tenure between men and women. This is an innovation from previous work exploring trends in long-tenure jobs, for example Farber (1998) and Diebold, Neumark, and Polsky (1997), and builds on findings in Farber (2010). In terms of short tenure, we show that the trend decline in low tenure employment is driven by a decline in churn among low-tenure workers. This builds on insights from previous work documenting the decline in short-tenure employment, for example Hyatt and Spletzer (2017).

Our final contribution is to use additional data on worker perceptions about job stability and longitudinal data on spells of employment and non-employment in order to better understand the consequences of these shifts in the tenure distribution for workers. The prior research on both

topics is quite limited.<sup>vi</sup> Our analysis suggests that worker perceptions of their current job’s stability align with changes in the lower tail of the tenure distribution. By contrast, perceptions of current job stability at the upper tail of the tenure distribution have been stable over the past four decades, despite the substantive changes in employment patterns over this period.

Our paper proceeds as follows. Section II describes the main datasets that we use to document changes in the tenure distributions and the factors behind it. Section III describes changes in the aggregate tenure distribution since the 1980s. Section IV documents changes in long tenure (20 years of tenure or longer) over this period, quantifies the importance of changes in observable characteristics to these trends, and highlights the cross-cohort link between changes in mid-career separations and long tenure. This analysis is conducted separately for men and women, as the trends are different. Section V documents the decline in short tenure (1 year or less), shows that changes in observable characteristics explain little of the decline, and shows that most of the decline in short tenure appears related to the declining rate of job-to-job transitions (rather than other forms of job separations). Section VI explores consequence of these trends in tenure on workers’ perceptions of job stability. Section VII concludes.

## **Section II. Data Overview**

For our main analysis, we sought publicly-available data that allowed for constructing reasonably continuous observations of the tenure distribution for U.S. workers over a long time period. The Current Population Survey (CPS) and the Survey of Income and Program Participation (SIPP) both meet these criteria. Our main outcome of interest is a worker’s tenure with the current employer at the time of the survey, which is reported in both sources, and we have also confirmed



our findings where possible in the Panel Study of Income Dynamics (PSID) and the National Longitudinal Survey of Youth (NLSY). Although these data sources are all standard, they differ in how tenure is measured for workers. We therefore provide a brief overview of these sources here, focusing on key measurement features for our analysis. Further detail, including sample sizes, and a side-by-side comparison of these sources can be found in Online Appendix Table 1.

Our analysis of the distribution of worker tenure is based primarily on data spanning 1983 to 2020 from the CPS, as it provides a longer sample period than the SIPP. This monthly survey periodically includes a job tenure supplement (in the January or February survey) that asks respondents when they started working with their current employer or how long they have been employed with their current employer. For workers who report multiple jobs, tenure is recorded only for their main job. An important caveat is that CPS microdata on this question span changes in survey methodology that make comparisons over long time periods challenging. We work to harmonize the data to ensure comparability, and we believe that the data allow consistent estimates of tenure rates 3 years and longer back to 1983. Estimates of shorter tenure rates may not be measured consistently pre- and post-1996. See the notes to Online Appendix Table 1 for details.<sup>vii</sup>

For this reason, we confirm many of our findings using the SIPP.<sup>viii</sup> Each wave of the panel of the SIPP from 1996 onwards asks the year and month respondents began working for up to two employers; we use information from both employers because the main employer is not identified. This allows us to calculate tenure from self-reported start dates. The SIPP also asks whether a respondent has separated from an employer over the previous four months. This information allows us to calculate tenure at the beginning of a 4-month reference period, and hence tenure-specific retention rates. One drawback of the SIPP data is that we do not have data post-2013.<sup>ix</sup> The

SIPP does have data on tenure for the late 1980s, but this information is unavailable for the early 1990s, so it is difficult to know whether the early data are comparable to the post-1996 data.

We also use the two National Longitudinal Survey of Youth (NLSY) studies, 1979 and 1997, to study tenure for two cohorts of younger workers. The NLSY does not meet all our criteria but it offers two important advantages. First, it allows us to construct tenure consistently two decades apart, even for short tenure lengths. The NLSY asks respondents about multiple employers in each annual (or biennial) survey, including start and end dates of employment. Second, it allows us to observe reasons for separations, which are not easily observable in the CPS.<sup>x</sup>

Finally, we rely on several additional sources that do not offer continuous observation of tenure over time but that can otherwise inform our understanding of changes in tenure for U.S. workers. These include the CPS Annual Social and Economic Supplement, the General Social Survey, and a Department of Labor survey called the Quality of Worklife Survey. We describe the information we use from these sources in the text alongside the relevant results.

### **Section III. Changes in the Tenure Distribution since the 1980s**

To begin, Figure 1 plots mean and median tenure in the CPS and SIPP over time.<sup>xi</sup> Both series show roughly stable average and median tenure through the mid-2000s, after which average tenure gradually edged up during and after the 2007-09 recession. This increase may, in part, reflect composition effects as those with shorter tenure separated from their job at higher frequencies than those with long tenure.<sup>xii</sup> In the CPS data, average and median tenure then moved down again, such that average and median tenure in 2020 were little different than four decades earlier. These estimates are consistent with an earlier literature, which found little evidence of a general decline in tenure through the early/mid-1990s (Farber 1998; Diebold, Neumark, and Polsky 1997).

The stability in average and median tenure shown in Figure 1 may seem surprising considering the many changes in the U.S. labor market that might be expected to affect the degree of stability in employment relationships—such as the shift in industrial composition from manufacturing to services, declining union representation, outsourcing (which may have affected longer-term stability) and the decline in labor market dynamism (which may have affected shorter-term stability). But average tenure may mask important changes at different points in the distribution of tenure. Therefore, next we establish the basic facts about how the distribution of employment tenure has changed since the early 1980s.

Figure 2 shows the distribution of tenure at available intervals in the 1980s, 1990s, and 2010s from the CPS. The fraction of workers with shorter tenure has fallen substantially over time. For example, the fraction with less than 3 years of tenure—the shortest category that we can measure consistently over the entire time period—fell from 35 percent in the 1980s to 32 percent in the 2000s.<sup>xiii</sup> Meanwhile, the fraction of workers in most other tenure groups has risen or been flat, with the increase in mass most apparent for workers with tenure from three to ten years and more than 20 years. These changes in the distribution of aggregate tenure seem generally consistent with the decline in labor market fluidity over this period: fewer workers have been with their employer for a short period of time, and more workers have been with their employer for a long period of time.<sup>xiv</sup>

Because Figure 2 shows the aggregate tenure distribution, it reflects changes in the demographic composition of employed workers as well as the tenure experiences of individual workers. Therefore, it is helpful to control for several demographic trends that also influence the distribution of tenure. As emphasized by Farber (2007), the aging of the population over the last few decades has masked a decline in the share of workers with high tenure since older workers have longer

tenure on average. It is also important to consider men and women separately because the growing labor force attachment of women during this period has led to differential trends in tenure by gender.

Table 1 reports the employment shares, average tenure, and fraction of workers with more than 20 years of tenure by age and gender. The table suggests that a growing share of older men and women in the workforce caused the distribution of aggregate tenure to shift right, as a result of older workers tending to have higher tenure. Within demographic groups, we see divergent patterns in the shift toward longer tenures. Among older men (those over 40), it has become less common to observe tenure longer than 20 years and average tenure has fallen.<sup>xv</sup> For women, the opposite is true. Thus, the ageing of the population and the different trend for women obscure the fact that older men are less likely to have stayed with the same employer for a long period of time. This result is perhaps consistent with perceptions of a demise in long-term employment relationships. However, it is worth noting that long tenure is still fairly common among older men, with nearly one third of men age 60-64 reporting 20 or more years of tenure.

To better understand the contribution of population aging and other demographic changes over this period on average tenure, we run a set of individual-level regressions of tenure on year fixed effects and various demographic controls and plot the coefficient on the year fixed effects. (1983 is the omitted group, so the coefficient on each year can be interpreted as the difference relative to 1983, conditional on the included controls.) The black line in Figure 3 corresponds with the blue line in Figure 1 and shows that mean tenure changed little, on net, since the early 1980s. However, after controlling for age and sex, average tenure has declined by nearly 1 year (about 15 percent of average tenure in 1983). Adding further controls for education, marital status, race, industry, and occupation (as shown by the green line) reduces this decline by about half,

suggesting that the length of tenure of a worker in 2000 was about 0.5 year shorter than in the 1980s.<sup>xvi</sup> In other words, a worker with the same characteristics in 2020 as in 1983 has worked with their employer by about one-half year less, on average. Returning to Table 1, declines in tenure have been most relevant for men older than 40, as they are substantially less likely to have worked for the same employer for at least 20 years than in the early 1980s.

In sum, our analysis of the distribution of tenure suggests that it would be helpful to focus on the two tails. A declining fraction of men with long tenure could reflect decreases in job stability for older men, while a declining fraction of workers with short tenure could reflect decreases in labor market fluidity and/or increased job stability for younger men and women. In the next section we will address each of the tails of the distribution of tenure in turn.

#### **Section IV. What Explains the Decline in Long Tenure Spells?**

##### *A. The role of compositional shifts in long tenure trends for older men*

It is clear that to understand the changes at the long end of the tenure distribution we need to quantify the roles of demographic trends, and we need to consider men separately from women. Toward this end, we begin with a regression analysis on a sample limited to men age 40 to 64. Like the analysis of mean tenure presented in Figure 3, we first regress an indicator for having more than 20 years of tenure on a set of year indicators. With no other controls in the regression, the coefficients on the year indicators show the evolution of the share of men with long tenure over time. Figure 4 shows that for men age 40 to 64, the share of workers with long tenure (the black line) fell by 11 percentage points from 1983 to 2018, before increasing by about 1½ percentage points between 2018 and 2020.<sup>xvii</sup> Next we adjust for changes in the age distribution among working men by adding a set of indicators for whether the worker is 40-44, 45-49, 50-54, 55-59, and 60-64. The red line in the figure plots the year fixed effects from this regression and shows that

the age-adjusted decline in male long-tenure rates is about 10½ percentage points through 2020, about 1 percentage point more than the unadjusted decline. Hence, the aging of the male population masks the extent of the decline in long-tenure a bit—a finding that is broadly consistent with related findings in Farber (2007). Controlling additionally for education, marital status, and race (the orange line) explains roughly 1 percentage point of the age adjusted decline in long tenure.<sup>xviii</sup> As shown in the bottom panel of Table 2, college-educated men are less likely to be in long tenure employment than non-college men, particularly in the 1980s. The increase in men’s college attainment thus accounts for a bit of the overall decline in long-tenure, but the figure illustrates that the decline is substantial within all demographic groups.<sup>xix</sup>

We next examine whether secular changes in the mix of industries or occupations can help account for the changes in the fraction of long-tenure workers, which a priori seems like it should be an important factor since employment has shifted some out of industries where long tenure was more common—in particular, manufacturing. The top panel of Table 2 shows long-tenure rates for manufacturing, public administration, and all other industries. In the 1980s, nearly 40 percent of workers in manufacturing had tenure of 20 years or more—well above most other industries.<sup>xx</sup> In the 2010s, workers in manufacturing were still more likely to have long tenure relative to other industries although the gap narrowed, and the share of employment of men age 40 to 64 in manufacturing declined from about 27 percent in the 1980s to about 12 percent in the 2010s. Hence, both the shift in employment away from high-tenure manufacturing, as well as broad-based declines in long tenure across industries and occupations likely contribute to the aggregate decline in long-tenure. The middle panel of Table 2 shows changes in tenure for occupations, where occupations are grouped by routine/non-routine and manual/cognitive tasks. Long-tenure rates have declined significantly in all the major occupation groups, except non-routine manual occupations

(service jobs), which had the lowest rates of long tenure in the 1980s and experienced little change in long tenure over the period.<sup>xxi</sup>

To better quantify the importance of industry and occupation shifts, the dashed green line in Figure 4 shows the trend in men's long-tenure after controlling for manufacturing. Consistent with a modest role for the shift out of manufacturing, this adjustment accounts for about 1¼ percentage points of the 9 percentage points decline in demographically adjusted long tenure (comparing the dashed green and orange lines). Finally, controlling for the full set of industry and occupation controls explains about another 1½ percentage points of the decline in long tenure; all told, these demographic, industry, and occupation controls can account for about 3 percentage points of the 9½ percentage point decline in long tenure from 1983 to 2020.

The long-run decline in unionization rates is another potential explanation for the decline in long-tenure employment, as long-tenure rates are higher among unionized workers than non-unionized workers, even conditional on industry of employment (Farber et al. 2018).<sup>xxii</sup> The CPS began including union status in the monthly survey in 1984, so we can calculate the contribution of unionization to the decline in long tenure since 1987 (the first tenure survey after 1984); however, union status is asked only of respondents in their fourth or eighth month in the CPS, shrinking the sample by three-fourths relative to our earlier analysis. Using this smaller sample in regression specifications like the ones described above, we find that the shift away from union jobs can account for about one-quarter of the decline in long-tenure shares for men age 40-64 from 1987 to 2020 beyond what can be accounted for by changes in the composition of demographics, industries, and occupations. Because much of the decline in long-tenure remains even after controlling for union status, and because long tenure spells decline for both unionized and non-unionized

workers (from the 1980s and 1990s to 2010s, the percent of long tenure unionized workers declined from 42 percent to 35 percent, and for non-unionized workers declined from 24 percent to 18 percent) it seems that changes in unionization contribute only modestly to declines in the likelihood of long tenure for men.

In summary, it is clear from the CPS statistics that prime-age men are less likely to be in long-term employment relationships than several decades ago. This trend appears to be only in part related to shifts in observable characteristics, including changes in the industry and occupation of workers. After adjusting for these factors, more than half of the decline in long tenure for older men remains unexplained by changes in observable demographic characteristics, industry, and occupation.<sup>xxiii</sup>

#### *B. Changes in Long Tenure across Cohorts and the Role of Mid-career Employment Separations*

To understand further what might be driving this decline in long-tenure, we turn to data on worker retention rates. Mechanically, the number of long-tenure workers at any point in time is a function of the number of long-tenure workers in the previous period who remained with their employer plus inflows of workers who previously had slightly less tenure and who remained with their employer, thus accumulating enough tenure to enter the long-tenure group. That is, the decline in long-tenure for men could be due to a combination of reduced retention rates for long-tenure workers (“rising outflows” of long-tenure workers) or reduced retention for short- or medium-tenure workers (“declining inflows” of medium-tenure men into long-tenure employment). More specifically, the share of workers with 20 or more years of tenure in period  $t$  equals the following:



$$(1) \quad \frac{N_t^{20+}}{E_t} = \frac{p_{R,t}^{19} N_{t-1}^{19}}{E_t} + \frac{p_R^{20+} N_{t-1}^{20+}}{E_t}$$

where  $N_t^k$  is the number of workers with  $k$  years of tenure,  $p_{R,t}^k$  is the retention rate of  $k$ -tenured workers, and  $E_t$  is the total number of workers.

We first assess the evidence for the “rising outflows” channel, namely, for evidence of declining retention rates of those already at 20 or more years of tenure, as expressed in Equation (1). We use SIPP data to estimate retention rates for long-tenure workers, plotted in Figure 5.<sup>xxiv</sup> The fraction of men with at least 20 years of tenure who remained with their employer over the subsequent four months has been relatively flat since 1996. We cannot observe tenure consistently prior to 1996, but as a proxy for long tenure we also examine retention rates for men age 50 to 64. This retention rate was also flat from 1996 to 2013 and *increased* from the mid-1980s to the mid-1990s. A similar analysis of one-month retention rates from CPS data based on matching tenure supplement data to the same respondents’ data from monthly surveys in months after the tenure supplement is also consistent with fairly flat retention rates for long-tenure workers post-1996.<sup>xxv</sup> Hence, it seems unlikely that the decline in long-tenure employment is attributable to declining retention (equivalently, rising separation) rates for workers that attain long-tenure employment.

We next explore evidence for the “declining inflows” channel. Equation (1) expresses this channel as a function of the retention rate of workers with 19 years of tenure. But of course, the number of workers with 19 years of tenure is partly a function of the retention rate of workers with 18 years of tenure. More generally, at any period  $t$ , the number of workers eligible to be retained

to the next tenure category  $k$  is a recursive function of retention rates in all previous periods, extending back to the hire date  $k$  periods earlier, as long as  $k$  is greater than the minimum tenure bin.

That is:

$$(2) \quad N_t^k = p_{R,t}^{k-1} N_{t-1}^{k-1}$$

Equation (2) makes clear that eligibility for long-tenure is a function of retention rates over the entire employment relationship. We are unaware of a large longitudinal data source with which to calculate retention rates reliably over long periods of time (a methodological change in the SIPP prevents analysis of retention rates prior to 1996). In the absence of such data, we can examine the link between long-tenure and earlier career retention rates by comparing birth cohorts that were toward the end of their career in the early 1980s (when long-tenure rates were higher) and those that were toward the end of their career in the 2010s (when long-tenure rates were lower). That is, did more recent birth cohorts, with lower long-tenure rates, experience lower retention rates earlier in their career, and if so, at what point in their career?

Toward this end, we calculate three measures of employment separation at various ages and for many birth cohorts. Specifically, using the Annual Social and Economic Supplement (ASEC) to the CPS, we can estimate the fraction of respondents who report being employed at some point during the previous year but not currently (a measure of employment separations that do not result in rapid reemployment), the fraction of respondents who report having more than one primary employer in the previous year (a measure of separations that do result in another job fairly quickly), and the unemployment rate (a measure of employment disruptions more generally). For these three measures to reflect mid-career conditions, we calculate them for men age 35 to 54. Figure 6 plots each of these measures for cohorts born in 1927 through 1963 (the right axis) along with the average percent of the cohort with long tenure at ages 55 to 64 conditional on employment

(red line, left axis).<sup>xxvi</sup> Indeed, average unemployment rates and separation rates at ages 35 to 54 (the blue and orange lines) have increased on net across cohorts as long tenure rates declined. The most substantial declines in long tenure, and increases in separations from employment and unemployment, are observed between cohorts born in the mid-1920s to mid-1930s and those born in the 1940s and 1950s; overall, about half of the decline in long-tenure rates (and rise in the employment separation rates) occurred between these cohorts. Thereafter, these rates flattened out some, and then beginning with cohorts born in the mid-1950s, long-tenure rates started falling again and separation rates started rising again. Meanwhile, the fraction of men with multiple primary employers (the green line) increased for cohorts born prior to 1950 and then decreased. The decline in this measure for more recent cohorts suggests that mid-career job-to-job changes declined even as long-tenure continued to move down, which is an observation we come back to in our discussion of short tenure in section IV.

Next, in Table 3 we analyze the connection between the proxies for mid-career employment disruptions and long-tenure later in life, by estimating cohort-level regressions where the dependent variable is the average share of the cohort with 20 or more years of tenure from ages 55 to 64 (the red line in Figure 6), and the explanatory variables are the measures of the cohort's disruption at mid-career. To begin, in column 1 we find that the relationship between long-tenure later in life and the average separation-from-employment rate at ages 34 to 54 (corresponding with the orange line in figure 4) is negative and strongly significant; the same thing is apparent in column 3 when we use the cohort's average unemployment rate (corresponding with the blue line in figure 4) as the measure of employment disruption. In columns 2 and 4, we examine in finer detail at which mid-career ages these relationships are strongest. Across cohorts, separation, or unemployment rates early in men's careers (at ages 25 to 34) are unassociated with cohorts' long-tenure

rates later in life, while employment disruptions later in their careers (at ages 35 to 44, or 45 to 54) are strongly associated with lower long-tenure rates. Finally, in column 5 we include the average percent of the cohort with multiple primary employers (corresponding with the green line in figure 4)—which is also negatively associated with cohorts’ long-tenure rates. We do not separate the multiple employer measure by finer age group because the measure is only available in the CPS since 1976. Therefore, we cannot calculate this measure at earlier ages for all the older cohorts included in the other regressions. When we include all three employment disruption measures at ages 35 to 54 (not shown), the coefficients on all three are negative, though the coefficient on the multiple employers is small and insignificant, and the coefficient on the separation and unemployment rates are marginally significant. The unemployment and separation rate measures are highly correlated and are likely measuring similar features of the labor market, so we don’t think it is informative to attempt to distinguish between them.

We interpret these results as consistent with the notion that later birth cohorts of men experienced more employment disruptions in the middle of their career relative to older cohorts, resulting in lower long-tenure rates later in life. Left unexplored in this analysis is *why* mid-career employment disruptions have become more frequent for men. The answer can potentially inform models like those developed in Jung and Kuhn (2019), who explore the role of long spells at the top of the tenure distribution in the persistent impacts of displacement on worker earnings. Contributing factors could include those related to the decline in prime-age male employment and participation from the late 1960s through mid-2010s, such as the adoption of labor-replacing automation, globalization, increasing competition from Chinese imports, and/or rising disability insurance take-up (for instance, see Abraham and Kearney 2018, Council of Economic Advisors

2016, Congressional Budget Office 2018). Another set of potential explanations could be associated with the nature or magnitude of the recessions in the 1970s and 1980s resulting in more mid-career disruptions than prior decades. Also, the increase in mid-career separations may in part be related to the increase in frequent movements in and out of the labor force over this period for men age 25 to 54, which as described by Coglianese (2018) appears to be unrelated to changes in labor demand. Finally, the changing nature of unemployment may have contributed to the decline in long tenure as reported by workers. Specifically, permanent separations (as opposed to temporary layoffs) as a share of all separations has increased since the mid-1990s, and unemployment spells are also of longer duration on average than decades earlier; it seems plausible that workers on temporary layoff or with a very short spell of unemployment (who are then re-hired by their original employer) may be less likely to think of the unemployment spell as a break in employment (and thus more likely to report being long-tenure later in life) than workers who suffer a permanent layoff or experience a longer spell of unemployment.

### *C. Returning to long tenure trends for older women*

We next move to analyzing a CPS sample restricted to women to understand whether shifts in major observable factors contributed to the rise in long tenure among women. As shown in Figure 7, the pattern in adjusted long tenure rates for women differ from those for men. Not only has the fraction of women with long tenure risen over time but shifts in demographic characteristics play a smaller role for women than for men. The trend in the fraction of long-tenure women is still positive even after accounting for age and education. Unlike the case for men, accounting for shifts in industry and occupation do not help to explain this trend further. Online Appendix Figure 2 shows that the increase in long-tenure rates has been fairly similar for less-educated and more-educated women alike. For both education groups, long tenure rates increased through the early

2000s or so before flattening out or declining slightly. Table 4 reveals that the increase in long-tenure for older women has been experienced for all industry and occupation groups, like the broad nature of the shift in long tenure for men.

One important distinction in long-tenure trends for women is related to marital status, as shown in the bottom rows of the table. In the 1980s, about 15 percent of older, unmarried women were in a long-tenure employment relationship, while 10 percent of married women were. By the 2010s, the ranking had flipped: married women were slightly more likely to have long-tenured employment. Hence, much of the increase in overall long-tenure for women is attributable to gains by married women. Consistent with this result, Hollister and Smith (2014) show that it is only married women that experienced increases in average tenure since 1983 (driven primarily by married mothers in the period prior to 1996). The upward trend in tenure mirrors the increase in labor force participation for women over this period, and likely reflects changes in home responsibilities and social perceptions about working mothers that have facilitated women’s participation in the labor market.<sup>xxvii</sup>

The combination of an increase in long-tenure rates for married women and a decrease in long-tenure rates for men might raise the question of how long-tenure rates have changed at the household level—that is, whether opposite sex households might be just as likely to have a long-tenure worker now as in the past, on net. In unreported analysis, we calculate that the fraction of 40- to 64-year-old men who are in long-tenure households (either because they are themselves in a long-tenure employment relationship or their spouse is), unconditional on their employment status, fell 1.7 percentage points from 1996 to 2020 (from 20.8 percent to 19.1 percent). This compares with a decline in the percent of older men who are employed in a long-tenure job of 2.6 percent over this period (from 17.7 percent in 1996 to 15.1 percent in 2020). Thus, the increase in

long-tenure among married women has not fully offset declines in such tenure for men at the household level.

Finally, we examine the cohort-level relationship between women's late-career long-tenure and mid-career measures of employment disruptions. Figure 8 shows that for women, more recent cohorts have lower rates of mid-career separation into non-employment and higher rates of long tenure. Hence, like our cross-cohort analysis for men, the trend in mid-career separations appears to be importantly related to the trend in late-career long tenure. But the trends are reversed, with declines in mid-career separations correlated with increase in long-tenure later in life for women.<sup>xxviii</sup>

#### *D. Summary*

To summarize, we have shown that the decrease in long-term employment relationships is concentrated among older men due to increased rates of mid-career separations (and, likely associated with this, higher mid-career unemployment rates). Meanwhile, married women have become *more* likely to have worked for the same employer for a long time, no matter their sector or skill-level, and this appears associated with lower mid-career separation rates for these women. On net, while long-term employment relationships have become less common for certain types of workers (older men), this trend has been offset by the aging of the workforce and rising long-tenure rates for married women such that long tenure rates have risen somewhat in the aggregate.

### **Section V: What Explains the Decline in Short Tenure Spells?**

We now apply some of the tools of the previous section to try to understand the decline in prevalence of short tenure. But first, we examine our definition of short tenure more closely. Our sample for this analysis consists of 22- to 64-year-olds. We combine results for men and women, since the decline in short-tenure employment turns out to be quite broad-based across demographic groups and subsequent results are similar for men and women. Figure 9 shows the fraction of workers with less than one year of tenure and one to 3 years of tenure. We show only data since 1996, as neither dataset measures tenure consistently in earlier years. The panel on the left shows that short tenure (less than one year) declined from the late 1990s to early 2010s in both the CPS and SIPP, although year-to-year fluctuations differ somewhat across the datasets. The panel on the right shows that the share with one to three years of tenure was little changed on net over this period in both datasets. We conclude that declines in this tail of the tenure distribution are confined to very low levels of tenure, and we therefore define short tenure as less than one year with an employer.



We first examine the contributions of demographics, industry, and skill as we did with long tenure. Figure 10 shows the estimated coefficients on year indicators from various regressions where the dependent variable is whether a worker has tenure of less than one year; these are analogous to the adjusted time trends in Section III. Changes in the age distribution of workers account for some of the decline in short tenure (since older workers are less likely to have short tenure); accounting for the age and sex composition of the employed population reduces the decline in short tenure by roughly 1/3 (from 3 percentage points to 2 percentage points). Changes in other demographics (namely increasing education) and the industrial and occupational composition of employment push in the other direction—so short tenure after adjusting for demographics and industry/occupation declined by essentially the same amount as the unadjusted estimate. Consistent with our finding only a small role for observables in the above figures, we find similar declines in short tenure across sets of workers defined by industry, occupation, education and gender (Online Appendix Table 2)--illustrating again that the decrease in the prevalence of very short tenure workers is widespread.<sup>xxix</sup> Results are similar when we examine workers with less than one quarter of tenure and workers with between one quarter and one year of tenure separately (see Online Appendix Figure 3).<sup>xxx</sup>

To understand this broad decline in the prevalence of short tenure workers, we consider how flows into new employment relationships and between tenure status bins combine to generate a group of new hires. We use the term “new hires” to identify the lowest tenure category. This decomposition helps clarify, at least in a mechanical sense, the source of the decline in the fraction of workers with short tenure over time, just as the earlier flows equation helped us identify inflows as an important source of the decline in long tenure. We express the number of new hires as a

function of the flow of workers entering employment from non-employment and the flow of workers leaving a previous employer, as in the equation below:

$$(3) N_t^{min} = H_t^N + \sum_{k=1}^K (p_{EE,t}^k * N_{t-1}^k)$$

where  $N_t^{min}$  is the number of new hire workers at time  $t$ , who by definition are in the *min* tenure category;  $H_t^N$  is the number of new hires from non-employment (not in the labor force or unemployed) at time  $t$ ; and  $p_{EE,t}^k$  is the job-to-job transition rate for workers in tenure group  $k$  over the period, where  $k=1$  is the first tenure category up from new hires, up to some max tenure level  $K$ .

This equation illustrates that inflows into the new hires group is the sum of flows into employment from non-employment and flows into new employment from employment, that is job-to-job transitions. We implement the decomposition described in equation (3) using data from the SIPP, because the job-to-job transition rate is not measured consistently pre- and post-2007 in the CPS (Fujita, Moscarini, and Postel-Vinay 2020). One drawback of the SIPP data is that we do not have data post-2013, but the lack of post-2013 data is not a substantive concern for this analysis because Figure 9 showed that the share of short-tenure workers was flat from 2012 to 2020. We define new hires in the SIPP as anyone who reports having tenure in their current employer of less than one quarter. Within this group of new hires, individuals who were employed three months earlier are included in job-to-job transitions, and individuals who were either unemployed or not in the labor force three months earlier are entrants from non-employment. To make the flows easier to interpret, we divide them by the total number of employed workers in the current period. Figure 11 displays the fraction of employed workers that are new hires overall, job-to-job transitions, and entrants into employment, showing 12-month moving averages of monthly data because

the monthly series are volatile. The fraction of new hires fell from about 9 percent in 1996 to about 6 percent in 2013. Most of this decrease can be explained by a decline in the share of employment-to-employment transitions; entrants from non-employment comprise a smaller fraction of new hires and were a fairly constant fraction of workers over this period. Thus, a decline in job-to-job transitions appears primarily responsible for the decline in the number of new hires.<sup>xxxix</sup>

We further study the decline in job-to-job transitions by calculating the contribution from changes in the share of workers in different tenure groups (a rising share of higher tenure groups will reduce aggregate job-to-job transitions because higher tenure workers tend to change jobs less often) and the contribution from changes in job-to-job transitions for specific tenure groups. Toward this end, we estimate a counterfactual average job-to-job transition rate for the 2010-2013 period assuming that the shares of each tenure group had remained at their 1996-2000 average while allowing the job-to-job transition rate of each category to evolve as it actually did. The difference between the counterfactual transition rate and the average observed transition rate in 1996-2000 reveals the contribution of changing job-to-job transition rates within tenure group. Similarly, a counterfactual that holds the job-to-job transition rates for each tenure group fixed but allows the shares of each tenure group to evolve will reveal the contribution of changes in the distribution of tenure.

Table 5 reports the results of this exercise. Declines in the job-to-job transition rates within each tenure group are more than twice as important than changes in the distribution of tenure in explaining the decline in the aggregate job-to-job transition rate. And declines in job-to-job transitions among low tenure workers are more important than declines in transitions among higher

tenure workers. Thus, it appears that the decline in job-to-job transitions, and therefore the decline in the fraction of low tenure workers, is attributable to less churn among shorter-tenure workers.

A reduction in churning among low-tenure workers is also evident in other datasets. In the NLSY 1979 cohort (where the median observation is from 1988), the average number of main employers held by a worker between the ages of 22 to 30 was 3.9. This average had fallen to 3.5 for the 1997 cohort (median observation from 2008), and Online Appendix Table 3 shows that this decline is most pronounced for lower tenure workers. Moreover, Online Appendix Figure 4 shows that the increase in tenure by age 30 in the NLSY reflects a shift across cohorts toward having worked for only one or two main employers between the ages of 22 and 30, rather than having worked for 4 or more employers. The CPS also shows that job-to-job transitions have fallen most for low-tenure workers through 2007; as noted above, job-to-job transitions cannot be measured consistently post-2007 (Fujita, Moscarini, and Postel-Vinay 2020).

Our analysis raises the question of why job-to-job churn has declined, and why especially for low-tenure workers. We investigate three potential explanations. First, it is possible that employers have become more reluctant over time to terminate new hires. There may be a general reduction in the use of involuntary terminations, which would likely disproportionately impact recent hires, or employers may simply be more concerned that they cannot show cause for terminating an employee they only recently hired (Autor 2003). Either way, if a reduced use of terminations drives declining churn for recent hires, we should observe involuntary separations declining over time, and particularly for this group. We test this possibility using the SIPP, and for confirmation, the NLSY. Both surveys ask workers their reason for separating from a past job. The

analysis is presented in Online Appendix Figure 5 and Online Appendix Table 3. Cyclical fluctuations are a potential concern in both data series because involuntary separations rise during recessions and there was a very large recession toward the end of the sample period; however, we conclude that both sources show that the share of separations that are involuntary is little changed over time, with the possible exception of a rise in involuntary separations in the wake of the Great Recession in the SIPP.<sup>xxxii</sup>

A second potential explanation is that reporting and coding of temporary help industry jobs may have changed over time in a way that generates a spurious decline in job-to-job transitions among recent hires. This could be the case if earlier surveys were less likely to frame questions about job tenure as allowing temp help firms to be a main employer. In that case, workers might report tenure temp assignments even if their employment with a staffing firm is longer-term. If this industry is better accommodated in later surveys, then we would observe a decline in job-to-job transitions but only because earlier surveys “over-counted” short tenure on temp assignments. We do not have a strong prior as to whether this kind of framing change is an issue, but we check for this possibility again using the SIPP and NLSY information on reason for separating from the previous employer. “Temp job ended” is an option in all waves of both surveys, allowing us to investigate this over time. The results are reported in Online Appendix Figure 6 and Online Appendix Table 3. Less than five percent of workers report separating from the previous employer due to a temp job ending, and this share is largely stable over time in both surveys. We conclude that framing of the temp help industry does not contribute to our measured decline in job-to-job transitions among low tenure workers.

A third explanation is undercounting short duration employment, particularly in recent years as short-term employment may have moved to online gig platforms from the more standard

labor market. If respondents are less likely to report gig jobs found online as short tenure employment than similar jobs found in the past, then we might overstate the decline in short tenure employment. We view this explanation as unlikely for two reasons. First, the stability in the share of jobs ending because they were temporary suggests that there has been no significant decline in the observation of temporary jobs over time. If past temporary jobs had moved to the gig marketplace and therefore went unreported, we would expect to see respondents reporting fewer jobs ending because of temporary status. Second, the share of workers employed in the gig economy appears to still be small, and regardless, electronic gig platforms were unavailable until the very final years in our analysis (U.S. Bureau of Labor Statistics 2018). They are therefore unlikely to be a major factor in a trend dating back to 1996.<sup>xxxiii</sup>

We conclude that the decline in job-to-job churn among short tenure worker is not due to reporting changes in the data or to a single type of separation or employment sector. This decline might possibly be related to a decline in single quarter employment spells, that is jobs that last for less than 1 quarter (Hyatt and Spletzer 2013, 2016, 2017; Pries and Rogerson 2019).<sup>xxxiv</sup> Although single-quarter workers and single-quarter jobs are different concepts, some workers with less than 1 quarter of tenure are in jobs that will last for less than 1 quarter. Moreover, neither the decline in low-tenure workers nor the decline in one-quarter jobs are strongly related to compositional factors. That said, we caution that many workers with less than one quarter of tenure at the time of observation will remain with their employer for longer than one quarter and therefore ultimately be employed in a *job* that lasts longer than one quarter.<sup>xxxv</sup> Hence it would be premature to conclude that the decline in single-quarter employment spells fully accounts for the decline in short-tenure worker share, but the corresponding trends are striking and deserve further research.

## **Section VI. Consequences of the Shifting Tenure Distribution: Has Security of Employed Workers Changed?**

One place to begin an investigation into the broader consequences of the shifting tenure distribution is with worker reports about their own job satisfaction and security. To our knowledge, only one other paper has directly addressed the question of whether worker reports of employment security have changed over time.<sup>xxxvi</sup> Fullerton and Wallace (2007) analyze responses to the General Social Survey (GSS) question, “Thinking about the next 12 months, how likely is it that you will be laid off?” This question has been asked regularly in the GSS since 1977, allowing construction of a long time series spanning several business cycles.

We graph responses to this question from the GSS by age group in Figure 12. The data show no trend in this self-reported measure of job security for any age group, although the series do exhibit strong cyclicalities. In a regression, the aggregate unemployment rate alone explains almost 30 percent of the variation of age-group specific shares reporting a high likelihood of job loss. Fullerton and Wallace also find that the pattern of unadjusted responses has changed little over time.<sup>xxxvii</sup> However, their data end just prior to the Great Recession. Our graph shows that even amid this aggregate shock, only the youngest group of workers saw their reported insecurity rise above historic levels. For other age groups, the fraction expecting to lose their jobs in the next year was, depending on the age group, generally somewhat higher than during the recessions of the early 1990s and 2000s, but no greater than during the early 1980s. These patterns indicate that perceived job security fluctuates substantively with the business cycle, but we see no evidence of a long-term trend in perceived stability.

The likelihood of job loss is only one aspect of job security. To bring more evidence to bear on workers’ perceptions of their employment situation, we compile responses from survey

questions that provide insight into workers' attitudes toward their jobs. In the late 1960s and 1970s, the U.S. Department of Labor conducted three cross-sectional surveys to assess the working conditions and quality of employment experienced by the typical American worker. Three waves were conducted in 1969-70, 1972-3 and 1977, each with about 1,300 responses. In 2002, the General Social Survey incorporated a "quality of worklife" module that was intended to collect the same type of information as in the surveys from the 1970s. Indeed, many of the survey questions are identical and sample sizes are similar.<sup>xxxviii</sup> This module was conducted in 2002, 2006, 2010, and 2014. By comparing the responses from 1969-77 surveys to the responses from the 2002-2014 surveys, we can get a sense of how these attitudes have changed over the past 30 to 40 years.

Table 6 reports the answers to parallel questions in the two surveys that pertain to workers' feelings of job security and satisfaction. Because these attitudes are related to the length of time that a worker has stayed with his or her employer, we report all statistics by years of tenure with the current employer. The first two columns of the table show the share of respondents in the two surveys who respond that they agree "very much" or "somewhat" that their job security is good. Contrary to what is commonly assumed, but consistent with beliefs about the probability of layoff shown in Figure 12, workers at all tenure levels report the same or greater feelings of security on this measure as compared to forty years ago. Workers at low tenure levels show substantive increases in reported job security across the surveys, and nearly 90 percent of workers with more than 20 years of tenure report strong feelings of security in both surveys. The second set of columns reports responses using a different measure of job security: workers' assessments of how easy it would be to find an equivalent job. The table shows some declines in this measure of security, but they are modest and concentrated among low tenure workers. The third set of columns shows that job satisfaction has also not changed appreciably over the past four decades.



In the final two columns, we look at workers' assessments of their likelihood of searching for a new job. Even though workers are not less satisfied with their current job or less secure in their current job, workers are more likely to report plans to look for work in the coming year than was the case four decades ago. We interpret this result as possibly suggesting that search costs have fallen over time, making it easier to search for new opportunities even as satisfaction has remained stable.<sup>xxxix</sup>

The bottom row of the table shows that we also find no evidence of a decrease in job satisfaction or job security among older men, even though this group has experienced a decrease in the prevalence of long tenure spells. Above, we showed that the reduction in long tenure is likely related to an increase in mid-career separations. We can think of three reasons why an increase in mid-career separations might not have caused perceptions of job security to decline. First, many of these mid-career separations may have been voluntary and therefore not associated with heightened worker insecurity. Second, many mid-career separations may have occurred during recessions. If workers recognize layoffs as reflecting recessionary pressures, these layoffs may not affect worker perceptions of job security during normal times. This is consistent with the high level of cyclicalities in the measure of job security in Figure 11.<sup>xi</sup> Third, the surveys only have information on perceptions of employed workers. People who experienced an involuntary separation may have more negative perceptions of job security, and the fraction of such people may have increased over time.

To summarize, perceptions of job security and satisfaction have been fairly stable over the past 40 years across age groups and tenure categories.<sup>xii</sup> This holds even for older male workers in the most-affected cohorts, indicating that declines in rates of long tenure don't seem to be associated with increased anxiety about one's own current employment. These reports are consistent

with Figure 5, which showed that older male workers are not more likely to transition into nonemployment than in the past. Meanwhile, perceptions of job security have actually improved for people with low tenure, perhaps related to the decline in job changing.

## VII. Conclusion

In this paper, we have taken a comprehensive look at the changing distribution of employer tenure among U.S. workers over four decades. Using CPS data (and verified in other sources), we find that a roughly stable mean and median tenure masks a range of changes in the tenure distribution since 1980. By examining changes throughout the tenure distribution comprehensively, we build on work by others that focuses on either short- or long-tenure independently.

In the left tail, we find that short tenures account for a declining share of employment. The declines are prevalent across demographic groups as well as industry, occupation, and skill groups and hence are not explained by compositional changes in the workforce. Instead, these declines appear to be related to a decline in job-to-job transitions among short-tenure workers, especially for workers with less than one year of tenure. Using SIPP data, we show that about 80% of the decline in job-to-job transitions since the late 1990s is related to declining separations within tenure groups, with about half the decline coming from the shortest tenure group (those with less than 1 year of tenure). These declines have been accompanied by an increase in perceived job stability among low tenure workers over the past four decades. For now, we leave unexplored the question of *why* churn is declining most strongly in shorter tenure employment relationships—this is clearly an important direction for future research and critical to understanding the rightward shift in the left tail of the tenure distribution.

In contrast to the short end of the tenure distribution, changes at the long end of the tenure distribution differ across demographic groups, particularly along age and gender lines. The percent of women with at least 20 years of tenure has increased substantially since the 1980s, while the percent of men with long tenure has fallen substantially at older ages. The decline in long-tenure rates for older men can be partly explained by the shift out of manufacturing and other high-tenure sectors, as well as the decrease in unionization. Strikingly, the decline in long tenure among men is roughly similar across skill groups.

However, about two-thirds of the decline in long tenures for men remains unaccounted for by observables. Instead, we find that the likelihood of a separation in mid-career has increased. Evidence suggests that this results in declining inflows into long-tenure employment, meaning that fewer men are eligible to attain long-tenure toward the end of their careers. The increase in mid-career employment disruptions could be related to the secular decline in prime-age male labor-force participation, which economic research has frequently linked to a variety of adverse demand shocks. On the other hand, declines in long-tenure rates for men have not been accompanied by increases in perceived job insecurity, hinting that the mid-career separations experienced by men may have been voluntary or cyclical, rather than reflecting a secular trend in involuntary separations. Notably, the declining incidence of long tenure at older ages was concentrated in cohorts of men born between 1920 and 1940 and again after the late 1950s, suggesting that any explanations should focus specifically on these cohorts. Additional research is needed to more fully disentangle the reasons why mid-career employment disruptions have become more frequent for men.

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Table 1

## Population Shares and Tenure by Age Group

	<b>Men</b>				<b>Women</b>			
	22-39	40-49	50-54	55-64	22-39	40-49	50-54	55-64
<b>Population shares (age 22-64, employed)</b>								
1983, 1987, 1991	58.2	21.8	15.4	4.6	58.4	22.7	14.6	4.3
2002-2020	47.2	25.6	21.1	6.0	44.9	26.0	22.6	6.5
<i>Change</i>	<i>-10.9</i>	<i>3.8</i>	<i>5.7</i>	<i>1.4</i>	<i>-13.5</i>	<i>3.3</i>	<i>8.0</i>	<i>2.2</i>
<b>Fraction with tenure 20 years or more</b>								
1983, 1987, 1991	0.6	20.1	39.1	39.1	0.4	7.5	16.4	23.8
2002-2020	0.4	13.0	27.8	31.3	0.3	9.7	21.2	26.7
<i>Change</i>	<i>-0.2</i>	<i>-7.1</i>	<i>-11.4</i>	<i>-7.8</i>	<i>-0.1</i>	<i>2.2</i>	<i>4.9</i>	<i>2.9</i>
<b>Average tenure in years</b>								
1983, 1987, 1991	4.7	10.8	15.4	16.4	3.9	7.4	10.4	12.3
2002-2020	4.1	8.9	12.4	13.5	3.8	7.9	11.1	12.6
<i>Change</i>	<i>-0.6</i>	<i>-1.9</i>	<i>-2.9</i>	<i>-3.0</i>	<i>-0.2</i>	<i>0.6</i>	<i>0.7</i>	<i>0.3</i>

Source: Authors' calculations from microdata to the CPS occupational tenure supplements.

Notes: Population shares are the share of the 22-64 employed population accounted for by the sex/age group (that is, cells add to 1 across the row). Self-employed and unpaid family workers are excluded. See text for discussion of the comparability of CPS data across these periods.

Table 2

Change in the percent of men 40-64 with tenure of 20 years or more, by industry and occupation

	1983, 1987	2010-20	Change
Industry			
Manufacturing	38.5	26.7	-11.9
Public Sector	31.2	30.5	-0.7
All other industries	25.4	18.2	-7.2
Occupation			
Non-routine cognitive	31.4	21.7	-9.7
Routine cognitive	28.5	20.9	-7.6
Routine manual	31.6	20.5	-11.1
Non-routine manual	18.6	17.5	-1.1
Education and marital status			
Non-college	31.2	20.8	-10.4
Married	31.8	22.8	-8.9
Unmarried	27.2	16.2	-11.0
College	27.9	20.6	-7.4
Married	28.9	21.5	-7.3
Unmarried	21.3	17.5	-3.9

Source: Authors' calculations from microdata to the CPS occupational tenure supplements.

Notes: Self-employed and unpaid family workers are excluded. Percent with long tenure is estimated by year and industry/occupation or demographic group, and then averaged over the years shown in each column. Estimates are in percentage points.

Table 3

Relationship between a birth cohort's long tenure share at age 55-64 and unemployment rates earlier in life

Dependent variable: Percent of cohort with 20+ years of tenure at ages 55 to 64 (men)

	(1)	(2)	(3)	(4)	(5)
Average percent of cohort:					
Employed in prev. year but not currently, ages 35 to 54	-4.3 (0.6)		-5.8 (0.7)		-3.7 (0.8)
Employed in prev. year but not currently, ages 25 to 34		0.0 (0.4)		-0.6 (0.2)	
Employed in prev. year but not currently, ages 35 to 44		-2.2 (0.6)		-2.6 (0.4)	
Employed in prev. year but not currently, ages 45 to 54		-1.9 (0.7)		-2.5 (0.5)	
R <sup>2</sup>	0.65	0.66	0.65	0.69	0.34
Number of cohorts	35	35	35	35	35

Sources: For tenure estimates we used the CPS tenure supplements from 1983. For the unemployment, non-employment, and multiple employer rates we used the March (ASEC) supplement to the CPS.

Notes: Table shows coefficient estimates (and standard errors, in parentheses) from OLS regressions where the dependent variable is the percent of the cohort with 20 or more years of tenure at ages 55 to 64 (estimated as described in footnote 25), and the independent variables are as listed in the table.

Table 4

Change in the percent of women 40-64 with tenure of 20 years or more, by industry, occupation, marital status, and education

	1983, 1987	2010-20	Change
Industry			
Manufacturing	15.8	19.8	4.0
Public Sector	12.1	27.5	15.4
All other industries	10.4	15.9	5.5
Occupation			
Non-routine cognitive	14.6	19.6	5.0
Routine cognitive	10.5	16.6	6.1
Routine manual	13.3	15.6	2.3
Non-routine manual	7.0	10.8	3.8
Education and marital status			
Non-college	11.3	16.0	4.7
Married	9.9	17.3	7.5
Unmarried	14.7	13.9	-0.8
College	11.6	17.3	5.7
Married	10.1	18.0	7.9
Unmarried	15.0	16.0	1.1

Source: Authors' calculations from microdata to the CPS occupational tenure supplements. Self-employed and unpaid family workers are excluded.

Notes: See table 2.

Table 5

## Decomposition of the change in the aggregate job-to-job transition rate

Average j-to-j transition rate 1996-2000	5.4%
Average j-to-j transition rate 2008-2013	3.3%
Decrease in EE share	2.1pp
Contribution from:	
Changes in employment shares by tenure	0.6pp
Changes in separation rates	1.7pp
Tenure < 1Y	0.9pp
Tenure 1Y to 3Y	0.4pp
Tenure 3Y to 5Y	0.2pp
Tenure 5Y to 10Y	0.2pp
Tenure 10Y+	0.1pp

Source: Authors' calculations from SIPP microdata, using 22-64 year olds.

Notes: The job-to-job transition rate is defined as the fraction of employed workers who left an employer and reported working for a new employer 3 months later. Contributions do not sum exactly to the decrease in the aggregate job-to-job transition rate because the table does not report interactions between the changes in separation rates and employment shares.

Table 6

Worker Perceptions of Job Security and Satisfaction: Share Giving an

Current job tenure	Affirmative Response							
	Agree own job security is good.		How easy to find equivalent new job?		How satisfied with own job?		How likely to search for new job in next year?	
Survey	QEMP (1970s)	GSS (2000s, 2010s)	QEMP (1970s)	GSS (2000s, 2010s)	QEMP (1970s)	GSS (2000s, 2010s)	QEMP (1970s)	GSS (2000s, 2010s)
All workers	79	88	62	61	88	90	28	40
By tenure category:								
<=1 year	70	82	74	68	83	85	44	56
1 to <=3	77	87	71	71	84	89	39	49
3 to <=5	78	86	66	62	87	89	33	44
5 to <=10	84	88	58	58	89	92	23	34
10 to <=20	84	90	49	53	93	94	13	25
Over 20	89	90	43	45	94	94	7	15
Men age 50-64	82	88	46	55	92	92	13	29

Sources: The Quality of Work Life (QEMP) survey was administered by the U.S. Department of Labor in 1969-70, 1972-3 and 1977, with about 1300 responses in each wave. The General Social Survey (GSS) is administered by the National Opinion Research Center. Responses are from the Quality of Work Life module, administered in the GSS in 2002, 2006, 2010, 2014, and 2018.

Notes: All cells report share respondents age 22-64 answering affirmatively or positively at the very or somewhat levels.

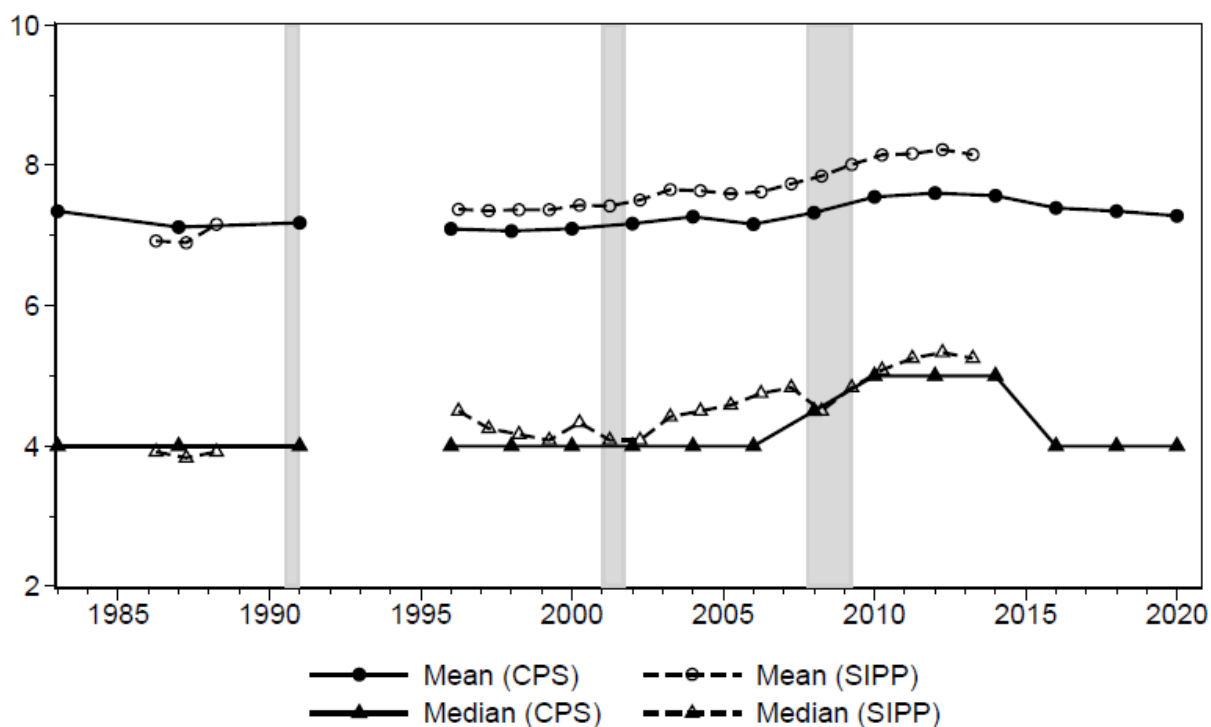


Figure 1

Mean and Median Tenure with the Current Employer, 22 to 64 year olds

Source: All estimates are from CPS and SIPP microdata, calculated by authors.

Notes: Estimates are for 22 to 64 year olds, and exclude self-employed workers and unpaid family workers. Estimates of short tenure (<3 years) in CPS data are likely not strictly comparable in the earlier years of our sample (1983, 1987, 1991) relative to later years (1996+), which may affect comparability of average tenure (but probably not median tenure) in the CPS across these years; see text for more details. NBER recessions are shaded; estimates from the CPS (which were measured in January or February) are assigned to the first quarter of the year and estimates from the SIPP (annual averages) are assigned to the second quarter of the year.

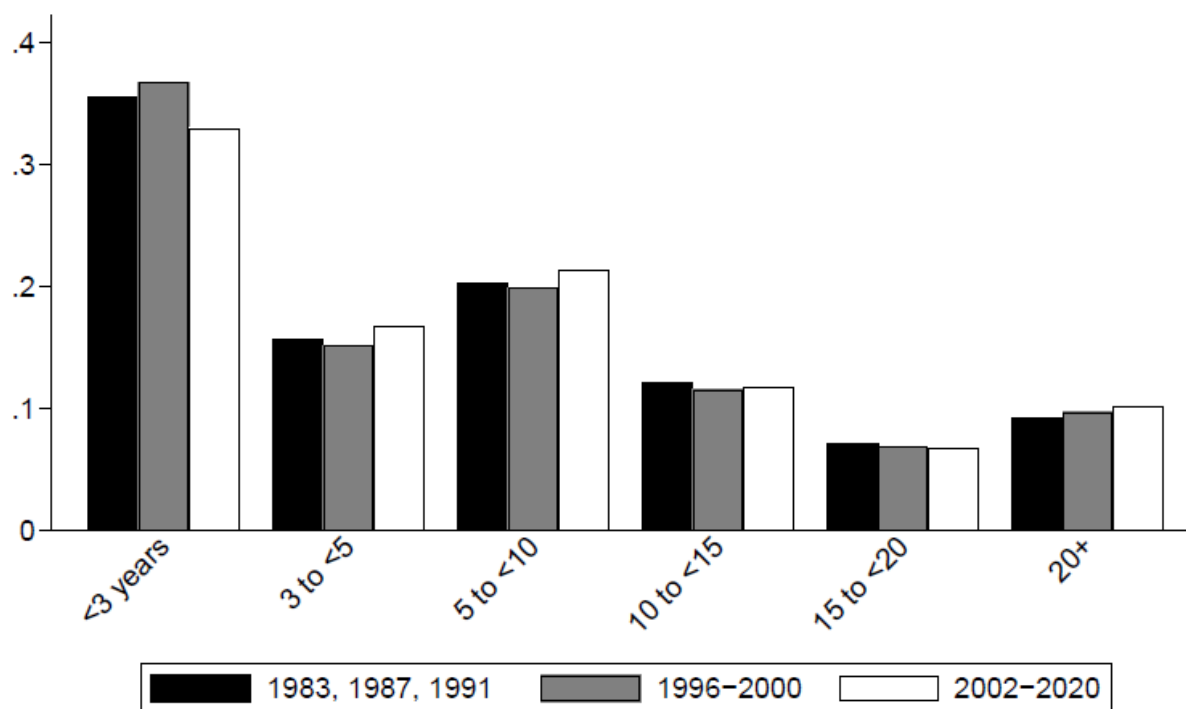


Figure 2

Distribution of Tenure Over Time, 22 to 64 year olds

Source: Authors' calculations from CPS microdata. Bars show the fraction of the working population with reported tenure in the listed ranges of years of tenure.

Notes: Estimates are for 22 to 64 year olds with positive reported tenure, and exclude self-employed workers and unpaid family workers.



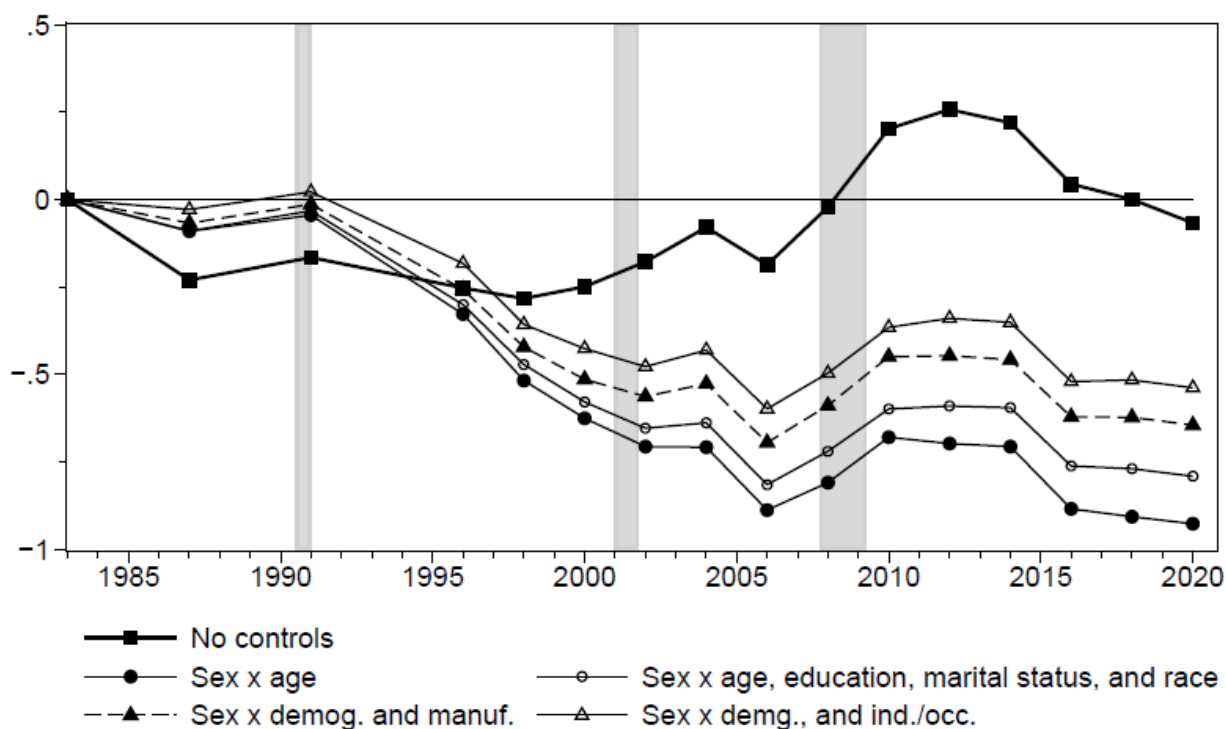


Figure 3

Average tenure, men and women age 22-64, relative to 1983

Source: Authors' calculations from microdata to the CPS occupational tenure supplements.

Notes: The figure plots year fixed effects from regressions where the dependent variable is the respondent's tenure, and the right-hand side variables are year fixed effects and listed controls. All estimates are relative to the estimated year effect in 1983 and are in percentage points. NBER recessions are shaded.

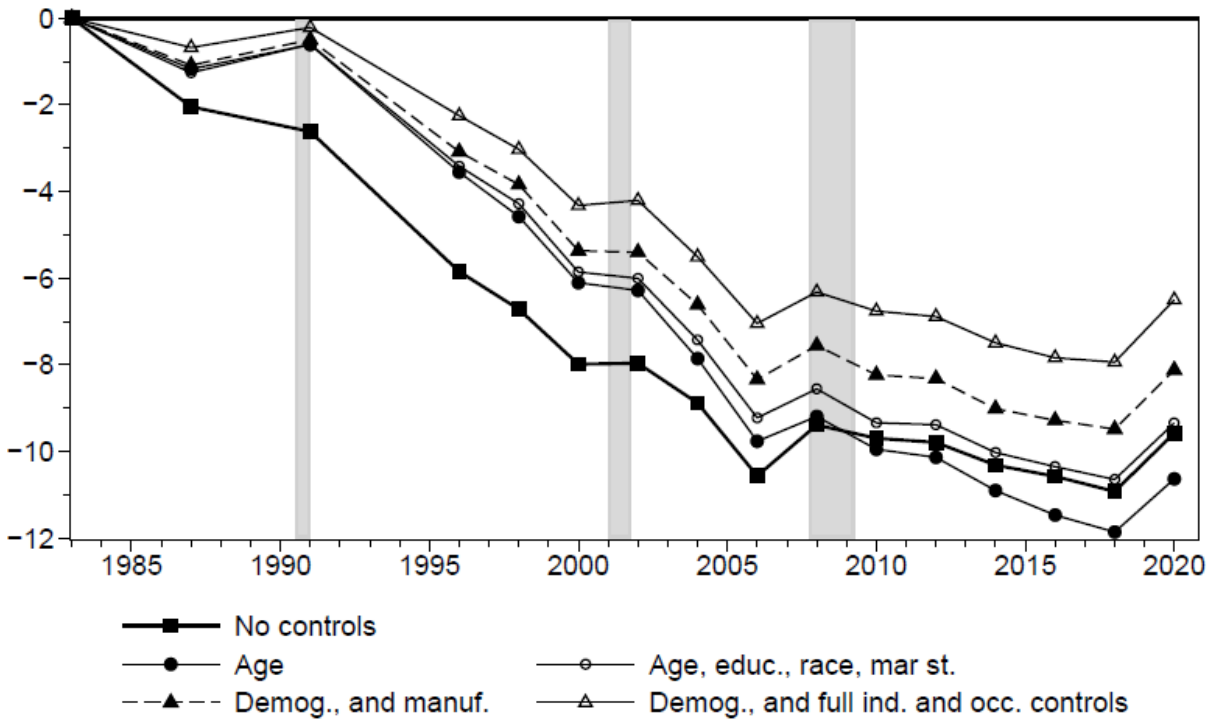


Figure 4

Percent of men age 40 to 64 with tenure of 20 years or more, relative to 1983

Source: Authors' calculations from microdata to the CPS occupational tenure supplements.

Notes: The figure plots year fixed effects from regressions where the dependent variable is whether the respondent had 20 or more years of tenure, and the right-hand side variables are year fixed effects and listed controls. All estimates are relative to the estimated year effect in 1983, and are in percentage points. NBER recessions are shaded.

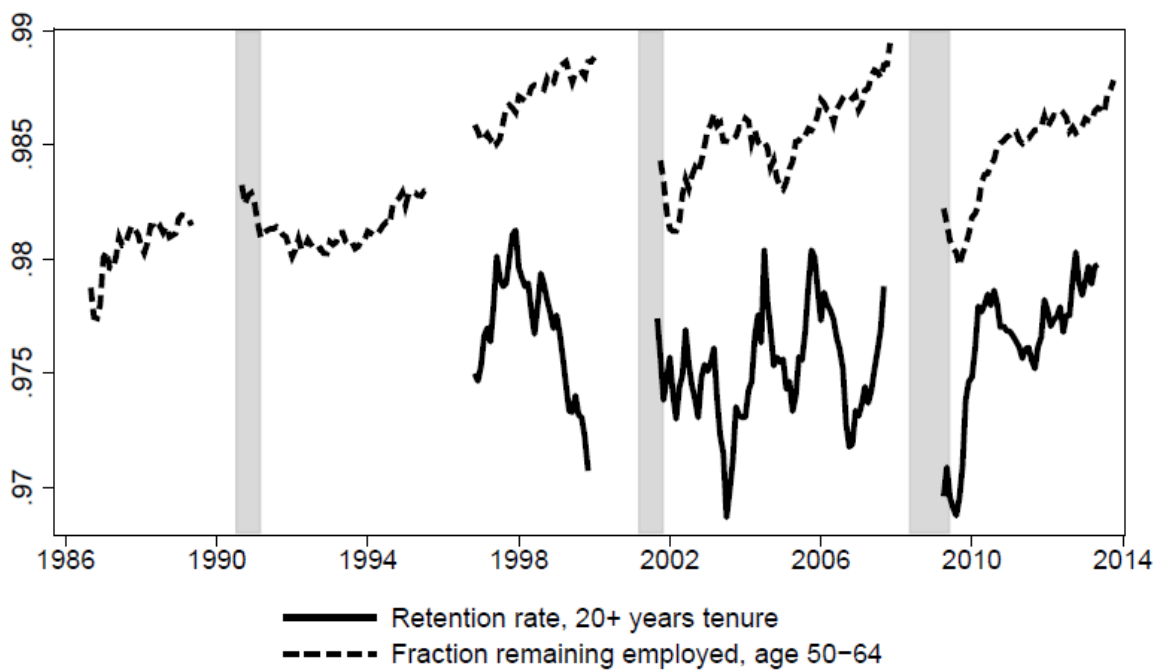


Figure 5

Retention rates for men

Source: Survey of Income and Program Participation.

Notes: Black line shows the fraction of men with 20+ years of tenure who remained working with the same employer in the subsequent four months. Red line shows the fraction of men age 50 to 64 who were not unemployed or out of the labor force four months later.

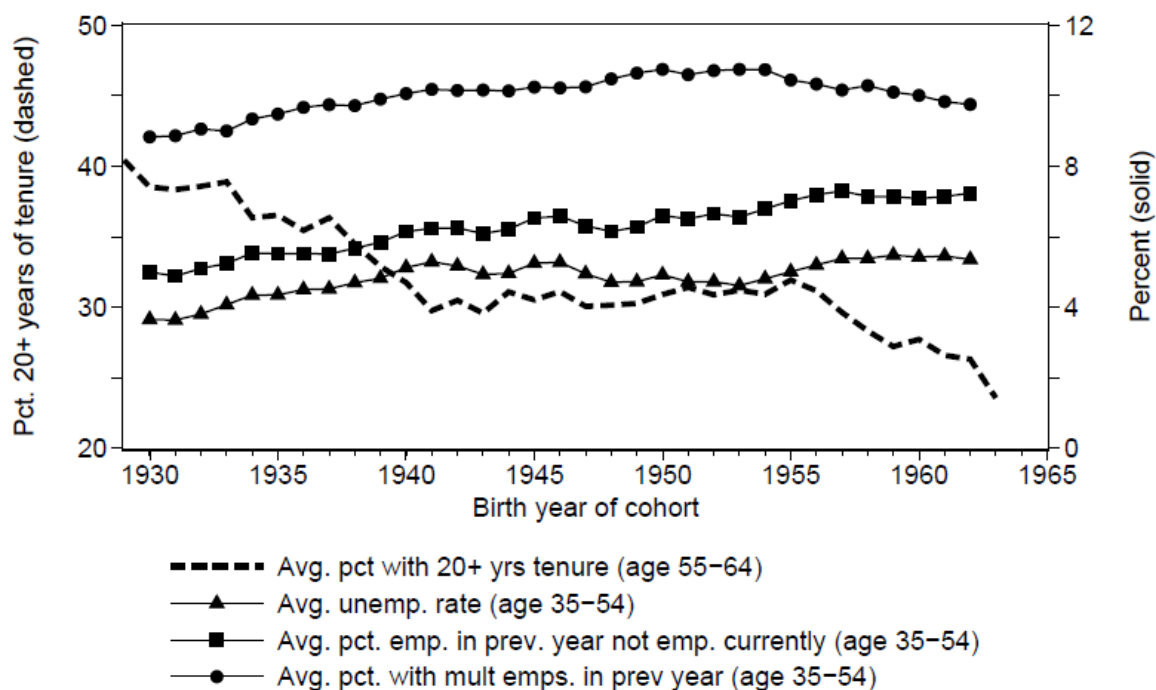


Figure 6

Trends across cohorts in long tenure at later career, and unemployment and separation rates at mid-career (men)

Source: For tenure estimates is the CPS tenure supplements from 1983, with cohort-specific long tenure rates estimated as described in footnote 25. The source for the unemployment rate and percent employed in the previous year but not employed currently is the March (ASEC) supplement to the CPS.

Notes: The figure shows three-cohort centered moving average to smooth through some volatility.

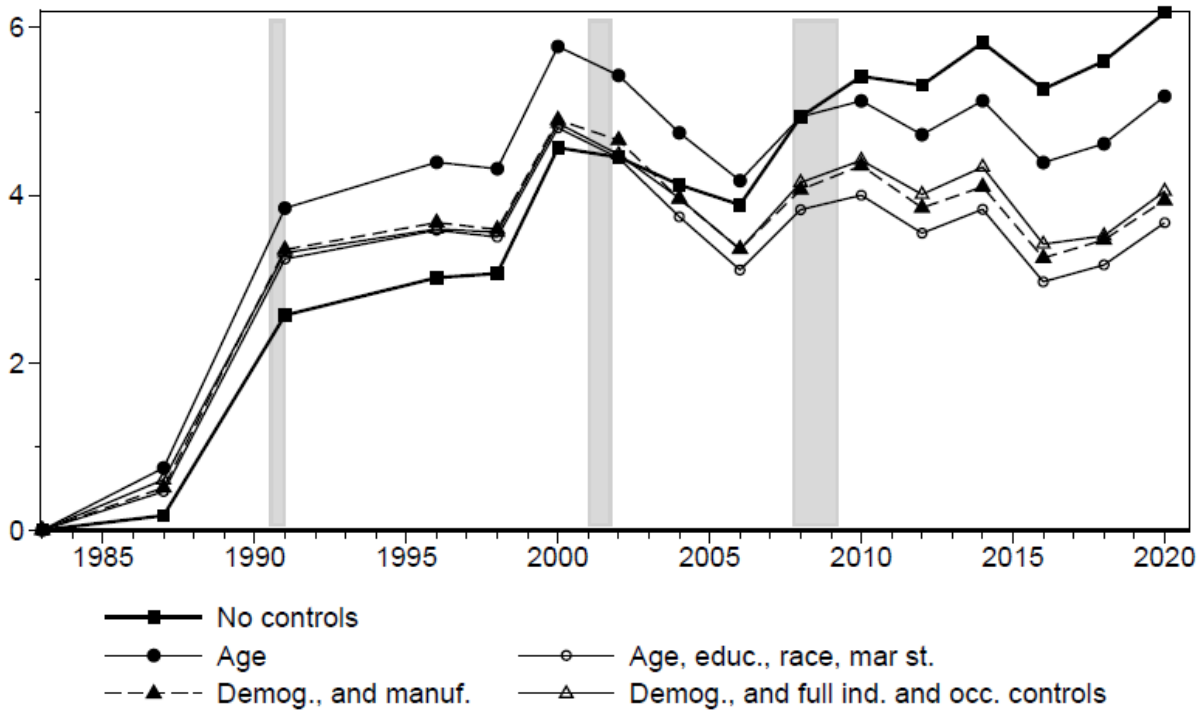


Figure 7

Percent of women age 40-64 with tenure of 20 years or more, relative to 1983

Note: See notes to figure 3. Estimates are in percentage points.

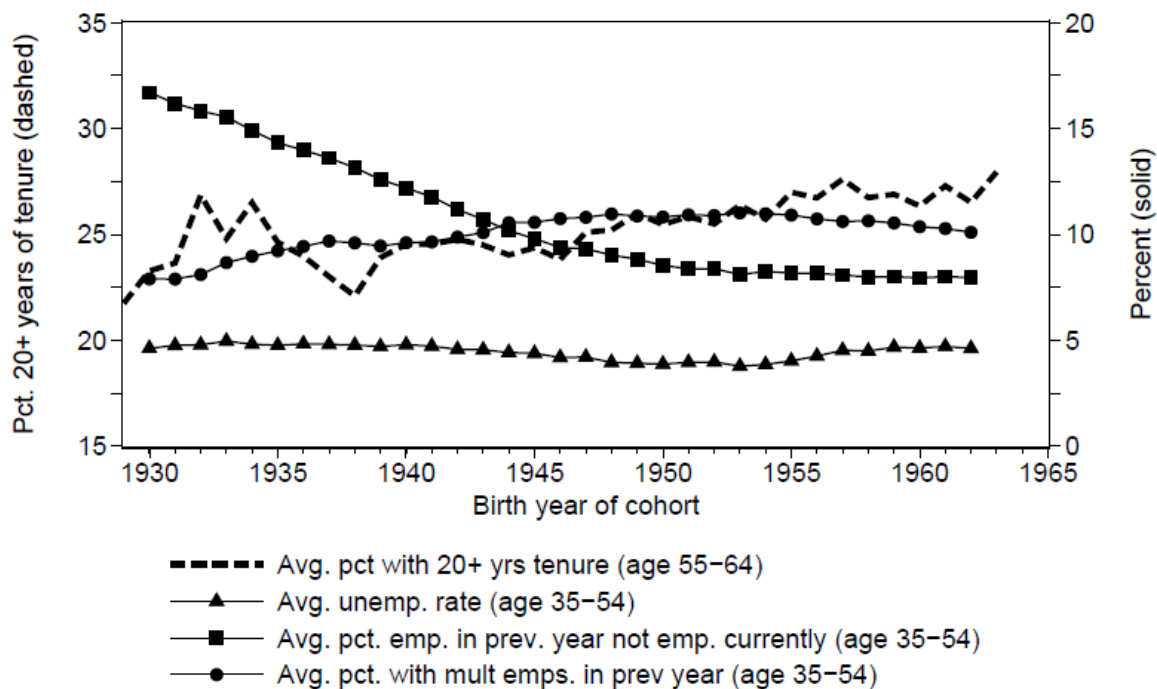


Figure 8

Trends across cohorts in long tenure at later career, and unemployment and separation rates at mid-career (women)

Sources: Tenure estimates are from the CPS tenure supplements from 1983, with cohort-specific long tenure rates estimated as described in footnote 23. The source for the unemployment rate and percent employed in the previous year but not employed currently is the March (ASEC) supplement to the CPS.

Notes: The figure shows three-cohort centered moving average to smooth through some volatility.

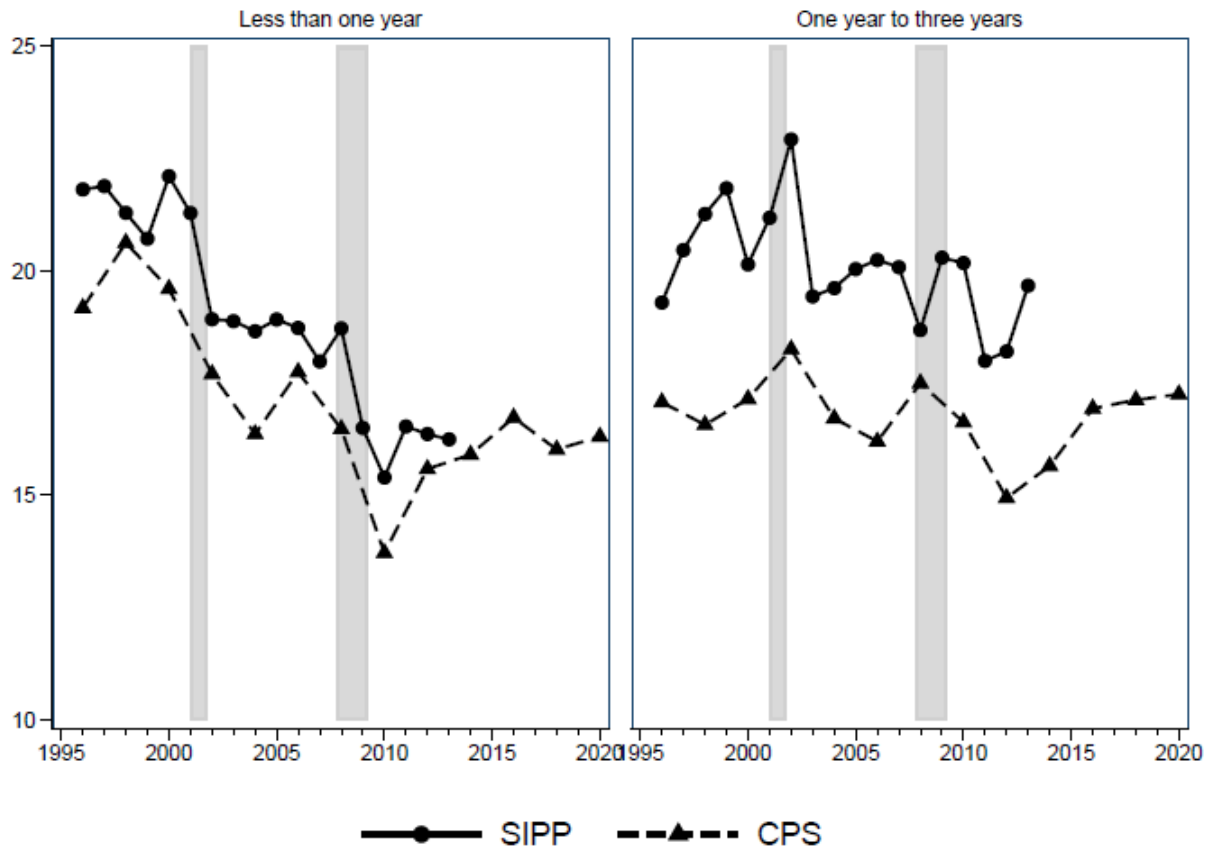


Figure 9

Percent of workers 22-64 with tenure less than one year

Source: Authors' calculations from microdata to the CPS occupational tenure supplements.

Notes: Figure shows the share of workers 22-64 with tenure in the listed tenure group, in percentage points. Self-employed and unpaid family workers are excluded. Further details are provided in the text. NBER recessions are shaded.

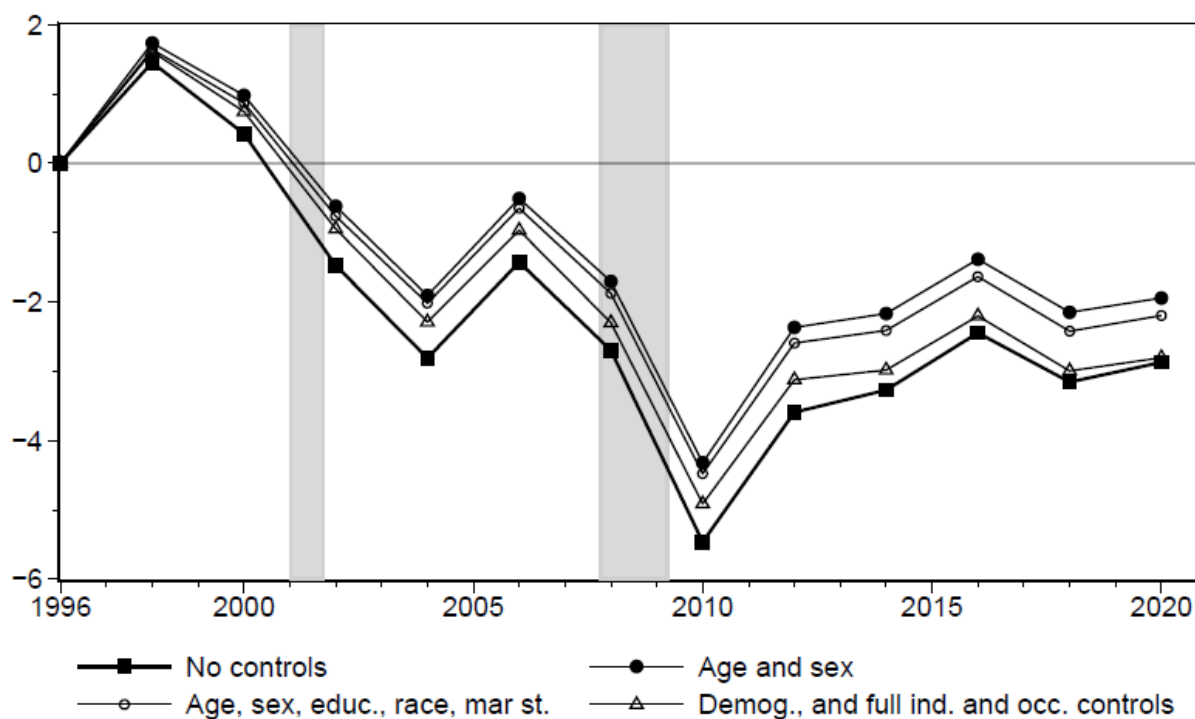


Figure 10

Percent of workers age 22-64 with tenure less than one year of tenure, relative to 1996

Source: Authors' calculations from microdata to the CPS occupational tenure supplements.

Notes: The figure plots year fixed effects from regressions where the dependent variable is whether the respondent had less than one year of tenure, and the right-hand side variables are year fixed effects and listed controls. All estimates are relative to the estimated year effect in



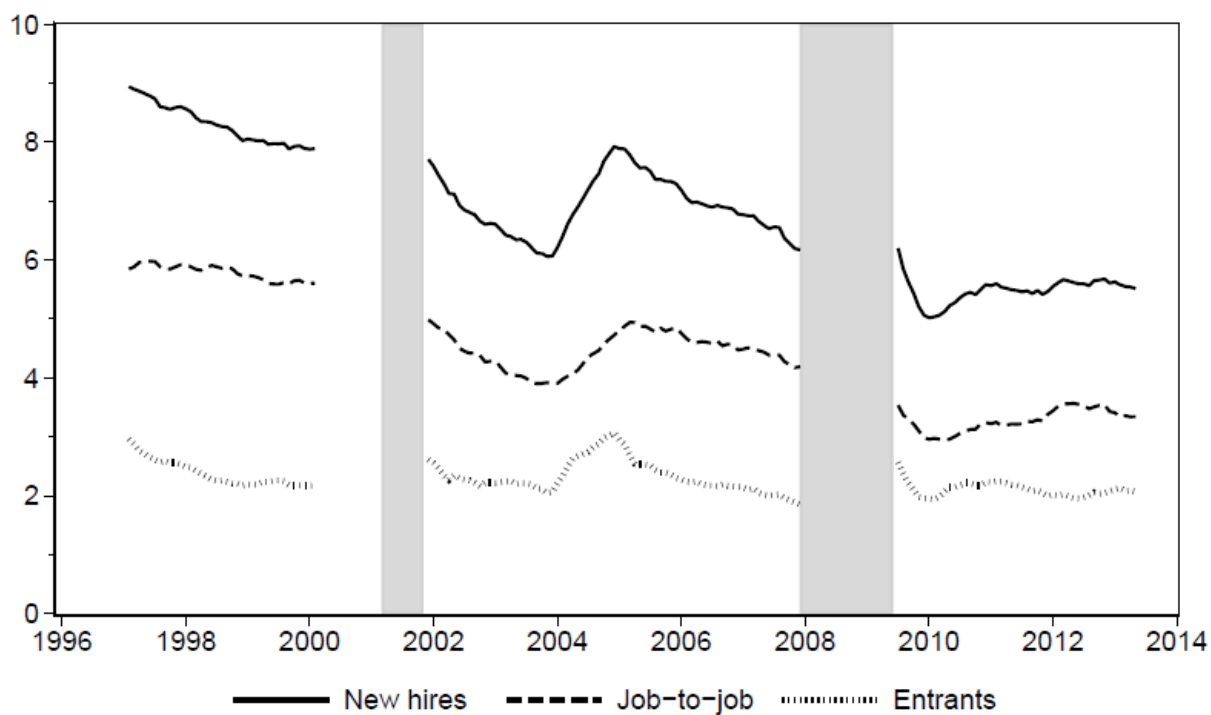


Figure 11

Decomposition of the Share of New Hires in Total Employment,  
22 to 64 year olds in the SIPP

Source: Authors' calculations from SIPP microdata.

Notes: NBER recessions are shaded. Figure shows 12-month moving averages of monthly transition rates (in percentage points). Gaps in series are because some SIPP panels ended before the next SIPP panels began. New hires are defined as workers with tenure at their employer of less than one quarter. Job-to-job are new hires that were employed three months earlier. Entrants are new hires that were not employed three months earlier.

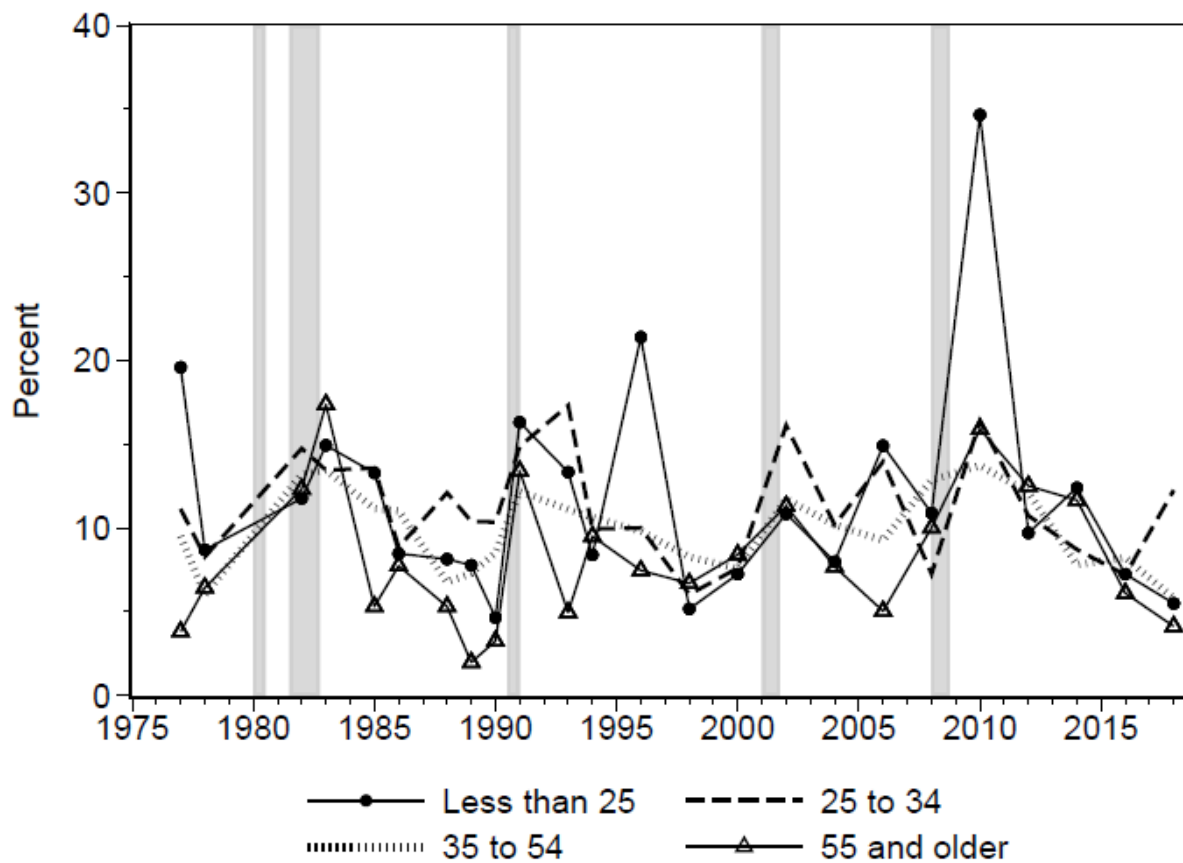


Figure 12

Percent of GSS Respondents Who Report They Feel Likely to Lose Their Job in the Next 12 Months, by Age

Source: is General Social Survey microdata, 1977 to 2016, provided by National Opinion Research Center.

Notes: Y-axis is share of (valid) respondents answering that they think it is likely or very likely they will lose their job in the next 12 months, on a four point scale.

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<sup>i</sup> In General Social Survey responses over the period 1989 to 2016, the share of respondents indicating that job security is important or very important in a job ranges from 93 to 98 percent. This compares with about 81 percent reporting high income as important or very important in the same question series, and about 55 percent for flexible hours.

<sup>ii</sup> Changes in separation patterns need not guarantee a change in average tenure, however, depending on how the changing separations are distributed across the tenure distribution.

<sup>iii</sup> For example, the employment-to-population ratio for men age 25 to 54 trended down from the 1970s through early 2010s.

<sup>iv</sup> The book *The End of Work* was an influential formulation of such concerns in the early 1990s, when U.S. unemployment was rising sharply. Similar concerns about automation or, more recently gig work, disruptively replacing a large share of formerly stable jobs continue to be discussed in the media, by policymakers and some scholars. A few examples: see the extended article by Thompson (2015) in *The Atlantic*; Bluestein (2019) summarizing his book from that year on uncertainty and work in *The Conversation*, speeches by Hillary Clinton (Reilly 2016), Steny Hoyer (2016) and Bobby Scott (2017). However, some in the popular conversation have taken issue with the characterization of prevalent stable jobs in past decades (Gimein 2016). Economists have also recently sought to document changes in gig work, motivated in part by concerns about the stability or quality of these jobs (Katz and Krueger 2019, Abraham and Houseman 2020).

<sup>v</sup> We are aware of only a few papers that have looked at both tails simultaneously. Swinnerton and Wial (1995) looked comprehensively at four-year retention probabilities for workers in the CPS Job Training Supplements spanning the 1980s. Hyatt and Spletzer (2016) jointly consider factors explaining the decline in very short tenure jobs and changes in longer tenure jobs. However, they limit their analysis of longer tenure jobs to 5 years of tenure or longer, and we find that the decline in long-tenure is only apparent for jobs much further in the right tail of the tenure distribution.

<sup>vi</sup> To our knowledge, only one other paper has directly examined the question of how worker perceptions of job stability and satisfaction have changed over time (Fullerton and Wallace 2007), and this study did not examine trends differentially by worker tenure.

<sup>vii</sup> Important early work by Hall (1982) documented key features of the US tenure distribution using CPS supplements that pre-date ours.

<sup>viii</sup> We also analyzed tenure using the Panel Study of Income Dynamics (PSID), which also meets our main criteria. However, because the PSID only records tenure for household heads and their spouses, sample differences meant that resulting tenure statistics were not directly comparable to those from the CPS and SIPP. Nevertheless, an advantage of the PSID is that the tenure question is unchanged across survey years, reducing concerns that survey changes contribute to our observed changes in the tenure distribution. Results from PSID analysis are available upon request.

<sup>ix</sup> The 2008 SIPP panel was followed through 2013. Although a new SIPP panel was created in 2014, the survey method changed materially so the worker flows cannot be measured consistently post-2013.

<sup>x</sup> In the CPS, one can infer that separations followed by a spell of unemployment were involuntary, but the voluntary/involuntary nature of all other separations is not observed.

<sup>xi</sup> The differences in the way that the CPS surveys recorded short tenure in the earlier years of our sample likely imply that estimates of mean tenure in the 1983, 1987, and 1991 samples are not strictly comparable to estimates from 1996 and later. Estimates of median tenure likely *are* comparable, because the changes in tenure recording methodology only affected tenure levels below the median, and therefore the median should be unaffected.

<sup>xii</sup> See also Hipple and Sok (2013), and U.S. Bureau of Labor Statistics (2016).

<sup>xiii</sup> In section IV, we show that the decline in short tenure has been especially large since the mid-1990s for workers with one year of tenure or less. In figure 2 we don't show very short tenure because, as described in section II, we think the share of workers with very short tenure is not strictly comparable over all of the years.

<sup>xiv</sup> Although we believe that short tenure was inconsistently measured in the earlier surveys relative to later surveys; we have no reason to believe that longer tenure estimates suffer similar inconsistencies over time. That said, it is very likely that tenure is measured with some degree of error in all survey years. For example, there is significant bunching for longer tenure at multiples of 5 and 10 years, and it may be possible that workers who report very long tenure (that is, 20 years or more) had short interruptions at some point in their tenure that they don't consider when reporting tenure. There is no reason to believe that this sort of measurement error has changed over time, however.

<sup>xv</sup> Hyatt and Spletzer (2016) find that the fraction of men age 45 and older with long tenure spells was fairly constant from 1998 to 2013. However, they define long tenure as 10 years or more. We find that this apparent stability is the result of an increase in the share of men with 10 to 15 years of tenure and a decrease in the share with more than 15 years. Thus, it is the very long employment relationships that are less common for older men.

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<sup>xvi</sup> Specifically, the red line controls for a male dummy interacted with dummies for ages 22 to 29, 30 to 39, 40 to 45, 45 to 49, 50 to 54, 55 to 59, and 60 to 64. The orange line additionally includes a male dummy interacted: with dummies for education (less than a high school degree, high school degree, some college, or bachelors degree or more); indicators for whether the respondent is white or black; and an indicator for whether the respondent is married. The dashed green line additionally includes a male dummy interacted with an indicator for whether the respondent is in manufacturing. The solid green line additionally includes a male dummy interacted with a set of dummies for 12 broad industry groups and 14 broad occupation groups.

<sup>xvii</sup> The jump in long tenure may seem surprising and abrupt, given the steady decline from 2008 to 2018. We suspect that the increase in long tenure may reflect some cyclical improvement in job stability—similar to the increase from 2006 to 2008—perhaps due to delayed retirement decisions by older and longer-tenure workers during the relatively tight labor market just prior to the pandemic. Indeed, for most ages between 55 and 64, the percent of male CPS respondents who report being not in the labor force and retired declined over the last few years leading up to the pandemic.

<sup>xviii</sup> At first blush, more sophisticated distributional decomposition techniques (for instance quantile regression) may seem well-suited for this question. However, the tenure distribution as measured in the CPS is very “lumpy,” with bunching at particular whole numbers, and these heaps can fall on either side of a particular percentile depending on the year. Decompositions that rely on characterizing percentiles of the distribution may therefore be misleading. So rather than decomposing changes across percentiles of the distribution, our preferred approach is to focus on explaining changes in the share of employment below or above particular tenure cutoffs. In addition to this regression based approach, we have also estimated Oaxaca-Blinder decompositions of the change in long tenure from the earlier to later periods, and the results are broadly consistent with the contribution of changing observable characteristics as shown in the figure.

<sup>xix</sup> In Appendix Figure 1, we show results from regressions similar to those presented in Figure 4, except estimated separately for non-college and college educated men. For both groups, controlling for age and other demographic characteristics, and industry and occupation explain a bit less than half of their declines in long tenure.

<sup>xx</sup> We show public administration separately in Table 2 because it is the only broad industry group that experienced little change in long tenure over this period.

<sup>xxi</sup> Specifically, non-routine cognitive occupations are professional, managerial, and technical jobs; routine cognitive jobs are sales, clerical, and administrative support occupations; routine manual jobs are production, craft, repair, and machine operative occupations; and non-routine manual jobs are services.

<sup>xxii</sup> For example, in the CPS from 2012-2020, the long-tenure rate for men age 40 to 64 in manufacturing industries was about 43 percent for unionized workers and 24 percent for non-unionized workers. In non-manufacturing industries, for this group of men long-tenure rates are about 33 percent for unionized workers and 17 percent for non-unionized workers.

<sup>xxiii</sup> The shift toward away from defined benefit (DB) plans over this period may also have contributed, because DB plans generally provide incentives to stay longer with a given employer. However, Goda, Jones and Manchester (2017) find that DC plans reduce worker mobility relative to DB plans, perhaps because workers value DC plans more. This suggests that this trend might have worked *against* the decline in long tenure. The CPS does not measure type of retirement plan.

<sup>xxiv</sup> The reason we use SIPP data instead of CPS data is because we think the SIPP provides a more accurate estimate of retention rates over time for a given respondent. In the CPS, some respondents to the January/February tenure supplement can be followed over the next three months, and then one year later. For those respondents who are employed one year later, there is no way to know whether they are employed at the same employer as they were when responding to the tenure supplement.

<sup>xxv</sup> We have matched respondents’ data from the CPS tenure supplement to data from the monthly CPS survey in order to estimate transition rates from employment for long-tenure workers in the month following the tenure supplement. The CPS data are noisier than what we see in the SIPP, but in general consistent with our findings reported in the main text: monthly retention rates for long-tenure workers are about flat since 1996 and around 95 percent or above.

<sup>xxvi</sup> In this figure, and in the cohort analysis presented elsewhere in this section, we report and use estimates of cohort tenure rates derived from individual-level regressions of the probability of being in a tenure bin (for instance 20 years or more), unemployment rates, or separation rates, on birth year cohort dummies and age dummies; estimated tenure rates by cohort are equivalent to the corresponding cohort effect plus the average age effect for the corresponding age group. We do not have tenure or separation rates for each cohort for each age in our sample (due to when the CPS questions we use become available, and also because the tenure supplement not administered every year). Instead, the regression infers the average cohort effect for each cohort for the given age range based on available data for each cohort in each age range. For example, when estimating long tenure for the 1930 birth cohort, tenure is observed for the 55-64 year age range in 1987 (at age 57) and in 1991 (at age 61); long-tenure shares for the 1930 birth cohort at ages 55, 56, 58, 59,

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60, and 62-64 are inferred based on their long-tenure at ages 57 and 61 and the usual long-tenure / age profile over these ages.

<sup>xxvii</sup> In support of this interpretation, cohorts of women with relatively high labor force participation rates at ages 21-24 also had relatively high rates of long tenure for married women at ages 54-59. (Specifically, a cohort-level regression of long-tenure rates for married women ages 54-59 on the average LFPR for that cohort at ages 21-24 has a coefficient of 0.18 and standard error of 0.05.)

<sup>xxviii</sup> In contrast to our findings for men, the unemployment rate for women at ages 35 to 54 does not show much of a trend across cohorts, and indeed for women there appears to be little cross-cohort relationship between long tenure at ages 55 to 64 and the cohort's unemployment rate at ages 35 to 54.

<sup>xxix</sup> Notably, the public-private sector distinction that we found for long-tenure men is not apparent at this end of the tenure distribution.

<sup>xxx</sup> Changing demographics and industry/occupation composition explain essentially none of the decline in less than one quarter jobs, although aging explains some of the decline in one quarter to one year jobs. This is similar to findings that observables explain little of the documented decline in job transitions (Molloy et al. 2016).

<sup>xxxi</sup> Hyatt and Spletzer (2016) find that the shift in the tenure distribution can be mostly explained by declines in the hiring rate rather than declines in the separation rate from existing jobs. However, their results pertain to a different set of hires and separations than our own. Specifically, they define separation as any exit from an existing job and a hire as any new employment relationship. In our framework, job-to-job flows are defined as separations that result in a new employment spell within the next 3 months. Consequently, we find a material decline in these transitions even though the aggregate separation rate (which includes separations into non-employment as well as job-to-job transitions) may not have decreased.

<sup>xxxii</sup> Gittleman (2019) studies whether the decline in job-to-job transitions in the PSID (imputed for a series break) is concentrated among voluntary or involuntary separations. He finds that trends within these categories are sensitive to the voluntary/involuntary classification, and, like us, he concludes that there is no strong evidence that the overall decline in transitions comes predominantly from either source.

<sup>xxxiii</sup> Abraham et al. (2018) finds that contingent and informal work are substantively undermeasured by the CPS, but they are unable to assess whether this mismeasurement has changed over time.

<sup>xxxiv</sup> Hall and Kudlyak (2019) explore the role of short employment spells in a model of labor market dynamics, but they do not analyze trends in short term jobs.

<sup>xxxv</sup> Using data from the Survey of Income and Program Participation 1996 to 2013, we estimate that about 4 out of 5 workers with less than one quarter of tenure will remain with their employer for longer than one quarter.

<sup>xxxvi</sup> Manski and Straub (2000) characterize the cross-sectional variation in reported job security by respondent observables, but they can say little about time trends in this measure as their data are limited to the late 1990s.

<sup>xxxvii</sup> They interpret flat security reports alongside a secular decline in unemployment rates as a rise in economic insecurity. However, the likelihood of a long unemployment spell rose over their period, so the unemployed state may be a bigger concern over time. As a result, we would not necessarily expect concerns about job security to decline with declines in the unemployment rate alone. Moreover, their analysis suggests that insecurity should have risen sharply in the Great Recession; our data show this was not the case.

<sup>xxxviii</sup> Respondents to the Quality of Worklife Module ranged from 1200 to 2800 across waves.

<sup>xxxix</sup> One might be concerned that conditioning these responses on length of tenure obscures a general decline in job satisfaction because the workers who do end up staying with their employer for a long time are more likely to be satisfied with their job. However, we find the same patterns when we group workers by age instead of by length of tenure. Job satisfaction increases with age but was roughly the same in the 1970s as it is today for each age group. Job security measures increased a little, especially for younger workers. And more workers of all age groups expect to look for a job within the next year. We find little difference in these measures by education, sex, and union status. Additionally, we find no meaningful differences in responses after 2000, either before or after the Great Recession.

<sup>xl</sup> Note that mid-tenure respondents to the 1970 survey (roughly ages 30 to 50) were born in the 1920 to 1940 cohorts. Hence responses include cohorts of men who experienced the most substantial declines in their likelihood of reaching long tenure.

<sup>xli</sup> Results are similar when we disaggregate the GSS into the 2000s and 2010s separately.