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THE MORE THINGS CHANGE,
THE MORE THEY STAY THE SAME:
TRENDS IN LONG-TERM EMPLOYMENT
IN THE UNITED STATES, 1969-2002

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ABSTRACT

This study considers whether there has been a decline in the attachment of workers and firms in the
United States over the past several decades. Specifically, it compares snapshots of job tenure taken
at the end of workers' careers from 1969 to 2002, using data from the Retirement History Survey,
the National Longitudinal Survey of Older Men, and the Health and Retirement Study. The primary
finding is one of stability in the prevalence of long-term employment relationships for men in the
United States. In 1969, average tenure in the longest job for males aged 58-62 was 21.9 years. In
2002, the comparable figure was 21.4 years. Just over half of men ending their careers in 1969 had
been with a single employer for at least 20 years; the same is true in 2002. This finding is robust to
adjustments for minor differences in question details across data sources and for educational and
retirement age changes over this time period.

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A great deal of attention has been paid in recent years to the issues of job stability and job security in the United States. Many studies have attempted to determine whether there has been deterioration in the prevalence of long-term, stable employment relationships in the United States during the period from roughly the mid-1970s to the present. Most of these studies have found either (1) no robust evidence of significant changes in various measures of job tenure, job stability or job security or (2) indications of relatively small increases in job turnover, particularly during the early 1990s. In contrast to the findings of these studies, there remains a powerful conventional wisdom that the U.S. has experienced widespread, substantial declines in expected job security or stability. A recent New York Times article noted that "workers today face a workplace that operates without the myth of job security." A similar article quotes the chief economist of a Chicago financial services firm as saying that the 1990s brought about a "very big structural change in labor markets…It's no longer lifetime employment like it was 30 years ago."[1] Further, when asked directly, workers themselves appear to be more worried than in previous years about the risk of separating from their employers. (Schmidt, 2000). There is, however, a striking lack of solid empirical evidence to support these claims. Even in cases where careful studies have shown some decline in job tenure or increased turnover, the question remains whether the magnitude of documented changes can justify claims of major shifts in employment relationships often found in the popular press.

This paper adds to the literature on long-term trends in employment stability in the United States in two specific ways. First, rather than examining cross-sectional

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[1] Connelly, Julie. "Youthful Attitudes, Sobering Realities." New York Times, October 29, 2003, and Holstein, William J. "Office Space: Armchair MBA; Job Insecurity, From the Chief Down." March 27, 2005..

tenure distributions or estimating job retention probabilities for different years, it focuses on measures of completed tenure in the longest job for several cohorts of workers near the end of their working lives. This focus on completed tenure provides a natural and direct measure of the frequency of "lifetime" or long-term employment. Second, by using different data sets than have previously been employed for questions relating to job stability, this work covers a longer time span than previous research and adds some perspective on the significance of observed changes in completed tenure. Most previous studies have relied on Current Population Study (CPS) files or longitudinal data available only from the early- or mid-1970s forward.[2] These studies have also been complicated by changes in question wording of several of the key tenure measures over time.

I use data from three different data sets to estimate the distribution of tenure on the longest job ever held, from cohorts of workers observed near retirement between 1969 and 2002. Specifically, data are drawn from the Retirement History Survey, started in 1969, the National Longitudinal Study of Older Men, started in 1966, and the Health and Retirement Study, started in 1992. Using these data allows me to examine cohorts of men who are aged 58-62 years in each of the years 1969, 1975, 1980, 1992, 1998 and 2002.

I.A. Current findings on trends in job tenure

The question of whether job stability has declined in the United States, and the tendency for economic studies and the popular press to disagree over its answer, have

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[2] As summarized below, researchers have addressed these questions using the Panel Study of Income Dynamics (PSID), Survey of Income and Program Participation (SIPP), and the National Longitudinal Studies (NLS).

been around since at least the mid-1990s. A collection of empirical research related to this controversy is contained in a volume edited by Neumark (2000).

Neumark (2000) summarizes several empirical investigations of changes in job stability and/or job security covering the period from the mid-1970s through the mid-1990s. More specifically, evidence from the PSID and the CPS suggests that the fraction of workers with very low tenure with their current employer increased somewhat during the 1970s (Jaeger and Stevens, 2000). Evidence for young workers from the NLS surveys, analyzed by Bernhardt, et al. (2000) is also consistent with higher separation rates during this period. Among higher tenure male workers, there is also evidence across data sets that their probability of remaining with their current employer declined during the 1990s (Neumark, Polsky, and Hansen, 2000). Most of the studies included in this volume point to some increase in turnover (or some decline in average tenure), for some worker groups, during some subset of the years between 1970 and 1995. However, what is clearly *not* found is consistent evidence of a major change in the dynamics of worker-firm relationships. Neumark writes that it would be "premature to infer long-term trends towards declines in long-term employment relationships." More recently Friedberg and Owyang (2004) show that current job tenure for men declined by approximately one year between 1983 and 1998, using data from the Survey of Consumer Finances. It is unclear, however, whether a decline of one year suggests a major change in the underlying employment relationship.

Another set of papers focuses more narrowly on turnover resulting from involuntary job changes. Here, there is again some evidence found of increasing rates of involuntary job separations. Using the PSID, for example, Valetta (2000) finds an

increase in the probability that high-tenure male workers experience an involuntary job change between 1976 and 1992. Valetta notes that these findings are consistent with an erosion of incentives to maintain long-term employment relationships, and thus qualitatively consistent with some of the claims from the popular press of a change in the nature of employment relationships. Similarly, Stewart (2000) makes use of CPS data and reports an increase in job loss rates from the 1970s to the 1980s (but not from the 1980s to the 1990s).

I.B. Contributions of the current study

This study differs from prior work mainly in the summary measure used to measure employment stability. I focus on cohorts of individuals who are observed near the end of their working lives, and utilize retrospective data on their completed (or nearly completed) tenure in the longest job they have held. One advantage of this approach is that it avoids the need to translate from job retention rates or distributions of current tenure into measures that speak more directly to the importance of long-term employment relationships. Many of the claims of decreased job stability express the notion that this— the extent to which long-term employment relationships are an important feature of the economy—is the key feature of the economy that has changed. As William Sundstrom (2003) argues in a review of the collected studies in the Neumark book:

> "Even if one leans toward the conclusion that stability has declined, the papers do not provide a good feel for the magnitude of the change…It would be interesting to know whether [these] changes in separations rates or tenure distributions…imply a large or merely marginal decline in that probability [of lifetime employment]."

Sundstrom refers to measures of the importance of lifetime jobs similar to those formulated and estimated by Hall (1982), and revised and updated in Ureta (1992). These authors estimated probabilities that an individual's current job will eventually last for more than a given number of years, a concept more directly related to claims of a reduction in long-term employment relationships than turnover probabilities or current tenure distributions. If, for example, similar fractions of workers at the end or their working lives in 1969 and in 2002 have been with a single employer for more than 20 years, there is little room to argue that the prevalence of long-term employment relationships has changed.

A related contribution of this approach is that, while the data sets utilized span only a slightly longer period of time than previous work (1969 to 2002) they will effectively make comparisons that include many earlier years. Measures of tenure in the longest job for the 1969 cohort will summarize the job turnover probabilities faced by workers from the 1930s through the 1960s. One concern with many of the previous studies is that consistently collected data from prior to the mid-1970s (or later for some data sets) is virtually non-existent. If some of the reported changes began to occur at the start of the 1980s, the use of only a few years of pre-change data could explain the failure of many studies to accurately capture such changes.

II. Data

II.A. Retirement History Survey

The Retirement History Survey (RHS) began in 1969 with a survey of approximately 11,000 men and unmarried women aged 58 to 63.[3] While these individuals were re-interviewed every other year until 1980, I rely primarily on information collected at the first survey wave. To maintain consistency with later cohorts drawn from other data sets, I look at the sub-sample of men aged 58-62 in the initial year, 1969. This provides me with a sample of 6,884 men in the specified age range in 1969. All tabulations reported below are weighted using the 1969 sample weights from the RHS.

The main questions of interest for this paper come from a section of the survey that collects retrospective information on previous jobs held. In particular, survey respondents are asked a series of questions about the longest job they ever held, including the year in which that job started, and the year in which it ended. From these questions, I calculate tenure in the longest job held, the basis for my measure of potential changes in long-term employment relationships.

II.B. National Longitudinal Survey of Older Men

The National Longitudinal Survey of Older Men (NLS) began in 1966 by surveying a sample of men aged 45 to 59 in that year. Because of the much broader age range in the NLS survey than in the RHS, I am able to construct 3 separate cohorts of older men, observed in three different calendar years. Specifically, I look at the

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[3] The fact that only unmarried women are fully surveyed by the RHS, and that there is not a similarly defined age group of women covered by the NLS survey explains why I limit this study to males. While there is limited evidence from the previous literature for a decline in job stability among men, there is even less evidence of such a trend among women. Further, major changes in women's labor force participation over the past four decades would make the simple tabulations of tenure in the longest job relied on in this study difficult to interpret for women. Such an analysis is left for future work.

distribution of tenure on the longest job for: (i) men aged 58-62 in 1969 (for comparison with the RHS results), (ii) men aged 58-62 in 1975, and (iii) men aged 58-62 in 1980. The resulting sample sizes for the cohorts observed in 1969, 1975, and 1980 are 1204, 1341, and 968, respectively.

The key questions used from this dataset are similar to those from the RHS. In particular, individuals in the initial year of the NLS were asked for the dates at which their longest previous job started and ended, as well as the date at which their current job started. In each subsequent year of the NLS survey, individuals are asked whether they are still with the same employer as in the previous survey wave. If they are not, they are asked about when their current job started, and about any intervening jobs completed between the current and previous survey. To code tenure in the longest job for each of the three cohorts in 1969, 1975, and 1980, I utilize data from both the retrospective longest job and the year-specific updates.

II. C. Health and Retirement Study

Finally, the Health and Retirement Study (HRS) began in 1992 with a survey of individuals ages 50-61 and their spouses. These individuals have been resurveyed every other year since then. In 1998 additional cohorts of those born between 1942 and 1947 were added to the HRS sample. This allows me to define three cohorts from the HRS: men aged 58-62 in 1992, men aged 58-62 in 1998, and men aged 58-62 in 2002. Sample sizes for these three groups from the HRS are 1402, 1759, and 1331.

There is one substantive difference from the earlier data sets in the survey question used in the HRS to code tenure in the longest job. In the first wave of the HRS

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individuals are asked about their current job (if currently employed) or their previous job (if not currently employed). Then, individuals are asked whether they had some previous job that lasted for at least five years, along with how many such jobs they have held. If there are multiple previous jobs lasting for five years or more, the individual is asked for starting and ending dates (along with salary, and other information) only for the *most recent* of these jobs. I use the maximum job tenure (difference between starting and ending dates of reported jobs) from these questions as the measure of tenure on the longest job in the initial year of the HRS survey (1992). In the later waves of the HRS, I use this information, plus updated information on subsequent jobs held since the wave 1 survey.

Because the other surveys ask specifically about the length of the longest job ever held, but the HRS asks about the most recent of (potentially) several jobs lasting more than five years, there is the potential for the calculated length of longest job in the HRS to be downward biased. If, for example, an individual worked at one previous job for ten years, and then at a subsequent job for 6 years prior to the initial HRS wave, we would miss the longest job tenure because of the structure of the questions. Fortunately, using individual responses about how many jobs lasting more than five years, and the start date of the most recent such job, I can calculate an upper bound on the extent to which this could bias my estimates of tenure on the longest job. This is described in more detail below, and does not significantly change my conclusions. For most workers the most recent long term job is also the longest job. This is not surprising since the job shopping process and the decline in separation rates with tenure means longer lasting jobs tend to occur later in workers' careers.

III. Results

III.A. Basic tabulations of tenure in the longest job

Table 1 reports the basic results on the distribution of tenure on the longest job from six cohorts of men taken from the three data sets. The first panel of the table shows the results for all men. From 1969 to 2002, average and median tenure on the longest job change very little. In 1969 average tenure on the longest job is approximately 22 years and the median is 21 years. By 2002 average tenure has declined slightly to 21.4 years and median tenure remains at 21 years. Longest tenure does increase to 24 years for those cohorts observed at age 58-62 in 1975 and 1980. As a result, there appears to be a slight reduction in average tenure if we compare current rates of long-term employment with those prevailing prior to the 1970s or early 80s, as many previous studies have done. This downward trend, however, is not robust to inclusion of earlier birth cohorts (observed in 1969) to the time series. This makes clear that there is little evidence that the 1990s produced rates of job changing that reflected a major departure from the concept of long-term employment in the United States.

Calculations of the fraction of men with longest tenure below 10, 20, or 30 years also fail to show any strong patterns consistent with a reduction in the importance of long-term employment relationships. For all of the cohorts represented in Table 1, more than half of men conclude their careers with 20 or more years with a single employer, and around a quarter have 30 or more years of tenure on their longest job.

Another key feature of Table 1 is the similarity in the summary statistics for tenure in the longest jobs across the two data sets for the 1969 cohorts. Average and

median tenure for the RHS and NLS 1969 samples are very close to one another. This is important since it provides more evidence that the similarity across datasets between 2002 and 1969 is unlikely to be a coincidence. Both measures of tenure from 1969 from two different data sets are extremely close to comparable measures, from a third data sest, for 1998 and 2002.

While these summary statistics on tenure in the longest job are not directly comparable to recent studies calculating distributions of current tenure, or to retention rates, they can be compared with previous estimates of the prevalence of long-term or "lifetime" jobs in the U.S., by Hall (1982), and updated by Ureta (1992). Hall and Ureta provided estimates of the distributions of completed tenure in the *current* job. My tabulations differ since they capture the distribution of (mainly) completed tenure in a workers' *longest* job. Particularly for younger workers, the current job might end quickly, but a subsequent job could end up as a very long-term job. For older workers, however, these two concepts are likely to produce similar estimates.

Hall (1982) originally argued that stable, "near-lifetime" employment was quite prevalent in the U.S., citing his results that approximately 37 percent of men were in jobs that would eventually last for more than 20 years. My estimates more strongly emphasize the likelihood that most workers will have *some* job during their working lives that lasts for more than 20 years. Most comparable to the results presented here, Hall shows (Table 7) that among male workers aged 55 and over, roughly 50 percent will have eventual job tenure of 20 or more years. Ureta (1992) makes some important modifications to Hall's methodology, including taking account of changing entry rates over time, and finds slightly lower figures for those with eventual tenure of more than 20

years. In both 1969 and 2002, I estimate that just over 50 percent of men have eventual job tenure of at least 20 years. The estimates in Table 1, in addition to showing stability over time, underscore the message of earlier work that long-term employment is an important feature of the labor market experience for most U. S. workers.

The remaining rows of Table 1 show the pattern of longest tenure over time when each cohort is split according to years of education and race. Among less educated workers, defined as those with less than 12 years of completed education, there is evidence of a decline in tenure. Average tenure in the longest job goes from approximately 21 years in 1969 to 18.6 years in 2002, with median tenure falling from 21 to 17 years over the same period. In contrast, among men with 12 or more years of education, tenure initially rises and then falls somewhat, so that the starting and ending points of the period show a median of 22 years.

The decline in median tenure among those with less than a high school education must be viewed in light of dramatic increases in educational attainment over this period. This means that the group defined as "less educated" is becoming increasingly selected over time. I show below that this the decline in tenure among the less educated shown in Table 1 is not robust to a definition of low education that uses a relative measure of education that changes over time as average education improves. If long-term employment is correlated with skill levels, it is not surprising that there is a decline in longest tenure among those with less than 12 years of education, since this group reflects lower levels of relative skill over time.

The final two sections of Table 1 separate men according to race. Among both racial groups shown, tenure in the longest job is again quite stable when looking at the

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end points, but rises for the middle cohorts. The rise (1969-1980) and decline (1980-2002) are particularly steep for nonwhites. Median tenure among non-white males goes from 17 years in 1979 to a high of 25 years in 1980, and then returns to 17 years by 2002. The increase in longest tenure for the 1980 cohort is surprising since it suggests that, for this cohort, longest tenure is actually higher among non-whites than among whites. Previous work (Ureta 1992, Hall, 1982), shows that non-whites tend to have lower tenure than whites. These findings confirm (with the exception of the 1980 cohort) that black males are substantially less likely than white males to remain with a single employer for many years. Nearly 60 percent of black males have tenure in the longest job of less than 20 years in 2002, compared to just 45 percent of white males, and median tenure in the longest job is 5 years lower among blacks (for a median of 17 years) than among whites.

III. B. Data concerns

One pattern that stands out in Table 1 is that tenure in the longest job appears to increase during the course of the 1970s, but then levels off or falls after 1980. This peak is particularly steep among non-white men. This pattern is entirely driven by data from the later two NLS cohorts. One possible explanation for these increases in longest tenure across the NLS cohorts involves sample attrition from the NLS. Attrition from the NLS cohort of older men was significant, particularly during the 1970s and 1980s. The U.S. Department of Labor notes that only 60% of the 1966 participants were still responding by 1980. (see USDOL, Table 6.3). Some of this is due to mortality, which is less of a concern for the relatively young men in the NLS who make up the cohort I observe in 1980. However, even among those still living, only 79 percent of the initial participants

were responding by 1980. (87 percent were responding in 1975.) If those who leave the survey tend to have lower job tenure than those who remain (which comparisons of tenure in the years prior to attrition suggest is the case), this attrition could produce an apparent, but spurious, increase in longest tenure over time.

To examine the extent to which sample attrition may account for the peak in longest tenure during 1975 and 1980, I impute missing longest tenure for the NLS non-respondents in two ways, making use of information from waves collected before individuals left the sample. First, I estimate regression models to predict longest tenure in 1980 (among respondents) as a function of their longest tenure in previous sample years. Then, using these coefficients, I predict longest tenure among non-respondents using the final wave of data in which they did respond.[4] Second, because I am concerned that the NLS results based only on respondents may be overstating longest-tenure, I use the prior waves of data for non-respondents to estimate a lower-bound on their longest tenure by 1980. To do this, I simply use longest tenure from their last reported survey wave. This will understate their true longest tenure by 1980, since this value can only increase, and so will provide a lower bound on the true distribution of longest-tenure among the entire cohort present in the sample as of 1969.

Table 2 shows the results of these alternative imputations, for all men, and for white and non-white men separately. Across all of the panels in this table, there is some increase in the median or other percentiles of the tenure distribution between 1969 and 1980. Results from the regression-based imputation show a somewhat smaller increase in tenure over time than the baseline results, but do not suggest that the entire increase in

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[4] An additional complication is that there are not sampling weights available for the non-respondents. I make comparisons across the three NLS cohorts including imputed tenure for non-respondents based on either unweighted tabulations, or using the 1969 weights. Results are similar across the two methods.

tenure shown in the middle columns of Table 1 is the product of sample attrition. Even

results in which the 1975 and 1980 estimates represent lower bounds on the accumulation

of longest tenure tend to show an increase over the 1969 values.[5] This suggests that the

increase in longest tenure among cohorts completing their careers in the second half of

the 1970s is not an artifact of sample attrition. This pattern is potentially important since

many previous findings on trends in job stability rely on samples that begin during this

period of relatively high average tenure.

The second data issue to consider is the extent to which the difference between

the tenure questions in the HRS and the other data sets could lead to an understatement of

longest tenure in for the men observed in 1992, 1998 and 2002. As described above, the

HRS collects information on tenure in the most recent job lasting more than five years,

rather than the longest of all recent jobs. This could lead to an apparent finding that

tenure is low in the 90s relative to previous decades. Since Table 1 shows little evidence

of such a finding, even before addressing this data concern, the main goal here is to

determine whether the HRS question could be obscuring increases in tenure over time.

To indicate the extent to which longest tenure from the HRS is understating true

longest tenure, I make use of several additional variables from the job history section of

the HRS. Specifically, I use information on the number of jobs an individual had that

lasted for five or more years, and information on when the most recent of these jobs (and

the only one for which actual tenure information was reported) began. Next, I calculate

the number of years between age 20 and the year in which the most recent job lasting five

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[5] A similar attrition concern could arise with the HRS, since workers in the 1998 cohort must remain in the
sample from 1992 until 1998, and those in the 2002 cohort must remain in the sample from 1998 (when
they entered as part of a new sample). I find little evidence of correlation between longest tenure and
sample attrition in the HRS, however; differences in 1992 tenure measures between those who do and do
not leave the sample by 1998 are not statistically significant.

years or longer began; for reference label this quantity as JOBGAP. This gives a rough idea of the number of years in the individual's labor force history that are not covered by the jobs reported in the HRS. If an individual reports only one other job lasting at least five years, JOBGAP is taken to be an upper bound on their actual (but unreported) tenure in the longest job. If an individual reports two other jobs lasting at least five years, I use (JOBGAP-5) as this upper bound, since the second reported job will have consumed at least 5 years of the labor force history. A small number of individuals report 3 or more previous jobs lasting more than five years, and these cases are handled in a similar way. This procedure allows me to calculate an upper bound for the individual's tenure on his "true" longest job, or an alternate measure of an individual's longest job tenure.

Implementing this process for the cohort taken from wave 1 of the HRS provides an idea of how serious this data problem may be. For 86% of the wave 1 sample, the upper bound measure of tenure on any omitted jobs is *less* than tenure on the most recent job lasting more than five years, suggesting that I am correctly measuring the individual's longest job. When I use the alternative, upper-bound measure of longest tenure for the remaining 14% of the sample, estimated average tenure on the longest job (for the entire cohort) increases by approximately a year and a half, and median tenure rises by one year. Overall, I view this exercise as suggesting that, while the longest tenure distributions in the HRS are probably understated, the magnitude of this understatement is modest, probably less than one year.

III.C. Underlying demographic and labor market trends

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Because the cohorts summarized in Table 1 represent work histories spanning more than 70 years, it is important to consider whether underlying demographic and labor force trends can help inform the interpretation of the basic results. Changes in the labor force and population between the 1960s and 2002 could potentially affect these measures of tenure on the longest job measured for these broad cohorts of older men in different years. Specifically, differences across the cohorts in age of retirement, educational attainment, and veteran status have the potential to produce changes in length of longest tenure when no underlying change in job security has occurred (or to obscure actual changes holding these factors constant).

Table 3 summarizes several characteristics of the different cohorts of men. There is a strong trend towards earlier retirement during this period that shows up in Table 3 in the fraction of each cohort that is already retired when they are observed between ages 58 and 62. Among older men observed in 1969, between 4 and 5 percent had already retired. However, by the 2002, nearly one-third of the cohort reports themselves as retired.[6] This corresponds with much earlier work documenting a long-term trend in the United States towards earlier retirement. Burkhauser and Quinn (1997), for example, report reductions in male labor force participation rates of 16 to 20 percentage points between 1970 and 1998.[7]

The trend towards earlier retirement could have a purely mechanical effect on tenure in the longest job, particularly if most of these "longest" jobs are the also the last

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[6] For the 1969 through 1980 cohorts, individuals are reported as "retired" if they give "retired" as their response to a question concerning their labor force status during the survey week. In the HRS cohorts (1992 and 1998) individuals are considered retired if their reported labor force status is "retired" or "partially retired." Alternative definitions yield similar trends, thought the extent of the increase is obviously diminished if I do not include the partially retired in later years.

[7] The fact that the fraction retired declines slightly after 1998 is consistent with findings of a slowdown in the trend towards earlier retirement in the 1990s (Burkhauser and Quinn, 1997).

jobs workers hold before retiring. If the total lifetime length of labor force participation

is reduced by several years from the earliest to the latest cohorts considered here, we

might also expect a reduction in tenure in the longest job, since the right tail of this

distribution will be reduced with earlier retirements. It is certainly true that a large

proportion of the "longest jobs" are still in progress as workers near retirement ages.[8] In

1992, for example, 61% of the observed cohort who are still employed report that they

are currently working in their longest job. This means that an observed decrease in

longest tenure could result without any corresponding change in the underlying stability

of employment relationships. Since I find little evidence of a decline, adjusting for

changes in the retirement age can only strengthen the evidence against declining job

stability.

To approximate how much earlier retirement could affect longest job tenure, I

create a counterfactual distribution of tenure that holds the fraction already retired in the

year of observation constant at approximately 5 percent. For this exercise, I utilize only

the 1969 cohorts and the two HRS cohorts observed in 1992 and 1998.[9] First, I calculate

the number of years since retirement for those individuals who are already retired by

1992 or 1998. Approximately 85% of those already retired in 1992 would still have been

working if the age of retirement had not changed between 1969 and 1992. To

approximate longest tenure if the trend towards earlier retirement had not occurred, I add

the number of years since retirement to true longest tenure for 85% of those already

retired in the 1990s. Specifically, I take the lowest 85% of the distribution of years since

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[8] Even if workers move from a career employer to a bridge job prior to full retirement, anticipation of an earlier retirement age could result in the bridge jobs being started at an earlier age.
[9] Since the fraction retired in 2002 is very similar to the fraction retired in 1992 I do not include the 2002 figure in the simulation.

retirement, and add years since retirement onto longest tenure for those individuals. This gives me a counterfactual distribution in which only 5% of the observed individuals have had their tenure cut short by earlier retirement. This is likely to overstate the effect of reduced retirement age on my measure of tenure in the longest job, since some of the longest jobs have been completed several years prior to retirement.

The results of this counterfactual exercise are summarized in Table 4. The overall conclusion is that the counterfactual distributions of longest tenure in the 1990s have means that are roughly 1 year higher than the actual distributions. For all men, average tenure on the longest job in the HRS goes from 22.8 to 23.5 in 1992, and from 22.0 to 22.8 in 1998. When compared with the starting point of 1969, this adjustment for changes in the retirement age results in a change from a picture of stability in longest tenure to one of a slight increase in tenure over time. Conducting a similar exercise for subgroups defined by education and race produces comparable results for each subgroup. The trend toward earlier retirement could obscure potential increases in lifetime employment, but the magnitude of this effect appears to be small, with average tenure in the longest job changing by around one year.

Another striking change in the older male labor force during this time period is the increase in educational attainment. Average education among the different cohorts of older men is rises substantially over the time period examined here. Average years of education for the 58 to 62 year old men observed in 1969 is just 10.1 years; by 2002 the cohort of the same age has average educational attainment of 13.1 years.[10] This trend

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[10] To confirm that this is not the product of differences in the measurement of education across data sets, I have tabulated completed education among men from the corresponding birth cohorts from the 1970 and 1980 census. Trends in educational attainment from these calculations look very similar to those reported in Table 2.

could have several possible effects on the interpretation of trends in longest job tenure summarized in Table 1. First, changes in the level of education could have offsetting effects on tenure in the longest job over time. The simplest of these is a mechanical effect, similar to that arising from changes in the retirement age. As individuals spend more time in school, and holding all else constant, total time in the labor market will decline, and so we may see some minor reduction in tenure in the longest job, even without any necessary change in employment stability over the lifecycle. The magnitude of such a change must be relatively small, however, since the total change in years of education is only about 2.5 years—a substantial change in educational attainment, but still a very small fraction of most individual's working years.

The second potential effect of changing levels of education comes about because more highly educated workers tend to face less turnover in their careers. This would suggest that increases in education might be expected to increase average tenure. The results from Table 1 when the samples are broken down into different education groups illustrate that it is this effect that dominates on average.[11] In 2002, for example, median tenure on the longest job is just 17 years for those with low levels of education, but is 22 years for more educated workers. Thus, as average education has increased, one might expect tenure in the longest job to have increased as well. This would be the case if the mix of jobs, or the mix of employment relationships has changed along with rising education levels, so that there are more "long-term" jobs in 1998 than in 1969 simply because there are more highly educated workers. On the other hand, if the distribution of

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[11] Simple regressions also point to a positive correlation between longest tenure and educational attainment. For each year of the data, I regress longest tenure on education, age, and race. Education always has a positive and significant coefficient, suggesting that an additional year of education is associated with .2 to .4 additional years of tenure in the longest job.

jobs, or the mix or long-term and short-term positions has remained the same, rising education levels would have little impact on our measures of tenure in the longest job.

Possibly the most important way that changing education levels affect trends in job tenure involves the interpretation of trends in longest tenure among workers with different levels of education. Several previous studies have focused on trends in retention rates and tenure distributions among workers with different measures of skill. As noted above, there is a sharper decline in median (and mean) tenure in the longest job among less educated workers from 1969 to 2002. A difficulty with such comparisons, however, is that the dramatic changes in education over time mean that the "less educated" group is becoming a more selective group over time. Even looking at only the last few cohorts, observed from 1992 to 2002, average education increases by almost one year. More directly related to the selection story, the less-educated group is roughly 60 percent of the overall sample of men in 1969, but is less than a quarter of the overall sample of men in 2002. Any decline in tenure among the "less educated", then, could simply reflect that the less educated in the later half of the period are from a lower portion of the overall distribution of skill than in the previous cohort (assuming that tenure is positively correlated with skill).

Table 4 addresses these issues concerning changing education levels, by looking at tenure in the longest job based on groups defined by fixed percentiles of the education distribution. For this table, I divide each cohort into three groups, based on their relative position in the overall distribution of years of education. Specifically, each cohort is divided into those with education less than or equal to the 25th percentile, those with education between the 25th and 75th percentiles, and those with education levels greater

than the 75th percentile. Because years of education is an integer, with substantial

clustering, I randomly select from among those with education equal to the cutoff points

so that each group contains exactly 25 or 50 percent of the total cohort.

The first row of Table 4 shows results for those men with education levels at or

below the 25th percentile of their cohort's education distribution. When low education is

defined in these relative terms, there is less evidence of a long-term decline in job tenure

among the less-skilled. Median tenure is 16 to 19 years (depending on the data source)

for the lowest 25% of the education distribution in 1969 and is 18 years in 1998 and

2002. Median tenure rises for the middle cohorts and then declines after 1980. Among

the upper portion of the education distribution longest job tenure follows the now familiar

pattern of an increase for the 1975 and 1980 cohorts, followed by a return to

approximately its 1969 level by 2002.

A final concern with underlying difference across the cohorts of men studied here

that could affect conclusions about job tenure involves the fraction of men who took time

out of the civilian labor force to serve in the military. Because there are relatively large

differences across cohorts in the fraction of men who are veterans, there may be concerns

about the effect of military service on eventual job tenure. A period of military service

could, for example, delay the job-shopping process, and result in men starting their career

jobs later in life. If cohorts with unusually high levels of military service are also those

with unusually short tenure, this may again reflect something other than change in

underlying employment relationships.

It is difficult to investigate this issue directly with the current data sets, because

the RHS and the NLS data do not report whether each individual has served in the

military.[12] Fortunately, data are available from other sources on the fraction of various birth cohorts who have completed some military service. Bound and Turner (1999) report the fraction of white males in the corresponding birth cohorts who had some military service, taken from 1980 Census data. Their results show that the fraction of veterans is particularly high for those men that I observe in 1980 and 1992 (birth cohorts centered around the years 1920 and 1932). Given the data limitations, there is little more to do here, except to note that there is little evidence of unusually low tenure among those cohorts with the highest levels of military service. I have also estimated the correlation between veteran status and longest tenure, using the three years of HRS data, for which veteran status is directly reported. Regressions of longest tenure on veteran status result in a small positive effect of veteran status on job tenure that is statistically significant in only one of the years. From this, I conclude that differences in military service are unlikely to influence the observed trends in longest tenure.

IV. Conclusions

This study compares snapshots of job tenure taken at the end of workers' careers from 1969 to 2002. The primary finding is one of stability in the prevalence of long-term employment relationships for men in the United States viewed over the entire period. In 1969, average tenure in the longest job for males aged 58-62 was 21.9 years. In 2002, the comparable figure was 21.4 years. Tenure in the longest job rises among cohorts retiring in the late 1970s, but then declines over the next decade to levels comparable to those prevailing in 1969. A measure of average tenure in the longest job does decline for those

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[12] Both of these data sets do report whether individuals are receiving or expect to receive and benefits as the result of military service. I have not made use of these reports.

men with less than a high school education, but this trend is reversed by using a relative, rather than an absolute, cut-off for low education. It remains true in all years that more educated men have higher tenure than less educated men. Among non-white men, average tenure remains below comparable measures for white men.

These findings suggest that claims of the erosion of long-term employment relationships in the U.S. are exaggerated. Because this paper focuses on completed tenure among men at the end of their careers, it might be claimed that changes in the 1990s have yet to be fully played out. This could be true if retention rates declined permanently in the 1990s, and future cohorts of workers will be exposed to lower retention rates over their entire careers, rather than just the final decade of their careers (as is the case for the older workers included here). There is little reason to believe, however, that changes in retention rates in the 1990s were permanent. Farber (2005), for example, shows that rates of job loss in the U.S. were particularly high from the early through mid-1990s, but then declined until the recession of 2001. There is little reason to forecast that relatively high rates of turnover in the first half of the 1990s reflected a permanent shift, rather than slow employment recovery from the recession.

Two other factors also strengthen the case against declining job stability. First, many studies of trends in job tenure that include women find increases over time (or much smaller decreases) in current tenure for women (most recently, see Friedberg and Owyang, 2004). Thus, the overall picture of trends in long-term employment in the U.S. probably points even more towards stability than the picture presented here based only on men. Second, I find two factors to suggest that the longest tenure calculated from the HRS for recent cohorts might understate the true prevalence of long-term employment.

Accounting for changes in the retirement rate would point towards slight increases in tenure over the entire period. Finally, the slightly different question wording in the HRS may lead longest tenure to be slightly understated.

The question of why press and popular views of job stability are at odds with many academic studies of this question remains. The results presented here, however, offer strong evidence that the story cannot be a simple one of broad changes in the probability of remaining with a given employer for a large fraction of one's career. Long-term relationships with a single employer are an important feature of the U.S. labor market in 2002, much as they were in 1969.

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Table 1
Tenure on Longest Job 1969-1998
Men 58-62 in Year Observed

Year: Data source:	1969 RHS	1969 NLS	1975 NLS	1980 NLS	1992 HRS	1998 HRS	2002 HRS
All men							
Mean	21.9	22.3	23.8	24.1	22.8	22.0	21.4
se(mean)	(0.14)	(0.32)	(0.30)	(0.31)	(0.28)	(0.24)	(0.29)
Median	21	22	24	24	23	22	21
se(median)	(0.30)	(0.83)	(0.55)	(0.57)	(0.54)	(0.53)	(0.60)
% <=10 years	17.94	15.78	12.53	9.46	15.23	16.20	19.69
% <=20 years	48.31	47.53	39.75	36.90	42.03	45.91	46.99
% <=30 years	75.62	75.61	72.40	72.74	72.69	77.15	77.05
N=	6884	1204	1341	968	1402	1759	1331
Education < 12 years							
Mean	21.5	20.9	23.5	23.3	21.3	19.0	18.61
se(mean)	(0.18)	(0.39)	(0.38)	(0.43)	(0.53)	(0.50)	(0.63)
Median	21	20	23	23	20	18	17
se(median)	(0.25)	(0.87)	(0.57)	(0.89)	(0.82)	(0.84)	(1.30)
% <=10 years	19.72	18.83	13.33	10.03	18.40	26.05	26.36
% <=20 years	49.71	53.20	41.21	40.99	50.27	58.10	62.83
% <=30 years	77.19	80.47	73.30	74.57	75.66	83.58	85.13
N=	4063	830	810	500	452	436	281
Education >= 12 years							
Mean	22.4	24.5	24.2	24.8	23.4	22.8	22.05
se(mean)	(0.21)	(0.56)	(0.47)	(0.45)	(0.33)	(0.27)	(0.32)
Median	22	24	24	25	24	23	22
se(median)	(0.50)	(0.79)	(0.53)	(0.82)	(0.53)	(0.53)	(0.60)
% <=10 years	15.42	10.84	11.60	8.98	13.93	13.46	18.28
% <=20 years	46.31	38.32	38.04	33.48	38.65	42.52	43.63
% <=30 years	73.39	67.73	71.35	71.20	71.47	75.27	75.33
N=	2821	374	531	468	950	1323	1050
Non-whites							
Mean	18.3	18.7	22.0	23.0	19.5	19.9	18.30
se(mean)	(0.43)	(0.55)	(0.51)	(0.58)	(0.62)	(0.55)	(0.65)
Median	17	18	21	25	20	20	17
se(median)	(0.76)	(1.14)	(0.84)	(1.12)	(0.81)	(0.84)	(1.27)
% <=10 years	27.38	25.92	14.88	12.08	20.16	20.52	25.91
% <=20 years	59.18	57.07	48.00	37.34	53.91	53.40	59.40
% <=30 years	86.67	85.19	78.37	78.55	86.42	82.15	86.09
N=	625	369	388	261	254	326	235
Whites							
Mean	22.2	22.6	24.0	24.2	23.2	22.3	21.91
se(mean)	(0.14)	(0.39)	(0.35)	(0.36)	(0.31)	(0.27)	(0.32)
Median	21	22	24	24	24	22	22
se(median)	(0.25)	(0.75)	(0.51)	(0.52)	(0.53)	(0.53)	(0.60)
% <=10 years	17.02	14.81	12.30	9.28	14.55	15.60	18.76
% <=20 years	47.28	46.62	38.83	36.95	40.39	44.88	45.13
% <=30 years	74.54	74.70	71.68	72.26	70.79	76.46	75.69
N=	6215	835	953	707	1148	1433	1096

Note: All entries are based on tabulations using sampling weights, for cohort of men aged 58 to 62 in the given year.

Table 2
Distribution of Years of Longest Tenure in NLS: Imputing Tenure for Missing Values

Percentile		1969	1975	1980
All men				
Baseline: no imputation	25th	13	15	17
	50th	22	24	24
	75th	30	32	31
	N=	1204	1328	968
Regression-based imputation	25th	13	15	17
	50th	22	23	24
	75th	30	31	31
	N=	1204	1557	1293
Lower-bound imputation (last	25th	13	15	16
observed longest tenure)	50th	22	23	23
	75th	30	31	31
	N=	1204	1557	1293
Nonwhites				
Baseline: no imputation	25th	10	15	17
	50th	18	21	25
	75th	25	29	30
	N=	369	385	256
Regression-based imputation	25th	10	15	17
	50th	18	21	24
	75th	25	29	29
	N=	369	462	358
Lower-bound imputation (last	25th	10	15	15
observed longest tenure)	50th	18	20	22
	75th	25	29	28
	N=	369	462	358
Whites				
Baseline: no imputation	25th	14	15	17
	50th	22	24	24
	75th	31	32	31
	N=	835	943	698
Regression-based imputation	25th	14	15	17
	50th	22	23	24
	75th	31	32	31
	N=	835	1095	935
Lower-bound imputation (last	25th	14	15	16
observed longest tenure)	50th	22	23	23
	75th	31	31	30
	N=	835	1095	935

Note: weighted using 1969 sampling weights

Table 3
Work and Retirement Status 1969-1998
Men 58-62 in Year Observed

	Year:	1969	1969	1975	1980	1992	1998	2002
	Data source:	RHS	NLS	NLS	NLS	HRS	HRS	HRS
All men								
% retired		5.6	4.0	18.0	26.9	29.6	32.8	30.5
average age		59.9	59.9	60.0	60.4	59.4	59.9	59.9
average education		10.1	9.8	10.4	11.0	12.3	12.7	13.1
Education < 12 years								
% retired		6.1	3.8	21.3	28.7	31.4	30.0	26.6
Education <= 12 years								
% retired		4.8	4.4	14.1	25.3	28.8	33.6	31.3
Non-whites								
% retired		3.6	2.7	14.6	27.2	29.7	28.9	27.6
average education		7.3	6.8	7.5	8.6	10.6	11.5	12.0
Whites								
% retired		5.8	4.2	18.2	26.9	29.6	33.4	30.9
average education		10.3	10.1	10.7	11.2	12.5	12.9	13.3

Note: All entries are based on tabulations using sampling weights, for cohort of men aged 58 to 62 in the given year.

Table 4
Counterfactual Mean Tenure in Longest Job
Eliminating Change in Retirement Age

	Year: Data source:	1969 RHS	1969 NLS	1992 HRS	1998 HRS
All men		21.9	22.3	23.5	22.8
Education < 12 years		21.5	20.9	22.1	19.7
Education >= 12 years		22.4	24.5	24.1	23.7
Non-white		18.3	18.7	20.3	20.6
White		22.2	22.6	23.1	24.0

Note: See text for details of counterfactual exercise

Table 5
Mean and Median Tenure in Longest Job
by Percentiles of Education Distribution

Data source:	RHS	NLS	NLS	NLS	HRS	HRS	HRS
Year:	1969	1969	1975	1980	1992	1998	2002
Education <=25th percentile							
Mean	20.44	19.03	21.45	22.96	20.81	19.05	19.35
Median	19	16	22	24	20	18	18
N=	1698	301	335	242	351	439	333
Education > 25th & <=75th percentile							
Mean	22.41	21.78	24.03	24.26	23.47	22.7	22.42
Median	21	21	24	24	24	22	22
N=	3396	602	670	484	701	880	666
Education > 75th percentile							
Mean	22.52	24.6	24.87	24.44	23.03	22.95	21.32
Median	22	24	25	24	24	23	22
N=	1698	301	336	242	350	440	332