Is Job Stability in the United States Falling? Reconciling Trends in the Current Population Survey and Panel Study of Income Dynamics

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This article considers whether two commonly used sources of information on employer tenure, the Panel Study of Income Dynamics and the Current Population Survey, yield systematically different trends in employer tenure. Little evidence of a discrepancy between the data sets in the 1980s or 1990s is found when comparable samples, variable definitions, and time frames are used. Neither data set shows a significant trend in the share of workers with 1 year or less of tenure, while both data sets show an increase in the fraction of men with less than 10 years of tenure starting in the late 1980s.

The degree of job stability in the U.S. economy is of substantial concern among workers and policy makers and has important implications for a variety of economic applications. Documenting trends in job stability over the past 25 years has become a controversial exercise, however. Press reports continue to emphasize deteriorating job stability, while support for this assertion from empirical economic studies has been limited. One reason for continuing ambiguity in the literature concerning trends in job stability is an apparent sensitivity of empirical results to the specific data source used. While results that differ across presumably representative and widely used data sets are always a matter of concern to empirical researchers, the enormous attention recently paid to job stability makes resolution of this issue of more than methodological interest. This article aims to resolve one area of ambiguity by examining whether the Panel Study of Income Dynamics (PSID) and the Current Population Survey (CPS) yield systematically different results with respect to comparable measures of employer tenure.

The suspicion that different data lead to different conclusions about trends in job stability arises both from a review of the growing literature on this topic, as well as from specific references within that literature. Several PSID-based studies report an increase in job mobility since the 1970s, while most CPS-based work finds no overall trend through the late 1980s. Marcotte (1995) and Gottschalk and Moffitt (1994), in particular, note that the conclusions of studies based on the PSID seem to differ systematically from those using the CPS. Examination of the conclusions of other studies in this area supports the notion that a relationship exists between findings and the data used. Despite this pattern, there has been no attempt to produce a directly comparable set of results between the PSID and CPS.[1] It is not possible, moreover, to reconcile the inconsistencies solely with reference to existing research. The available studies use different measures of job stability, have different sample coverage, and focus on several different time periods, all of which make it difficult to judge whether the different conclusions can be explained by the specific details of each study. Because panel data such as the PSID are often necessary to answer questions relating to the consequences of job instability, it is important to know whether the PSID can produce results consistent with the CPS when changes to the survey are handled appropriately.

Our results suggest that, during the 1980s and 1990s, the two data sets produce similar measures of the level of and trends in employer tenure.

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[1] Stewart (1997) uses the CPS March supplements and explicitly compares his results to those of Farber (1995) and Marcotte (1996). His results are quite similar to those of Farber (who uses the CPS tenure supplement) but not very similar to those of Marcotte (who uses the PSID).

We find little evidence in either data set of a reduction in the share of workers with employer tenure of 1 year or less between 1983 and 1996. We find, however, an increase in the share of workers with tenure of less than 10 years between 1983 and 1996, concentrated among older male workers toward the end of the period.

Including the 1970s in our analysis produces greater differences in trends across the two data sets. In the 1970s, the incidence of low tenure in the PSID is generally smaller than in the CPS. We argue that this is probably the result of changes in the CPS question following the 1981 survey that may have caused low tenure rates in the 1970s to be overstated relative to those in the 1980s. Evidence from similar question changes in early years of the PSID is quite consistent with this hypothesis.

Our primary focus in this article is on cross-sectional tabulations of the fraction of workers with employer tenure below a fixed cutoff of either 1 year or 10 years. This focus is motivated by our desire to have the simplest possible measures of workers' attachment to an employer that will be directly comparable across the two data sets. One drawback of focusing on these aspects of the tenure distribution is that they do not directly measure "job stability." In particular, the fraction of individuals with tenure below a fixed cutoff will be sensitive to changes in the flows of workers into employment from out of the labor force or unemployment. An increase in the rate at which individuals move from not working to working would increase the fraction of workers with low tenure but would not necessarily indicate a change in the degree of job stability. This distinction between the changes over time in the distribution of employer tenure and in the probability of remaining with a given employer is, in principle, an important one. We find, however, that trends in these simple measures of employer tenure are not sensitive to conditioning on employment in a previous year or to other variations in the exact measures used.

I. Existing Literature on Trends in Job Stability

To clarify the degree to which the data source used is related to observed trends in job stability, we begin by summarizing a number of recent studies of job stability and tenure. Among studies using the tenure data from the CPS, Farber (1995) finds that there was no overall change in the distribution of job duration between 1973 and 1993. He does, however, find evidence of a reduction in job duration among less educated men, particularly those with less than a high school education. The results presented by Diebold, Neumark, and Polsky (1996, 1997), who also use the CPS tenure data, are generally consistent with these findings of little or no change in job stability. Diebold et al. report a small reduction in 4-year job retention rates for men from 1983 through 1991 of just over 2 percentage points after controlling for the business cycle. Between 1973 and 1991, a sample period more comparable to Farber's,

Diebold et al. find a small increase in the 10-year job retention rate for men, although the change is essentially zero after controlling for the business cycle.[2] Stewart (1997) employs data from the March CPS to calculate job mobility rates and also finds little overall change in job mobility among men.

Results from several PSID-based studies present a different pattern, however. Marcotte (1996) finds reductions in 1-year job retention rates for men between the periods 1976–78 and 1985–88 of just over 2 percentage points. While the estimated overall change in this study is relatively modest, Marcotte reports very large increases in mobility for several demographic groups, including blacks and young workers. Two other studies using the PSID have also suggested declining job stability. Rose (1995) reports that the proportion of workers with "strong employment stability," defined as having changed employers no more than once in a decade, fell both overall and for a variety of subgroups from the 1970s to the 1980s.[3] A similar finding of a possible increase in rates of job changing during the late 1980s is reported in Gottschalk and Moffitt (1994). While job changing is not the primary focus of their study, they do report an increase in rates of job turnover from the 1970s to the 1980s in the PSID, although they immediately note that such an increase "is in contrast to tabulations based on the January CPS" (p. 241).

Also using the PSID, Polsky (1999) reaches substantially different conclusions. His point estimates of the change between the periods 1976–81 and 1986–91 in the probability of job separation are generally 1 percentage point or less and are statistically significant and positive only for workers in service occupations. Polsky identifies changes over time in the "reason for job change" question as a potentially important reason for some of the earlier findings of increased turnover in the PSID.[4] Changes in the questionnaire skip pattern and question wording in the 1984–87 surveys make the responses to this question inconsistent over time. From 1984 through 1987, the "reason for job change" question was asked of all respondents who reported that their current job started after January of

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[2] Swinnerton and Wial (1995, 1996) did find a reduction in retention rates using the CPS data, but a revision of their findings in response to comments by Diebold et al. (1996) tempers their estimated change in retention rates. Remaining differences between the findings of Swinnerton and Wial and those of Diebold et al. appear to be related to how the authors weight the CPS data to account for nonresponse to the tenure question.

[3] Diebold et al. (1997) present evidence that Rose's findings are largely driven by his use of the "reason for job change" question in the PSID, which changed in important ways during the mid-1980s. We discuss this issue below.

[4] Evidence on the extent of this problem is documented in Diebold et al. (1997) in their replication of the results of Rose (1995).

the previous year, rather than within the past 12 months as in prior years.[5] This artificially inflates the job-changing rates based on this question for these 4 years. Polsky argues that the discrepancy between his work and the findings of some other PSID-based studies can be attributed to earlier work's failure to take account of the change in the "reason for job change" question.

A final set of papers on job stability that deserves some mention here is that focusing exclusively on involuntary job changes, as opposed to all job changes or low tenure. The findings in this literature are somewhat more consistent across different data sets. Boisjoly, Duncan, and Smeeding (1998), for example, find an increase between the 1970s and early 1990s in the probability of job displacement, or *involuntary* job changes using PSID data. Similarly, Farber (1997) uses the Displaced Workers Survey (a supplement to the main CPS survey) and finds a similar increase in displacement rates from the early 1980s through the mid-1990s. This finding of increased rates of involuntary job changes could be consistent with either no overall change in the distribution of employer tenure implied by several CPS studies (if there were an offsetting decrease in voluntary employer changes) or with increases in the total number of employer transitions suggested by some of the PSID studies.

Overall, our reading of the literature on job stability (considering both voluntary and involuntary employer changes) points to many discrepancies across data sets and, to a lesser extent, across studies using the same data set. We next attempt to resolve some of these discrepancies and to understand how they have arisen. Specifically, we consider whether eliminating differences in sample composition, measures of job stability, and time periods also eliminates differences in the measured trends in the PSID and CPS.

II. Data and Sample Construction

In both data sets we restrict our samples to include heads of household and their spouses, between the ages of 20 and 59, who are employed but not self-employed at the time of the survey. The restriction to household heads and spouses is driven by data limitations in the PSID; we attempt to generate a comparable CPS sample by including "reference persons" and their spouses.[6] Information on job tenure for persons other than household heads and wives is not available in the PSID, and for wives it

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[5] Those who have changed positions within the past 12 months, or since the beginning of the previous calendar year, are asked, "What happened to the job you had before—did the company go out of business, were you laid off, promoted, were you not working, or what?"

[6] Most of the previous CPS studies have not been limited to reference persons and their spouses. Calculation of low-tenure probabilities in the CPS including

is available only for 1981 and after.[7] Because samples are extremely small for those reporting their race as neither black nor white, we also restrict the male sample to blacks and whites only.[8] Additional variable definition and construction is described next for each data source.

A. The Panel Study of Income Dynamics

The PSID is used here primarily as a series of repeated cross sections, and workers are included in any year in which they meet the other sample requirements. Our primary analysis uses PSID data from the 1976 through 1996 surveys.[9] We use the entire PSID sample, including the low-income sample, and use PSID sample weights throughout. We obtain similar results using only the random sample without weights.

The variable of primary interest in the PSID reports the time that a worker has been with his or her current employer. We use this question to construct the fraction of individuals who have employer tenure below some level. Our choice of a measure of job stability is dictated largely by the desire to have as close a counterpart as possible in the CPS tenure supplement data. This means relying on a cross-sectional measure and ignoring the panel dimension of the PSID, although we do consider below whether measures that use the longitudinal nature of the PSID show different trends. Our initial measure of job stability is the share of workers in "new" jobs (i.e., with employer tenure of less than 18 months). We also present results on the fraction of workers with tenure less than 10 years to capture potential changes at a higher point in the tenure distribution.

The choice of a time frame of less than 18 months is dictated by our desire to have a comparable measure of low tenure in the PSID and CPS. In the CPS, employer tenure is generally reported in years, rather than months as in the PSID. Because we use a threshold for employer tenure in the CPS of less than or equal to 1 year and assume that respondents follow a simple rounding rule, we believe the less-than-18-month definition in the PSID is the most comparable. In the results for tenure less than 10 years, we use a cutoff of 9.5 years in the PSID, or 114 months. For the survey years 1976–77 and 1981–92, this information is taken directly from questions about how long the worker has been with his or her

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nonheads and nonspouses, however, does not result in trends different from those reported here.

[7] In the PSID, the male in a two-adult household is automatically considered the "head of household."

[8] Because race was asked of wives beginning only in 1984 in the PSID, we do not similarly restrict the female samples.

[9] Panel data from 1993 to 1996 are "early release," and so these results may be subject to revision on final release of the data.

current employer.[10] An important disadvantage of using the employer tenure question is that it was not asked in the 1979 and 1980 surveys and was asked only of those under the age of 45 in 1978. While some previous work has used alternative measures to get around this gap in coverage of the employer tenure question, we prefer to use this, the most straight-forward measure of employer tenure, in those years for which it is available.

There has been one potentially important change to the employer tenure question in the PSID during the period used here. Prior to 1984, the survey asked respondents how long they had worked for their present employer, without distinguishing between total time with the employer and a worker's most recent spell of employment. Beginning in 1984, respondents were explicitly asked to provide the *total* time they had been with their employer. For workers who have multiple spells with a given employer, separated either by nonemployment or employment with other firms, this change in question wording will prompt different answers.

Some information is available on the potential effect of this change because, starting in 1988, the PSID collected information on both length of total employment and time in the most recent spell with the current employer. Using data from 1988, we have calculated median tenure and low tenure rates based on total time with employer and time in the most recent spell. Median total tenure is approximately 2 months higher than median tenure in the most recent spell. The probability of having tenure less than 18 months is approximately 2 percentage points lower when using the total time with employer measure. This comparison, however, is very sensitive to the tenure cutoff used because the total measures are far more concentrated at 6- and 12-month increments.[11] When we calcu-late the probability of having less than 12 months of tenure, for example, the total time measure actually produces a slightly *higher* turnover rate than the measure based on time in the most recent spell. In 1996, the CPS also collected information on total tenure and tenure in the most recent spell with an employer. In these data, the fraction of workers with total

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[10] In particular, prior to 1983, the PSID question was, "How long have you worked for your present employer?" From 1984 to 1987, the PSID employer tenure question was, "How many years altogether have you worked for your present employer?" After 1987, it was, "How many years experience do you have altogether with your present employer?" See the appendix in Polsky (1999) for the complete set of PSID tenure questions.

[11] This is because the total time measure is from a question asking for a response in months, while the time in most recent spell measure comes from a question eliciting the month and year that spell started.

tenure of 1 year or less is also very close to the fraction with current tenure of 1 year or less.

All of these results provide an upper bound on the impact of this question change in the PSID. The effect will depend on both the difference between the two measures and on earlier PSID respondents assuming that the old question referred to time in the most recent spell. It seems unlikely, therefore, that this change will produce a noticeable distortion in the trends. To the extent that this change is important, however, we would expect to see a spurious decrease in the fraction with low tenure in the PSID beginning in 1984.

The difficulties in using the PSID tenure variables to measure job changes have been explored by Brown and Light (1992). They note the substantial difficulties in identifying employer changes in the PSID and suggest and test a number of alternative schemes for partitioning the data into jobs. Their preferred method defines a job change if employer tenure is less than elapsed time since the previous interview. We follow Brown and Light in relying exclusively on the employer tenure variable from 1976 forward but focus on tenure below a fixed cutoff rather than the time since the prior survey. This again is a function of our utilization of the PSID as a series of cross sections.

Finally, at least one major alternative to the employer tenure question exists in the PSID and has been used by other researchers in this literature for discerning employer changes. This is the "position" tenure question that was used by Polsky (1999). One advantage of using this question is that is was asked in every year from 1976 through 1996. The problem, of course, is that low-position tenure may reflect a recent position change or promotion but no change in the employer. Polsky (and others) use additional information on the reason for the job change to find "promotions" and eliminate these from their job change counts. The detection of promotions, however, is itself a difficult task. The primary source for identifying promotions is the "reason for job change" question that distinguishes promotions from other types of job changes. This is likely to leave some within-employer moves identified as job changes since some of the other possible responses could also reflect within-employer movements and because of missing values in this variable.[12] To counteract this, Polsky also compares position tenure to employer tenure and eliminates job changes for workers whose employer tenure is greater than position tenure.

An additional concern with the position tenure variable for our pur-

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[12] Other possible responses to the "reason for job change" question that might also be applicable to within-employer changes (in addition to "promotion") include "wanted a change in jobs," "other or transfer," and "job completed."
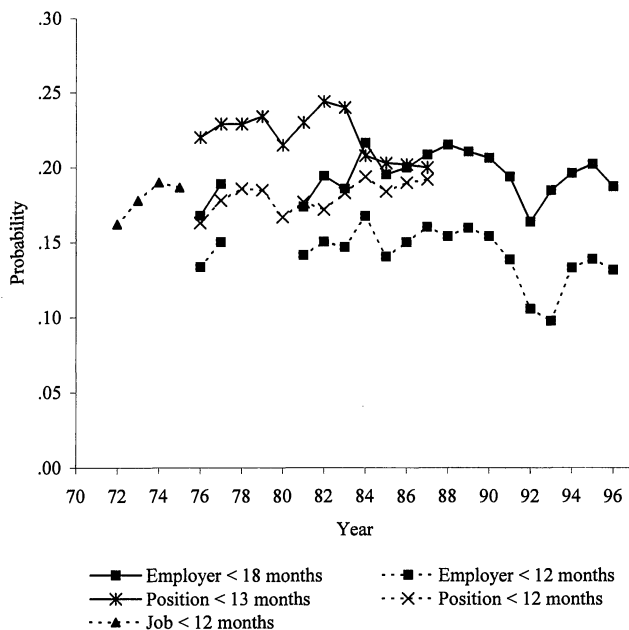
FIG. 1.—Alternative tenure series—PSID. The figure shows the fraction of employed male household heads with employer, position, or job tenure less than the given number of months. See text and footnotes for exact question wording in the PSID.

poses is that between 1983 and 1984 the question wording was changed from asking about *how long* a worker has been in his or her present position to asking *when the current position started* (calendar month and year).[13] The result of this change from a response in terms of a number of months to a response of a starting calendar month is that heaping of responses around multiples of 6 months is much more common prior to 1984. The employer tenure question, in contrast, has always been asked in terms of the length of employment, rather than the calendar month when the employment began.[14]

Because the exact variable used in the PSID may be crucial to reconciling differences in the literature, we first present results comparing these alternative low-tenure measures in the PSID. Figure 1 illustrates trends in

[13] The exact question changed from "How long have you been in your present position?" to "When did you start working in your present position?"

[14] Another alternative is to use the "reason for job change" question in the PSID. In addition to the problems noted by Polsky with use of the variable, it is triggered from the response to the position tenure question and so has all of the advantages and disadvantages of that question as well.

several alternative low-tenure series. First, the figure shows two series based on responses to the PSID question involving "position" tenure. Using the position tenure variable, we constructed a series of dummy variables equal to one if (1) position tenure is less than or equal to 1 year and (2) the individual's reason for changing jobs was not "promotion." This series, labeled "position < 13 months," shows a downward trend over time. We also include a comparably defined series for "position < 12 months." If heaping at 12 months becomes substantially less important following the change in question wording (from months in position to calendar month position started), these two series should be closer together starting in 1984. This is precisely what is shown in figure 1, with the less than 13 months measure showing a slight downward trend and the less than 12 months measure showing a slight upward trend.[15]

Another important comparison in figure 1 is that between measures based on position and employer tenure. A comparison of the series for "employer" and "position" tenure less than 12 months suggests that eliminating position changes identified by respondents as promotions leaves a substantial number of position changes that do not have a corresponding employer change. We also show the main series used for our comparisons with the CPS, representing employer tenure of less than 18 months.[16]

A final example of the sensitivity of low-tenure rates to the particular question used comes from inspection of the early years of the PSID data in which data are available on time in the current "job" rather than with the current employer or in the current position. For the years 1972–75, we show the probability of having job tenure of less than 12 months.[17] This is relevant to our analysis because, as explained below, the early years of CPS data we use refer to "job" rather than employer. While the comparison is made difficult because the same questions were not asked in the PSID in the same years, figure 1 suggests that the "job"-based question results in significantly higher turnover rates than those based on employer tenure. In 1975, the fraction of men with "job" tenure less than 12 months was 0.18. In the following year, the fraction of men with "employer"

[15] This potential problem is recognized by Polsky (1999), and he adjusts for heaping by using the longitudinal aspect of the PSID to identify those who round down to 1 year from those who round up. While this may solve some of the problem, the patterns shown in fig. 1 nonetheless suggest that turnover rates and trends in them based on this variable may be quite sensitive to how the heaping issue is handled.

[16] We do not include a comparable position tenure series using the 18-month cutoff since it is not generally possible to identify promotions occurring more than 12 months ago.

[17] We use less than 12 months as the cutoff for this "job"-based series because job tenure is reported only in bracketed quantities during these years.

tenure of less than 12 months was only 0.13. If the job versus employer tenure distinction is not important, this would imply an implausible reduction in the fraction of workers with low tenure of more than 25% in one year. We interpret this result as a caution against combining series on job and employer tenure.

B. The Current Population Survey

The CPS data we employ come from the tenure supplements included in the CPS in January of 1973, 1978, 1981, 1983, 1987, and 1991. We also use the employee benefits supplements from May 1979 and April 1993 and the displaced workers supplement from February 1996, which asked about employer tenure.[18] All data are weighted by the supplement weights, when available, or by the basic CPS weight when supplement weights are not available.[19] In practice, however, weighting makes very little difference to the results.[20]

Our measure of low tenure in the CPS is based on the tenure question asked in the various supplements. In 1973, 1978, and 1981, this question asks what year individuals started working in their current job. In these years we record individuals as having tenure of 1 year or less if they started working in their current job in year t or in year $t - 1$. Because the question was asked in January, it measures the incidence of low tenure within a 13-month window. Also note the emphasis on "job" rather than "employer." As suggested by comparison of alternative PSID series above, measured tenure could be less than actual employer tenure if individuals give their tenure in a particular position rather than their tenure with a particular employer.

In 1979 and from 1983 forward, the CPS question asks about the length of time individuals worked for their current employer. The shift from calendar to elapsed time may cause the share of workers with low tenure to increase, however. For tenure longer than 1 year, the CPS measures tenure in integer years. If individuals follow a simple rounding rule, the "1 year or less" tenure variable in the CPS will include all individuals who started working for their current employer in an 18-month window.[21] Given our interpretation of the questions and responses over time, the

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[18] Information on tenure is also available in the 1983 and 1988 employee benefits supplements.

[19] Supplement weights are not available in 1978 and 1981.

[20] We also performed the analyses using adjusted supplement weights that take into account nonresponse to the tenure questions. This also made very little difference to the results. Further details are available from us on request.

[21] Interviewers were instructed to follow this type of rounding rule if the individual answered the "new" question with a noninteger response (Bureau of Labor Statistics 1997).

series we report based on the "new" question represents the fraction of individuals with *employer tenure less than 18 months;* the "old" series refers to *"job" tenure less than or equal to 13 months.*

Several previous authors using the CPS have noted the question changes over time and limited their analyses to the post-1981 data. Farber (1995), however, finds that the share of individuals with low tenure remains stable using both the "old" and "new" tenure questions to examine trends spanning the change in question. We think it likely, however, that the simultaneous shifts from "job" to "employer" tenure and from calendar to elapsed time were roughly offsetting in their impact on our measure of low employer tenure. It may, therefore, be difficult to distinguish changes in job stability between the 1970s and 1990s using CPS data. In the results that follow, we show a break in series based on the "old" and the "new" questions to highlight that the series may not be consistent over time.

Evidence from similar question changes in the PSID also provides support for the contention that these two simultaneous changes in the question may be roughly offsetting. In figure 1, the "job less than 12 months" series available through 1975 and "employer less than 18 months" series available beginning in 1976 are fairly similar in magnitude. Under the assumption that there was no change in the distribution of employer tenure from 1975 to 1976, the switch from "job tenure less than 12 months" to "employer tenure less than 18 months" produces a spurious reduction in the fraction with low tenure of approximately 2 percentage points. This is roughly the magnitude by which the CPS and PSID results for men differ during the 1970s. While it does not show definitively the magnitude of the distortion produced by the CPS question change, this evidence from the PSID is consistent with the change producing a small effect on the trend that could alter conclusions about relatively subtle patterns in employer tenure.

III. Trends in the Share of Workers with Low Tenure

A. Share of Workers with 1 Year or Less of Tenure

We focus first on the share of employed individuals with 1 year or less of tenure. Figure 2 presents trends in the fraction of men and women with low tenure for the period 1973–96. Error bands are twice the standard error of each annual estimate.[22] For men, this figure evinces little system-

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[22] In the CPS, standard errors are estimated as $[p(1-p)/N]^{1/2}$, where p is the share of the sample with 1 year or less of tenure, and N is the number of (unweighted) observations in the cell. To address sample design issues in the PSID, standard errors are estimated using balanced half-sample replication (Wolter 1985).

(a) Male Household Heads
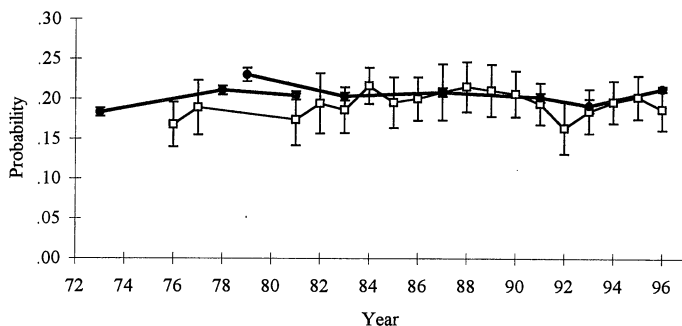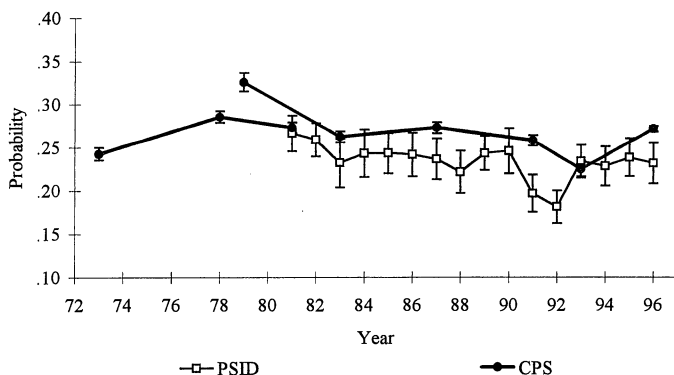

(b) Female Household Heads and Wives

—□— PSID   —●— CPS

FIG. 2.—Probability of tenure ≤ 1 year—PSID and Current Population Survey (CPS). Panels have different vertical scales. *a,* Male sample includes blacks and whites only; *b,* female sample includes all race/ethnicity groups. Male and female samples include employed individuals aged 20–59.

atic difference either in level or in trend between the CPS and PSID, particularly after 1983. From 1983 through 1996, we find a slight increase in both data sets in the early 1980s, a decline during the early 1990s, and an increase in the middle 1990s. The peaks and valleys are somewhat more pronounced in the PSID (particularly the decline between 1988 and 1992), but the overall pattern of the incidence of low tenure is quite consistent between the two data sets.

In the years prior to 1983, the consistency across data sets is less clear, both because of some apparent deviations in the trends and because of fewer observations available in the PSID. Recall that the break in the CPS

(a) Male Household Heads

(1) Ages 20-29   (2) Ages 30-39

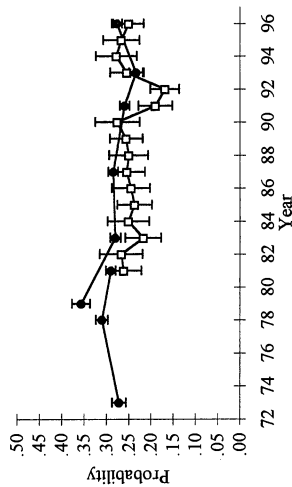(3) Ages 40-49   (4) Ages 50-59
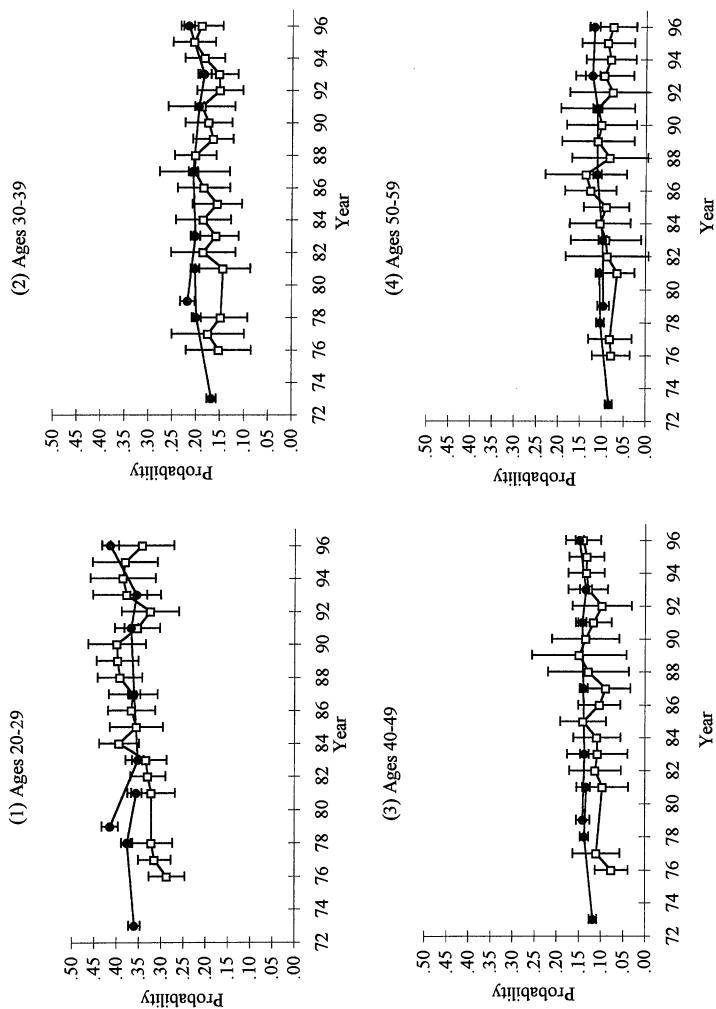
FIG. 3.—Probability of tenure ≤ 1 year by age—PSID and CPS

--□-- PSID   --●-- CPS

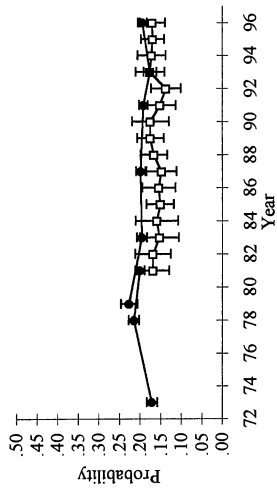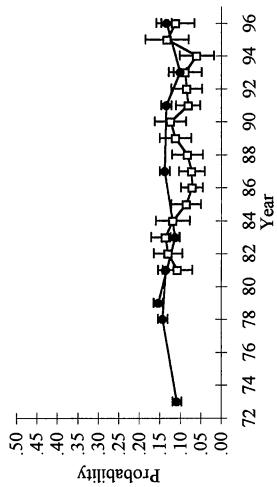(b) Female Household Heads and Wives

(1) Ages 20-29
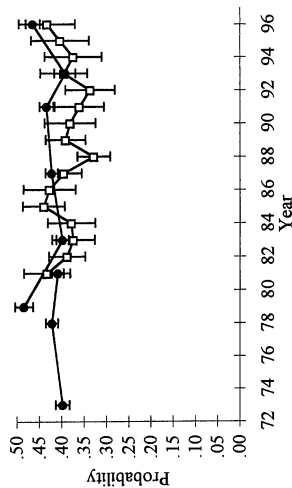
(2) Ages 30-39

(3) Ages 40-49

(4) Ages 50-59

—□— PSID

—●— CPS

FIG. 3.—(Continued)

series between the "old" and "new" questions coincides with a change in the relevant question reference from job to employer. Thus, our expectation is that the CPS observations using the "old" question may be elevated as individuals reported changes in "jobs" that could have occurred without a change in employer. Of course, the change in the time period over which tenure is reported (from 13 to 18 months) would counter this tendency. The evidence in figure 2a is consistent with the hypothesis that, on balance, the "job" to "employer" change dominates, resulting in slightly elevated low tenure rates in the early years of the CPS. The major exception to this hypothesis is 1979, where, despite using the "new" question, the incidence of low tenure would appear to be substantially higher than the surrounding years in the CPS and the PSID. Unfortunately, this comparison is based on only three annual observations in each data set, and the data points are not for the same years. Thus, our main conclusion from figure 2a is that the two overall series are very consistent from 1983 forward but somewhat less consistent when the 1970s are considered.

Figure 2b shows the fraction of all employed women with tenure less than 18 months. The fraction of women with low tenure is generally 3–6 percentage points lower in the PSID, but the trends are comparable. Neither data set shows strong evidence of an increase in the fraction of women with low tenure during the 1980s and 1990s. The CPS shows a slight increase in this fraction in 1996, while the PSID shows a slight decline if we consider the entire period from 1981 through 1996. As was the case for men, the 1979 observation from the CPS is substantially higher than any of the surrounding years and remains somewhat of an anomaly.[23]

Because the tenure distribution may differ substantially by age, figure 3 shows trends in low tenure by age groups. There is evidence from the PSID of an increase in the incidence of low tenure among young men, particularly from 1976 to 1990. For the 20–29-year-old males in the PSID, low-tenure rates increase from an average of .32 between 1976 and 1982 to an average of .37 between 1986 and 1996. In the CPS, the low-tenure share is quite stable near .36, with the exception of 1979 and 1996, where it was closer to .41. Similarly, in the CPS the low-tenure share for 30–39-year-olds is roughly constant near .20 for the whole sample period, with perhaps a slight movement upward in 1996; a similar pattern appears in the PSID. For 40–49-year-olds, the incidence of low tenure in the CPS is consistently higher than in the PSID, although the

[23] Farber (1995), in his appendix tables, shows similar results for 1979. His estimated rates of tenure less than 1 year are also substantially higher in 1979 than in the surrounding years.

series are quite close in 1993 and 1996 and the trends are similar to those of the two younger age groups. For the oldest age group of men aged 50–59, both the PSID and CPS show a very slight increase in the incidence of low tenure through the early 1990s, with a subsequent decline (more pronounced in the PSID) in the mid-1990s. Across all age groups there is little evidence from either data set of an upward trend in rates of low tenure from 1983 onward.

For women, shown in figure 3*b,* there is little evidence of any significant changes in the fraction of different age groups with low tenure between 1981 and 1996. Among the youngest women there is a decline in the fraction in new jobs from 1981 through the early 1990s and then an increase in the last few years of our sample. For the older age groups, the fractions with low tenure are relatively flat over time.

B. Share of Workers with Less than 10 Years of Tenure

To ascertain whether the trends and comparisons described above are unique to the very low end of the tenure distribution, we next consider an alternative measure to capture changes in a wider range of the distribution. In figure 4 we show the fraction of workers in each year with tenure less than 10 years for different age groups. This focuses attention on higher points in the tenure distribution and, particularly for older workers, may capture more of the potential changes in the overall distribution.

The results for men are shown in the left panels of figure 4. The CPS gives consistently higher estimates than the PSID of the share of male workers with employer tenure less than 10 years, particularly for men 30–39 years old.[24] Figure 4 also shows, however, that the trends in these measures are comparable across data sets. For workers aged 39 and under, neither data set shows a sustained trend in this measure through the entire sample period. From 1983 forward, the series for workers in their thirties exhibit a shallow U-shape in both data sets. In contrast, for workers over age 40 both data sets show an increase in the fraction of workers with less than 10 years of employer tenure. Unlike the results for the fraction of workers with 1 year or less of tenure, using this measure suggests an

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[24] Different sample coverage may partially explain the discrepancy. Because of the nature of its sample, the PSID does not include immigrants who entered the United States after the first wave of interviews, while the CPS is a representative sample of the population in the year of the survey. Unfortunately, immigrants are not separately identified in the CPS prior to 1994. Using the 1996 sample, we found that the share of native men having less than 10 years of employer tenure was .58, while for immigrants it was .75; for women, the shares were .68 and .79 for natives and immigrants, respectively. For the 1 year or less of tenure measure, the difference in share between natives and immigrants was .04 and .01 for men and women, respectively.

(a) Males, Ages 30-39

(b) Females, Ages 30-39

(c) Males, Ages 40-49

(d) Females, Ages 40-49

(e) Males, Ages 50-59

(f) Females, Ages 50-59

—□— PSID   —●— CPS

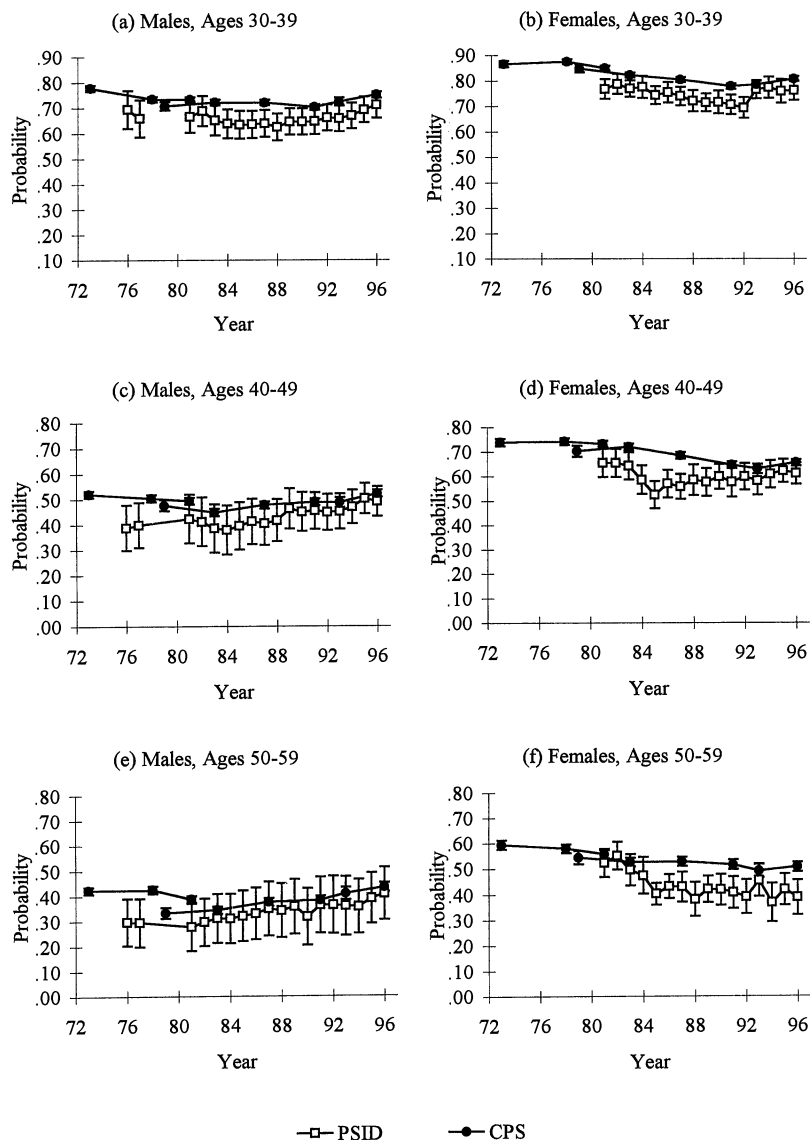FIG. 4.—Probability of tenure < 10 years by age and sex—PSID and CPS. Panels have different vertical scales. Males, by age, are on the left-hand side; females, by age, are on the right-hand side.

upward trend from the early 1980s through the end of the sample that is found in both data sets. This trend is particularly strong during the 1990s, suggesting that the change in the tenure distribution is a fairly recent phenomenon.

The results in the right panels of figure 4 show a decline over time in the percentage of women with tenure less than 10 years. We find this decline in both data sets for all groups except for the 30–39-year-olds in the PSID; it is stronger in the PSID for the oldest women. Using this measure we find no evidence consistent with a reduction in job stability for women.

We have also compared the full distributions of tenure in the CPS and PSID samples. To summarize these distributions over time we followed Farber (1995) and calculated interpolated quantiles of the distributions. Medians and 90th percentiles were calculated separately by the age groups shown in figure 4. This comparison results in much the same story as the probabilities of tenure less than 10 years.[25]

C. Multivariate Trend Regressions

The characteristics of our samples change somewhat between the 1970s and 1990s. In particular, both samples are more educated and slightly older by 1996 than in the 1980s or 1970s. These changes in the sample composition over time could mask changes in the underlying incidence of low tenure for workers with a fixed set of characteristics. To examine changes in the adjusted incidence of low tenure holding individual characteristics (age, education, and race) constant, we performed regression analysis of the incidence of low tenure.[26] The regression results presented below are for men only since we have the necessary education and race information in all years. Controlling for age and education did not alter our conclusion that there was no increase in rates of low tenure among women.

The estimation proceeded in two steps. In the first step, we estimated a logit model on the probability of having employer tenure of less than 1 year or less than 10 years and controlled for age, age squared, race, education, and calendar year.[27] Using the calendar year coefficients, we then calculated year-specific probabilities.[28] In the second step of the estimation, these probabilities were regressed on a time trend using ordinary least squares. Because the error term in this second-stage regression is heteroskedastic, we present heteroskedasticity-consistent standard errors estimated using the jackknife.[29] We have estimated the model for

[25] Tables showing these results are available from us on request.

[26] We have also calculated the low-tenure probabilities for different education and race groups, which are available from us on request.

[27] We control for education by including dummy variables for the education groups shown in fig. 4.

[28] In creating these probabilities, the logit function is evaluated at the observed mean of the other covariates.

[29] MacKinnon and White (1985) show that the small-sample performance (which is certainly relevant here) of jackknife standard errors is superior to other

Table 1
Trends in Tenure Probabilities: PSID and CPS (Employed Male Household Heads)

	Coefficient on Linear Trend							
	Tenure ≤ 1 Year				Tenure < 10 Years			
	CPS		PSID		CPS		PSID	
Group	1973–96 (1)	1983–96 (2)	1976–96 (3)	1983–96 (4)	1973–96 (5)	1983–96 (6)	1976–96 (7)	1983–96 (8)
Full sample	.015 (.0008)	.0020 (.0014)	.027 (.0007)	.011 (.0010)	.0001 (.0016)	.0040 (.0014)	.0046 (.0012)	.0079 (.0010)
Age:								
20–29 years	.018 (.0014)	.0045 (.0027)	.039 (.0016)	−.0002 (.0022)	−.0002 (.0022)	.0030 (.0025)	.0029 (.0016)	.0070 (.0013)
30–39 years	.014 (.0013)	.0007 (.0021)	.0022 (.0008)	.0015 (.0014)	.0004 (.0016)	.0057 (.0009)	.0064 (.0012)	.0109 (.0008)
40–49 years	.015 (.0005)	.0014 (.0006)	.0027 (.0007)	.0028 (.0010)	.0020 (.0016)	.0075 (.0009)	.0060 (.0012)	.0066 (.0008)
50–59 years	.018 (.0003)	.0020 (.0008)	.0006 (.0007)	−.0017 (.0010)	.0020 (.0022)	.0075 (.0006)	.0060 (.0009)	.0066 (.0010)
Education:								
Less than 12 years	.022 (.0008)	.0022 (.0007)	.021 (.0008)	−.0005 (.0020)	.0024 (.0014)	.0060 (.0007)	.0050 (.0013)	.0035 (.0031)
12 years	.015 (.0005)	.0022 (.0003)	.0031 (.0004)	.0027 (.0007)	.0005 (.0017)	.0046 (.0005)	.0038 (.0022)	.0091 (.0024)
13–15 years	.009 (.0013)	.0018 (.0029)	.0029 (.0012)	.0008 (.0022)	−.0004 (.0017)	.0031 (.0028)	.0072 (.0010)	.0111 (.0009)
16 or more years	.009 (.0006)	.0011 (.0012)	.0019 (.0009)	−.0000 (.0009)	−.0006 (.0025)	.0045 (.0024)	.0057 (.0014)	.0095 (.0015)
Race:								
White	.014 (.0009)	.0019 (.0017)	.023 (.0007)	.0006 (.0011)	.0001 (.0017)	.0039 (.0015)	.0045 (.0011)	.0072 (.0009)
Black	.022 (.0006)	.0035 (.0031)	.0061 (.0010)	.0048 (.0014)	−.0000 (.0012)	.0041 (.0008)	.0036 (.0000)	.0146 (.0040)

NOTE.—Standard errors are in parentheses. Tenure ≤ 1 year samples include all individuals aged 20–59; tenure < 10 years samples include all individuals aged 30–59. First-stage logit regressions include control variables for age, age squared, education group, and race group (where appropriate). Second stage is regression of adjusted year-specific predicted probabilities on time trend. Predicted probabilities are calculated at the mean value of the control variables. Standard errors are estimated using the jackknife. PSID = Panel Study of Income Dynamics. CPS = Current Population Survey.

the full sample as well as separately for each age, education, and race group; the results are presented in table 1.

The first four columns of table 1 show the estimated trends in the regression-adjusted probabilities of tenure of 1 year or less for the two data sets. We show results for both the full periods and for 1983–96 only but focus our attention on the latter period, in which we view the measures as more comparable to one another. Between 1983 and 1996, for the full sample, neither data set produces a statistically significant trend in rates of tenure less than or equal to 1 year. Within certain subgroups, the estimated trend in the CPS is larger, although often not statistically significant. In the PSID, there are statistically significant trends only for 40–49-year-olds, high school graduates, and blacks. The trends for 40–49-year-olds (as well as 50–59-year-olds) and high school graduates are also statistically significant in the CPS. This analysis largely confirms the visual evidence in the previous section of little movement in the probability of having tenure less than 1 year.

The results for the period beginning in the 1970s are substantially different from those beginning in the 1980s. First, in the PSID, including the years 1976, 1977, 1981, and 1982 produces a statistically significant and upward trend for almost every subgroup. The pattern of a smaller increase in the CPS from the 1970s to the 1980s is consistent with our hypothesis that the question changes lead to an overstatement of low tenure probabilities prior to 1983. The PSID data are more consistent over the entire period 1976–96 and provide evidence of a small increase in the fraction of male workers in new jobs from the mid-1970s to the mid-1990s. This evidence also suggests that measured trends in job tenure are sensitive to the exact time period under consideration.

Columns 5–8 of table 1 present results for the trend in the percentage of workers with employer tenure of less than 10 years. The trends here are statistically significant in almost every subgroup from 1983 to 1996. The estimated trend is stronger in the PSID, with the magnitude of the trend coefficient typically equal to approximately twice that of the CPS. After adjusting for age, education, and race, there is strong evidence from both data sets that workers are more likely to be in jobs with tenure less than 10 years in the 1990s relative to the 1980s. In general, the regression-adjusted probabilities provide stronger evidence of an increase in the probability of having tenure less than 10 years than did the unadjusted figures in the previous section.[30] This is not surprising since the sample is

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heteroskedasticity-consistent standard errors such as those suggested by White (1980).

[30] In addition to the evidence from the figures in previous sections, we have also estimated the trend terms shown in table 1 without conditioning on age, educa-

both more educated and older at the end of the period and both of these characteristics are associated with lower probabilities of being in relatively new jobs.

D. Sensitivity of Estimated Trends in Low Tenure

As noted throughout, fractions of employed individuals with tenure below 1 or 10 years is not an ideal measure of job stability. While the two data sets may produce similar trends in these tenure-based measures, the question remains whether preferred measures of job stability would also produce such agreement. While we are somewhat limited by the data available in both data sets, we have also estimated trends in several alternative measures of changes in the tenure distribution.

Our inclusion of only employed individuals may mask business cycle effects on the tenure distribution. For example, if equal shares of individuals with low tenure and with high tenure become unemployed because of a cyclical downturn, our measures would not capture this obvious decrease in job stability. To check the robustness of our results to the inclusion of nonemployed (i.e., unemployed or out of the labor force) individuals, we present trends in the share of the population (i.e., including both employed and nonemployed individuals) in figure 5. These calculations count nonemployed individuals as having 0 months of employer tenure.

In the PSID, the population- and employment-based fractions with tenure less than 1 and less than 10 years show extremely similar trends from 1981 through 1996. This suggests that the distinction between population- and employment-based fractions of workers with low tenure is unlikely to alter our conclusions. In contrast to the employment-based series, the CPS population-based series shows a slight increase in the fraction of men with low tenure. This population-based trend is mainly driven by the estimated probabilities for 1979 and 1983, which are lower than in other years (and closer to the employment-based probabilities). As we noted above, the employment-based probability in 1979 is somewhat anomalous and is substantially higher than the CPS probabilities from 1978 and 1981.[31] This pattern is not repeated in the population-based estimates. Lacking data from the PSID in this year for comparison, it is difficult to say more about the 1979 CPS observation. We note, however, that evidence from the population-based CPS series from 1979

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tion, and race in the first stage. These "unadjusted" trend coefficients are consistently smaller and are often not statistically significant.

[31] Recall that in 1979 the CPS asked the "new" (employer-based) question, which we would have expected to give somewhat smaller estimates of low tenure than in 1978 and 1981, when the "old" (job-based) question was asked.

(a) Probability of Tenure ≤ 1 Year, Males

(b) Probability of Tenure ≤ 1 Year, Females

(c) Probability of Tenure < 10 Years, Males

(d) Probability of Tenure < 10 Years, Females

●— CPS Employment
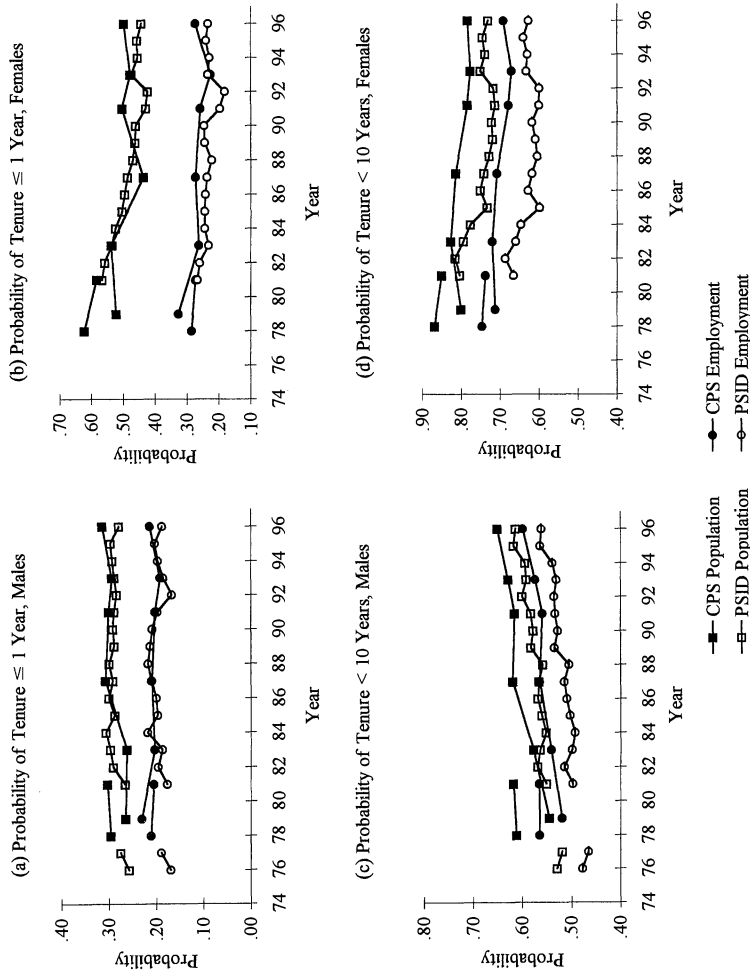○— PSID Employment

■— CPS Population
□— PSID Population

FIG. 5.—Employment- and population-based estimates of probability of low tenure—PSID and CPS. Panels have different vertical scales. Probability of tenure ≤ 1 year is for individuals aged 20–59; probability of tenure ≤ 10 years is for individuals aged 30–59.

to 1996 is consistent with our finding of an upward trend in the share of men with low tenure in the PSID from 1976 through 1996. More generally, the population-based trends confirm our previous results from 1983 through 1996: we find reductions in the fraction of women with 1 year or less of tenure and increases in the fraction of men with less than 10 years of tenure.

We have also directly controlled for the effects of the business cycle in regressions like those presented in the previous section. Inclusion of the unemployment rate in these regressions gave estimates that were similar to those presented above. This largely reflects that our measures of the incidence of low tenure capture the effects of recent job changes due to both quits and involuntary separations. Because these two categories of job changes generally have opposite cyclical patterns, it is not surprising that our measures are relatively unaffected by the business cycle.

Our results might also be sensitive to changes over time in the flow of workers from nonemployment to employment. An increase (decrease) in this inflow would push the share of workers with low tenure up (down), while the underlying trend in job stability would remain unchanged. Using the longitudinal aspect of the PSID, we estimated the fraction of employed individuals in year t who had tenure of less than 12 months in year $t + 1$. This measure is closer to the retention rate measures reported elsewhere in the literature (e.g., Diebold et al. 1997) and is not sensitive to changes in the flow of workers into employment. Like the population-based series above, this experiment also produced estimated trends that were essentially parallel to the employment-based results reported in figure 2. Conditioning on employment in the previous year lowers the probability of having tenure of less than 1 year by 5.5–6.5 percentage points but has no discernible effect on the trends. We find little evidence that eliminating those workers who have low tenure following a transition into the workforce changes our main conclusions.

IV. Discussion and Conclusion

We conclude by returning to the questions that motivated this work: (1) Has there been a trend toward decreased job stability? (2) Does the answer to this question differ between the CPS and the PSID? In answer to the first question, we find that both data sets show a statistically significant increase in the probability of workers having less than 10 years of tenure. We find no similar trend in the fraction of workers with 1 year or less of tenure, however. Because the pool of workers with less than 1 year of tenure is quite small, it is difficult to precisely estimate small changes in this fraction over time, particularly with the sample sizes available in the PSID. In answer to the second question, and perhaps most central to the specific goals of this article, we find similar trends in the two

data sets once consistent data series, variable definitions, and time periods are used.

We find several explanations for the apparent sensitivity of previous estimates of job stability or turnover to the particular data used. The general tendency for PSID studies to find an upward trend in employment instability where none is found using CPS data may be explained by three factors.

1. Tenure estimates or job-changing rates based on PSID data may be very sensitive to the particular variables used. Some of the increase found in the PSID, as noted by Diebold et al. (1997), results from failure to account for major changes in the questions regarding job and position changing that occurred during the 1980s. As emphasized by figure 1, the exact choice and definition of variables in the PSID can substantially affect the resulting trends.

2. The comparison of the PSID and CPS shows some sensitivity of results to the exact time period studied. Many of the previous PSID studies have included data only through 1988, when the probability of having tenure of 1 year or less appears to have peaked in those data. This is not, however, inconsistent with the CPS findings once the later years of both surveys are included. The trends we find over the course of the 1980s and 1990s in the PSID are also sensitive to whether we begin the period in 1976, 1981, or 1983.[32] A related point is that individual year estimates of job-tenure or job-changing probabilities in the PSID are, by virtue of the sample sizes available, substantially less precise than those in the CPS.

3. While we cannot say with certainty, our evidence suggests the CPS question change prior to 1983 may have had an important effect on comparisons across data sets. For comparisons starting in the 1970s, the upward trend in instability found in the PSID for some groups (young workers, for example) may reflect genuine changes (although relatively small) in job mobility. These changes may not have been replicated in the CPS-based studies either because those studies did not include the 1970s or because the CPS question change masks this increase.

In many cases, a combination of these factors contributes to the apparent differences in findings across data sets. For example, the PSID study by Marcotte (1996) is based on a relatively young sample of workers (under age 45) and examines the period 1976–88. Our results from the PSID are quite consistent with his finding of some increase in job instability for young men over this time period. Panel 1 of figure 3a shows a strong increase in the fraction of young men (ages 20–29) with

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[32] We do not believe this is the result of different business cycle conditions in the different years. We have also estimated trends holding constant the unemployment rate and alternative business cycle controls and obtained similar results.

low tenure from 1976 through 1988. We should also note that two recent studies using the National Longitudinal Survey of Youth, by Monks and Pizer (1998) and Bernhardt et al. (in this issue), find an increase in turnover among young men from the 1970s to the 1980s. The lack of CPS-based evidence for such an increase over this period is not necessarily informative given potential comparability problems related to the CPS question change.

Polsky (1999) is the one PSID-based study that finds virtually no increase in turnover rates, despite beginning his analysis in the 1970s. This result is likely driven by his inclusion of data through 1991 (when some of the temporary increase in the late 1980s had been reversed) and because his measure of turnover is based on the position tenure question that measures a somewhat different quantity than employer tenure. More important, however, Polsky corrects for changes over time in heaping patterns, while other authors using the PSID position tenure question do not. The comparison of trends in slightly different levels of position tenure shown in figure 1 suggests that such a correction may be crucial to making correct inferences based on this question.

Our results from both data sets during the 1980s and 1990s are quite consistent with the findings of Diebold et al. (1997) and a recent extension of this work by Neumark, Polsky, and Hansen (in this issue). These studies are somewhat unique among those using the CPS in that they explicitly adjust for the question change after 1983. Diebold et al. produce two main sets of estimates: one covering the period 1983–91 and a second covering 1973–91. In our full samples we find, consistent with Diebold et al., little evidence of an increased incidence of low tenure during the period 1983–91. Finally, as we show in figure 4, much of the increase that we report in the fraction of workers with less than 10 years of tenure occurs during the early part of the 1990s, consistent with the findings of Neumark et al. (in this issue).

While we view our findings as generally consistent with Diebold et al. (1997) from the 1980s to the 1990s, we find less agreement in the 1973–91 period. Both our study and Diebold et al. (1997) find no strong overall trend in job stability over this period, but results by education and age subgroups differ somewhat across the two studies. Of course, our PSID results used as the basis for comparison in the 1970s involve only 2 years in the late 1970s. We are thus not surprised that results focused on the 1980s forward are far more consistent with these previous findings.

Using what we view as the cleanest and most consistent variable to measure tenure in the PSID produces estimates that differ very little from comparable CPS estimates from 1983 to 1996. This is an important finding for researchers interested in utilizing either the panel nature of the PSID or the much larger samples sizes available in the CPS to study issues related to job tenure or job stability. While previous work has focused on

the difficulties with the PSID tenure variable, and several recent studies have produced results seemingly at odds with CPS-based studies, we are able to produce consistent results across the two data sets once comparable time frames, variable definitions, and samples are used.

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