THE IMPORTANCE OF LIFETIME JOBS
IN THE U.S. ECONOMY

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ABSTRACT

Though the U.S. labor market is justly notorious for high turnover and consequent high unemployment, it also provides stable, near-lifetime employment to an important fraction of the labor force. This paper investigates patterns of job duration by age, race, and sex, with the following major conclusions:

1. The typical worker today is holding a job which has lasted or will last about eight years. Over a quarter of all workers are holding jobs which will last twenty years or more. Sixty percent hold jobs which will last five years or more.

2. The jobs held by middle-aged workers with more than ten years of tenure are extremely stable. Over the span of a decade, only twenty to thirty percent come to an end.

3. Among workers aged thirty and above, about forty percent are currently working in jobs which eventually will last twenty years or more. Three-quarters are in jobs which will last five years or more.

4. The duration of employment among blacks is just as long as among whites. Even though the jobs held by blacks are worse in almost every other dimension, they are no more unstable than those held by whites.

5. Women's jobs are substantially shorter than men's, on the average. Only about a quarter of all women over the age of thirty are employed in jobs which will last over twenty years, whereas over half of men over thirty are holding these near-lifetime jobs.

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Introduction

Though the U.S. labor market is justly notorious for high turnover and consequent high unemployment, it also provides stable, near-lifetime employment to an important fraction of the labor force. This paper investigates patterns of job duration by age, race, and sex, with the following major conclusions:

1. The typical worker today is holding a job which has lasted or will last about eight years. Over a quarter of all workers are holding jobs which will last twenty years or more. Sixty percent hold jobs which will last five years or more.

2. The jobs held by middle-aged workers with more than 10 years of tenure are extremely stable. Over the span of a decade, only twenty to thirty percent come to an end.

3. Among workers aged thirty and above, about 40 percent are currently working in jobs which eventually will last twenty years or more. Three-quarters are in jobs which will last five years or more.

4. The duration of employment among blacks is just as long as among whites. Even though the jobs held by blacks are worse in almost every other dimension, they are no more unstable than those held by whites.

5. Women's jobs are substantially shorter than men's, on the average. Only about a quarter of all women over the age of thirty are employed in jobs which will last over twenty years, whereas over half of men over thirty are holding these near-lifetime jobs.

These findings are highly relevant in the debate over the existence and nature of long-term employment contracts. I have elaborated this point elsewhere (Hall, 1980) and have given extensive citations, which will not

be repeated here. If most workers in the U.S. were holding relatively brief jobs, then theories of long-term employment arrangements would be off the point. The findings reported here of the considerable importance of lifetime work do not clinch the case in favor of any particular theory of long-term contracts. Even in markets for completely homogeneous products, where simple ideas of competitive spot markets work perfectly, it is conceivable that the typical buyer deals with the same seller year after year. But the finding of extensive long-term employment in the U.S. labor market does add to the interest in understanding long-term employment arrangements.

All of the results in this paper are derived from published tabulations of job tenure, that is, the length of time that workers have been employed to date in their jobs. Most of the results rest on projections of how much longer workers will remain on their current jobs. These projections are most important for workers in mid-career, where many have just started jobs which will ultimately last twenty or thirty years. The techniques used in this research were inspired by the related literature on the duration of unemployment, launched by Hyman Kaitz (1970). My concentration on the distribution of job duration across workers was suggested by the work of Kim Clark and Lawrence Summers (1979) on the distribution of the duration of unemployment across unemployed workers. This paper will not make any explicit use of a very different distribution, that of the duration across jobs. It is true, but not relevant for the points to be made here, that the typical job is extremely brief, lasting only a matter of months (R.A. Jenness, 1979). Most workers hold very stable jobs, even though stable jobs are a small fraction of the flow of jobs filled each month. The relationship between the distribution of the

lengths of jobs, sampled randomly from the universe of newly started jobs, and the distribution obtained by sampling randomly among workers, is explained in detail by Salant (1977) and by George Akerlof and Brian Main (1980). Everything in this paper is based on sampling workers.

The stability of jobs among middle-aged and older workers has been noted by a number of earlier authors, though the computation in this paper of additional time on the job is new, as far as I know. My own earlier work (Hall, 1972) presented low estimates of separation rates from the National Longitudinal Survey of Work Experience for older men, but without any comment on the significance of the low rates. Martin Neil Baily (1976) cited the same source in defense of theories of long-term employment contracts. Kazuo Koike (1978) has compared data on tenure for the U.S. and Japan and concluded that tenure of 15 years or longer is actually more common in the U.S., in spite of the celebrated _nenko_ system of lifetime employment in Japan. I hope in later work to apply the techniques of this paper to a comparison of the U.S., Japan, and France, all of which have tenure surveys. Finally, Akerlof and Main (1980) present computations of the mean length of jobs held by workers in the U.S., with results that are fully compatible with the complete distributions reported here.

Data on Job Tenure

On six different occasions in the postwar period, the Current Population Survey has inquired about the starting date of the current job of each of the roughly 100,000 workers included in the survey.[1] A

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[1] See Bureau of the Census (1951), Bureau of Labor Statistics (1963), (1967), (1960), (1975), and (1979).

job is defined as continuous employment with the same employer, possibly in different occupations. Interruptions in jobs for vacation, illness, strikes, and layoffs of less than 30 days are not counted. For the self-employed and household service workers with multiple employers, the entire spell in the same line of work is counted as a single job.[1] Tenure is defined as the number of years since the workers' current job began.

The data on tenure do not immediately suggest that lengthy employment is an important feature of the American labor market. The median job tenure among workers in general was only 3.6 years in 1978; 40 percent had tenure of less than two years and only 9.5 percent had been on the same job for twenty years or more. The distribution of workers among the categories of tenure was

Category (years)	Percent of all workers
0-0.5	19.0
0.5-1.0	9.2
1-2	11.7
2-3	7.7
3-5	12.5
5-10	16.7
10-15	8.7
15-20	5.0
20-25	3.7
25-30	2.8
30-35	1.7
35+	1.3
median	3.6 years

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[1]Only 1.5 percent of workers are in household service, and, in any case, their distribution by tenure is very similar to the distribution for workers in general. The self-employed form 8.4 percent of all workers and have typically longer tenure (especially farmers). However, for most of the self-employed, the definition of a job used in the survey is probably quite reasonable.

However, the labor force contains a large proportion of young workers who could not possibly have long tenure even if lifetime jobs were the general rule. A better way to diagnose long-term employment from data on tenure is among older workers. The percentages of workers who have had the same jobs for 20 or more years are:

Age	Percent
35-39	1
40-44	7
45-49	17
50-54	25
55-59	30
60-64	33
65+	35

From these data, one might reasonably infer that lifetime employment is the exception in the U.S. labor market. Only about a third of older workers are currently in jobs which have lasted a large fraction of their careers. But this inference is obscured by the failure to count large numbers of middle-aged workers who are now working in jobs which ultimately will last 20 or 25 years, but which have lasted less than 20 years to date. Among the 45 to 49 year olds, for example, in addition to the 17 percent who are working in jobs which have lasted at least 20 years so far, another 44 percent are in jobs which have lasted 5 to 20 years, and, as I will demonstrate, there is a large probability that these jobs will last a good many more years. Over 40 percent of all 45 to 49 year olds are in near-lifetime jobs. This inference is not inconsistent with the small fraction--

again about a third--of workers near retirement age who have twenty or
more years of tenure. Ages of retirement vary widely; many of the workers
in this age group are now holding new jobs after retiring from near-
lifetime jobs in the recent past. There is no single age at which the
fraction of workers with long tenure reveals the true importance of long-
term jobs.

Inferring the prospective length of a job

   In order to get a clearer picture of the importance of long jobs,
it is necessary to project the likely additional time a worker will spend
in his current job. Then what I will call "eventual tenure" can be
computed as the sum of actual reported tenure and the projected additional
time on the job. The key element in the projection is the probability
that a worker with a given age and tenure will retain his current job for
one, ten, twenty years, and so on. In the work presented here, the
retention probabilities are measured from the number of workers in one
age-tenure category who move on to higher age-tenure categories. If the
fraction is large, it means that there is considerable prospective
additional time on the job for a worker in the first category. This kind
of comparison can be made for widely separated categories; for example,
to compute the probability that a worker aged 25 to 29 who has been on
the job for 5 years will remain on the job for 10 more years, I use

$$\frac{\text{number of workers aged 35 to 39 with 15 years of tenure}}{\text{number of workers aged 25 to 29 with 5 years of tenure}}$$

The computation of job retention rates can be done historically by
comparing the number of workers in an age-tenure category in one survey

with the number in a later survey in correspondingly higher age and
tenure categories. Job retention rates computed in this way appear in
Table 1 for the 10-year period 1968 to 1978. Alternatively, what I will
call "contemporaneous" job retention rates can be computed by comparing
two categories in the same survey. In this approach, an adjustment for
differences in the population by age must be used. The effect of the
adjustment is to compare the fraction of the population in an age group
who have a specified amount of tenure with the fraction of the population
in an older group with correspondingly higher tenure. The two methods of
calculating job retention rates will give the same results if the
distribution of tenure within age groups remains stable over time. Both
are just estimates of future retention rates, and it is not clear as a
theoretical matter which is better. At the practical level, the
contemporaneous retention rates are the only ones that can be calculated
for less than five-year spans because the survey has been taken only at
five-year intervals in the past decade. Examples of the differences
between the two rates appear in Table 1 for the most important age-tenure
groups. The only important discrepancy occurs among 40 to 44 year olds
with 15 to 20 years of tenure. An unusually large fraction of this age
group in 1968 took jobs in the immediate postwar period, 1948 to 1953.
As a result, the numerator in the contemporaneous retention rate, which
contains the same group 10 years later, is biased upward as an estimate
of the likely fraction of 50 to 54 year olds with 25 to 30 years of
tenure in 1988. Biases of this kind are largely offsetting because the
same high number appears in the denominator of other estimates of
retention rates. The fact that the disturbance in job-taking patterns

Table 1

Ten-Year Job Retention Rates

Age in 1968 (years)	Tenure in 1968 (years)	Percent of age group in this category		Age in 1978 (years)	Tenure in 1978 (years)	Percent of age group in this tenure category, 1978	Historical retention rate 1968-1978 (percent)	Contemporaneous retention rate, 1978 (percent)
		1968	1978					
20-24	0-5	50.76	58.83	30-34	10-15	7.36	14.5	12.5
30-34	0-5	39.24	45.27	40-44	10-15	10.83	27.6	23.9
	5-10	14.25	16.61		15-20	7.61	53.4	45.8
40-44	5-10	12.30	15.36	50-54	15-20	7.10	57.7	46.2
	15-20	9.24	7.61		25-30	6.02	65.2	79.1
	20-25	4.93	4.61		30-35	3.58	72.6	77.7
50-54	5-10	11.12	12.58	60-64	15-20	4.23	38.0	33.6
	20-25	7.25	6.42		30-35	3.40	46.9	53.0
55-59	20-25	6.54	5.45	65-69	30-35	1.09	16.7	20.0

caused by World War II shows up clearly in the 1978 data on job tenure is an illustration in itself of the importance of long-term jobs.

The computation of retention rates in Table 1 takes account of all the major sources of departure from jobs--movements to other jobs and departures from the labor force through permanent retirement or temporary withdrawal. This is achieved by taking the percent of the population in each age-tenure category, rather than the percent of workers (which is what is reported in the tabulations of the survey). Data on the civilian non-institutional population were used to restate the data in this form; the resulting distribution is given in the appendix. Two other less important sources of departure from jobs are not counted in Table 1: death and emigration. An examination of data on deaths and on population changes within cohorts showed that neither flow has any perceptible effect on the calculation of retention rates. In the modern U.S. economy, almost nobody dies or emigrates while holding a job. Finally, the restriction to civilian employment and population means that military service is not included--the reported retention rates are correct estimates for non-military jobs.

Computed job retention rates and the distribution of eventual tenure for the U.S. labor force

Table 1 shows that both measures of job retention rates agree that all but the youngest workers face a substantial probability of remaining on their current jobs for at least another ten years. Eventual tenure is far greater than tenure to date, especially for workers in their forties. About half of those 40 to 44 who have been on their current

jobs for 5 to 10 years so far will retain their jobs 10 years from now. And for those in their forties who have spent most of their working lives in their current jobs, the great majority (65 to 79 percent) will remain in those jobs for the next 10 years as well. Job retention rates are lower among younger workers, who are still in the process of finding good lifetime matches, and for older workers, who have substantial probabilities of retirement in the next 10 years.

With a complete set of job retention rates, it is possible to calculate the distribution of additional years of work for workers in each observed age-tenure category. Results for 40 to 44 year olds are:

Category (years)	Percent with eventual tenure of 20+ years
0-0.5	4.6
0.5-1	7.8
1-2	11.3
2-3	15.7
3-5	20.4
5-10	35.5
10-15	59.0
15-20	98.0
20+	100.0
all tenure groups	39.5

Although the entire distribution can be inferred, all that is shown here is the fraction of workers whose additional years of work will be enough to give them eventual tenure of at least 20 years on the current job. As

in every group in the labor force, those aged 40 to 44 who have just taken new jobs have only a small likelihood of remaining in those jobs for the next 20 years. But those who have been on their current jobs for 5 to 10 years have a 35 percent chance of keeping their current jobs for the 10 to 15 additional years necessary to give them an eventual tenure of 20 years or more. Those who have already lasted 10 to 15 years have a 59 percent chance of lasting the additional 5 to 10 years, and those with 15 to 20 years on their current jobs are 98 percent likely to reach 20 years of eventual tenure. In the entire age group, just under 40 percent will have eventual tenure on their current jobs of 20 years or more. This should be compared to the much smaller figure--7.5 percent--who have already reached 20 years of tenure. Very long-term jobs are quantitatively important in this age group, but that fact is not apparent directly in the distribution of tenure. Computations of eventual tenure from job retention rates are needed to appraise the incidence of very long jobs.

Following is the distribution of eventual tenure across all age and tenure categories for U.S. workers in 1978:

Eventual tenure (years)	Percent of all workers
0-0.5	9.8
0.5-1	6.7
1-2	7.0
2-3	5.0
3-5	13.5
5-10	14.8
10-15	10.4
15-20	4.7
20-25	4.7
25-30	6.2
30-35	10.0
35+	7.0
median	7.7 years
percent 20+ years	28.0

The typical worker is currently on a job which will last about eight years in all, counting the years it has already lasted. An important minority--about 28 percent--are currently employed in near-lifetime jobs lasting 20 years or more, and 17 percent are in jobs which will last 30 years or more. An equally important minority are at work in what will turn out to be very brief jobs--about 23 percent will have eventual tenure of less than two years. A clear majority of workers--58 percent--are currently holding reasonably long jobs, those which will last five years or more.

The process of moving into long-term work

The data on job tenure reveal a good deal about the probability process through which most workers eventually settle into near-lifetime jobs. The typical pattern is to hold a number of very brief jobs in the first few years after leaving school. Eventually one job turns out to be a good match and lasts several years. The probability that any given new job will become a lifetime job is extremely low for young workers and never rises above six percent in any age group. But after a job has lasted five years, the probability that it will eventually last 20 years or more in all rises to close to one-half among workers in their early thirties. As a general matter, the data suggest that most job changes occur in the first few years after a job begins, because the worker or the employer or both perceive that the worker and the job are poorly matched. Once this period of job-shopping reaches a successful conclusion, workers have very low probabilities of losing or leaving jobs. Again, it is important to emphasize that good matches are not necessarily good jobs in any absolute sense--a worker who is placed above his competence will not last any longer than will a worker who realizes he would be happier in another job for which he is qualified.

At no age is the probability very high of a given new job becoming a lifetime job:

	Percent probability that a new job will last 20+ years
Age	
16-17	0.4
18-19	0.3
20-24	2.2
25-29	4.8
30-34	5.3
35-39	5.7
40-44	4.6
45-49	1.8
50-54	1.0

The very low chance of success in any given new job means that the typical worker has to take a number of different jobs in order to have a good chance of finding a lifetime match. The small probability in each new job presumably reflects the paucity of information available to workers about prospective jobs before they try them out and the similar paucity of information available to employers about the talents of prospective workers before they can be observed at work. Even workers in their thirties and forties, who generally have substantial amounts of experience, face low chances of landing lifetime jobs on any given try.

Still, most workers do wind up in lifetime work, as earlier parts of this paper have shown. Table 2 illustrates how multiple tries eventually succeed. It uses the point of five years of tenure as an intermediate milestone in describing the process. The first column gives the fraction of workers who are in new jobs, that is, jobs which began in the six months before the survey. The fraction declines smoothly from a majority

Table 2

Aspects of the Process of Moving into Long-Term Jobs, All Workers, 1978

Age	(1) Percent working in new jobs	(2) Probability of retaining job to 5 years	(3) Percent of all workers 5 years older who have reached tenure of 5+ years	(4) Percent of those who reach 5 years of tenure who go on to reach tenure of 20+ years
16-17	59.5	1.7	5.5	26.2
18-19	52.5	1.2	5.5	26.2
20-24	34.1	5.9	19.9	36.6
25-29	22.3	10.8	35.3	44.9
30-34	17.1	13.6	46.3	39.3
35-39	13.6	16.0	53.7	35.5
40-44	11.3	18.1	61.7	25.2
45-49	8.6	20.0	67.1	8.7
50-54	7.1	24.4	71.4	4.3
55-59	6.2	20.0	73.7	-
60-64	6.2	9.8	63.5	-
65-69	8.2	7.1	72.9	-

Explanation: Column 1 is the reported fraction of workers in the age group who have 0 to 6 months of tenure. Column 2 is the contemporaneous 5-year job retention rate from 0-6 months tenure to 5-10 years tenure. Column 3 is the reported fraction of workers in the age group with 5 or more years of tenure. Column 4 is the 15-year contemporaneous job retention rate from 5-10 years tenure to 20-25 years tenure.

of teenagers to about six percent of workers aged 55 to 64; it rises

slightly around retirement age. The second column gives the probability

that a newly employed worker will reach the milestone of five years on

the job. The chances are insignificant among teenagers, rise to a peak

of about one in four among workers in their early fifties, and then fall

back to low levels for workers near retirement age. The third column

shows the fraction of all workers in each age group who have reached the

five-year point on their current jobs. The fraction rises smoothly from

close to zero for teenagers to about three-quarters for workers in their

early sixties. At age 40, a majority of workers have passed the five-year

milestone, generally after a number of trials. For example, if the chances

are about 10 percent that any given job will last at least five years, and

half of all workers have made it, then the typical worker has taken roughly

five tries. The last column gives the prospects for a total duration of

20 years or more at the five-year point. The probability reaches a peak

of nearly half among workers in their early thirties and then declines

among older workers, who will probably retire within the next 15 years.

The result of this process of moving into long-term jobs is the

following fraction of workers with eventual tenure of at least 20 years:

Age	Percent with eventual tenure of 20+ years
16-17	0.0
18-19	0.6
20-24	7.4
25-29	18.6
30-34	27.7
35-39	35.5
40-44	39.5
45-49	41.0
50-54	41.1
55-59	40.1
60-64	39.4
65-69	40.9

The fraction rises until the late thirties, as more and more workers find good job matches, and then remains remarkably constant at about 40 percent until retirement age. However, these aggregate results conceal very important differences between men and women, a topic I will take up shortly.

Another way to express the movement of workers into stable jobs is by the number of jobs held by the average worker. The flow of new jobs is recorded directly in the tenure data in the form of the number of workers who have tenure of six months or less. The annual number of new jobs started by the average person in an age group is twice the fraction of the age group that is found in the 0 to 6 month tenure category. The

average number of jobs held over a two-year span is twice the annual rate, and the average over a five-year span is five times the annual rate. These simple computations yield the following results for the number of jobs held by the average worker:

Age group	New jobs per year	New jobs over the age interval	Cumulative number of jobs held to this age
16-17	.394	0.8	0.8
18-19	.534	1.1	1.9
20-24	.425	2.1	4.0
25-29	.309	1.5	5.5
30-34	.240	1.2	6.7
35-39	.192	1.0	7.7
40-44	.167	0.8	8.5
45-49	.126	0.6	9.1
50-54	.096	0.5	9.6
55-59	.076	0.4	10.0
60-64	.054	0.3	10.3
65-69	.032	0.2	10.4
70+	.010	0.1	10.5

Job-shopping is most intense in the early twenties--by age 24, the average worker has held four jobs out of the 10 he or she will hold in an entire career. The next 15 years, from age 25 through 39, will contribute another four jobs. Then, during the ages when near-lifetime work is characteristic, less than three more jobs will be held on the average.

Long-term jobs among blacks and women

Many accounts of the disadvantages facing blacks and women in the labor market emphasize their lack of success in finding and holding permanent jobs. The techniques of this paper reach a surprising conclusion in testing this view--it is upheld strongly for women but not at all for blacks. Lifetime employment is almost as common among blacks as among whites, and long-term employment is actually more common:[1]

	Percent with eventual tenure of 5+ years	Percent with eventual tenure of 20+ years
All blacks, 1978	63.4	26.4
All whites, 1978	57.3	28.7

The lower-paying jobs where blacks are concentrated are not systematically briefer than are the better jobs typically held by whites. Discrimination against blacks does not take the form of exclusion from lifetime jobs. Blacks are heavily represented in certain occupations with lower status and pay, but these are not occupations with systematically shorter jobs. Moreover, the vastly higher incidence of unemployment among blacks-- generally double the white rate--is not at all the result of larger flows of workers out of jobs. Further investigation of the surprising finding of equal or higher job stability among blacks relative to whites cannot be done with the published data and will require tabulation of the survey itself.

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[1] The same conclusion is reached by Steven Director and Samuel Doctors (1976) using personnel data from three firms.

On the other hand, the comparison between men and women confirms the
general impression that men typically hold longer jobs than do women:

	Percent with eventual tenure of 5+ years	Percent with eventual tenure of 20+ years
Women, 1978	49.6	15.1
Men, 1978	63.8	37.3

Shorter job duration among women is almost unrelated to their concentration
in certain occupations. For example, more than a third of all employed
women (34.9 percent) in 1978 were in clerical occupations, against 6.4
percent of men. Median tenure for women clerical workers was 2.6 years
compared to 4.7 years for men. The gap between women and men in the total
labor force was close to the same--median tenure was 2.6 years for women
and 4.5 years for men. Similarly large sex differences in tenure are found
in the other two major occupations employing women, professional-technical
and service workers. It is not possible to compute the distribution of
eventual tenure by occupation with the published data, but it seems likely
that large differences in eventual tenure would be found within occupations
as well.

Although lifetime work is much less common among women than among men,
the typical number of jobs held over a lifetime is about the same for both
sexes--about ten or eleven jobs. Longer periods spent out of the labor
force by women almost exactly offset the shorter durations of the jobs they
hold. In other words, although the time between starting one job and
starting the next is the same for women and men, women spend a larger part
of that time not working. This is roughly true within age groups as well
as over the typical entire career:

Age	Cumulative number of jobs held	
	women	men
16-17	0.7	0.8
18-19	1.8	1.9
20-24	3.8	4.1
25-29	5.2	5.8
30-34	6.4	7.0
35-39	7.4	7.9
40-44	8.3	8.7
45-49	9.0	9.3
50-54	9.4	9.8
55-59	9.8	10.2
60-64	10.0	10.5
65-69	10.2	10.7
70+	10.2	10.8

Women slip behind men by about 0.6 jobs during the period of most intense job-shopping and then recover a little after age 35.

Further results for men

Because lifetime work is so much more common for men than for women, it seems worthwhile presenting some further detailed results for men alone. Actual and eventual tenure are:

Age	Percent who had worked 20+ years to date	Percent with eventual tenure of 20+ years
16–17	0.0	0.3
18–19	0.0	1.2
20–24	0.0	11.5
25–29	0.0	27.0
30–34	0.1	38.4
35–39	1.7	47.0
40–44	10.2	51.1
45–49	24.4	52.6
50–54	33.4	51.0
55–59	39.3	49.5
60–65	41.4	48.0
65–69	38.9	50.2

Once past the years of job-shopping, half of all men are in lifetime jobs.

The jobs held by middle-aged men are remarkably stable--ten-year job retention rates are:

Age	Percent of jobs retained for 10 years, starting from tenure of 10-15 years	Percent of jobs retained for 10 years, starting from tenure of 20-25 years
30–34	73	—
35–39	81	—
40–44	64	79
45–49	66	61
50–54	47	59

Monthly separation rates, which are of the order of three percent for workers in general, are about 0.25 percent for middle-aged men with at least 10 years on the job.

Appendix

Derivation of Results

All of the computations for all workers in 1978 start from the following table abstracted from the BLS (1979):

Table A. Age: Tenure on current job, by sex, January 1978

(Percent distribution)

Age and sex	Total employed — Number (in thousands)	Percent	6 months or less (July 1977-Jan. 1978)	7 to 12 months (Jan.-June 1977)	Over 1 to 2 years (Jan.-Dec. 1976)	Over 2 to 3 years (Jan.-Dec. 1975)	Over 3 to 5 years (Jan. 1973-Dec. 1974)	Over 5 to 10 years (Jan. 1968-Dec. 1972)	Over 10 to 15 years (Jan. 1963-Dec. 1967)	Over 15 to 20 years (Jan. 1958-Dec. 1962)	Over 20 to 25 years (Jan. 1953-Dec. 1957)	Over 25 to 30 years (Jan. 1948-Dec. 1952)	Over 30 to 35 years (Jan. 1943-Dec. 1947)	Over 35 years (Prior to Jan. 1943)	Median years on job
BOTH SEXES															
Total, 16 years and over	91,048	100.0	19.0	9.2	11.7	7.7	12.5	16.7	8.7	5.0	3.7	2.8	1.7	1.3	3.6
16 and 17 years	2,765	100.0	59.5	16.1	14.2	4.6	3.6	2.0	-	-	-	-	-	-	.4
18 and 19 years	4,322	100.0	52.5	19.2	18.1	5.5	3.4	1.2	-	-	-	-	-	-	.4
20 to 24 years	12,724	100.0	34.1	15.9	20.2	11.1	13.2	5.2	.3	-	-	-	-	-	.9
25 to 34 years	23,578	100.0	19.9	10.4	14.3	10.3	17.9	20.9	.6	-	-	-	-	-	2.6
25 to 29 years	12,439	100.0	22.4	11.7	15.2	11.3	19.6	18.3	1.5	.1	-	-	-	-	2.5
30 to 34 years	11,139	100.0	17.1	9.0	13.2	9.3	16.0	23.7	10.5	1.1	-	-	-	-	3.5
35 to 44 years	17,493	100.0	12.5	7.2	10.0	7.3	13.1	22.1	14.7	8.6	3.6	.6	.1	-	5.0
35 to 39 years	9,212	100.0	13.6	7.7	10.7	8.0	13.8	23.1	14.7	7.1	1.2	.2	-	-	4.7
40 to 44 years	8,281	100.0	11.4	6.7	9.2	6.6	12.4	21.0	14.8	10.4	6.3	1.1	.1	-	5.8
45 to 54 years	16,295	100.0	7.9	5.2	6.2	5.6	10.8	19.7	13.4	10.1	9.8	7.3	3.3	.6	8.3
45 to 49 years	8,298	100.0	8.6	5.8	6.7	6.0	11.3	20.7	13.7	9.8	10.2	5.8	1.4	.1	7.8
50 to 54 years	7,997	100.0	7.1	4.6	5.7	5.2	10.4	18.6	13.2	10.5	9.5	8.9	5.3	1.1	9.5
55 to 64 years	10,987	100.0	6.2	3.8	5.6	3.9	8.2	18.4	12.6	9.6	8.8	9.3	7.5	6.0	11.0
55 to 59 years	6,876	100.0	6.2	4.3	6.0	4.3	7.9	19.1	12.3	9.5	8.9	9.6	7.4	4.6	10.6
60 to 64 years	4,111	100.0	6.2	3.0	4.9	3.4	8.8	17.4	13.1	9.7	8.7	8.8	7.8	8.2	12.0
65 years and over	2,864	100.0	7.4	3.2	6.0	5.1	10.8	14.1	11.2	7.3	6.0	6.6	6.2	16.1	11.0
65 to 69 years	1,667	100.0	8.3	3.5	7.1	5.5	12.1	13.7	11.7	7.4	5.7	7.2	5.6	12.2	9.7
70 years and over	1,198	100.0	6.2	2.8	4.6	4.4	9.0	14.6	10.4	7.2	6.3	5.7	7.1	21.6	12.9

The first step is to restate the data as fractions of the population in each age group, rather than as fractions of the employed:

AGE	.0-.5 20-25	0.5-1.0 25-30	1- 2 30-35	2- 3 35-50	3- 5	5-10	10-15	15-20
16-17	19.68	5.33	4.70	1.52	1.19	0.66	0.0	0.0
	0.0	0.0	0.0	0.0				
18-19	26.69	9.76	9.20	2.80	1.73	0.61	0.0	0.0
	0.0	0.0	0.0	0.0				
20-24	21.23	9.90	12.57	6.91	8.22	3.24	0.19	0.0
	0.0	0.0	0.0	0.0				
25-29	15.44	8.07	10.48	7.79	13.51	12.62	1.03	0.07
	0.0	0.0	0.0	0.0				
30-34	11.98	6.31	9.25	6.52	11.21	16.61	7.36	0.77
	0.0	0.0	0.0	0.0				
35-39	9.59	5.43	7.54	5.64	9.73	16.29	10.36	5.01
	0.85	0.14	0.0	0.0				
40-44	8.34	4.90	6.73	4.83	9.07	15.36	10.83	7.61
	4.61	0.80	0.07	0.0				
45-49	6.28	4.24	4.89	4.38	8.25	15.12	10.01	7.16
	7.45	4.24	1.02	0.07				
50-54	4.80	3.11	3.85	3.52	7.03	12.58	8.93	7.10
	6.42	6.02	3.58	0.74				
55-59	3.79	2.63	3.67	2.63	4.83	11.69	7.53	5.81
	5.45	5.87	4.53	2.82				
60-64	2.70	1.31	2.14	1.48	3.84	7.58	5.71	4.23
	3.79	3.84	3.40	3.57				
65-69	1.61	0.68	1.38	1.07	2.35	2.66	2.27	1.44
	1.11	1.40	1.09	2.37				
70- 0	0.48	0.22	0.36	0.34	0.70	1.13	0.80	0.56
	0.49	0.44	0.55	1.67				

The contemporaneous job retention rates in Table 1 are simply ratios of entries in this table. For example, the 12.6 percent retention rate for 20-24 year olds with 0-5 years of tenure is the fraction of the population in that group (21.2 + 9.9 + 12.6 + 6.9 + 8.2 = 58.8 percent) divided into the fraction aged 30-34 years with 10-15 years of tenure (7.4 percent).

The computation of the distribution of eventual tenure within an age group proceeds as follows. To compute the fraction with, say, 20+ years of eventual tenure, first count those with 20+ years of actual tenure. Then add the fraction with 15-20 years of tenure multiplied by the 5-year job retention rate, the fraction with 10-15 year tenure multiplied by their 10-year retention rate, and so on. For 40-44 year olds, the computations are:

Tenure (years)	Retention to 20	Fraction of workers	Contribution
0-0.5	.046	.114	.0052
0.5-1.0	.078	.067	.0052
1-2	.113	.092	.0104
2-3	.157	.066	.0104
3-5	.204	.124	.0253
5-10	.355	.210	.0746
10-15	.590	.148	.0873
15-20	.980	.104	.1019
20+	1.000	.075	.0750
			.3953

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