

A new method for estimating job separations by sex and race

Computations using data from the CPS show that the separation rate of women is the same as or lower than that of men when wage rates are taken into account; for blacks, the separation rate is lower than that for whites, irrespective of sex

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With the development of human capital theory, increasing attention has been given to specific training and its impact on employer hiring decisions with respect to sex and race.¹ The traditionally weaker labor force attachment among women in comparison with men, for example, has given rise to the perception that the risk of loss of a firm's investment in specific training is greater for the former than the latter.² This perception is one basis for statistical discrimination in which class information, for example, that pertaining to sex, is used as a criterion for hiring men rather than women, although both may be equally qualified for a given job.³

The view that women are much more likely to separate from an employer has several bases, among them are casual observation, economic theory, and empirical data. Casual observation suggests that in married households responsibilities for home production have been delegated to the woman. The reasonableness of this inference is augmented by the economic theory of marriage in which the main inducement to marriage is seen as the advantages of specialization of labor, the

most important of which is procreation.⁴ Not only may a married woman leave an employer to rear children, she may also leave if her spouse finds a better job elsewhere,⁵ or when a temporary condition which has impelled her to find work ameliorates so that she may resume nonmarket activities. While information on worker turnover by sex and race is sparse,⁶ the data that are most accessible, that is, work experience and job tenure data, imply that women are more apt to leave an employer than are men. For example, 26 percent more women had work experience in 1977 as were, on average, employed during any given month in that year; the corresponding figure for men was 13 percent.⁷ Likewise, the median years of job tenure among women employed in January 1978 were 2.6 compared with 4.5 for men.⁸

The same perception of higher than average turnover may also prevail with respect to blacks, particularly black men whose labor force attachment is weaker than their white counterparts. Additionally, blacks have more spells of unemployment than whites, suggesting a lower success rate in finding stable employment.⁹ Some evidence in support of the supposition of weaker employer attachment by blacks, particularly for black men and during the early 1960's for blacks of both sexes, is also suggested by work experience and job tenure data.¹⁰

Despite the utility of work experience and job tenure data, they provide only indirect information about employee separation rates because the former only reflect

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inter-labor force mobility¹¹ and the latter are sensitive to accessions as well as terminations. More direct information on separation rates can be derived from the Current Population Survey (CPS), and it is data from this source which are examined here.

Because of data limitations, the earlier turnover literature, which focused primarily on quits rather than separations, could only link turnover in an industry with other variables (for example, the percentage that women and blacks comprised of employees) similarly aggregated to an industry level. Some of the studies indicate that quit rates are higher in industries where women and blacks account for a large percentage of the work force; however, sometimes the regression coefficients for the sex and race variables are insignificant or they indicate that the quit rate is lower in industries with a large percentage of female and black workers.¹²

With the advent of survey data for individuals, it has been possible to directly ascertain the relationship between the quit rate and personal and job characteristics. W. Kip Viscusi, using a sample of more than 5,000 individuals from the 1976 University of Michigan Panel Study of Income Dynamics, found that the overall quit rate of women was approximately twice that of men.¹³ However, were women to have the same types of jobs, for example, jobs in which the mean wage and occupational distribution were the same as for men, the observed differences in quit rates would be eliminated. Similar results were obtained by Francine D. Blau and Lawrence M. Kahn in their study of young wage and salary workers who were no longer in school.¹⁴ Their sample was drawn from National Longitudinal Surveys covering 1969 to 1972. While the overall quit rate of young women was considerably higher than that of young men, the relationship was reversed when personal and job differences were taken into account. Likewise, holding personal and job-related characteristics constant, the predicted quit rate of young blacks was found to be lower than that of young whites, even though overall rates were nearly identical.

The turnover figures in our study also pertain to individuals, but instead of limiting turnover to quits, other separations, mainly permanent layoffs, are included. One reason for this is that some quits are a response to an imminent layoff but, more importantly, both quits and permanent layoffs result in unrecouped specific training outlays. Even though employers may be behaving optimally by laying off workers, they must evaluate all *ex post* outcomes in light of *ex ante* expectations. Any separation may represent an event which diminishes anticipated profits. Hence, inclusion of separations, other than quits, provides a more comprehensive measure of the turnover risk faced by employers when choosing employees.

The goals of the study are 1) to indicate how separa-

tion rates by demographic and socioeconomic groupings can be derived from CPS files¹⁵ and 2) using such data, to focus on several questions relating to employer attachment. One question is whether the overall separation rate, as distinct from the overall quit rate, is substantially higher for females than males. A second question pertains to the relationship between the separation rate and marital status and the presence of children because, as noted, these are the core factors underlying the premise that employer attachment is markedly less for women than for men. Another issue dealt with is whether there are substantial differences in the overall separation rate between races. In the analysis, these questions are first examined neglecting differences in wage rates among jobs and then taking wage rates into account because employers hire for specific jobs which pay a given wage. The data are also compared with those of an earlier BLS study to ascertain whether employer attachment has changed over time.

The data set

The data are for approximately 21,000 workers in both the January and March 1978 CPS surveys. The March survey contained information regarding labor force status in that month as well as information on earnings, work experience, and number of employers worked for during 1977. The January survey also contains labor force status information as well as job tenure information. The January and March surveys were matched together in order to link information for persons in both surveys. The matching operation was carried out in two steps. First, the households in the four common rotation groups (out of the total of eight groups) were matched; the household match rate was 90.1 percent. Second, persons within matching households were also matched; the match rate for these individuals was 88.0 percent. In both cases, the match was less than perfect because, for example, some households and individuals moved between January and March and could not be reinterviewed. The sample weights were then adjusted on the basis of age, race, and sex to independent national population controls.

Included in the sample are wage and salary workers age 18 to 59 years with 1 or more weeks of work experience in 1977, except those in the military, school, agriculture, or private household work. In limiting the sample in this manner, attention is restricted to the main determinants of turnover, that is, job dissatisfaction and lack of work, among wage and salary workers in nonagricultural establishments where specific training is generally provided.

While all persons who change employers, that is, job changers,¹⁶ are job separators, not all those who separate from a job are job changers. In particular, individuals who separate from their *only* employer during a

year are not counted in job changer statistics. For this reason, job changer statistics understate employee turnover, especially among women, because they are more likely than men to leave the labor force.

In this study, job separators are defined as 1) job changers in 1977 plus 2) one-employer-only individuals¹⁷ who worked less than 52 weeks in 1977, were not employed or started a new job in January 1978, and were not working for their 1977 employer as of March 1978.^{18,19} In 1977, the latter group accounted for 5.8 percent of male job separators, 28.0 percent of female job separators, and 16.5 percent of all job separators. One-employer-only individuals with less than 52 weeks work experience who were not employed (or started a new job) in January 1978, but who in March 1978 were working for the same employer as in 1977 were *excluded* from the count of job separators.²⁰ This group contains individuals who were recalled from layoff by their employer or who returned to their employer after withdrawing from the labor force for personal reasons, for instance, pregnancy; hence only minimal loss of specific training expenditures to employers can be presumed.

It is important to emphasize that while layoffs and quits cannot be distinguished in the CPS data, individuals who were temporarily laid off in 1977 and subsequently rehired in 1977 or the first quarter of 1978, are not counted as job separators; put another way, our count of job separators includes permanent layoffs but not temporary layoffs. This is seen from the following classification of workers who were on layoff in 1977 (but cannot be identified as being in this status in the CPS). Members of this group were:

1. reemployed by another employer during the year; or
2. reemployed by the same employer during the year and
 - a. were still employed by that employer in January 1978
 - b. were not employed or started a new job in January 1978; or
3. not reemployed during the year and
 - a. worked for the same employer in January 1978
 - b. were not employed or started a new job in January 1978.

Individuals in category 1 (defined above) are counted as job separators. Likewise, persons in subgroups 2b or 3b who *also* were not employed by their 1977 employer as of March 1978 are counted as job separators. Persons on layoff in these subsets either found work with another employer or were on layoff for the first 3 months of 1978, that is, they were on permanent layoff. (As indicated, the analysis is confined to individuals age 18 to 59, thereby excluding most job separators who retired.)

Also, it should be noted that our definition refers to job separators rather than job separations, thereby

understating the turnover risk faced by employers. Some evidence that this deficiency is probably not serious is suggested by multiple job changer data derived from the CPS sample which indicate that women and blacks are less likely to have three employers or more (implying separation from two employers or more) than men and whites.²¹

Separation rates by sex

Economic theory suggests that the decision to hire one individual rather than another for jobs in which specific training is provided depends on the likelihood that training costs will be recovered; this likelihood, in turn, is negatively related to the probability that an individual will permanently separate from a firm. In some studies the overall *quit* rate of women has been found to be substantially higher than that for men. However, as indicated in table 1, among women with work experience in 1977, the overall separation rate (including permanent layoffs) was 19.7; the corresponding figure for men was 17.3.²² While *inter-labor* force mobility is greater among women, as noted below, *intra-labor* force mobility is greater among men. On balance, the overall separation rate is not much different between the sexes.

Table 1 also shows that there is little or no difference in separation rates when age is taken into account. Of importance, more than one-third of young persons age 18 to 24 permanently separate from their employer during a year, indicating that much of the specific training provided to this group is lost by employers. But as young women are no more likely to separate than young men, these losses are not sex related.

In addition, table 1 reveals that part-time workers are more prone to separation than full-time workers and their age-separation profile is flatter, suggesting that the factors influencing their turnover are different from those affecting full-time workers. Moreover, employers are not likely to provide substantial amounts of specific training to workers in part-time jobs in which marginal productivity is low and, hence, training costs are difficult to recover. This being the case, the economic signif-

Table 1. Separation rates by sex for persons with work experience in 1977

Age (in years)	Men			Women		
	Total	Full time	Part time	Total	Full time	Part time
Total, 18 and over	17.3	16.4	36.7	19.7	18.0	24.8
18 to 19	48.4	48.8	47.5	44.0	45.0	42.2
20 to 24	34.7	34.5	36.9	33.0	31.9	37.5
25 to 34	18.6	18.3	30.7	20.2	18.5	26.1
35 to 44	12.2	11.8	(¹)	15.0	13.6	18.6
45 to 54	8.2	7.6	35.1	11.8	8.9	19.6
55 to 59	8.9	8.6	(¹)	9.7	6.9	19.1

¹ Less than 50 sample observations.

SOURCE: Matched January-March 1978 Current Population Survey file.

Table 2. Separation rates by sex and wage rate, full-time workers with work experience in 1977

Characteristic	Total	Men			Women			
		Under \$5.00	\$5.00 to \$9.99	\$10.00 and over	Total	Under \$5.00	\$5.00 to \$9.99	\$10.00 and over
Total	16.4	27.8	11.4	9.5	18.0	20.6	10.8	14.2
Age (in years):								
18 to 24	36.4	40.7	26.1	(¹)	33.8	35.1	23.5	(¹)
25 to 44	15.6	25.3	11.9	11.3	16.6	18.8	11.3	21.0
45 to 59	7.9	13.5	6.3	6.2	8.3	9.4	6.2	(¹)
Education (in years):								
Less than 16	17.1	27.5	11.2	11.4	18.3	20.6	10.1	13.2
16 or more	13.5	30.2	12.3	7.1	16.3	20.9	12.5	(¹)
Marital status:								
Single, never married	29.0	35.7	18.2	15.3	22.6	26.3	11.7	(¹)
Married, spouse present	13.3	23.0	10.4	9.0	16.7	20.3	10.3	(¹)
Other	19.7	28.9	12.7	12.8	17.4	20.3	12.0	(¹)
Families with both spouses present and both worked in 1977:								
Children present	13.8	23.9	10.9	7.9	17.4	19.6	9.9	(¹)
All under 6 years	20.9	33.2	14.9	12.1	25.2	27.6	14.1	(¹)
Some under 6 years	15.4	20.7	12.7	14.9	18.2	19.7	10.8	(¹)
All between 6 and 17 years	10.7	19.1	9.0	6.2	13.9	16.0	8.4	(¹)
No child present under 17 years	15.0	23.3	11.3	11.4	16.4	18.8	10.7	(¹)

¹ Less than 50 sample observations.

SOURCE: Matched January-March 1978 CPS file.

importance of the separation rate is most pronounced for jobs which are filled by full-time workers. When only full-time workers are considered,²³ the overall separation rate differential is reduced by one-third.²⁴ Given our focus on jobs in which specific training is most likely to be offered, in the remainder of this section and the next one, the data are restricted to full-time workers.

The separation behavior of full-time workers is shown in table 2. The separation rates in the first and fifth columns reflect worker characteristics without regard to the wage that individuals can obtain in the labor market. Implicit in these figures is the assumption that all jobs are alike. This assumption may also underlie employer perceptions of male and female separation rates. The remaining columns control for the wage of workers with given personal characteristics.

The percentage of full-time workers in each of the three wage groups was as follows:

Wage	Men	Women
Total	100.0	100.0
Under \$5 per hour	32.7	72.5
Between \$5 and \$9.99 per hour	51.8	26.1
\$10 and over per hour	15.5	1.4

The second wage category, \$5 to \$9.99 per hour, containing approximately one-half of the male workers but only one-quarter of the female workers, is referred to below as the "typical" male wage.

From table 2 we can see that, as expected, the separation rate and wage rate are negatively related, other

factors held constant. The separation rate differentials also conform to expectations with regard to marital status and presence of children. For both sexes, the separation rate of single persons, who are most likely to engage in job search and least likely to have job seniority, is greater than that of married persons with their spouse present. Additionally, the separation rate of married women (16.7 percent) is higher than that of married men (13.3 percent), but it is higher for single men (29.0 percent) than for single women (22.6 percent). Also, the separation rate of married women with young children all under 6 years (25.2 percent) is higher than that of women with only older children between 6 and 17 years (13.9 percent). In part, this is because women with young children are themselves young as much as because of the constraints on employer attachment imposed by the need to care for offspring. This age effect is seen in the higher separation rate of married men with only young children (20.9 percent) vis-à-vis those with only older ones (10.7 percent). Nevertheless, when children are present, the separation rate of married women (17.4 percent) is higher than that of married men (13.8 percent).

Further examination of table 2 reveals that the aforementioned separation patterns are quite different from the ones that are found to prevail when the wage rate is taken into consideration. For wage rates below \$5 per hour, the separation rate of women, 20.6 percent, is lower than that of men, 27.8 percent. Women have a lower separation rate among all age groups; single and married persons; and families with and without children where both spouses are present and working; as well as other groups. For wage rates between \$5 and \$9.99, that is, the typical male wage, the separation rates for women and men are similar (approximately 11 percent for all full-time workers) except for single persons where the separation rate is higher for men than women (18.2 versus 11.7 percent).²⁵ At the higher wage range of \$10 or more per hour, the differences between the female and male separation rates are not statistically significant. Given the very small proportion of women who earn such a high wage, we observe that the higher overall separation rate for women is due to their concentration in low-paying jobs. Indeed, if women who worked full time were distributed among the three wage groups in the same manner as men, their separation rate, instead of being 1.6 percentage points higher than the overall male rate, would have been smaller by 1.9 percentage points.

These findings suggest that a major factor influencing turnover among men and women is the ratio of their wage relative to that paid to a typical male worker. When the wage is less than this amount, men are likely to seek better job opportunities with employers other than their current one. In contrast, women, who be-

cause of family responsibilities often work close to home, may be reluctant to give up a low-paying job because the likelihood of finding a better-paying one, which is also close to home, is small. When the female wage equals or exceeds the typical male wage, the separation rate of women is no different from that of men. Thus, when the wage rate is taken into account, women do not exhibit higher separation rates than men despite women's lesser job tenure, home responsibilities, and tendency to relocate when husbands find employment elsewhere.

Among all the variables examined, education had the weakest impact on separations. Here again, however, holding education constant, men have a higher separation rate than women when the wage rate is less than that earned by a typical male. At wage rates earned by most men, the separation rates are similar.

Separation rates by race

As in the case of women, the weaker labor force attachment of black men and the high unemployment rate of blacks, irrespective of sex, suggest that the overall black separation rate may be higher than that of whites. Although the small number of observations for blacks, approximately 1,900 full-time workers, prevents detailed examination of their separation behavior, the broad outlines are clearly visible and indicate that the black separation rate is lower than that of whites.

The basis of this conclusion are the data in tables 3 and 4. The former compares black and white separation rates by personal characteristics unadjusted for wage rates; the latter compares black and white separation rates by wage category unadjusted for personal characteristics.

Table 3. Separation rates by sex and race, full-time workers with work experience in 1977

Characteristic	Men		Women	
	White	Black	White	Black
Total	16.8	14.1	18.9	11.7
Age (in years):				
18 to 24	37.5	27.4	34.7	26.1
25 to 44	15.9	13.4	17.7	9.7
45 to 59	7.8	8.1	8.7	4.7
Education (in years):				
Less than 16	17.6	13.6	19.2	11.6
16 or more	13.4	20.1	17.1	12.7
Marital status:				
Single, never married	30.6	20.4	24.3	13.9
Married, spouse present	13.4	11.3	17.3	11.4
Other	20.8	15.7	18.6	10.3
Families with both spouses present and both worked in 1977:				
Children present	14.1	10.8	18.1	11.9
All under 6 years	21.7	10.9	25.0	24.7
Some under 6 years	15.4	15.5	20.2	8.8
All between 6 and 17 years	10.9	8.6	14.8	8.0
No child present under 17 years	15.1	13.8	17.0	10.0

SOURCE: Matched January-March 1978 Current Population Survey file.

Table 4. Separation rates by sex, race, and wage rate, full-time workers with work experience in 1977

Sex and race	Total	Wage rate		
		Under \$5.00	\$5.00 to \$9.99	\$10.00 and over
Total	17.1	23.6	11.2	9.8
Men	16.4	27.8	11.4	9.5
White	16.8	29.3	11.8	9.4
Black	14.1	19.3	7.6	12.7
Women	18.0	20.6	10.8	14.2
White	18.9	21.8	11.1	14.4
Black	11.7	12.6	8.8	(¹)
White	17.6	24.8	11.6	9.7
Black	12.9	15.6	8.0	13.3

¹ Less than 50 sample observations.

SOURCE: Matched January-March 1978 Current Population Survey file.

We notice from table 4 that the overall separation rate among blacks, 12.9 percent, is smaller than the corresponding figure for whites, 17.6 percent.²⁶ From table 3, the largest race differentials are found among women, young men, and single men. The lower separation rate of black men, particularly younger ones, is important to note because, as indicated, these groups have low labor force participation and high unemployment rates. From the tables, we see that the factors that influence separations among whites impact in a similar manner on blacks. In particular, at wage rates below the typical male wage, black men have a higher separation rate than black women, but at wage rates typical of male workers the two groups have similar separation rates.²⁷

While the data are not as complete as one would like, it is clear that the overall black separation rate would be even lower than that shown if the distribution of blacks by wage category were the same as that of whites. Were this the case, the separation rate of black men would be 12.0 percent, black women, 11.2 percent²⁸ and all full-time black workers, 12.1 percent.

Employer attachment over time

Labor turnover is desirable to maintain efficient allocation of labor resources. But a rapid rise in labor turnover could result in large losses in specific training expenditures and reduced worker productivity. Whether such large losses have been incurred is not readily ascertainable. An easier question is whether employer attachment has changed over time. The increased proportion of women and young persons in the labor force, many of whom are in low-paying jobs, suggests that the overall separation rate may have risen in recent years. On the other hand, the growth of private pension plans and internalization of labor markets may have had a sufficiently large offsetting effect as to decrease the overall separation rate.

Some insight into this question can be obtained from job changer rates, as distinct from job separation rates,

which can be derived also from the January–March 1978 CPS file and compared to similar rates from a 1961 BLS study.²⁹ From table 5, we see that the overall job changer rate has risen during the past two decades. The rise was most pronounced among white women and white men and least pronounced among black men.^{30,31}

A part of this increase is because of differences in coverage. Assuming individuals under age 18 and over age 59, the self-employed, unpaid family workers, and agricultural and private household workers are mutually exclusive, their omission from the 1961 data would raise the overall job changer rate at that date from 10.1 to 12.3 percent. Thus, the overall job changer rate was at least 3.0 percentage points lower in 1961 than in 1977.³²

Some of the increase is also due to the changing sex-age mix of persons with work experience between 1961 and 1977. Standardizing the 1961 job changer rates by the sex and age composition of all persons with work experience in 1977 would raise the 1961 overall figure by 1.1 percentage points; still, the larger portion of the increase, due to changes in age-specific rates, remains to be explained.³³

One explanation for the increase may be the growth of two-worker families. Job dissatisfaction may also be rising. Whatever the reason, it appears that the job changer rate has increased, and that further study of the causes and consequences of this trend is warranted.

Conclusion

In this article, a methodology is developed for computing separation rates from household data collected by the Bureau of the Census in the Current Population Survey. This methodology is illustrated using data from the January and March 1978 files to estimate separation rates by sex and race, as well as other personal characteristics. Previously, separation rate data have only been available for manufacturing industries based on establishment reports; however, these data are no longer collected. With this methodology, separation rates can now be estimated not only for manufacturing but for all industries and by race, sex, and other demographic characteristics.

One need for separation data arises from the negative relationship between returns to employers from specific training and worker turnover. For a number of reasons, it is commonly believed that the overall separation rate of women and blacks is much higher than that of men and whites. However, as shown in this study, the overall separation rate of women is not much higher than that of men. Although women do exhibit greater inter-labor force mobility, intra-labor force mobility is greater among men; on balance their overall separation rates are not much different. As to race, the overall separation rate of blacks is found to be lower than that for whites, irrespective of sex.

Table 5. Separation rates and job changer rates by sex and race for persons with work experience

Sex and race	1977		1961
	Separation rate ¹	Job changer rate ¹	Job changer rate ²
Total	18.3	15.3	10.1 (11.3)
Men	17.3	16.3	11.1 (12.3)
White	17.6	16.6	10.9
Black ³	15.3	13.5	12.8
Women	19.7	14.2	8.6 (9.5)
White	20.4	14.8	8.8
Black ³	14.1	9.9	7.0
White	18.8	15.8	10.1
Black ³	14.9	11.7	10.2

¹ Age 18 to 59 years.

² Age 14 years and over; figures in parentheses for persons age 18 to 59 years where available.

³ Nonwhite in 1961.

NOTE: For definitions of the separation and job changer rates, see text and footnotes 16 and 18.

These findings fail to take into account the fact that the wage rate differs among jobs. Among full-time workers, we find that at wage rates below \$5 per hour (the wage received by almost three-fourths of the women in our sample) the female separation rate is lower than that of men irrespective of age, education, marital status, and presence or absence of children. At higher wage rates received by the typical man, the separation rate is the same for both sexes among each subgroup except for single, never-married persons where it is lower for women. Thus, the somewhat higher overall separation rate for women stems from their greater concentration in low-paying jobs. Likewise, the overall separation rate of blacks, which is less than that of whites, would be even lower if the two groups had the same wage distribution.

The major component of the separation rate is the job changer rate. It is possible to compare job changer rates based on our sample with similar figures from a 1961 BLS study. Although there are differences in coverage and concept between the two, it appears that the job changer rate has increased over the last two decades. This increase in turnover may indicate why productivity gains have tapered off in recent years.

In assessing the extent to which employer attachment among women differs from that of men, attention is primarily focused on full-time workers because specific training is most likely to be given to this group. However, women hired into full-time positions may seek part-time employment when they marry or have children. This aspect of turnover behavior is not captured by the data for full-time workers. But it is important to note that the separation rate figures for all persons with work experience cited in the text and footnotes are consistent with those for full-time workers.

As mentioned, permanent layoffs are included in our count of separations. Thus, it can be argued that the data overstate the separation rate of men whose layoff

rate rises, more so than that of women, during periods of high unemployment such as in 1977. On the other hand, the unemployment rate in 1977 was midway between its most recent peak in 1975 and trough in 1979 and was less than one-half percentage point higher than the average unemployment rate during 1972–81. Moreover, during this period the absolute differential between the female and male unemployment rates was greater in 1977 than in any other year (in 1977 the fe-

male unemployment rate was 1.9 percentage points higher than the male rate).³⁴ Nonetheless, if only because of the sensitivity of the layoff rate to the level of unemployment, additional research is needed to determine the empirical parameters which enter into employer decisions as to whom to hire and train. As this study indicates, the common perceptions regarding employer attachment of women and blacks are, in important respects, incorrect. □

— FOOTNOTES —

¹ Gary S. Becker, *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education* (Columbia University Press, 1964).

² Specific training is training which raises a worker's productivity in the firm providing such training and is generally paid for by the firm.

³ Edmund S. Phelps, "The Statistical Theory of Racism and Sexism," *American Economic Review*, September 1972, pp. 659–61; and Lester G. Thurow, *Generating Inequality* (Basic Books, Inc., 1975).

⁴ Gary S. Becker, *A Treatise on the Family* (Harvard University Press, 1981).

⁵ Jacob Mincer, "Family Migration Decisions," *Journal of Political Economy*, October 1978, pp. 749–73; and Robert H. Frank, "Why Women Earn Less: The Theory and Estimation of Differential Overqualification," *American Economic Review*, June 1978, pp. 349–60.

⁶ Separation rates for manufacturing industries were reported by sex until 1968. As of that date, the quit rate was 16 percent higher for women than men. See W. Kip Viscusi, "Sex Differences in Worker Quitting," *The Review of Economics and Statistics*, August 1980, pp. 388–98.

⁷ *Work Experience of the Population in 1977*, Special Labor Force Report 224 (Bureau of Labor Statistics, 1979), and *Employment and Earnings*, March 1982 (Bureau of Labor Statistics, 1982).

⁸ *Job Tenure Declines as Work Force Changes*, Special Labor Force Report 235 (Bureau of Labor Statistics, 1979).

⁹ James E. Hall, "Turnover in the Labor Force," *Brookings Papers on Economic Activity*, No. 2, 1973, pp. 709–56.

¹⁰ See references in footnotes 7 and 8. Also, see *Work Experience of the Population in 1961*, Special Labor Force Report 25 (Bureau of Labor Statistics, 1962); and *Job Tenure of American Workers, January 1963*, Special Labor Force Report 36 (Bureau of Labor Statistics, 1963).

¹¹ *Inter-labor force mobility* refers to movements into and out of the labor force in contrast to *intra-labor force mobility* which pertains to movements among jobs and between employment and unemployment.

¹² John F. Burton, Jr. and John E. Parker, "Interindustry Variations in Voluntary Labor Mobility," *Industrial and Labor Relations Review*, January 1969, pp. 179–98; Donald O. Parsons, "Specific Human Capital: An Application to Quit Rates and Layoff Rates," *Journal of Political Economy*, November/December 1972, pp. 1120–44; John Pencavel, *An Analysis of the Quit Rate in American Manufacturing Industry* (Princeton University Press, 1970); and Vladimir Stoikov and Robert L. Raimon, "Determinants of Differences in the Quit Rate among Industries," *American Economic Review*, December 1968, pp. 1283–98.

¹³ W. Kip Viscusi, "Sex Differences."

¹⁴ Francine D. Blau and Lawrence M. Kahn, "Race and Sex Differences in Quits by Young Workers," *Industrial and Labor Relations Review*, July 1981, pp. 563–77.

¹⁵ For a discussion of the need for such information, see Robert E. Hall and David Lilien, "The Measurement and Significance of Labor Turnover," *Concepts and Data Needs: Counting the Labor Force*, Appendix Volume 1, National Commission on Employment and Unemployment, Washington, D.C., 1979. This need is enhanced because

turnover data for manufacturing industries are no longer being collected. Currently, the only source for turnover information is State unemployment insurance data collected by the individual States. See Carol M. Utter, "Labor turnover in manufacturing: the survey in retrospect," *Monthly Labor Review*, June 1982, pp. 15–18. Social Security Administration data can also be used to derive turnover rates. Also, see Malcomb Cohen and Arthur Schwartz, "U.S. labor turnover: analysis of a new measure," *Monthly Labor Review*, November 1980, pp. 9–13. However, because both unemployment and social security data can only be disaggregated by age, sex, race, and industry, neither is as rich in detail as the Current Population Survey.

¹⁶ Job changers are individuals with two employers or more in a given year. Current Population Survey enumerators are instructed to report persons who during the year work at different establishments of the same company (or different agencies if the worker is in government) as having a different employer if the establishments (or agencies) maintain separate payrolls. For this reason, we count some individuals as separating from their employer when they should be considered as stayers. We believe this problem is a minor one. In the private sector only professional and managerial workers are likely to be affected, and in many occupations within these broad groupings, for example, accountants and managers of retail trade stores, one would expect few persons to be misclassified. In government, the most likely groups to be affected are clerical workers and blue-collar workers, because their skills are less agency specific than those of professionals and managers. Indeed, in the government when professionals and managers change agencies, they often do different things in their new job leading to a loss of specific training so that one would want to classify them as job separators even though they do not change their class of worker status. Moreover, when workers do change establishments or agencies but not employers, they may be carried on the same payroll. Thus, only a very small proportion of workers may be misclassified, including groups besides white men.

¹⁷ In the Current Population Survey survey, only one employer is counted where an individual worked for two employers or more at the same time.

¹⁸ The separation rate is defined as the proportion of individuals with work experience in 1977 who were job separators. The job changer rate is the proportion of individuals with work experience in 1977 who were job changers.

¹⁹ Persons with one employer in 1977 who started a new job in January 1978, as determined from the job tenure data, had a break in employment prior to the survey week. For these individuals (as well as those not employed in January 1978), it is also possible to determine whether their March 1978 employer was the same as their 1977 employer. Where the employer was different, it is assumed that the person was a job separator; otherwise, the person is assumed to be a job stayer.

²⁰ Among individuals with work experience in 1977 who were on temporary or indefinite layoff in January 1978, 39 percent were re-employed with their longest employer in 1977 as of March 1978. This figure contrasts with Lilien's estimate of a 68-percent recall rate within 6 months in manufacturing. See David M. Lilien, "The Cyclical Pattern of Temporary Layoffs in U.S. Manufacturing," Ph.D. dissertation, Massachusetts Institute of Technology, 1977. The higher figure

reported by Lilien is due, in part, to the longer time span used in his computation of the recall rate and to unrequited demands being more easily postponed in the case of goods than services.

²¹ The percentage of job changers (those with two employers or more) who were multiple job changers (those with three employers or more) was 28.7 for men, 20.1 for women, 25.4 for whites, and 21.9 for blacks. However, because these figures do not include individuals who separated from the last of exactly two employers by becoming unemployed or leaving the labor force, they provide only partial information about multiple job separators.

²² Except as indicated, all differences noted in the text are statistically significant at the 0.10 level. Where relevant to the analysis, the figures in the footnotes have also been tested for statistical significance. The results of these tests can be obtained from the authors upon request.

²³ In our sample, full-time workers accounted for 96.0 of the men and 75.7 percent of the women with work experience in 1977.

²⁴ Among workers who were in the labor force year round (50 to 52 weeks) and usually worked full time (35 hours or more per week), the separation rate was 12.6 percent for women and 15.0 percent for men. The separation rate of year-round workers who usually worked part time was 13.8 percent for women and 38.0 percent for men.

²⁵ As in the case of full-time workers, for all persons with work experience in 1977 who earned less than \$5 per hour the separation rate of women (21.6 percent) was lower than that of men (28.5 percent). Likewise, for *all* persons with work experience in 1977 with wage rates between \$5 and \$9.99 the difference in separation rates between the sexes was not statistically different (the separation rate was 13.1 percent for women, 11.8 percent for men). The findings cited in the text for specific groups of low-wage workers and workers earning the typical male wage also hold for the same subgroups among all persons with work experience in 1977. The only exception is among married persons, where the separation rate is higher for women (13.0 percent versus 10.5 percent for men).

²⁶ Separation rates by race and sex for *all* workers with work experience in 1977 were as follows: whites, 18.8; blacks, 14.7; white men, 17.6; black men, 15.3; white women, 20.4; and black women, 14.1. As in the case of full-time workers, for all workers with work experience in 1977, black separation rates were lower than those of whites for men as well as women.

²⁷ The same finding holds for all black workers with work experience in 1977.

²⁸ Because of sample size, no separation rate could be calculated for black women earning \$10 or more per hour in 1977. The standardized estimate of 11.2 percent assumes the maximum separation rate of 100.0 percent for this group. As shown in table 5, only 1.4 percent of full-time female workers earned as much as \$10 per hour.

²⁹ *Job Mobility in 1961*, Special Labor Force Report 35 (Bureau of Labor Statistics, 1963).

³⁰ Because of differences in coverage, no tests of statistical significance could be made in comparing the job changer rates in the BLS study and this one.

³¹ It is also noticed from table 5 that, as expected, the disparity between the job changer and separation rates is larger for women than men and for black men than white men, reflecting differences among these groups in inter-labor force mobility. The job changer data also indicate that intra-labor force mobility is greater among men than women and greater among whites than blacks irrespective of sex.

³² The difference would be even larger if students were also omitted from the 1961 job changer data; however, information for this group is lacking. Furthermore, with the surge of women and young people into the labor force in recent years, groups for whom inter-labor force mobility is higher than average, the job changer data may understate the secular rise in the overall separation rate.

³³ Some indication of how age-specific job turnover changed over time can be inferred from the following figures:

	Age (in years)			
	18 to 59	18 to 24	25 to 44	45 to 59
1961 job changer rate, men	12.3	24.1	12.5	6.3
1977 separation rate, men	17.3	37.0	16.0	8.4

As indicated by table 5, the difference between the separation and job changer rates is small for men. (See also Mincer, "Family Migration," where small differences are noted between the two rates when job tenure, which is related to age, is controlled for.) The decline in employer attachment among young persons is noteworthy in view of the inclusion of students in the 1961 data.

³⁴ Based on data provided by the U.S. Department of Labor, Bureau of Labor Statistics.