

The role of gender in job promotions

Data from the National Longitudinal Survey of Youth indicate that most young men and women are promoted in their jobs on the basis of performance; although a gender gap in the rate of promotion does exist, the gap was smaller in 1996 than in 1990

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Firms often use promotions both to give workers an incentive to work hard and to retain valuable employees while, at the same time, filling higher level positions. In addition to giving workers financial rewards, promotions afford them the incentive and opportunity to acquire new skills or additional training that may ultimately—especially among young workers who are promoted—result in permanent earnings differences.¹ Given this potential, efforts have increasingly focused on understanding the role of gender in the promotion process. The concern is that differential opportunities for promotion may contribute to the wage gap that currently exists between the genders, either directly, by influencing wages and wage growth, or indirectly, by contributing to labor market segregation, which is in turn related to relative wages.²

This article examines the role of gender in the promotion process for young men and women early in their careers. It first highlights the qualitative nature of promotions and then focuses on who gets promoted by considering the characteristics of men and women who have been promoted. Finally, the relationship between labor market conditions—in particular, unemployment rates, and employment growth in industries and occupations—and promotion is assessed.³

The data

The data are drawn from the National Longitudinal Survey of Youth (NLSY), sponsored by the

Bureau of Labor Statistics. The NLSY began in 1979 and is a longitudinal survey of young people who were aged 14 to 21 in that year. In 1989–90 and again in 1996, NLSY respondents were asked a series of questions about their promotion experiences with their current employer. In particular, respondents were asked whether they had been promoted in their current job since the start of that job or since the date of the last interview, whichever was more recent. Given the NLSY survey design, all references to a job are essentially references to an employer; thus, for the purposes of this article, “promotion” means “internal promotion.” As a result of the particular years the questions on promotion were asked and the ages of the respondents when they were asked the questions, the article is able to consider the promotion opportunities of men and women as they move from being relatively inexperienced workers (aged 25 to 32) into their prime working ages (32 to 39).⁴

The sample consists of individuals who were currently working (or who had worked during the past 2 years) for 30 hours or more per week. These workers must also have held the job they cited for at least 9 weeks. Persons excluded from the sample were the self-employed, those working for no pay, and those who were included in the survey as part of the military sample. Hispanics, blacks, and economically disadvantaged non-black, non-Hispanic persons were oversampled in the survey.⁵

Employment growth rates for 46 detailed industries and 44 detailed occupations were calcu-

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lated by using the 1988–90 and 1994–96 Current Population Surveys (CPS's) and were appended to each individual record.⁶ This procedure permits a consideration of the extent to which promotion opportunities for young men and women might be influenced by macroeconomic conditions.⁷

What is a promotion?

What is involved in a promotion? Are the qualitative characteristics of a promotion the same for the young men and young women in the NLSY? Table 1 presents detailed information about the promotion process for workers who were promoted

at least once between 1988 and 1990; table 2 presents similar information about promotions occurring between 1994 and 1996.

For both men and women, almost 90 percent of the time, a promotion resulted in a wage increase. A promotion also was generally associated with greater responsibility: in both 1990 and 1996, more than 80 percent of persons who received a promotion stated that their responsibilities had increased. In comparison, one-third of those who were *not* promoted indicated an increase in job responsibilities since their last interview. Thus, although a promotion and increased job responsibilities are closely related, it appears that in some cases promotions may be automatic, while in other cases workers are not rewarded with a promotion for their increased work effort.

The questions asked about promotions were somewhat different in the 1990 and 1996 surveys, but still, a number of interesting observations can be made. First, decisions about promotions are most likely to be made on the basis of job performance: in 1996, 60 percent of promotions for both men and women were related to performance on the job. Fifteen percent of promotions for men and 20 percent of promotions for women occurred at the worker's request, perhaps also indicating that these promotions were the result of the worker's superior job performance. In comparison, approximately one in three men and the same ratio of women promoted in 1990 reported that they performed the same duties before and after the promotion. These results suggest that in the majority of cases promotion is not automatic, but rather, is generally linked to a change in duties and increased responsibility.

Company reorganization accounted for a much larger share of promotions in 1996 than in 1990. Fully 17.6 percent of men and 16.1 percent of women promoted in 1996 cited reorganization as the source of their promotion, while in 1990 reorganization was the source of the promotion in only approximately 5 percent of cases.

Interestingly, for young workers, most promotions required no new formal education, but just under half of young men and women who were promoted reported needing more experience or training. For these workers, on-the-job training with the current employer was critical, with 80.0 percent of men and 74.0 percent of women stating that their promotion had required this kind of training. Additionally, 15.2 percent of men requiring training and 19.0 percent of women requiring training undertook formal company training. These percentages indicate the close link between promotions and training opportunities for young workers. It is also interesting to note that in the promotion process, very little consideration was given to on-the-job training provided by other employers. Employers thus appear to prefer to train their own staffs, with promotions given within the firm to workers who have been able to improve their skills.

Table 1. Characteristics of promotions, 1990

[Percent]		
Characteristic	Men	Women
Workers promoted (number)	1,192	938
Increase in job responsibilities:		
Promoted workers	84.4	82.7
Workers who were not promoted	30.2	31.5
Increase in wage as a result of promotion	89.9	89.4
Category of promotion: ¹		
Reorganization	5.3	4.8
Took over supervisor's job	8.8	8.0
Promoted to higher level in different section	12.2	16.7
Newly created position with increased responsibilities	8.7	11.6
Lateral move	2.1	1.9
Other	3.3	3.7
Same job duties	33.2	28.9
Upgrade of job duties	26.5	24.4
Formal education required for new position:		
Higher education	2.8	3.6
More course work or class work	7.9	9.6
No formal education required	89.9	87.1
New position required more experience or training	49.8	44.6
Type of experience or training: ²		
Trade or vocational	7.6	7.2
Apprenticeship	5.0	1.8
Formal company training	15.2	19.0
On-the-job training with current employer	80.0	74.0
On-the-job training with previous employer	11.2	7.7
Armed Forces3	.0
Other	2.2	6.9
Believe that more promotions are possible	88.4	83.0
Reason for belief that <i>no</i> more promotions are possible: ¹		
No further promotion potential	49.2	63.4
Waiting for someone to leave	22.9	13.9
Need additional training	8.3	3.8
Discrimination3	2.4
Other	19.3	16.5

¹ Respondent could choose only one category.

² Respondent could choose all categories that applied.

Table 2. Characteristics of promotions, 1996

[Percent]

Characteristic	Men	Women
Workers promoted (number)	743	614
Increase in job responsibilities:		
Promoted workers	80.7	83.9
Workers who were not promoted	31.6	36.6
Category of promotion: ¹		
Reorganization	17.6	16.1
Automatic	7.3	7.3
Job performance	62.0	56.9
Self-requested	15.3	19.7
Change of ownership	1.5	1.3
Company growth	15.2	12.4
Company laid off others	3.1	3.5
Other	10.8	13.2
Believe that more promotions are possible	72.8	67.6
Reason for belief that <i>no</i> more promotions are possible: ²		
No further promotion potential	60.4	55.6
Waiting for someone to leave	27.6	25.2
Need additional training	9.9	12.2
Company reorganization	1.2	4.6
Change of ownership9	2.5

¹ Respondent could choose all categories that applied.
² Respondent could choose only one category.

Both men's and women's perceptions about their future promotion prospects became more pessimistic over time, although in 1996 almost three-fourths of men and more than two-thirds of women still expressed positive feelings about the possibility of additional promotions in the future. Many of the remainder indicated that they had reached the end of their promotion ladder or that they would have to wait for other workers to leave before another promotion was possible.

Overall, the qualitative nature of promotions appears to be the same for men and women. Rather than being automatic, promotions are linked to increased responsibilities and a change in work duties. For the vast majority of men and women, promotions are accompanied by a wage increase. Over time, as workers become more experienced, the source of promotions becomes more closely associated with the growth or reorganization of the firm. Although the vast majority of those who are promoted remain optimistic about their future chances of promotion, more workers feel that they have come to the end of their promotion ladder.

Who is promoted?

Table 3 presents 2-year promotions rates calculated over the periods 1989–90 and 1995–96. On average, in 1990, approximately one-third of workers reported that they had been pro-

moted in their current job during the previous 2 years. By 1996, the promotion rate dropped, so that only about one-quarter of workers had received a promotion. This drop may reflect differences in the macroeconomic conditions of each period. At the same time, it may also reflect the standard life-cycle changes that are typically observed in age-earnings profiles, whereby young workers generally experience fairly rapid earnings growth as they leave school and acquire labor market experience. This rapid earnings growth is closely tied to job mobility.⁸

Although there is evidence of a gender gap in promotions for young men and women in their early careers, this gap seems to disappear over time: whereas in 1990 men were more likely to report having received a promotion than women were, by 1996 the promotion rate of women was slightly higher than that of men.⁹ There is also evidence of greater racial differences in 1990 than in 1996: black men had promotion rates that were approximately 5 percentage points lower than nonblack, non-Hispanic men did, and the gap for Hispanic men was even larger. Like the gender-related differences, these racial differences in promotions disappear over time as the men gain labor market experience. Interestingly, the racial gap in promotions was much smaller for women than for men: Hispanic women had promotion rates that were slightly below the average in 1990 and slightly above the average in 1996. It is evident, however, that black women are the group that seems to be the most disadvantaged with respect to promotion opportunities, although their position, too, had improved by 1996.

Additional insight into who gets promoted can be gained from table 4, which compares the characteristics of men and women who were promoted in one or the other period covered by the study. Demographic characteristics—in particular, age, marital status, and the presence of preschool children—are related to promotion rates. Generally, the opportunity for promotion falls with age for both men and women, although the effect of age was much larger in 1990 than in 1996. Not surpris-

Table 3. Promotion rates by gender and race, 1990 and 1996¹

[Percent promoted]

Gender and race	1990	1996
Sample size (number)	6,800	5,355
All workers	32.8	25.6
Men	34.2	25.4
Hispanic	28.3	24.0
Black	30.4	25.5
Nonblack, non-Hispanic	35.2	25.5
Women	31.0	26.0
Hispanic	30.6	27.0
Black	26.2	24.6
Nonblack, non-Hispanic	31.9	26.1

¹ Two-year promotion rates, expressed as percentages.

Table 4. Promotion rates by characteristics of workers, 1990 and 1996

[Percent promoted]

Characteristic	1990		1996	
	Men	Women	Men	Women
Sample size	3,367	3,163	2,972	2,383
Percent promoted	34.2	31.0	25.4	26.0
Age:				
23 to 26 years in 1990	38.2	35.9	26.7	25.5
27 to 29 years in 1990	35.8	32.1	24.2	27.2
30 to 33 years in 1990	31.3	27.7	25.6	24.9
Marital status:				
Never married	31.7	35.6	23.1	27.4
Married with spouse present ...	35.5	29.1	26.4	25.0
Other	35.2	29.7	24.3	27.2
With a preschool child ¹	37.0	27.6	27.9	24.7
With children, but no preschool child ¹	28.6	28.4	25.2	28.0
Occupation: ²				
Professional, technical, and kindred occupations	36.5	30.9	30.8	27.2
Managers and administrators, excluding farmers	46.6	49.2	33.0	35.3
Salespersons and clerical and unskilled workers	35.8	33.8	26.7	25.9
Craftspersons and kindred occupations	37.2	31.7	23.1	—
Operators, including transportation workers	26.4	12.8	18.6	14.6
Laborers, farmers, and farm managers	21.0	—	16.9	—
Service workers, including private household workers	28.0	19.5	24.5	21.3
Education:				
Less than high school	27.6	24.2	16.2	21.4
High school graduate	31.4	29.6	22.3	27.1
Some college	41.0	32.9	26.2	26.2
College graduate	34.9	35.4	34.5	28.5
Postgraduate schooling	43.2	28.3	33.6	20.8
Hours of work:				
Full time	35.0	32.5	25.9	26.9
Part time	16.1	21.4	13.7	20.7
Size of firm:				
Fewer than 100 employees	31.8	30.3	22.2	25.5
100 to 499 employees	36.9	32.9	28.1	28.8
500 or more employees	39.9	32.5	35.6	26.7
Tenure with employer:				
Less than 2 years	26.6	23.3	24.1	23.9
2 to 3 years	50.1	43.2	30.1	37.3
3 to 4 years	42.8	47.7	28.6	34.0
4 to 5 years	38.6	34.6	28.3	31.1
5 or more years	34.2	30.7	24.5	23.3
Work experience previous to job with current employer: ³				
Less than 6 years	29.2	24.0	—	—
6 to 10 years	36.3	30.9	⁴ 26.9	⁴ 28.6
10 to 14 years	33.6	33.5	27.5	27.3
14 to 18 years	—	—	25.6	24.3
18 or more years	—	—	22.1	25.5
Participated in training since last interview	42.8	43.5	40.0	35.6
Did not participate in training since last interview	31.0	26.3	21.3	22.7

¹ Percent stated is percent of those with children who were promoted.
² Occupations classified using one-digit 1970 Census Bureau codes.
³ Calculated as total weeks in labor force, divided by 50 weeks.
⁴ Work experience previous to job with current employer less than 10 years.

NOTE: Dash indicates sample size (< 60) is too small for publication standards.

ingly, promotion rates vary with marital status: in both 1990 and 1996, married men with a spouse present reported a promotion rate that was 3 to 4 percentage points higher than the rate for men who had never married. Married women, in contrast, had much lower rates of promotion than never-married women did. In fact, it is striking that never-married women reported having the same, or even higher, chances of being promoted than did other groups—even married men.

Having a preschool child was related to higher promotion rates for men, whereas the opposite was the case for women. In 1990, men with a preschool child had a promotion rate of 37.0 percent, while the rate for men without a preschool child was 28.6 percent. This differential may reflect the fact that men with young children feel that they need to pursue a career more fervently to support their family. In contrast, women who have small children may direct more of their attention to the family and hence not to their careers. In general, however, the influence of demographic characteristics appeared to be stronger in 1990 than in 1996, which may reflect either differences in those two specific periods or changes in the career paths of individuals over time.

For both men and women, occupation-specific promotion rates highlight important differences in the promotion ladders of different types of jobs. Managers and administrators stand out, with 1990 promotion rates that were 36 percent above the average for men and 59 percent higher than the average for women. These above-average rates were sustained into 1996, although at a lower level. Men and women employed in professional and technical occupations or in sales, clerical, and unskilled occupations experienced promotion rates that were just above the average. Significantly, workers in less skilled occupations—in particular, operators, laborers, and service workers—had promotion rates well below the average.

Women employed as managers and administrators were more likely than their male counterparts to be promoted in both 1990 and 1996. For the other occupations in which promotions were relatively common, however, the reverse was evident: women's promotion rates were below those of men's, particularly in the professional and technical jobs and, to a lesser extent, in the sales, clerical, and unskilled occupations. In fact, for other occupational groups, promotion rates for women were generally less than the rate for men in both 1990 and 1996.

Human-capital theory suggests that people with higher education enjoy returns to their investment in the form of higher wages over their working lives. They may also have greater access to, and benefits from, on-the-job training. These advantages would be reflected in more highly educated individuals having more opportunities for promotion. Alternatively, formal education may allow workers to enter a firm on a higher rung on the job ladder, thereby reducing the opportunities for subsequent upward mobility. The NLSY data generally support the former view. First, the promotion rates of men

increased with higher education levels, particularly in 1996, a year in which men with more than a college degree were twice as likely to be promoted as high school dropouts were. Second, similar trends were seen for women, although the most highly educated women had promotion rates that ran counter to the trend: in both 1990 and 1996, women with more than a college degree had promotion rates well below the average, and indeed, their position seemed to worsen over time, with their rate slipping from 8 percent below the average in 1990 to 20 percent below in 1996.¹⁰

Not surprisingly, promotion rates were positively correlated with the size of the firm, particularly for men. In 1990, men who worked for employers with more than 500 employees had a chance of promotion that was 8 percentage points higher than those working for employers with fewer than 100 workers. The difference in promotion rates between small and large firms increased in 1996, with men in the largest firms having promotion rates that were 13.4 percentage points greater than those who worked in the smallest firms. This finding suggests that men may benefit from the internal promotion opportunities offered within larger firms. The same does not appear to be true for women, however: their promotion rates were fairly constant across firms of different sizes. Indeed, in 1996, women working in medium-sized firms, with 100 to 500 employees, had the highest promotion rate.

The relationship between promotions and the tenure a worker has with his or her employer is complex. In 1990, promotion rates for young workers initially increased with tenure, reaching a maximum at 2 to 3 years of tenure for men and 3 to 4 years of tenure for women. Afterwards, they began to decline. The same pattern roughly held in 1996, although the relationship between tenure and promotions was not as strong. That year, workers who had remained with the same employer for more than 5 years had promotion rates similar to those with very low levels of employer tenure. This relationship may simply indicate the fact that, over time, these employees became well matched to their jobs or that they reached the point in their career at which there was no more opportunity for promotion.

Experience in the labor market also played a role in the chances for promotion of younger workers, with the data suggesting that in 1990 both men and women with fewer than 6 years of labor market experience were less likely to be promoted than workers with more experience. For men, promotion rates reached their highest level for those with 6 to 10 years of labor market experience, while for women, the highest promotion rates were for those with more than 10 years of experience. In 1996, the workers sampled by the survey entered their prime working years, and labor market experience did not appear to be as closely related to opportunities for promotion.¹¹ In contrast to the earlier period, men and women with relatively little labor market experience had rates of pro-

motion similar to those of workers with more experience. This phenomenon most likely occurred because in 1996, workers with little experience were more likely to have higher education levels than in the earlier period.

Finally, participation in a training program was related to substantially higher opportunities for promotion. The training programs included in the survey were vocational, technical, and formal company training, as well as informal on-the-job training. Promotion rates in both 1990 and 1996 were well above average for those individuals who, since the previous interview, had undertaken some kind of training program. Because we cannot identify whether the training or the promotion came first, it is possible that the positive relationship results because workers are often asked to undertake training as a condition of promotion.

Overall, these results point to the existence of both a gender and a racial gap in promotion rates, but these gaps appear to narrow as workers age. Demographic characteristics are related to promotions for both men and women, but the patterns are substantially different. In particular, married men have promotion rates that are higher than those of never-married men, while the reverse relationship holds for women. Indeed, never-married women have promotion rates that are often higher than those for other groups, even married men. Variations in occupation-specific promotion rates highlight the importance of differences in job ladders for both men and women. For both genders, managers and administrators stand out, with a likelihood of promotion that is much higher than those enjoyed by workers employed in other occupations. Finally, promotions appear to be closely tied to specific experiences within the firm: tenure with the employer, the size of the firm, and on-the-job training are all closely related to the probability of promotion.

Promotions and the local labor market

Do promotion rates vary with macroeconomic conditions in the labor market? Table 5 presents information on differences in promotion rates due to variation in local labor market conditions faced by employers and employees. Industry and occupation employment growth rates were calculated from CPS data.

The table suggests that more promotion opportunities are available to workers in occupations in which overall employment growth is high. In 1990, men and women in those occupations whose employment growth was greater than 8 percent had promotion rates between 7.2 and 10.0 percentage points higher than men and women in occupations in which employment was falling. High-growth occupations included professional, managerial, and some service and sales occupations. On the other hand, occupations in which employment fell were operators, laborers, and some service occupations, and these occupations had low promotion rates. One excep-

Table 5. Promotion rates by local labor market conditions, 1990 and 1996

[Percent promoted]

Labor market condition	1990		1996	
	Men	Women	Men	Women
Occupation growth:				
Negative or zero	30.3	24.4	30.6	23.2
0.1 percent to 4.0 percent	35.0	33.4	25.4	30.7
4.1 percent to 8.0 percent	36.0	31.0	22.4	23.9
Greater than 8.0 percent	37.5	34.4	33.2	37.4
Industry growth:				
Negative or zero	36.0	27.5	—	—
0.1 percent to 4.0 percent	33.5	31.8	—	—
4.1 percent to 8.0 percent	34.5	32.5	—	—
Greater than 8.0 percent	29.3	24.3	—	—
Unemployment rate in area of residence:				
Less than 5.9 percent	30.3	31.1	25.6	26.2
6.0 percent to 8.9 percent	31.0	30.3	25.8	26.3
9.0 percent or more	30.9	30.3	26.2	24.0

NOTE: Dash indicates growth rates could not be calculated, due to an insufficient number of observations classified by 1980 industry codes in the 1996 NLSY data.

tion to this trend was men who, in 1996, were employed in declining occupations; these men still had higher-than-average promotion rates. The lowest promotion rates for men were in occupations in which overall employment growth was positive, but less than 8 percent per year. For women, promotion rates in both 1990 and 1996 were highest in occupations with the greatest growth. In contrast to the men employed in occupations that shrank in 1996, women in these same occupations did not fare as well: their promotion rates were almost 3 percentage points lower than the average promotion rate.

The relationship between industry employment growth and promotion rates provides additional insight into the role of macroeconomic conditions in the promotion decision.¹² Differences in promotion rates can provide us with an indication of the extent to which promotions are used by employers as a cost adjustment mechanism during bad times in the industry. The figures for 1990 do not provide strong evidence for the notion that promotion opportunities are fewer in industries in decline. Indeed, as mentioned, for men in industries in which employment was declining in 1990, promotion rates were above average.

Finally, it is important to mention the relationship between overall unemployment in the labor market and promotion op-

portunities. Interestingly, the data presented in table 5 suggest that there is little relationship between promotion rates and unemployment in the local labor market, either for men or for women.

THIS ARTICLE HAS USED DATA from the 1988–90 and 1996 NLSY and corresponding CPS data to explore the role of gender in the promotion process. Several interesting findings have emerged. First, the qualitative characteristics of promotions appear to be the same for both men and women. Promotions are associated with both increased wages and job responsibilities and, in the majority of cases, appear to be awarded on the basis of job performance. Although the young men and women interviewed in the NLSY over time became somewhat more pessimistic about their future opportunities for promotion, in 1996 more than two-thirds believed that future promotions were still possible.

Whereas the data provide evidence of a gender gap in promotions for men and women early in their careers, this gap seems to disappear over time. Similarly, there is evidence of fewer racial differences relating to promotion in 1996 than in 1990. While demographic characteristics such as marital status and the presence of children are related to promotion rates, important differences arise in the patterns for men and women. The evidence indicates that promotion rates increase with education and the size of the firm, although the magnitude of the increase depends on gender. Labor market experience was related to promotions only in 1990, when the NLSY workers were relatively inexperienced. Promotion rates, on the other hand, were strongly related to employer tenure in both periods, first increasing and then decreasing the longer a worker was employed with a given firm. Last, workers participating in a training program had substantially higher promotion rates than workers not engaged in training. It is unclear whether this difference was because training led to promotion or promotion led to training.

The article also used CPS industry and occupation employment data and information from the NLSY about unemployment rates in local labor markets to assess the extent to which promotions are tied to macroeconomic conditions facing firms and workers. Promotion opportunities do appear to be higher in occupations in which overall employment growth is high, yet there is little evidence that either employment growth in the industry or the local labor market unemployment rates matter in determining promotion rates. □

Notes

¹ Howard Birnbaum, "Career Origins, On-the-Job Training, and Earnings," *Southern Economic Journal*, April 1976, pp. 587–99, argues that "differential skill, training, and promotional opportunities in individuals' early careers can lead to permanent earnings differentials" (p. 589).

² See William T. Bielby and James N. Baron, "Men and Women at Work: Sex Segregation and Statistical Discrimination," *American Journal of Sociology*, January 1986, pp. 759–99, for a discussion of the critical role of job segregation in generating gender differences in labor market outcomes.

³ See Stephan J. Spurr, "Sex Discrimination in the Legal Profession: A Study of Promotions," *Industrial and Labor Relations Review*, April 1990, pp. 406–17; Joni Hersch and W. Kip Viscusi, "Gender Differences in Promotions and Wages," *Industrial Relations*, October 1996, pp. 461–72; and Kristin McCue, "Promotions and Wage Growth," *Journal of Labor Economics*, April 1996, pp. 175–209, for recent reviews of the empirical literature on the relationship between gender and promotions.

⁴ In 1989 and 1990, NLSY respondents were asked, "Since the date of the last interview have you experienced any promotions?" Thus, respondents were interviewed about promotions over a 1-year period. In 1994, however, NLSY respondents began to be interviewed biennially. The 1996 questions on promotion referred to a 2-year period. In this article, promotion rates for the 1989–90 period have been converted to 2-year rates. In both 1990 and 1996, there were some persons for whom the time between interviews was longer than 2 years because they were not interviewed in the previous year. However, the distributions of the times between interviews for the two sets of years are similar.

⁵ In this article, sampling weights are used to account for the sampling design and attrition.

⁶ Employment growth in each industry and occupation was calculated as the logarithm of the change in current employment from the average employment in the previous 2 years.

⁷ There is little evidence on the role of macroeconomic conditions in the promotion process. James E. Rosenbaum, "Organizational Career Mobility: Promotion Chances in a Corporation during Periods of Growth and Contraction," *American Journal of Sociology*, July 1979, pp. 21–48, is one of the few researchers who address this issue. He concludes that promotion rates are higher in periods of greater company growth. Rosenbaum considers only men, however, so it is not possible to say whether the same is true for women.

⁸ Robert Topel and Michael Ward, "Job Mobility and the Careers of Young Men," *Quarterly Journal of Economics*, May 1992, pp. 439–79, find that job mobility is an important source of wage growth for young men. However, Pamela J. Lopest, "Gender Differences in Wage

Growth and Job Mobility," *American Economic Review*, May 1992, pp. 526–32, finds that women have less than 50 percent of the wage growth of young men when changing jobs.

⁹ Many studies conclude that the probability of promotion is lower for women than for men. (See, for example, Spurr, "Sex Discrimination"; and Elizabeth A. Pauline and Jennifer M. Mellor, "Gender, Race, and Promotions within a Private Sector Firm," *Industrial Relations*, April 1996, pp. 276–95. This finding is by no means universal, however: the results of some studies indicate that gender has no significant effect on promotion (see, for example, David R. Jones and Gerald H. Makepeace, "Equal Worth, Equal Opportunities: Pay and Promotion in an Internal Labor Market," *Economic Journal*, March 1996, pp. 401–9), while others conclude that women are significantly *more* likely than men to be promoted (Hersch and Viscusi, "Gender Differences in Promotions and Wages").

¹⁰ This apparent lack of opportunity for promotion experienced by highly educated women may be explained in part by gender differences in the occupations of highly educated workers. About 70 percent of highly educated women were employed in professional, technical, and kindred occupations, whereas approximately 60 percent of highly educated men were in those occupations. McCue, "Promotions and Wage Growth," notes that education is often not found to be significantly related to promotions, but when the effects are significant, they are positive.

¹¹ This finding is in accord with McCue, "Promotions and Wage Growth," who notes that the one result consistently found in studies of the characteristics related to promotion is that promotion rates tend to fall with experience or age.

¹² In the 1996 NLSY, 1980 Census Bureau industry codes were not provided for a large number of cases. Thus, industry employment growth could not be computed from CPS data, which also use 1980 Census Bureau codes. For evidence suggesting that promotion rates are higher during periods when the organization is growing, see Rosenbaum, "Organizational Career Mobility."