

An examination of occupational mobility among full-time workers

As workers approached mid-career in the late 1990s, they saw an increase in their occupational stability; however, mobility rates varied between men and women in certain occupations

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There is extensive literature on the processes that influence the occupational choices of workers.¹ However, less attention is devoted to examining the rate at which workers move from one occupation to another. Fortunately, the availability of panel data sets makes it possible to measure the extent that workers shift jobs within the occupational distribution over time. This study explores recent trends in occupational mobility among full-time wage and salary workers in the United States as they move from young labor market entrants to their approach to mid-career. Our objective is to determine if their occupational mobility rates changed over time, and then to compare occupational mobility rates by gender.

The results of our analysis can provide an additional perspective on the recent increase in wage disparities between high- and low-income workers, an increase that has been well documented.² In terms of equity, the recent increase in earnings inequality is generally viewed with concern among policymakers. However, several studies have suggested that an increase in labor-market mobility may actually counterbalance the growth in earnings inequality.³ This argument asserts that flexible labor markets provide ample opportunity for upward (and downward) mobility. Consequently, if an increase in the propensity of low-wage workers moves into higher-paying occupations, lifetime earnings inequality may be reduced in spite of increases in annual

cross-sectional measures of labor-market inequality.

Data and results

A worker's ability to experience upward occupational mobility generally results from favorable events such as the acquisition of additional human capital, or from intangible factors such as motivation or luck. For instance, a worker may invest in additional education and training to move into a higher-paying job.⁴ A second possibility for occupational advancement may be the workings of the internal labor market.⁵ The factors that lead to downward occupational mobility are less well-developed, but include such things as structural change in the labor market (for example, a declining industry), a voluntary change in career, or the atrophy and obsolescence of labor market skills. In any event, occupational mobility can best be measured by tracking individuals over time. Fortunately, panel data sets are available that allow for better assessment of occupational mobility patterns than can be obtained from annual cross-sectional comparisons. Given the longitudinal requirements of the data, we chose the National Longitudinal Survey of Youth (NLSY). For the analysis, samples of year-round, full-time nonfarm workers were compiled, beginning with the 1990 NLSY cohort.⁶

Chart 1 illustrates the trend in median weekly-wage and salary-income earnings (measured in

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1997 dollars) of the 1990 NLSY cohort across occupational categories as they aged between 1989 and 1997.⁷ The Census occupational categories used in this study are listed in table 1. Although the clustering of occupational incomes was slightly less pronounced by 1997, occupations may still be classified into two categories: *Low-wage occupations* (service, laborers, clerical, and operatives); and *High-wage occupations* (professional and technical, managerial, sales, and craft). In general, real earnings increased for most occupations during the 1990s. However, following a similar trend to the 1970s and 1980s, workers in the professional and mana-

gerial fields experienced the most significant percentage increase in real earnings. The service and operative occupations also experienced significant earnings gains, whereas earnings for sales, craft, and clerical occupations increased only modestly. (See chart 1.) The only occupational category to experience a decline in real earnings was laborers. The data in chart 1 suggest that the disparity in income growth between high-wage and low-wage workers has slowed during the 1990s—especially when compared with earnings and inequality data from the 1970s and 1980s that indicate more disparity.⁸

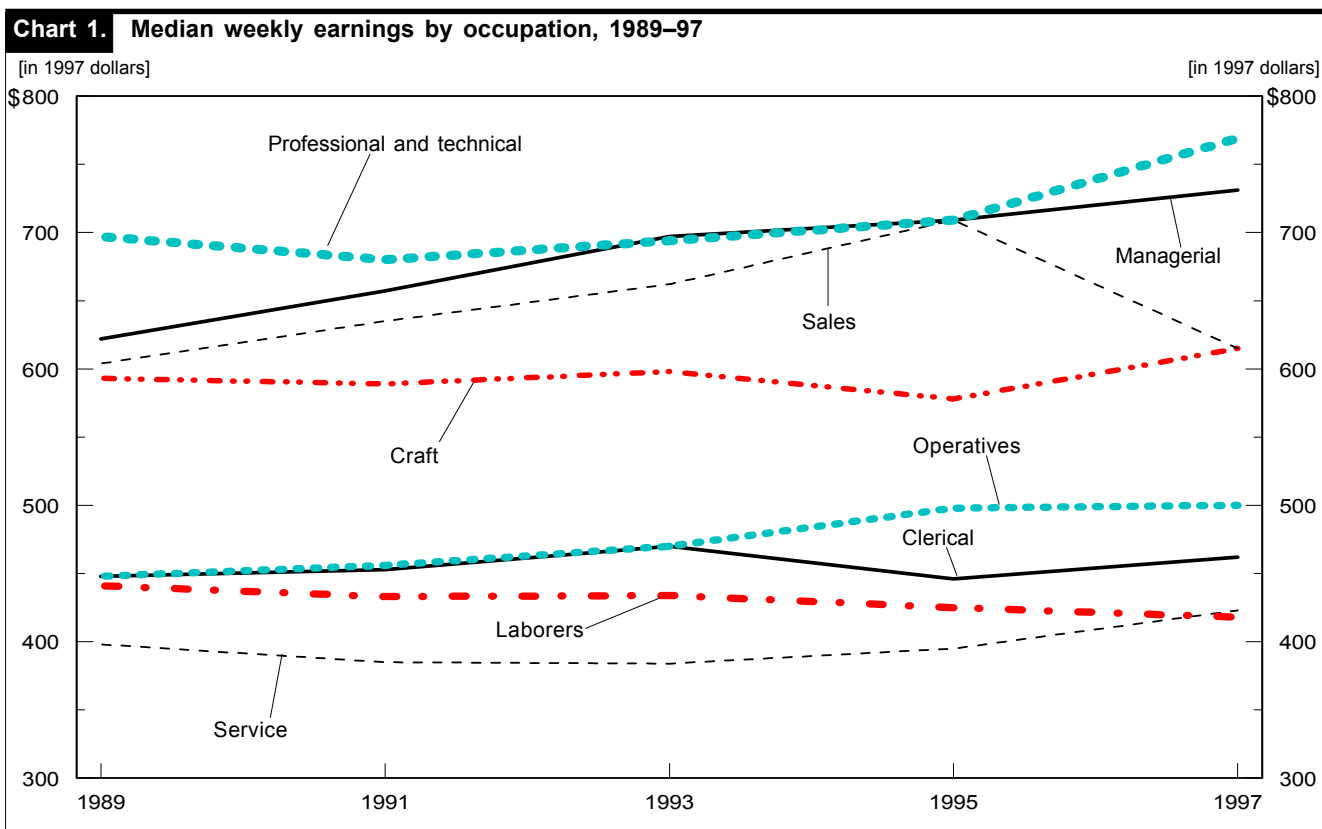


Table 1. Census occupational categories, ranked from lowest to highest by median weekly earnings in 1990

Occupational categories	Occupations included
Low-wage occupations	
Service	Service occupations, including private households
Laborers	Handlers, equipment cleaners, helpers, and laborers
Clerical	Administrative support occupations
Operatives	Machine operators, assemblers and inspectors, transportation and material moving occupations
High-wage occupations	
Craft	Precision production, craft, and repair occupations
Sales	Sales occupations
Managerial	Executive, administrative, and managerial occupations
Professional and technical	Professional specialty occupations; technicians and related support occupations

In order to keep the number of mobility measures reasonable, upward and downward occupational mobility are defined as occurring when a worker changes occupation across income groups (that is, from a high-wage to a low-wage occupation and vice versa) between year t and year $t+n$. Thus, *upward* occupational mobility is defined as a worker moving from any low-wage occupation to any high-wage occupation. Conversely, *downward* occupational mobility occurs if a worker moves from any high-wage occupation to any low-wage occupational category. For example, if a worker is employed as a clerical worker in year t , and employed as a professional and technical worker in year $t+n$, the worker has experienced *upward* occupational mobility over time. Likewise, if a worker is employed in the managerial category in year t , and in the operative category in year $t+n$, the worker has experienced *downward* occupational mobility. Lateral occupational mobility is thus omitted.⁹

The analysis of the occupational mobility of young workers is based on 2-year occupational mobility rates for the years 1989 through 1998. Tables 2, 3, and 4 summarize the 2-year mobility rates across occupations.¹⁰ These rates are derived

from occupational mobility transition matrices for each of the following periods: 1989–91, 1990–92, 1991–1993, 1992–94, 1994–96, and 1996–98.¹¹ To be included in our analysis, an individual must work year-round full time in both years of the 2-year period. Thus, the analysis concentrates on workers who demonstrate a strong attachment to the labor force.¹²

Each entry in table 2 shows the percentage of workers in an occupational category who were also in that same category 2 years later. The results from table 2 indicate an overall increase in occupational stability among year-round full-time workers during the 1990s, as immobility rates were higher in 1996–98 than they were in 1989–91 for all occupational categories. The most significant increases occurred in the operatives, service, and sales categories.

Turning to differences in occupational mobility by gender, men and women experienced similar mobility trends over the period. Although female clerical workers and operatives are more likely than men to remain in their occupations, there appears to be no significant gender differences in occupational immobility for service, managerial, and professional and technical workers. Gender differences were not reported for

Table 2. 2-year occupational immobility rates for year-round full-time workers, National Longitudinal Survey of Youth

[in percent]

Occupation	1989–91	1990–92	1991–93	1992–94	1994–96	1996–98
Service	63.8	69.6	72.2	73.0	72.7	70.6
Men	67.0	71.9	73.8	72.6	70.3	71.7
Women	59.6	66.2	69.8	73.6	75.4	69.4
Laborers	36.6	37.5	43.8	39.2	45.1	49.3
Men	—	—	—	—	—	—
Women	—	—	—	—	—	—
Clerical	64.6	65.8	69.4	69.3	65.6	65.4
Men	¹ 44.7	¹ 50.9	¹ 49.7	¹ 47.6	¹ 55.2	¹ 44.7
Women	72.8	70.9	76.7	77.9	69.3	72.9
Operatives	65.9	60.5	64.2	63.3	68.2	71.8
Men	¹ 63.2	58.8	62.3	¹ 60.0	² 65.8	³ 69.7
Women	74.2	65.9	69.8	73.5	75.7	78.4
Craft	59.2	56.9	55.3	58.0	70.0	67.0
Men	—	—	—	—	—	—
Women	—	—	—	—	—	—
Sales	48.4	55.4	47.8	43.9	55.6	53.2
Men	—	—	—	—	—	—
Women	—	—	—	—	—	—
Managerial	56.0	56.9	59.4	60.8	63.6	64.6
Men	57.7	59.3	61.0	61.1	² 60.8	64.3
Women	53.3	53.3	56.8	60.2	68.6	64.9
Professional and technical	70.4	75.0	74.2	69.5	77.9	76.4
Men	¹ 74.9	74.8	72.9	69.3	78.3	77.1
Women	65.6	75.2	75.8	69.6	77.5	75.6

¹ Gender differences in occupational immobility rates are statistically significant at the 1-percent level (two-tailed test).

² Gender differences in occupational immobility rates are statistically significant at the 5-percent level (two-tailed test).

³ Gender differences in occupational immobility rates are statistically significant at the 10-percent level (two-tailed test).

NOTE: Dash indicates data are not available for occupations with fewer than 50 male or female observations.

the occupations that produced relatively small samples of women (laborers, craft, and sales).

Tables 3 and 4 provide additional perspectives on occupational mobility. Table 3 presents upward mobility rates, and table 4 presents the corresponding downward mobility rates. These rates are based on the fraction of workers who moved into higher- or lower-paying occupations. Thus, workers initially in high-wage occupations are omitted from the upward mobility calculations, whereas workers initially in low-wage occupations are omitted from the downward mobility measure. The results in table 3 indicate that, with the exception of clerical workers, there has been no sustained increase in the upward occupational mobility of low-wage

workers. In fact, in 1998 service workers and laborers were less likely to advance to higher-paying occupations than they were in 1989.

The differences in occupational mobility by gender are especially notable. For instance, female service workers experienced a more pronounced reduction in upward mobility than men, yet they retained a slight advantage over men at the end of the period. On the other hand, male clerical workers experienced a significant increase in upward occupational mobility relative to that of women. For operatives, the upward occupational mobility of men was more than twice that of women by 1998. Thus, there are clear gender disparities in the upward occupational mobility of low-wage workers.

Table 3. 2-year upward occupational mobility rates for year-round full-time workers, National Longitudinal Survey of Youth

[in percent]

Occupation	1989-91	1990-92	1991-93	1992-94	1994-96	1996-98
Service	20.9	16.9	16.0	14.5	18.3	16.8
Men	³ 17.5	14.6	¹ 11.2	² 11.2	19.0	16.6
Women	25.4	20.3	22.8	19.4	17.5	17.1
Laborers	23.7	27.1	20.9	21.6	29.7	22.4
Men	-	-	-	-	-	-
Women	-	-	-	-	-	-
Clerical	24.2	26.6	23.4	22.8	28.6	27.7
Men	¹ 32.4	30.5	30.6 ¹	¹ 32.5	32.5	¹ 40.7
Women	20.9	25.3	20.8	18.9	27.3	23.0
Operatives	17.3	21.3	22.0	21.2	18.2	17.5
Men	¹ 19.9	21.8	23.5	³ 23.2	¹ 21.3	² 20.5
Women	9.7	19.5	17.2	15.0	8.7	8.1

¹ Gender differences in upward occupational mobility rates are statistically significant at the 1 percent level (two-tailed test).

² Gender differences in upward occupational mobility rates are statistically significant at the 5 percent level (two-tailed test).

³ Gender differences in upward occupational mobility rates are statistically significant at the 10-percent level (two-tailed test).

NOTE: Given this article's definition of upward occupational mobility, only the low-wage occupational categories are presented. Dash indicates data are not available for occupations with fewer than 50 male or female observations.

Table 4. 2-year downward occupational mobility rates for year-round full-time workers, National Longitudinal Survey of Youth

[in percent]

Occupation	1989-91	1990-92	1991-93	1992-94	1994-96	1996-98
Craft	28.8	29.4	27.8	28.0	15.9	20.6
Men	-	-	-	-	-	-
Women	-	-	-	-	-	-
Sales	18.0	16.9	18.8	20.0	12.6	14.2
Men	-	-	-	-	-	-
Women	-	-	-	-	-	-
Managerial	20.0	19.1	21.0	19.0	15.1	15.3
Men	¹ 14.5	¹ 13.8	³ 18.2	³ 16.3	14.3	¹ 10.9
Women	29.3	27.1	25.4	23.0	16.5	21.5
Professional and Technical	13.7	11.4	13.9	14.1	8.1	8.0
Men	¹ 8.0	² 8.6	² 11.2	12.0	¹ 5.3	¹ 4.3
Women	18.9	14.1	17.1	16.1	11.4	12.1

¹ Gender differences in downward occupational mobility rates are statistically significant at the 1-percent level (two-tailed test).

² Gender differences in downward occupational mobility rates are statistically significant at the 5-percent level (two-tailed test).

³ Gender differences in downward occupational mobility rates are statistically significant at the 10-percent level (two-tailed test).

³ Gender differences in downward occupational mobility rates are statistically significant at the 10-percent level (two-tailed test).

NOTE: Given this article's definition of downward occupational mobility, only the high-wage occupational categories are presented. Dash indicates data are not available for occupations with fewer than 50 male or female observations.

The results from table 4 show sizeable decreases in downward mobility for all high-wage occupations. This finding is consistent with the well-documented finding that high-income workers continue to benefit from labor market trends.¹³ However, a notable finding from table 4 concerns differences in downward mobility rates by gender. Although the trend in downward mobility was similar for both genders, female managers and professional and technical workers are significantly more likely to experience downward occupational mobility than their male colleagues. This finding is particularly surprising because our samples are drawn from young workers with similar degrees of attachment to the labor market.

Summary

Although real wages increased for persons in most occupations during the 1990s, high- and low-wage workers were more likely to remain in their respective occupational categories by the end of the decade than at the beginning. To some extent, of course, occupational stability within any cohort might be expected to increase as that cohort ages. The trends in occupational stability were consistent across gender lines,

although female clerical workers and operatives tended to have higher rates of occupational immobility than men. We also observed virtually no change in the upward occupational mobility of low-wage workers. Notably, however, men in the clerical and operative occupations were much more likely to advance to higher-paying occupations than their female counterparts. For persons in high-wage occupations, there was a significant decline in downward mobility rates. However, female workers in the managerial and the professional and technical fields continue to experience a significantly higher incidence of downward occupational mobility than men.

During the 1990s, the increased stability of the occupational distribution of full-time workers resulted from a leveling-off of the upward mobility rates of persons in low-wage occupations, coupled with a pronounced decline in *downward* mobility rates among workers in high-wage occupations. Thus, less downward mobility among high-income workers accounts for most of the increase in occupational stability observed over the decade in the cohort that was aged 25 to 32 in 1990. □

Notes

¹ Peter J. Schmidt and Robert P. Strauss, "The Prediction of Occupation using Multiple Logit Models," *International Economic Review*, June 1975, pp. 471–86; Randall S. Brown, Marilyn Moon, and Barbara Zoloth, "Occupational Attainment and Segregation by Sex," *Industrial and Labor Relations Review*, July 1980, pp. 506–17; Paul E. Gabriel, Donald R. Williams, and Susanne Schmitz, "The Relative Occupational Attainment of Young Blacks, Whites, and Hispanics," *Southern Economic Journal*, Vol. 57, No. 1, 1990, pp. 35–46.

² Maury Gittleman and Mary Joyce, "Earnings Mobility in the United States, 1967–91," *Monthly Labor Review*, September 1995, pp. 3–13; "A Brief Look at Postwar U.S. Income Inequality," *Current Population Reports* (U.S. Census Bureau, 1996), pp. 60–191; Peter Gottschalk, "Inequality, Income Growth, and Mobility: The Basic Facts," *Journal of Economic Perspective*, Vol. 11, No. 2, 1997, pp. 21–40; Peter Gottschalk and Timothy M. Smeeding, "Cross-National Comparisons of Earnings and Income Inequality," *Journal of Economic Literature*, Vol. 35, 1997, pp. 633–87; Richard Dickens, "Caught in a Trap? Wage Mobility in Great Britain: 1975–1994," *Economica*, Vol. 67, November 2000, pp. 477–97.

³ Bradley R. Schiller, "Relative Earnings Redux: Youth Mobility in the 1980s," *Review of Income and Wealth*, Vol. 40, No. 4, December 1994, pp. 441–56; P.J. Sloane and I. Theodossiou, "Earnings Mobility, Family Income, and Low Pay," *The Economic Journal*, Vol. 106, 1996, pp. 657–66; Stephen Rose, "Is Mobility in the United States Still Alive? Tracking Career Opportunities and Income Growth," *International Review of Applied Economics*, Vol. 13, No. 3, 1999, pp. 417–36.

⁴ Gary S. Becker, *Human Capital 2nd edition* (New York, National Bureau of Economic Research, 1975).

⁵ Peter B. Doeringer and Michael J. Piore, *Internal Labor Markets and Manpower Analysis* (Armonk, NY, M.E. Sharpe, Inc., 1971).

⁶ Year-round full-time workers are defined as those who have annual hours worked of at least 1,750. The 1990 NLSY cohort comprises

workers between the ages of 25 and 32. Our samples also exclude full-time military personnel, those reporting work-limiting disabilities, self-employed individuals, and those enrolled in school.

⁷ Each year the NLSY determines a respondent's wage and salary income for the previous calendar year. Thus, our earnings data correspond to the NLSY survey years 1990 through 1998, and reflect the progress of the cohort within jobs, as well as the trend in occupational earnings.

⁸ Gittleman and Joyce, "Earnings Mobility in the United States"; Gottschalk and Smeeding, "Cross-National Comparisons," *Journal of Economic Literature*; Gottschalk, "Inequality, Income Growth, and Mobility," *Journal of Economic Perspectives*.

⁹ Note that the concept of occupational mobility is based upon movements between broad occupational groups. As a result, an individual could actually see an increase in pay if, for instance, there was a move between a top-end operative job and a low-end manager position.

¹⁰ Since the NLSY is now conducted every 2 years, we use 2-year occupational mobility rates as opposed to 1-year rates. The sample sizes for each 2-year interval are as follows: 1989–91: 3,035; 1990–92: 3,356; 1991–93: 3,238; 1992–94: 3,254; 1994–96: 3,307; 1996–98: 3,500.

¹¹ Transition matrices summarize the movements of workers across occupational categories over time. The 2-year transition matrices, upon which the mobility calculations in tables 2–4 are based, are available from the author upon request.

¹² On average, approximately 25 percent of year-round full-time workers are excluded from the second year's sample because they are either employed part time, out of the labor force, or have missing data on hours worked.

¹³ "Postwar U.S. Income Inequality," *Current Population Reports*.