

Less-Educated Workers Face Limited Opportunities To Move Up to Good Jobs

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Changing occupations is often essential to a worker's career development, and can bring increased earnings and status. In 1996, about half of all occupational changes among U.S. workers involved a move from a lower skill to a higher skill job. A voluntary change improves the match between worker and job, resulting in greater productivity. Occupational mobility for many workers proceeds from entry-level work to work requiring higher levels of training and experience. Each successive job, in these cases, can provide a new opportunity both for increasing human capital and enjoying its rewards.

Largely due to data limitations, few studies have attempted to compare career pathways for workers who enter the labor force with different levels of education and training, particularly those with limited human capital. But recent shifts in Federal policy have lent a new urgency to such investigations. The "work first" philosophy of welfare reform, for example, emphasizes immediate employment over

Only one-fifth of the jobs held by less-educated workers are in "starter" occupations associated with subsequent well-paying occupations. So while pathways to advancement exist, they may be inaccessible to many less-educated workers. Minorities and especially women make up a disproportionately large share of dead-end employment, but the shares of starter, goal, and dead-end jobs in rural and urban labor markets are similar.

formal job preparation, and implicitly assumes that workers will be able to use the skills and knowledge gained in initial jobs to qualify for better paying jobs. This article reports progress on work using the 1996 occupational mobility supplement to explore the career dynamics of workers without a college education. The study identifies 17 occupations requiring little training or experience (starter jobs) that often lead to employment in well-paid occupations typically requiring higher skill levels (goal jobs). However, 27 other occupations accessible to workers with no more than a high school diploma are identified as "dead-ends," in that they typically yield low earnings and are unlikely to lead to better employment.

Career paths for less-educated workers remain strongly segregated by gender. Although women comprise 43 percent of the less-educated workforce, they hold just 21 percent of the jobs in goal occupations, compared with 56 percent of the jobs in dead-end occupations. The concentration of women in occupations offering less upward mobility has important implications

for gender differences in long-term earnings and occupational status. Occupational steering (the practice of encouraging women to take jobs traditionally held by women) in public job assistance programs reinforces this trend.

Other findings on race, ethnicity, and urban-rural status yield less striking differences than suggested by earlier research. Black and Hispanic workers, like women, are about half as likely as other workers to hold goal jobs, and more likely to be in dead-end occupations. However, they appear to have better access than women to the full range of starter and goal occupations. Although rural areas have a lower share of well-paying or high-status occupations than urban areas, rural workers are just as likely to hold starter jobs and advance to goal jobs as urban workers.

Identifying Pathways to Good Jobs for Less-Educated Workers

In 1996, there were about 33 million civilian workers in the United States age 18-44 with no college education (table 1). Of these workers, 43 percent were women, 14 percent were Black, 17

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Table 1

Selected characteristics of occupation types, 1996*About half of the less-educated workforce is employed in dead-end and other low-mobility jobs*

Occupation type	Occupations	Workers	Mean age	Mean weekly wage
	Number	Thousands	Years	Dollars
Goal jobs	157	9,861	33.7	557
Starter jobs	17	4,633	30.3	350
Dead-end jobs	27	10,934	31.4	323
Other high-mobility jobs	23	878	31.2	375
Other low-mobility jobs	179	6,527	31.5	354
Combined HSG/NHSG age 18-44 ¹	403	32,834	31.9	405

¹High school graduates and non-high school graduates.

Source: Calculated by the authors using data from the 1996 Current Population Survey.

percent were Hispanic, and 22 percent lived in nonmetro areas. Average weekly earnings for these workers were \$405, or \$21,060 for a full-year worker, which was 131 percent of the poverty threshold for a family of four in 1996. These earnings levels suggest that many less-educated workers face limited opportunities for career advancement and earnings growth, or are unable to use them. Recent government policy initiatives, such as the Workforce Investment Act of 1998 and State programs to subsidize college attendance, were designed to capitalize on the strong association between education and training and career advancement.

Occupations often link to form a pathway to better jobs. While previous studies have emphasized the lack of such pathways among less-educated workers, these pathways do exist, although they may not be the norm. This article identifies three “types” of occupations—goal, starter, and dead-end—to illustrate the role of occupational change in helping workers move up the ladder.

Goal Jobs

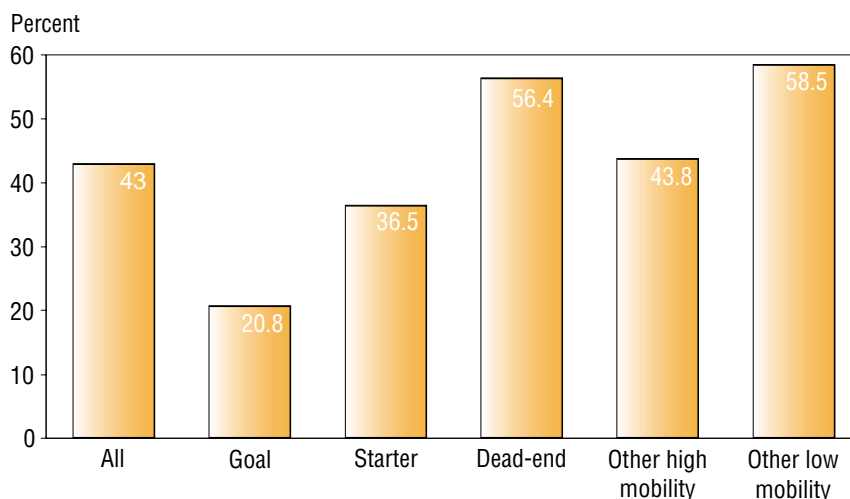
Thirty percent of less-educated (18-44 with no college) workers, or 9.9 million, were employed in goal jobs in 1996. Average weekly earnings for these workers were \$557, or 38 percent above the average for all such workers. Among the less-educated, women, Blacks, and Hispanics were less likely than

White men to be employed in these goal jobs.

In all, 157 occupations were identified as goal jobs. However, just 20 of these occupations accounted for about 6.5 million employed high school graduates (HSG's) and non-high school graduates (NHSG's), or about two-thirds of all of those in goal jobs. Each of these well-paying occupations employed at least 100,000 HSG's and NHSG's in 1996, with weekly earnings ranging from \$494 for sales supervisors, welders, and cutters to \$645 for police officers and detectives (table 2). About one in every eight goal jobs held by less-educated workers belongs to a truck driver. Managerial and administrative occupations account for 22 percent of all goal jobs, with craft, precision production, and repair jobs also well-represented.

Women make up a much smaller share of employment in goal jobs, 21 percent, than in the less-educated working population as a whole (43 percent) (fig. 1). And

Figure 1

Women's share of less-educated employment by occupation type, 1996*The share of women in goal jobs is about half their share in the overall less-educated workforce*

Source: Calculated by authors using data from the 1996 Current Population Survey.

Table 2

Twenty goal jobs with the largest employment in 1996¹*Truck driving accounts for one in eight goal jobs*

Occupation	Average weekly earnings	Employment
	Dollars	Thousands
Truck drivers	510	1,296
Supervisors and proprietors, sales occupations	494	873
Managers and administrators, n.e.c.	616	735
Carpenters	501	522
Supervisors, production occupations	577	432
Welders and cutters	494	331
Electricians	611	241
Sales representatives—mining, manufacturing, and wholesale	554	231
Industrial machinery repairers	571	220
Machinists	548	217
Plumbers, pipefitters, and steamfitters	564	203
Supervisors—construction, n.e.c.	643	167
Specified mechanics and repairers, n.e.c.	503	166
Printing press operators	518	156
Bus, truck, and stationary engine mechanics	504	142
Operating engineers	614	130
Construction trade, n.e.c.	500	119
Heating, AC, and refrigeration mechanics	500	107
Police and detectives, public service	645	105
Correction institution officers	529	102

n.e.c. = Not elsewhere classified.

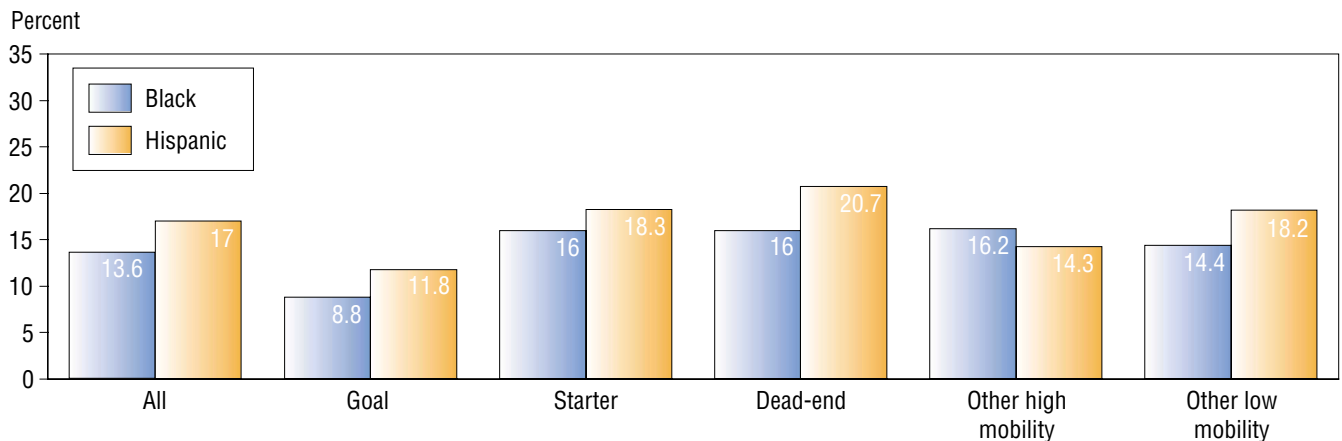
¹Employment and earnings for high school graduates and non-high school graduates.

Source: Calculated by the authors using data from the 1996 Current Population Survey.

those who do have goal jobs are highly concentrated in just a few occupations (table 3). Among the 20 goal jobs with the largest employment in 1996, women accounted for more than 30 percent of employment in just 3 of them—sales supervisors, managers not elsewhere classified, and sales representatives in mining, manufacturing, and wholesaling. They accounted for 10-30 percent of employment in just 3 occupations, while they accounted for 5 percent or less of employment in 10 occupations. Providing better paying jobs for women without a college education may require either opening up jobs currently dominated by men or hiking the wages and status of jobs currently open to women that would lead to improvements in their wages.

Blacks and Hispanics are also under-represented in goal jobs, but unlike women, are less concentrated in a small subset of these jobs (fig. 2 and table 3). Although Blacks account for just 13.5 percent of employment among less-educated

Figure 2

Black and Hispanic share of less-educated employment by occupation type, 1996*Blacks and Hispanics are under-represented in goal jobs, but over-represented in starter jobs*

Source: Calculated by authors using data from the 1996 Current Population Survey.

Table 3

Women and minority groups in major goal occupations, 1996*Women are highly segregated within goal occupations*

Occupation	Women	Occupation	Black	Occupation	Hispanic	Occupation	Nonmetro
	<i>Percent</i>		<i>Percent</i>		<i>Percent</i>		<i>Percent</i>
Sales supervisors	45.1	Police/detectives	19.6	Welders and cutters	17.8	Industrial machinery repairers	40.4
All jobs	43.0	Correction institution officers	18.0	All jobs	17.0	Correction institution officers	40.4
Managers, n.e.c.	37.1	Construction trades, n.e.c.	17.3	Carpenters	16.1	Operating engineers	35.6
Sales representatives ¹	33.7	All jobs	13.5	Production supervisors	16.1	Production supervisors	29.6
Correction institution officers	20.4	Truck drivers	12.9	Mechanics/repairers, n.e.c.	15.6	Welders and cutters	29.2
Production supervisors	17.6	Welders and cutters	10.4	Truck drivers	15.1	Bus/truck/stationary engine mechanics	28.2
Printing press operators	11.2	Operating engineers	9.9	Construction trades, n.e.c.	15.1	Truck drivers	25.3
Mechanics/repairers, n.e.c.	9.1	Mechanics/repairers, n.e.c.	8.9	Construction supervisors, n.e.c.	14.0	Carpenters	24.9
Machinists	7.3	Printing press operators	8.2	Printing press operators	13.0	Machinists	24.3
Police/detectives	7.2	Carpenters	8.0	Plumbers	11.2	Construction trades, n.e.c.	24.3
Welders and cutters	5.9	Electricians	7.4	Heat, AC, and refrigeration mechanics	11.1	All jobs	22.3
Truck drivers	5.0	Sales supervisors	6.8	Industrial machinery repairers	10.9	Construction supervisors, n.e.c.	21.6
Industrial machinery repairers	4.7	Managers, n.e.c.	6.3	Sales supervisors	10.5	Plumbers	21.5
Operating engineers	3.1	Bus/truck/stationary engine mechanics	6.3	Electricians	10.3	Mechanics/repairers, n.e.c.	21.4
Heat, AC, and refrigeration mechanics	2.4	Production supervisors	6.2	Correction institution officers	10.2	Sales supervisors	19.8

n.e.c. = not elsewhere classified.

¹Mining, manufacturing, and wholesale.

Source: Calculated by the authors using data from the 1996 Current Population Survey.

workers age 18 to 44, and just 8.8 percent in goal occupations, they account for less than 5 percent of employment in only 3 of the top 20 goal jobs (sales representatives in mining, manufacturing, and wholesaling; industrial machinery repairers; heating, air conditioning, and refrigeration mechanics). Similarly, Hispanics, who account for 17 percent of employment in our study group and for 11.8 percent of employment in goal jobs, make up at least 5 percent of the employed in all 20 top goal jobs, and at least 10 percent in 14 of the top 20.

The distinctive nonmetro occupational mix, with its relatively large share of jobs requiring few or no skills, suggests that goal jobs might be scarcer in nonmetro labor markets. However, nonmetro workers are about as likely to work in goal jobs as metro workers, except for police and detective work (fig. 3). Workers in goal jobs averaged about 2 years older than all workers covered by the study, a substantial difference considering that workers 45 and over are excluded.

Starter Jobs

The 17 occupations identified as “starter” jobs, with high potential to lead to goal jobs, accounted for 4.6 million jobs, or 14 percent of workers covered in the study (table 1). An additional 23 high-mobility occupations with less than 1 million jobs qualified as starter jobs based on their association with goal jobs, but were too rare in the survey to measure “transition-to-goal” rates precisely. All but 3 of the 17 starter occupations employed at least 100,000 HSG’s and NHSG’s (table 4). Nonconstruction laborers and assemblers make up the largest share of these occupations, with over half a million workers each. Workers in starter jobs were about 1½ years younger than all less-educated workers, and were paid about 14 percent less. In fact, their earnings are only slightly higher than those of dead-end occupations, but the range is quite large—from \$229 a week for waiters’ assistants to just over \$400 for noninsurance-related investigators/adjusters and assemblers. Starter jobs exhibit a greater occu-

pational range than do goal jobs, and are more likely to be found within the operator, fabricator, and laborer group.

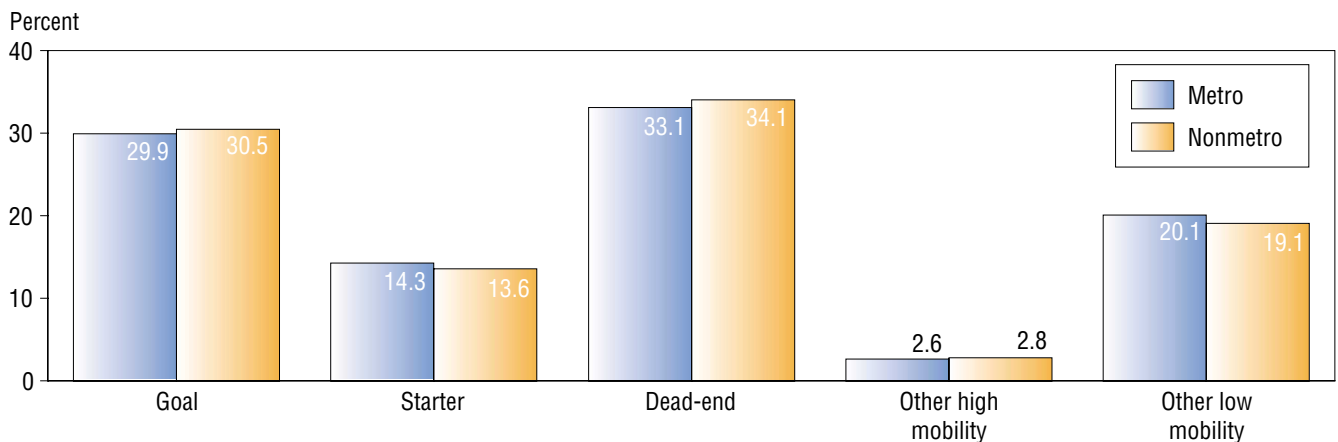
Women are somewhat under-represented in starter jobs (36 percent) relative to their 43-percent share of the less-educated working population. However, they are over-represented in four white-collar starter occupations: bank tellers (91 percent), data entry keyers (91 percent), records clerks (86 percent), and investigators/adjusters, except insurance (83 percent) (table 5). Just 3 of the 17 starter jobs (garage-related occupations, construction laborers, and roofers) are more than 95 percent male. Thus, women’s representation in starter occupations appears to be greater than in goal occupations. However, because the identification of starter jobs has been based on relatively few observed transitions, caution needs to be exercised in interpreting these results.

Blacks and Hispanics are proportionately represented or over-represented in starter occupations

Figure 3

Distribution of jobs by occupation type, metro and nonmetro

The occupation types of nonmetro workers are similar to those of metro workers



Source: Calculated by authors using data from the 1996 Current Population Survey.

Table 4

Starter jobs, earnings and employment, 1996¹*Laborers form the largest starter occupation*

Occupation	Average weekly earnings	Employment
	<i>Dollars</i>	<i>Thousands</i>
Laborers, except construction	378	723
Assemblers	403	628
Construction laborers	390	474
Stock handlers and baggers	282	473
Freight, stock, and material handlers, n.e.c.	375	365
Sales workers, other commodities	294	362
Data entry keyers	360	231
Waiters'/waitresses' assistants	229	228
Investigators and adjusters, except insurance	404	228
Guards and police, except public service	353	214
Bank tellers	318	156
Vehicle washers and equipment cleaners	323	153
Roofers	389	112
Graders and sorters, except agricultural	262	111
Garage and service station-related occupations	316	97
Records clerks	385	54
Miscellaneous textile machine operator	373	24

n.e.c. = Not elsewhere classified

¹Employment among high school graduates and non-high school graduates.

Source: Calculated by the authors using data from the 1996 Current Population Survey.

relative to their numbers among the less-educated workforce. They are less likely to be either highly concentrated or scarce to the extent that women are in specific starter occupations, each ethnic group accounting for least 5 percent of employment in all 17 occupations and neither accounting for more than 40 percent of employment in any of the 17.

Dead-End Jobs and Other Low-Mobility Jobs

Twenty-seven occupations with 10.9 million workers, or 33 percent of less-educated workers, were “dead-end” jobs, with near-average or below-average earnings and with near-average or below-average prospects for moving into a better paying job (table 1). Among these are such common occupations as cashier, secretary, bookkeeper, wait-

er/waitress, cook, nursing aide/orderly, janitor, farmworker, and automobile mechanic. Another 6.5 million, or 20 percent of the total, were in 179 occupations labeled as “other low-mobility jobs.” These also had near-average or below-average earnings, but their estimated transition-to-goal rates were less reliable because of the small number of observations in each occupation.

Together, these two groups account for just over half of the study total. The demographics of these two groups are similar. Women are heavily over-represented in both—56 percent of the first group and 58 percent of the second—and Hispanics are slightly over-represented—21 percent of the first group and 18 percent of the second. Blacks are slightly over-represented in dead-end jobs,

but not in other low-mobility jobs. The average pay level is particularly low for “dead-end” jobs—20 percent below the average for the study group, and, at \$323 per week, just 5 percent above the poverty threshold for a family of four.

Transition From Starter to Goal Job Takes Time

Between 1995 and 1996, workers initially in starter jobs had an 8.3 percent probability of moving into a goal job (table 6). This equates to a greater-than-50-percent chance of moving into a goal job within 8 years. However, the high overall occupational mobility rate for these workers, over 23 percent per year, suggests that many will move from starter jobs into other low-paying jobs before they move up.

Rates of occupational mobility are relatively low for those already in goal jobs—about 1 in 12 can expect to change occupations in a year. This is not surprising, given that these are more desirable occupations and that the workers holding them are slightly older than the average. When these workers do change occupations, however, fewer than half move into other goal jobs, indicating that many of these transitions reflect adverse events.

Dead-end jobs have an overall occupational mobility rate of about 14 percent per year, intermediate between the rates for goal jobs and starter jobs. Less than 3 percent advance from these jobs into goal jobs. Other low-mobility jobs show similar mobility rates.

Within each occupational mobility type, the differences across demographic groups in transition-to-goal rates are not striking. However, transition-to-goal rates are

Table 5

Representation of women and minority groups in starter jobs, 1996*The distribution of women and minorities across starter occupations is generally more equitable than across goal occupations*

Occupation	Women	Occupation	Black	Occupation	Hispanic	Occupation	Nonmetro
	<i>Percent</i>		<i>Percent</i>		<i>Percent</i>		<i>Percent</i>
Bank tellers	91.4	Guards/police, except public service	33.8	Graders and sorters, except agricultural	39.7	Miscellaneous textile machine operator	31.2
Data entry keyers	90.6	Miscellaneous textile machine operator	28.5	Waiters'/waitresses' assistants	31.8	Freight/stock/material handlers, n.e.c.	28.5
Records clerks	86.5	Freight/stock/material handlers, n.e.c.	21.1	Vehicle washer/equipment cleaners	29	Laborers, except construction	28.3
Investigators/adjusters, except insurance	83.3	Vehicle washer/equipment cleaners	20.6	Construction laborers	24.6	Assemblers	25.6
Sales workers, other commissioned	72.1	Garage/service station-related occupations	19/3	Roofers	22.1	Construction laborers	24.4
Graders and sorters, except agricultural	55.9	Assemblers	18	Stock handlers and baggers	19.4	Roofers	22.8
Miscellaneous textile machine operator	43.2	Laborers, except construction	17.8	Records clerks	17.5	Graders and sorters, except agricultural	21.5
Assemblers	42.6	Records clerks	16.4	Assemblers	17.5	Stock handlers and baggers	20.6
Waiters'/waitresses' assistants	40.7	Data entry keyers	15.9	Guards/police, except public service	16.4	Vehicle washer/equipment cleaners	19.6
Stock handlers and baggers	30.8	Waiters'/waitresses' assistants	13.2	Laborers, except construction	16.2	Bank tellers	19.5
Guards/police, except public service	22.5	Roofers	12.9	Freight/stock/material handlers, n.e.c.	14.5	Garage/service station-related occupations	19.4
Laborers, except construction	19.3	Graders and sorters, except agricultural	12.6	Bank tellers	13.3	Records clerks	18.5
Freight/stock/material handlers, n.e.c.	11.4	Stock handlers and baggers	12.4	Data entry keyers	13.1	Sales workers, other	17.4
Vehicle washer/equipment	8.8	Construction laborers	21.1	Garage/service station-related occupations	12.7	Investigators/adjusters, except insurance	14.4
Garage/service station-related occupations	3.9	Investigators/adjusters, except insurance	10.7	Sales workers, other commissioned	11.2	Guards/police, except public service	12.2
Construction laborers	3.3	Sales workers, other	10.6	Miscellaneous textile machine operator	10	Waiters'/waitresses' assistants	
Roofers	0.6	Bank tellers	6.6	Investigators/adjusters, except insurance	9.1	Data entry keyers	7.5

Source: Calculated by the authors using data from the 1996 Current Population Survey.

Table 6

Rates of occupational mobility by occupation type and demographic group, 1996

Transition rates from starter to goal jobs are much lower for women than for men

Initial occupational mobility type	Total transition rate ¹	Rate of transition to goal jobs				
		Overall ²	Female	Black	Hispanic	Nonmetro
<i>Percent</i>						
Goal jobs	8.5	3.3	3.4	1.5	2.1	2.8
Starter jobs	23.4	8.3	6.7	7.6	6.7	8.7
Other high-mobility jobs	29.0	11.8	3.1	6.1	19.7	15.0
Dead-end jobs	13.6	2.7	2.5	1.6	2.5	3.3
Other low-mobility jobs	12.5	1.0	0.7	0.1	0.4	1.4

¹The total transition rate is the percent of all workers in the occupation types who changed occupations between 1995 and 1996.

²High school graduates and non-high school graduates, age 18-44.

Source: Calculated by the authors using data from the 1996 Current Population Survey.

lower than overall transition-to-goal rates for women and for Hispanics in four of the five occupational mobility types, and for Blacks in all five types. In contrast, the non-metro transition-to-goal rate is higher than the overall rate in four of the five mobility types. The non-metro advantage may be due to the greater concentration in metro areas of minority groups with lower transition-to-goal rates, or to the greater nonmetro concentration of manufacturing, a key employer of skilled blue-collar labor.

Most Entry-Level Jobs Are Not Key Entry Points to Goal Occupations

Although there are a set of occupations that are good starting places to enter goal jobs, the skills required in these starter occupations may render many of them inaccessible to workers with limited education and training. On the other hand, a well-paying job does not always require a great deal of

training or prior experience. How likely, then, are workers just entering the workforce to take starter jobs (or perhaps even goal jobs) immediately? If entry-level employment consists mostly of dead-end occupations, most workers with limited education face a long path to jobs offering adequate pay levels.

We identified entry-level occupations for HSG's and NHSG's according to the 11 occupational skill categories produced by the

Bureau of Labor Statistics (see "How 'Starter,' 'Goal,' and 'Entry Level' Jobs Are Defined"). While all starter jobs are entry-level jobs, only 21 percent of entry-level jobs can be clearly labeled starter jobs (24 percent if small-sample occupations not meeting the transition rate threshold are included) (table 7). About 15 percent of entry-level jobs qualify as goal jobs, but over a third of these are found in one occupation—truck driving. Thus, over half of entry-level jobs for less-educated workers have low earnings and do not lead directly to jobs with higher earnings.

Meanwhile, more than 60 percent of nonentry-level jobs are goal jobs, and none qualify as starter jobs; further, about two-thirds of goal jobs are nonentry level. On the other hand, 100 percent of starter jobs and 77 percent of dead-end jobs are entry level. The cross-classification of jobs by entry-level status and mobility type highlights two key features. First, the transition from starter to goal job closely tracks the movement from entry level to nonentry level, suggesting that many less-educated workers follow upward career trajectories just as college-educated workers do. Second, the large proportion of entry-level dead-end jobs in the less-educated labor market—38

Table 7

Entry-level status by occupation type, 1996

Starter and goal occupations comprise less than 40 percent of all entry-level jobs for less-educated workers

Type	Entry level	Nonentry level
	<i>Percent</i>	
Goal	15	62
Starter	21	0
Dead-end	38	23
Other nonclassified	26	15

Source: Calculated by the authors using data from the 1996 Current Population Survey.

Table 8

Predicted employment change by major occupation group, 1996-2006
Occupation groups with the highest starter and goal job concentrations face below-average growth

Occupational group	All workers	HSG's/ NHSG's ¹ in goal jobs	HSG's/ NHSG's ¹ in starter jobs	Employment growth, 1996-2006
<i>Percent</i>				
Total	100.0	100.0	100.0	14.0
Executive, administrative, managerial	10.2	13.5	0.0	17.2
Professional specialty	13.7	1.8	0.0	26.6
Technicians	3.5	3.0	0.0	20.4
Marketing and sales	11.1	13.5	7.8	15.5
Administrative support	18.1	4.0	14.4	7.5
Service	16.1	2.9	9.5	18.1
Agriculture, forestry, fishing	2.9	0.1	0.0	1.0
Precision production, craft, repair	10.9	38.8	2.4	6.9
Operators, fabricators, laborers	13.5	22.4	65.8	8.5

¹High school graduates and non-high school graduates.

Source: Calculated by the authors using data from the 1996 Current Population Survey.

percent—implies autonomous, insulated submarkets for less-educated workers. Together, these features point to a duality within low-skill markets, in which point of entry determines whether workers follow a conventional career track or tend to move along a more lateral path among low-skill jobs. The findings here only suggest such a job structure, and would need additional analysis and a more generous sample size to verify.

Opportunities for Less-Educated Workers To Move Up Are Limited

What are the prospects for limited-education jobs that provide good pay? We compare the distribution of goal jobs, starter jobs, and all jobs across major occupational groups for which employment projections are available from 1996 to 2006. Expected employment

growth will be below-average in goal and starter jobs relative to the national economy (table 8). About 60 percent of goal jobs and 68 percent of starter jobs are concentrated in craft/repair and operator/fabricator/laborer occupations, which are predicted to grow at about half the rate of the economy as a whole (14 percent over 10 years). Similarly, goal and starter jobs for less-educated workers are under-represented among the fast-growing service, professional, and technical occupations.

High school graduates and those without high school diplomas can and do get jobs in well-paid occupations. Furthermore, while most of these well-paying occupations are not entry level, they are often directly accessible from other, entry-level occupations. Goal jobs and starter jobs together comprised

over half the employment of HSG's and NHSG's in 1996. Unfortunately, these jobs are also concentrated in occupational groups with very limited growth potential over the next decade. Without parallel estimates of labor supply growth, it is hard to determine whether it will be more difficult to enter a well-paying job with limited education. The relative supply of noncollege-educated workers will likely have to decline in order to accommodate the predicted shifts in labor demand.

Of more immediate concern, however, is the predominance of “male-dominated” jobs among the goal occupations. Opportunities for less-educated women, such as women exiting Temporary Assistance for Needy Families (TANF), will be particularly limited unless the gender composition of current goal jobs shifts dramatically, or unless women become better paid. Such a shift is occurring, as in such well-paying jobs as sales and management, where women are well represented. These jobs are likely to see strong growth (15-17 percent), so the distribution of new jobs through 2006 will probably be more favorable for women than the distribution of existing jobs.

Women's educational attainment is about the same as men's, and for young women, it is now slightly higher. Occupational segregation, holding education constant, therefore remains a critical source of male-female wage disparity. For minorities, low educational attainment per se remains a problem, with occupational segregation within education levels a secondary source of disparity with Whites.

Rural workers are as likely to hold starter jobs and goal jobs as are urban workers, bucking conventional notions of rural-urban occupational disparities. This may be

How 'Starter,' 'Goal,' and 'Entry-Level' Jobs Are Defined

Identifying 'Goal' Jobs

To identify "good" (well-paying) occupations available to those with a high school education or less, information on individual workers' earnings was drawn from all 12 months of the 1996 Current Population Survey. Average weekly earnings were calculated for each occupation represented in the sample, which included employed persons age 18-44 with less than a high school education (NHSG's) or a high school education but no college (HSG's). Workers 45 and older were excluded since some jobs available to labor force entrants more than 25 years ago are no longer available to such entrants. In addition, those working part-time voluntarily were excluded from the sample because their numbers could artificially depress average weekly earnings.

The sample includes 35,251 workers distributed among 443 occupations, which were ranked in descending order of average weekly earnings. The 178 highest paying occupations (the top third of jobs in the sample) were defined as "Good Occupations Available to the Less-educated" or "goal jobs." Weekly earnings for these occupations average at least \$492. For a full-year worker, this is equivalent to annual earnings of \$25,584, which is 160 percent of the 1996 poverty threshold for a family of four.

Identifying 'Starter' Jobs

Data on transitions from one occupation to another are taken from the October 1996 occupational mobility supplement to the Current Population Survey. Respondents' occupations at the time of the survey and 1 year earlier were compared to identify occupational mobility. A sample of 11,121 workers in 406 occupations included 1,454 who had changed occupations during the previous year. The transitions were then classified as to whether the initial or final occupation was a goal job. For each occupation, we calculated the percentage of workers who subsequently made a transition into a goal job and the percentage who made any transition into another occupation.

For all workers not initially in goal jobs, 3.6 percent had made a transition into a goal job (transition-to-goal) over the previous year. Those occupations with a transition-to-goal rate at least 50 percent higher than this average—that is, 5.4 percent or higher—were defined as "starter jobs," provided that this rate reflected a minimum of three transitions to goal jobs for that occupation in the underlying unweighted data. Seventeen occupations met these criteria. Occupations with a transition-to-goal rate of 5.4 percent or more, but with only one or two underlying transitions to goal jobs, were labeled as "other high-mobility jobs."

Occupations with an observed transition rate of less than 5.4 percent were classified as "dead-end" jobs, provided that the number of unweighted observations initially in that occupation was 56 or greater (that is, a transition rate of 5.4 percent or more would have corresponded to at least 3 transitions). Twenty-seven occupations met these criteria. Occupations with an observed transition rate of less than 5.4 percent, and with fewer than 56 unweighted cases, were labeled as "other low-mobility jobs."

Identifying 'Entry-Level' Jobs

Entry-level occupations were identified using an occupational classification system based on education and work experience requirements developed by the Bureau of Labor Statistics, U.S. Department of Labor. In this article, entry-level occupations are defined as those usually requiring short-term or medium-term training, and some that require formal vocational preparation. Occupations that typically require long-term training or previous work experience are considered nonentry-level. This definition differs from the low-skill occupation definition used by BLS.

due to our considering only less-educated workers, whereas the major source of rural-urban earnings and occupational differences is at the higher end of the educational continuum. In addition, "rural"

here comprises a diverse set of local economies and labor markets. Transitions to goal jobs are likely to be challenging in scattered rural pockets throughout the United States.

Conclusions

Conventional career paths for less-educated workers most certainly exist, but they may not represent the most common experience of such workers. Starter jobs are exclusively entry level, and most

well-paying (goal) jobs reached through starter jobs require prior experience and/or training. The gender composition of some of the occupations studied further corroborates the notion of definite career paths. Women are disproportionately represented in “sales workers, other commodities” (starter jobs),

and make up about half of “sales supervisors” and one-third of “sales representatives, mining/manufacturing/wholesaling” (goal jobs), which appear to have skill and knowledge associations.

Starter jobs such as data entry keyers and waiters’ assistants do not appear to impart very many

necessary skills for career mobility (beyond general good work habits). Perhaps these jobs attract workers with unrecorded characteristics—such as higher literacy levels, flexibility, or self-direction—that are particularly valued in many well-paying occupations.

