The Immediate Returns to Early Career Mobility[1]
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After finishing school, young workers go through a period of rapid job mobility that moves them toward longer lasting jobs and higher wages. Previous studies in labor mobility investigate the theoretical process and long-term impact of changing jobs by examining its effect on wages, but they do not consider the type of job changes workers make.[2,3] Neal (1999) divides the process of mobility into simple job changes and complex career changes. A simple job change does not involve switching industries, while a career change does. Neal does not, however, consider how the theory affects worker wages.

Using panel data from the National Longitudinal Survey of Youth (NLSY) we compare the immediate wage return to career change with the return to within-career job change. A career change occurs when a worker moves to a new employer in a different industry and assumes a different occupation.[4] We find that career change is a distinguishable component of labor mobility and that the way it impacts wages depends on individual worker characteristics. Characteristics that we consider include education, race, potential experience, job tenure, and previous mobility. Increased levels of education, potential experience, and current job tenure reduce the probability a worker will experience a positive return to career change. Well-educated workers are likely to accept low, or even negative, immediate returns to career change in order to receive sustained long-term wage growth within that career. We expect that results regarding race should mimic educational patterns according to the traditional observation that minorities receive less or lower quality education. While potential experience does indicate less time to reap the benefits of long-term wage growth, it is also closely correlated with previous industry tenure. Highly tenured workers should expect low return to career change because they must sacrifice accumulated industry-specific capital. Section II expands upon the theoretical foundations of the study. Section III describes the data, sample selection criteria, and regression and statistical analysis. Section IV concludes.

2. Theoretical Framework

The process of labor mobility is a two-party search for the most productive job match. Workers search for firms that offer them the best opportunities while firms search for workers that are most productive. Because both firms and workers lack complete information, workers move from career to career, or firm to firm, shopping for the best job. Likewise firms fire workers and hire others that appear more productive. On the way to their final job, workers learn skills specific to their employer and their industry, as well as general skills valued by all firms. The accumulated set of skills a worker acquires is known as human capital. As they change jobs workers also learn what type of career and occupation best suits them. These factors all have implications on the quality of a job match and the resultant wage. One way to measure the quality of job match is durability, or how long it lasts.

While it is agreed that job turnover drives workers to more durable employment, the exact process of labor mobility and its effect on wages is subject to debate. Three major theories offer an explanation of why workers change jobs. Blumen (1955) posits the *mover-stayer* model in which worker mobility is based solely on an individual's innate level of productivity. Burdett (1978) and Jovanovic (1979b) suggest the *search-good* model in which mobility reflects workers moving toward more productive job matches. Productivity is measured ex ante by wages offers. Mobility slows over time because workers attain increasingly productive matches. Johnson (1978) and Jovanovic (1978a) argue, however, that job match quality is an *experience-good* and not known ex ante. Instead workers gradually realize the quality of a job over the time of employment. In this model, mobility is driven by ever-changing worker perceptions of job match quality. Turnover occurs when a worker realizes a job is worse than initially expected. Jovanovic's duel positions alone suggest that labor mobility has not been completely explained, and that the actual process most likely involves behaviors described by all three models.

With regards to the effect mobility has on wages, Topel and Ward (1992) estimate that early career mobility accounts for over one-third of the wage growth workers can expect during the first ten

years of full-time employment. Therefore, in line with the search-good model, wage growth is the primary motivation behind mobility. Light and McGarry (1998) conclude otherwise, indicating that early mobility is negatively related to wages and immobile workers receive the highest wages in the long run. This disparity suggests that there is more to mobility than just changing jobs. Neal (1995) and Parent (2000) begin to uncover the complexity of labor mobility by addressing the roles of firm-specific and industry-specific human capital. Both find that workers that switch industries see more drastic wage reductions than those who do not. They conclude that industry-specific skills are more valuable to workers than employer-specific skills. Neal (1999) extends this human capital theory to mobility by dividing job changes into two categories. A simple job change occurs when a worker switches occupations within an industry, thereby retaining industry-specific skills. A complex career change occurs when a worker switches both occupations and industries and gives up all specific human capital. Upon these definitions, Neal constructs a two-stage job search model in which workers first select a career within an industry, and then search for an employer within that career. Neal, however, does not consider how the type of mobility affects wages. This is where our study begins.

The analysis of our results does depend on the actual process of mobility. If workers act as the *search-good* model suggests, they know ahead of time the value of their career change and should act according to our general predictions. The *experience-good* model suggests a different story: workers make decisions based on what they expect, not on what they see. In this case our predictions might explain how education, for example, influences a worker's ability to foresee the quality of job matches rather than how it influences the rate of wage growth within a career. The *mover-stayer* model is significant to the degree that it reminds us that time-invariant worker characteristics do affect mobility. At some level workers simply have different propensities to change jobs. Beyond innate worker characteristics, other observable factors have an effect on worker mobility such as current job tenure education, race, potential experience, and previous mobility.

Extensions to Basic Theory - Education and Labor Mobility

Just like mobility, education is an investment in human capital. Workers invest in schooling because they expect returns over time to exceed the full cost of attending school. Assuming that workers acquire the amount of education that maximizes their lifetime earnings, levels of education will vary because abilities to learn differ. For example, the psychic cost of struggling through additional years schooling is often high enough to keep slow learners from continuing their education. In all instances, education serves as a tool for workers to explore career choices prior to full time entry into the labor market. Educated workers are therefore are less likely to make career changes after committing to full-time employment.[5]

Educated workers can expect higher wages over their lifetime as a compensating differential for the cost of being educated. The cost of education includes not only the price of tuition and books, but also the sum of forgone wages, and a period of low wages that lasts until the returns to education are realized.[6] In other words, educated workers have steeper lifetime wage growth profiles. Early on they sacrifice wages while investing in human capital, and later reap the returns. Similarly, workers invest in marketplace education after entering the job market. Training makes workers more productive, thereby raising their value to a firm, which translates into higher wages. Workers, however, must bear part of the cost of training in the form of reduced wages during the training period. Therefore when educated workers change careers they are often willing to accept small wage gains or even wage losses as a type of long-term investment in their personal value to that industry. The same story was previously understood to occur principally between employers instead of industries. Over time workers gained skills valuable only to a specific firm. These were sacrificed when the worker left the firm whether or not they stayed in the industry. Neal (1995) and Parent (2000) argue otherwise, suggesting that industry-specific skills supersede firm-specific skills and that changing jobs within an industry should impact wages significantly less than changing careers. It is upon this conclusion that we interpret the affect of education and other worker characteristics on immediate wage gains.

When changing jobs within a career educated workers should expect high wage gains. According to Neal (1999) a simple-job change is a strong indicator that a worker has chosen an appropriate career and is searching for the ideal employer within that career. A worker in a suitable career is less concerned with making long-term industry-specific human capital investments, and more interested in finding the best employer within that industry. As described in the search-good mobility model, workers will seek out the employer that offers highest wages. Therefore, relative to simple job change, educated workers should receive significantly less immediate wage gains from career change.

Potential Experience

Similarly, due to the length of time workers have to collect returns on human capital investments in a firm or industry, potential experience is negatively related to the immediate wage return to labor mobility. Potential experience is the number of years a worker has been able to work full time since finally leaving school, whether or not they were employed. The longer a worker waits to change careers the more likely they have accumulated valuable industry-specific skills. For this reason, and due the significance of industry-specific capital, increases in potential experience should negatively impact on workers who change careers.

Job Tenure

In general, the longer a worker stays at a job the less likely that worker will be to leave. According to Farber (1994), after 3 months on a job the probability that a worker will leave continually declines. This likelihood decreases because worker invests in more specific capital. In step with the *experience good* search model, tenure is negatively correlated with mobility because the probability of good job match quality increases over time. Therefore, as job tenure increases we expect a decline in the immediate returns to career change and an increase in the immediate value of a simple job change.

Prior Mobility

According to Farber (1994) and Mincer and Jovanovic (1981), the number of job changes a worker has made in the past is a strong indicator of the likelihood a worker will leave the current job. Neal (1999) and the *search good* job-matching model suggest, however, that as the number of previous jobs increases the better the current job match should be. The better the current job the less likely a worker will want to leave. Therefore, in terms of career change, the number of previous jobs has an ambiguous theoretical effect on immediate wage returns. We expect a worker's prior mobility to be highly correlated with potential experience, so workers with a high number of previous jobs should suffer more from career change than simple job change.

In all of these cases further analysis of the reason for career change could clarify results and alleviate weak t-statistics. We hypothesize the probable actions of a worker who willingly changes jobs or careers. Workers that are fired or laid off due to downsizing often cannot choose their next career and search time for another employer may be drastically reduced.[7]

3. Data

The National Longitudinal Survey of Youth 1979 (NLSY79) is a panel data set that records longitudinal employment and school history of 12,686 young men and women born between 1957 and 1964. Employment data includes starting and stopping weeks, wage, occupation code, and industry code for each job a worker held. Our objective is to construct a sample of job transitions that provide an accurate comparison of the between-job wage gains from mobility within a career and mobility across careers. Data used is from survey years 1979-1994.

A. Sample Construction

We initially limit the original sample to men who have not served in the military. We further restrict it to job observations that commenced after the respondent had completed schooling.[8] From

within this subset we remove job observations if the respondent fails to report its starting or ending week, or if a wage, industry code, or occupation code is not reported.[9] In order to focus on full-time, stable employment, we remove observations that involve less than 30 hours of work per week as well as jobs that lasted less than three months.[10] A final deletion is made to limit the effect of skill depreciation on wage changes by removing jobs that follow non-employment periods spanning more than one year.[11] From this point, we adjust starting and ending wages for each job (see endnote 9) to 1982-1984 dollars. We then calculate between-job wage differences for each transition by subtracting the natural log of the previous job's ending wage from the natural log of the current job's starting wage:

(1) $$\frac{Wage_{start}^{n+1} - Wage_{stop}^{n}}{Wage_{stop}^{n}} \cong \ln(Wage_{start}^{n+1}) - \ln(Wage_{stop}^{n})$$

Transition wage differences in which the new wage was more than quadruple that of the previous wage (10 observations), or the old wage was more than quadruple that of the current wage (11), were considered erroneous and dropped to provide more accurate estimates.

Table 1 displays a summary of descriptive statistics for the sample of job transitions. 2,478 respondents contribute at least one valid job transition. There are 7,802 valid job transitions among this group, or roughly 3.15 transitions per worker. Whites account for 57.6% of the respondents who have at least one job transition, blacks for 25.2%, and Hispanics comprise the final 17.2%. Of these respondents, 19.7% attended less than 12 years of schooling, 35.6% received exactly 12 years of schooling, and 44.7% achieved an education that exceeded 12 years. The average age of entry into the labor market for the sample was 22.2 years.[12]

Table 2 furthers delineates schooling level by race. Of the Hispanic respondents, 30.4% failed to reach their twelfth year of schooling, 31.4% received exactly twelve years of schooling, and 38.2% attended school beyond their twelfth year. Roughly 20% of black respondents received less than twelve years of schooling, 42.6% achieved exactly twelve years, and the remaining 37.3% received more than

twelve years of education. Of the white respondents, 16.3% attended fewer than twelve years of school, 33.8% received exactly twelve years, and 50.0% attended beyond their twelfth year.

In order to compare expected wage growth between types of mobility, Table 3 delineates career changes and non-career changes by race and education. Hispanics accounted for 18.3% of the total career changes in the sample and 18.3% of the non-career changes. Blacks completed 28.3% of the career changes and 23.3% of non-career changes, while whites accounted for the final 53.4% of career changes and 58.5% of non-career changes. These numbers closely mirror the racial profile of the overall sample in Table 1. Further breakdown of job transitions by education support the theoretical role of education as a tool for exploring career choices. Workers with twelve years of schooling or less, account for 66.8% of the total career changes and 61% of the non-career changing transitions. The remaining results indicate that more educated workers are not only less inclined to switch jobs than those with less schooling, but they are also much less likely to change careers. The most educated workers make up 45% of the sample but account for only 33.2% of career changes and 39% of within-career transitions.

4. Between-Job Wage Growth Estimates

A. Regression Analyses

This section offers regression and statistical analysis of the immediate wage gains that stem from labor mobility and attempts to distinguish a career change from job changes within a career.

Table 4 displays the percent wage differences between jobs for both career and non-career transitions subdivided across worker characteristics. The first column shows the percentage mean wage change for all job transitions. The fourth column shows the percentage differences between mean career and non-career transition values. [13] A large difference between wage changes should tell us that a career change is noteworthy. Absolute t-statistics are given in the final column. On average a worker's wage increases 7.22% across job transitions.[14] For career-changes, the value increases to 7.24% while the gain for non-career-changing is 7.20%. This difference is negligible suggesting that a career change does not

differ from a simple job change. The significance of career change does, however, come to light in further analysis of worker characteristics.

Simple regression analyses clearly set career change apart from aggregate mobility. We run a series of regressions using a standard linear OLS model. We use education, race, previous job tenure, and unionization to explain how between-job wage changes are determined. The first model is based on total job transitions and is designed to eek out the effect of career change in the aggregate. In the next two regressions career and non-career change observations are separated in order to evaluate the distinctions between the two. The control subject is a white high school graduate with exactly twelve years of schooling that is not involved with a union in any way. Results reflect the impact each characteristic relative to the control subject whose average wage gain is measured by the constant. The first analysis corroborates what the mean-comparisons established: changing careers has little if any impact on the overall expected immediate wage change for a worker in the aggregate. However, the next two regressions begin to show that worker characteristics can augment the immediate gain for career changes.

Table 5 clearly shows that in all transitions education pays. For every year of education beyond the twelfth, workers can expect an additional 3.1% wage gain for job transitions. However, more educated workers are penalized when changing careers, receiving only a 1.5% gain for per year of education, relative to the nearly 5% gain for non-career changes. Similarly, for each year of education fewer than twelve workers lose wages in transition, but lose less when this transition involves a career change. As mean comparisons will confirm, race results mimic those of education. The constant shows that whites receive more wage gains whenever they switch jobs relative to non-whites, and blacks lose less than Hispanics. These disparities are theoretically traceable to the educational profile of the sample found in Table 2 and will be discussed in the following section.

The impact of previous job tenure on expected immediate wage changes deviates from what we expected. Immediate wage changes do decrease as previous job tenures increase, but there is no realizable wage distinction between career changes and within-career job transitions. Mean comparisons, however, reveal supporting results.

The final condition investigated in our comparative regression analyses was the unionization status of the last and current jobs of the respondent. As we saw earlier, transferring from one unionized job into another results in lower immediate returns than when neither job is involved with a union. The comparison between career changes and within-career job changes when the former job was in a union reveals a decline in wages. When a worker leaves a union and changes career, the relative immediate wage return is over 65% less than if he had chosen to remain in the same career. On the other hand, when a worker enters a union, his relative immediate wage gain may increase by more than 90% if he chooses a new career. When entering a union from a non-unionized job, workers earned higher immediate wage gains than when neither job is affiliated with a union, regardless of whether or not the new job was within the career of the former. Mean comparisons shown in Table 4 reveal significant patterns that support the theoretical implications of these results.

B. Evaluation of Mean Comparisons

Education

While results for education are statistically insignificant, the pattern that emerges supports the predicted theoretical relationship between a worker's education and immediate wage gains from mobility. Highly educated workers receive more wages for all job transitions, but are relatively penalized for career changes. Workers with less than 12 years of schooling receive an initial wage increase of 5.3%; those with exactly 12 years gain 6.2% in wages when changing jobs; and those with more than 12 years of education earn between-job wage benefits of 9.6%. Regarding career changes, workers who have less than 12 years of schooling receive a 6.0% increase in wages. Workers with exactly 12 years of schooling gain 6.8%, and workers with more than 12 years of education gain 8.7%. Non-career changes result in wage gains of 4.6%, 5.6%, and 10.4% respectively.

The goal of this study is to determine if workers benefit more from within-career job change or career changes. From the above information, we see that highly educated workers are the only group to

gain more from non-career job changes. Workers that attend less than 12 years of school receive a wage premium of 27.1% for switching careers and workers with exactly 12 years of education receive 20.5% bonus. Workers that attend more than 12 years of school, however, see their between-job wages penalized by 17.3%. An important factor to consider is the standard characterization of lower-educated workers as "wage chasers." They are more likely to switch jobs, regardless of career, in order to find one with a higher immediate wage. This behavior reflects the fact that these workers traditionally have slow within-job wage growth.[15] This theory is corroborated by the relative percentage of career changes in our sample that were completed by workers with lower levels of education (see Table 3).

Race

Due to traditionally high correlations between race and education, the analysis of race generates a similar pattern. Table 2 shows that whites are disproportionately represented in the highest classification of education, accounting for nearly two-thirds of the total. A look at the wage differences on Table 4 shows that whites—traditionally the most highly educated race—receive an initial wage benefit of 7.8% when they change jobs. It is not surprising then that they receive 6.1% less when they change careers (a wage increase of 7.6%). Hispanics also adhere to the educational pattern, and in stark contrast to whites, receive a 63.2% premium for career change.

Unlike the outcomes for whites and Hispanics, the results for black respondents deviated from our expectations. While we expected blacks to benefit more by changing careers due to their traditional education profile, this is not the pattern that emerges. Blacks receive an initial wage increase of only 6.4% when they change careers, a relative 15.5% decrease from job transition within careers. This anomaly is reconcilable upon closer inspection of the educational profile of the sample. Table 2 shows that 80% of the black respondents received an education of 12 or more years. This value is much more comparable to the 84% of whites that received a similar education than to the 70% of Hispanics who did. Therefore, given the educational background of this sample of black respondents, the results are not surprising.

Potential Experience

In addition to education, the timing of a job switch in the life of a worker can be an important factor in determining immediate wage returns to mobility. During the first two years in the labor market, workers receive an average wage increase of 11.2% when changing jobs. But as workers progress through their working lifetime, between-job wage gains consistently dwindle from 8.3% between the third and fifth year in the labor market to only a 4.6% gain beyond their tenth year. Results for career and non-career changes show a different pattern, however. Career changes within a worker's first two years in the labor market earn 7.8% less than non-career changes. Once they have been in the labor market for three to five years this trend reverses and workers gain an 18.0% premium for career change. Beyond their fifth year of potential experience the value of career change declines again. Neal (1999) explains this story in relation to actual work experience in his two-stage job search model. He shows that the more time a worker has spent working in the past, the more likely that worker will be closer to their ideal job match. Workers spend the first period of their working life gauging if they are suitable to a particular line of work. If they desire to change industries then they look for a different type of work. The middle time frame demonstrates this new career search. After some time in the labor market, however, establishing a new career causes severe loss of specific capital and limits the time to recover the loss in new human capital investments. Therefore, in later stages of working life, workers maximize between-job wage growth by remaining in the same career and seeking out the ideal employer.

Previous Job Tenure

The duration of the job that the worker held prior to making a switch has a significant impact on between-job wage growth. Workers that move from jobs that lasted two years or less experience a between-job wage boost of 8.7% across all transitions. Workers whose previous job lasted between two and five years, though, see a decline in wage increases to 3.7%. As previous job tenure increases a career change becomes more and more detrimental. This concurs with Neal (1995) and Parent (2000) who

suggest that industry-specific capital plays a significant role in career change. Workers who choose to stay in the same career for 5 years or more receive a between-job wage gain while those who abandon such a career lose wages. Analysis of other variables closely correlated to potential experience or previous job tenure, such as age at the time of the job transition and the number of jobs previously held by the respondent, yielded corroborating patterns.

Search Time Between Jobs

Wage gain differences are also affected by the lag time between jobs. We theorized that longer lags would lead to smaller wage boosts than shorter ones due to increasing pressure on an unemployed worker to find a job and deterioration of human capital. Furthermore, transitions that occur within three months of the conclusion of the previous job are more likely to be conducted by voluntary job changers, those who probably have another job lined up. Transitions that occur outside of this time frame are more likely to be involuntary, or made by laid-off workers who need significant time to find a new job. The data reflects this hypothesis. Workers that search less than three months can expect a between-job wage increase of 9.4%, a significant amount more than the 1.1% increase that accompanies transitions that occur after three months of searching. The returns to career changes and non-career changes over these two lengths of time reveal an interesting outcome. If a career change takes place within three months of exit, an 8.4% premium is realized over simple job change. However, if this same transition occurs beyond the three-month window the worker loses 60.7%.

Unionization

The final, and perhaps most significant factor that we explored was the status of union membership—whether the worker was involved with a union in the previous job, the new job, in both, or in neither. We anticipated that transferring into a union would result in a larger wage boost than transferring out of one, but the explanation for transferring from one union to another versus not being involved at all with unions was ambiguous. Unions typically provide wage benefits to the workers whom

they oversee, while non-unionization allows workers freedom to search for a job-match outside the coercive forces of a union. Results show that any transition into a union is beneficial and that transitions out of unions are generally harmful to immediate wages. Making a career change out of a union into a generally non-unionized industry results in a severe penalty to workers relative to a simple job change out of a union, which perhaps occurs within a largely unionized industry. Career transitions into unions are highly beneficial relative to simple job changes, presumably for the same reason, that transferring into within a largely unionized industry boosts wages less than transferring from a non-unionized industry. Similarly, when both jobs are associated with unions, workers receive a between-job wage increase of 5.4% compared to the 7.2% increase they earn when neither job is unionized. This lends itself to the latter argument discussed above; however, there are relatively few observations in which both jobs involved unions. Consequently, these conclusions might be biased toward job transitions that did not involve unions at either end.

5. Conclusions

While we observe no singular return to career change in the aggregate, regression analyses and statistical mean comparison show that career change offers substantial wage gains to less educated workers who cannot expect significant wage growth within a career. Patterns of return to career change within racial categories reflect the traditional theory that minorities receive fewer years of a lower quality education. More tenured workers are penalized for changing careers relative to changing jobs within a career because they must sacrifice industry-specific skills. Younger workers, who have not accumulated much industry or firm specific capital, sacrifice little when changing careers and therefore receive a high immediate return. Holding other variables constant, workers with histories of high mobility are penalized for career change relative to within-career job changes because they are more likely to be giving up a productive job match. Further research might expand the theoretical explanation of our results regarding unions or examine the effect of career change on the long-term wages of workers and its role in young

worker wage growth. Further analysis is also necessary to explain the true role of previous job tenure on

the immediate return to career change.

Table 1

Descriptive Statistics for Sample of Workers and Job Transitions

Workers With At Least One Job Transition	2,478
Age at Time of Labor Market Entry	22.17

Race
Hispanic	17.23 percent
Black	25.22 percent
Non-Hispanic, Non-Black (White)	57.55 percent

Schooling
HGA<12	19.73 percent
HGA=12	35.59 percent
HGA>12	44.67 percent

Job Transitions
Total Jobs	11,218
Total Transitions	7,802
Transitions Per Worker	3.15
Transitions Involving a Change of Career	3,951
Transitions Not Involving a Change of Career	3,851
Transitions That Occurred Within 3 Months of the Previous Job	5,741
Transitions That Occurred Beyond 3 Months of the Previous Job	2,061

Unionization
Total That Involve Either Joining or Leaving a Union	24.67 percent
Career Changes That Involve a Union	25.26 percent
Non-Career Changes That Involve a Union	24.07 percent

Table 2: Schooling Level Achieved By Race
(Percent of Respondents Within Race in Parentheses)

Years of Schooling

Race		<12	=12	>12	Total
Hispanic		130	134	163	427
		(30.4)	(31.4)	(38.2)	
Black		126	266	233	625
		(20.2)	(42.6)	(37.3)	
White		233	482	711	1426
		(16.3)	(33.8)	(50.0)	
Total		489	882	1107	2478
		(19.7)	(35.6)	(44.7)	

Table 3: Career Changes and Non-Career Changes By Race and Education Level

Race/ Schooling		Career Changes	Percentage of Total Of Career Changes	Non-Career Changes	Percentage of Total Of Non-Career Changes
Hispanic		723	18.3	703	18.3
Black		1117	28.3	897	23.3
White		2111	53.4	2251	58.5
<12		1042	26.4	939	24.4
=12		1597	40.4	1410	36.6
>12		1312	33.2	1502	39.0
Total		3951	100.0	3851	100.0

Table 4: Real Wage Differences for Job Transitions (%)

Category	Total mean	Career Changes mean	Non-Career Changes mean	Percent Difference	T-Test
Total	0.0722	0.0724	0.0720	**+0.6**	0.0374
School Level					
<12 years	0.0535	0.0603	0.0456	**+27.1**	0.6247
=12 years	0.0622	0.0681	0.0555	**+20.5**	0.7638
>12 years	0.0961	0.0873	0.1038	-17.3	0.8157
Race					
Hispanic	0.0573	0.0745	0.0396	**+63.2**	1.3753
Black	0.0684	0.0636	0.0743	-15.5	0.5016
White	0.0789	0.0764	0.0812	-6.1	0.3107
Job Transition Occurring During Year of Potential Experience					
1-2	0.1119	0.1082	0.1170	-7.8	0.3290
3-5	0.0831	0.0905	0.0756	**+18.0**	0.7267
6-10	0.0519	0.0500	0.0537	-7.2	0.1966
>10	0.0463	0.0310	0.0601	-66.2	1.0470
By Previous Job Tenure					
<=2 years	0.0871	0.0872	0.0870	**+0.3**	0.0165
2<X<=5 years	0.0368	0.0314	0.0408	-26.2	0.3919
>5 years	-0.0106	-0.0410	0.0113	-464.2	1.0126
Age At Job Transition					
<=20	0.0920	0.1083	0.0674	**+47.4**	1.3653
21-25	0.0836	0.0866	0.0802	**+7.7**	0.3794
26-30	0.0572	0.0473	0.0657	-32.9	0.9483
>30	0.0545	0.0326	0.0709	-77.6	0.9471
Search Time Between Jobs					
<=13 weeks	0.0944	0.0984	0.0904	**+8.4**	0.6067
>13 weeks	0.0106	0.0077	0.0141	-60.7	0.2916
Unionization					
Union, Both Jobs	0.0538	0.0568	0.0522	**+8.4**	0.1113
Union, Old Job	-0.0008	-0.0308	0.0263	-217.3	2.1894*
Union, New Job	0.1372	0.1833	0.0924	**+68.5**	3.3785*
No Union	0.0722	0.0690	0.0755	-8.9	0.4865
Per Number of Total Jobs Held					
<=5	0.1057	0.1214	0.0914	**+28.5**	0.7417
6-15	0.0815	0.0819	0.0811	**+1.0**	0.0571
>15	0.0385	0.0356	0.0416	-15.6	0.2639
Per Number of Full-Time, Post-Schooling Jobs Held That Lasted At Least 3 Months					
<=4	0.0978	0.1001	0.0957	**+4.5**	0.2127
5-9	0.0668	0.0737	0.0594	**+21.5**	0.9430
>9	0.0389	0.0190	0.0631	-120.0	1.4991

A "+" sign indicates that the immediate between job wage change is greater if a worker switches careers than if he remains in the same career. A "-" sign indicates that the immediate between job wage change is less if a worker switches careers than if he remains in the same career. All values in percentage wage gain for first three columns.
*Statistically significant at 5% level

Table 5: Regression Analyses of Real Wage Differences for Job Transitions

Dependent Variable: Between Job Wage Change

Controlled for White Respondents, Exactly 12 Years of Schooling, & Neither Job has
Union Affiliation

Variable	Total Job Transitions Coefficient (Standard Error)	Career Changes Coefficient (Standard Error)	Non-Career Changes Coefficient (Standard Error)
<12 Years Schooling	-0.0113 (0.0146)	-0.0090 (0.0213)	-0.0126 (0.0199)
>12 Years Schooling	0.0314* (0.0133)	0.0151 (0.0198)	0.0483* (0.0179)
Hispanic	-0.0178 (0.0153)	-0.0018 (0.0229)	-0.0344 (0.0203)
Black	-0.0075 (0.0135)	-0.0115 (0.0196)	0.0001 (0.0186)
Previous Job Tenure	-0.0154* (0.0035)	-0.0152* (0.0055)	-0.0158* (0.0044)
Both Jobs in Union	-0.0195 (0.0236)	-0.0122 (0.0421)	-0.0244 (0.0277)
Only Previous Job in Union	-0.1047* (0.0196)	-0.1315* (0.0279)	-0.0685* (0.0276)
Only New Job in Union	0.1213* (0.0195)	0.1612* (0.0271)	0.0650* (0.0283)
Constant	0.1012* (0.0130)	0.1053* (0.0187)	0.0947* (0.0180)

All values reflect percentage wage impact.
*Statistically Significant at 5% Level or Smaller

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Notes

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[1] This project was funded through the Department of Economics and Business Administration Summer Scholars Program at Furman University. Special thanks to Dr. Jeffrey Yankow for directing and advising throughout the project. All mistakes are our own.

[2] Notably excepting Herbert Parnes (1954) who first examines the "complexity" of labor mobility.

[3] Isadore Blumen, Marvin Kogan, and Philip J. McCarthy (1955), Kenneth Burdett (1978), Jovanovic (1979a,b), Ann Bartel, George Borjas (1981) Robert Topel, Michael Ward (1992), Derek Neal (1995), Audrey Light, Kathleen McGarry (1998), Daniel Parent (2000)

[4] We consider a 1-digit industry code change and a 3-digit occupation code change. See Neal (1999) for a more detailed discussion of the definition of career change we adopt.

[5] Neal (1999), 251.

[6] Mincer (1974) estimates that it takes 10 years for educated workers to surpass their uneducated counterparts.

[7] Bartel and Borjas (1981) offer further discussion on the wage effects of workers who leave a job voluntarily or otherwise.

[8] We allow a lag of 5 weeks due to potential reporting errors surrounding the school-exit dates.

[9] This only applies to jobs that had no report of wage, industry code, or occupation code at all in that particular job's history. Provisions were made to provide reporting latitude whereby jobs that failed to report any of these three in its initial observation were assigned the first available value in its history. Jobs that required this type of value-transplant beyond the second observation applied to 0.3% of the jobs regarding wages, 3.2% regarding industry codes, and 3.2% regarding occupation codes. This does alleviate some reporting error in industry and occupation codes, as errors in coding tended to show up in the middle of a job's history. The results discussed on the following pages were established with these wage allowances; however, the differences between these results and the figures determined with these observations deleted from the sample are negligible. Therefore, they were allowed to remain in the sample in order to increase the likelihood of statistical significance between comparable means.

[10] This selection criterion is similar to that used by Topel and Ward [1992] who consider very short-term jobs part of a single transition between surrounding jobs of more extensive duration.

[11] Other lengths of time were considered at this point, but the results of these analyses are minimally different from the ones described below.

[12] This is defined as the age when the respondent began his first job after he completed schooling.

[13] This is calculated by subtracting the natural log of the "non-career" mean from the natural log of the "career" mean. A positive sign indicates that the transition favors a change in career while a negative shows that a non-career change holds the relative advantage.

[14] Topel and Ward (1992) estimate this figure for the first ten years of employment for young men to be 11.4%. The discrepancy arises from a difference in sampling methods. Topel and Ward's estimations include part-time and summer employment for students before they exit school. Consequently their sample includes younger workers and employment spells that would begin at lower wages, factors that would understandably increase estimated wage growth.

[15] Borjas (2000)