Job Mobility and the Black-White Wage Gap*

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Abstract

This paper examines the effect of job mobility on the Black-White wage gap over the early career through the theoretical channels of job shopping motives, human capital accumulation, and statistical discrimination in the labor market. Using data from the National Survey of Youth 1979 spanning the years of 1979 to 2002, I estimate the differential returns to job mobility over the worker life-cycle using Armed Forces Qualifications Test (AFQT) score and tenure as proxies for general unobserved skill and job-specific human capital, respectively. I find that controlling for job mobility over time explains the observed Black-White wage gap over the worker life-cycle since Black workers face a large penalty when they change employers. Furthermore, the analysis shows that Black workers face a greater extent of wage loss at higher levels of pre-separation tenure. The empirical results indicate that the observed Black-White wage can be explained with the theoretical channels of statistical discrimination or human capital accumulation. The findings in this paper provide additional directions for future research to investigate how the three theoretical channels can explain the development of the Black-White wage gap through job mobility.

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1 Introduction

For more than half of the past century, Black-White wage differentials have persisted relentlessly in the labor market despite the considerable gains in economic outcomes made by Black workers. In 2019, Black men earned about 71% of the weekly earnings of White men without controlling for observed factors related to disparities in earnings such as education, age, and industry (Bureau of Labor Statistics, 2020). While these observed factors account for most of the racial wage gap, unobserved factors have increasingly accounted for the unexplained portion of the Black-White wage gap over the past few decades (Daly, Hobijn, & Pedtke, 2017). After accounting for observed characteristics, about a third of the earnings gap for Black and White workers was left unexplained in 1979. And by 2016, this unexplained portion had increased to account for nearly half of the total Black-White wage gap.

Though Black-White wage differentials are typically explained by pre-market factors, the unexplained portion can be disentangled with different economic theories relating to observed events and decisions that occur after individuals enter the labor market. Research on workers' post-market entry decisions on lifetime earnings include topics on job mobility. Notably, the increase in earnings associated with job mobility accounts for at least a third of wage growth in the early career, and job mobility is critical for workers' stable employment later in their careers (Topel & Ward, 1992). Given its large influence on workers' earnings, the effect of job mobility should be examined when studying the Black-White wage gap. In this paper, I investigate how job mobility affects the observed Black-White wage gap over the worker life-cycle through three theoretical channels: the job shopping channel, the human capital channel, and the statistical discrimination channel.

First, the job shopping channel refers to workers' decisions behind moving jobs and how the effect of changes in certain firm or geographic characteristics differentially affect Black and White workers' earnings. Since workers move for different reasons, a job transition can be accompanied by a change of a firm characteristic or geographic location. If wage

bargaining is more frequent in large firms, Black workers who move to a larger firm may lead to observed wage differentials if Black workers have less wage-setting power relative to White workers. Second, the human capital channel refers to differences in Black and White workers' job-specific skills accumulated over their time in the labor market and how job transitions interrupt the accumulation process. Through this channel, Black workers are expected to face a greater wage loss relative to White workers when they have the same levels of pre-separation tenure. Lastly, the statistical discrimination channel discerns the mechanisms by which employers pay their workers according to the level of workers' observed productivity. When there is statistical discrimination, employers that negatively associate productivity with race will initially pay a Black worker less than a White worker of the same level of unobserved skill. Over time, the employer learns about the Black worker's true ability and compensates him for his marginal product. When Black workers change jobs, the employer learning process is reset with his new employer and thus he faces another wage penalty in his new job. The existence of statistical discrimination and job transitions would lead to an observed Black-White wage gap over the early career. Given that general and job-specific human capital accumulation significantly increases wage growth in the early career, the different effects on wages for Black and White workers are ambiguous when considering these theoretical channels. A Black worker makes less in earnings relative to a White worker that has the same level of unobserved skills and the difference in wages is exacerbated when Black workers move jobs.

To investigate whether the three aforementioned theories can explain the Black-White wage gap, I use individual-level panel data from the National Longitudinal Study of Youth 1979 (NLSY) over the years of 1979-2002 with a sample of Black and White men that have either received a high school diploma or college degree. I present an ordinary least squares model to examine the returns to job mobility by race. In the model, I utilize the measure of potential experience to estimate wage trends over time. To estimate these effects over the early career, I include a linear combination of interactions between potential experience, a

Black indicator variable, and a job-moving dummy to estimate the returns to mobility by race over time. Similarly, I add interactions with tenure to estimate the effect of job-specific human capital and job moving on the wage gap. Additionally, I analyze whether statistical discrimination and employer learning have a role in the Black-White wage gap through the use of workers' Armed Qualifications Test (AFQT) scores as a proxy for unobserved productivity. Finally, I classify observed changes in firm size and occupation as career-related reasons and geographic changes as non-wage reasons for changing jobs to estimate the effect of Black and White workers' job shopping motives on wages.

Among high school-educated workers, I find that Black workers who change jobs reap significantly fewer returns to experience in the early career relative to White workers of the same level of unobserved skills. Black workers who make a job transition earn roughly 1.5 less than White workers' returns to job mobility for each additional year in the labor market. Furthermore, the results also show that Black workers have a greater extent of wage loss upon changing jobs when they have higher levels of pre-separation tenure. The empirical evidence suggests that the observed Black-White wage differentials can be explained by the existence of statistical discrimination in the labor market or differences in the accumulation of job-specific skills and human capital.

This paper supplements the existing literature on the Black-White wage gap by introducing theory on employer learning, human capital accumulation, and job shopping to explain the observed wage differentials over the early career. The results of this paper can advise policy changes to increase equitable outcomes in the labor market. Since productivity differences in Black and White workers continue to drive part of the wage gap, policy changes in the pre-market period include increasing job-specific skills training before the completion of formal education. Additionally, policy regarding anti-discrimination enforcement in hiring and pay is needed so that Black workers are compensated for their skills.

This paper is organized as follows. Section 2 reviews the existing literature on job mobility. Section 3 presents the theoretical framework on the mechanisms through which job

mobility affects the Black-White wage gap. Section 4 describes the data used for analysis, sample selection, and variable creation. Section 5 presents the empirical model that estimates the returns to job mobility by race. Section 6 discusses the empirical results. Section 7 concludes with policy implications and areas for further research.

2 Literature Review

The large body of theoretical and empirical literature on Black-White disparities in labor market outcomes focuses on pre-market factors, such as primary education and family background (Black et al., 2006; Neal & Johnson, 1996). Though these studies have shown that pre-market factors have a large role on wage differentials by race, research to explain this gap with the post-market entry experiences of Black and White workers has been relatively sparse. Within this area of literature, researchers have explored Black-White worker differences in the topics of match theory and occupational matching (Golan & Sanders, 2019; Neal, 1999) and geographic mobility (Raphael & Riker, 1999). Since job mobility is linked to the theory of job matching (Jovanovic, 1979), the effect of job mobility on the wages of young workers has been studied extensively but has less frequently focused on effects by race. I contribute to the literature by departing from these models and differentiating the effect of mobility by race and education.

In general, the returns to job mobility are defined as the difference in wages between two successive jobs of employed workers. Many studies have shown that average rates of job changing decline with age or experience and decline even more with current job tenure (Mincer, 1986; Topel & Ward, 1992). Especially in the early career, human capital accumulation is a strong determinant in how much a worker gains in his returns to mobility. The study from Topel & Ward concludes that a worker's uncertainty about the match with his job declines as he learns of certain information about a career match and as he accumulates job-specific human capital over his actual labor market experience and tenure. When examining

the gendered differences of job mobility and career interruptions, Amano-Patiño, Baron, and Xiao (2020) find that fertility-related interruptions on the wage gap result in women having lower levels of human capital. Overall, many studies on job mobility suggest that workers learn about their specific skills as they complement their respective productivity in certain jobs (Jovanovic, 1979; Neal, 1999). That said, papers on the effect of human capital accumulation on workers' mobility decisions primarily use samples of White men or women and do not consider the heterogeneous characteristics of workers, particularly of race, that may contribute to the observed differences in earnings. In this paper, I extend my analysis on the role of human capital accumulation in job transitions with a focus on racial differences.

In empirical papers that study skill matching through job transitions, authors typically utilize measures of schooling as a proxy for workers' general human capital. Especially on papers that investigate the Black-White wage gap, authors have departed from using schooling or academic achievement as a measure of ability and instead employ workers' Armed Forces Qualifications Test (AFQT) score in wage regressions. Neal and Johnson (1996) argue that years of schooling likely overstate the relative skill of Black workers since schooling is characterized as an input rather than an outcome of workers' abilities. While Neal and Johnson rely on AFQT as a proxy for skills, studies have shown that schooling itself affects AFQT performance (Altonji & Pierret, 2001) and that the AFQT is racially biased (Rodgers & Spriggs, 1996). While using AFQT score creates the aforementioned problems, an observed variable that is an alternative that measures a worker's skills is currently unavailable. In this paper, I use AFQT score as a proxy for workers' skills.

Another way that job mobility affects earning differentials is through the channel of job shopping. Job shopping motives contribute to workers' job mobility decisions and in turn affect wage gaps when there are differential returns by race. On the gender wage gap, women choose jobs related to a work-life balance relative to the process of family formation. For women that move to large firms, the gender wage gap is driven by lower bargaining power in larger firms (Del Bono & Vuri, 2011). As for the Black-White wage gap, Black

workers who are employed in large firms earn lower wages relative to White workers since White workers earn significant wage premiums from greater bargaining power (Mitra, 1999). Furthermore, within-occupation racial disparities are most observable in high-profile, private-sector positions and can be traced to social segregation of Black and White professionals (Grodsky & Pager, 2001). I borrow empirical methods from Del Bono & Vuri to investigate job shopping motives of Black workers to build onto findings for the Black-White wage gap.

Amongst the literature that investigates workers' post-labor market entry decisions on wage gaps, researchers have empirically tested for statistical discrimination based on race and education with AFQT score as a proxy for workers' unobserved skills and ability. For workers of the same level of productivity, Altonji and Pierret (2001) introduce the theory of employer learning and find that employers statistically discriminate based on education but not on race. Arcidiacono, Bayer, and Hizmo (2010) build onto Altonji & Pierret's theoretical model through the channel of information signaling and they conclude that there is statistical discrimination based on race in the high school market but not in the college market. While empirical papers have explained part of the Black-White wage gap with statistical discrimination, the papers by Altonji & Pierret and Arcidiacono et al. do not consider the role of job transitions in the early career.

Currently, there are few papers that include workers' job changes in tests for statistical discrimination. The employer learning process is interrupted when a worker changes jobs since the new employer must now learn about his true productivity. If employers statistically discriminates on race, Black workers face an initial wage penalty with the new employer. Since workers are mobile in the early career, the observed widening of the Black wage gap over time can be attributed to statistical discrimination. Thus, it is necessary to consider workers' job mobility patterns when empirically determining whether there is statistical discrimination on the basis of race in the labor market. Of the existing literature that links job mobility to statistical discrimination, Oettinger (1996) tests for statistical discrimination on the basis of race during the early career of Black and White workers. Oettinger finds that

no Black-White wage gap exists at the beginning of workers' careers, but one develops since Black workers reap smaller gains from job mobility relative to White workers. Oettinger does not estimate the model separately for high school- and college-educated workers, the results are likely biased since workers reap different returns to mobility by educational attainment. Additionally, Oettinger does not have an unobserved proxy of ability when determining whether there is statistical discrimination against Black workers. I expand on these findings by using workers' AFQT score as a proxy for unobserved human capital in my paper.

While prior relevant research has empirically shown that job transitions provide avenues of wage and career growth for young workers and set a foundation for their lifetime earnings, the effect of mobility on Black-White wage differentials is yet to be explored with theories unrelated to productivity differences. Furthermore, the majority of research on the role of job mobility on wage differences is centered on the gender wage gap. This paper assesses the decisions made by Black workers after entering the labor market and employers' interactions with workers on the Black-White wage gap considering job shopping, job-specific human capital, and statistical discrimination as theoretical foundations for the different returns to job mobility.

3 Theoretical Framework

As described in the previous section, workers' engagement in job mobility leads to lifetime career and wage growth in their early careers. Yet, there are different ways that Black-White wage differentials arise when workers choose to move jobs. First, workers' motives behind moving jobs vary vastly and affect wages differently through their personal choices. On the other hand, workers' general and job-specific skills impact how workers are compensated for their marginal product in areas of work. Finally, employers have a large effect on wage-setting by how they learn about workers' unobserved ability. Below, I describe the three theoretical channels to decompose the persistence of the Black-White wage in the context of

job mobility.

3.1 Job Shopping Motives

Some workers choose to move jobs for purely financial reasons to increase their earnings. Workers can also have non-pecuniary reasons for moving jobs such as relocating to be closer to family, partaking in more relaxed work environments, or fostering more satisfactory relationships with coworkers. Generally speaking, a job-mover voluntarily seeks a new job under the expectation that his next job is expected to yield a greater amount of utility relative to that of his current job.

Job shopping refers to the experimentation of well-fitting jobs that accompany high rates of mobility in the early career (Johnson, 1978). Over workers' experience in the market, workers determine their preferences and ability with respect to certain jobs. Workers engage in job shopping to find a fitting job to maximize their utility while engaging in labor market activities. Johnson's theory presents the reasoning behind why workers engage in job mobility due to workers' unknown information of job-specific abilities, as well as personal preferences, that induce them to explore different jobs or careers. Workers make a tradeoff between their utility from working in their current job and uncertainty of returns to different jobs.

For workers that choose to move jobs for career-related and financial reasons, we may see them moving to larger firms to receive more employee benefits or to climb the job ladder. These changes likely have different effects on wage growth due to a worker's gender or race. In terms of gender differences, a female worker may face gender discrimination and thus be less likely to receive certain benefits relative to a male worker if she is of child-bearing age. As for racial differences, a Black worker may earn less in wages relative to a White worker by moving to a larger firm. If workers generally have greater wage-setting power through bargaining in larger firms, Black workers may have less bargaining power relative to White workers. Holding all else equal, a Black worker cannot negotiate his wages to be as high as those of a White worker's bargained wages when he has less bargaining power. In larger

firms, employers may be racially prejudiced against Black workers and thus be less likely to accept higher bargained wages from Black employees.

As for the non-pecuniary reasons, a worker may move across different geographic areas due to a personal distaste of his location or residence or to be closer to friends and family. Black workers may face more racial prejudice from employers in different geographic locations relative to the area's cultural and political attitudes which leads to an observed wage gap. The effects of job shopping on observed wage differentials leave us to question the specific firm and social structures that disadvantage Black workers. If the job shopping channel were to explain the Black-White wage gap, we would see that Black workers earn less in wages relative to White workers when workers move to differently sized firms or move to a new geographical location conditional on worker skills and observed individual characteristics.

Black and White workers might have different returns to certain firm and geographic characteristics upon changing jobs which would contribute to the observed Black-White wage gap. With all of that said, Black and White workers may simply value different aspects of jobs. If Black workers are more likely to move jobs for non-pecuniary reasons, we would see the emergence of a Black-White wage gap over the lifetime since Black workers primarily value non-monetary aspects of work. As a result, the Black-White wage gap would instead be driven by Black workers self-selecting into different firms.

Prior to a job transition, a worker must balance the benefit of a potential wage increase in his new job with the cost of losing job-specific human capital accumulated in his previous job. The direction of the effects of job shopping on the wage gap is unclear if Black and White workers accumulate human capital at different rates. Thus, I supplement the theoretical framework of this paper by accounting for the channel of human capital accumulation on the Black-White wage gap.

3.2 Human Capital

The gains from job mobility can be defined as the wage difference between the wages of his previous and current job at the same level of tenure when controlling for general work experience (Mincer, 1986). Immediately following a job transition, a worker's initial wages in his new job may be lower relative to the wage received in his previous job. Wages immediately following a job-to-job transition can be lower for various reasons: a new worker can be less familiar with his employer, the worker is promised a raise in the following year, or the worker has not had time to develop new job-specific skills. When an employer compensates a worker relative to his marginal product of labor, a worker's earnings increase as he gains more skills specific to his job as he accumulates more job-specific experience (tenure) with his respective employer.

Over a worker's tenure, a worker accumulates job-specific human capital in his current job that may be irrelevant to a new future employer. Moving to a new job is costlier for workers with higher pre-separation tenure since their job-specific human capital may not be transferable to a future job. A worker who remains in his previous job for longer learns more about employee interactions and processes that make him more productive but moving to a new employer in the same line of work can still result in an initial wage penalty since his previous job-specific skills become irrelevant with his new employer. In the example where a worker has the occupation of a college professor, he accumulates skills specific to practices in his current university (such as communicating with colleagues or navigating classrooms), but these skills become less important when he teaches as a professor at a new university. That said, the worker can still transfer his occupational-related skills at his new job.

On the other hand, the effect of losing job-specific human capital is exacerbated when a worker changes his occupation with a job move. With a change in occupation, wage loss is expected to be greater if higher levels of tenure with workers' employers before moving jobs translates to greater wage loss. For example, the worker who changes his occupation from a college professor to an electrician not only loses the previously mentioned skills, but he also

loses the technical skills related to when he held the job as a professor.

To explain the Black-White wage gap with the human capital channel, Black workers would be expected to face greater wage loss relative to White workers when they have the same levels of pre-separation tenure. As previously mentioned, Black workers may voluntarily work in occupations that earn relatively less. Thus, discerning the reasons for job changes is important for decomposing the Black-White wage gap. The observed lower returns to job mobility can further be explained by racial discrimination in layoff decisions by employers. If an employer must decide to fire either a Black worker or a White worker that each has the same level of productivity, the employer may choose to fire the Black worker due to his negative racial preferences. Thus, the Black worker would face greater wage loss from racial discrimination from this involuntary job transition.

Further concerning job turnover, young workers tend to move jobs frequently as they learn more about their specific skills and preferences. Voluntary job moves are more likely to occur in the early career, while workers are more likely to face an involuntary job movement later in their careers due to layoffs from recessions or firm closures. The stability of certain jobs can differ by firm characteristics, industry, and part-time status during recessions or economic uncertainty. Workers in smaller firms may face a higher likelihood of separations due to resource limitations; part-time workers are more likely to face involuntary separations during economic downturns; and certain industries are also likely more susceptible to face mass layoffs relative to others, especially during economic downturns. In relation to the wage gap, issues of selection arise if Black workers are disproportionately employed in industries more susceptible to firm closures.

By considering the role of human capital accumulation on the Black-White wage gap, I consider the differences in skills between Black and White workers and the potential for greater skill loss when moving jobs. If the Black-White wage gap was attributed to differential returns to human capital, then the amount of Black workers' wage loss would be greater for each additional year of tenure with their previous employers. The loss may be greater for

Black workers if they acquire more job-specific skills or gain these unobserved skills at a faster rate during their tenure. Assuming that workers are compensated by wages relative to their marginal product of labor, systematic differences in Black and White workers' productivities only partially explain the observed wage differentials. Thus, I present the final theory on statistical discrimination and employer learning.

3.3 Statistical Discrimination

Another explanation for racial disparities in labor market outcomes can be attributed to two economic models of discrimination. The model of taste-based discrimination from Becker (1957) describes discrimination as a reflection of personal prejudice or preferences. On the other hand, the model of statistical discrimination from Phelps (1972) and Arrow (1973) refers to how an individual discriminates on another person's observed characteristics due to incomplete information. In this paper, I consider how statistical discrimination affects the Black-White wage gap through job mobility.

The theory of statistical discrimination is centered on observable characteristics of workers and learning processes. Given that an employer pays his workers respective to each worker's productivity, high-productive workers are paid higher wages relative to low-productive workers when the employer has perfect information about the worker. In reality, the employer has limited information on a worker's true productivity upon hiring the worker and therefore may statistically discriminate on a worker's observed characteristics, such as education or race, when paying his wages. If an employer negatively associates race (being Black) with productivity, then the employer initially pays a Black worker less than a White worker that has the same level of unobserved ability.

With employer learning, a Black worker would face an initial wage penalty since the worker's true ability is unseen by the employer. Over time, the employer learns about the Black worker's true productivity and relies less on race as a proxy for unobserved skills. The Black worker reveals his true productivity to his employer and is compensated for his

skills. Conditional on skills, the Black-White wage gap should only exist upon entry to the labor market since the employer learns more about a Black worker's marginal product and no longer statistically discriminates on race. That said, the theory behind employer learning on the wage gap only holds true if workers remain with the same employer when they are in the labor market. In reality, workers make multiple job changes during the early career.

In the context of job mobility, the process of employer learning resets with a worker's new employer when the worker changes jobs. Since the new employer does not have the same information on the worker's productivity relative to his old employer, a high-productive worker faces a larger wage loss in comparison to a low-productive worker. If a Black worker's previous employer and new employer both statistically discriminate on race, the Black worker again faces an initial wage penalty after changing jobs. If all employers generally statistically discriminate by race, a Black worker that moves more frequently faces a greater wage penalty relative to an immobile Black worker since the new employer does not have the same information as the previous employer on the mobile Black worker's true productivity. In the presence of statistical discrimination by race, the Black-White wage gap would therefore widen over time when workers engage in job changes throughout their early careers due to the repeated cycles of the employer learning process.

While research on taste-based discrimination is important to further decompose the Black-White wage gap,[1] the data used in this paper is more suitable for testing whether there is statistical discrimination. When employers statistically discriminate on race, the data would show that Black workers have an initial wage penalty upon moving but Black workers' wages would not grow at a rate that is different from that of White workers. Furthermore, the returns to worker productivity would be positive over time. Under statistical discrimination and job mobility, Black workers would face a wage penalty after every job change throughout the early career.

Theoretically, the effects of job mobility are ambiguous on Black and White workers'

[1] See Bertrand and Mullainathan (2004), Charles and Guryan (2013), and Castillo et al. (2013) for research on taste-based discrimination.

relative earnings when considering different channels that contribute to the wage differentials. Job mobility can lead to a large loss in wages with greater human capital accumulation when there is skill mismatch or discrimination; while on the other hand, a job transition can also lead to higher earnings when the worker moves voluntarily for career-related reasons to improve his potential earnings. I investigate whether any of these theoretical channels can explain the observed Black-White wage gap over time. Given that workers' motives, abilities, and outside discrimination are unobserved, the empirical methodology in this paper uses proxies for job-specific human capital accumulation and workers' unobserved skills from the NLSY.

4 Data

The National Longitudinal Survey of Youth 1979 (NLSY) is a nationally representative panel data set that consists of 12,686 young men and women that were 14-22 years of age at the first interview in 1979. The surveys were conducted annually from 1979 to 1994 and then moved to a biennial schedule thereafter until its end in 2016. The NLSY captures detailed information on individuals' work history and job characteristics such as workers' firm size and industry, voluntary or involuntary job transitions, and worker's job expectations. Most importantly, the NLSY data contains rich information on workers' employment histories in weekly and yearly arrays which allows for detailed construction of work history variables.

For the empirical analysis, I use the waves of NLSY data spanning the years of 1979-2002. As for the sample, I only include White and Black male respondents who have completed either 12 or 16 years of formal education, where individuals have only received a high school diploma or college degree, respectively. Workers of mixed race are not included in the sample. Hispanic individuals are also dropped from the sample due to the confounding effects of immigration. I exclude female respondents from the sample to account for the confounding effect of fertility decisions and the limited sample of Black female respondents in the NLSY

cohort. Furthermore, I exclude men who have enrolled in the military to center my study on civilian employees.

Since this paper focuses solely on individuals after entering the labor market, I exclude observations before respondents' last year of education and restrict the sample to individuals who do not enroll in additional years of schooling between successive years of employment. Including these individuals would disrupt their potential experience. I additionally exclude observations in which workers are self-employed or work without pay since this paper considers the role of employers in wage determination. Respondent errors, inconsistent interview dates, and coding errors make it difficult to render weekly job arrays that include every possible job change with accurate measures of tenure and employer identification. Thus, I determine workers' main job as the job they worked for the most weeks in each survey year. Furthermore, I limit the sample up to the year 2002 since the sample of respondents after 2002 is insufficient for data analysis and would therefore bias the estimates and results of this paper. Lastly, I exclude observations with hourly real wages less than $1 and more than $100, which drops 493 observations

After determining workers' main jobs for each year, a job move is coded as 1 if the worker's employer in the previous year is not equal to his current employer. Since respondents vary in age at the beginning of the NLSY survey year, I standardize AFQT scores for respondents within each age group. The standardized AFQT score is used in place of the raw AFQT score since AFQT scores vary by age and using the raw AFQT score would be an inaccurate proxy for ability. For example, an older respondent's AFQT score is likely greater than a younger respondent's score, but it does not necessarily mean the older respondent has greater general ability than the younger respondent does. The younger respondent may actually have a relatively high AFQT score in comparison to the other respondents of his same age.

The standardized AFQT score is constructed by finding the average AFQT score in the individual's age group and subtracting the individual's actual AFQT score from the average,

and then dividing this value by the standard deviation of AFQT within his age group. For workers' time in the labor market, potential experience is measured as the number of years from their first graduation date. Individuals in this sample have up to 15 years of potential experience to capture job changes at the beginning of their careers. I place the define a worker's first 15 years in the labor market as the early career where mobility is the most important for wage growth. To measure labor market outcomes with hourly nominal wages, I index workers' real wages to the base year of 2000 with yearly Consumer Price Index (CPI) data from the Bureau of Labor Statistics. The NLSY presents a cumulative measure of a worker's tenure in weeks and indicates if an individual's employer has changed from the previous survey year. I divide a worker's reported tenure by 50 to measure tenure in years and further create a lagged variable of tenure.

As for the controls in my model, I create indicators for firm size since respondents give a range or an exact number in the data. Workers who work 30 hours or less per week in their reported job are coded as part-time. With the survey responses relating to the respondent's answer of leaving their previous job, I classify a job move as involuntary if he responds with lay-offs or plant closures, fired, or work program ended, and voluntary job moves if he responds with quit. Since the occupation coding changes over decades in the NLSY, I limit the occupation variable to a set of seven dummies. Full descriptions of variable construction are located in Appendix A.

Table 1 reports the means and standard deviations of relevant variables for the total sample of 2,515 workers and 17,846 unique person-year observations used for analysis. Full summary statistics are located in Table A2. As expected, the raw data shows that there is a difference in earnings between college- and high school-educated workers, as the average nominal and log of nominal wages are higher for college workers in both White and Black categories. Across the board, Black workers with a high school degree have the lowest average log hourly wage and average standardized AFQT score. Interestingly, this sub-sample of workers also has the highest average number of total jobs and lowest average tenure. High

Table 1: Sample Summary Statistics

	High School		College	
	White	Black	White	Black
Nominal Hourly Wage	12.256	10.145	18.680	17.657
	(5.598)	(4.762)	(9.026)	(8.520)
Log Hourly Wage	2.411	2.230	2.816	2.769
	(0.443)	(0.409)	(0.485)	(0.466)
Potential Experience	7.647	8.247	6.730	7.383
	(3.974)	(3.950)	(3.938)	(4.031)
Tenure	3.205	2.556	3.678	3.743
	(3.302)	(2.861)	(3.494)	(3.544)
AFQT	0.264	-0.824	1.110	0.365
	(0.786)	(0.767)	(0.457)	(0.748)
Total Jobs	4.912	6.248	4.132	4.632
	(2.904)	(3.445)	(2.492)	(2.431)
Mobility Variables (%)				
Stayed at Job	57.2	50.0	65.4	63.6
Moved Jobs	42.8	50.0	34.6	36.4
Voluntary	71.1	63.2	80.0	83.9
Involuntary	28.9	36.8	20.0	16.1
Individuals	1280	597	532	106
Observations	9127	4198	3764	757

Notes: Standard deviations are in the parentheses below means. The percentages of voluntary and involuntary moves are taken within the sample of those who engage in a job move. Nominal hourly wage reported are in 2000 USD.

school-educated workers who engage in a job move also have the highest percentages of involuntary movements relative to college-educated workers which indicates that there is some type of selection between the two groups. For example, high school-educated workers may be more willing to move jobs for non-wage reasons, while college-educated may only make job transitions for career-related reasons. The sample of Black workers (especially those in the college market) is small and likely is not representative of the population and the inferences drawn from the summary statistics should be made carefully.

5 Empirical Model

The theoretical framework discussed in Section 3 guides the design of the empirical model with observed variables in the data. Equation (1) is the model that investigates the roles of statistical discrimination and human capital, while Equation (2) presents additional modifications to Equation (1) to explore the job shopping channel on the Black-White wage gap.

First, I estimate the following ordinary least squares equation for log hourly wages, w_{it}, on job mobility and race,

$$\begin{aligned} w_{it} = \phi(X_{it}, N_{it-1}) + \beta_0 + \beta_1 B_i + \beta_2 M_{it} + \beta_3 B_{it} M_{it} + \beta_4 B_i \phi(.) + \beta_5 M_{it} \phi(.) \\ + \beta_6 B_i M_{it} \phi(.) + c_i \theta + c_i X_{it} \Theta + \mathbf{K}'_{it} \gamma + \delta_t + \epsilon_{it}, \end{aligned} \tag{1}$$

where B_i is the race indicator equal to one if worker i is Black and M_{it} is an indicator equivalent to one if worker i has a new employer in year t. Since job-specific human capital is crucial in workers' mobility decisions and wages, the term $\phi(X_{it}, N_{it-1})$ in Equation (1) denotes a non-linear function of human capital,

$$\phi(X_{it}, N_{it-1}) = \alpha_1 X_{it} + \alpha_2 X_{it}^2 + \alpha_3 N_{it-1} + \alpha_4 N_{it-1}^2,$$

where X_{it} denotes potential experience at year t and N_{it-1} denotes tenure in the year $t-1$. In Equation (1), the coefficient on B_i estimates the Black-White wage gap at the beginning of young workers' careers. The returns to potential experience and previous tenure are expected to have a positive effect on log wages since workers increase their wages with human capital over time. The interactions between the Black indicator and human capital function capture how Black workers have different returns to potential experience and tenure over time in the labor market. Given by the interaction between Black and $\phi(.)$, the coefficient on $B_i X_{it}$ can be interpreted as the average growth of the racial wage gap for each additional year in the labor market. I render the OLS assumption that the relationship between log wage

and race is linear over experience for the sake of result interpretation. In the data, the true relationship between log wages and race is actually non-linear: White workers reap higher returns to experience over time relative to Black workers. The violation of the linearity assumption may overestimate the magnitude of the Black-White wage gap at higher levels of potential experience.

The coefficient on M_{it} estimates the initial effect of a job transition on wages and the interaction of M_{it} with B_i captures the wage difference between Black and White workers upon a job move. The job move dummy is interacted with the human capital function since the effect on wages varies over time in the labor market. The triple interaction term of Black indicator, job move dummy, and potential experience renders the racial wage gap in returns to job mobility over time. This triple interaction term would be negative if Black workers' returns to potential experience are negatively impacted when they change jobs.

The estimates for the race and job move interactions with previous tenure are expected to have the same directional effect on wages. A negative coefficient on the interaction between tenure and job moving can translate to a loss in job-specific human capital in the form of an observed wage penalty. If Black workers face a larger extent of wage loss through the forfeiture of job-specific skills after job moving, we would expect to see a significant negative coefficient in the triple interaction term between Black, job moving, and previous tenure. With these interaction variables, I estimate the Black-White wage gap and its persistence over time for when workers make job transitions in the early career.

Next, the term c_i in Equation (1) captures the individual's ability and is proxied by the respondent's age-standardized AFQT score from the NLSY. The proxy c_i is unobserved to the employer but observed by the econometrician. If the worker's ability is initially unknown to the employer, then the coefficient on AFQT should be insignificant. I include AFQT and an interaction with potential experience to investigate whether a worker's productivity is revealed to the employer over time. If employer learning occurs, then the AFQT and potential experience interaction term should be positively correlated with the worker's wages.

I additionally include a triple interaction of AFQT, potential experience, and job moving. The triple interaction between ability, potential experience, and job move accounts for the interruption of the employer learning process when a worker changes jobs. The triple interaction is expected to be negative since the worker's new employer does not have the same information on the worker's productivity relative to the previous employer.

Firm- and individual-specific time-variant controls are captured in the vector $\mathbf{K}'_{it}$. These controls include sets of indicators for region and urban residence, firm size (small, medium, and large), occupation, and part-time status of worker i in year t, as well as these variables interacted with potential experience X_{it}. I include interactions of these time-variant characteristics with potential experience since these variables may have different effects on a worker's wage later in their careers from their first year in the labor market. δ_t is a set of year dummies that control for year fixed effects. The presence of time-specific shocks, such as recessions, affects worker mobility and wages and would bias the results if omitted. During economic recessions, workers would move jobs during a temporary layoff and wages would be affected. Finally, ϵ_{it} is the error term.

To further explore the Black-White wage gap, I test for the effect of different job shopping motives on wages. The effect of job mobility may be confounded with specific changes in employer- or firm-specific characteristics or geographical differences. For example, if a job mover transitions to a non-urban location where his previous job was located in an urban area, he may have a more negative effect on his earnings relative to job-movers who remain within the same area. Changes in these characteristics may differentiate by race as well. White workers may face a wage penalty when moving to a smaller firm, but the penalty may be greater for Black workers when they make the same type of job move. With the same variables specified in Equation (1), I estimate log wages on workers' changes in firm

characteristics and geography,

$$
\begin{aligned}
w_{it} = {} & \phi(.) + \beta_0 + \beta_1 B_i + \beta_2 M_{it} + \beta_3 B_{it} M_{it} + \beta_4 B_i \phi(.) + \beta_5 M_{it} \phi(.) + \beta_6 B_i M_{it} \phi(.) \\
& + \eta_0 \mathbf{D}_{it}^K + \eta_1 M_{it} \mathbf{D}_{it}^K + \eta_2 B_i \mathbf{D}_{it}^K + \eta_3 B_i M_{it} \mathbf{D}_{it}^K + c_i \theta + c_i X_{it} \Theta + \mathbf{K}'_{it} \gamma + \delta_t + \epsilon_{it},
\end{aligned} \tag{2}
$$

where $\mathbf{D}_{it}^K$ is a vector of dummy variables equal to one if a variable of set $\mathbf{K}'_{it}$ in time t is not equivalent to the characteristic in time $t-1$.[2] That is, there is an observed change in some characteristic of $\mathbf{K}'_{it}$ in the current period relative to the previous period. Variables captured in $\mathbf{D}_{it}^K$ are divided into two types: changes in firm- or employer-specific characteristics and changes in geographic location. For the changes in firm and employer characteristics, groups of indicators include moving to a larger firm and moving to a smaller firm; and a worker changes his occupation. The dummy for occupation changes is only available for job-movers since a change in occupation necessarily means that a worker has moved jobs. The dummies for geographic changes include a set of dummies equal to one if the worker moves from an urban to non-urban residence and vice versa; and if the worker moves from one region to one of the three different regions. The reference group for each variable is where the worker does not have a change in firm-related characteristics or geographic location.

Equation (2) estimates heterogeneous effects for both job-movers and job-stayers. I include job-stayers in this model because they may have a change in a firm- or geographic-specific characteristic but not endure a job transition. A situation that this model would capture would be the effect on a job-stayers' wages when the size of his firm grows yet he remains employed at the same job in consecutive periods.

Determining the true motives of job changes is rather difficult due to data limitations. Data on job satisfaction is only present for four years in the data and is insufficient for relevant empirical analysis to determine whether a worker moves for purely pecuniary reasons. Since the data on reasons behind workers' job separations is not detailed to make robust

[2] I adapt the model from Del Bono and Vuri (2011), where the authors estimate changes in firm characteristics on the gender wage gap in Italy.

assumptions, I place certain assumptions on the types of observed changes with job moves. Changes in occupations and firm characteristics can be seen as career reasons and geographic changes can be interpreted as non-wage reasons and preferences. I estimate Equation (2) for workers who voluntarily change jobs to follow the theory behind job shopping.

When using OLS to estimate the effects of job mobility on wages, there may be unobserved variables that would bias the results. While a model of OLS with cluster standard errors accounts for the panel data structure and the non-independent observations, OLS assumes there are no unobserved time-invariant variables correlated with the error term. Unobserved time-invariant variables could include attitudes about work, such as an individual who chooses to work new jobs for fun versus an individual who is determined to move up the job ladder in a specific career. In contrast to OLS, the use of fixed effects operates under the assumption that there are unobserved time-invariant variables that are correlated with the job mobility patterns of workers. While a fixed effects model is suitable for the structure of the data set to remove bias from unobserved individual-specific variables that may bias the results, the Black variable would be excluded from the model since it is time-invariant. Dropping the Black indicator would remove estimates on the initial Black-White wage gap. Given the panel structure of the data set, I estimate my main results with Huber-White standard errors to account for correlation at the individual level over time.

I estimate Equations (1) and (2) separately for high school and college-educated workers due to bias attributed to the college wage premium and systematic differences between the two educational groups. Since my empirical analysis only includes workers to have 12 or 16 years of education, I do not need to include a variable for years of education. In Section 6, the results for Equation (1) that exclude tenure controls are located in Table 2 and full results that include tenure are presented in Table 3. Estimates of job-movers from Equation (2) are shown in Table 4.

6 Results

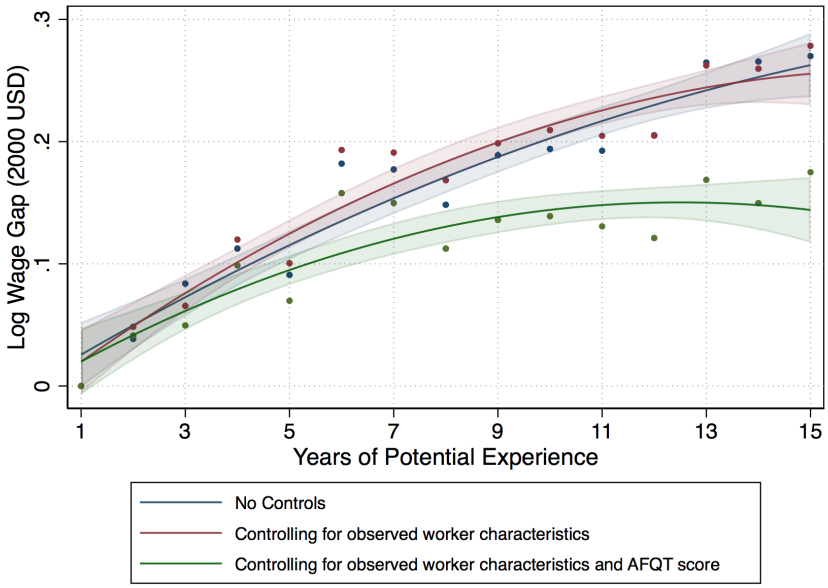
In the following tables, I present the empirical results of job mobility on the Black-White wage gap. The outcome of wages can be interpreted as a one percent increase in wages. Since there is no significant Black-White wage gap in the college market from Equation (1) and thereafter, I restrict my interpretations on the empirical results for high school-educated workers in this section. Additional results for the sample of college-educated workers and the pooled sample of all workers can be found in the Appendix.

Table 2 presents the baseline OLS estimates of race on log wages to decompose the Black-White wage gap from Equation (1). There is a Black-White wage gap upon entry into the labor market and the gap widens over time, as shown by the estimates in columns (1) and (2). After adding controls for AFQT in columns (3) and (4), the initial wage gap disappears but the wage gap continues to grow over time.[3] Without controlling for job mobility Black workers are expected to earn 0.88% less in wages relative to White workers for each additional year in the labor market, holding all else constant. After controlling for job mobility in column (5), these differential returns to experience disappear which shows that job-movers drive the widening of the Black-White wage gap. Most notably, Black workers earn about 0.78% less relative to White job-movers for every additional year of experience when they change jobs. The findings show that there is no wage gap at the beginning of workers' careers, but a wage gap forms since Black workers reap fewer gains in job mobility.

While the magnitude of the wage gap does not seem large when taken at face value, Black workers earn 1.5 less than White workers when comparing the returns to experience for Black job-movers to White job-movers. White job-movers earn an expected 0.52% increase in wages for every year in the labor market and Black workers' returns are nearly 150% less than those of their White counterparts. Since these initial findings show that the Black-White wage gap manifests through job mobility, I further explore the three different theoretical channels

[3]Figure 1 presents the visual of the estimated wage gap over potential experience for high school-educated workers of the regression specifications in columns (1), (2), and (4) in Table 2.

Figure 1: Log Wage Gap Over Time



Notes: Graphs present the non-linear returns to potential experience of White workers relative to Black workers in the high school market with a quadratic fitted line. All estimates include year fixed effects. Shaded areas display 95% confidence intervals.

that can explain the observed gap in lifetime wage differentials.

6.1 Statistical Discrimination

If race is a signal for workers' productivity, then the effect of a worker being Black should negatively impact his initial wages since the employers believe that productivity is negatively related to being Black upon hiring. Through employer learning, the effect of AFQT is more important over time and the effect of being Black is lessened over time as the worker's employer learns about the worker's true productivity. If employers statistically discriminate on the basis of race, we should see a significant negative coefficient on the Black term after controlling for AFQT over time since the Black workers face a wage penalty upon hiring. Furthermore, the effect of being Black over time should become insignificant or less negative since the employer no longer relies on the worker's observed race as a signal of his productivity.

Table 2: Effect of Race and Job Mobility on Log Wages

	(1)	(2)	(3)	(4)	(5)	(6)
Black	-0.0530**	-0.0611**	0.0254	-0.0070	-0.0618	-0.0563
	(0.0244)	(0.0241)	(0.0265)	(0.0276)	(0.0414)	(0.0418)
Potential Experience	0.0851***	0.0864***	0.0923***	0.0771***	0.0658***	0.0668***
	(0.0111)	(0.0112)	(0.0111)	(0.0109)	(0.0126)	(0.0126)
Black × Potential Experience	-0.0173***	-0.0127***	-0.0129***	-0.0088***	0.0010	0.0018
	(0.0027)	(0.0027)	(0.0027)	(0.0029)	(0.0039)	(0.0038)
AFQT Score			0.0863***	0.0287**	0.0379**	0.0430***
			(0.0105)	(0.0144)	(0.0150)	(0.0156)
AFQT Score × Potential Experience				0.0074***	0.0059***	0.0066***
				(0.0015)	(0.0015)	(0.0015)
Move					-0.1230***	-0.1208***
					(0.0210)	(0.0210)
Black × Move					0.0535	0.0531
					(0.0358)	(0.0358)
Move × Potential Experience					0.0052*	0.0058**
					(0.0028)	(0.0028)
Black × Move × Potential Experience					-0.0078*	-0.0118***
					(0.0040)	(0.0043)
Move × AFQT Score × Potential Experience						-0.0039***
						(0.0015)
Additional Controls	No	Yes	Yes	Yes	Yes	Yes
Observations	13325	13325	13325	13325	13325	13325
R^2	0.1170	0.2417	0.2640	0.2631	0.3136	0.3144

Notes: The results are presented for workers with a high school degree. All specifications include constants and dummy controls for year fixed effects and potential experience squared. Columns (2) to (6) include additional controls for region, urban, occupation, part-time status, firm size, and interactions of these dummies with potential experience. Huber-White standard errors shown in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$.

As mentioned in the theoretical framework, employers learn about a worker's productivity over time. When excluding the AFQT and potential experience interaction in column (3) of Table 2, the Black-White wage gap is expected to widen by 1.29% for each additional year in the labor market and there is an insignificant wage gap upon entry. In column (4), I identify a positive and significant coefficient on the AFQT and potential experience interaction of 0.0074 which shows that employers learn about the worker's true productivity over time and his wages are therefore positively with his productivity. The Black-White wage slightly converges and we see that Black workers are now estimated to earn 0.88% less in wages relative to White workers for each additional year in the labor market. Interestingly, the coefficient on Black becomes negative (-0.0070) but remains insignificant. Similar to the findings of Altonji & Pierret, the results presented in columns (3) and (4) do not provide strong evidence on whether or not employers statistically discriminate on race because the Black-White wage gap should be insignificant over time when controlling for productivity interacted with AFQT.

That said, these estimates do not consider the role of job mobility on worker's wages. Theoretically, the Black-White wage gap should converge over time when there is employer learning over time but this process is truncated when a Black worker switches jobs. When workers switch jobs through their lifetimes, the employer learning process must re-start whenever the worker changes employers. If employer learning resets with each job change, then wages are correlated with a worker's ability when he stays at his current job as opposed to when he changes jobs. When employers statistically discriminate on race, Black workers face a larger wage penalty relative to white workers when they move jobs.

The key result in column (5) shows that Black workers earn 0.78% less in wages relative to White workers when they change jobs for each additional year in the labor force. Conditional on skills, this shows that a Black worker who moves to a new job earns significantly less in wages compared to a White worker. This shows that a Black worker faces a wage penalty upon moving jobs and this effect is greater if they change employers later in the early

career. Since the interaction between race and potential experience is now insignificant, the results suggest that Black workers no longer face a wage penalty over the early career when remaining with the same employer. Since Black workers face a wage penalty upon moving, the result is consistent with statistical discrimination if employers rely on race as a proxy for productivity. The AFQT and potential experience interaction term remains positive and significant, meaning that the employer continues to learn about the worker's productivity over time.

Including the triple interaction term between AFQT, potential experience, and job-moving indicator in column (6) accounts for the effect of a job change on how employers perceive the worker's productivity. The negative coefficient of -0.0039 on the triple interaction term of job changing, AFQT, and potential experience indicates that there is a negative effect on wages upon changing employers for relatively high productive workers. This is consistent with employer learning since new the employer does not have the same information as the old employer does on the worker's productivity which is negatively reflected in a job-movers wage loss when the worker is more productive relative to his colleagues. The information on productivity resets for all workers upon a job move. Furthermore, the negative coefficient of -0.0118 on the triple interaction term among the Black indicator, move dummy, and potential experience becomes more negative and significant in column (6) which indicates that race and productivity are negatively correlated. While a new employer does not have information on the worker's productivity, the more negative coefficient on the triple interaction term suggests that employers negatively associate race with productivity to determine a worker's wages. The Black and potential experience interaction remains insignificant, meaning that the gap in returns to experience does not widen over the early career when a Black worker remains with the same employer.

The evidence suggests that statistical discrimination on the basis of race contributes to the observed Black-White wage differentials over time. As shown by the estimates in column (6), Black workers face a wage penalty from re-starting the employer learning process when

they transition to a new job. While Altonji & Pierret do not find evidence of statistical discrimination on race, they exclude the role of job mobility in their analysis. After I consider workers' job transitions made in the early career, the empirical evidence suggests that job mobility likely affects the Black-White wage gap through the channel of statistical discrimination.

6.2 Human Capital

In general, workers would be expected to have positive returns to tenure since they accumulate job-specific skills when actively working with their current employers. Upon a job transition, the loss in these job-specific skills would yield a loss in wages with his new employer. In the context of the Black-White wage gap, the loss in wages after changing jobs should be greater for Black workers. Given that job-specific human capital and skill matching have a large effect on the moving decisions and wages of workers, I investigate how the loss of job-specific skills impacts workers' wages in column (1) of Table 3. After controlling for workers' previous tenure, the estimated returns to potential experience for Black job-movers remains negative but is less significant. Holding all else constant, the model shows that wages are estimated to increase by 5.68% on average for every additional year of tenure in the previous survey year for workers that do not engage in a job-to-job transition. For workers that engage in a job change, they are predicted to have a 1.55% decrease in wages for every additional year of tenure accumulated in the previous job.

The results in column (1) do not fully capture how workers are heterogeneous in the amount of human capital that they have accumulated. Black and White workers' wages may reflect the difference in the returns to productivity when they are employed. Thus, I include interactions with Black in column (2) to determine whether the widening of the Black-White wage gap is related to the amount of tenure that a worker accumulates prior to changing jobs. Black workers do not face significantly different returns to tenure relative to White workers, but they face a greater wage penalty when they accumulate larger amounts

Table 3: Effect of Race and Job Mobility on Log Wages, Controlling for Tenure at $t-1$

	(1)	(2)
Black	-0.0404	-0.0446
	(0.0440)	(0.0429)
Potential Experience	0.0978***	0.0988***
	(0.0178)	(0.0177)
Black × Potential Experience	0.0002	-0.0025
	(0.0040)	(0.0048)
Move	-0.0822***	-0.0842***
	(0.0256)	(0.0256)
Black × Move	0.0209	0.0310
	(0.0459)	(0.0456)
Move × Potential Experience	0.0014	0.0001
	(0.0032)	(0.0034)
Black × Move × Potential Experience	-0.0088*	-0.0053
	(0.0051)	(0.0056)
AFQT	0.0467**	0.0470**
	(0.0197)	(0.0198)
AFQT × Potential Experience	0.0062***	0.0062***
	(0.0018)	(0.0017)
Move × AFQT × Potential Experience	-0.0045***	-0.0046***
	(0.0015)	(0.0015)
Tenure $(t-1)$	0.0568***	0.0546***
	(0.0069)	(0.0072)
Move × Tenure $(t-1)$	-0.0155***	-0.0105**
	(0.0041)	(0.0050)
Black × Tenure $(t-1)$		0.0085
		(0.0059)
Black × Move × Tenure $(t-1)$		-0.0174**
		(0.0085)
Observations	11311	11311
R^2	0.3047	0.3052

Notes: All specifications include constants and dummy controls for year fixed effects, potential experience squared, previous tenure squared, and dummies for region, urban, occupation, part-time status, class, firm size, and interactions of these dummies with potential experience. Huber-White standard errors shown in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$.

of tenure in his job before changing employers. For every additional year of tenure that a Black worker accumulates in his previous job, he is expected to lose an additional 1.74% in wages compared to a White worker, ceteris paribus. Notably, the loss in wages for Black workers is nearly twice the amount of White workers' wage loss when changing jobs at the same amount of tenure.

The findings in column (2) give rise to multiple theoretical explanations. First, the negative coefficients on the interaction terms between tenure and job-changing can be explained as a loss of job-specific skills acquired in the workers' previous job or a mismatch in skills. If the job-specific human capital is higher in the workers' old job, there is a new learning process that the worker must engage in with his new employer and career. Since the effect is significantly more negative for Black workers, it is possible that Black workers do not engage in job search as efficiently relative to White workers and thus have more difficulty with the matching process.

Another possible explanation can be that Black workers do not have as much information relative to White workers on their particular skills and therefore they may experiment with jobs across different occupations. Alternatively, the negative coefficient on the triple interaction between the Black indicator, move dummy, and previous tenure can imply that Black workers in the high school market accumulate job-specific skills at a faster rate over the length of tenure as a White worker. Furthermore, Black workers may be more likely to work in industries in which the on-the-job skills he accumulates are more specific to his current job and less transferable to other jobs.

While the higher loss of wages can be explained by the loss of job-specific human capital from the previous job or a mismatch in skills, there are a few issues with this interpretation. Another explanation for this finding is that a worker's wages may be extremely high in his prior job relative to his current job which is not necessarily related to wage growth from his tenure. If a worker's previous wages are higher than his current wages, the question arises on why he chose to move jobs. Black workers may additionally work in industries that are more

susceptible to layoffs and thus are more likely to face an involuntary separation. Transitioning from a higher to lower wage job can be further explained by determining whether his job change was voluntary or involuntary. I obtain similar results when controlling for involuntary job transitions (Table B3). Since there is a reasonably large amount of missing data regarding the reasons why workers leave their jobs, the sample size falls to 9,963 observations.

After including controls for whether the job transition was involuntary, the negative effect of moving jobs with respect to previous tenure becomes larger for Black workers. For workers that move involuntarily, it is expected that Black workers would have greater wage loss relative to higher amounts of tenure accumulated in their previous jobs. Yet, the evidence suggests that Black workers do not have a significantly higher wage loss relative to White workers when moving involuntarily.

When evaluating how different types of job movements affect wages, problems with selection bias arise if Black and White workers change jobs for systematically different reasons. If Black movers relatively more often work in industries in which there are more layoffs, then selection prevents the determination of a causal relationship between mobility and tenure on the wage gap. Furthermore, responses bias likely affects these estimates since survey respondents can refuse to answer or inaccurately answer the question on the reason for leaving their previous jobs. This source of bias can be remedied by utilizing robust administrative data that shows whether the workers' previous firm shut down or faced financial difficulties that resulted in mass layoffs.

While multiple stories explain of the empirical results in Table 3, we can still conclude that Black workers face a greater extent of wage loss with respect to the tenure accumulated in their previous job. That said, Table 3 strengthens the theory that statistical discrimination has a role in the early career Black-White wage gap. Assuming that employers learn over the course of workers' tenure, employer learning occurs since Black workers do not have differential returns to tenure. Instead, Black workers face a wage penalty at the time of a job transition since the new employer does not have the same information relative to the

worker's previous employer.

6.3 Job Shopping Motives

Finally, I investigate whether different job shopping motives contribute to the Black-White wage gap over time. Black workers who move jobs while simultaneously enacting a change in firm or geographic characteristics should face a wage penalty. I present the estimates of Equation (2) without interactions between the Black indicator and variables $\mathbf{D}_{it}^{K}$ in column (1) of Table 4 to examine the general heterogeneous effects by job changes of voluntary job-movers. The results regarding changes in career-related reasons indicate that workers who move to a smaller firm earn about 7.35% less in averages relative to a worker that does not change firm sizes during a job transition. Additionally, workers who change occupations earn a significant loss of 9.51% in wages relative to a worker that remains in the same occupation after a job move. The estimated wage loss associated with an occupation change confirms the expectation that wages are negatively impacted by the loss of job-specific human capital. As for the geographic changes, workers who move to an urban location from a non-urban location face an expected loss of 9.51% in wages in comparison to a job-mover who does not move to a different urban area.

Column (2) includes interactions between firm and worker characteristic changes and the Black indicator. The terms interacted with race in the regression discern whether there are differential returns for changes in industry-related characteristics. If Black workers faced an additional wage penalty associated with career-related motives for changing, then we would see a significant and negative coefficient on the changes in occupation or firm size interacted with the Black indicator. I find no significant wage differences between Black and White workers when workers move to a larger or smaller firm relative to their previous jobs and when they change occupations. The insignificant coefficient on the interaction between Black and changed occupations may show that Black workers do not actually not suffer from human capital-related losses mentioned in the previous subsection.

Table 4: Effect of Race and Job Mobility on Log Wages with Job Shopping Motives

	(1)	(2)	(3)
Black	0.0276	-0.0017	0.0222
	(0.0462)	(0.0503)	(0.0466)
Potential Experience	0.0007	0.0007	0.0006
	(0.0034)	(0.0034)	(0.0034)
Black × Potential Experience	-0.0048	-0.0048	-0.0047
	(0.0056)	(0.0057)	(0.0056)
Tenure $(t-1)$	-0.0119**	-0.0121**	-0.0120**
	(0.0050)	(0.0050)	(0.0050)
Black × Tenure $(t-1)$	-0.0174**	-0.0168**	-0.0171**
	(0.0085)	(0.0084)	(0.0085)
Moved to a smaller firm	-0.0735***	-0.0710**	-0.0726***
	(0.0252)	(0.0286)	(0.0252)
Moved to a larger firm	-0.0343	-0.0440	-0.0338
	(0.0247)	(0.0292)	(0.0248)
Changed Occupations	-0.0951***	-0.1117***	-0.0958***
	(0.0140)	(0.0178)	(0.0140)
Moved to urban	-0.0951*	-0.0966*	-0.1186*
	(0.0555)	(0.0554)	(0.0605)
Moved to non-urban	-0.0697	-0.0698	-0.0589
	(0.0453)	(0.0453)	(0.0496)
Moved regions	-0.0678	-0.0690	-0.0795
	(0.0799)	(0.0799)	(0.0832)
Black × Moved to a smaller firm		-0.0051	
		(0.0335)	
Black × Moved to a larger firm		0.0225	
		(0.0313)	
Black × Changed Occupations		0.0442	
		(0.0284)	
Black × Moved to urban			0.0887
			(0.0667)
Black × Moved to non-urban			-0.0435
			(0.0693)
Black × Moved regions			0.0380
			(0.0555)
Observations	11182	11182	11182
R^2	0.3141	0.3143	0.3142

Notes: The results are presented for workers with a high school degree. The regressions include identical controls used in Table 3. Only results for job-movers are presented in the table. Huber-White standard errors shown in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

In column (3), I add the interactions between geographic changes and the Black dummy variable. Geographic changes that accompany a worker's job change can be motivated by familial reasons or personal preferences for his location of residence. If non-wage reasons for changing jobs contributed to the Black-White wage gap, we would see negative and significant estimates on the geographic change dummies with the Black indicator variable. The results show no significant wage differences between Black and White workers when the job move is associated with a geographic change.

I do not find sufficient evidence to conclude that racial differences in job shopping motives have a role in the widening of the Black-White wage gap over time. Given the findings in Table 4, it is important to determine whether the data capture changes in firm or worker characteristics and geography for Black and White workers. For example, if the data capture more White workers changing occupations and few Black workers, I cannot conclude that Black workers face no significant wage penalties when they also change occupations. The full summary statistics (in the Data Appendix) show that this does give rise to these concerns since there is enough data on Black workers' job changes to compare to White workers. That said, these results on job shopping motives may be susceptible to self-selection. Black and White workers may systematically be different when selecting certain characteristics for their new job. On the other hand, the results from Tables 2 and 3 remain robust after examining the heterogeneous effects of job changing. Thus, the empirical results in this section show that job shopping motives have a relatively lower or insignificant role in explaining the Black-White wage gap relative to the channels of statistical discrimination and human capital accumulation.

7 Conclusion

Using data from the NLSY, I find that Black workers reap fewer returns to job mobility relative to White workers in the high school market. Conditional on skills, high school-

educated Black workers who make job transitions fare worse relative to White workers. Furthermore, Black workers have greater levels of wage loss after changing jobs when they have higher levels of pre-separation tenure. The empirical results indicate that job mobility has a considerable role in the observed evolution of the Black-White wage gap.

The results are consistent with the two theoretical channels of statistical discrimination and human capital accumulation, but there is inconclusive evidence to suggest whether or not changes in firm or geographic characteristics contribute to the Black-White wage gap. With statistical discrimination, employers that negatively associate race and productivity initially pay a Black worker relatively less than a White worker of the same unobserved skill. When Black workers engage in job mobility, they face a wage penalty due to statistical discrimination by race for each new employer in addition to the wage loss from the worker's unrevealed ability to his new employer. When testing for differential returns to job-specific human capital, I find that Black workers face larger amounts of wage loss at greater levels pre-separation tenure. That said, many explanations in the context of the human capital channel can explain the observed wage gap.

When looking at employer and geographic changes that accompany job-to-job transitions, changes in occupations negatively affect both Black and White workers' wages. Interestingly, the Black-White difference in the wage loss from changing occupations is insignificant. Assuming that human capital is specific to certain occupations, the results contradict the theory that the Black-White wage gap is driven by wage penalties from the loss of job-specific human capital. Additional evidence is needed to further determine the theoretical mechanisms behind the racial differences in human capital accumulation. Tenure is not likely an accurate proxy for job-specific human capital accumulation. Overall, it is difficult to disentangle whether lifetime Black-White wage differentials are explained by statistical discrimination or employer learning, or even a combination of the two theories. When a Black worker remains with the same employer, it is unclear as to whether the worker is accumulating job-specific human capital differently or there is employer learning during his tenure.

This paper provides additional directions in research to further investigate how the Black-White wage gap develops through workers' post-market entry decisions. Primarily, the three theoretical channels investigated in this paper should be studied further in-depth while conducting research on the Black-White wage gap. The empirical findings suggest that job mobility should be considered when estimating whether employers statistically discriminate on race. Influential papers on employer learning and statistical discrimination, such as Altonji & Pierret, omit the role of job mobility from analysis and rule out statistical discrimination on the basis of race. Furthermore, the results on the wage gap in the college market are inconclusive due to the limitations in the data and sample selection. The restriction imposed on dropping workers that have non-consecutive years of schooling results in a generally limited sample but this especially impacted the sample of college-educated workers. Future research should consider obtaining more robust longitudinal data on workers' mobility that better investigates the Black-White wage gap among college-educated workers. Lastly, the complexity of research on the Black-White wage gap calls for different theoretical avenues to be explored through structural models. Since purely observable worker characteristics cannot fully explain the wage differentials, future research should continue to use theoretical models to decompose the Black-White wage gap.

The findings have policy implications that target the observed Black-White earning differentials over the lifetime. Since pre-market productivity differences in Black and White workers continue to drive part of the wage gap, policy involving investment in young Black workers includes widely and equitably increasing job-specific skills training before the completion of formal education. In the workplace, policy regarding anti-discrimination enforcement in hiring and pay is needed so that Black workers are compensated for their skills instead of facing wage loss simply from their observed race. Ultimately, research on the Black-White wage gap is critical from an equity standpoint given that disparate labor market outcomes have persistently stifled economic prosperity and generational mobility for Black workers.

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Appendices

A Data Appendix

Table A1: Variable Descriptions

Variable	Description
Black	0: Worker is White 1: Worker is Black
Potential Experience	Years since last reported graduation date; Otherwise interpreted as the years that the respondent could have been working in the labor force upon ending his formal education.
Tenure	Consecutive weeks with the respondent's employer in year t divided by 50 for tenure in yearly units
AFQT Score	Age-standardized AFQT score Constructed by finding the average AFQT score in the respondent's age group and subtracting the individual's actual AFQT score from the average, and then dividing this value by the standard deviation of AFQT within his age group
Move	An observed job change based on whether or not the respondent had a different employer in year t relative to year $t-1$. 0: Stayed at job in year t; the respondent had the same employer in year t and in year $t-1$ 1: Changed jobs in year t; the respondent had different employer in year t and in $t-1$
Type of Job Move	Utilized responses from the NLSY to determine whether the job change was involuntary or voluntary. 1: Involuntary. Coded 1 if the respondent was fired, left due to plant/firm closure, or his program ended 2: Voluntary. Coded 2 if the respondent reported to quit his job
Worker Characteristics	
Part-time status	0: Full-time; worked 30+ hours per week

Variable	Description
	1: Part-time, worked < 30 hours per week
Urban	0: Non-Urban 1: Urban
Region	1: Northeast 2: North Central 3: South 4: West
Firm Size	1: Small, $1 - 14$ employees 2: Medium, $15 - 99$ employees 3: Large, 100+ employees
Occupation	The occupation indicators are grouped by categories according to 1970 census codes reported in the NLSY. 1: Professional, Management, or Technical 2: Sales 3: Administrative or Clerical 4: Craftsmen 5: Operatives or Laborers 6: Farmers 7: Service
Changes in Firm Characteristics	
Firm Size Changes	0: Did not change firm size 1: Moved to a larger firm 2: Moved to a smaller firm
Occupation Changes	0: Did not change occupation 1: Changed occupation
Changes in Geographic Location	
Urban Residence Changes	0: Did not move to or from an urban/non-urban area 1: Moved from urban to non-urban area 2: Moved from non-urban to urban area
Regional Location Changes	0: Did not move regions 1: Moved regions

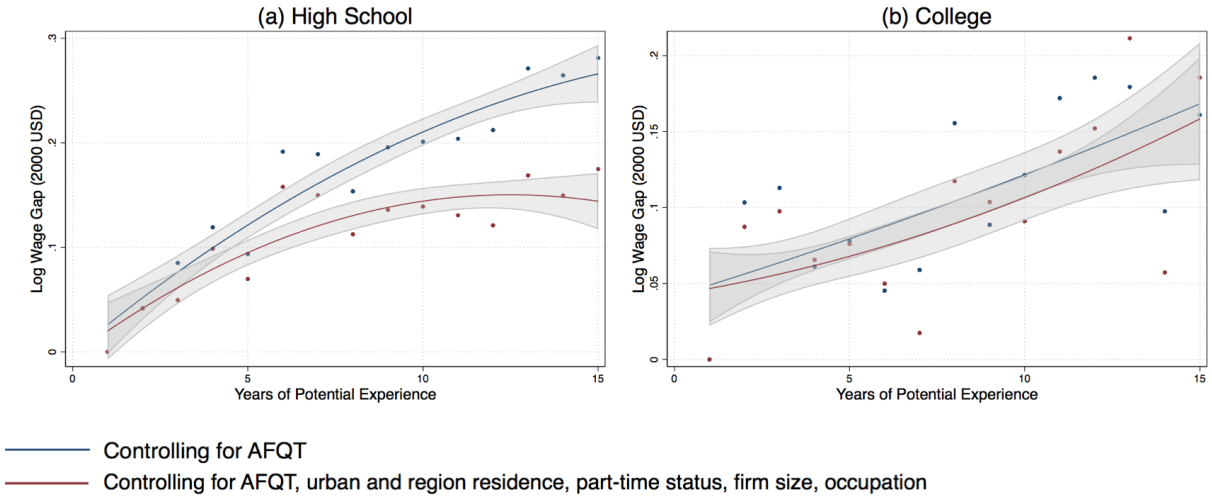
Table A2: Full Sample Summary Statistics

	Non-College		College	
	White	Black	White	Black
Nominal Wage	12.26	10.14	18.68	17.66
	(5.598)	(4.762)	(9.026)	(8.520)
Log Hourly Wage	2.411	2.230	2.816	2.769
	(0.443)	(0.409)	(0.485)	(0.466)
Potential Experience	7.647	8.247	6.730	7.383
	(3.974)	(3.950)	(3.938)	(4.031)
Tenure	3.205	2.556	3.678	3.743
	(3.302)	(2.861)	(3.494)	(3.544)
AFQT Score	0.264	-0.824	1.110	0.365
	(0.786)	(0.767)	(0.457)	(0.748)
Total Jobs	4.912	6.248	4.132	4.632
	(2.904)	(3.445)	(2.492)	(2.431)
Mobility Variables (%)				
Stayed at Job	57.2	50.0	65.4	63.6
Moved Jobs	42.8	50.0	34.6	36.4
Voluntary (% of Movers)	71.1	63.2	80.0	83.9
Involuntary (% of Movers)	28.9	36.8	20.0	16.1
Worker Characteristics (%)				
Part-Time Worker	4.49	4.83	2.50	3.03
Full-Time Worker	95.51	95.17	97.5	96.97
Small Firm	35.8	27.6	23.9	15.7
Medium Firm	32.2	34.5	29.6	33.1
Large Firm	32.0	37.9	46.5	51.2
Occupations (%)				
Professional/Management/Technical	7.68	4.12	55.0	54.3
Sales	3.35	1.71	15.3	8.71

Admin/Clerical	8.27	8.50	11.2	12.9
Craftsmen	25.7	16.5	4.36	3.84
Operatives/Laborers	42.6	46.7	7.20	9.86
Farmers	1.41	0.718	0.882	0.128
Service	10.9	21.7	6.07	10.2
Geography (%)				
Urban	70.5	81.8	84.6	94.4
Non-Urban	29.5	18.2	15.4	5.58
Northeast	20.2	14.9	25.0	12.8
North Central	36.4	14.5	31.0	19.9
South	28.0	64.1	29.5	53.2
West	15.5	6.48	14.5	14.1
Firm/Worker Changes (%)				
Did not change firm size	79.4	72.6	80.9	74.0
Moved to a smaller firm	10.1	13.8	09.33	13.3
Moved to a larger firm	10.6	13.6	9.82	12.6
Changed Occupations	17.8	22.6	10.3	12.0
Geographic Changes (%)				
Did not change urban location	94.9	97.0	94.1	97.0
Moved to urban from non-urban	2.45	1.57	2.68	0.947
Moved to non-urban from urban	2.62	1.41	3.22	2.03
Did not change regions	97.55	97.7	95.9	96.6
Moved regions	2.54	2.29	4.10	3.44
Individuals	1280	597	532	106
Observations	9127	4198	3764	757

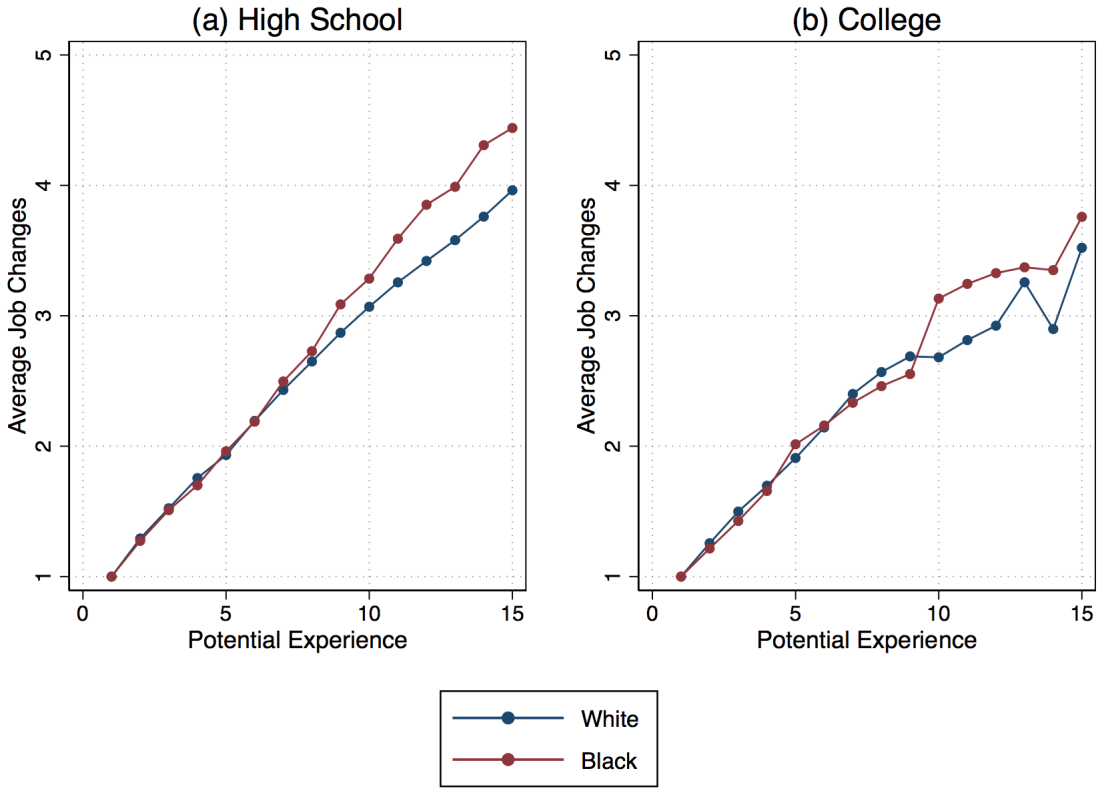
B Results Appendix

Figure B.1: Log Wage Gap Over Potential Experience by Education



Notes: Graphs present the non-linear returns to potential experience of White workers relative to Black workers for high school- and college-educated workers with a quadratic fitted line. All estimates include year fixed effects. Shaded areas display 95% confidence intervals.

Figure B.2: Average Job Changes Over Potential Experience by Education



Notes: Graphs present the average number of job changes over potential experience of White workers and Black workers. The decline in average job moves in the b) College are due to sample attrition.

Table B1: Effect of Race and Job Mobility on Log Wages, College Sample

	(1)	(2)	(3)	(4)	(5)	(6)
Black	-0.0243	-0.0293	0.0575	0.0750	0.0346	0.0369
	(0.0543)	(0.0535)	(0.0558)	(0.0562)	(0.0704)	(0.0704)
Potential Experience	0.1174***	0.1221***	0.1313***	0.1216***	0.0969***	0.0960***
	(0.0197)	(0.0193)	(0.0191)	(0.0200)	(0.0250)	(0.0250)
Black × Potential Experience	-0.0074	-0.0038	-0.0044	-0.0075	-0.0012	-0.0008
	(0.0060)	(0.0062)	(0.0060)	(0.0061)	(0.0070)	(0.0070)
AFQT Score			0.1171***	0.1130***	0.1165***	0.1192***
			(0.0276)	(0.0362)	(0.0368)	(0.0372)
AFQT Score × Potential Experience				0.0006	-0.0006	0.0000
				(0.0041)	(0.0041)	(0.0041)
Move					-0.0716**	-0.0714**
					(0.0338)	(0.0339)
Black × Move					0.0489	0.0504
					(0.0684)	(0.0685)
Move × Potential Experience					-0.0050	-0.0007
					(0.0060)	(0.0076)
Black × Move × Potential Experience					-0.0046	-0.0081
					(0.0092)	(0.0102)
Move × AFQT Score × Potential Experience						-0.0041
						(0.0048)
Additional Controls	No	Yes	Yes	Yes	Yes	Yes
Observations	4588	4313	4313	4313	4312	4312
R^2	0.1369	0.2616	0.2767	0.2707	0.3111	0.3114

Notes: The results are presented for workers with a college degree. All specifications include constants and dummy controls for year fixed effects and potential experience squared. Columns (2) to (6) include additional controls for region, urban, occupation, part-time status, firm size, and interactions of these dummies with potential experience. Huber-White standard errors shown in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$.

Table B2: Effect of Race and Job Mobility on Log Wages, Pooled Sample

	(1)	(2)	(3)	(4)	(5)	(6)
Black	-0.0364	-0.0413*	0.0434*	0.0187	-0.0242	-0.0193
	(0.0228)	(0.0223)	(0.0241)	(0.0252)	(0.0356)	(0.0358)
Potential Experience	0.1077***	0.1096***	0.1147***	0.0968***	0.0767***	0.0776***
	(0.0093)	(0.0092)	(0.0092)	(0.0090)	(0.0108)	(0.0108)
Black*Potential Experience	-0.0175***	-0.0134***	-0.0133***	-0.0103***	-0.0020	-0.0012
	(0.0025)	(0.0025)	(0.0025)	(0.0026)	(0.0034)	(0.0034)
College	0.4749***	0.3755***	0.3108***	0.3121***	0.2813***	0.2798***
	(0.0216)	(0.0227)	(0.0235)	(0.0237)	(0.0230)	(0.0230)
AFQT Score			0.0913***	0.0461***	0.0596***	0.0643***
			(0.0098)	(0.0130)	(0.0135)	(0.0139)
AFQT Score*Potential Experience				0.0059***	0.0037***	0.0045***
				(0.0013)	(0.0013)	(0.0013)
Move					-0.1160***	-0.1117***
					(0.0176)	(0.0177)
Black*Move					0.0487	0.0485
					(0.0311)	(0.0311)
Move*Potential Experience					0.0034	0.0043*
					(0.0025)	(0.0025)
Black*Move*Potential Experience					-0.0073**	-0.0114***
					(0.0036)	(0.0038)
Move*AFQT Score*Potential Experience						-0.0039***
						(0.0013)
Additional Controls	No	Yes	Yes	Yes	Yes	Yes
Observations	17638	17638	17638	17638	17638	17638
R^2	0.2492	0.3505	0.3683	0.3668	0.4060	0.4066

Notes: The results are presented for all workers. All specifications include constants and dummy controls for year fixed effects and potential experience squared. Columns (2) to (6) include additional controls for region, urban, occupation, part-time status,firm size, and interactions of these dummies with potential experience. Huber-White standard errors shown in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$.

Table B3: Effect of Race and Job Mobility Wages, Controlling Tenure $(t-1)$ and Involuntary

	(1)	(2)	(3)
Black	-0.0388	-0.0326	-0.0384
	(0.0437)	(0.0452)	(0.0437)
Potential Experience	0.1013***	0.1067***	0.1018***
	(0.0185)	(0.0185)	(0.0185)
Black × Potential Experience	-0.0032	-0.0023	-0.0032
	(0.0049)	(0.0042)	(0.0049)
Move	-0.0745**	-0.0840***	-0.0648**
	(0.0293)	(0.0301)	(0.0297)
Black × Move	0.0480	0.0192	0.0371
	(0.0502)	(0.0533)	(0.0521)
Move × Potential Experience	-0.0003	-0.0056	-0.0002
	(0.0041)	(0.0038)	(0.0041)
Black × Move × Potential Experience	-0.0048	-0.0075	-0.0049
	(0.0069)	(0.0065)	(0.0069)
AFQT	0.0599***	0.0585***	0.0597***
	(0.0212)	(0.0212)	(0.0212)
AFQT × Potential Experience	0.0049***	0.0051***	0.0049***
	(0.0019)	(0.0019)	(0.0019)
Move × AFQT × Potential Experience	-0.0049***	-0.0049***	-0.0050***
	(0.0017)	(0.0017)	(0.0017)
Tenure $(t-1)$	0.0565***		0.0564***
	(0.0073)		(0.0073)
Black × Tenure $(t-1)$	0.0087		0.0087
	(0.0059)		(0.0059)
Move × Tenure $(t-1)$	-0.0109*		-0.0114**
	(0.0057)		(0.0058)
Black × Move × Tenure $(t-1)$	-0.0229**		-0.0224**
	(0.0096)		(0.0097)
Involuntary Move		-0.0381*	-0.0341
		(0.0216)	(0.0217)
Black × Involuntary Move		0.0434	0.0375
		(0.0349)	(0.0350)
Observations	9963	9963	9963
R^2	0.3090	0.2895	0.3093

Notes: All specifications include constants and dummy controls for year fixed effects, potential experience squared, previous tenure squared, and dummies for region, urban, occupation, part-time status, class, firm size, and interactions of these dummies with potential experience. Huber-White standard errors shown in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$.

Table B4: Effect of Race and Job Mobility on Log with Tenure at $t-1$, College Sample

	(1)	(2)
Black	0.0300	0.0318
	(0.0690)	(0.0682)
Potential Experience	0.1036***	0.1029***
	(0.0308)	(0.0308)
Black × Potential Experience	0.0005	0.0033
	(0.0069)	(0.0096)
Move	-0.0791*	-0.0749*
	(0.0425)	(0.0424)
Black × Move	0.0275	0.0210
	(0.0964)	(0.0948)
Move × Potential Experience	-0.0027	-0.0013
	(0.0087)	(0.0089)
Black × Move*Potential Experience	-0.0028	-0.0107
	(0.0123)	(0.0137)
AFQT	0.1156***	0.1147***
	(0.0398)	(0.0399)
AFQT × Potential Experience	0.0004	0.0006
	(0.0042)	(0.0042)
Move × AFQT × Potential Experience	-0.0026	-0.0023
	(0.0047)	(0.0046)
Tenure $(t-1)$	0.0442***	0.0458***
	(0.0128)	(0.0129)
Move × Tenure $(t-1)$	-0.0086	-0.0148
	(0.0084)	(0.0102)
Black × Tenure $(t-1)$		-0.0059
		(0.0098)
Black × Move × Tenure $(t-1)$		0.0242
		(0.0167)
Observations	3723	3723
R^2	0.2936	0.2941

Notes: The results are presented for workers with a college degree. All specifications include constants and dummy controls for year fixed effects, potential experience squared, previous tenure squared, and dummies for region, urban, occupation, part-time status, class, firm size, and interactions of these dummies with potential experience. Huber-White standard errors shown in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$.

Table B5: Effect of Race and Job Mobility on Log with Tenure at $t-1$, Pooled Sample

	(1)	(2)
Black	-0.0061	-0.0103
	(0.0372)	(0.0362)
Potential Experience	0.0994***	0.1000***
	(0.0146)	(0.0145)
Black × Potential Experience	-0.0025	-0.0048
	(0.0034)	(0.0042)
Move	-0.0854***	-0.0868***
	(0.0220)	(0.0220)
Black × Move	0.0215	0.0277
	(0.0406)	(0.0403)
Move*Potential Experience	0.0011	0.0003
	(0.0029)	(0.0030)
Black × Move × Potential Experience	-0.0084*	-0.0058
	(0.0046)	(0.0051)
AFQT	0.0705***	0.0706***
	(0.0168)	(0.0168)
AFQT × Potential Experience	0.0038***	0.0038**
	(0.0015)	(0.0015)
Move × AFQT × Potential Experience	-0.0042***	-0.0041***
	(0.0013)	(0.0013)
Tenure $(t-1)$	0.0509***	0.0491***
	(0.0066)	(0.0067)
Move × Tenure $(t-1)$	-0.0129***	-0.0102**
	(0.0037)	(0.0045)
Black × Tenure $(t-1)$		0.0071
		(0.0050)
Black × Move × Tenure $(t-1)$		-0.0098
		(0.0076)
College	0.2850***	0.2852***
	(0.0246)	(0.0246)
Observations	15034	15034
R^2	0.4055	0.4057

Notes: The results are presented for all workers. All specifications include constants and dummy controls for year fixed effects, potential experience squared, previous tenure squared, and dummies for region, urban, occupation, part-time status, class, firm size, and interactions of these dummies with potential experience. Huber-White standard errors shown in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$.

Table B6: Effect of Race and Job Mobility on Log Wages with Job Shopping Motives

	(1)	(2)	(3)
Black	0.0147	-0.0127	0.0101
	(0.0444)	(0.0475)	(0.0447)
Potential Experience	0.0036	0.0035	0.0035
	(0.0031)	(0.0031)	(0.0031)
Black × Potential Experience	-0.0084*	-0.0084*	-0.0083*
	(0.0049)	(0.0050)	(0.0049)
Moved to a smaller firm	-0.0671***	-0.0647**	-0.0661***
	(0.0249)	(0.0280)	(0.0249)
Moved to a larger firm	-0.0294	-0.0370	-0.0290
	(0.0239)	(0.0279)	(0.0240)
Changed Occupations	-0.0905***	-0.1073***	-0.0913***
	(0.0135)	(0.0171)	(0.0135)
Moved to urban	-0.0944*	-0.0960*	-0.1195**
	(0.0552)	(0.0552)	(0.0595)
Moved to non-urban	-0.0649	-0.0649	-0.0552
	(0.0456)	(0.0456)	(0.0498)
Moved regions	-0.0497	-0.0507	-0.0595
	(0.0790)	(0.0791)	(0.0821)
Black × Moved to a smaller firm		-0.0048	
		(0.0327)	
Black × Moved to a larger firm		0.0178	
		(0.0297)	
Black × Changed Occupations		0.0456*	
		(0.0272)	
Black × Moved to urban			0.0997
			(0.0666)
Black × Moved to non-urban			-0.0419
			(0.0689)
Black × Moved regions			0.0321
			(0.0541)
Observations	11398	11398	11398
R^2	0.3095	0.3098	0.3097

Notes: The results are presented for workers with a high school degree. The regressions include identical controls used in Table 2. Only results for job-movers are presented in the table. Huber-White standard errors shown in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.