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Exploring the Generational Evolution of Black-White Wage Inequality across Geographic Regions of the United States

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Abstract

Wages of black men trail those of their white counterparts despite decades of generational socio-political change. This paper examines the extent to which the black-white wage gap has evolved from individuals born in the Baby Boomer (births between 1956 and 1964) to the Millennial (births between 1977 and 1995) generation, an era assumed to reflect great shifts in anti-racist sentiments and opportunities in the late 20th century. Despite presumed progressive attitudes developed in this time period, I find that the black-white wage differential of the labor market in its whole has worsened from black earnings lagging 28.1% behind white to a greater 31.2% in the later generation. There is significant discussion exploring how the ability to gain academic skill pre-entry into the labor market equates to higher earnings upon stepping foot into the workforce, and how there is a racial difference in the ability to acquire said skills that equip individuals for greater rates of pay in later life with disproportionate barriers posed to black men. Under my findings that controlling for disparities in academic skill scores reduce yet do not eliminate the black-white wage gap, I break down my sample by region to examine the extent to which specific geographic areas of the United States are responsible for the unconditional inequity, and the trend the racial wage inequalities of these respective areas have followed from the Baby Boomer to Millennial generation. I find that while the South region has had a significant fall in its racial wage gap by roughly 36%, all other regions' black-white earnings differentials have grown across these generations, apart from the West region not holding significant impact in the earlier generation presumably due to an insufficient sample size.

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Introduction

It is common knowledge that black Americans experience lower wages than their white counterparts. The black-white wage gap is a national issue that continues to prevail in the United States despite government policies designed to reduce or eliminate these racial disparities. Economic theorists have attempted to explore the correlation between academic skills and wages, indicating that the unequal access to education between blacks and whites contribute to their resulting wage differences in later life. Human capital theory suggests that human beings increase their productive capacity in the workplace through greater education and skills training, creating a payoff in the form of increased earnings for higher productivity (Taylor 1981). Further evidence of the significance of schooling as explanation for the differences in income among workers is presented by Patrinos (2016), in which the Mincer equation reveals employment earnings as a function of schooling, estimating each additional year of education to increase average monetary returns by 5-8%. Yet, correlation does not imply causation; while the inequalities in the acquisition of academic skills are said to be a key factor to wage disparities, it is not the sole root of racial income inequality. This paper seeks to examine how black-white wage gap in the whole labor market has evolved over time from individuals born in the Baby Boomer to Millennial generations, both unconditionally and once conditioning for pre-labor market academic skill. Understanding that the racial wage-gap is a complex issue that cannot be explained by one factor, I am motivated to explore the trend to which this is moving across the United States by breaking down this disparity by the four core regions of the country: the Northeast, North Central, South and West. This paper uncovers the extent to which different geographic areas of the country drive the cumulative black-white wage gap, and

how the magnitude of these respective regionalized gaps has evolved throughout and beyond the late 20th century.

The National Longitudinal Survey of Youth conducted in 1979 (NLSY79) is a longitudinal project following the lives of a sample of American youth born between 1957-64. This ongoing cohort was aged 12-17 at their initial interview data in 1979 and was surveyed 18 times to data in a panel data set covering their lives on categories such as household, geography & contextual variables, education, and employment. Studying this NLSY79 data collected sequentially from the same participants gives insight into within-sample changes of American youth born in the Baby Boomer generation over time. I hence also use data from the National Longitudinal Survey of Youth conducted in 1997 (NLSY97), an analogous version of the NLSY79 20 years later, reflecting trends amongst individuals born in the Millennial generation between 1980 and 1984. In both data sets, I find the mean magnitude hourly rate of pay for black and white men at age 30 to uncover the wage differential across wages. To identify the relationship between youthful academic skill and subsequent employment earnings amongst a consistent sample, I also extract information evaluating aptitude, achievement and intelligence through respondents' Armed Forces Qualification (AFQT) scores. Taken by NLSY participants in 1981 and 1999 respectively, the AFQT is a combined measure of achievement in 4 academic skills tests from both math and verbal domains which can be influenced by age, school quality, parental and peer influence. Rooting analyses in years of schooling poses the risk of overstating the magnitude of the black-white wage gap through confusing barriers into acquiring formal schooling with that of entering the labor market (Neil and Johnson

1996). As a result, I substitute AFQT scores as a more precise, racially unbiased measure quantifying pre-market levels of education.

I investigate the evolution of both the unconditional and conditional black-white wage gap once controlling for academic skill as represented by AFQT scores from individuals born in the Baby Boomer and Millennial generations, and explore how much each geographic region of the United States contributes to the unconditional racial wage inequality of the whole labor market. I extract data from both NLSY79 and NLSY97 to respectively run Random Effects Generalized Least Squares (GLS) regression specifications of the natural logarithm of each participant's yearly wage on a race indicator dummy, identifying the magnitude of mean wage gaps. My sample is comparable to the works of Bjerk (2007) as well as Neal and Johnson (1996); for both NLSY79 and NLSY97 I select black and white males with a valid AFQT score as well as CPS wage and occupation in at least one year between 1991-1996 and 2010-2015 respectively. This sample consists of white and black men who were at pre-market age (12-17) at the beginning of the longitudinal project and had data collected up to their early thirties, removing potential biases arisen from gender discrimination of females. In running the same GLS regression on the NLSY79 as the NLSY97, I will be able to compare the value of their coefficients on the race dummy to reveal the percent differential of earned wages between black and white male workers in this age group during these two different time periods, reflective of two different generations. I hypothesize that in both the NLSY79 and NLSY97, overall labor market race inequality will be evident with said percent differential being less than 0 in the datasets, and that the magnitude of the unconditional wage gap will be even larger in this later generation. This is based on research by Daly et al (2017) and

Wilson and Rodgers (2016) that point to how the black-white wage gap has disappointingly widened over time. Daly et al, 2017 find that the average black male worker in America earned just 70% of the hourly wage of his average white counterpart in 2016, dropping from 80% in 1979. Wilson and Rodgers, 2017 similarly uncover that although the gap shrank with the late 1990s boom partially due to tighter labor market causing for most costly discrimination alongside increases in minimum wage, the gap continued to grow in the 21st century with wage growth of black and white low-to middle wage earners being either flat or negative in almost every preceding economic cycle. Therefore, my hypothesis is that there will be a greater percent earnings differential between black and white workers in the early 2010s from the NLSY97 dataset than those in the early 1990s from the NLSY79 dataset: the unconditional black-white wage gap has increased from individuals born in the Baby Boomer to those of the Millennial generation.

I further hypothesize that Bjerk's (2007)'s and Neal and Johnson (2006)'s NLSY79 findings on the conditional wage gap after controlling for AFQT scores will remain true in regards to the NLSY97 data; a similar trend will uphold of racial differences in pre-market academic skills as a key, but not sole driver, of the racial wage gap. More precisely, my hypothesis is that there will be a significant drop in the percent differential of black-white worker wages in the unconditional against conditional wage gaps for both generations, yet this relative difference will be of greater value in the NLSY79 data over NLSY97. I believe that when controlling for academic skill, there will be a remaining unexplained black-white earnings differential of larger magnitude in the NLSY97 data indicative of academic skill holding less influence against other factors on subsequent labor market outcomes and consequent wages amongst Millennials compared to Baby Boomers in NLSY79 due to

racial schooling inequalities reducing over time. Hence, the change in wage gaps after conditioning for academic skill is predicted to be more substantial in the NLSY79 dataset. While pre-market educational discrepancies will continue to significantly affect black-white wage disparities, the conditional racial wage gap from participants in the NLSY97 will have evolved to be greater than that extracted from those in the NLSY79, as work from Karageorge (2017) has shown unexplained disparities to proportionally grow as a constituent of racial income inequality in the Millennial generation.

As this wage gap prevails and is predicted to increase over time, I then analyze the extent to which different regions of the country- the Northeast, North Central, South and West- contribute to this inequality that persists. This is motivated by different states having contrasting anti-discrimination laws, labor market regulations and access to employment opportunities, which I anticipate will bring about varying values in how much they drive cumulative national black-white income inequality across both NLSY79 and NLSY97. I hypothesize that after breaking up the two data sets into these 4 core geographic areas of the United States, the earnings percent differential on data from participants located in the South will be the largest regional component of the total racial wage gap in both time periods. This is based on the premise that the South has a history of racial segregation with lingering racist remnants rooted in society through discrimination and differences in opportunity that I forecast would attribute to factors of racial wage disparity, and subsequently fuel a proportionally larger wage gap. Comparing this result from NLSY97 to NLSY79, I further hypothesize that while the South will have the highest regionalized black-white wage gap in both generations, its magnitude will be less starkly different relative to other regions amongst Millennials than Baby Boomers.

Moreover, my overall hypothesis is that the black-white wage gap of the overall American labor market has grown over time, with there being greater racial wage inequality amongst Millennials than Baby Boomers. Once conditioning for academic skill, there will be a drop in the magnitude of this racial wage differential, but this drop will be of more substantial magnitude in the NLSY79 dataset than the NLSY97. Once breaking down the racial wage gap by geographical region, I predict the South to be the dominant driver of the disparity, but to a lesser extent in the later generation as regions reach a more even playing field.

Literature Review

There are three avenues of literature regarding black-white income inequality in the labor market that my research examines: the lengths to which it is accounted for by pre-market academic skill, the trend to which its magnitude has evolved generationally from Baby Boomers to Millennial, and the weight different geographic areas carry in its cumulation. Looking into literature that discusses education as an explained key factor that drives this gap alongside work acknowledging the unexplained conditional wage gap allows for an expansive analysis of the roots behind why the black-white labor market discrimination persists as a national issue, and to what extent different regions are responsible for this inequity.

Academia is universally known to be important to our society as a gateway to success, a pathway to progress, a stepping stone to gaining the skill sets that make us desirable for the workforce, with there being an indubitable positive correlation between educational attainment and earnings. Yet, the ability to obtain academic knowledge varies deeply across different demographic groups. There is a large amount of work regarding black citizens and the barriers posed to them against gaining academic skill. A study by Taylor (1981) probes that although monetary returns for each year of education are as high for black men as white, black earnings lag those of white counterparts, revealing how there is a gulf in the amount of academic skill and educational level acquired by race. Taylor's study states that black men not only completed fewer grades, but also scored lower on standardized scholastic aptitude tests, with mean scores of high school seniors significantly lower for blacks. This is indicative of how relative to whites, black citizens lack the

academic skills upon entry to the labor market that would position them for greater productivity in their careers and hence, higher wages.

The importance of school quality and black-white relative earnings is further examined by Card and Krueger (1991). Contrary to Taylor (1981) suggesting that monetary returns for each year of education are equal for blacks and whites, Card and Krueger (1991)'s study detects coefficients associated with schooling to be typically lower for black, implying a smaller wage gain all things equal. Yet, their research similarly points to the significance having an access to education holds in determining racial wage inequality, with findings that improvement in the relative quality of black schools account for 20% of the narrowing black-white earnings gap between 1960 and 1980. This percentage emphasizes that unequal schooling does attribute some portion of the black-white wage gap in later life, but by no means plays a unique role in influencing this disparity.

Authors such as Bjerk (2007) and Neal and Johnson (2006) provide evidence that educational discrepancies between blacks and whites are a primary, yet not a unique driver of racial income inequality, illustrating the importance of racial differences in pre-market academic skills to wage inequality upon worker market entry. Both studies use the NLSY79 panel data set in which participants have not entered the labor market nor started postsecondary schooling at their initial testing to observe human capital attained in youth- academic skill- as a predetermined initial condition that constrains the future path of human capital- wages. Neal and Johnson (2006) find the large skill gap between blacks and whites to be an important determinant of subsequent wage disparities, revealing black youths to acquire less skill than white youths as shown through their lower AFQT scores; while only 10 percent of white men score below a 1.0 on these tests, over 35 percent of black men are

below this benchmark. Given the AFQT scores are a test of achievement and learned skill through encompassing math and verbal domains, racial score differences are reflective of black-specific constraints in acquiring productive human capital. Blacks and whites entering the labor market with different levels of skill and the significance of this lag in labor market outcomes is correspondingly represented in Bjerk's (2007) study. His findings suggest that of an approximate 28 percent gap in mean unconditional wages between black and white men in the early 1990s, over ⅔ of it can be accounted for by controlling for variances in each individual's academic skill as measured by AFQT scores. However, the ⅓ that remains denotes an unexplained portion of wage inequality that creates a conditional wage gap, insinuating factors beyond academic skill to comprise observed racial wage inequality throughout the United States.

Economic theory suggests a relationship between worker earnings and productivity, as quantified by characteristics such as education, or more precisely, pre-market skill sets. Nonetheless, this unexplained wage gap after conditioning for academic skill uncovered in Bjerk (2007)'s study indicates a portion of black-white wage inequality untraceable to differences in easily measured characteristics, and according to Daly et al (2017), is growing at a rate responsible for a large proportion of the total gap. Daly et al (2017) reveal that while about 8 percentage points of the earnings gap for men was unexplained by readily measurable factors in 1979, by 2016 this had risen to almost 13 percentage points, constituting almost half of the total earnings gap. Wilson and Rodgers (2016) similarly explore the expansion of black-white gaps through the lens of unobservable attributes. The study uses samples of white and black workers from the Current Population Survey Merged Outgoing Rotation Group (CPSORG) files for the years 1979 through 2015, plotting log

hourly black-white wage disparities to discuss how much of its increase is driven by observable factors such as shifts in educational attainment of black workers, against the amount explained by less tangible, unobservable data attributes such as racial discrimination. Their analysis resulted in a 3.65% increase in the black-white wage gap over time from 1979 to 2015, with 3.3% accounted for by aforementioned unobservable factors versus almost tenfold less by observables at 0.35%. On the other hand, Cajner et. al (2017) takes a contrasting approach to deciphering racial gaps in labor market outcomes over the last four decades and its business cycles. These authors argue to take caution on interpreting the unexplained portion of black-white wage differentials as evidence of labor market discrimination, emphasizing the possibility of this component rather reflecting omitted variable bias. Failure to extensively control every factor determining labor market outcomes that have systematic variation across different demographic groups too as the potential to create an outstanding value after conditioning for observables such as education or pre-market academic skill.

The ambiguity behind this remaining unexplained racial gap points to the complexity of the black-white wage gap, prompting my research considering how the magnitude of this differential varies across different geographic areas in the United States. Acknowledging the plausibility of discrimination, I choose to examine how different locations with varying levels of access to opportunity as well as degrees of racism rooted in their distinct cultures line up against each other in terms of the weight they each add to the cumulative mean unconditional wage gap. With the prior understanding that the South has a history of racial segregation and unwritten social rules governing black-white relations, further literature set the foundation for me to explore how each specific US region

contributes to the portion of wage inequality potentially by inherent societal racism and discrimination. Sundstrom (2006)'s study discussing the geography of wage discrimination in the Pre-Civil Rights South unpacks sets of factors determining the degree of wage inequalities in a local labor market, including the strength of racial norms or beliefs restricting job assignments by race, and the relative supply of black versus white workers. Huffman and Cohen's (2004) study using the 1990 Census dataset to test job segregation as a mechanism for racial wage inequality echo these sentiments, post the Civil Rights Movement. The authors discovered blacks to be systematically segregated into jobs with disproportionate black representation whereby black workers are excluded from access to well-paying, high-skilled work: the process of which is exacerbated by larger local black population sizes. Therefore, under the assumption that areas with more visible black populations have more pronounced job segregation in which black-dominated jobs pay lower, geographic areas with higher black population concentrations are more likely to be associated with a greater racial wage gap. Given that Rastogi et. al (2011) examined 2010 Census data to find the South to be the region where Blacks comprised the greatest proportion of the total population as well as where the majority of Blacks lived, I predict that the South will still have the highest black-wage differential out of the other regions constituting the total wage gap due to factors beyond academic skill acquisition.

Although literary analyses build my hypothesis that the South will be the dominant driver of the unexplained portion of racial wage inequality and hold the highest-value black-white wage gap relative to other regions, I also have gathered evidence showing the South's racial wage inequality to deviate closer to that of other regions of the country over time. Wilson and Rodgers' (2016) study states that the overall unconditional racial wage

gap has grown the least in the South despite gaps being the largest in 1979, suggesting that other regions of the country have risen to levels more consistent with the long-term pattern of the South. Regardless of the unconditional racial wage gap growing at a slower rate in the South - potentially due to most Southern states starting to spend relatively more on school districts serving predominantly nonwhite student populations than the national average (Robson et al, 2019) - my hypothesis is that the conditional racial wage gap after controlling for academic skill continues to prevail as highest in the South across both generations. This is supported by literature surrounding one potential attribute driving wage inequality: the presence of right-to-work laws. As evaluated by Gould and Shierholz (2011), right-to-work states employing this regulation prohibiting worker authorization from joining labor unions have wages 3.2 percent lower than non- right-to-work states, with the negative impact on black workers' wages being 1.8 percent greater than that on white workers. The surge of right-to-work laws, typical of Southern labor market policy, in North Central states such as Indiana (2012), Michigan (2013), Wisconsin (2015) in the early 2010s acts as a contributing factor for wage rates in non-Southern states directing closer to Southern patterns. However, this law posing a disproportionate harm on black workers exists in 75% of Southern States, and the majority of the 25 right-to-work states are in the South. Therefore, these findings are consistent with my prediction of a larger black-white wage gap in the South than other areas; although other regions are one step closer to a level playing field to the South as illustrated by right-to-work laws, they are not even, yet. This trend guides my belief that while the South continues to have the greatest weight in calculating the cumulative unconditional racial wage gap, this will be to a lesser extent from the NLSY97 dataset as that of the NLSY79.

Methods

Data

To examine how black-white wage gap has evolved from the Baby Boomer to Millennial generations, and how much each geographic region of the United States contributes to this racial wage inequality, I pull data from both the NLSY79 and NLSY97. At the initial point of interview in 1979 and 1997 respectively, participants were aged 12-17; therefore, to ensure all are finished with schooling and have entered the labor market (accommodating for extensive years of education and other delays from starting work), my sample consists of black and white men around 30 years old. I extracted variables representing wages, age at interviewing pre-market as well 14-18 years later in the labor market, region, and race. To measure the black-white wage inequality, I run regression specifications of the natural logarithm of each participant's wage on a race indicator dummy, identifying the magnitude of the racial wage gap. In running the same regressions on the NLSY79 as the NLSY97, I will be able to compare the value of their coefficients on the race dummy to reveal the percent differential of earned wages between black and white male workers in this age group during these two different time periods, reflective of two different generations. My initial regressions will be as aforementioned calculating the unconditional wage gap, then I will control for academic skill in test scores to find the conditional wage gap. I will then break down the observations according to where participants were located by region to find how mean unconditional wage inequality has evolved across geographic areas of the country.

Descriptive Statistics

Table 1 and *Table 2* outline summary statistics regarding mean hourly rate of pay in dollars and cents from the NLSY79 and NLSY97 data respectively. Both samples consist of male white and black workers aged 30 with a valid CPS wage and occupation; respondents who failed to indicate their wage were dropped. Given this cohort was aged 12-17 at the initial point of survey, I extracted wages from the years 1991-1996 to ensure all participants of the NLSY79 had their wage from around age 30 included in the sample. Similarly, wages from the years 2010-2015 were taken from the NLSY97. As Figure 1 illustrates, white men receive higher mean wages than black men in every region, and that this inequality has remained consistent over time. Although both black and white men receive higher wages in the NLSY97 dataset than NLSY79, white men's earnings have grown disproportionately more with a 42.4% mean increase in hourly rate of pay from the NLSY79 to NLSY97. Black men's hourly rate of pay has only had a 29.3% mean increase, suggesting that the black-white wage gap has widened from the Baby Boomer to Millennial generations. One noteworthy observation is that while the black-white mean wage gap in the West was at the most even-playing field out of all regions in the NLSY79, white workers' mean pay has grown exponentially with a 64% rise while black workers' mean pay has grown to a far lesser extent at 8.63% in the NLSY97.

Table 1: Summary of Hourly Rate of Pay (dollars and cents), NLSY79 data

Variable	Obs	Mean	Std. Dev.	Min	Max
Black Overall	727	1179.019	756.627	11	7558
White Overall	1516	1558.148	980.284	1	12820
Black North East	112	1298.277	739.761	185	5000
White North East	270	1797.974	1181.15	450	12692
Black North Central	125	1231.256	805.65	250	7325
White North Central	553	1492.624	824.709	75	8333
Black South	439	1086.747	730.782	11	7558
White South	449	1468.742	921.678	68	8012
Black West	51	1583.353	727.663	516	3500
White West	244	1605.795	1115.742	1	12820

Table 2: Summary of Hourly Rate of Pay (dollars and cents), NLSY97 data

Variables	Obs	Mean	Std. Dev.	Min	Max
Black Overall	367	1668.041	1355.433	90	15000
White Overall	984	2219.278	1979.508	208	35000
Black North East	49	1580.857	814.23	213	4075
White North East	176	2179.807	1124.649	278	8547
Black North Central	53	1489.698	1022.001	90	6667
White North Central	297	2110.539	2218.748	213	33333
Black South	237	1719.81	1538.156	213	15000
White South	290	2038.569	1319.72	208	12308
Black West	28	1720	965.17	800	4900
White West	221	2633.977	2712.538	415	35000

Figure 1: Mean Hourly Rate of Pay for 30-year old Black and White Men

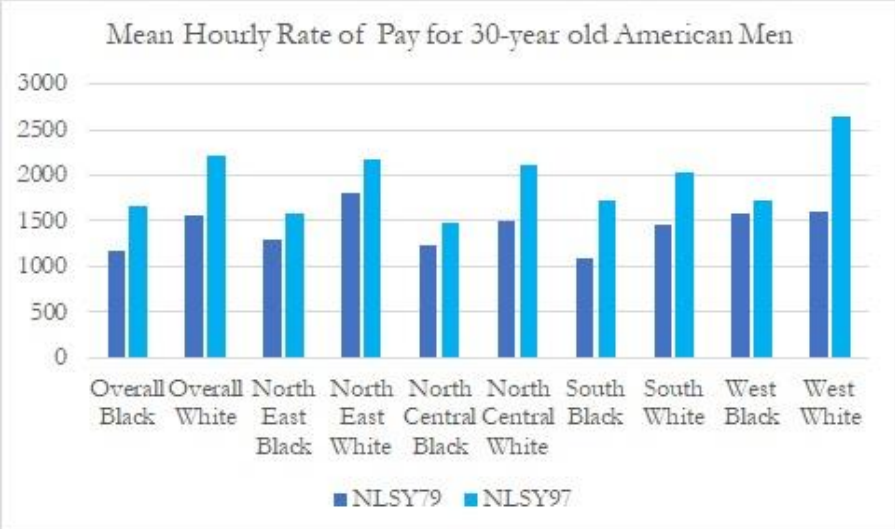


Table 3 and *Table 4* outline summary statistics regarding mean AFQT test scores from participants in 1981 and 1999 from the NLSY79 and NLSY97 data respectively. Both samples consist of male white and black workers aged 14-19 (2 years after their initial interview date) with a valid test score in their profiles; respondents who skipped disclosing their test score were dropped. As Figure 2 illustrates, white men in their youth preceding entry to the labor market received higher mean test scores than black men in all regions of the country, and this trend has upheld over time from the Baby Boomer to Millennial generation. While mean test scores have remained fairly consistent across regional and racial groups over time, the disparity in scores between races persists. Overall, white males score on average around two-fold as high on AFQT tests both in the NLSY79 data and NLSY97 data, pointing to the significance of racial differences in obtaining academic skill that has prevailed over generations.

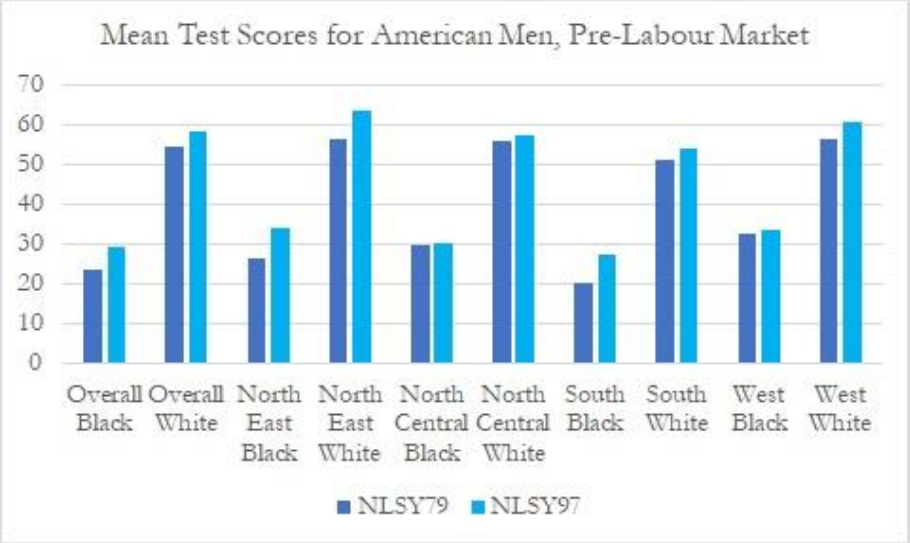
Table 3: Summary of AFQT scores, NLSY79 data

Variables	Obs	Mean	Std. Dev.	Min	Max
Black Overall	727	23.754	22.618	1	98
White Overall	1517	54.668	27.968	1	99
Black North East	112	26.205	23.642	1	96
White North East	270	56.607	28.119	1	99
Black North Central	125	29.56	25.326	1	96
White North Central	553	55.787	27.462	1	99
Black South	439	20.449	20.781	1	97
White South	450	51.049	29.208	1	99
Black West	51	32.588	23.241	1	98
White West	244	56.66	26.075	1	99

Table 4: Summary of AFQT scores, NLSY97 data

Variables	Obs	Mean	Std. Dev.	Min	Max
Black Overall	367	29.2892	23.7798	1.283	96.148
White Overall	984	58.3202	28.3861	1.50	100
Black North East	49	34.0704	22.254	4.394	85.207
White North East	176	63.8193	25.611	5.281	100
Black North Central	53	30.1916	25.3323	1.38	93.256
White North Central	297	57.3265	27.4316	1.50	100
Black South	237	27.5952	24.2121	2.45	96.148
White South	290	54.1012	28.7786	2.88	100
Black West	28	33.5516	11.035	1.283	52.157
White West	221	60.8126	28.0124	2.307	100

Figure 2: Mean Test Scores for Black and White Men, Pre-Labor Market



Empirical Model

Overall, these summary statistics motivate further empirical analysis of the degree to which the black-white wage gap has evolved over time from the Baby Boomer to Millennial generation, and whether there are differences in the trend that have upheld across different regions of the country. My paper will include a model with the following regression specifications:

(1) $$w_i = \alpha + + \lambda_B{}^{\mathrm{B}}{}_i + \varepsilon_i$$

where w_i is dependent variable depicting the log of an individual's wage, $^{B}_{i}$ is a dummy variable indicating whether an individual is black, and ε_i represents an error term, an independent random variable for an individual *i* uncorrelated with race. This econometric model specification is used to examine the unconditional black-white wage differential as shown by $\lambda_B < 0$, and is run in ten regressions, five for each dataset (NLSY79 and NLSY97). For each dataset, the first regression represents the overall labor market, and the following four regressions are for each of the four core geographic regions of the United States, showing racial wage inequality in the North-East, North Central, South and West regions respectively.

To examine whether racial wage inequality can be accounted for racial differences in academic skill, I run another regression specification in two models on the overall labor market for both the NLSY79 and NLSY97, controlling for AFQT test scores.

$$w_i = \alpha + \lambda_B {}^{B}_{i} + \lambda_\theta \theta_i + \varepsilon_i \quad (2)$$

This reports the same variables as the regression specifications in (1), while also controlling for academic skill as shown by θ, an individual's test score from 1981 and 1999 in the NLSY79 and NLSY97 datasets respectively. This specification examines the impact pre-market academic skill holds on the racial wage gap across generations.

Results

Table 5 reports the results from two linear regressions of the whole labor market for the sample of NLSY79 dataset, consisting of 2244 observations of black and white men with valid AFQT scores as well as valid CPS wage and occupation within the range of 1991-1996 to expansively cover each cohort member at age 30. Table 5 finds the effect of controlling for each individual's academic skill by their AFQT scores obtained in 1981, outlining the unconditional regression specification in Model 1 and the conditional in Model 2. The coefficient on the race dummy reveals that 30-year old black workers during this time period earned, on average, 28.1% less than their white male counterparts. When controlling for academic skill, the black-white wage gap by almost two-thirds to a 9.5 percent differential. These findings are similar to that found in Bjerk (2007) as well as Neal and Johnson (1996).

Table 5: Log Wage Regressions on the Baby Boomer Generation (whole labor market, NLSY79)

	Specification			
	Unconditional Model 1		Conditional Model 2	
Variables	**Coef.**	**St.Err.**	**Coef.**	**St.Err.**
black	**-.281*** **	**.026**	**-.095*** **	**.029**
birthyear	**-.017*** **	**.005**	**.021*** **	**.005**
testscore	-	-	**.182*** **	**.008**

To understand how both the overall unconditional black-white wage gap and that conditional on academic skill have evolved over time, Table 6 similarly reports the results from two linear regressions of the whole labor market for the sample of NLSY97 dataset,

consisting of 1351 observations of black and white men with valid AFQT scores as well as valid CPS wage and occupation within the range of 2010-2015 to expansively cover each cohort member at age 30. Table 6 finds the effect of controlling for each individual's academic skill by their AFQT scores obtained in 1999, outlining the unconditional regression specification in Model 3 and the conditional in Model 4. The coefficient on the race dummy reveals that 30-year old black workers during this time period earned, on average, 31.2% less than their white male counterparts. When controlling for academic skill, the black-white wage gap by about 40% to an 18.7 percent differential. This confirms my hypothesis that not only has the black-white wage gap grown over generations, with the unconditional percent differential growing by 3.1 points, but racial differences in academic skill acquired prior to labor market activity holds less influence as a source of observed overall wage inequality in the later generation. This is presented by the racial wage-gap falling by a lesser magnitude from the second regression specification in the NLSY97 analysis than the NLSY79, with the coefficient of the conditional black-white wage differential being almost two-fold in magnitude in the later generation. Moreover, $\lambda_B B < 0$ in both datasets: whole labor market race inequality remains evident and has grown over time, with the relative difference in the unconditional against conditional wage gap being of greater value in the earlier generation as shown by the NLSY79 findings in Table 5.

Table 6: Log Wage Regressions on the Millennial Generation (whole labor market, NLSY97)

	Unconditional Model 3		Conditional Model 4	
Variables	**Coef.**	**St.Err.**	**Coef.**	**St.Err.**
black	**-.312*** **	**.051**	**-.187*** **	**.055**
birthyear	**-.022*** **	**.015**	**-.021*** **	**.015**
testscore	-	-	**.148*** **	**.00544**

I then explore regional differences in racial wage inequality by separating my sample into the four core geographic areas participants reside in. In Table 7, I have run the first regression specification on the NLSY79 dataset sample depicting the unconditional black-white wage gap for each region. Observations for each regression are as follows- 382 in the North-East, 678 in the North Central, 889 in the South and 295 in the West- representing the breakdown of the aforementioned 30-year old men filtered by the validity of their wage and occupation. While the North-East, North Central and South regions resulted in the coefficient of the race dummy proving statistical significance with parameters significantly different from zero at the 1 percent level, the model representing the West Region held no significance at across any percent level. I presume this error to be rooted in the sample for the West not only being the smallest in size overall, but also due to it only have 57 observations for black men. Comparing the black-white wage gap of the other 3 core regions, the South is the largest component of the total racial wage inequality with the greatest racial wage differential at 30.3 percent, as shown by Model 7 in Table 7. This is consistent with my hypothesis that the South would be a dominant driver of black-white wage inequality for individuals in the Baby Boomer generation due to its history of racial segregation with lingering racist remnants rooted in society.

Table 7: Log Wage Regressions on the Baby Boomer Generation (labor market by region, NLSY79)

	North-East Model 5		North Central Model 6	
Variables	**Coef.**	**St.Err.**	**Coef.**	**St.Err.**
black	**-.264*** **	**.058**	**-.247*** **	**.053**
birthyear	**-.03*** **	**.012**	**.015*** **	**.009**
	South Model 7		West Model 8	
Variables	**Coef.**	**St.Err.**	**Coef.**	**St.Err.**
black	**-.303*** **	**.039**	.006	.106
birthyear	**.003*** **	**.009**	.006	.017

To deepen my understanding of the extent to which specific geographic areas of the United States are responsible for the unconditional racial wage gap and uncover the degree to which this has evolved over time, I perform the same regression specification on each region of the NLSY97 dataset sample of similarly filtered 30-year old black and white men in Table 8. Observations for each regression are as follows- 225 in the North-East, 350 in the North Central, 527 in the South and 249 in the West. The regional breakdown of the NLSY97 sample proved statistical significance at the 1 percent level for all models, unlike the NLSY79 in which the result for the West was disregarded. The West prevailed as the region with the highest observed racial wage inequality for individuals born in the Millennial generation, drawing that on average, black workers earn 34.9% less than their white counterparts. Comparing the coefficients in Table 8 to that of Table 7, there has been an increase in the black-white wage differential in all regions but the South, with a percent increase of 21.5% and 36.4% in the North-East and North Central respectively.

Yet, what is striking is that the South was the only region to result in less observed black-white wage inequality in the later generation, with the lowest coefficient on the race dummy. There has been a significant drop in the racial wage gap in the South over time; the average black man born in the Baby Boomer generation earned 30.3% less than his white counterpart, whereas this statistic dropped to 19.4% for men born in the Millennial generation. This challenges my hypothesis; although I accurately predicted the magnitude of the regionalized black-white wage gap in the South to lower in the later generation, I did not forecast that it would drop such a large degree to the point where its racial wage inequality was lower than the other core areas of the country.

Table 8: Log Wage Regressions on the Millennial Generation (labor market by region, NLSY97)

	North-East Model 9		North Central Model 10	
Variables	**Coef.**	**St.Err.**	**Coef.**	**St.Err.**
black	**-.321*** **	**.083**	**-.337*** **	**.084**
birthyear	**-.022*** **	**.024**	**-.015*** **	**.02**
	South Model 11		West Model 12	
Variables	**Coef.**	**St.Err.**	**Coef.**	**St.Err.**
black	**-.194*** **	**.048**	**-.349*** **	**.113**
birthyear	**.002*** **	**.016**	**.01*** **	**.024**

Limitations

The findings of my study must be seen in light of some limitations. My study involved extracting information from two datasets- NLSY79 and NLSY97- which are analogous sets of surveys gathering information on a sample of American youth at multiple points in their lives. Due to the nature of my data collection being from questionnaires, there were significant numbers of unreported individuals in my sample, who were dropped from my study due to them failing to provide valid wage and/or test score values. This brings about selection bias, drawing out the limitation of sampling error in my methodology in which the observations I selected to perform analyses on may not truly be reflective of a random sample of 30-year old black and white American men.

Another limitation my study is subject to is an insufficient sample size for statistical measurement, which arose in my regional regression on the West in the NLSY79 dataset, preventing a significant relationship from being identified in this model. The larger the sample, the more precise results will be, and it is worth considering that my sample size for the NLSY79 and NLSY97 in its entirety were only 2244 and 1351 respectively. Hence, this calls into question how truly representative the significant findings on my wage regressions are: my results should be interpreted with it borne in mind that there is a limitation regarding the number of observations I had in my sample.

Additionally, my study does not test where the significant differences arisen are coming from. It is likely there could unconsidered factors that my models do not account for in finding the black-white wage gap, bringing about an omitted-variable bias in my statistical analysis.

Conclusion

This paper seeks to examine how the racial wage gap has evolved generationally from individuals born in the Baby Boomer generation to those in the Millennial, finding the extent to which pre-market academic skill accounts for whole labor market black-white wage inequality, as well as the magnitude of each core region of the country in its cumulation. The data used in this study includes the National Longitudinal Survey of Youth conducted in 1979 and 1997 respectively, with information covering the lives of a sample of American youth that, in its comparison, represents generational change in my analysis.

I hypothesized that the black-white wage gap of the American labor market has grown over time, with there being a greater degree of racial wage inequality amongst individuals born in my sample representing Millennials than that of Baby Boomers. I further hypothesized that conditioning for AFQT scores would produce a racial wage differential of greater magnitude in the later generation, as racial differences in the ability to acquire academic skill prior to the bulk of labor market activity holds greater impact in observed racial wage inequality in the early 1990s than early 2010s. The regressions shown in Tables 5 and 6 support my hypothesis, as my findings demonstrate the growing magnitude of the black-white earnings gap alongside the falling magnitude of the influence controlling for academic skills plays in counteracting this differential over time.

Once breaking down the unconditional racial wage gap by geographical region, I hypothesized the South to be the dominant driver of the cumulative disparity, but to a lesser extent over time as regions gradually trend towards a more even playing field. My findings only partially align with this hypothesis; although the South results in the largest component of the total racial wage gap amongst individuals born in the Baby Boomer

generation, its black-white wage differential drops an unpredictably large degree to the point where it is no longer the region with the most racial wage inequality in the later generation. While I accurately hypothesized the South to drive proportionately less of the race differential amongst individuals born in the Millennial generation, I did not forecast that it would ultimately be the region with the least observed black-white wage differential. On average, black 30-year old men in the South earn 19.6% less than their white counterparts, in contrast to this statistical comparison exceeded 30% for all other regions from the NLSY97 data.

For future studies, it could be interesting to account for the female black-white wage gap to work with a larger and more representative sample size of the American population and the trends it is upholding. In doing so, a model of preference-based discrimination along the lines of Becker (1971) regarding the cost firms pay in order to act on their preferences could be useful in understanding how and to what extent gender and racial biases persist to be employed in the marketplace, and how these preferences have evolved over time in impacting whole labor market racial wage inequality. It could be also interesting to add more interaction variables related to other controls such as family background, health, crime & substance use to more holistically analyze what other factors could be contributing to the black-white wage gap beyond the acquisition of pre-market academic skillsets.

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