

Racial Unemployment and Racial Wage Inequalities in the Labor Market of the United States

Yafei Luo^{*}

Feb, 2024

Abstract

This paper selects two representative racial groups in the United States: black and white. It analyzes their annual average unemployment rate and hourly wages between 1980 and 2022 to explore the inequality in the American labor market. The unemployment rate and hourly wages of both races have improved over time, and the educational level of workers may impact the changes in both.

Key words: Racial unemployment, Racial wage, Inequalities.

1 Introduction

Racial discrimination and racial employment inequality persist in the U.S. labor market. There are differences between different ethnic groups in their ability to enter the labor market or the wage gap after entering the labor market. The earliest economic analysis of discrimination can be traced back to Gary Becker's "The Economics of Discrimination" in 1957. The continued threats of high unemployment, employer bias, and educational inequality themselves mean that there are huge gaps and imbalances in the development and status of workers of different races in the labor market. Based on the widespread phenomenon of racial inequality in the labor market, many scholars have conducted research in this field.

When we examine whether hiring workers in the labor market is unfair based on race, we first look at the earnings levels of different racial groups. Sociologists and economists have traditionally

^{*}China University of Labor Relations

[†]Email: Luoyafei2002@outlook.com

focused on wage gaps. Akee, Jones, and Porter (2019) found that Black and Hispanic employees earn, on average, approximately 20% to 40% less than white employees, and this gap has persisted since the 1980s [1]. Kim and Sakamoto (2010) proved that after controlling for their education level, Asian men also earn about 8% less than equivalent white men [2]. Dobbin, Schrage, and Kalev (2015) also studied racial gaps in occupational achievement. For example, the proportion of ethnic minorities in management [3]. Like the wage studies, these studies found that black and Hispanic workers are 30 to 50 percent less likely than white workers to become managers, while Asian workers are about 10 percent less likely. In conclusion, these studies reveal deep racial inequalities in earnings and occupational attainment.

Other studies have also shown racial differences in job satisfaction. According to the GSS survey, Sanders (2021) considered that job satisfaction of black employees at work is significantly lower than that of 100 employees, and the gap is even twice that of 100 employees [4]. The survey has to do not only with companies classifying racial and ethnic groups based on benefits and pay but also with educational attainment. As a difference between college-educated and non-college-educated employees, employees did not report lower job satisfaction. Moreover, black people also suffer specific discrimination in education. From education to work, this continuous discrimination forms a chain reaction, causing some people who have been discriminated against in education to continue to be discriminated against at work.

There are many reasons for racial inequality in the labor market, and I think one of them is that, in most cases, white workers are favored over minority workers. Pager and Shepherd (2008) found that some functional company executives believe that minority employees are less qualified than white employees, which is evident in the hiring stage. In addition to hiring discrimination, organizations may unconsciously exclude racial discrimination. Because minority groups are not as familiar with social networks as locals, they often have less access to institutional contacts [5]. Therefore, there will be differences between them and employees of other races at the threshold of entering the labor market. As a result, many ethnic minority employees are unable to find jobs, significantly increasing the unemployment rate of this race in the labor market.

What kind of employees have a great impact on a company's performance and status? Companies often lose many outstanding employees because of the "label" of a group directly biased

against a certain group. Racial discrimination persists in the labor market, and we need to change that. Derenoncourt and Montialoux (2021) indicated that some policies will greatly help. For example, union minimum wage policies can play a perfect role in narrowing the economic gap in racial wages [6]. However, policies are not always "lubricating oil". If we want to change the employment inequality problem that drives the labor market, we need to change the reasons that affect racial discrimination.

Based on the above research, I decided to start with the unemployment rate and income of workers of different races in the current U.S. labor market, analyze the present racial inequality in the U.S. labor market, and whether inter-racial educational inequality has an impact on the unemployment rate and wage levels of blacks and whites in the labor market.

2 Data and Methodology

The data source of this article is the Economic Policy Institute, which mainly selects the unemployment rate, average hourly wage, and average hourly wage gap between blacks and whites in the U.S. labor market from 1980 to 2022, as well as the number of blacks and whites with a high school degree or above and those over 25 years old—population proportion data. The unemployment rate is used to judge whether different races will be discriminated against when entering the labor market; the average hourly wage is used to evaluate whether other races can obtain equal treatment and even status after entering the labor market; the average hourly wage gap is used to measure what percentage of wages would the same employer pay to a black people less than a white person for the same period. Because data for other ethnic groups are not as complete as those for blacks and whites, only data for blacks and whites were selected. To facilitate statistics and calculations, only the data of these two people were chosen for analysis. A summary statistics of the data is provided in Table 1.

Table 1. Summary Statistics of Variables

Variable name	Mean		Variance		Max		Min	
	Black	White	Black	White	Black	White	Black	White
Unemployment Rate	11.6%	5.0%	0.001011	0.000192	20.0%	8.5%	6.4%	3.1%
Hourly Wage	\$21.3	\$27.6	3.817995	11.55799	\$26.0	\$34.9	\$18.9	\$23.1
Black-white Hourly Wage Gap	22.49%		0.0007177		27.5%		17.40%	
share of population between blacks and whites with a high school diploma or higher, age 25 or older	75.4%	83.4%	0.01238	0.003284	88.2%	70.5%	51.2%	90.7%

Source: *Economics Policy Institute*

Notes: The black-white hourly wage gap means that, on average, black workers are paid X percent less per hour than white workers.

For the above data, the article will use the regression analysis method to analyze and make two regression equations. Use the annual unemployment rate gap and hourly wage gap as the Dependent Variables and the diploma gap as the Variable.

3 Inequalities in the Labor Market

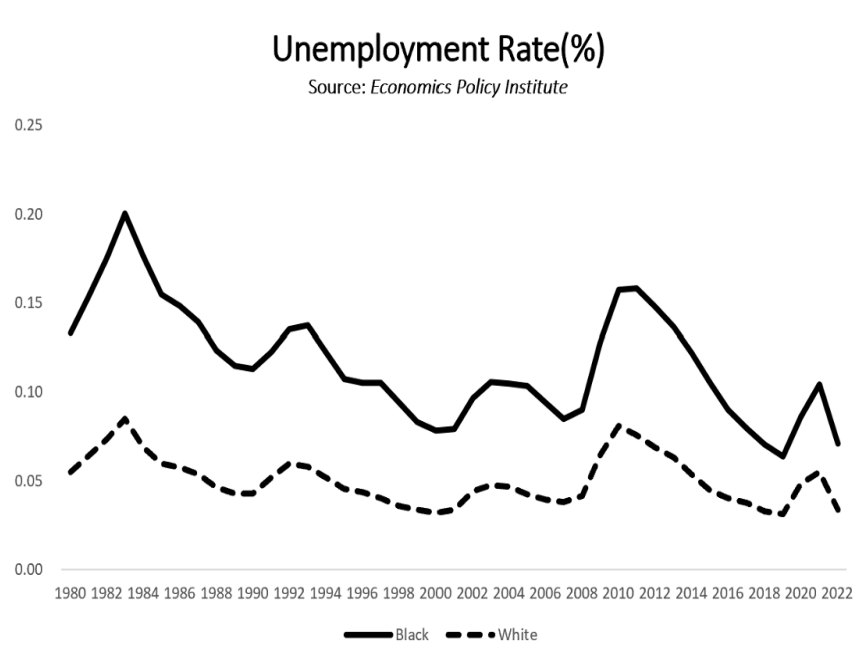


Figure 1: Change curves of Unemployment rate for blacks and whites from 1980 to 2022

The unemployment rate measures the unemployment of different groups in the labor market. There are considerable disparities in unemployment rates between races in the U.S. labor market. Such differences have been recorded in the EPI, so I collected the unemployment rate data of blacks and whites in the United States from 1980 to 2022 and plotted it into a line chart, as shown in Figure 1. From the line chart, we can see that the overall trend of unemployment rates for both races has decreased over 42 years, from 13% and 6% in 1980 to 7% and 3% in 2022. But the unemployment rate for blacks has always been higher than that for whites, roughly by a 2-to-1 ratio. This gap represents the inequality in the American labor market between the two races. From the point of view of changing trends, the data changes during the 32 years are unstable and will rise sharply in some specific years. For example, the financial crisis in the United States in 2008 led to a rapid increase in the unemployment rate of the two races. The unemployment rate 2009 increased by 4% and 2% compared with 2008. By 2022, the easing of the epidemic will also lead to a decline in the unemployment rate. Overall, the unemployment gap between blacks and whites remains significant.

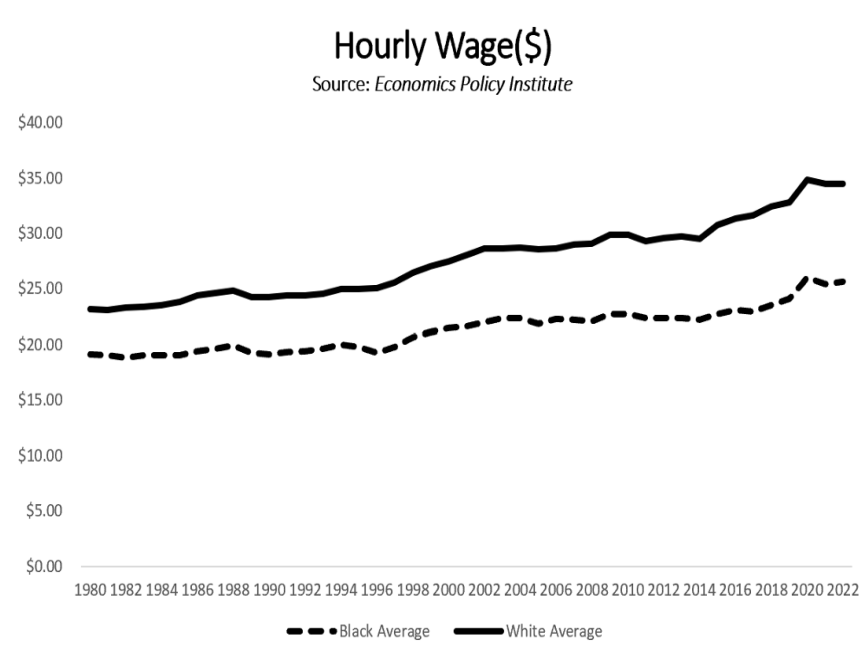


Figure 2: Change curves of hourly wages for blacks and whites from 1980 to 2022

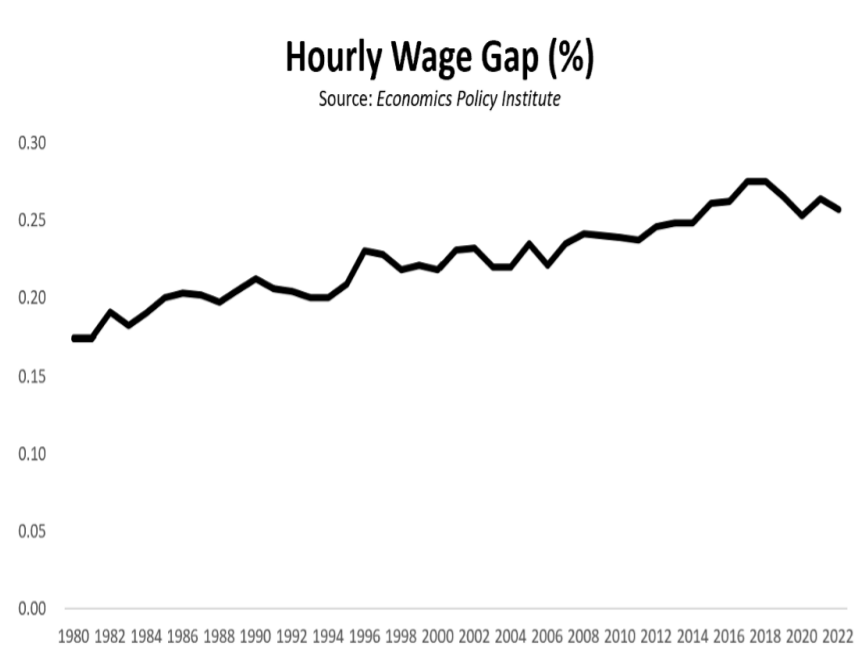


Figure 3: Change curve of Black-white hourly wage gap from 1980 to 2022

In Figure 1, we analyze the difference in black and white unemployment rates in the U.S. labor market, but even after employment, there are significant differences in pay between races. Another important manifestation of racial inequality in the labor market is the difference in hourly

wages between blacks and whites. I also collected average hourly wage data for blacks and whites from 1980 to 2022 and drew a line chart, as shown in Figure 2. Judging from the overall trend of the polyline, the average hourly wages of blacks and whites show an upward trend, rising from US\$19.16 and US\$23.19 in 1980 to US\$25.51 and US\$34.49 in 2022, with relatively stable changes. At the same time, we can also find that the average hourly wage of black people is always lower than that of white people, and the gap is slowly widening. To do this, I found the data on the Black-white hourly wage gap and drew a line chart, as shown in Figure 3. The wage gap is calculated as the proportion of black people paid less than white people per hour of work. The increase in this ratio shows that the hourly wages of black people are gradually widening the gap with white people. Although the two generally show an upward trend, the hourly wages of black people are increasing. The growth rate has yet to enable its hourly wages to catch up with those of whites.

The three graphs above show the gap between blacks and whites in the U.S. labor market, reflecting the inequality in the U.S. labor market. When we try to explain unemployment and hourly wage gaps between blacks and whites, differences in human capital between blacks and whites are often cited as one of the reasons. Human capital investment is an essential factor affecting workers' employment and personal wage income. Among its various types of investments, education is one of the most important. Therefore, I collected data on the proportion of the U.S. population with a high school degree or above and those aged 25 and above from 1980 to 2022, as shown in Figure 4. Looking at the overall trend in the line chart, we can see that over the past 43 years, the number of blacks and whites with a high school degree or above has continued to increase. Although there was a large gap between blacks and whites in 1980, only 50% of blacks over the age of 25 had a high school degree or above, which means that only half of blacks had a high school degree or above. At this time, the number of white people with a high school education or above had reached 70%. It took black people 13 years (1993) to get this proportion. By 2022, the proportions of people aged 25 and above with a high school degree or above will be similar for the two races, reaching 88.2% and 90.7%, respectively, with a difference of only 2.5 percentage points. It can be seen that although the educational level of black people has increased rapidly in recent years under the influence of various factors such as economy and policy, it still has not reached the level of white people. Overall, although the academic level gap between blacks and whites was large 43

years ago, the educational level of blacks has improved significantly in recent years.

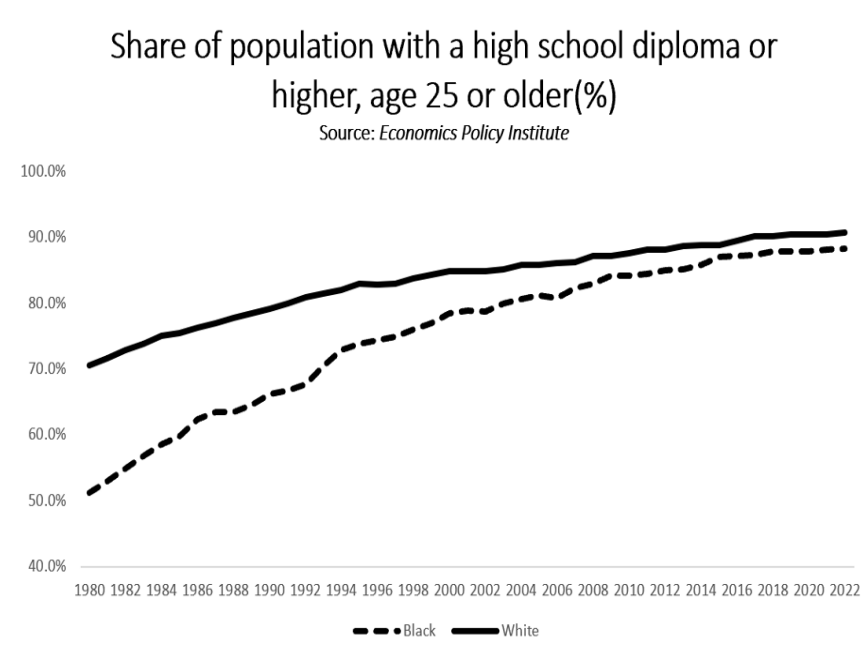


Figure 4: Change curves of the share of the population between blacks and whites with a high school diploma or higher, age 25 or older from 1980 to 2022

However, although the educational level of black people is likely to catch up with white people in the future, their unemployment rate and average hourly wage have not narrowed significantly compared with white people 43 years ago, and the gap has even widened compared to 1980. Do differences in educational attainment between different races have a particular impact on differences in unemployment rates and average salaries? We will explore this through regression analysis.

4 Regression Analysis

Table 2. The Equation Between Unemployment Gap and Diploma Gap

Dependent Variable:UNEMPLOYMENT RATE GAP

Method:Least Squares

Sample:143

Included observations:43

Variable	Coefficient	Std.Error	t-Statistic	Prob.
DIPLOMA GAP	0.360472	0.070022	5.147950	0.0000
C	0.526919	0.008854	59.51204	0.0000

Table 3.The Equation between the Hourly Wage Gap and the Diploma Gap

Dependent Variable:HOURLY WAGE GAP

Method:Least Squares

Sample:143

Included observations:43

Variable	Coefficient	Std.Error	t-Statistic	Prob.
DIPLOMA GAP	-0.335886	0.024461	-13.73148	0.0000
C	0.259640	0.003093	83.94517	0.0000

In the regression analysis process, we first calculate the difference between the unemployment rate of blacks and whites, the difference between the proportion of the population with a high school education or above, and the proportion of the population over 25 years old, all taking absolute values. Use the difference data between the two and the annual average hourly wage difference to perform regression analysis. In the equation, the unemployment rate gap and the average yearly hourly wage gap are used as two Dependent Variables, and the educational level gap is used as a Variable to obtain the Coefficient and C value.

According to Table 2 and Table 3, $p=0.00<0.05$, so it is significant at the 0.05 significance level. For the two Dependent Variables, the coefficients are 0.36 and -0.33, which is in line with the changing trend of each Variable in the previous line chart; that is, the diploma gap is narrowing, and the unemployment rate gap is also decreasing; the diploma gap is narrowing, but the annual average hourly wage gap is increasing. However, judging from the absolute value of the coefficient, the narrowing of the inter-racial diploma gap has a similar and insignificant impact on the changes

in the unemployment rate gap and the average annual hourly wage gap between blacks and whites. This means the two Dependent Variables are more affected by factors other than educational gaps.

5 Discussion

Based on the analysis of the above data, we found that the narrowing of the gap in education levels will have a positive impact on the change in the unemployment rate gap. Still, it is not the main factor influencing the improvement of the gap between the two races. In addition to increasing individual productivity, education also has a signaling function. The higher a person's ability, the more willing he is to receive education and the easier it is to obtain a higher degree. Although the educational gap between blacks and whites in the United States has gradually narrowed in recent years, we still need to keep the academic levels between the two races close or even let blacks have higher academic levels than whites because blacks themselves are likely to be affected by employer subjective factors Resulting in not being prioritized. Because of this, improving education levels can offset this "hesitancy" gap, thereby narrowing the unemployment gap between the two. Being in the labor force is always better than being unemployed, especially for workers whose only goal is to enter the labor market.

However, for the wage gap between blacks and whites, the increase in education level has not improved the wage gap between races. Wage levels can sometimes represent a person's professional status in the labor market. Generally, people think people with high wages are high-status, high-skilled talents, while people with low salaries are mainly low-status, low-skilled. Even as the gap in education levels between blacks and whites has narrowed significantly, the wage gap between the two is still increasing, which means that even after blacks enter the labor market, most blacks are forced to work in low-skilled jobs. For example, for whites and blacks with the same academic qualifications, employers may preferentially select whites for high-skilled positions such as technology research and development. In contrast, while blacks will be assigned to service jobs.

Generally speaking, the gap in education level has little impact on the unemployment rate gap and the average annual hourly wage gap, but this does not mean that we can give up on improving our education level. Regarding the unemployment rate gap, especially the wage gap, other factors

impact the change in the racial gap between the two. For example, gender, family background, the treatment of professional training for employees of different races after entering the company, the subjective judgment of employers when applying for jobs, and the differences in job search information caused by the differences in living environment between blacks and whites, etc. As for how to more effectively improve the wage gap between blacks and whites, we look forward to more in-depth research in this area in the future.

6 Conclusion

According to the words before, the article analyzes the average annual unemployment rate and hourly wages of blacks and whites from 1980 to 2022 and finds that the average annual unemployment rate and hourly wages of blacks and whites have changed over time; the overall trend is upward, but there is still a certain gap between the two races. The unemployment rate of black people is generally higher than that of white people, with a ratio of 2 to 1; the average annual hourly wage of black people is usually lower than that of white people, and the gap between the other two races is slowly widening. When we try to explain this gap, we often cite the human capital, especially the educational level, of black and white workers as a measure. Therefore, from 1980 to 2022, the proportion of blacks and whites aged 25 and above with a high school degree or above was collected and used as a variable to explore the impact on black and white unemployment rates and average hourly annual wages. Comparisons are made through regression equations. The conclusion is that differences in education levels between races can have a positive impact on the unemployment rate, and by improving the education gap between races, the unemployment rate gap between races can be enhanced to a certain extent. In contrast, the racial education gap does not improve the racial wage gap, suggesting that there are inequalities other than education that influence the gap in average annual hourly earnings—including but not limited to gender, family background, employer's subjective factors, differences in job search information caused by differences in living environment between blacks and whites, etc. The data in this article have certain limitations, and we look forward to more comprehensive and rigorous research on racial inequality in the labor market in the future.

Acknowledgment

As I complete this thesis, I would like to thank my advisor, Mr. Chen, for your valuable guidance, selfless help, and encouragement throughout the research process. Thank you very much. I would like to thank my family and friends for their continued support and encouragement, which has motivated my research. Finally, I want to thank the literature, materials, and reviewers cited in the article. In my research, your materials and data made it more comprehensive and rigorous. This acknowledgment is my full affirmation and gratitude to you.

Finally, I want to express my deep gratitude and best wishes to the above people again!

References

- Akee, Randall, Maggie R Jones, and Sonya R Porter (2019). “Race matters: Income shares, income inequality, and income mobility for all US races”. In: *Demography* 56.3, pp. 999–1021.
- Derenoncourt, Ellora and Claire Montialoux (2021). “Minimum wages and racial inequality”. In: *The Quarterly Journal of Economics* 136.1, pp. 169–228.
- Dobbin, Frank, Daniel Schrage, and Alexandra Kalev (2015). “Rage against the iron cage: The varied effects of bureaucratic personnel reforms on diversity”. In: *American Sociological Review* 80.5, pp. 1014–1044.
- Kim, ChangHwan and Arthur Sakamoto (2010). “Have Asian American men achieved labor market parity with white men?” In: *American Sociological Review* 75.6, pp. 934–957.
- Pager, Devah and Hana Shepherd (2008). “The sociology of discrimination: Racial discrimination in employment, housing, credit, and consumer markets”. In: *Annu. Rev. Sociol* 34, pp. 181–209.
- Sanders, Christopher T (2021). “The Impact of Cultural Values on Worker Satisfaction: A Potential Explanation for Observed Racial Differences in Job Satisfaction”. PhD thesis. Virginia Tech.