

# Closing the Racial Gap or Keeping Up Appearances?

## Labor Force Participation and Demographic Change

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**PRELIMINARY**

### **1 Introduction**

Since at least the 1970s, it has been observed that the Black unemployment rate in the US is higher than the White rate. Accordingly, the economic literature documenting this disparity and its many possible causes is vast.<sup>1</sup> An important elementary finding is that the Black unemployment rate is approximately twice that of Whites. This is a robust long-run relationship which has had no discernible change over the past four decades (see [Boulware & Kuttner, 2022](#)).

Overlooked in this discussion is the marked improvement in Blacks' labor force participation, relative to Whites.<sup>2</sup> Looking at [Figure 1](#), the gap between Black and White labor force participation has narrowed dramatically since the 1990s, from 3 percentage points to less than half a percentage point on the eve of the pandemic. Post pandemic, Black participation has reached parity—and even slightly surpassed that of Whites.

At first glance, this seems like an improvement in the fortunes of Black workers. It would appear that running the economy “hot” over the past ten years or so played a role, perhaps drawing discouraged workers

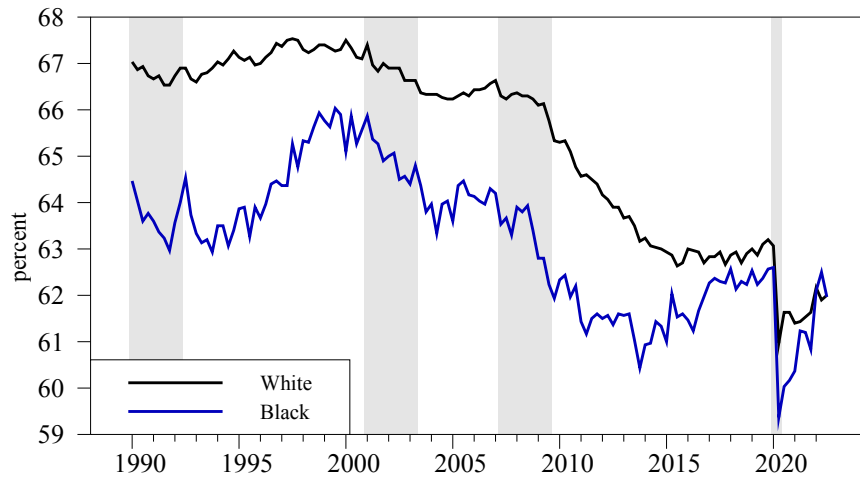
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<sup>1</sup>For example see [Aaronson \*et al.\* \(2019\)](#), [Austin \(2021\)](#), [Fairlie & Sundstrom \(1997\)](#), and [Couch & Fairlie \(2010\)](#).

<sup>2</sup>Previous studies of the racial participation gap examining earlier time periods include [Jones \(1985\)](#), [Parsons \(1980\)](#), and [Schirle \(2008\)](#).

Figure 1: Aggregate Participation Rates



Note: Data are from the Current Population Survey, table A-2; FRED series LNS11300003 and LNS11300006. The shaded areas are periods during which the unemployment rate is rising (“cooling”). These are similar to but not identical to NBER recessions.

back into the labor force, leading to a narrowing and eventual closure of the gap.

According to our findings this triumph is premature, however. In this paper, we show that the apparent improvement in the racial participation gap is largely a function of demographic trends rather than improved labor market opportunities. We find that participation rates among the young of both sexes and prime-age Black males remain well below those of Whites. A relative bright spot however, has been some convergence in youth participation rates, particularly for young Black women.

## 2 Participation Rates and Population Shares

The change in the overall participation rate for different groups (White and Black) can be broken down into the contributions of the subgroups’ (e.g., male, female and youth) participation rates and the subgroups’ shares i.e. an accounting exercise. This allows us to distinguish the effects on the aggregate participation rate of within-subgroup changes in participation rates from those resulting from demographic changes (i.e. changes in the shares in each subgroup). Similar exercises have been performed to understand changes in the natural rate of unemployment.<sup>3</sup>

To fix ideas, consider a breakdown for three subgroups: “Male 20+” (M), “Female 20+” (F) and “Youth

<sup>3</sup>For example, Aaronson *et al.* (2015); Shimer (1999) and Katz & Krueger (1999).

16-19” (Y).<sup>4</sup> Let  $i$  index the subgroup and  $t$  represent the time period. Let  $N_i$  be the 16+ noninstitutional population of subgroup  $i$  and  $L_i$  the number of people in subgroup  $i$  in the workforce. The participation rate of subgroup  $i$ ,  $P_i$ , is  $L_i/N_i$ ; and  $S_i$  is the share of subgroup  $i$  in the total 16+ noninstitutional population,  $N_i/N$ . Letters without  $i$  subscripts pertain to the entire group (Black, White):  $N = N_W + N_B + N_Y$  and  $L = L_W + L_B + L_Y$ . The overall participation rate (either White or Black) can be written as the subgroups’ participation rates, weighted by population shares:

$$P_t = \frac{L_t}{N_t} = \frac{N_{M,t}}{N_t} \frac{L_{M,t}}{N_{M,t}} + \frac{N_{F,t}}{N_t} \frac{L_{F,t}}{N_{F,t}} + \frac{N_{Y,t}}{N_t} \frac{L_{Y,t}}{N_{Y,t}} \equiv S_{M,t}P_{M,t} + S_{F,t}P_{F,t} + S_{Y,t}P_{Y,t} \quad (1)$$

The change in the overall group’s participation rate is the changes in the subgroups’ participation rates, weighted by their population shares; plus the changes in the population shares multiplied by the participation rates:<sup>5</sup>

$$\Delta P_t \approx \underbrace{S_{M,t-1}\Delta P_{M,t} + S_{F,t-1}\Delta P_{F,t} + S_{Y,t-1}\Delta P_{Y,t}}_{\text{participation}} + \underbrace{[P_{M,t-1}\Delta S_{M,t} + P_{F,t-1}\Delta S_{F,t} + P_{Y,t-1}\Delta S_{Y,t}]}_{\text{demographics}} \quad (2)$$

The interpretation of the first three terms is straightforward. Suppose men made up 40% of the population and the participation rate for men increases by 1 percentage point. This would increase the overall participation rate by 0.4 percentage points ( $0.4 \times 1$ ). The interpretation of the last three terms, grouped in the square brackets, is less obvious. Their sum represents the degree to which the overall participation rate changes as a result of changes in population shares. For example, suppose the male and female participation rates were 40% (0.4) and 60% (0.6) respectively, and both groups comprised 45% of the population. If the female share rose to 50% while the male share fell to 40%, the overall participation rate would rise by 1 percentage point  $[(0.50 - 0.45) \times 0.6 + (0.40 - 0.45) \times 0.4]$ , due to the population shift from low-participation men to high-participation women. Since this effect pertains to shifts in the subgroups’ shares relative to one another (that is, it make no sense to think about an increase in the female share in isolation with an offsetting change in another subgroup’s share), in the results below we report the sum of the three terms in the square brackets and refer to this as the effects of changing demographics.

<sup>4</sup>These are the subgroups reported in the Current Population Survey table A-2; in the results presented below in sections 3 and 4, we will be looking at six distinct subgroups.

<sup>5</sup>This is obtained by treating the first differences as time derivatives and then using the product rule for the derivative of a product.

### **3 Racial Trends in Participation Rates and Population Shares**

Figure 2 plots participation rates broken down by age, race and sex for six subgroups: sex, plus three age categories (“youth,” 16–19; “prime age,” 20–64; and “old,” 65+). The top center and top right panels shows that among prime-age and older men, the racial gap is constant. For prime-age and older women, the bottom center and bottom right panels, there is virtually no difference in participation rates by race. The gap amongst the youth, both men and women, shown in the two leftmost panels, is initially large, but fell from 1990 to 2010 for both Blacks and Whites, both male and female. Since 2010, the gap has held steady for Black men and fallen slightly for Black females.

We also see that in general, participation rates are generally not very cyclical, but participation rates among black youth and prime age males do tend to turn down during cooling periods. Now the question is, are the observed changes in the aggregate participation rate due to changes in these groups’ participation rates? Or are they due to demographic changes, i.e. shifts in the shares of population that fall into each group? As Figure 3 shows, changing shares are likely to be important.

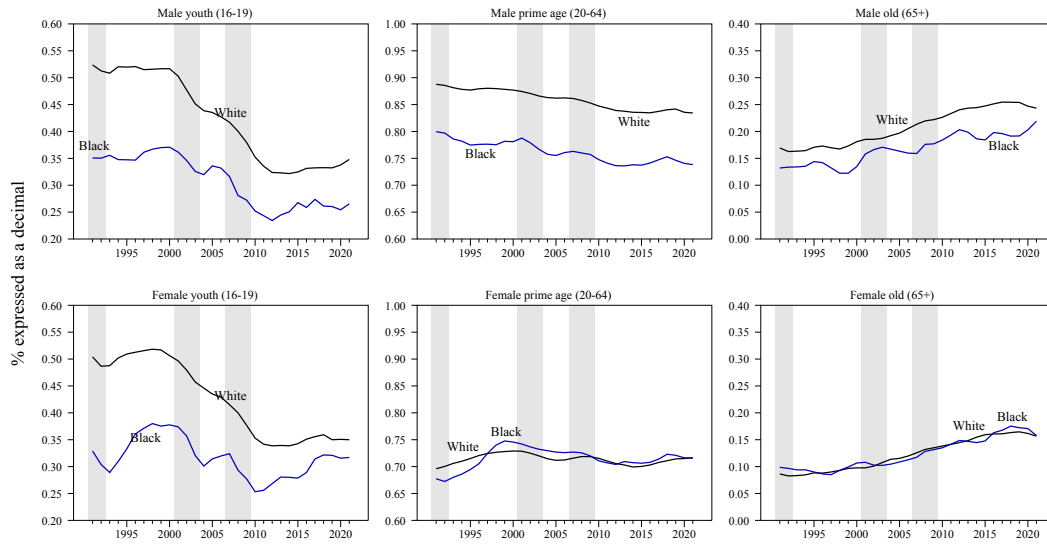
For example, from the figure we can see that the population shares of older individuals are rising for all groups. Since participation rates among the old are low, this aging trend likely accounts for much of the overall downward trend in the aggregate rates. We can also see that relative to White youth, the Black youth shares are falling. Since youth (especially Black) participation is low, this trend is tending to increase the Black participation rate. We also see that the prime-age White male share is falling relative to Black, and since this is a high-participation group, this is also contributing to the closing of the gap.

### **4 Decomposing the Trends in Participation Rates and Population Shares by Race**

Section 2 showed how the change in the overall participation rate for different racial groups can be decomposed into the contributions of subgroups’ participation rates and subgroups’ population shares. Figure 4 plots the decomposition of the post-1990 change in the overall Black and White participation rates broken down by age, race and sex. The lines represent the cumulative contributions of changes in the subgroup’s participation rate, relative to 1990.

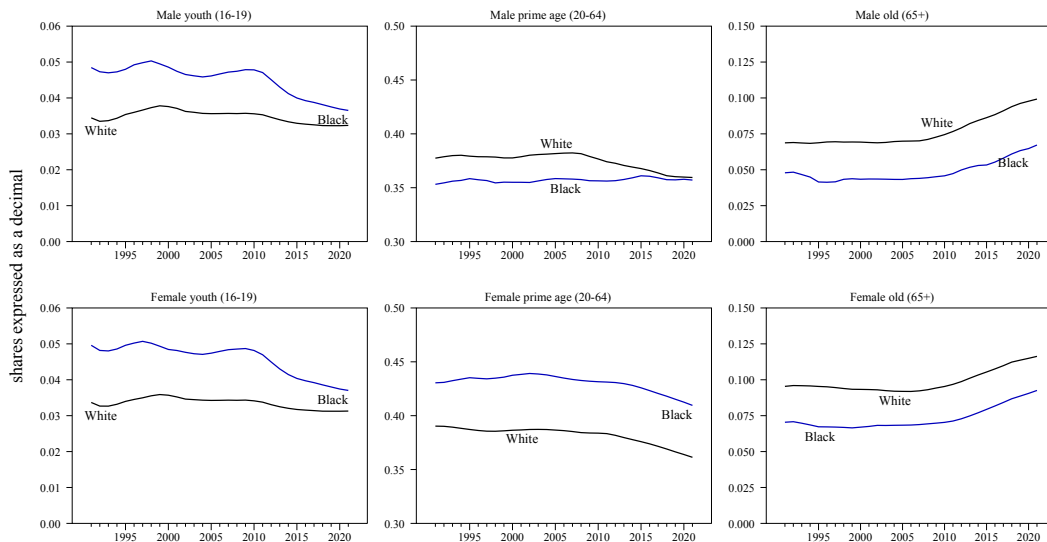
The decomposition quantifies the effects of the subgroup participation rate changes on the overall Black and White participation rates. We can see from the figure that young individuals’ contributions to the participation rate tend to decrease the gap between Blacks relative to Whites. For prime-age men, we see no contribution, on average, to the gap. However, the cyclicity of Black participation for men and women

Figure 2: Participation Rates by Age, Sex and Age



Note: The participation rates are relative to the number of persons 16+ years of age residing in the 50 states and DC who are not members of institutions and not on active duty in the armed forces. The calculations are based on microdata obtained from the CPS Annual Social and Economic (ASEC) Supplement microdata. The shaded areas are periods during which the unemployment rate is rising (“cooling”). These are similar to but not identical to NBER recessions. A centered MA(3) filter is used for smoothing.

Figure 3: Population Shares by Age, Sex and Age



Note: The population shares are relative to the number of persons 16+ years of age residing in the 50 states and DC who are not members of institutions and not on active duty in the armed forces. The calculations are based on microdata obtained from the Annual Social and Economic (ASEC) Supplement microdata. A centered MA(3) filter is used for smoothing.

is clearly evident. The contributions of the old tend to increase the gap since Whites are increasing their participation by more than Blacks.

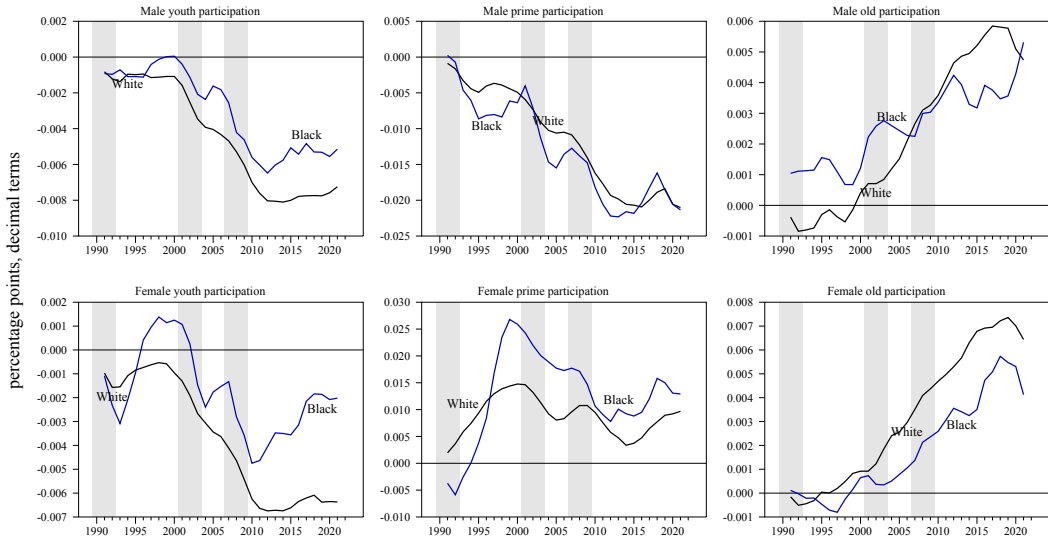
Figure 5 shows the combined effects of demographic shifts, i.e. changes in the population shares. Since around 2007, the drop in aggregate participation rates is almost entirely driven by these shifts. We can see that they have affected Whites more than Blacks, and that the difference between the two therefore accounts for nearly 2 percentage points of the gap's closure.

## **5 Conclusion**

This paper sought to understand the narrowing of the gap between the labor force participation rates of Blacks and Whites over the past three decades. We found that demographic trends rather than trends in participation rates largely explain the narrowing of the gap. However, there has been some convergence in youth participation rates, particularly for young Black women.

Our findings point to the importance of looking beyond the optimistic assumption that there has been more opportunity in the labor market for Black workers since the 1990s. Instead, our examination of the demographic shifts reveals the need for further research to determine these shifts' underlying sources.

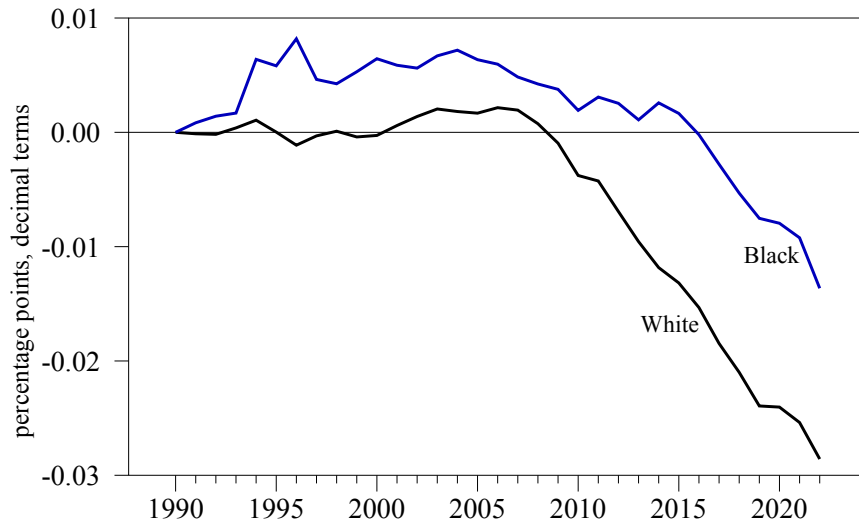
Figure 4: Contributions of Participation Rate Changes by Subgroup



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Note: The decomposition of the post-1990 change in the overall Black and White participation rates is based on equation 2. The lines represent the cumulative contributions of each component relative to the 1990 participation rates. See also note to Figure 2. A centered MA(3) filter is used for smoothing.

Figure 5: Contributions of Shifts in Population Shares by Race



Note: The decomposition of the post-1990 change in the overall Black and White participation rates is based on equation 2. See also note to Figures 2 and 4. A centered MA(3) filter is used for smoothing.

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