Racial Segregation, Employment, and Income in the U.S., 1970-2010[1]

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Abstract

In this paper, I analyze the relationship between racial segregation and income for black and white male workers during this period. I find that racial segregation continues a previously observed downward trend through 2010. Nevertheless, my findings suggest that increased racial segregation is linked to worsened black incomes between 1990 and 2010, especially for low-income black workers. Additionally, I report a previously unobserved negative association between racial segregation and income for both low-income white and high-income black workers that emerges in 2000. Moreover, I find that racial segregation is negatively associated with employment outcomes for black workers, most notably for black high school graduates and dropouts. My results indicate that racial segregation may distort the returns to schooling for black workers. My findings are robust to the inclusion of income and education segregation as well as black income and black education segregation measures.

Keywords: racial segregation, income, employment

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Introduction

Racial residential segregaion in U.S. cities garnered prominent scholarly attention in the late 20th century. Previous research has linked higher levels of segregation with adverse outcomes for black urban dwellers in 1990 (Cutler and Glaeser, 1997). Although, evidence suggests that this relationship did not emerge until the 1980s (Collins and Margo, 2000). Additional work has documented an overall decline in levels of racial segregation through 1990 (Cutler, Glaeser, and Vigdor, 1999). Interesting questions following from these studies include: how has segregation in U.S. cities trended in the nearly thirty years after 1990, and how have the relationships between segregation and economic outcomes changed over this period?

A vast literature within economics, sociology, and public health examine racial segregation and its relationship with various outcomes. Massey and Denton (1989) study the relationship between various dimensions of racial segregation finding that black residents of U.S. cities are more likely than other minority groups to experience hypersegregation (i.e., high levels in five dimensions of segregation). Moreover, Massey and Tannen (2015) find that about a third of black urban dwellers live in hypersegregated areas in 2010. Ananat (2011) uses a unique instrumental variable approach to demonstrate that poverty and inequality increases for blacks and decreases for white workers in more segregated cities. Several studies have linked racial segregation with adverse infant health outcomes including low birth weight (Ellen, 2000; Grady, 2006), infant mortality rates (Yankauer, 1950; Laveist, 1993; Polednak, 1996), and black-white preterm birth disparities (Osypuk and Acevedo-Garcia, 2008). Williams and Collins (2011) link racial segregation with a host of adverse health outcomes for black individuals. Additionally, Card and Rothstein (2007) find robust evidence that the black-white SAT gap is larger in more racially segregated cities, and Rugh and Massey (2010) present causal evidence linking racial segregation positively to the recent foreclosure crisis. Boustan (2011) summarizes the commonly discussed causes and consequences of racial segregation within the literature giving particular attention to spatial mismatch of jobs and peer effects as prominent mechanisms. Collins and Margo (2000) moreover hypothesize that an adverse effect of racial segregation might derive from increasing concentration of poverty within predominantly black neighborhoods following the end of de jure segregation.

In this paper, I use tract-level census data available via Social Explorer to explore the trends of segregation in Metropolitan Statistical Areas (MSAs) from 1970 through 2010. Moreover, I utilize individual-level census data available via IPUMS to measure the relationship between racial segregation and income for black and white male workers throughout this period. I further examine

potential heterogeneity across the income distribution in those findings. Put differently, I explore whether low- or high-income black (or white) workers experienced different impacts of racial segregation on their earnings.

My results replicate those of previous research finding an overall decline of racial segregation between 1970 and 2010. My results suggest that the negative relationship between racial segregation and income for black workers emerged in the 1980s and worsened through 2000 and 2010. I find that low-income black workers are predominantly disadvantaged by higher levels of racial segregation. Interestingly, I find that a negative relationship between racial segregation and the incomes of white workers, especially low-income white workers, emerged by 2010. I also find that racial segregation is negatively related to employment outcomes for black workers. Notably, I find some evidence suggesting that racial segregation may distort returns to schooling for black workers as those negative effects are greatest among high school graduates followed by high school dropouts. My results are ostensibly consistent with theories related to labor market or peer effects; however, they are also robust to the inclusion of income and education segregation as well as black income and black education segregation. It is possible that either these controls serve as bad proxies for those mechanisms, that other mechanisms are more salient to these relationships, or both.

II. Racial Segregation in U.S. Cities, 1970-2010

Previous research by Cutler, Glaeser, and Vigdor (1999) document an overall decline of racial segregation in U.S. cities between 1970 and 1990. I contribute to their study by extending it through 2010. I measure segregation using the dissimilarity index[3], which takes the following form in equation (1) below:

$$RDI_m = \frac{1}{2}\sum_{c=1}^{N}\left|\frac{b_c}{B} - \frac{w_c}{W}\right| \quad (1)$$

where N is the total number of census tracts c in an MSA m, b is the total number of black residents of census tract c, B is the total number of black residents of MSA m, w is the total number of white residents in census tract c, and W is the total number of white residents in MSA m. The dissimilarity index therefore measures the share of black residents in an MSA who need to move to a different

[3] Massey and Denton (1989) discuss five dimensions of segregation: evenness, exposure, clustering, centralization, and concentration. In their previous work, (1988) these authors use factor analysis and principal components analysis to select ideal measurements of each dimension. They find that the dissimilarity index offers the best measure of evenness.

tract within the same MSA to have a uniform distribution of black residents across the MSA. Put differently, if an MSA's dissimilarity index measure is zero, then it is perfectly integrated, whereas a dissimilarity index measure of one indicates that it is perfectly segregated. Conventionally, racial segregation rates less than 0.3 are considered low, between 0.3 and 0.6 are considered moderate, above 0.6 are considered high, and above 0.75 are considered extremely high (Rugh and Massey, 2010).

I calculate measures of the dissimilarity index using tract-level 1970-2000 decennial census data and American Community Survey 2008-2012 (Five-Year Estimates) data available via Social Explorer (U.S. Census Bureau). For my calculations, I use consistent 2010 boundaries. I present box plots of the racial segregation distribution by year in Figure 1 and summary statistics of racial segregation in each year are reported in Table 1 along with other MSA-level characteristics. The box plots depict a downward trend in racial segregation, on average, from an extreme level of 0.745 in 1970 to a more moderate level of 0.476 in 2010. Notably, the 1970 racial segregation box plot's shorter whiskers and lower outliers indicate that the distribution is squeezed and slightly negatively skewed. In other words, most of the sixty-nine U.S. cities included in the 1970 distribution have similarly high levels of racial segregation, and the few outliers represent notable exceptions. This is a stark contrast to the spread distributions of 1980-2010 racial segregation which stretch roughly and with some variation from 0.2 to 0.8 and do not include outliers.

The decline in racial segregation between 1970 and 2010 both on average and across the distributions as evidenced by Figure 1 may indicate improved spatial equality by race in U.S. cities during this period. On the other hand, it is also possible that the finding is driven mechanically by the addition of predominantly less racially segregated cities into the sample, which is possible as the sample of MSAs increases from seventy to two-hundred-and-fifty-six between 1970 and 2010. In order to elucidate whether the observed racial segregation decline is a result of sampling bias, I present box plots of the racial segregation distribution in each year using a consistent set of MSAs in Figure 2. As depicted, the same trends observed in Figure 1 are moreover present in Figure 2. Notably, the decline in racial segregation seems to be largely driven by the most racially segregated cities. Also, the rate of improvement is largest between 1970 and 1980. As depicted in the trend lines shown in Figure 3, the most racial segregation appears to be persist over time. That is, the most racially segregated places remain the most racially segregated places (as do the least) despite an overall decline. Altogether, I find evidence that racial segregation in U.S. cities improved (i.e., declined) between 1970 and 2010. Similarly, Massey and Tannen (2015) find that hypersegregation—

which suggests that a city experiences high levels of segregation in all five dimensions of segregation simultaneously—declines in this same period.

My findings replicate Cutler, Glaeser, and Vigdor's (1999) earlier finding that racial segregation in U.S. cities declined overall between 1970 and 1990; moreover, my results indicate that this decline continued through 2010. My findings also suggest that the decline in racial segregation seemed to occur predominantly between 1970 and 1980 as well as 2000 and 2010 in highly racially segregated cities. These results are consistent with findings by Massey and Tannen (2015). Although the average level of racial segregation has declined from extremely high to moderate levels between 1970 and 2010, the upper range is persistently extremely high as depicted in Figure 1. Moreover, while an average level of racial segregation of 0.476 may be conventionally considered moderate, it is alarming that roughly half of the average U.S. city's black residents would be required to relocate within their city to achieve perfect integration.[4]

III. Racial Segregation and Income

Previous research by Cutler and Glaeser (1997) pairing individual-level data from the 1990 1% Public Use Micro Sample with measures of segregation calculated using tract-level data from the 1990 Census finds an adverse causal relationship between segregation and various economic outcomes. Specifically, they find that black residents of more segregated neighborhoods experience worse outcomes regarding schooling, employment, and single-motherhood. Subsequently, research by Collins and Margo (2000) finds no evidence of a relationship between segregation and idleness or single-motherhood before 1970, instead these adverse effects appear and in 1980 and increase through 1990. Interestingly, they find a positive relationship between income and segregation in 1970 that disappears and returns negatively in 1990. In this paper, I expand on this work first by studying the relationship between racial segregation and income for black and white workers, and how this changes between 1970 and 2010.

In order to examine these relationships, I use individual-level census decennial data for 1970-2000 and a five-year 2010 American Community Survey (ACS) sample available via from IPUMS (Ruggles et al. 2018). I replicate Cutler and Glaeser's methodology of restricting their sample to 20-

[4] Research from Lincoln Quillian (2002) suggests that, in addition to discriminatory housing policies (Munnell et al., 1996), racial segregation has been maintained in U.S. cities due to migratory behaviors of white residents that avoid predominantly minority neighborhoods. Similar results are found by Ellen (1999) and Boustan (2010).

30 year-olds who work full-time and live in MSAs with at least 100,000 residents and 10,000 black residents. Presumably, a young subgroup has had less opportunity to migrate to different cities based on their own preferences, thus this diminishes the likelihood of selection bias. In addition, I restrict my sample to male workers who are either black or white as coded in the Census.

Summary statistics for individual-level characteristics of black and white workers in each year are reported in Table 2. Notice that, on average, white individuals report significantly higher wage and salary incomes than black workers throughout the period, although the gap does seem to diminish slightly between 1970 and 2010. Black individuals also report significantly less years of education on average than white workers. Although differences in education presumably account for some of the difference in income between white and black workers, I will exclude education from my regression specifications since, as shown by Cutler and Glaeser (1997), this would otherwise be a source of endogeneity as racial segregation impacts education attainment.

In order to measure the relationship between individual wage and salary income and racial segregation, I estimate three specifications of the following equation (2):

$$ln\,Y_{imt} = a + \beta_0 Black_{imt} + \beta_1 RDI_{mt} + \beta_2 Black*RDI_{imt} + \tau_t + \epsilon_{imt} \qquad (2)$$

where the outcome variable is ln(income) and the primary predictors are a black dummy variable, the racial dissimilarity index, and an interaction of these. Each specification pools the sample across years and therefore includes year fixed effects. Specification one includes a vector of MSA-level characteristics including ln(population), black population share, percent manufacturing, and ln(median family income) as well as the interaction of these with the black dummy. Meanwhile, specification two includes MSA fixed effects and specification three, which is my preferred specification, includes both the MSA-level controls and MSA fixed effects. Table 3 reports the results from these three specifications of equation (2), and my estimates are fairly consistent across the specifications. Given the length of my sample period, it is reasonable that MSA fixed effects may not sufficiently control for unobservables. Therefore, the combination of both MSA fixed effects and MSA-level controls presents a preferable alternative. Specification three, which does include both, is thus my preferred specification.

The coefficients on racial segregation indicate the change in ln(income) for white residents that results from a one-unit change in racial segregation. The coefficients on the interaction term represent the difference in the change of ln(income) for black residents relative to that of white residents due to a one-unit change in racial segregation. Examining these coefficients allows us to examine whether the relationship between racial segregation and income varied significantly between

white and black residents. I moreover report a coefficient for the net black effect, which captures the full relationship between racial segregation and the incomes of black residents. For easier interpretability, I discuss all of my results in terms of a standard deviation increase in racial segregation, which is reported in Table 1. In Figure 4, I plot the net white effect, net black effect, and differential black effect for each year.

The relationship between racial segregation and income is very imprecisely measured for both white and black workers in 1970 and 1980. My findings point weakly towards a positive association between racial segregation and the incomes of black workers in these decades. White incomes are negatively related to racial segregation in 1970 and positively related to racial segregation in 1980. Although these results are dubious given their high standard errors, it is interesting that the black workers seem to benefit more from increased racial segregation prior to 1990 than white workers. Collins and Margo (2000) report similar results and discuss the role of income or education diversity within black neighborhoods during de jure segregation as a potential explanation. While low- and high- income black workers lived in the same neighborhoods, the higher demand for black-owned businesses as well as potentially beneficial peer or role model effects might produce prosperous outcomes within black communities. Furthermore, Collins and Margo suggest that the most mobile black individuals and households (i.e., high income, education, skill, etc.) might have been inclined to move to predominantly white neighborhoods in the post-Civil Rights era in pursuit of better jobs, schools, etc. As a result, black neighborhoods in highly racially segregated cities might disproportionately suffer from decreased demand for black businesses as well as negative peer effects (Case and Katz, 1991). Consequently, Collins and Margo suggest that these labor market and peer effects might generate decreased earnings for black workers in more racially segregated neighborhoods. On the flip side, the introduction of highly-skilled black workers to previously all-white labor markets might result in a labor surplus. Assuming that equally skilled white and black workers would be considered perfect substitutes, then we would expect earnings of white workers to decrease in more racially segregated neighborhoods. Furthermore, if businesses could offer black workers lower wages for the same productivity, then we would expect even greater declines in white earnings due to increased racial segregation.

Consistent with these hypotheses, my estimates indicate that racial segregation is negatively associated with the incomes of black residents between 1990 and 2010. I also find that racial segregation is negatively, but imprecisely, related to incomes of white residents in most of these years. My estimates for black workers are significantly different than those for white workers, and

also statistically significantly different from zero. In 1990, a standard deviation increase in racial segregation (0.137 as reported in Table 1) is related to a 8.47 percent decrease in incomes of black workers. This negative relationship strengthens over time such that increased racial segregation is tied to a 10.80 percent decrease in black incomes in 2010. In contrast, increased racial segregation is associated with 1.27 percent decrease in white incomes in 2010 and this is statistically insignificant.

In general, my results are consistent with earlier findings that increased racial segregation is associated with improved outcomes for black workers prior to 1990 and strongly adverse outcomes thereafter. Importantly, my findings demonstrate that both black and white workers are worse off in more segregated cities, although the negative effect of racial segregation is much greater for black residents. Potential explanations for these relationships include labor market and peer effects. In the post-Civil Rights era, it is plausible that the out-migration of wealthy black residents from predominantly-black communities resulted in decreased demand for black labor, which would account for the negative coefficient in 1990. Moreover, the absence of wealthy and highly-educated black workers from predominantly black communities might have constrained the human capital attainment of future generations through peer effects, which may explain the larger coefficients in 2000 and 2010. Interestingly, the largest decline in racial segregation occurs between 1970 and 1980. Given that we would generally expect the labor market effects to correspond with that decline, the delayed negative association may suggest that peer effects offers a more salient explanation.

IV. Heterogeneity Across the Income Distribution

I aggregate the sample to the MSA-level and calculate wage and salary income at the 20th, 50th, and 80th percentiles for white and black workers separately in each city. The 20th percentile represents low-income white and black workers while the 80th percentile represents high-income white and black workers. The 50th percentile represents the middle-class.

Consequently, I estimate the following equation (3):

$$ln\,Y_{mt} = a + \beta_0 RDI_{mt} + X`_{mt}\,\gamma + \eta_m + \tau_t + \epsilon_m \qquad (3)$$

where the outcome variable is ln(income) at one of the given percentiles. I estimate each regression separately by race, weighted by population, and including year fixed effects, MSA-level controls, and MSA fixed effects. My findings from these results are presented in Table 4. Again, I interpret all coefficients in terms of a standard deviation shift in racial segregation, which is reported in Table 1.

I find that the incomes of high-income white workers are positively associated with racial segregation in 1970 and 1980 while the incomes of low-income white workers are negatively

associated with it. The negative effect on incomes experienced by low-income white workers drops nearly to zero in 1980, but steadily returns to its 1970-level by 2010. The magnitude of this relationship for low-income white workers is notably high as increased racial segregation corresponds to a 4.79 percent decrease in income at the 20th percentile. Interestingly, the effect on average white earners (i.e., the 50th percentile) remains positive in all decades although it is imprecisely estimated. Also, I estimate that increased racial segregation is associated with a 0.4 percent decrease in the incomes of high-income white workers by 2010, which is also imprecisely estimated. These results suggest that the negative (albeit imprecisely estimated) relationship observed between racial segregation and white incomes in the previous section is predominantly experienced by the poorest of white workers.

I moreover find that the relationship between racial segregation and income is generally positive for average to high-income black workers in 1970 and 1980 while negative for low-income black workers. Between 1990 and 2010, the associations between racial segregation and income are negative for black workers of all income levels. Remarkably, the poorest black workers (i.e., 20th percentile) experience 14.21 percent lower incomes due to increased racial segregation while the richest black workers (i.e., 80th percentile) experience 5.22 percent lower incomes in 2010.

These findings suggest that low-income black and white workers' incomes are consistently negatively related to racial segregation. According to the labor market and peer effects theories previously discussed, post-Civil Rights era migration of high-skilled black workers away from predominantly black neighborhoods would generate decreased earnings for the remaining low-to-middle skill black workers who might suffer from decreased demand for black labor or negative peer effects. High-skilled black workers might therefore benefit from higher racial segregation if their labor is highly demanded in the previously all-white, high-skill labor markets. In this case, high-skilled black workers might crowd out some high-skilled white workers, which would lead to higher incomes for high-income black workers and lower incomes for high-income white workers. Alternatively, the high-skill black workers who move to predominantly white workers might face some discrimination in the labor market wherein either they crowd-out high-skill white workers but do not receive higher earnings or they crowd-out low-skill white workers, which leads to negative earnings outcomes for both high-income black workers and low-income white workers. My results in this section can be explained by the scenario described above wherein high-skilled black workers leave predominantly black neighborhoods in the post-Civil Rights era and crowd-out low-skill white workers from a previously all-white labor market. Additionally, the alarmingly high, negative

coefficients for low-income black workers are well-explained by these mechanisms. Oddly, I find that high-income white and, especially, black workers' incomes are also negatively related to racial segregation by 2010. Based on my current theory, it is not obvious how this outcome might arise. Therefore, its plausible that this result is further evidence of potential bias in my estimates stemming from endogeneity.

V. Robustness Checks with Income and Education Segregation

In the previous two sections, I found that racial segregation is positively related to white and black incomes in 1970 and 1980, but negatively related to them thereafter. This negative relationship is particularly strong for low-income white workers and especially for low-income black workers. I've briefly discussed two potential mechanisms generating these relationships: labor market and peer effects. Cutler and Glaeser's (1997) study examined two measures related to these mechanisms: income segregation and education exposure. If highly racially segregated MSAs are also highly segregated by income, then it's possible that any negative relationship between racial segregation and black incomes is driven by black residents' disproportionate propensity to live in poor neighborhoods. It is also possible that black residents of highly racially segregated cities are exposed to less educated neighbors, and their incomes are therefore lower due to peer effects. Cutler and Glaeser's findings suggest that greater income segregation is negatively (but statistically insignificantly) related to incomes of black workers and positively associated to incomes of white workers. Meanwhile, greater black education exposure is linked to statistically significant increased incomes for black workers and decreased white incomes. With that said, the negative relationship between racial segregation and black workers' incomes persists when these mechanisms are controlled for. Thus, Cutler and Glaeser's results indicate that education exposure, and perhaps therefore peer effects, seems to be a salient mechanism explaining the adverse effect of racial segregation on black incomes in 1990, but it does not tell the full story.

I expand on Cutler and Glaeser's analysis once again by including measures of income and education segregation into my regressions from the previous two sections. I measure income segregation also using the dissimilarity index, which takes the following form in equation (4) below:

$$IDI_m = \frac{1}{2}\sum_{c=1}^{N}\left|\frac{p_c}{P} - \frac{np_c}{np}\right| \quad (4)$$

where N is the total number of census tracts c in an MSA m, p is the total number of poor residents of census tract c, P is the total number of poor residents of MSA m, np is the total number of

nonpoor residents in census tract *c,* and *NP* is the total number of nonpoor residents in MSA *m*. Poor is defined as having an income below the poverty threshold as determined by the Census Bureau and nonpoor is defined as having an income above that threshold. I restrict my measure of the income dissimilarity index to black or white residents of each MSA. The interpretation of the income dissimilarity index is therefore the share of poor (black or white) residents of a city required to relocate within that city to attain a uniform poverty distribution across the city.

Similarly, I measure education segregation using the following equation (5) below:

$$EDI_m = \frac{1}{2}\sum_{c=1}^{N}\left|\frac{le_c}{LE} - \frac{he_c}{HE}\right| \quad (5)$$

where *N* is the total number of census tracts *c* in an MSA *m, le* is the total number of low-education residents of census tract *c*, *LE* is the total number of low-education residents of MSA *m*, *he* is the total number of high-education residents in census tract *c,* and *HE* is the total number of high-education residents in MSA *m*. I define low-education as having attained any education less than at least some college and high-education as having attained some college or more. Again, I only include black or white residents in my measurement of education segregation. The interpretation of the education dissimilarity index is the share of low-educated residents required to relocate within a city to achieve an uniform distribution of education across the city.

Summary statistics of income and education segregation indices are reported by year in Table 1 with other MSA-level characteristics. Additionally, box plots of income and education segregation are presented in Figure 5 for each year. Notably, both income and education segregation levels are relatively low compared to racial segregation levels and they are mostly unchanged from 1970 through 2010. Through my examination of income and education segregation, I hope to elucidate, at least in part, the roles of labor market and peer effects as mechanisms driving the observed relationship between racial segregation and income as previously discussed. To this end, I replicate my regression analyses from the previous two sections including income and education segregation as controls. The results from replicating my estimation of equation (2) are reported in Table 5.

Recall, I found that increased racial segregation is generally negatively related to the incomes of white workers. When controlling for income and education segregation, my estimated coefficients for racial segregation instead suggest a slight positive relationship, but none are statistically significant. On the other hand, the coefficients on income segregation are large, negative, and statistically significant except in 1980 and 1990. Education segregation seems to be positively associated with white workers' incomes, especially in 2000 and 2010, although this relationship is not

statistically significant. Interestingly, the coefficients on racial segregation for black workers are slightly diminished although they remain large, negative, and statistically significant in 1990, 2000, and 2010. Meanwhile, the coefficients for income and education segregation are small, positive, and statistically insignificant, which suggests that the incomes of black workers are similarly affected by these mechanisms as the incomes of white workers.

I moreover replicate my estimation of equation (3) with results reported in Panel A of Table 6 for white workers and Panel B of Table 6 for black workers. Interestingly, controlling for income and education segregation seems to moderate the negative effect of racial segregation experienced by low-income white workers in all years while bolstering the positive effect of racial segregation experienced by high-income white workers in 1970 and 1980 and eliminating the negative effects experienced by high-income white workers in later decades. Generally, the coefficients on income segregation are large and negative while the coefficients on education segregation are large and positive. Despite the inclusion of these controls, increased racial segregation is tied to 3.2 percent lower incomes of low-income white workers in 2010. The estimated coefficients on racial segregation for low-income black workers are only slightly reduced by the inclusion of these controls. Similarly, the positive coefficients on racial segregation for high-income black workers in 1970 and 1980 as well as the negative coefficients on racial segregation for high-income black workers thereafter are only slightly reduced by these controls. The results suggest that increased racial segregation is associated with 13.6 percent lower incomes for low-income black workers and 5.6 percent lower incomes for high-income black workers in 2010.

My findings suggest that the effects of racial segregation experienced by white workers are largely explained by variation in income and education segregation. Generally, increased income segregation negatively impacts white workers' incomes while education segregation is beneficial. Nevertheless, controlling for income and education segregation appears to have very little impact on the relationship between racial segregation and the incomes of black workers, especially low-income black workers. Although these results are consistent with Cutler and Glaeser's (1997) findings, they do not do much to clarify our understanding of the role of mechanisms like labor market or peer effects. Recall, those hypotheses are predominantly premised on the migration of high-skill black individuals out of predominantly black communities into previously all-white neighborhoods. Conceivably, this migration might occur without generating much variation in a city's overall income

or education segregation. Consequently, I address this possibility by repeating this analysis with black income and black education segregation as controls.[5]

I present box plots of black income and black education segregation in each year in Figure 6. These box plots generally indicate that both black income and black education increased between 1970 and 2010. Notably, while the average levels only increased slightly, the range of values increased tremendously. For example, the maximum level of black education segregation in 1970 is about 0.5 and in 2010 its nearly 0.9. These changes are substantial and therefore lend some support to the proposition that they may explain the "effect" of racial segregation on incomes, especially for black workers, better than just overall income or education segregation.

I report the results from estimating equation (2) with black income and black education segregation as controls in Table 7. I find that increased racial segregation is negatively associated with the incomes of white workers at levels that seem mostly unaffected by the inclusion of these controls. Interestingly, increased black education segregation is negatively related to white incomes, which may lend support to the labor market and peer effects theories previously discussed. Surprisingly, the coefficients on racial segregation for the incomes of black workers are only moderately diminished by these controls. Moreover, black income and black education segregation are not differentially related to the incomes of black workers.

I report my findings from estimating equation (3) with these controls in Table 8. Again, I find that controlling for black income and black education segregation has very little impact on the coefficients on racial segregation for both white and black workers' incomes. Oddly, I find that the estimated coefficients on racial segregation are greater in magnitude when these controls are included. To the extent that income and education segregation and moreover black income and black education segregation are good proxies for the labor market or peer effects theories previously outlined, then these results would suggest that these mechanisms are not particularly salient. It is not obvious however that these controls do represent those mechanisms well, therefore they deserve continued attention in future research.

VI. Employment as an Outcome

[5] I calculate these measures using equations (4) and (5) above with my sample restricted to only black residents.

Finally, I replicate my previous analysis once more by turning my attention towards the extensive margin using two measures of employment as my outcome. I use the same data as the previous section; however, this analysis necessarily requires me to revise my sample restrictions. For these regressions, I will include all 20-30 year-old male workers in my sample (including those who are presently unemployed) whereas I previously excluded workers who were not currently fully employed. Consequently, my first measure of employment is a dummy variable for whether the person is employed or not. My other measure of employment is the number of hours worked each week (I exclude unemployed workers once again for this). Summary statistics for these measures are presented by race and year in Table 2. Notice that the employment rate and average hours worked per week of black workers are significantly lower than for white workers in all years. Additionally, these gaps seem to increase over time.

I begin my estimating equation (2) with these employment measures as my outcomes, and I present the results in Table 9. The effect of racial segregation on employment for white workers is negative and imprecisely estimated in 1970, but it is positive and statistically significant thereafter. The estimated effect on black employment is negative in all decades with the highest impact measured in 1990. In 2010, increased racial segregation is associated with a 2.7 percent decreased likelihood to be employed for black workers and 0.8 percent increased likelihood to be employed for white workers. Additionally, my results indicate that white workers experience more hours worked per week related increased racial segregation throughout the period, while the hours worked per week of black workers decrease.

I address potential heterogeneity in these results by partitioning my sample by educational attainment. I divide the sample into four groups: high school dropouts (less than twelve years of education), high school graduates (twelve years of education), some college (between one and there years of college), and college graduates (four years of college or more). I therefore re-estimate equation (2) for each of these groups using the employment measures as outcomes and present my results in Table 10. My results indicate the white workers of all education-levels experienced increased likelihood to be employed due to increased racial segregation in 1980 and beyond, although my findings are often imprecisely estimated. I find that the greatest positive "effect" of racial segregation on employment is experienced by white college graduates in 2000 and 2010. On the other hand, I find that black workers' employment, regardless of education-level, is negatively related to employment in all decades with the exception of college graduates in 1970 and 1980. The largest negative effect is experienced by black high school graduates and, to a lesser degree, black

high school dropouts. My results indicate that black high school graduates are 2.5 percent less likely to be employed and black high school dropouts are 0.7 percent less likely to be employed due to increased racial segregation. These results may therefore suggest that racial segregation distort the conventional returns to education for black workers. That is, my findings indicate that black workers in highly racially segregated cities may be disproportionately incentivized to drop out of high school relative to their peers in less segregated cities. In this case, these workers would have attained less human capital and may therefore be subject to lower wages, which may explain at least part of my results from my previous section. My results using hours worked per week as the outcome report similar results.

Once again I attempt to elucidate the role of peer effects as a mechanism behind these relationship by controlling first for income and education segregation (reported in Table 11) and then black income and black education segregation (reported in Table 12). Panels A and B report the results with likelihood to be employed as the outcome for white and black workers, respectively, while panels C and D do the same for hours worked per week. The inclusion of income and education segregation as controls diminishes the previously estimated positive effects for white workers except for college graduates. Education segregation seems to be predominantly negatively associated with employment for white workers while income segregation is positively associated with it, although this is inconsistent. I find that including these controls only slightly moderates the negative effects of racial segregation on black workers' employment. Again, education segregation seems to be positively associated with employment for black workers while income segregation is negatively related to it. The results for hours worked per week are consistent with these findings, except education segregation seems to be negatively associated with the hours worked per week of black workers especially in 2010. I find similar results when controlling for black income and black education segregation, as reported in Table 12.

I find that racial segregation is negatively associated with black workers' employment outcomes and positively related to white workers' employment outcomes, with these effects peaking in 1990, but remaining high through 2010. This is consistent with the earlier findings from Cutler and Glaeser (1997) and Collins and Margo (2000). Additionally, my results indicate that high school graduates followed by high school dropouts experience the bulk of the negative effects for black workers. This suggests that racial segregation may distort the returns to schooling for black workers. Similar to my regressions using wage and salary income as the outcome, my inclusion of income and education segregation as well as black income and black education segregation measures does not

elucidate the role of peer effects as a mechanism. Most likely this indicates that these measures poorly represent the mechanism rather than the mechanism' irrelevance to the relationship between racial segregation and racially disparate income and employment outcomes. On the other hand, it is possible that another mechanism, such as the spatial mismatch of skills and jobs, offers a better explanation. According to this theory, the relocation of low-skill jobs away from city centers during the second half of the 20th century would result in surplus labor supply (Steinnes, 1977; Thurston and Yezer, 1994; and White, 1999). Moreover, discriminatory housing policies against black residents would leave low-skill, black workers stranded in city centers without jobs (Gobillon et al., 2007). Job suburbanization would therefore leave low-skilled black workers (e.g., high school dropouts and high school graduates) left to compete in an over-saturated market. It is plausible that high school dropouts might overtake graduates in this market if they already have the necessary skills for these low-skill jobs as they entered the market first and have more experience.

VI. Conclusion

In this paper, I explore the changes in racial segregation between 1970 and 2010, the relationship between racial segregation and individuals' incomes by race, the changes in those associations over time, and the differences in those relationships across the income distribution. I demonstrate that segregation levels in U.S. cities have declined overall between 1970 and 2010. Although the 2010 levels have decreased to a "moderate" standard, it remains alarming that nearly half of the average city's black residents would need to relocate in their city to achieve perfect integration. It is moreover noteworthy that the greatest share in decreased levels of racial segregation seemed to occur between 1970 and 1980 as well as 2000 and 2010, and these decreases occurred mostly among the most highly segregated cities.

I find that racial segregation has an adverse relationship with the incomes of black workers that emerges in 1990 and expands substantially through 2010. Based on my estimates, a standard deviation increase in racial segregation is tied to a 10.8 percent decrease in black incomes in 2010. I moreover find that this relationship varies significantly based on income. My findings suggest that low-income black workers' incomes decreased by about 14.2 percent due to increased racial segregation while high-income black workers' incomes only decrease by 5.2 percent. Although it emerges later, I also find a modestly negative association between racial segregation and the incomes of white workers as well. This relationship also exhibits considerable variation across incomes as

low-income white workers' incomes decrease by about 4.8 percent due to increased racial segregation but high-income white workers' income only decrease by about 0.4 percent.

In addition, my results indicate that racial segregation is negatively related to the employment outcomes of black workers and positively associated with the employment outcomes of white workers. Most notably, I find that the largest negative effect of racial segregation is experienced by black high school graduates followed closely by black high school dropouts. This indicates that racial segregation may distort returns to schooling for black workers. Although the negative effects of racial segregation on black incomes have increased over time, I find that the impacts on black employment have diminished slightly since 1990.

My preliminary findings are consistent with hypotheses of labor market or peer effects as outlined by Collins and Margo (2000). However, my attempts to control for these mechanisms with income and education segregation as well as black income and black education segregation measures are largely unsuccessful. I find that the large negative effects of racial segregation on the incomes of black workers, especially low-income black workers, as well as low-income white workers are robust to the inclusion of these controls. My results with employment outcomes are also robust to including these controls. On one hand, these results may suggest that these controls are poor proxies for those mechanisms. On the other hand, it's possible that other mechanisms are more salient to these effects. For example, spatial mismatch theory of jobs and skills is a popular alternative explanation of these findings. As low-skills jobs move to the suburbs, we would expect black unemployment rates to soar, which Miller (2016) finds. My findings are consistent with this as it is moreover plausible that black high school graduates would suffer from this the most. In addition, we would expect this mechanism to generate lower wages for black workers, especially low-skill black workers, and higher wages for low-skill white workers. It is possible that this mechanism or some interaction of it with labor market or peer effects can explain my findings.

Despite a general decline in racial segregation levels across U.S. cities over the past forty years, the impact of racial segregation on the incomes of black workers is getting worse. Notably, the worsening effect of racial segregation moreover seems concentrated amongst the worst off. My findings seem to be consistent with theories related to labor market or peer effects as well as spatial mismatch. The timing of my findings however may lend more support for peer effects than labor market effects. All in all, these potential mechanisms as well as others deserve greater attention in future research.

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Table 1: Summary Statistics of MSA-Level Characteristics, 1970-2010

	1970	1980	1990	2000	2010
Racial Segregation	0.745	0.605	0.556	0.512	0.476
	(0.0970)	(0.134)	(0.137)	(0.135)	(0.126)
Income Segregation	0.330	0.307	0.331	0.326	0.338
	(0.0598)	(0.710)	(0.0735)	(0.0679)	(0.0605)
Education Segregation	0.228	0.219	0.254	0.251	0.245
	(0.0366)	(0.0511)	(0.0598)	(0.0608)	(0.0593)
Black Income Segregation	0.269	0.299	0.376	0.358	0.436
	(0.0922)	(0.135)	(0.146)	(0.135)	(0.141)
Black Education Segregation	0.255	0.217	0.344	0.327	0.358
	(0.0654)	(0.0846)	(0.132)	(0.119)	(0.129)
Population	22,809	6,082	30,402	32,990	36,799
	(29,661)	(10,825)	(49,390)	(54,896)	(58,040)
ln(Population)	9.602	8.097	9.726	9.779	9.892
	(0.844)	(0.961)	(0.979)	(1.00)	(1.007)
Black Population Share	0.128	0.117	0.102	0.115	0.104
	(0.0960)	(0.0962)	(0.0993)	(0.111)	(0.100)
Percent Manufacturing	0.335	0.274	0.220	0.182	0.144
	(0.120)	(0.128)	(0.101)	(0.0964)	(0.0785)
Median Family Income	56,253	186,297	132,631	52,546	48,595
	(5,446)	(1,972,883)	(1,174,527)	(8,366)	(9,199)
ln(Median Family Income)	10.933	10.962	10.911	10.857	10.775
	(0.0974)	(0.429)	(0.416)	(0.159)	(0.180)
Number of MSAs	70	231	223	257	256

Notes: Segregation indices are calculated using tract-level decennial census data for 1970-2000 and an ACS Five-Year Estimate for 2008-2012 for 2010 available via Social Explorer. The other MSA-level characteristics are estimated using individual-level decennial census data for 1970-2010 and the Five-Year ACS 2008-2012 sample for 2010 available from IPUMS and aggregated to MSA-level. Standard errors are shown in parentheses below means.

Table 2: Summary Statistics of Individual-Level Characteristics, 1970-2010

	1970		1980		1990		2000		2010	
	White	Black	White	Black	White	Black	White	Black	White	Black
Wage and Salary Income	42,804	32,301	38,974	31,201	37,096	29,019	36,905	29,331	35,162	26,438
	(23,576)	(17,626)	(23,445)	(20,298)	(26,499)	(20,044)	(32,363)	(26,964)	(30,710)	(23,281)
	[40.020]		[30.078]		[55.603]		[48.886]		[52.183]	
Employment Rate	0.948	0.868	0.941	0.800	0.938	0.799	0.919	0.775	0.900	0.728
	(0.222)	(0.338)	(0.235)	(0.400)	(0.242)	(0.401)	(0.273)	(0.418)	(0.300)	(0.445)
	[39.000]		[67.000]		[129.49]		[124.72]		[134.25]	
Avg. Hours Worked Per Week	40.845	39.592	41.552	39.835	42.220	40.301	41.622	39.738	39.545	37.374
	(9.913)	(8.094)	(10.304)	(9.684)	(11.133)	(10.490)	(11.805)	(11.818)	(12.499)	(12.364)
	[12.620]		[16.620]		[34.800]		[37.170]		[38.170]	
Age	25.531	25.273	25.369	25.279	25.896	25.643	25.678	25.568	25.706	25.514
	(2.940)	(3.077)	(3.054)	(3.109)	(2.992)	(3.051)	(3.113)	(3.135)	(3.000)	(3.082)
	[7.612]		[2.612]		[15.062]		[7.230]		[11.431]	
Years of Education	12.474	11.282	12.990	12.452	13.082	12.633	12.919	12.521	13.240	12.764
	(2.717)	(2.503)	(2.502)	(2.113)	(2.245)	(1.811)	(2.458)	(1.952)	(2.444)	(1.990)
	[38.679]		[19.552]		[36.320]		[33.957]		[35.602]	
Observations	62,905	8,693	77,758	8,939	303,434	35,508	313,803	48,289	287,073	36,193

Notes: These summary statistics are estimated using individual-level census decennial data for 1970-2000 and ACS 5-Year Estimates of 2008-2012 for 2010 from IPUMS. I report means and standard deviations in parentheses below those. Beneath each set of means and standard deviations for a given variable in a particular decade for blacks and white I report the associated t-statistic in brackets.

Table 3: Estimated Effect of Racial Segregation on ln(Income), 1970-2010

	(1)	(2)	(3)
1970			
Black	-0.995	-0.729	-1.033
	(0.142)***	(0.221)**	(0.144)***
Racial Segregation	-0.0257	0.0995	-0.0270
	(0.0508)	(0.230)	(0.0934)
Black * Racial Segregation	0.132	0.473	0.168
	(0.154)	(0.267)	(0.164)
Net Black Effect	0.107	0.572	0.141
	(0.146)	(0.192)***	(0.142)
1980			
Black	-0.618	-0.480	-0.524
	(0.127)***	(0.0912)***	(0.115)***
Racial Segregation	0.208	-0.0542	0.117
	(0.0786)***	(0.138)	(0.127)
Black * Racial Segregation	0.114	0.219	0.0585
	(0.165)	(0.132)	(0.169)
Net Black Effect	0.322	0.165	0.175
	(0.175)	(0.169)	(0.201)
1990			
Black	-0.462	-0.0580	-0.341
	(0.157)**	(0.0349)	(0.146)*
Racial Segregation	0.150	0.0129	-0.0269
	(0.0949)	(0.192)	(0.131)
Black * Racial Segregation	-0.556	-0.368	-0.591
	(0.0925)***	(0.0576)***	(0.0885)***
Net Black Effect	-0.406	-0.355	-0.618
	(0.109)***	(0.191)*	(0.146)***
2000			
Black	-0.325	0.0281	-0.261
	(0.128)*	(0.0367)	(0.117)*
Racial Segregation	0.0322	0.00449	-0.0915
	(0.0820)	(0.183)	(0.106)
Black * Racial Segregation	-0.734	-0.556	-0.760
	(0.0709)***	(0.0586)***	(0.0700)***
Net Black Effect	-0.702	-0.551	-0.852
	(0.0943)***	(0.166)***	(0.106)***
2010			
Black	-0.367	0.0118	-0.290
	(0.103)***	(0.0589)	(0.0879)***
Racial Segregation	0.0490	-0.165	-0.101
	(0.0860)	(0.218)	(0.119)
Black * Racial Segregation	-0.740	-0.552	-0.756
	(0.0863)***	(0.104)***	(0.0908)***
Net Black Effect	-0.691	-0.717	-0.857
	(0.122)***	(0.288)**	(0.160)***
MSA-Level Controls	Yes	No	Yes
MSA F. E.	No	Yes	Yes
Adjusted R^2	0.0530	0.0556	0.0595

Notes: Column 1 includes MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income) as well as those interacted with black as controls. Column 2 includes MSA fixed effects. Column 3 includes MSA-level controls as reported above and MSA fixed effects. Standard errors clustered by MSA are shown in parentheses. The Net Black Effect is calculated as the sum of coefficients on racial segregation and the interaction term. *** p<0.01, ** p<0.05, * p<0.1

Table 4: Effect of Racial Segregation on ln(Income Percentile) by Race, 1970-2010

	Percentile		
	20th	50th	80th
Panel A: Effect of Racial Segregation on White Incomes			
1970	-0.379	0.0672	0.211
	(0.124)**	(0.0859)	(0.0771)**
1980	-0.00355	0.276	0.145
	(0.121)	(0.0834)***	(0.0749)
1990	-0.113	0.0147	-0.0460
	(0.117)	(0.0810)	(0.0727)
2000	-0.216	0.00166	-0.0837
	(0.122)	(0.0841)	(0.0755)
2010	-0.380	0.0187	-0.0316
	(0.128)**	(0.0886)	(0.0795)
Adjusted R^2	0.852	0.876	0.832
Panel B: Effect of Racial Segregation on Black Incomes			
1970	-0.250	0.324	0.0439
	(0.326)	(0.164)*	(0.140)
1980	-0.502	0.379	0.347
	(0.327)	(0.165)*	(0.141)*
1990	-0.756	-0.210	-0.182
	(0.319)*	(0.161)	(0.137)
2000	-1.059	-0.440	-0.358
	(0.322)**	(0.162)**	(0.138)**
2010	-1.128	-0.473	-0.414
	(0.343)**	(0.173)**	(0.148)**
Adjusted R^2	0.623	0.728	0.699

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 5: Estimated Effect of Racial, Income, and Education Segregation on ln(Income), 1970-2010

	1970	1980	1990	2000	2010
Black	-0.576	-0.393	-0.588	2.026	-0.307
	(1.798)	(0.227)	(0.305)	(1.039)	(0.785)
Racial Segregation	0.0812	0.138	-0.0173	0.00308	0.00703
	(0.0999)	(0.118)	(0.126)	(0.0980)	(0.109)
Income Segregation	-0.438	0.220	0.0200	-0.342	-0.465
	(0.221)*	(0.180)	(0.150)	(0.158)*	(0.182)*
Education Segregation	-0.183	-0.253	-0.156	0.283	0.161
	(0.266)	(0.237)	(0.253)	(0.255)	(0.247)
Black * Racial Segregation	-0.0835	-0.0738	-0.388	-0.722	-0.724
	(0.220)	(0.184)	(0.106)***	(0.115)***	(0.132)***
Black * Income Segregation	0.157	-0.0635	-0.435	0.321	0.130
	(0.322)	(0.328)	(0.217)*	(0.217)	(0.298)
Black * Education Segregation	-0.164	-0.305	0.237	0.264	0.122
	(0.453)	(0.368)	(0.217)	(0.230)	(0.331)
Net Black Effect of Racial Segregation	-0.00237	0.0637	-0.405	-0.719	-0.717
	(0.194)	(0.201)	(0.120)***	(0.108)***	(0.161)***

Notes: These coefficients result from estimating the preferred specification of equation (1) with the addition of measures of income and education segregation. It therefore includes MSA-level controls, MSA fixed effects, and year fixed effects. The Adjusted R^2 is 0.0599. The Net Black Effect is calculated as the sum of coefficients on racial segregation and the interaction term.

*** p<0.01, ** p<0.05, * p<0.1

Table 6: Effect of Racial, Income, and Education Segregation on ln(Income Percentile) by Race, 1970-2010

	Percentile		
	20th	50th	80th
Panel A: Effect of Racial Segregation on White Incomes			
1970			
Racial Segregation	-0.378	0.162	0.352
	(0.147)*	(0.100)	(0.0894)***
Income Segregation	0.00234	-0.726	-0.822
	(0.330)	(0.226)**	(0.201)***
Education Segregation	-0.188	-0.515	-0.0377
	(0.362)	(0.248)*	(0.221)
1980			
Racial Segregation	-0.0480	0.315	0.254
	(0.130)	(0.0890)***	(0.0793)**
Income Segregation	0.188	-0.105	-0.244
	(0.227)	(0.155)	(0.138)
Education Segregation	0.151	-0.373	-0.245
	(0.213)	(0.146)*	(0.130)
1990			
Racial Segregation	-0.122	-0.00309	0.0239
	(0.133)	(0.0911)	(0.0811)
Income Segregation	0.153	-0.185	-0.295
	(0.212)	(0.145)	(0.129)*
Education Segregation	-0.00462	-0.278	-0.127
	(0.225)	(0.154)	(0.137)
2000			
Racial Segregation	-0.102	-0.0246	-0.00616
	(0.134)	(0.0918)	(0.0818)
Income Segregation	-0.368	-0.243	-0.406
	(0.214)	(0.146)	(0.130)**
Education Segregation	0.127	-0.0591	0.315
	(0.233)	(0.160)	(0.142)*
2010			
Racial Segregation	-0.251	-0.0158	0.0440
	(0.143)	(0.0979)	(0.0872)
Income Segregation	-0.500	-0.374	-0.477
	(0.237)*	(0.162)*	(0.144)***
Education Segregation	0.184	-0.167	0.319
	(0.229)	(0.157)	(0.140)*
Adjusted R^2	0.853	0.879	0.839

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 6: Effect of Racial, Income, and Education Segregation on ln(Income Percentile) by Race, 1970-2010

	Percentile		
	20th	50th	80th
Panel B: Effect of Racial Segregation on Black Incomes			
1970			
Racial Segregation	-0.418	0.296	0.0374
	(0.428)	(0.213)	(0.182)
Income Segregation	0.826	-0.0340	-0.102
	(0.892)	(0.444)	(0.379)
Education Segregation	-0.274	-0.594	-0.489
	(0.987)	(0.492)	(0.420)
1980			
Racial Segregation	-0.584	0.254	0.130
	(0.372)	(0.185)	(0.158)
Income Segregation	0.567	0.672	0.843
	(0.670)	(0.334)*	(0.285)**
Education Segregation	-0.793	-1.127	-0.738
	(0.613)	(0.305)***	(0.261)**
1990			
Racial Segregation	-0.814	-0.234	-0.206
	(0.366)*	(0.182)	(0.156)
Income Segregation	0.331	0.0412	0.0741
	(0.592)	(0.295)	(0.252)
Education Segregation	0.138	0.0385	-0.191
	(0.568)	(0.283)	(0.242)
2000			
Racial Segregation	-1.055	-0.489	-0.350
	(0.353)**	(0.176)**	(0.150)*
Income Segregation	0.293	0.233	0.00929
	(0.568)	(0.283)	(0.242)
Education Segregation	0.432	0.391	0.276
	(0.577)	(0.287)	(0.245)
2010			
Racial Segregation	-1.078	-0.540	-0.447
	(0.375)**	(0.187)**	(0.160)**
Income Segregation	0.219	0.304	0.158
	(0.622)	(0.310)	(0.264)
Education Segregation	0.625	-0.105	-0.105
	(0.580)	(0.289)	(0.247)
Adjusted R^2	0.620	0.732	0.704

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 7: Estimated Effect of Racial, Black Income, and Black Education Segregation on ln(Income), 1970-2010

	1970	1980	1990	2000	2010
Black	-1.795	-0.489	-0.581	2.450	-0.309
	(1.443)	(0.236)*	(0.319)	(1.132)*	(0.790)
Racial Segregation	-0.0186	0.187	-0.0337	-0.0999	-0.105
	(0.0971)	(0.136)	(0.139)	(0.102)	(0.116)
Black Income Segregation	-0.0432	0.200	-0.00245	0.109	0.188
	(0.103)	(0.129)	(0.103)	(0.0939)	(0.106)
Black Education Segregation	0.0171	-0.0817	-0.0722	-0.200	-0.274
	(0.150)	(0.169)	(0.158)	(0.112)	(0.128)*
Black * Racial Segregation	0.0344	-0.135	-0.495	-0.535	-0.765
	(0.189)	(0.184)	(0.120)***	(0.0861)***	(0.131)***
Black * Black Income Segregation	-0.543	0.0617	0.0261	0.345	-0.238
	(0.239)*	(0.282)	(0.283)	(0.207)	(0.207)
Black * Black Education Segregation	-0.0787	0.314	0.139	0.316	0.0672
	(0.256)	(0.354)	(0.226)	(0.200)	(0.228)
Net Black Effect of Racial Segregation	0.0158	0.0524	-0.529	-0.634	-0.869
	(0.184)	(0.212)	(0.158)***	(0.125)***	(0.173)***

Notes: These coefficients result from estimating the preferred specification of equation (1) with the additional measures of black income and black education segregation. It therefore includes MSA-level controls, MSA fixed effects, and year fixed effects. The Adjusted R^2 is 0.0598. The Net Black Effect is calculated as the sum of coefficients on racial segregation and the interaction term.

*** p<0.01, ** p<0.05, * p<0.1

Table 8: Effect of Racial, Black Income, and Black Education Segregation on ln(Income Percentile) by Race, 1970-2010

	Percentile		
	20th	50th	80th
Panel A: Effect of Racial Segregation on White Incomes			
1970			
Racial Segregation	-0.406	-0.0183	0.222
	(0.135)**	(0.0930)	(0.0838)**
Black Income Segregation	-0.178	-0.0780	-0.0622
	(0.159)	(0.110)	(0.0988)
Black Education Segregation	0.0758	-0.183	0.143
	(0.189)	(0.130)	(0.117)
1980			
Racial Segregation	-0.00177	0.277	0.173
	(0.131)	(0.0899)**	(0.0811)*
Black Income Segregation	-0.0378	0.0599	0.0822
	(0.140)	(0.0963)	(0.0869)
Black Education Segregation	0.119	-0.189	-0.0586
	(0.174)	(0.120)	(0.108)
1990			
Racial Segregation	-0.111	-0.0493	-0.0536
	(0.129)	(0.0890)	(0.0803)
Black Income Segregation	-0.0606	-0.0741	0.00666
	(0.145)	(0.0999)	(0.0901)
Black Education Segregation	0.00130	-0.160	-0.111
	(0.159)	(0.110)	(0.0990)
2000			
Racial Segregation	-0.176	-0.0546	-0.0800
	(0.138)	(0.0951)	(0.0858)
Black Income Segregation	0.211	-0.0182	0.0569
	(0.170)	(0.117)	(0.106)
Black Education Segregation	-0.207	-0.160	-0.120
	(0.178)	(0.123)	(0.111)
2010			
Racial Segregation	-0.412	-0.0524	-0.00794
	(0.154)**	(0.106)	(0.0955)
Black Income Segregation	0.244	0.151	0.108
	(0.190)	(0.131)	(0.118)
Black Education Segregation	-0.416	-0.342	-0.127
	(0.203)*	(0.140)*	(0.126)
Adjusted R^2	0.851	0.876	0.831

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 8: Effect of Racial, Black Income, and Black Education Segregation on ln(Income Percentile) by Race, 1970-2010

	Percentile		
	20th	50th	80th
Panel B: Effect of Racial Segregation on Black Incomes			
1970			
Racial Segregation	-0.0915	0.321	-0.000167
	(0.369)	(0.186)	(0.159)
Black Income Segregation	-0.799	-0.00479	0.0751
	(0.551)	(0.278)	(0.237)
Black Education Segregation	-0.0444	-0.335	-0.382
	(0.619)	(0.312)	(0.266)
1980			
Racial Segregation	-0.364	0.456	0.391
	(0.355)	(0.179)*	(0.153)*
Black Income Segregation	0.527	0.458	0.572
	(0.502)	(0.253)	(0.216)**
Black Education Segregation	0.408	-0.342	-0.232
	(0.603)	(0.301)	(0.256)
1990			
Racial Segregation	-0.577	-0.146	-0.168
	(0.350)	(0.177)	(0.151)
Black Income Segregation	0.620	0.347	0.265
	(0.503)	(0.253)	(0.216)
Black Education Segregation	-0.105	-0.0602	-0.128
	(0.483)	(0.244)	(0.208)
2000			
Racial Segregation	-0.754	-0.323	-0.319
	(0.364)*	(0.184)	(0.156)*
Black Income Segregation	0.664	0.217	0.0491
	(0.546)	(0.275)	(0.234)
Black Education Segregation	0.301	0.241	0.201
	(0.558)	(0.281)	(0.240)
2010			
Racial Segregation	-1.044	-0.442	-0.418
	(0.407)*	(0.205)*	(0.175)*
Black Income Segregation	0.00695	0.0611	0.0982
	(0.558)	(0.282)	(0.240)
Black Education Segregation	-0.0578	-0.0257	-0.0853
	(0.632)	(0.319)	(0.272)
Adjusted R^2	0.624	0.728	0.700

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 9: Estimated Effect of Racial Segregation on Employment, 1970-2010

	Likelihood to be Employed	Hours Worked
1970		
Black	-0.0264	-6.821
	(0.0422)	(1.461)***
Racial Segregation	-0.0393	2.668
	(0.0201)	(1.331)*
Black * Racial Segregation	-0.0592	-2.663
	(0.0356)	(1.410)
Net Black Effect	-0.0985	0.00429
	(0.0434)*	(1.661)
1980		
Black	0.0460	-2.410
	(0.0470)	(1.139)*
Racial Segregation	0.0574	4.346
	(0.0219)**	(1.287)***
Black * Racial Segregation	-0.181	-2.657
	(0.0600)**	(1.637)
Net Black Effect	-0.124	1.689
	(0.0590)*	(2.093)
1990		
Black	-0.101	-1.947
	(0.0381)**	(1.186)
Racial Segregation	0.0627	3.679
	(0.0196)**	(1.190)**
Black * Racial Segregation	-0.360	-6.612
	(0.0556)***	(1.207)***
Net Black Effect	-0.297	-2.932
	(0.0502)***	(1.535)
2000		
Black	-0.133	-0.133
	(0.0476)**	(1.454)
Racial Segregation	0.0875	2.599
	(0.0206)***	(1.319)*
Black * Racial Segregation	-0.331	-2.273
	(0.0431)***	(1.089)*
Net Black Effect	-0.243	0.326
	(0.0479)***	(1.368)
2010		
Black	-0.121	-0.673
	(0.0549)*	(1.417)
Racial Segregation	0.0658	1.962
	(0.0199)**	(1.599)
Black * Racial Segregation	-0.279	-2.972
	(0.0561)***	(1.132)**
Net Black Effect	-0.213	-1.009
	(0.0519)***	(1.312)
Adjusted R^2	0.0455	0.0260

Notes: Each regression includes MSA fixed effects and MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income) as well as those interacted with black as controls. Standard errors clustered by MSA are shown in parentheses. The Net Black Effect is calculated as the sum of coefficients on racial segregation and the interaction term.

*** p<0.01, ** p<0.05, * p<0.1

Table 10: Effect of Racial Segregation on Employment by Race and Education, 1970-2010

	Education Level			
	High School Dropout	High School Graduate	Some College	College Graduate
Panel A: Effect of Racial Segregation on Likelihood to be Employed				
White Workers				
1970	-0.0916	-0.0731	-0.0690	0.00279
	(0.0545)	(0.0315)*	(0.0369)	(0.0279)
1980	0.0397	0.0420	0.0170	0.0294
	(0.0501)	(0.0286)	(0.0367)	(0.0234)
1990	0.0192	0.0553	0.0255	0.0470
	(0.0451)	(0.0248)*	(0.0309)	(0.0195)*
2000	0.103	0.0581	0.0575	0.0674
	(0.0463)*	(0.0290)*	(0.0353)	(0.0200)***
2010	-0.0246	0.00256	0.0641	0.0682
	(0.0614)	(0.0297)	(0.0449)	(0.0211)**
Black Workers				
1970	-0.260	-0.0908	-0.0410	0.133
	(0.0676)***	(0.0521)	(0.0612)	(0.113)
1980	-0.186	-0.119	-0.0182	0.0546
	(0.120)	(0.0615)	(0.0649)	(0.0913)
1990	-0.242	-0.286	-0.149	-0.0652
	(0.114)*	(0.0604)***	(0.0420)***	(0.0430)
2000	-0.126	-0.253	-0.0875	0.0471
	(0.0793)	(0.0581)***	(0.0463)	(0.0414)
2010	-0.155	-0.201	-0.0485	0.0195
	(0.0937)	(0.0560)***	(0.0548)	(0.0409)
Adjusted R^2	0.0940	0.0584	0.0298	0.00877
Panel B: Effect of Racial Segregation on Hours Worked				
White Workers				
1970	3.640	1.484	1.050	4.512
	(1.825)*	(1.329)	(1.743)	(1.947)*
1980	2.359	2.071	6.669	6.730
	(2.224)	(1.145)	(1.516)***	(2.546)**
1990	4.731	2.539	4.753	5.286
	(1.974)*	(1.054)*	(1.363)***	(1.860)**
2000	5.380	1.144	5.476	2.748
	(2.087)*	(1.030)	(1.461)***	(2.269)
2010	4.666	0.185	3.766	3.310
	(2.665)	(1.226)	(1.410)**	(2.405)
Black Workers				
1970	3.672	-2.190	-5.083	14.86
	(2.014)	(2.452)	(2.765)	(6.510)*
1980	-0.728	-0.680	3.817	9.024
	(3.713)	(1.827)	(2.820)	(5.048)
1990	1.432	-3.364	-1.191	2.789
	(2.931)	(1.710)	(1.712)	(2.458)
2000	-0.253	-1.004	6.607	1.354
	(2.538)	(1.372)	(1.841)***	(2.242)
2010	0.828	-3.512	5.438	4.208
	(2.912)	(1.527)*	(1.786)**	(2.528)
Adjusted R^2	0.0254	0.0345	0.0390	0.0270

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 11: Effect of Racial, Income, and Education Segregation on Employment by Race and Education, 1970-2010

	Education Level			
	High School Dropout	High School Graduate	Some College	College Graduate
Panel A: Effect on Likelihood to be Employed for White Workers				
1970				
Racial Segregation	-0.0462	-0.0878	-0.0564	0.0524
	(0.0546)	(0.0342)*	(0.0352)	(0.0234)*
Income Segregation	-0.0685	0.0177	-0.113	-0.123
	(0.128)	(0.0641)	(0.0762)	(0.0746)
Education Segregation	0.0451	-0.0489	0.0328	0.144
	(0.148)	(0.0841)	(0.0802)	(0.0626)*
1980				
Racial Segregation	0.0465	0.0322	0.0144	0.0223
	(0.0524)	(0.0294)	(0.0389)	(0.0253)
Income Segregation	0.0351	-0.0430	-0.0557	0.0407
	(0.0812)	(0.0486)	(0.0457)	(0.0384)
Education Segregation	-0.0488	-0.0297	-0.0199	0.0296
	(0.0921)	(0.0536)	(0.0599)	(0.0352)
1990				
Racial Segregation	-0.00221	0.0244	0.00693	0.0503
	(0.0444)	(0.0267)	(0.0323)	(0.0235)*
Income Segregation	0.137	0.0425	0.00713	0.0358
	(0.0739)	(0.0379)	(0.0375)	(0.0377)
Education Segregation	-0.106	-0.131	-0.0755	-0.0443
	(0.0785)	(0.0417)**	(0.0441)	(0.0306)
2000				
Racial Segregation	0.0703	0.0124	0.0302	0.0625
	(0.0486)	(0.0320)	(0.0382)	(0.0248)*
Income Segregation	0.263	0.106	0.0259	0.0943
	(0.0925)**	(0.0482)*	(0.0447)	(0.0434)*
Education Segregation	-0.140	-0.172	-0.104	0.00413
	(0.0818)	(0.0504)***	(0.0486)*	(0.0382)
2010				
Racial Segregation	0.00801	-0.0411	0.0188	0.0702
	(0.0655)	(0.0336)	(0.0469)	(0.0263)**
Income Segregation	0.116	0.113	0.0797	0.0855
	(0.102)	(0.0568)*	(0.0607)	(0.0496)
Education Segregation	0.353	-0.0502	-0.209	0.00730
	(0.124)**	(0.0677)	(0.0665)**	(0.0452)
Adjusted R^2	0.0945	0.0587	0.0300	0.00910

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 11: Effect of Racial, Income, and Education Segregation on Employment by Race and Education, 1970-2010

	Education Level			
	High School Dropout	High School Graduate	Some College	College Graduate
Panel B: Effect on Likelihood to be Employed for Black Workers				
1970				
Racial Segregation	-0.202	-0.0917	0.0603	0.224
	(0.0755)**	(0.0615)	(0.0936)	(0.114)*
Income Segregation	-0.109	0.0543	-0.571	0.0479
	(0.197)	(0.135)	(0.327)	(0.392)
Education Segregation	0.0527	0.109	-0.118	0.727
	(0.299)	(0.133)	(0.231)	(0.338)*
1980				
Racial Segregation	-0.0637	-0.0137	0.0793	0.231
	(0.150)	(0.0681)	(0.0759)	(0.112)*
Income Segregation	-0.137	-0.193	-0.190	-0.368
	(0.250)	(0.113)	(0.121)	(0.203)
Education Segregation	-0.517	-0.364	-0.265	-0.277
	(0.312)	(0.148)*	(0.132)*	(0.246)
1990				
Racial Segregation	-0.139	-0.240	-0.153	-0.0443
	(0.152)	(0.0668)***	(0.0426)***	(0.0636)
Income Segregation	-0.119	-0.152	-0.0348	0.00107
	(0.224)	(0.120)	(0.0828)	(0.113)
Education Segregation	0.394	0.256	0.112	0.102
	(0.238)	(0.123)*	(0.0663)	(0.0879)
2000				
Racial Segregation	-0.117	-0.272	-0.0929	0.0576
	(0.0802)	(0.0548)***	(0.0409)*	(0.0596)
Income Segregation	0.122	0.0179	-0.0202	0.0666
	(0.186)	(0.107)	(0.0916)	(0.140)
Education Segregation	0.125	-0.0238	0.0917	0.114
	(0.192)	(0.125)	(0.112)	(0.112)
2010				
Racial Segregation	-0.0219	-0.173	-0.0355	-0.00189
	(0.108)	(0.0596)**	(0.0602)	(0.0573)
Income Segregation	-0.404	-0.176	-0.109	0.228
	(0.168)*	(0.101)	(0.0990)	(0.125)
Education Segregation	0.387	0.196	0.166	0.0371
	(0.232)	(0.135)	(0.138)	(0.111)
Adjusted R^2	0.0940	0.0584	0.0298	0.00877

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 11: Effect of Racial, Income, and Education Segregation on Employment by Race and Education, 1970-2010

	Education Level			
	High School Dropout	High School Graduate	Some College	College Graduate
Panel C: Effect on Hours Worked Per Week for White Workers				
1970				
Racial Segregation	2.934	0.759	-0.676	6.033
	(2.116)	(1.686)	(1.742)	(2.041)**
Income Segregation	-0.771	1.354	5.145	-7.819
	(4.423)	(4.641)	(4.438)	(3.982)
Education Segregation	-7.012	0.406	-11.36	-5.939
	(3.620)	(3.090)	(4.023)**	(4.490)
1980				
Racial Segregation	3.069	1.196	5.527	7.634
	(2.283)	(1.290)	(1.736)**	(2.465)**
Income Segregation	-2.972	0.381	0.744	-0.421
	(2.771)	(1.875)	(2.580)	(3.089)
Education Segregation	-3.491	2.185	-4.296	-2.812
	(3.185)	(2.900)	(2.825)	(3.430)
1990				
Racial Segregation	3.813	2.381	2.821	6.243
	(1.913)*	(1.084)*	(1.456)	(1.819)***
Income Segregation	0.372	-0.739	2.296	-2.629
	(2.619)	(1.430)	(2.402)	(2.744)
Education Segregation	-5.273	-3.740	-6.985	3.263
	(2.590)*	(1.844)*	(2.225)**	(2.411)
2000				
Racial Segregation	5.531	0.637	2.376	4.303
	(2.074)**	(1.075)	(1.453)	(2.300)
Income Segregation	-3.490	0.380	8.060	-4.114
	(2.628)	(1.814)	(2.420)***	(3.351)
Education Segregation	2.381	-5.025	-4.894	8.537
	(2.928)	(2.485)*	(2.750)	(3.353)*
2010				
Racial Segregation	4.841	0.338	1.195	4.177
	(2.654)	(1.390)	(1.457)	(2.397)
Income Segregation	-2.609	-2.818	6.395	-0.404
	(3.343)	(2.106)	(2.627)*	(3.688)
Education Segregation	6.473	2.669	-1.674	7.431
	(2.981)*	(2.809)	(2.424)	(2.746)**
Adjusted R^2	0.0258	0.0347	0.0392	0.0272

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 11: Effect of Racial, Income, and Education Segregation on Employment by Race and Education, 1970-2010

	Education Level			
	High School Dropout	High School Graduate	Some College	College Graduate
Panel D: Effect on Hours Worked Per Week for Black Workers				
1970				
Racial Segregation	3.822	-4.076	-4.536	22.53
	(2.243)	(3.061)	(3.792)	(6.566)***
Income Segregation	-8.483	6.332	-5.825	-36.00
	(5.219)	(5.566)	(13.02)	(12.75)**
Education Segregation	-7.944	-2.382	-2.813	17.06
	(5.839)	(6.876)	(9.078)	(14.08)
1980				
Racial Segregation	4.025	2.898	4.072	6.625
	(3.974)	(2.119)	(3.378)	(5.208)
Income Segregation	-13.79	-9.935	-2.320	7.575
	(6.557)*	(3.636)**	(4.977)	(8.020)
Education Segregation	-5.920	-2.343	-4.334	-1.223
	(7.285)	(4.025)	(6.508)	(10.87)
1990				
Racial Segregation	0.166	-1.902	-2.553	1.000
	(4.622)	(2.285)	(2.102)	(3.208)
Income Segregation	-0.720	-4.856	0.608	3.590
	(5.958)	(4.707)	(3.551)	(5.412)
Education Segregation	-8.161	-8.579	-0.393	-6.313
	(6.716)	(3.571)*	(4.412)	(4.809)
2000				
Racial Segregation	1.921	-1.446	2.328	0.243
	(3.105)	(1.573)	(2.017)	(2.430)
Income Segregation	-10.97	-0.818	12.04	5.514
	(4.878)*	(3.010)	(3.606)***	(5.793)
Education Segregation	-1.048	-6.743	-2.372	4.118
	(5.989)	(3.387)*	(4.334)	(5.347)
2010				
Racial Segregation	-0.533	-2.831	1.608	2.028
	(3.199)	(1.776)	(1.830)	(2.659)
Income Segregation	0.691	-5.689	12.62	12.01
	(5.951)	(3.365)	(4.129)**	(5.880)*
Education Segregation	-8.872	0.874	-4.321	-0.263
	(6.845)	(3.571)	(4.515)	(5.898)
Adjusted R^2	0.0258	0.0347	0.0392	0.0272

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 12: Effect of Racial, Black Income, and Black Education Segregation on Employment by Race and Education, 1970-2010

	Education Level			
	High School Dropout	High School Graduate	Some College	College Graduate
Panel A: Effect on Likelihood to be Employed for White Workers				
1970				
Racial Segregation	-0.0769	-0.0888	-0.0708	0.00981
	(0.0523)	(0.0339)**	(0.0348)*	(0.0230)
Black Income Segregation	-0.0613	-0.0694	-0.114	-0.118
	(0.0611)	(0.0325)*	(0.0281)***	(0.0246)***
Black Education Segregation	0.0189	-0.00935	0.0945	0.0573
	(0.0715)	(0.0364)	(0.0386)*	(0.0399)
1980				
Racial Segregation	0.0777	0.0374	0.0370	0.0659
	(0.0513)	(0.0299)	(0.0383)	(0.0248)**
Black Income Segregation	0.0940	-0.0481	-0.0248	0.0203
	(0.0570)	(0.0250)	(0.0349)	(0.0220)
Black Education Segregation	-0.0637	0.0282	-0.0371	0.0221
	(0.0732)	(0.0341)	(0.0490)	(0.0282)
1990				
Racial Segregation	0.0449	0.0582	0.0450	0.0731
	(0.0487)	(0.0257)*	(0.0297)	(0.0201)***
Black Income Segregation	0.0500	-0.0300	-0.00842	-0.0247
	(0.0631)	(0.0217)	(0.0255)	(0.0196)
Black Education Segregation	0.00722	0.0149	-0.0152	-0.0152
	(0.0707)	(0.0227)	(0.0231)	(0.0206)
2000				
Racial Segregation	0.166	0.0702	0.0792	0.101
	(0.0532)**	(0.0292)*	(0.0338)*	(0.0213)***
Black Income Segregation	0.180	0.0261	-0.0331	-0.00644
	(0.0860)*	(0.0353)	(0.0349)	(0.0242)
Black Education Segregation	-0.0492	-0.0268	0.0316	0.0119
	(0.0867)	(0.0378)	(0.0314)	(0.0215)
2010				
Racial Segregation	0.0671	0.0228	0.116	0.104
	(0.0740)	(0.0334)	(0.0454)*	(0.0255)***
Black Income Segregation	0.210	-0.0000273	-0.0245	-0.0262
	(0.103)*	(0.0416)	(0.0425)	(0.0339)
Black Education Segregation	-0.0702	0.0152	0.0770	0.0359
	(0.109)	(0.0479)	(0.0527)	(0.0359)
Adjusted R^2	0.0942	0.0585	0.0299	0.00896

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 12: Effect of Racial, Black Income, and Black Education Segregation on Employment by Race and Education, 1970-2010

	Education Level			
	High School Dropout	High School Graduate	Some College	College Graduate
Panel B: Effect on Likelihood to be Employed for Black Workers				
1970				
Racial Segregation	-0.186	-0.0795	-0.0383	0.186
	(0.0609)**	(0.0549)	(0.0658)	(0.110)
Black Income Segregation	-0.303	-0.137	-0.00233	-0.340
	(0.118)*	(0.0973)	(0.0975)	(0.173)
Black Education Segregation	0.308	0.200	0.206	0.324
	(0.127)*	(0.0965)*	(0.160)	(0.267)
1980				
Racial Segregation	-0.168	-0.116	0.00698	0.133
	(0.121)	(0.0621)	(0.0678)	(0.0994)
Black Income Segregation	-0.260	-0.108	-0.0570	0.203
	(0.231)	(0.111)	(0.115)	(0.176)
Black Education Segregation	0.158	-0.184	-0.172	-0.214
	(0.302)	(0.162)	(0.154)	(0.256)
1990				
Racial Segregation	-0.207	-0.286	-0.143	-0.0178
	(0.122)	(0.0670)***	(0.0472)**	(0.0454)
Black Income Segregation	0.0235	0.0916	-0.00737	-0.0454
	(0.180)	(0.125)	(0.0846)	(0.0738)
Black Education Segregation	0.0175	-0.108	-0.105	0.0989
	(0.208)	(0.130)	(0.100)	(0.0637)
2000				
Racial Segregation	-0.0477	-0.254	-0.0582	0.105
	(0.0843)	(0.0660)***	(0.0542)	(0.0484)*
Black Income Segregation	0.200	-0.0184	-0.00822	0.0407
	(0.198)	(0.124)	(0.0852)	(0.0889)
Black Education Segregation	0.0740	-0.0301	0.0255	0.0725
	(0.224)	(0.113)	(0.102)	(0.116)
2010				
Racial Segregation	-0.135	-0.250	-0.0587	0.0198
	(0.102)	(0.0644)***	(0.0608)	(0.0504)
Black Income Segregation	0.120	0.0343	0.0124	-0.0954
	(0.205)	(0.106)	(0.0977)	(0.0959)
Black Education Segregation	-0.159	-0.245	-0.123	0.0148
	(0.272)	(0.143)	(0.114)	(0.112)
Adjusted R^2	0.0940	0.0584	0.0298	0.00877

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 12: Effect of Racial, Black Income, and Black Education Segregation on Employment by Race and Education, 1970-2010

	Education Level			
	High School Dropout	High School Graduate	Some College	College Graduate
Panel C: Effect on Hours Worked Per Week for White Workers				
1970				
Racial Segregation	3.464	2.962	0.424	4.426
	(1.766)	(1.404)*	(1.978)	(1.860)*
Black Income Segregation	3.991	2.000	-0.913	-0.293
	(1.916)*	(1.362)	(2.338)	(2.342)
Black Education Segregation	-2.413	3.800	-0.610	0.705
	(2.093)	(1.965)	(2.850)	(3.554)
1980				
Racial Segregation	1.031	1.829	6.926	6.710
	(2.334)	(1.196)	(1.752)***	(2.684)*
Black Income Segregation	-0.790	0.485	1.250	0.123
	(1.829)	(1.075)	(1.704)	(2.181)
Black Education Segregation	3.454	3.606	-1.456	0.747
	(2.056)	(1.595)*	(2.190)	(3.069)
1990				
Racial Segregation	4.402	2.799	4.486	4.898
	(2.063)*	(1.148)*	(1.466)**	(2.134)*
Black Income Segregation	4.301	0.189	3.084	-0.419
	(1.939)*	(0.985)	(1.227)*	(1.726)
Black Education Segregation	-1.509	1.772	-5.040	-1.221
	(1.654)	(1.053)	(1.524)**	(2.127)
2000				
Racial Segregation	4.322	1.830	6.084	1.823
	(2.148)*	(1.255)	(1.669)***	(2.366)
Black Income Segregation	0.862	1.937	1.436	0.331
	(1.774)	(1.297)	(1.940)	(1.932)
Black Education Segregation	-0.783	0.578	-0.508	-3.749
	(2.220)	(1.169)	(2.180)	(2.619)
2010				
Racial Segregation	5.414	1.581	4.176	2.855
	(3.051)	(1.586)	(1.707)*	(2.520)
Black Income Segregation	2.420	2.882	0.234	0.908
	(3.366)	(1.683)	(1.774)	(2.526)
Black Education Segregation	2.004	0.229	0.143	-2.402
	(3.410)	(1.770)	(1.948)	(3.303)
Adjusted R^2	0.0258	0.0347	0.0390	0.0271

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

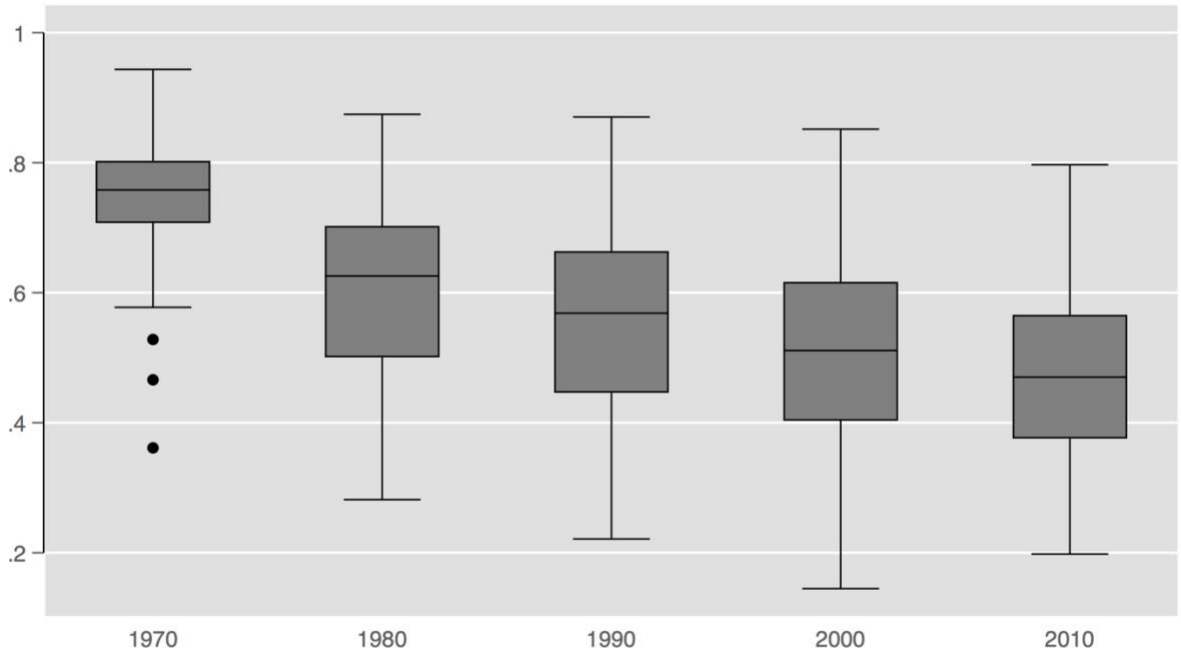
Table 12: Effect of Racial, Black Income, and Black Education Segregation on Employment by Race and Education, 1970-2010

	Education Level			
	High School Dropout	High School Graduate	Some College	College Graduate
Panel D: Effect on Hours Worked Per Week for Black Workers				
1970				
Racial Segregation	3.231	-0.764	-5.336	16.07
	(2.322)	(2.810)	(2.871)	(6.291)*
Black Income Segregation	0.587	-0.713	-1.693	-10.35
	(4.274)	(4.779)	(5.418)	(10.71)
Black Education Segregation	-10.07	3.183	-4.651	8.187
	(5.029)*	(5.023)	(6.414)	(12.93)
1980				
Racial Segregation	-0.935	0.495	4.325	8.233
	(3.740)	(1.922)	(3.126)	(5.070)
Black Income Segregation	9.011	8.629	1.922	-0.00520
	(4.900)	(3.331)*	(4.158)	(7.008)
Black Education Segregation	-8.190	-4.023	-6.096	9.093
	(7.343)	(4.478)	(6.378)	(10.25)
1990				
Racial Segregation	0.694	-2.739	-1.775	3.599
	(3.277)	(1.854)	(1.832)	(2.869)
Black Income Segregation	9.882	10.93	2.088	8.896
	(5.477)	(2.889)***	(3.016)	(4.746)
Black Education Segregation	-5.102	-6.731	-7.579	-0.302
	(5.150)	(2.921)*	(3.558)*	(5.877)
2000				
Racial Segregation	1.869	1.076	8.022	3.347
	(2.821)	(1.623)	(2.248)***	(3.046)
Black Income Segregation	5.019	8.135	7.340	1.897
	(4.310)	(2.818)**	(3.852)	(3.922)
Black Education Segregation	9.763	1.673	-2.416	6.840
	(4.278)*	(2.784)	(4.297)	(5.098)
2010				
Racial Segregation	3.676	-2.195	5.647	8.490
	(3.228)	(1.795)	(2.328)*	(3.272)**
Black Income Segregation	9.079	3.194	0.581	0.748
	(5.894)	(3.974)	(4.024)	(4.393)
Black Education Segregation	2.518	0.290	-1.242	11.51
	(6.473)	(4.369)	(5.180)	(5.848)
Adjusted R^2	0.0258	0.0347	0.0390	0.0271

Notes: The estimated regressions include MSA-level controls: ln(population), black population share, manufacturing share, and ln(median family income), MSA fixed effects, and year fixed effects. Standard errors in parentheses.

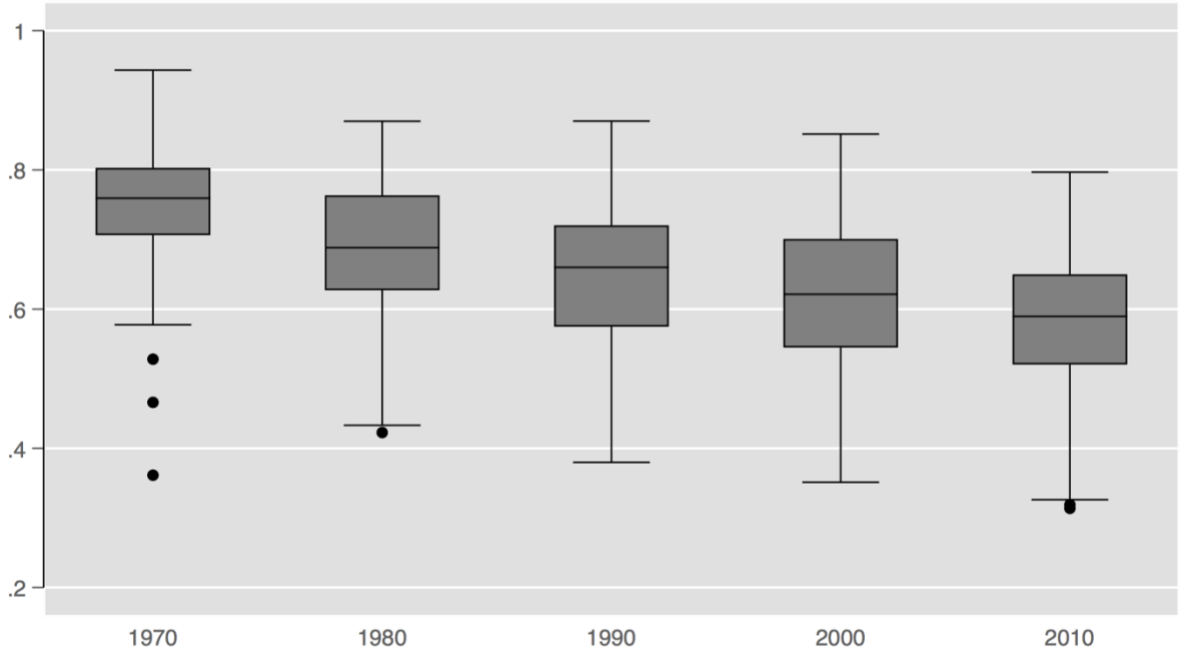
*** p<0.01, ** p<0.05, * p<0.1

Figure 1: Distribution of Racial Segregation, 1970-2010



The lines of the boxes represent the 25th, 50th, and 75th percentiles.
The whickers extending from the boxes represent the lowest/highest value within 1.5IQR.
Dots represent outliers.

Figure 2: Racial Segregation across Consistent MSAs, 1970-2010



The lines of the boxes represent the 25th, 50th, and 75th percentiles.
The whickers extending from the boxes represent the lowest/highest value within 1.5IQR.
Dots represent outliers.

Figure 3: Changes in Racial Segregation, 1970-2010

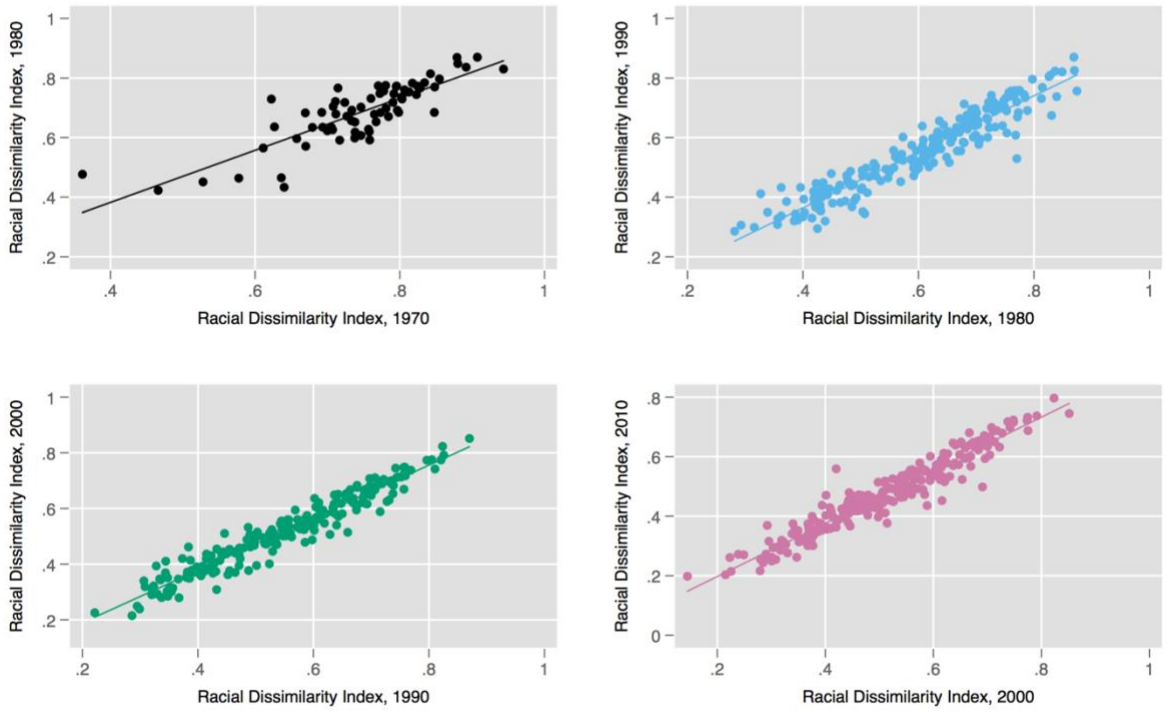
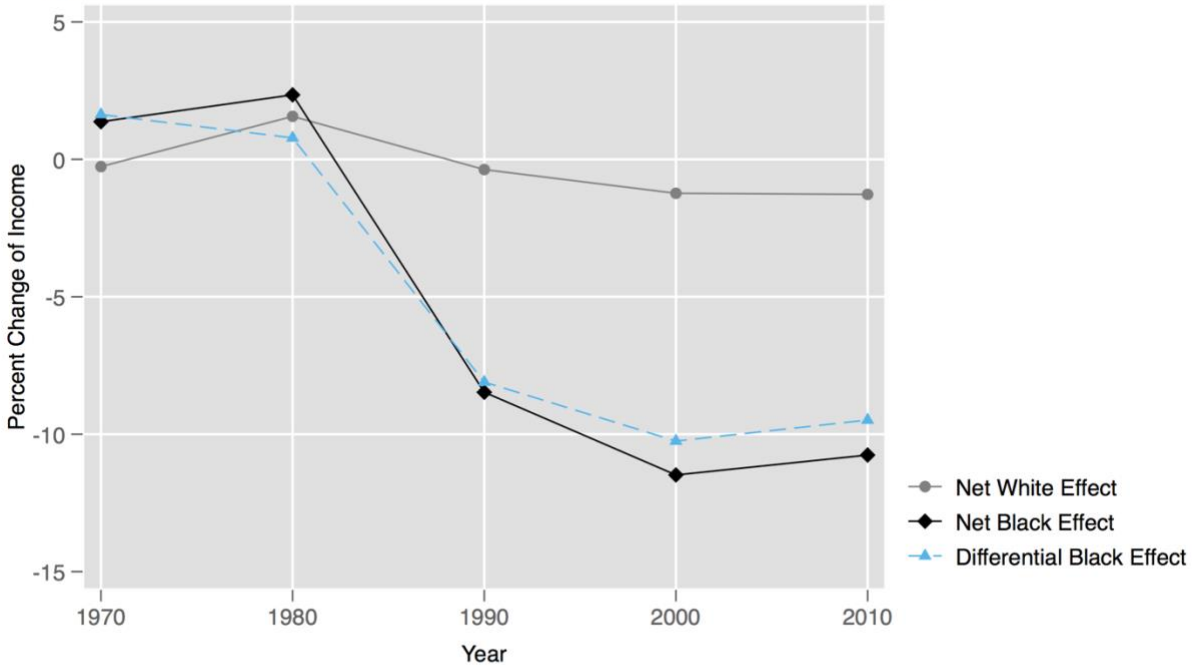
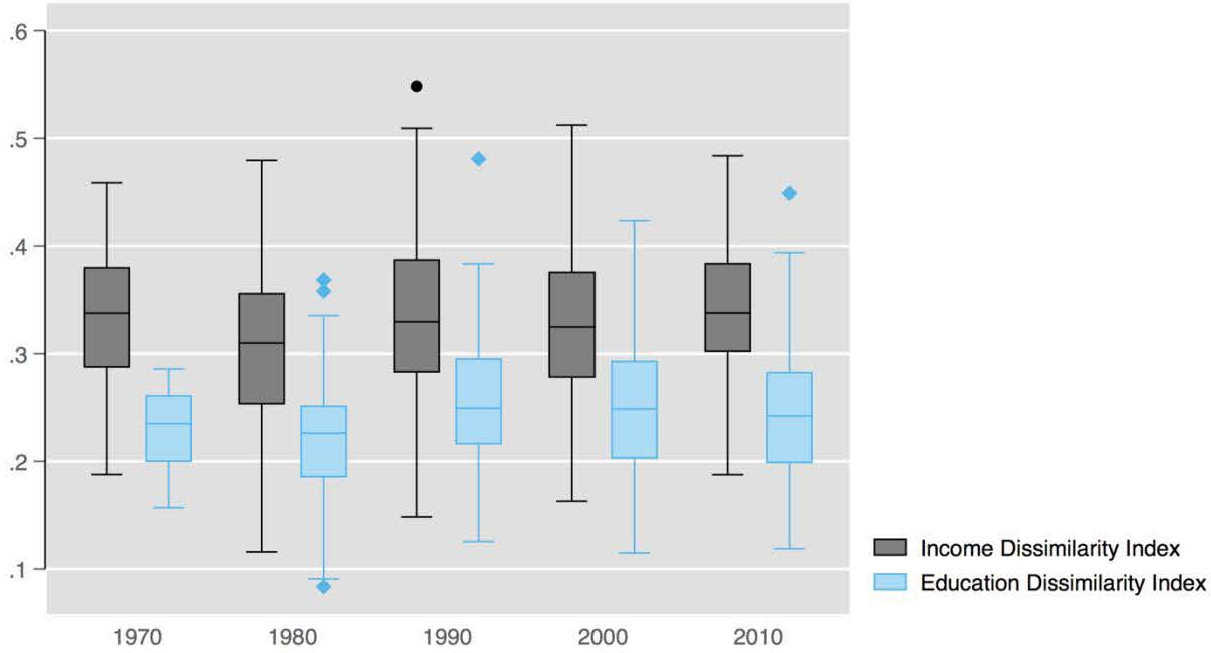


Figure 4: Estimated Effect of Racial Segregation on Income, 1970-2010



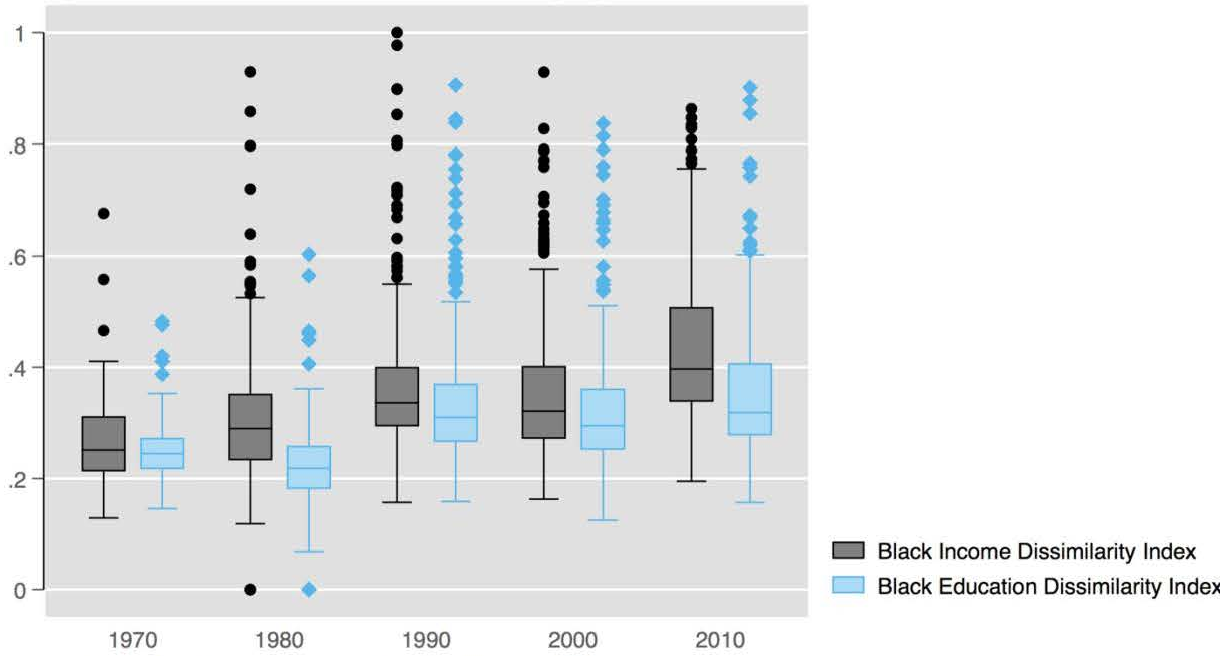
Note: This figure depicts the estimated percent change in ln(income) that results from a standard deviation increase in racial segregation.

Figure 5: Distributions of Income and Education Segregation, 1970-2010



The lines of the boxes represent the 25th, 50th, and 75th percentiles.
The whickers extending from the boxes represent the lowest/highest value within 1.5IQR.
Dots represent outliers.

Figure 6: Black Income and Education Segregation, 1970-2010



The lines of the boxes represent the 25th, 50th, and 75th percentiles.
The whickers extending from the boxes represent the lowest/highest value within 1.5IQR.
Dots represent outliers.