**<H1>Appendix A**

Appendix Table A1 Regions responsible for trends in within-region variance

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | |  | 1940 | 2010 | 1940-2010 Change | % of Within-Region Trend |
| *Exclusion* | |  |  |  |  |  |
| Full-time Employment Gap | | |  |  |  |  |
|  | All Regions | | 2.01 | 0.23 | 1.78 |  |
|  | West | | 1 | 0.03 | 0.97 | 54% |
|  | North | | 0.57 | 0.06 | 0.51 | 29% |
|  | Midwest | | 0.34 | 0.06 | 0.28 | 16% |
|  | South | | 0.1 | 0.08 | 0.02 | 1% |
| Home Ownership Gap | | |  |  |  |  |  |
|  | All Regions | | 11.9 | 2.43 | 9.47 |  |
|  | West | | 2.95 | 0.37 | 2.58 | 27% |
|  | North | | 3.91 | 0.6 | 3.31 | 35% |
|  | Midwest | | 3.62 | 1.31 | 2.31 | 24% |
|  | South | | 1.41 | 0.15 | 1.26 | 13% |
| *Subordination* | | |  |  |  |  |
| Wage and Salary Income Gap | | |  |  |  |  |
|  | All Regions | | 7.95 | 0.37 | 7.58 |  |
|  | West | | 0.79 | 0.04 | 0.75 | 10% |
|  | North | | 0.36 | 0.14 | 0.22 | 3% |
|  | Midwest | | 2.98 | 0.06 | 2.92 | 39% |
|  | South | | 3.82 | 0.14 | 3.68 | 49% |
| Home Value Gap | | |  |  |  |  |  |
|  | All Regions | | 18.53 | 1.95 | 16.58 |  |
|  | West | | 4.46 | 0.13 | 4.33 | 26% |
|  | North | | 2.89 | 0.52 | 2.37 | 14% |
|  | Midwest | | 2.31 | 0.89 | 1.42 | 9% |
|  | South | | 8.86 | 0.4 | 8.46 | 51% |

Source: US Decennial Census

Note: Values come from the application of ANOVA to regional groups.

Appendix Table A2. Coefficient of variation over time

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Absolute and Percentage Change | | | | | | | | |
|  | |  | 1940 | 1970 | 2010 | 1940-1970 | 1970-2010 | 1940-2010 |
| *Exclusion* | |  |  |  |  |  |  |  |
| Full-time Employment | | |  |  |  |  |  |  |
|  | Black | | 0.23 | 0.14 | 0.11 | -0.09 (-40%) | -0.03 (-22%) | -0.12 (-53%) |
|  | White | | 0.06 | 0.06 | 0.06 | -0.002 (-4%) | 0.01 (8%) | 0.002 (4%) |
|  | Inequality ratio | | 0.2 | 0.11 | 0.08 | -0.09 (-44%) | -0.03 (-27%) | -0.12 (-59%) |
| Home Ownership | | |  |  |  |  |  |  |  |
|  | Black | | 0.34 | 0.26 | 0.2 | -0.08 (-25%) | -0.06 (-23%) | -0.14 (-42%) |
|  | White | | 0.11 | 0.08 | 0.05 | -0.04 (-33%) | -0.03 (-33%) | -0.06 (-55%) |
|  | Inequality ratio | | 0.31 | 0.27 | 0.18 | -0.03 (-11%) | -0.1 (-36%) | -0.13 (-43%) |
| *Subordination* | |  |  |  |  |  |  |  |
| Wage and Salary Income | | |  |  |  |  |  |  |  |
|  | Black | | 0.36 | 0.21 | 0.17 | -0.15 (-42%) | -0.04 (-19%) | -0.19 (-53%) |
|  | White | | 0.17 | 0.14 | 0.15 | -0.03 (-19%) | 0.01 (4%) | -0.03 (-15%) |
|  | Inequality ratio | | 0.33 | 0.15 | 0.08 | -0.19 (-56%) | -0.07 (-45%) | -0.26 (-76%) |
| Home Value | |  |  |  |  |  |  |  |
|  | Black | | 1.3 | 0.47 | 0.41 | -0.83 (-64%) | -0.05 (-11%) | -0.89 (-68%) |
|  | White | | 0.28 | 0.26 | 0.32 | -0.02 (-8%) | 0.07 (27%) | 0.05 (16%) |
|  | Inequality ratio | | 0.57 | 0.28 | 0.19 | -0.29 (-51%) | -0.09 (-32%) | -0.38 (-66%) |

Source: US Decennial Census.

Note: The inequality ratio represents the variation in the level of white-black inequality across the 50 states.

Appendix B

Sources and Measures

*Work Exclusion*: Ratio of white-to-black full-time employment-to-population by state, 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010. Proportion of White population 16 and older in the labor force working full-time divided by the proportion of Black population 16 and older in the labor force working full-time. Range = 0.69 to 1.88 with values higher than one indicating that Whites work full-time in the labor force at higher rates than Blacks. Mean=1.11; standard deviation=.16. Source: **Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek.**Integrated Public Use Microdata Series: Version 6.0 **[Machine-readable database]. Minneapolis: University of Minnesota, 2015. All data used comes from the decennial census.**

*Housing Exclusion*: Ratio of white-to-black home ownership rate by state, 1940, 1960, 1970, 1980, 1990, 2000, 2010. Proportion of the White population aged 25 and older owning their own home divided by the proportion of the Black population aged 25 and older owning their own home. Range = .7 to 2.97 with higher values indicating that Whites own their own homes at higher rates than Blacks. Mean=1.69, standard deviation=.39. Source: 1940, 1960, 1970, 1980, 1990, 2000, 2010**- Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek.**Integrated Public Use Microdata Series: Version 6.0 **[Machine-readable database]. Minneapolis: University of Minnesota, 2015. Source: 1950- US Census, Table 17- Occupancy characteristics, type of structure, and plumbing facilities for regions, divisions, and states. Obtained via personal communication with US Census personnel. For this 1950 data, the home ownership rate is calculated through a simple division of owner occupied dwellings by all dwellings (i.e. owner occupied dwellings + renter occupied dwellings). All data used comes from the decennial census.**

*Work Subordination*: Ratio of white-to-black mean wage and salary income by state, 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010. White median income from wages and salary among those 16 years and older divided by the Black median income from wages and salary among those 16 years and older. Range = 0.76 to 3.03 with higher values indicating that the median income from wages and salary of Whites is greater than that of Blacks. Mean=1.45, standard deviation=.39. Source: **Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek.**Integrated Public Use Microdata Series: Version 6.0**[Machine-readable database]. Minneapolis: University of Minnesota, 2015. All data used comes from the decennial census.**

*Housing Subordination*: Ratio of white-to-black median housing value by state, 1940, 1960, 1970, 1980, 1990, 2000, 2010. No data available for 1950, all values were interpolated using STATA’s “ipolate” command. White median housing value among heads of household 25 years and older who own their homes divided by the Black median housing value among heads of household 25 years and older who own their homes. Range=0.11 to 3.84 with higher values indicating that the median housing value of Whites is greater than that of Blacks. Mean=1.46, standard deviation=.61. Source: **Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek.** Integrated Public Use Microdata Series: Version 6.0 **[Machine-readable database]. Minneapolis: University of Minnesota, 2015. All data used comes from the decennial census.**

Data Checking and Modification Protocols

Below are the different procedures that we have utilized to ensure data quality. Due to the range of issues we encountered with the data, several different processes were necessary. We spell out each of these processes in detail, and list the instances in which this process was used. The processes are listed below in the order they were applied. In total, approximately 5 percent of observations were replaced using these procedures. Nearly all of the replacements generated through this process were to states with small population sizes (e.g. nearly 60 percent of the outlying values replaced came from 11 states), not states with extreme racial inequality regimes.

*Missing Data Protocol*

We utilized a five year moving average replacement process. To do so, we ran a linear prediction through the five most adjacent years to the missing value(s), and replaced the value using this linear prediction. There are two exceptions to this protocol. First, the data for Alaska and Hawaii in 1940-50 is missing due to these not being states at the time, and thus are left as missing. Second, all of the house value data for 1950 is missing due destroyed census records, and is replaced using STATA’s “ipolate” command.

Number of instances used: 44 state-years.

*Moving Average* Protocol

All racial position variables were modified by applying a thirty year moving average to the data after any missing values were replaced, as outlined in the protocols above (i.e. the value for 1960 is the average of 1950, 1960 and 1970). For the years at the ends of the series (i.e. 1940 and 2010), this process involved taking the average of most proximate year and the year of interest (e.g. 1940 was replaced using the average of 1940 and 1950). This process was only used on the raw data values, not the ratios or components.

Number of instanced used: All state-year values.

*Outlying Values* Protocol

Following the replacement of any missing data and the application of the thirty year moving average, as outlined above, all of the racial position and composition variables were inspected for outlying values. This was done by looking for instances where the state-year value was more than two standard deviations away from the fifty state mean for that given year. In those instances where a state-year value was identified as being more than two standard deviations away from the mean, it was replaced by giving it a value equal to two standard deviations away from the mean (e.g. if a value was 2.5 standard deviations below (above) the mean, it was replaced with the value equal to 2 standard deviations below (above) the mean).

Number of instances used: 494 state-years.

*Impractical*/*Nonsensical* Value Protocol

Following all of the steps above, we checked the raw data for any impractical or nonsensical values. We use this term to refer to any value less than or equal to 0 (or any value greater than or equal to 1 if the measure is a proportion) appearing in a series. We consider these to be impractical because they would indicate either zero or fewer individuals in a racial group fall into a category in a state-year (e.g. no African Americans in Vermont owned homes in 2010) or that all of the individuals or more fall into a category in a state-year (e.g. every African American in Vermont owned a home in 2010). These cases were replaced using the lowest or highest existing value for that year. For example, if a state-year had a 0 value in 1940, we replaced that 0 with the lowest non-zero value that existed in any state on that variable in the year 1940.

Number of instances used: 56 state-years.

Together, these processes raise our confidence that we eliminated substantial measurement error by replacing values arising from sample variation in estimates in a way that avoided distorting the underlying trends. Two other potential sources of distortion also merit note, as they bear on interpretation of results. First, like most studies in the field, ours does not account for the racially biased patterns of removal created by the rise of mass incarceration. Since the 1970s, Black men have been incarcerated at exceptionally high rates, with Black-White gaps for men and women rising until 2000 and declining somewhat from 2000 to 2010 (Humphreys 2016). Because incarcerated individuals are drawn disproportionately from people in poor socioeconomic conditions, these racialized patterns of removal (from census data as well as other communities) are likely to progressively and artificially elevate Black estimates relative to White estimates over the time period under study (see e.g. Pettit 2012). Second, racial designations in the U.S. census were attributed in 1940 and 1950 (self-identified thereafter), and respondents were able to select multiple racial categories only in 2000 and 2010. The latter are excluded from analysis. Recent work suggests that as Americans acquire higher socioeconomic statuses, they become more likely to be seen, and to self-identify, as White (Saperstein and Penner 2012; Saperstein and Gullickson 2013; Nix and Qian 2015). This dynamic, along with the exclusion of respondents selecting multiple racial categories, may inflate estimates of Black-White inequality in more recent decades.