

The Massive Recent Decline in Concentrated Poverty: A Change of Neighborhoods or of Racial Labels?

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October 28, 2025

Abstract: Large efforts in research and policy have been driven by the fact that in segregated American cities there is a high concentration of poor Black residents in neighborhoods with the lowest socioeconomic status (SES). This concentration has witnessed a massive decline over the past decade as measured in the American Community Survey (ACS). This decline is not due to changes in Census tract boundaries. This decline could be due to changes in the neighborhood SES of poor Black Americans, but we show that it could also be due to changes in the Census Bureau's measurement of race.

Keywords: Concentrated poverty, residential segregation by race, racial categories

JEL Classification Codes: C81, J11, J15, R23

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Acknowledgements: We thank Tim Dunne for helpful comments.

1 Introduction

What definition of race should be used to describe the population of the United States (US)? Contemporary definitions of race have their origins in slavery. As Davis (2006) notes in his history of the Atlantic slave trade, the invention of race solved an old problem in the history of slavery.

long before the eighteenth-century invention of ‘race’ as a way of classifying humankind, a different phenotype or physical appearance made the dehumanization of enslavement much easier. . . . Throughout the ancient Euro-Asian world as well as in the preconquest Western Hemisphere, slaves were commonly marked off by identifying symbols or icons, such as brands, tattoos, collars, hairstyles, or clothing. Clearly such emblems would have been less necessary if all slaves had shared distinctive physical characteristics that quickly differentiated them from all nonslaves (p. 53).

After slavery ended, a primary use of race remained the justification of limiting either the rights or access to resources of those in the out-group (Zuberi (2001), Washington (2006), Mason (2023)).

Contemporary social scientists typically conduct research on racial inequality in terms of the groups defined in 1997 by the US Office of Management and Budget (OMB (1997)). Given the history described above, alternative definitions of racial groups should be a topic of discussion for those wanting the US to be a society with equal rights and equal opportunity. It is therefore laudable that the US Census Bureau has conducted extensive research and outreach to improve data on race and ethnicity (US Census Bureau (2024)). Nevertheless, while there are reasons that changes to the definition of race could be socially beneficial, accurately describing changes to society across such a discontinuity would require careful attention on the part of researchers and data users.

Starting with the 2020 decennial Census and American Community Survey (ACS), the US Census Bureau changed the way that it processes race and ethnicity data (See Appendix A for a full description.). As noted in Arias et al. (2025), researchers and data users have been provided limited guidance about these changes, which stands in contrast to the guidance given around the adoption of the 1997 OMB definition. In our research on residential segregation, we noticed striking changes around 2020. We were not sure whether to attribute those changes to the residential sorting of people across neighborhoods or to the way people are classified into race and ethnicity groups. Given the widespread effort of research and policy to understand and mitigate the effects of concentrated poverty, starting at least with the seminal work in Wilson (1987), an accurate interpretation of the data is a fundamental requirement for researchers and policy makers.

This note shows that changes to the US Census Bureau’s measurement of race make it difficult to interpret the recent decline in concentrated poverty. We first show that this decline has been massive and widespread across racially-segregated cities. The magnitude of this change alone gives us pause as to whether it is an artifact of some detail in its measurement. We then show that the decline in concentrated poverty is not due to the 2020 change in Census tract boundaries. While changes to tract boundaries is an obstacle to measurement in other contexts (Glaeser et al. (2025)), we find that the decline in concentrated poverty is driven by Census tracts with constant boundaries across the 2020 change in boundaries.

We document two secular trends that yield opposite perspectives on interpreting the recent decline in concentrated poverty. There is a secular decline in the number of poor Black residents in low-SES neighborhoods that is stable across the 2020 measurement change. This suggests that the recent decline in concentrated poverty is real in the sense that it reflects improvements in the neighborhood SES experienced by poor Black Americans. However, the secular trend in the number of poor residents in low-SES neighborhoods who are labeled as “Two or More Races” is not stable across the 2020 measurement change. In most cities, the increase in the number of “Two or More Races” individuals who are either “Black and White” or “Black and American Indian / Alaska Native” could explain the majority of the decline in poor Black residents in low-SES neighborhoods. In other words, it is possible that poor residents labeled as Black pre-2020 have experienced no change in neighborhood SES, but have simply been placed into a different racial category post-2020.

2 The Recent Decline in Concentrated Poverty

Concentrated poverty is high in many cities in the United States (US). Consider the distribution of poor Black residents in a city by their neighborhoods’ socioeconomic status (SES), where we construct SES as a ranking of Census tracts on a scale of 0 (lowest) to 100 (highest) in terms of poverty rate, high school diploma attainment rate, bachelor’s degree attainment rate, the employment to population ratio, the unemployment rate, and the share of households with children under 18 that are single-headed.¹ As an example, the light blue bars in Figure 1a show that 33 (42) percent of poor Black residents of Baltimore live in Census tracts ranked in the bottom five (10) percent nationwide in terms of neighborhood SES. The red bars in Figure 1a show that poor white residents of Baltimore are uniformly distributed across neighborhood SES.²

Given the widespread concern in the social sciences about the effects of concentrated poverty since Wilson (1987), it is noteworthy that cities like Baltimore experienced a massive decline in concentrated poverty from the 2015-2019 American Community Survey (ACS) to the most recent 5-year vintage, 2019-2023. Looking at Figure 1b, the difference between the left-most solid light blue bars and the left-most outlined blue bars indicates that 4.4 percentage points fewer of Baltimore’s poor Black residents live in neighborhoods ranked in the bottom 10 percent of neighborhood SES.

The speed of change in Baltimore is extremely high for a four-year period. If change were to continue at this pace, the segregation of poor Black residents of Baltimore would be resolved in about two decades. In comparison, it might take a housing mobility program 10 decades to resolve

¹We obtain Census data from the National Historical Geographic Information System (Manson et al. (2024)). For the sake of this note, we will refer to concentrated poverty as the concentration of poor Black residents in neighborhoods with socioeconomic status (SES) in the bottom 10 percent of all neighborhoods in the US, as shown in Figure 1a. See Aliprantis et al. (2024) for a more detailed discussion of the construction of the neighborhood SES ranking used in this note and for a comparison of the strengths and weaknesses of this ranking with those from the Childhood Opportunity Index (COI, Noelke et al. (2020)) and the Opportunity Atlas (OA, Chetty et al. (2020)).

²We focus on Baltimore due to the prominence of the Baltimore Regional Housing Partnership (BRHP) in the literature on housing mobility programs (Aliprantis and DeLuca (2025), DeLuca and Rosenblatt (2017), Darrah and DeLuca (2014), Aliprantis et al. (2024)).

the segregation of poor Black residents in Baltimore (Aliprantis et al. (2024)).³

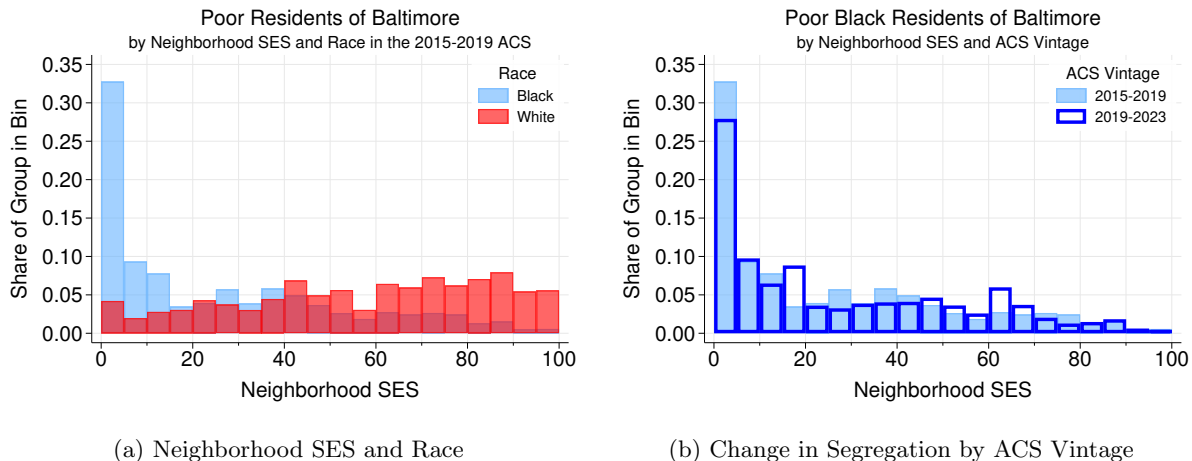


Figure 1: Racial Segregation in Baltimore,
by Vintage of the American Community Survey (ACS)

Note:

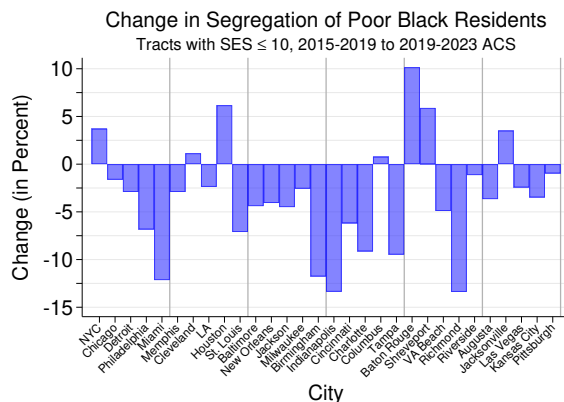


Figure 2: Change in Racial Segregation,
by City

Note:

It is additionally surprising that the change measured in Baltimore is typical. We use a sample of highly-segregated cities in our analysis, defined as Core-Based Statistical Areas (CBSAs) with 50 thousand poor Black residents with at least 30 percent of those poor Black residents residing in tracts in the lowest 10 percent of neighborhood SES nationwide in the 2015-2019 ACS. Figure 2 shows the change in concentrated poverty for this sample of cities between the 2015-2019 and

³Aliprantis et al. (2024) estimate that a full-blown housing mobility program would resolve about 10 percent of this type of concentrated poverty. Since one would imagine such a result over the course of approximately a decade, fully addressing the problem with this policy might take a century.

2019-2023 vintages of the ACS. In this sample of cities, the median decline in concentrated poverty between the 2015-2019 and 2019-2023 ACS vintages is 3.2 percent.

For the sake of exposition, in the subsequent analysis will often refer to 5-year estimates of the American Community Survey (ACS) using their middle year. Since changes starting with the 2020 Census will first appear in the 2016-2020 ACS, this means we will often focus on changes after the 2017 (or 2015-2019) ACS and beginning with the 2018 (or 2016-2020) ACS.

3 Potential Explanations

3.1 Changes between 2010 and 2020 Census Tract Boundaries

At each decennial Census, tract boundaries are updated so that tract population level generally fall within the Census Bureau’s expected range of 4,000 to 8,000 residents. Glaeser et al. (2025) show that these changes can create major obstacles to measuring changes in population.

The decline in poor Black residents in low-SES neighborhoods occurred in tracts with identical identification numbers across the 2010 and 2020 Census tract boundary definitions. Figure 3 shows the decline in poor Black residents in low-SES neighborhoods in Baltimore. The blue lines in the figure indicate that the poor Black residents of low-SES neighborhoods declined by around 10 thousand between the 2014 ACS (or 2012-2016 ACS) and the 2021 ACS (or the 2019-2023 ACS). In contrast, the dashed red and green lines show that there is a much lower level of poor Black residents in low-SES neighborhoods that appear only before or only after the 2020 tract boundary revisions. Appendix B shows that this pattern holds across our sample of highly-segregated cities.

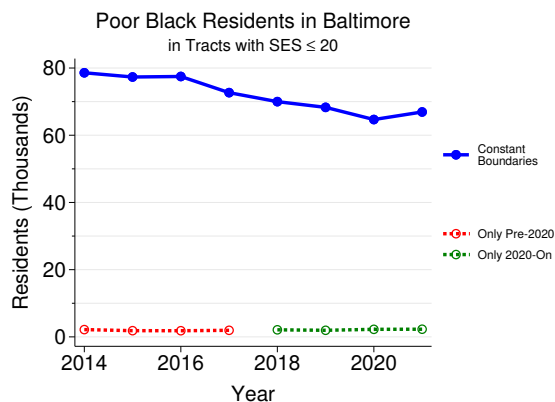


Figure 3: Poor Black Residents in Low-SES Tracts in Baltimore, by Stability across 2020 Census Tract Boundary Changes

Note: “Constant Boundaries” indicates Census tracts that appear with the same identification number under both the 2010 and 2020 boundaries. “Only Pre-2020” indicates tracts that exist only under the 2010 boundaries and “Only 2020-On” indicates tracts that exist only under the 2020 boundaries.

3.2 Poor Black Residents: Did their Neighborhood SES Increase or Were They Labeled as a Different Race?

Two secular trends in the poor populations of low-SES neighborhoods suggest different interpretations of the recent measured decline in concentrated poverty.

A decline in the number of poor Black residents of low-SES neighborhoods began before the 2020 Census and continued its trend after the changes in the 2020 Census were implemented. The large red dots in Figure 4a show the levels of poor Black residents of Baltimore who were in Census tracts in the bottom quintile of neighborhood SES in each wave of the ACS. The red lines are best fit lines estimated separately via Ordinary Least Squares (OLS) for the period pre-2020 changes (2014-2017) and the period post-2020 changes (2018-2021). The number of poor Black residents in the lowest quintile of neighborhood SES declined from nearly 81 thousand in 2014 to just over 69 thousand in 2021. This decline continued at a similar pace in the four years of data before and after the 2020 changes in the measurement of race.

The stable secular trend in the poor Black population in low-SES neighborhoods suggests that the decline in concentrated poverty reflects an improvement in the neighborhood SES of poor Black Americans. Appendix C shows that the pattern of stable change across the 2020 Census holds across our sample of segregated cities.

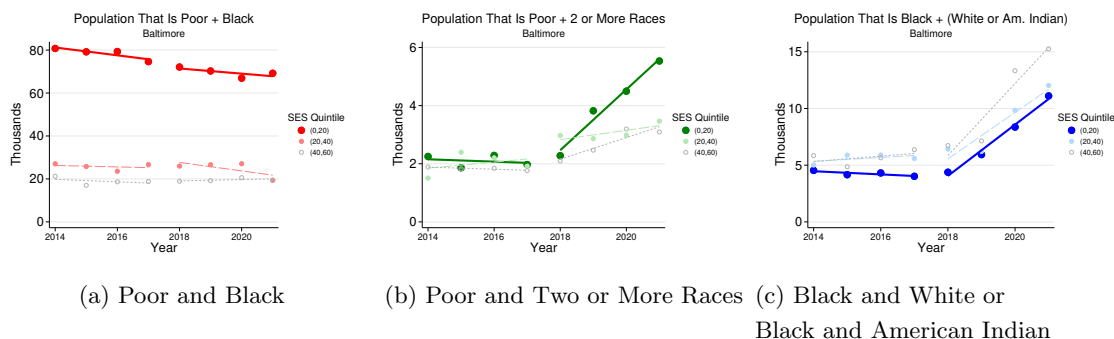


Figure 4: Population by Neighborhood SES Quintile and Race in Baltimore, by Vintage of the American Community Survey (ACS)

Note: These figures show population counts by race in the bottom three quintiles of neighborhood SES in Baltimore. These quintiles represent neighborhood SES levels of (0,20), (20,40), and (40,60).

However, an alternative possibility is that the measured decline in concentrated poverty is due to changes in the way the US Census Bureau measures race. Beginning with the 2020 Decennial Census and American Community Survey (ACS), the Census Bureau modified its race and ethnicity questions and how it processed responses to those questions. There are several important changes, described in detail in Appendix A and Marks and Ríos-Vargas (2021). Broadly speaking, additional responses were allowed for write-in description of origins; the Bureau captured 200 characters from write-in responses in 2020 compared to 30 characters in prior censuses and the ACS; and the process for processing those write-in responses changed in substantive ways. As detailed in

multiple analyses (Arias et al. (2025), Starr and Pao (2024), Reynolds (2021), National Academies of Sciences, Engineering, and Medicine (2023)), we observe dramatic changes in the racial and ethnic composition of the US population that are driven by this new coding methodology. For example, between 2019 and 2020 the share of the overall population labeled as White alone declined from 72.0 percent to 62.7 percent and the Two or More Races population increased from 3.4 percent to 11.5 percent.

Here we show that, in contrast to the secular decline in poor Black residents, the secular trend in the number of poor residents in low-SES neighborhoods who are labeled as “Two or More Races” is not stable across the 2020 change in the definition of race. This suggests the possibility that poor Black residents pre-2020 have experienced no change in neighborhood SES, but have simply been placed into a different racial category post-2020.

Figure 4b shows the structural break in the “Two or More Races” group at the time of the 2020 change in the definition of race. The large green dots show the levels of poor minority residents of Baltimore in the “Two or More” racial group who were in Census tracts in the bottom quintile of neighborhood SES in each wave of the ACS. The green lines are best fit lines estimated separately via Ordinary Least Squares (OLS) for the period pre-2020 changes (2014-2017) and the period post-2020 changes (2018-2021). After the 2020 change in definition, starting at 2018 (or 2016-2020) in the figure, we see a sharp uptick in the number of poor “Two or More Races” residents of Baltimore’s lowest SES neighborhoods. Appendix C shows that, just like the smooth trend for poor Black residents, this pattern of a structural break for poor “Two or More Race” residents holds across our sample of segregated cities.

The number of poor Black residents in the bottom quintile decline by 5.4 thousand between 2017 and 2021. The number of poor Two or More Races residents in the bottom quintile increased by 3.6 thousand between 2017 and 2021. Thus, the increase in the number of poor Two or More Races residents represents two thirds of the decrease in poor Black residents in low SES neighborhoods between 2017 and 2021.

If the secular trends in Figure 4 are driven by changes in measurement, one may wonder why the upward sloping lines in Figure 4b and 4c depict a smooth increase in the count of individuals in those specific racial categories. If the Census Bureau introduced a new processing methodology for race/ethnicity in 2020, we may have expected to observe a sharp discontinuity as opposed to a smooth increase.

The way the Bureau created the 5-year ACS estimates explains the lack of a discontinuity. The revised race/ethnicity questions and processing started with the responses received in 2020. Data collected in previous years was based on differently worded questions and processing methodology. Thus, when the Bureau produced the 2016-2020 ACS 5-year estimates, they combined four year’s (2016-2019) of responses processed using the prior methodology with one year’s (2020) responses using the new methodology. In each subsequent ACS release, additional years processed using the new methodology were added and years processed using the prior methodology were dropped. The 2020-2024 ACS, scheduled for release in December 2025, will be the first 5-year ACS dataset with

all race/ethnicity data processed using the new methodology (US Census Bureau (2020, 2023)).

4 Conclusion

Given the history of race in the US, there is a normative question of how race should be defined today (O’Flaherty (2016)). This note studied the related positive (empirical) question of how to accurately characterize the US under different measures of race and ethnicity, especially those used before and after the changes made by the US Census Bureau in 2020 (Arias et al. (2025)).

We showed that changes to the measurement of race beginning in 2020 generate a source of conceptual uncertainty when interpreting official statistics (Manski (2015)). The uncertainty we document makes it difficult to accurately characterize neighborhood inequality. One consummate goal of social scientists is to characterize neighborhoods in a way that captures their causal effects on residents (Aliprantis et al. (2024), Chetty et al. (2020), Noelke et al. (2020)). The more preliminary goal of accurately characterizing the current residents of neighborhoods is itself non-trivial. For example, measures of income segregation mechanically respond to changes in the population distribution of income, complicating the interpretation of such measures (Watson (2009)). Similarly, sampling variation obfuscates the measurement of residential segregation by either race (Napierala and Denton (2017)) or income (Logan et al. (2018), Reardon et al. (2018)) as well as the rankings of neighborhoods (Mogstad et al. (2024)).

Optimal policy and societal outcomes hinge critically upon whether the recent massive decline in concentrated poverty in US cities is due to changes in the neighborhoods where poor Black residents live or else is simply due to changes in the measurement of race. This note showed that, unfortunately, we are not able to confidently interpret the measured decline in concentrated poverty.

Overall poverty declined considerably over the time period studied in this note (Appendix Figure 13). Increases in income could break the concentration of poverty by allowing poor households to move out of high-poverty neighborhoods (Garin et al. (2025)). If the measured decline in concentrated poverty reflects this pattern, then the most effective strategy for combating the effects of concentrated poverty may simply be overall economic growth. This could be seen as consistent with the trends in concentrated poverty over recent decades (Jargowsky (2003), Dwyer (2012), Kneebone and Nadeau (2016)).

On the other hand, we know that racial inequality is highly persistent in the US. There has been no change in the ratios of the mean Black and white income or wealth since the 1960s (Aliprantis et al. (2025), Derenoncourt et al. (2024)) and Black men’s contemporaneous earnings are in the same location in the distribution as in 1940 (Bayer and Charles (2018)). It is possible that the large decline in overall poverty since 2014 had a limited impact on the neighborhood conditions experienced by poor Black residents of high poverty neighborhoods.

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A Appendix: The Census Changed How It Processed Race Responses in 2020

Race and ethnicity classifications reported in official U.S. federal statistics have changed over time, with the most recent change introduced in 1997. The Office of Management and Budget updated Statistical Policy Directory Number 15 to add Native Hawaiian or Other Pacific Islander (NHOPI) as its own category and allowed individuals to select two or more race categories if they felt that matched their self-identification. The introduction of two more categories complicated temporal analysis of statistical data. To help researchers carry out such analyses, the Census Bureau provided guidance in several forms.

Beginning with the 2020 Decennial Census and American Community Survey (ACS), the Census Bureau modified its race and ethnicity questions and how it processed responses to those questions.⁴ For the race and ethnicity questions, the Bureau provided space for individuals identifying as any race (White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, or Some Other Race) to write in their origins (e.g., German, Irish, Ethiopian, Blackfeet Tribe, Hmong, Tongan, etc.). In the 2000 and 2010 Decennial Censuses and all ACS surveys through 2019, no write-in spaces were provided for the White or Black or African American categories; instead, the form just provided checkboxes. Providing write-in spaces for Whites and Black or African Americans results in a tenfold increase in the number of write-ins from 38 million in 2010 to 336 million in 2020 (National Academies of Sciences, Engineering, and Medicine (2023)).

Write-in responses must be processed by the Census Bureau in order to assign the racial categories to each person. Four important changes to the Bureau’s processing methodology resulted in significant changes in the racial composition of the US. First, the Bureau captured *200* characters from write-in responses in 2020 compared to *30* characters in prior censuses and the ACS. Next, the Bureau considered up to six responses in 2020 compared with up to two responses in prior censuses. Then, the Bureau used a single code list for Hispanic ethnicities and race categories in 2020 compared with separate lists for each write-in response in prior censuses. Finally, the Bureau codes responses from left to right. In prior censuses, if a respondent wrote in a detailed Hispanic origin and two detailed racial origins into the race question, the Bureau privileged the detailed racial origin responses when coding the data. In 2020, the Bureau could have coded all three responses.

A simplified example of this coding change helps illustrate its impact on the data. Suppose someone wrote in the following string to both the 2010 and 2020 Census race questions – “Cuban, Thai, Filipino”. In 2010, this person would be assigned to the Asian racial category. The Bureau privileged the two detailed Asian race responses over the Hispanic ethnicity group “Cuban”. In 2020, this person would be assigned to both the Some Other Race and the Asian racial categories. Thus, they would be considered multiracial in 2020.

As detailed in multiple analyses (Arias et al. (2025), Starr and Pao (2024), Reynolds (2021),

⁴Information in the three following paragraphs is largely drawn from Marks and Ríos-Vargas (2021).

National Academies of Sciences, Engineering, and Medicine (2023)), we observe dramatic changes in the racial and ethnic composition of the US population that are partially (or mostly) driven by this new coding methodology. Between 2010 and 2020 the percentage of the White alone population declined from 72.4 percent to 61.6 percent and the percentage of the Two or More Race population increased from 2.9 percent to 10.2 percent. While we expect changes in the racial composition over a 10-year time period, we observe dramatic changes in the 2019 and 2020 ACS data. Between 2019 and 2020 the share of the overall population labeled as White alone declined from 72.0 percent to 62.7 percent and the Two or More Races population increased from 3.4 percent to 11.5 percent.

Changes to the Census Bureau’s race and ethnicity coding provides a more nuanced and accurate view of the racial composition of the United States going forward (Jones et al. (2021)). But, these changes also disrupt researchers’ ability to analyze change over time. We can no longer disentangle actual demographic change from changes introduced by the new race and ethnicity coding system.

B Appendix: Tract Boundary Changes

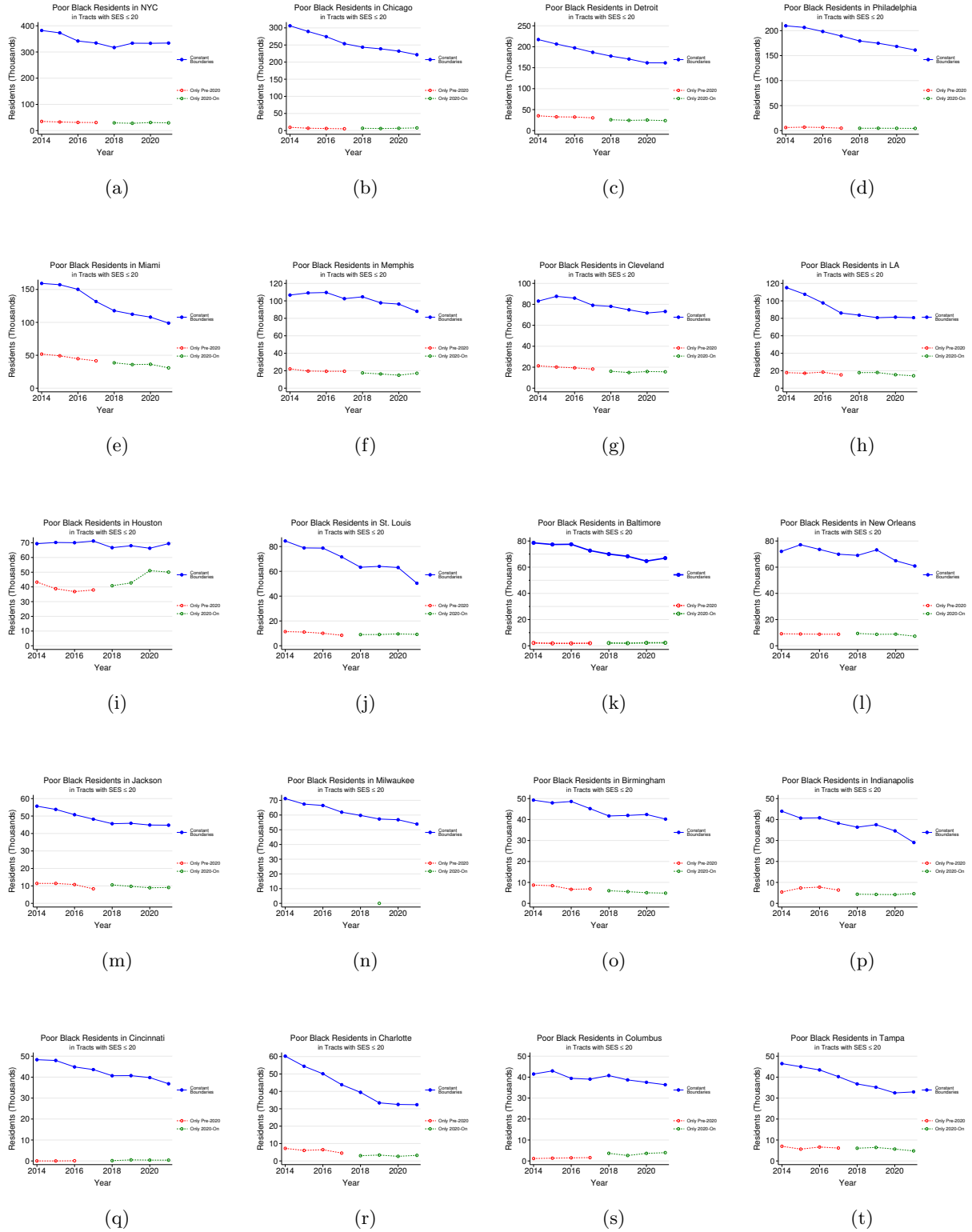


Figure 1: Changes in Poor Black Population by Tract Boundary Changes and City, by Vintage of the American Community Survey (ACS)

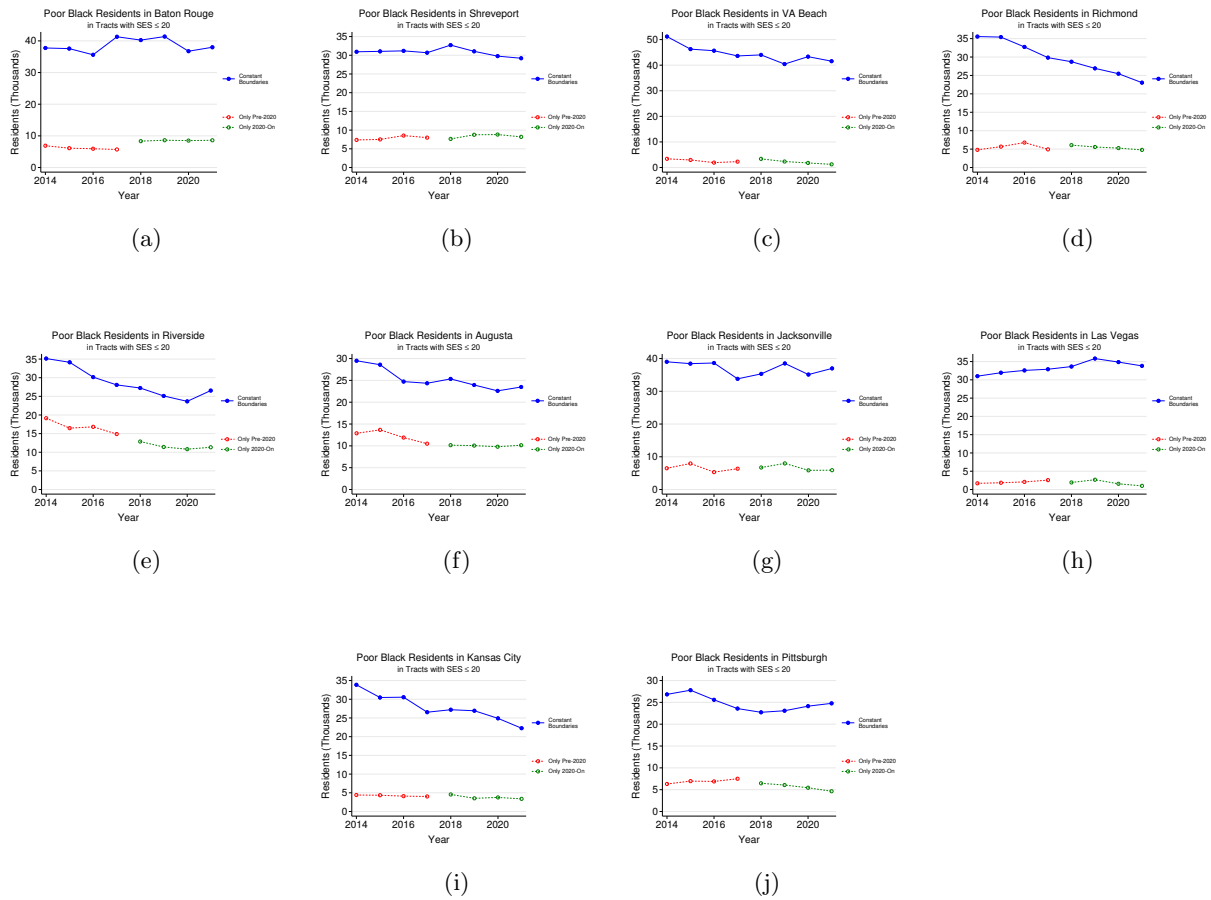


Figure 2: Changes in Poor Black Population by Tract Boundary Changes and City, by Vintage of the American Community Survey (ACS)

C Appendix: Secular Trends by Race

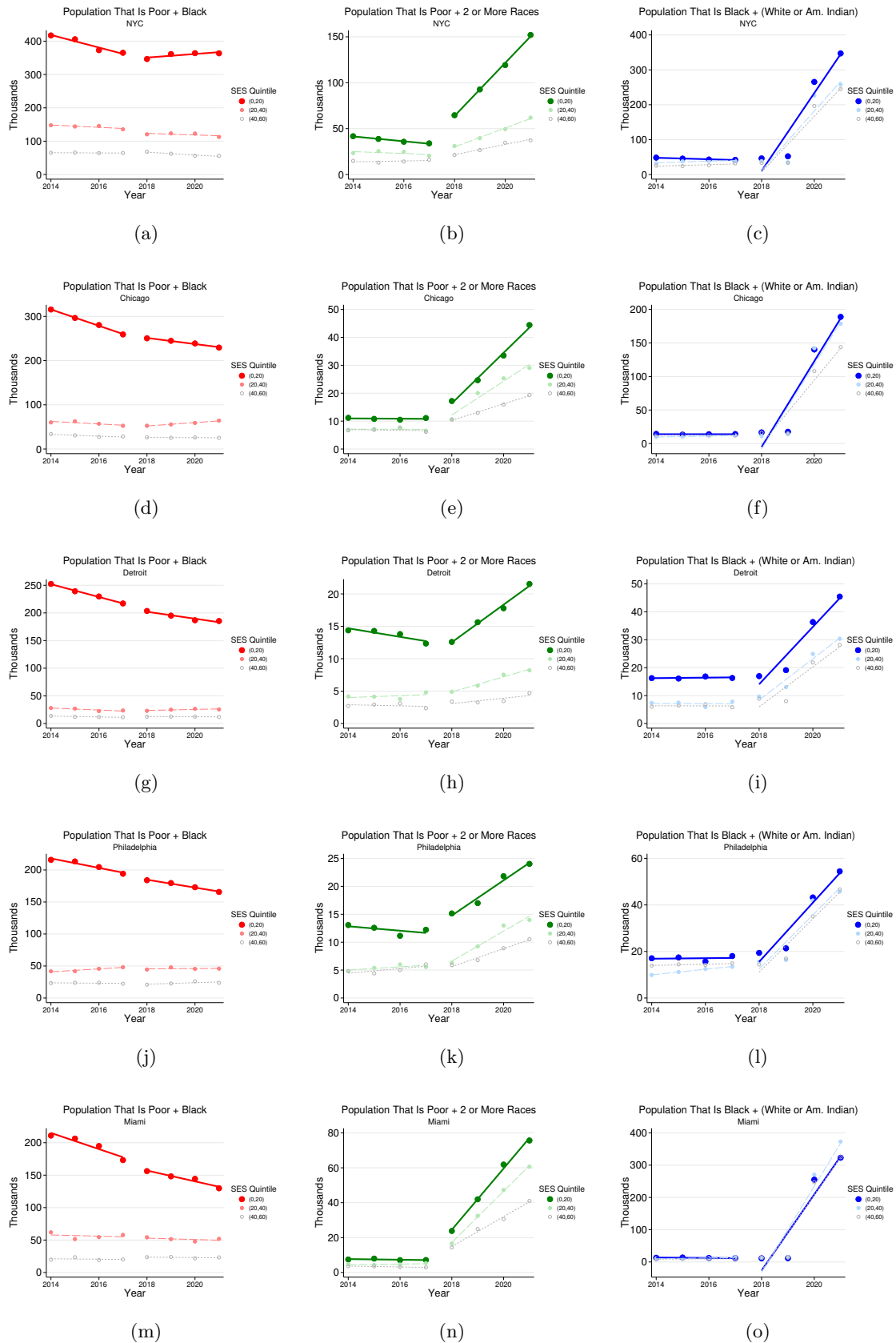


Figure 3: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)

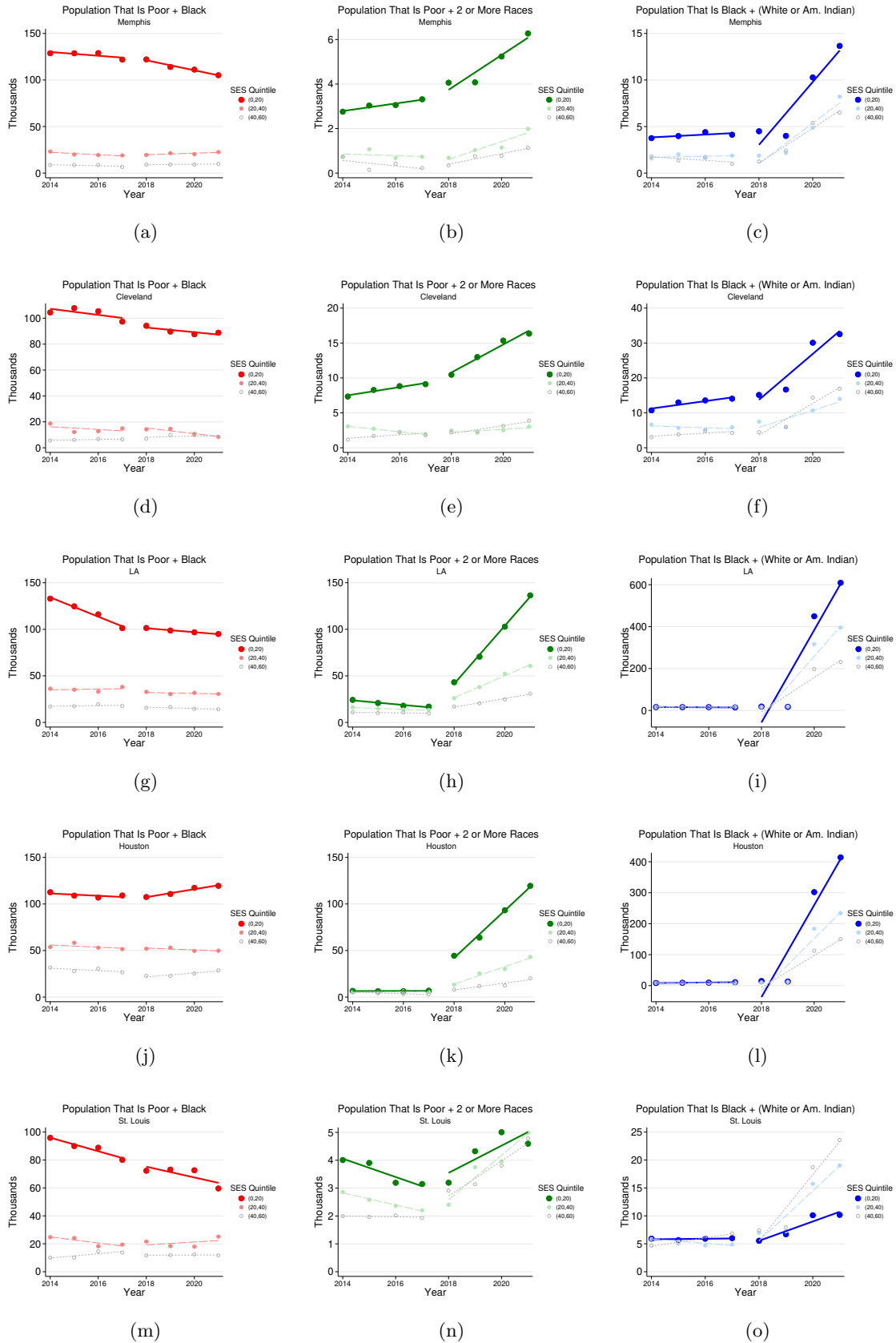


Figure 4: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)

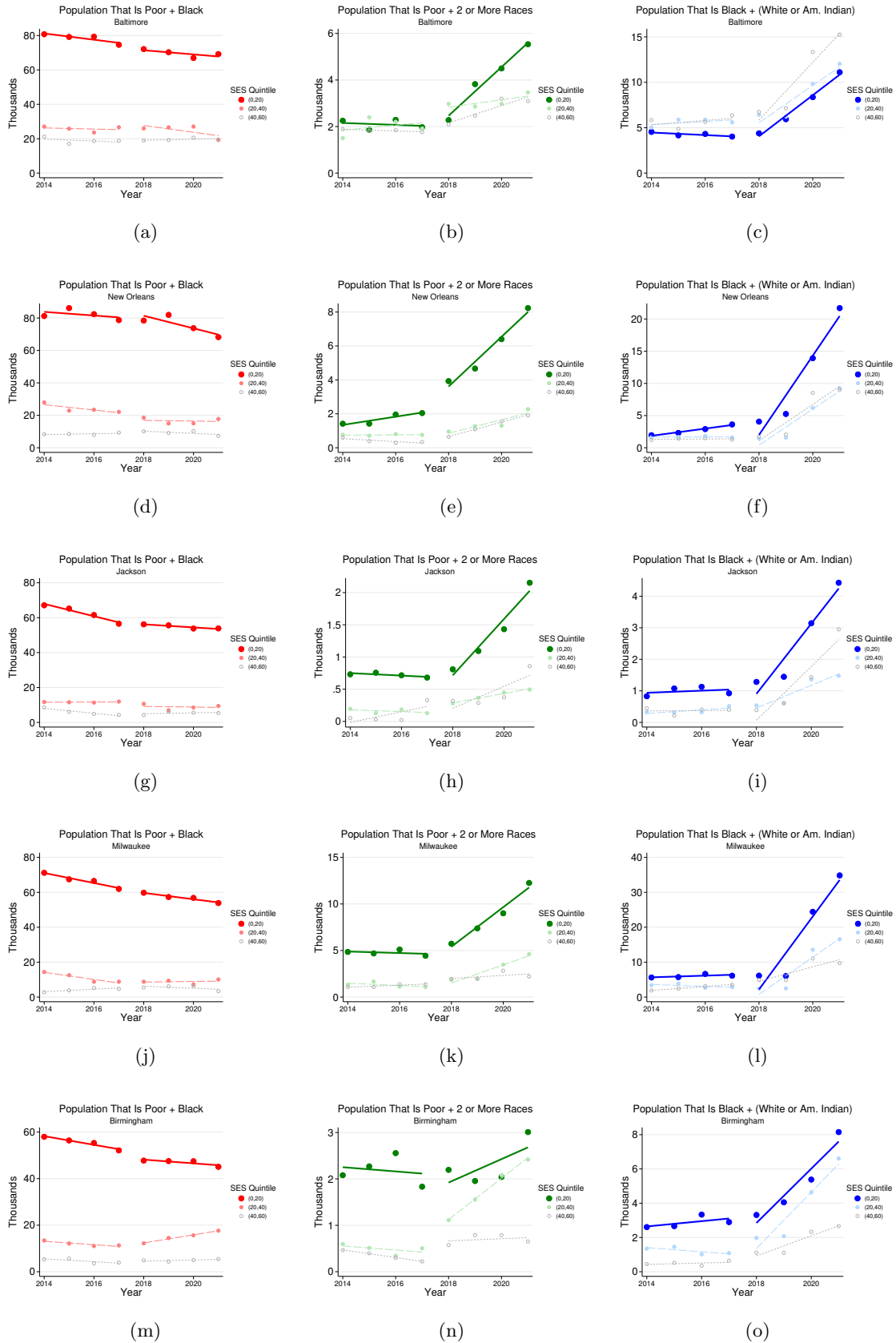
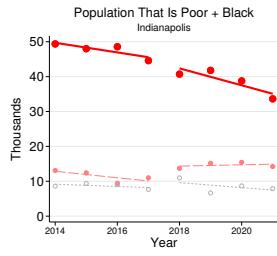
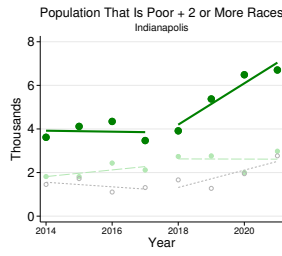


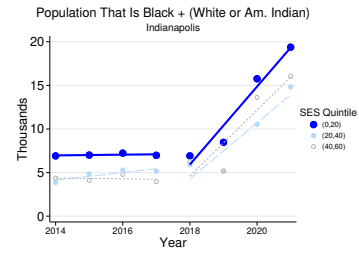
Figure 5: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)



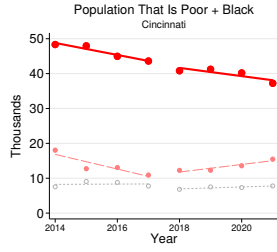
(a)



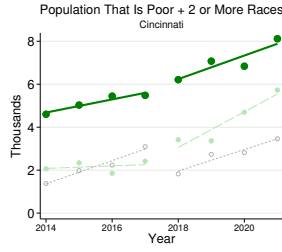
(b)



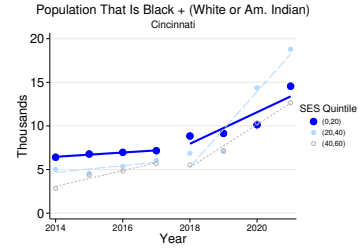
(c)



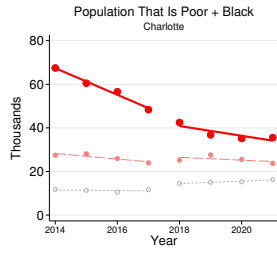
(d)



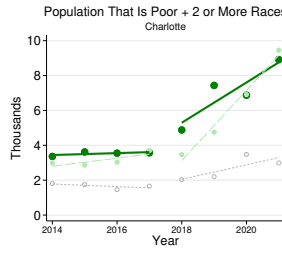
(e)



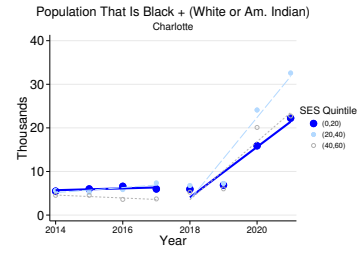
(f)



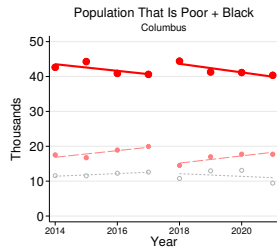
(g)



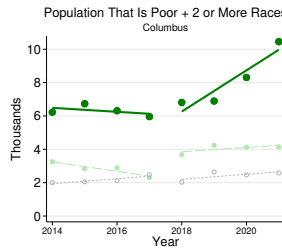
(h)



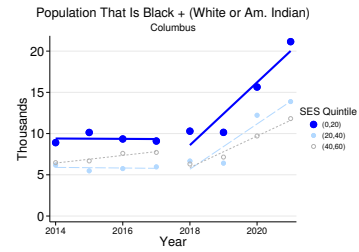
(i)



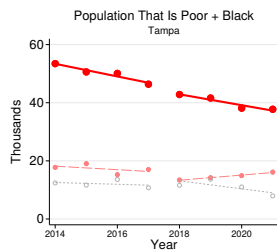
(j)



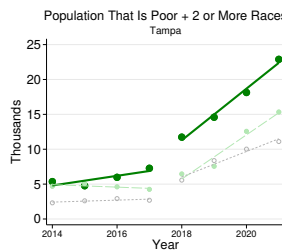
(k)



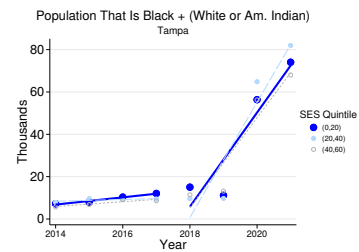
(l)



(m)

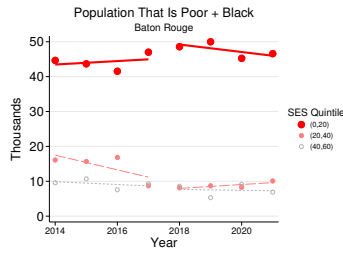


(n)

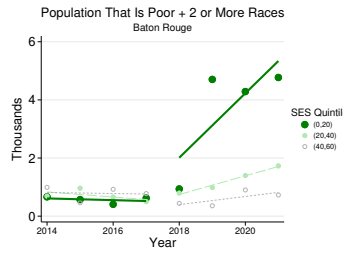


(o)

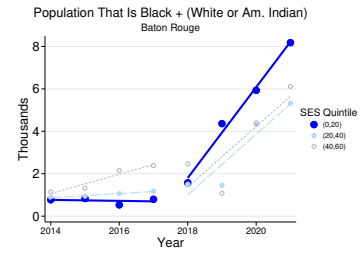
Figure 6: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)



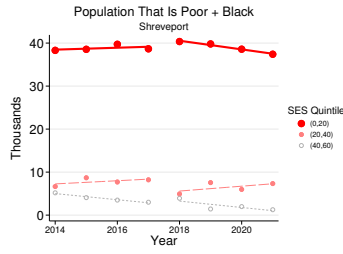
(a)



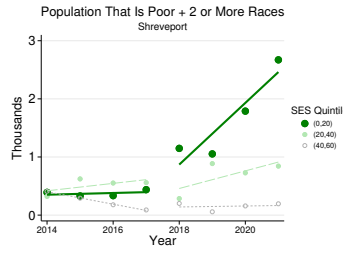
(b)



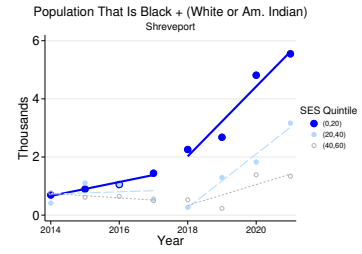
(c)



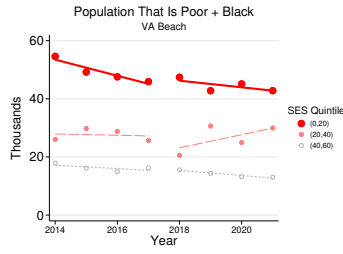
(d)



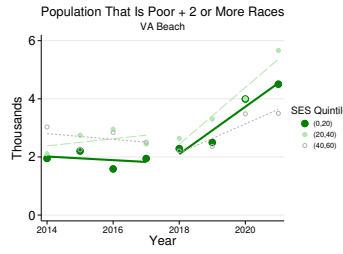
(e)



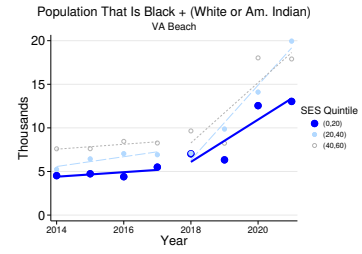
(f)



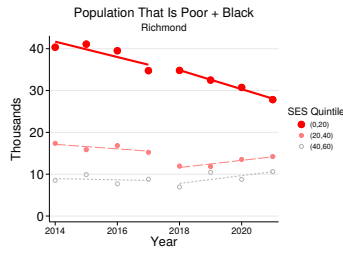
(g)



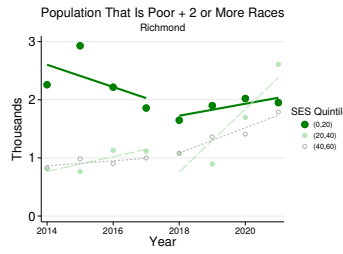
(h)



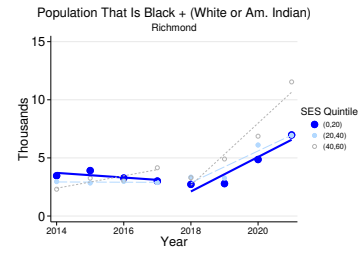
(i)



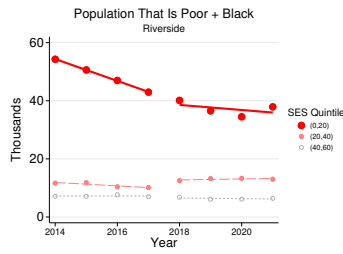
(j)



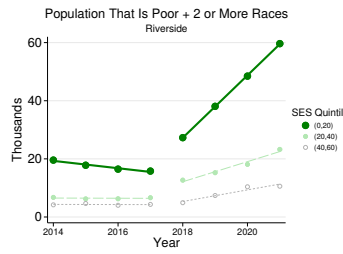
(k)



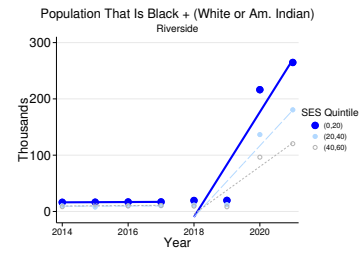
(l)



(m)

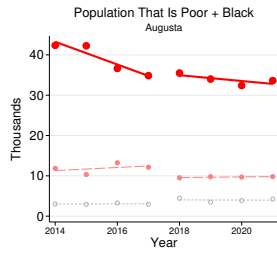


(n)

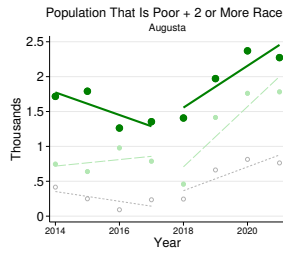


(o)

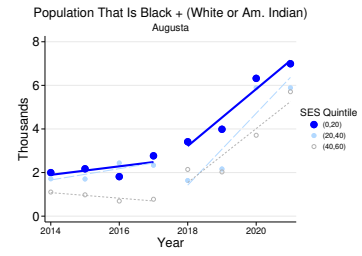
Figure 7: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)



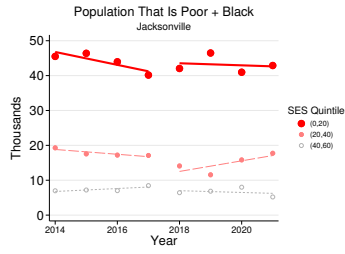
(a)



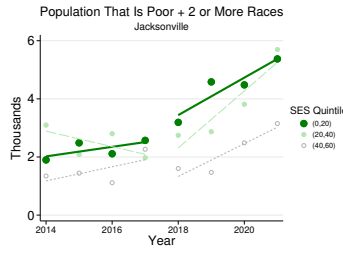
(b)



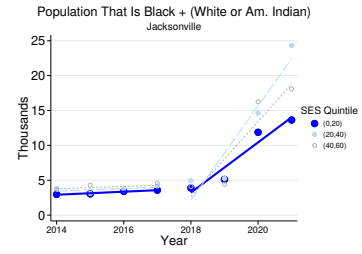
(c)



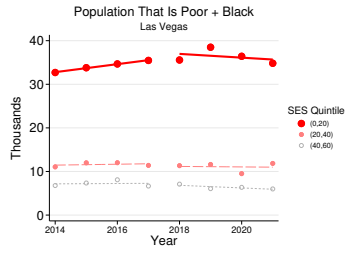
(d)



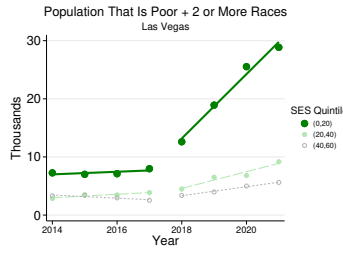
(e)



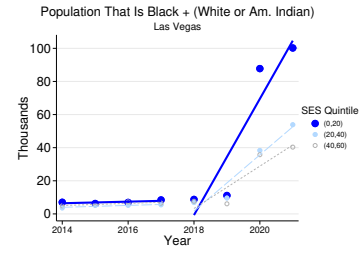
(f)



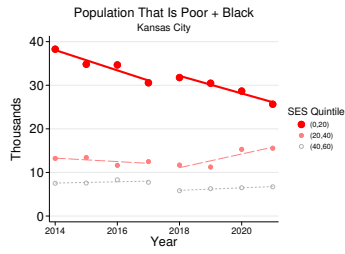
(g)



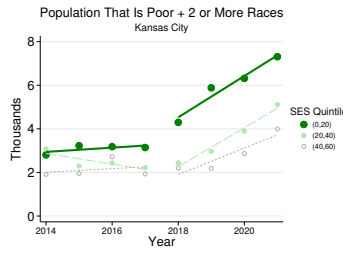
(h)



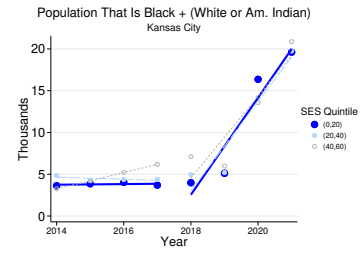
(i)



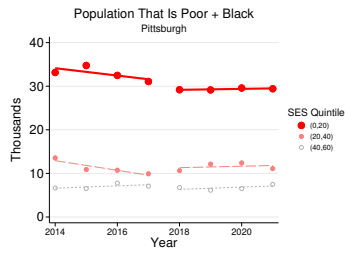
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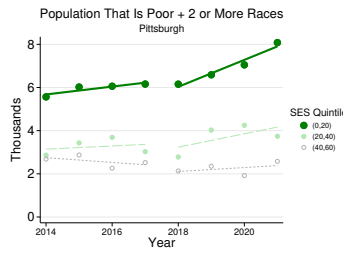
(k)



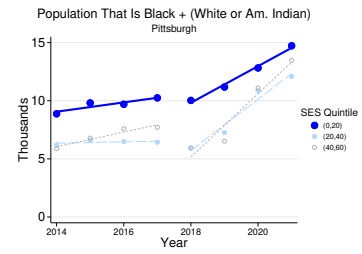
(l)



(m)



(n)



(o)

Figure 8: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)

D Appendix: Racial Shares in the Bottom Quintile of Neighborhood SES

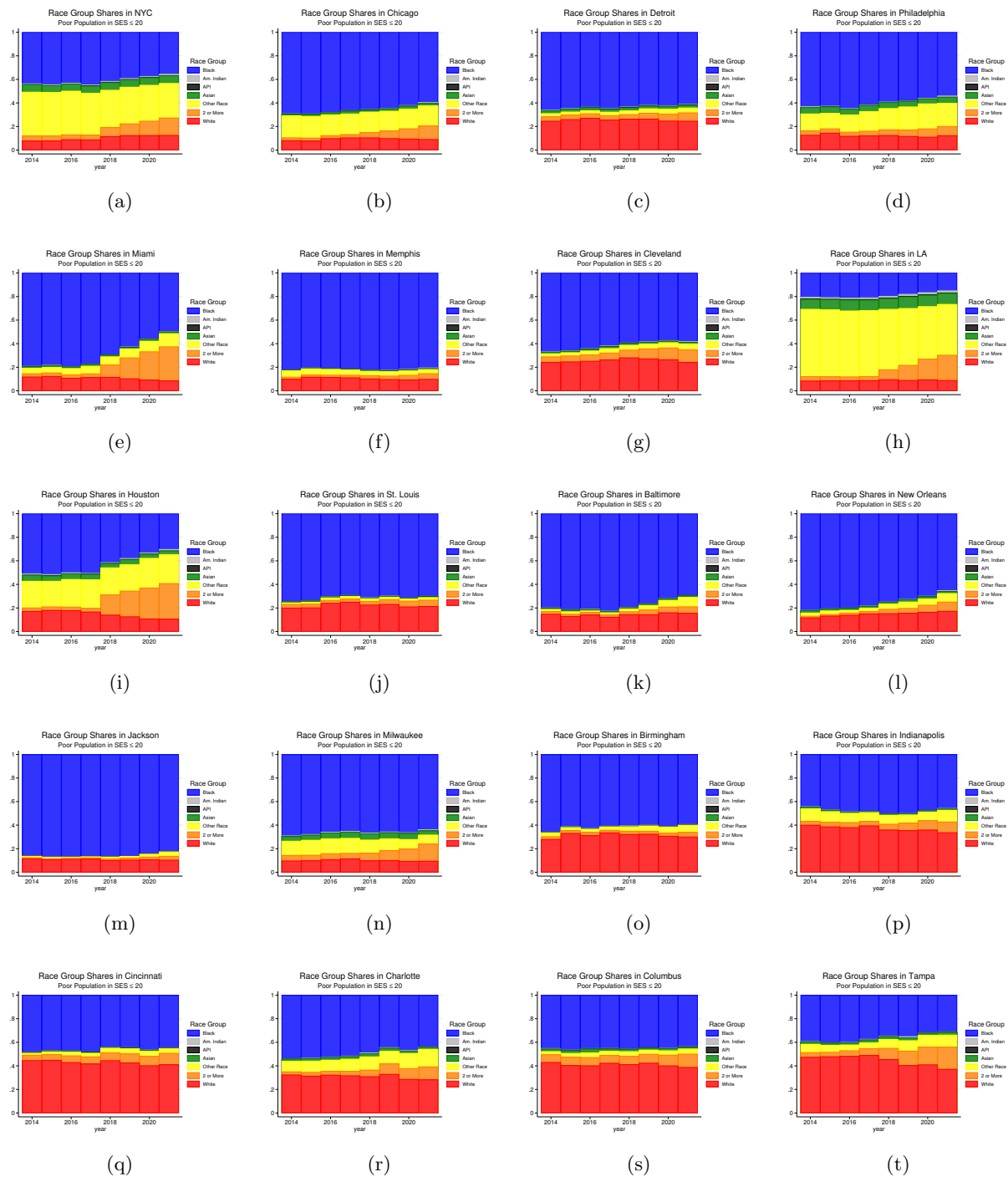


Figure 9: Racial Shares in the Bottom Quintile of Neighborhood SES, by City and Vintage of the American Community Survey (ACS)

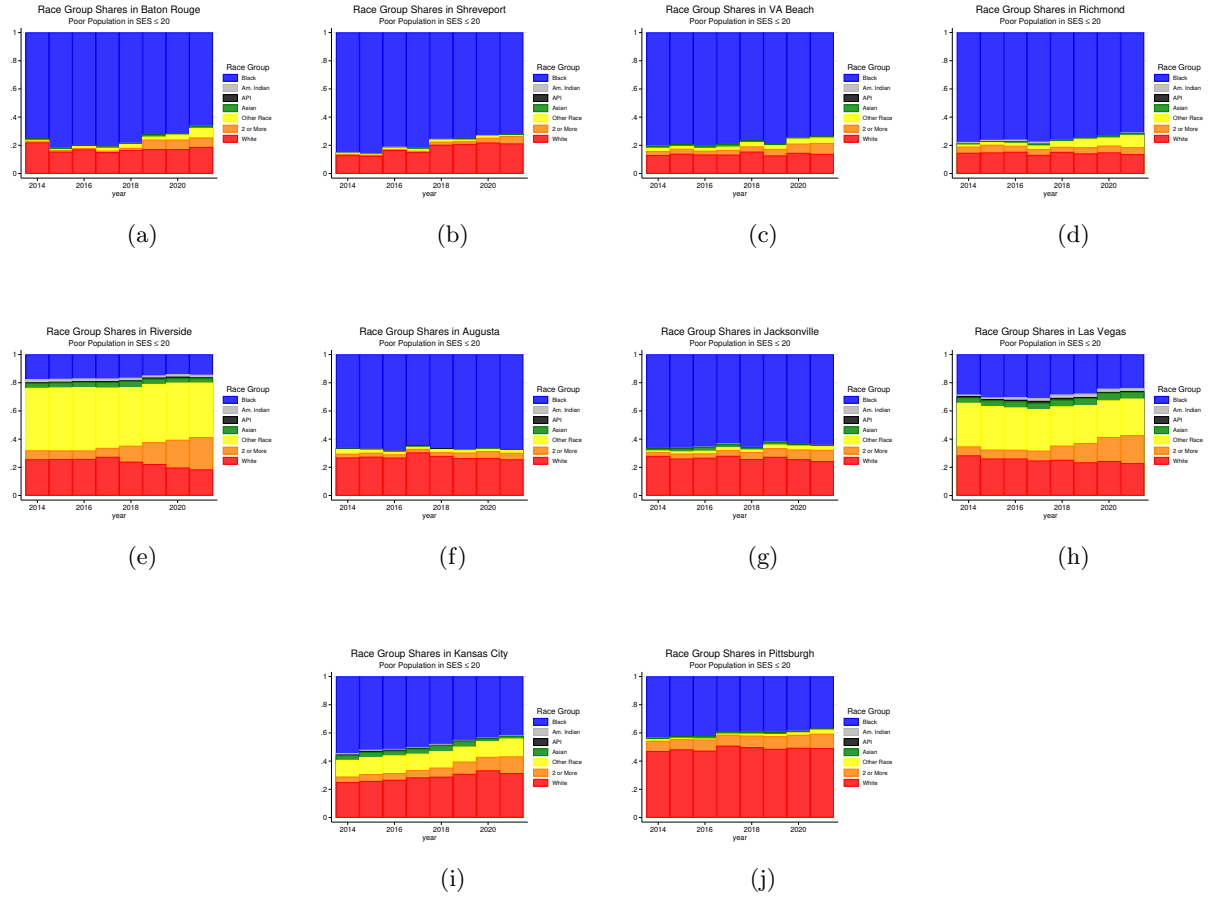


Figure 10: Racial Shares in the Bottom Quintile of Neighborhood SES, by City and Vintage of the American Community Survey (ACS)

E Appendix: Black Population

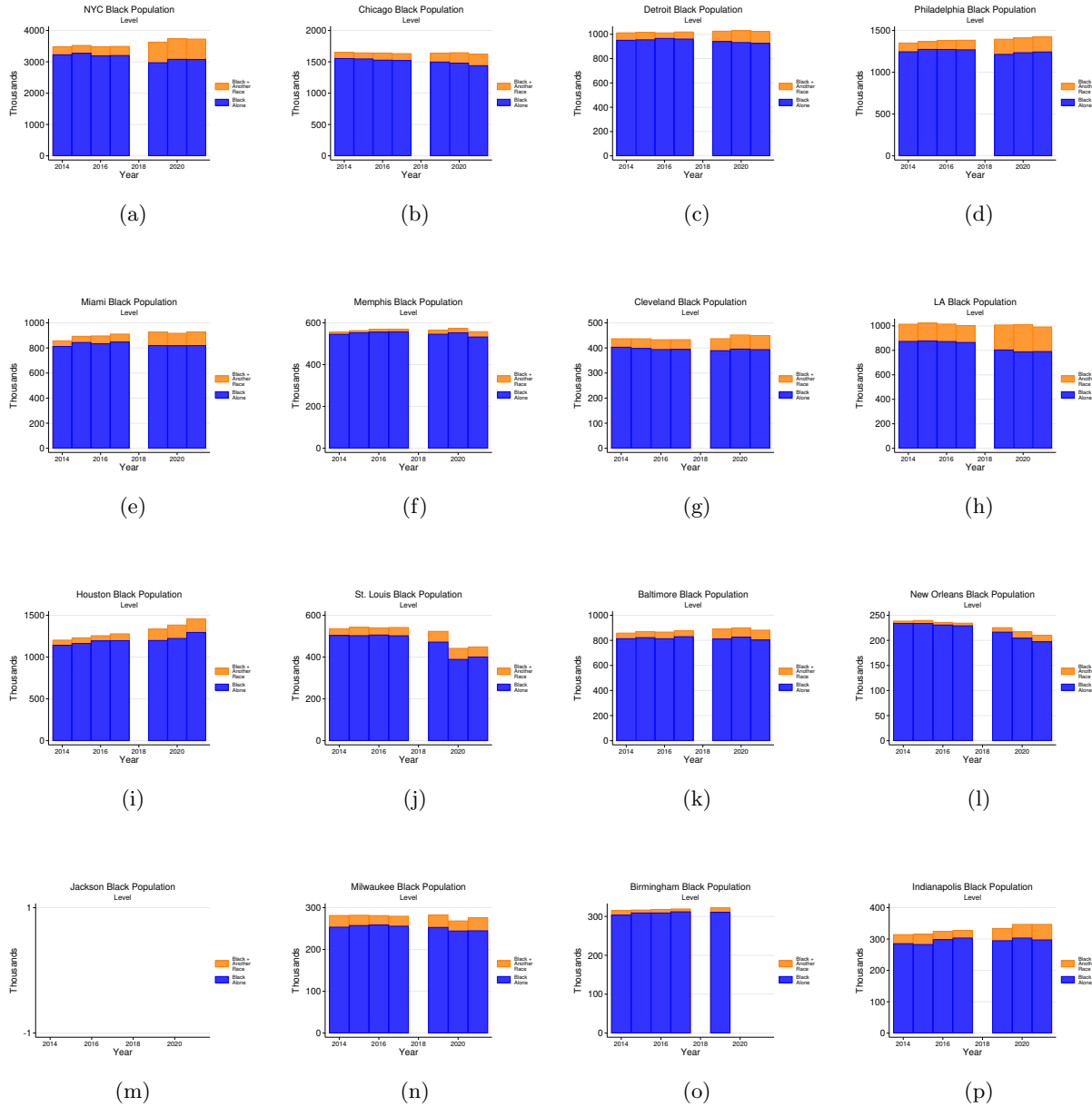


Figure 11: Black Population in the “Black Alone” or “Black and Another Race” Bins, by Vintage of the ACS

Note: The microdata examined in this figure are 1-year ACS estimates obtained from Ruggles et al. (2025). These calculations are based off of the detailed race variable with 100 bins. The “Black and Another Race” bin displayed here includes any of the 100 detailed race bins where “Black” is included.

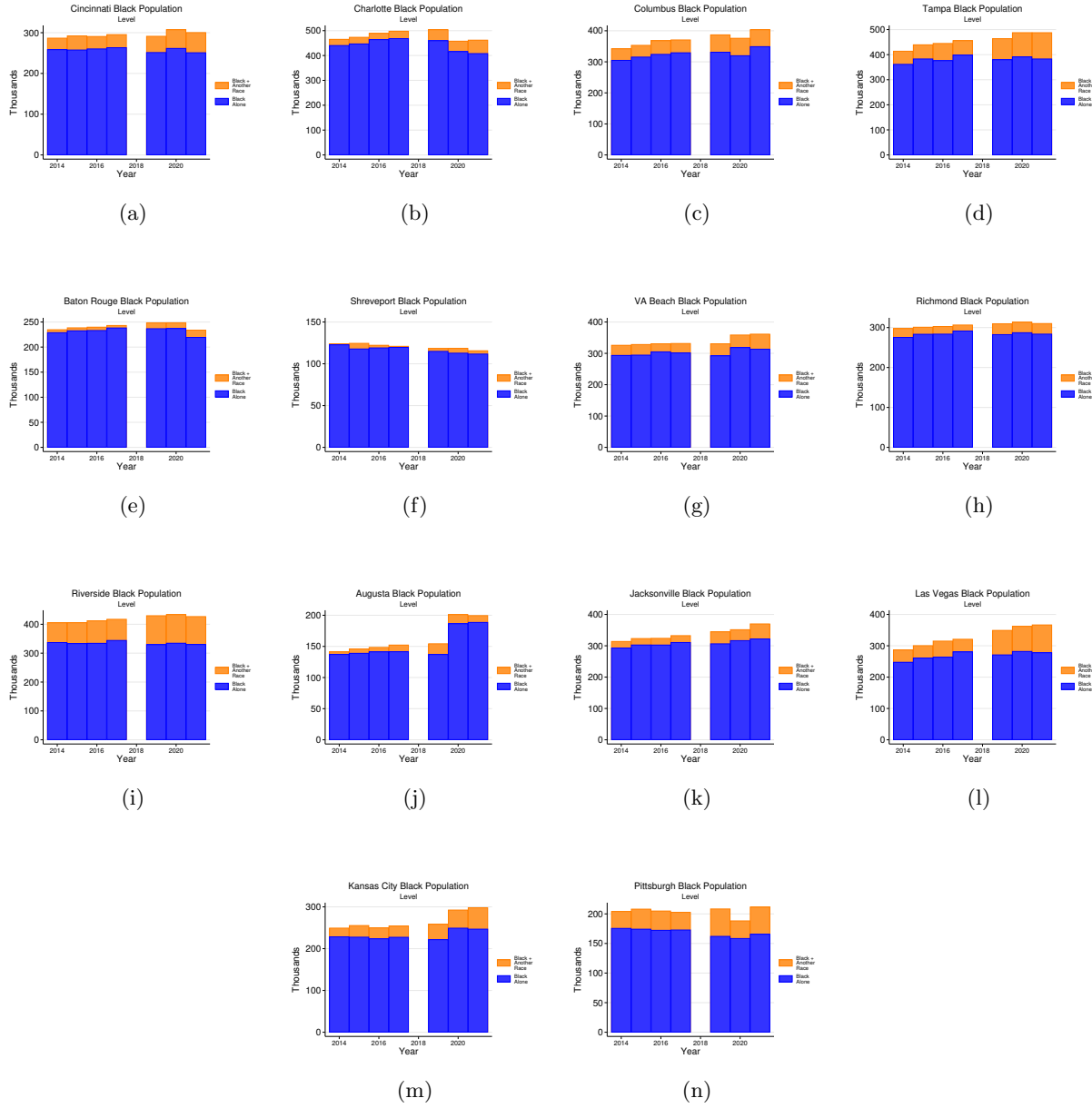


Figure 12: Black Population in the “Black Alone” or “Black and Another Race” Bins, by Vintage of the ACS

Note: The microdata examined in this figure are 1-year ACS estimates obtained from Ruggles et al. (2025). These calculations are based off of the detailed race variable with 100 bins. The “Black and Another Race” bin displayed here includes any of the 100 detailed race bins where “Black” is included.

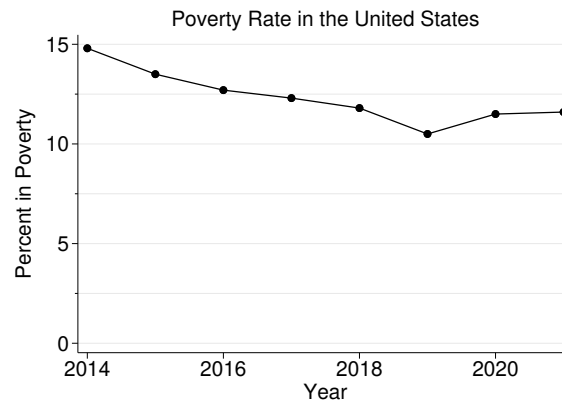


Figure 13: National Poverty Rate in the United States
Note: Data are obtained from Table A-3 of Shrider and Bijou (2025).