

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

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**Abstract:** Large efforts in research and policy are 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 tract boundary changes. This decline could be due to changes in the neighborhood SES of poor Black Americans, but we show that a large share could also be due to changes in the way the Census Bureau assigns racial labels to individuals.

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

**JEL Classification Codes:** C81, J11, J15, R23

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# 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 pre-conquest 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 non-slaves (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), Jones et al. (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, even if overall poverty declined substantially over the same time period. We 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 show that the stability of labeling conventions is critical for interpreting the recent decline in concentrated poverty. We first document two secular trends that yield opposite perspectives on the stability of labeling conventions. There is a secular decline in the number of poor Black residents in low-SES neighborhoods that is stable across the 2020 measurement change. 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.

We conclude by showing how uncertainty about the stability of labeling conventions translates into uncertainty about secular changes in concentrated poverty. We calculate changes in concentrated poverty under two assumptions about labeling conventions; (i) that labeling has been stable and (ii) that all new “Two or More Races” individuals post-2020 would have been labeled as “Black” pre-2020. Uncertainty regarding the accuracy of assumptions (i) and (ii) has the following implications for our sample of the 30 most-segregated large cities in the US. One third of cities are not affected by this measurement issue. If assumption (ii) were true rather than assumption (i), there would be economically large and meaningful differences in the recent change of concentrated poverty for one third of cities. And the truth of assumption (ii) in place of assumption (i) would completely alter the measured change in concentrated poverty for the remaining third of cities. In other words, in a third of large cities the recent decline in concentrated poverty as measured in the ACS reflects improvements in the neighborhood SES experienced by poor Black Americans. In two thirds of cities, it is possible that a significant share of poor residents labeled as Black pre-2020 have experienced no change in neighborhood SES, but have simply been labeled with 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.<sup>1</sup> As an example, the light blue bars in Figure 1a show that 33 percent of

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<sup>1</sup>We 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)).

poor Black residents of Baltimore live in Census tracts ranked in the bottom five percent nationwide in terms of neighborhood SES. Furthermore, 42 percent of this group lives in the bottom 10 percent of neighborhoods. The red bars in Figure 1a show that poor white residents of Baltimore are uniformly distributed across neighborhood SES.<sup>2</sup>

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

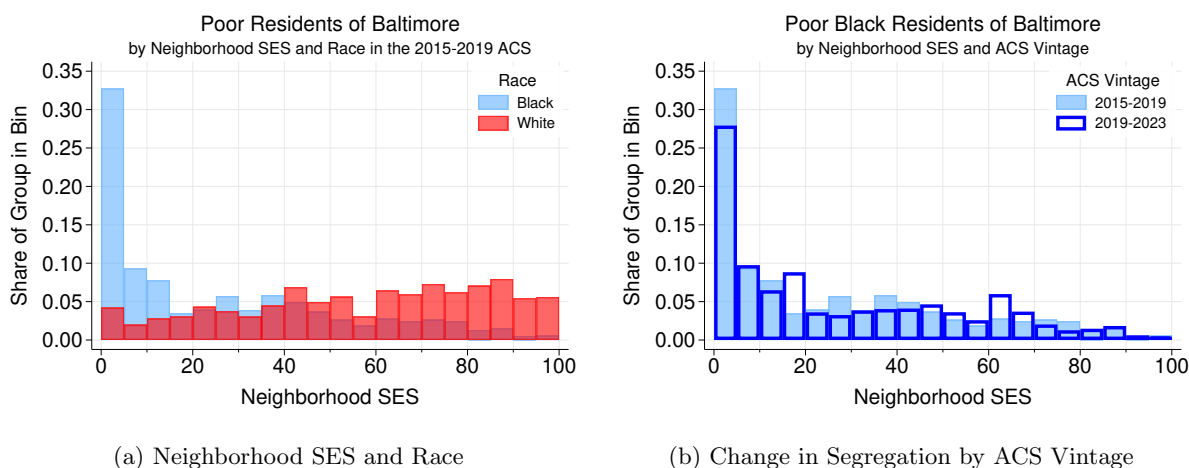


Figure 1: Racial Segregation in Baltimore,  
by Vintage of the American Community Survey (ACS)

Note: These figures show the distribution of the Baltimore metro area’s poor population over Census tracts ranked by a neighborhood socioeconomic status (SES) ranking whose construction we discuss in the main text. The left panel show the distributions conditional on a poor resident being either Black or non-Hispanic white. The right panel shows the distributions for poor Black residents in the 2015-2019 or 2019-2023 vintages of the American Community Survey (ACS).

<sup>2</sup>We 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)).

<sup>3</sup>Aliprantis 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.

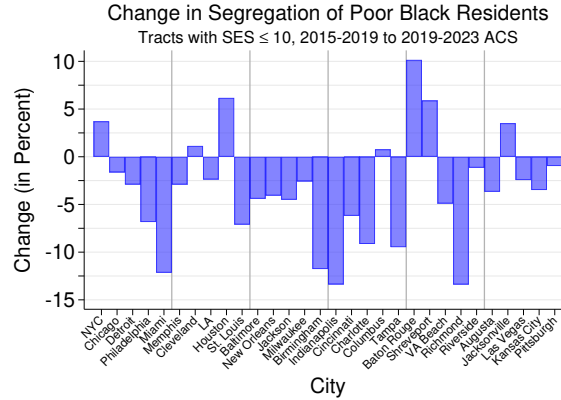


Figure 2: Change in Racial Segregation, by City

Note: This figure shows, for each of our sample cities, the change in the percent of poor Black residents living in the bottom 10 percent of tracts nationwide between the 2015-2019 and 2019-2023 vintages of the American Community Survey (ACS).

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 and 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 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 counts generally fall within the Census Bureau’s expected range of 4,000 to 8,000 residents. Glaeser et al. (2025) show that these boundary 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.

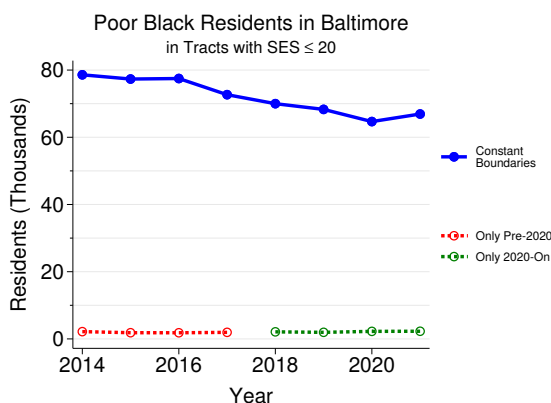


Figure 3: Poor Black Residents in Low-SES Tracts in Baltimore, by Stability across 2020 Census Tract Boundary Changes

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 The Stability of Labeling Conventions: Population Counts

Two secular trends in the poor populations of low-SES neighborhoods indicate uncertainty about the stability of racial labeling conventions pre- and post-2020.

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 data suggest a stable secular change in the poor Black population in low-SES neighborhoods. Appendix C shows that the pattern of stable change across the 2020 Census holds across our sample of segregated cities.

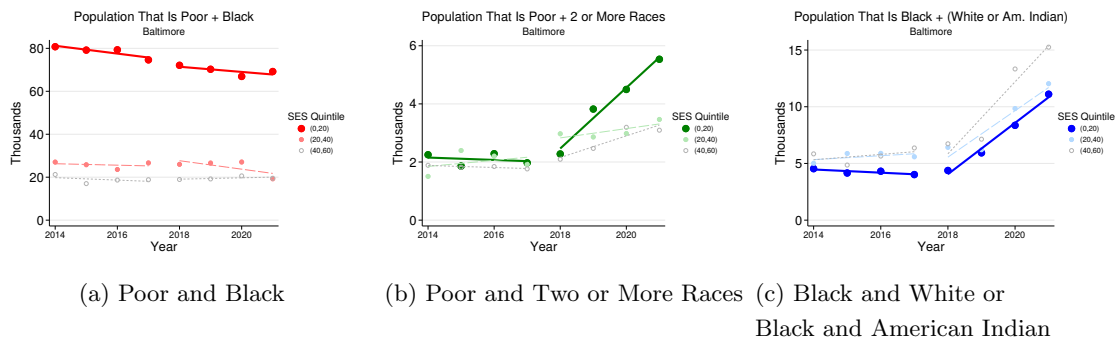


Figure 4: Population by Neighborhood SES Quintile and Race in Baltimore, by Vintage of the American Community Survey (ACS)

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, secular changes in other relevant groups suggest that the changes in those groups’ population are driven by changes in the way individuals are assigned racial labels. 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 measurement of race. This suggests the possibility that poor Black residents pre-2020 have experienced no change in neighborhood SES, but have simply been labeled with 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 labeling, 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)).

### 3.3 The Stability of Labeling Conventions: Consequences for Measuring Concentrated Poverty

What are the consequences of uncertainty in the labeling of individuals for uncertainty in the measurement of concentrated poverty? We begin by formally defining our measure of segregation in a city, which we use interchangeably with concentrated poverty, in 2017,

$$S_{2017} = \frac{\# \text{ of Poor Black Residents with Neighborhood SES } \leq 10}{\# \text{ of Poor Black Residents with Any Neighborhood SES}} \tag{1}$$

Accurate measurement of changes in segregation depends on how individuals in the “Two or More Races” group Post-2020 would have been labeled Pre-2020. It is possible that the “Two or More Races” group in 2021 would have been labeled in a stable, identical way as “Two or More Races” Pre-2020. Under this assumption, we measure segregation in 2021 identically as we do in 2017, so that Equation 2 follows Equation 1. On the other hand, it is possible that the labeling of the “Two or More Races” group changed Pre- and Post-2020, where many of those would have been labeled as “Black” Pre-2020 are now labeled as “Two or More Races.” Under this assumption, given an identical population in 2021 as in 2017, in order to measure segregation of the same individuals

in 2021 as in 2017, we would need to measure segregation in 2021 as shown in Equation 3:

$$\mathcal{S}_{2021}^{\text{Stable}} = \frac{\# \text{ of Poor Black w SES } \leq 10}{\# \text{ of Poor Black w Any SES}} \quad (2)$$

$$\mathcal{S}_{2021}^{\text{Changing}} = \frac{\# \text{ of Poor Black w SES } \leq 10 + \text{2017-2021 change in } \# \text{ of Poor 2 or More Races w SES } \leq 10}{\# \text{ of Poor Black w Any SES} + \text{2017-2021 change in } \# \text{ of Poor 2 or More Races w Any SES}} \quad (3)$$

We define measures of changes in segregation in terms of their assumption about the labeling of the “Two or More Races” group Pre- and Post-2020:

$$\begin{aligned} \Delta^{\text{Stable}} &= \mathcal{S}_{2021}^{\text{Stable}} - \mathcal{S}_{2017} \\ \Delta^{\text{Changing}} &= \mathcal{S}_{2021}^{\text{Changing}} - \mathcal{S}_{2017} \end{aligned}$$

For our ensuing empirical work we calculate the 2017-2021 change in the number of poor “Two or More Races” individuals using regressions of the poor “Two or More Races” population on year between 2017 and 2021 separately in neighborhoods above and below the 10th percentile of SES and then multiplying those regression coefficients by four.

Figure 5 uses these alternate assumptions about labeling conventions to show the range of uncertainty when measuring changes in concentrated poverty. The figure orders cities by the magnitude of their difference under the two labeling conventions. We see three broad patterns in the top, middle, and bottom third of cities.

In the top third of cities, different labeling conventions would completely alter the measured changes in concentrated poverty. Looking at the middle of this group, Miami and Tampa, we see that the solid blue dots under a stable labeling convention indicate incredibly large drops in concentrated poverty of 12.2 and 9.1 percentage points, respectively. However, if only labeling conventions changed, as assumed by the measure in the hollow blue dots, then concentrated poverty would have dropped by 3.2 and 1.2 percentage points. Likewise, the large and economically significant declines in segregation in Milwaukee and Kansas City would simply not have happened. Hispanic migration is likely to play a role in many of the top third cities. As a result, we consider a robustness check in which only a fraction of the increase in “Two or More Races” individuals were due to labeling changes of “Black” residents (in our exercise, 1/5). Even in this scenario, a completely altered qualitative picture would still be painted for Los Angeles, Riverside, Houston, and Las Vegas.

In the bottom third of cities, changes due to different labeling conventions would have little impact on the measured changes in segregation. Consider the middle of this group, Jackson and Memphis. In both of these cities large declines in segregation would be measured under either stable or changing labeling conventions.

Finally, in the middle third of cities, different labeling conventions would meaningfully alter the measured changes in concentrated poverty. Consider the middle of this group, Chicago and Pittsburgh. Under a stable labeling convention shown by the solid blue dots, there would be

meaningful reductions. Under changing labeling conventions shown by the hollow blue dots, the sign changes, so that concentrated poverty would actually have increased. Likewise, the magnitudes of changes are altered in non-trivial ways for the group of cities in this middle third. In New Orleans and Baltimore, for example, the respective declines in concentrated poverty under stable labeling is 4.1 and 4.4. Under changing labeling the magnitudes would reduce to 1.6 and 3.1, respectively, effectively reducing the decline by 60.0 and 29.0 percent of the stable decline.

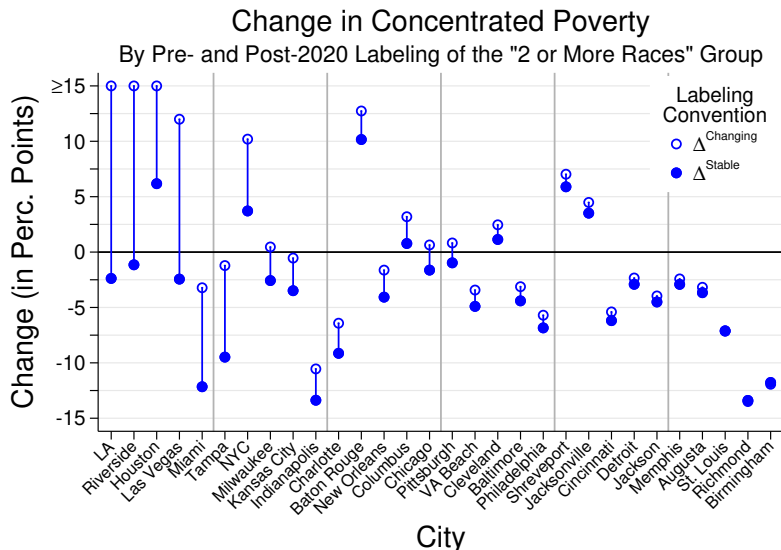


Figure 5: Change in Concentrated Poverty between the 2015-2019 ACS and 2019-2023 ACS, by Assumption about the Stability of Labeling of Individuals as “Two or More Races”

Note: This figure shows changes in concentrated poverty, or the percent of poor Black residents of a city living in a neighborhood with socioeconomic status (SES) less than the 10th percentile of neighborhoods in the US. The blue dots show changes by city between the 2015-2019 and 2019-2023 waves of the American Community Survey (ACS). The solid blue dots assume a stable labeling convention, that individuals labeled “Black” pre-2020 would be identically labeled as “Black” post-2020. The hollow blue dots assume a changing labeling convention, in which increases in the “Two or More Races” population are entirely due to individuals labeled “Black” pre-2020 having their labels switched to “Two or More Races” post-2020. City-level changes in poor “Two or More Races” population are estimated via OLS regressions on the 2015-2019 through 2019-2023 waves of the ACS.

## 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), Darity and Lefebvre (2024)). 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 way racial labels are assigned to individuals. This note showed that, unfortunately, in most cases 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)). This note has demonstrated that in many cities the large decline in overall poverty since 2014 could have had a limited impact on the neighborhood conditions experienced by the 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.<sup>4</sup> 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, Blackfoot 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),

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<sup>4</sup>Information 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

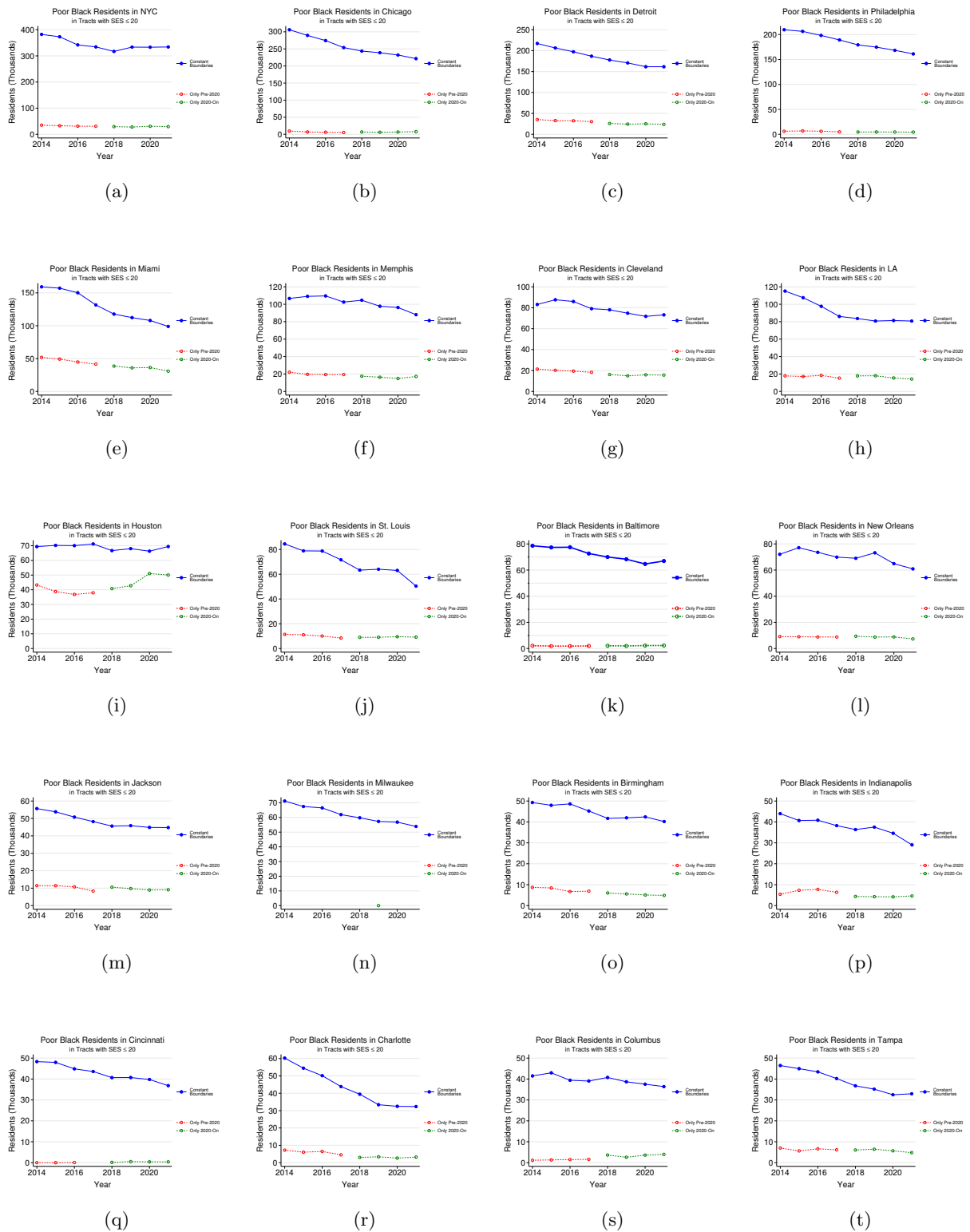


Figure 1: Changes in Poor Black Population by Tract Boundary Changes and City, by Vintage of the American Community Survey (ACS)

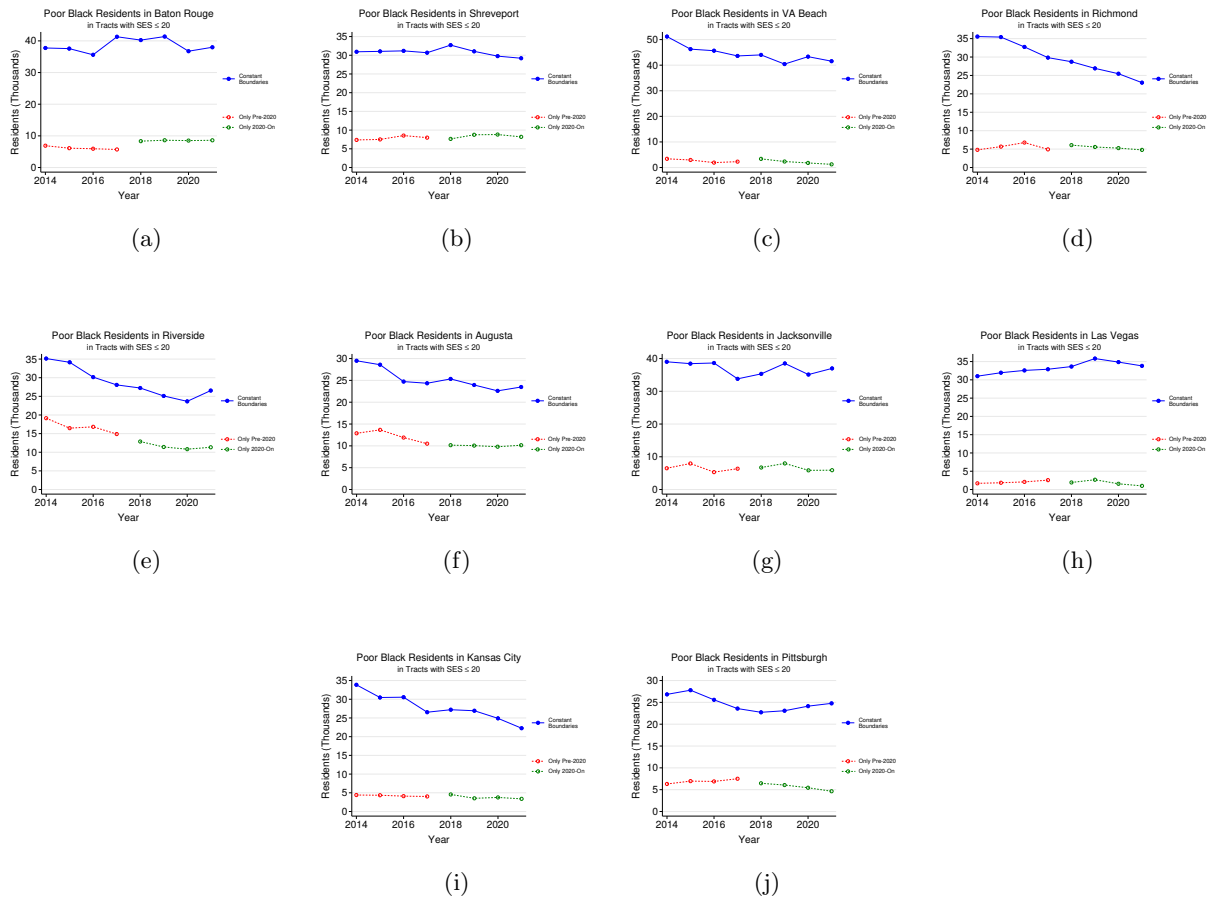


Figure 2: Changes in Poor Black Population by Tract Boundary Changes and City, by Vintage of the American Community Survey (ACS)



# C Appendix: Secular Trends by Race

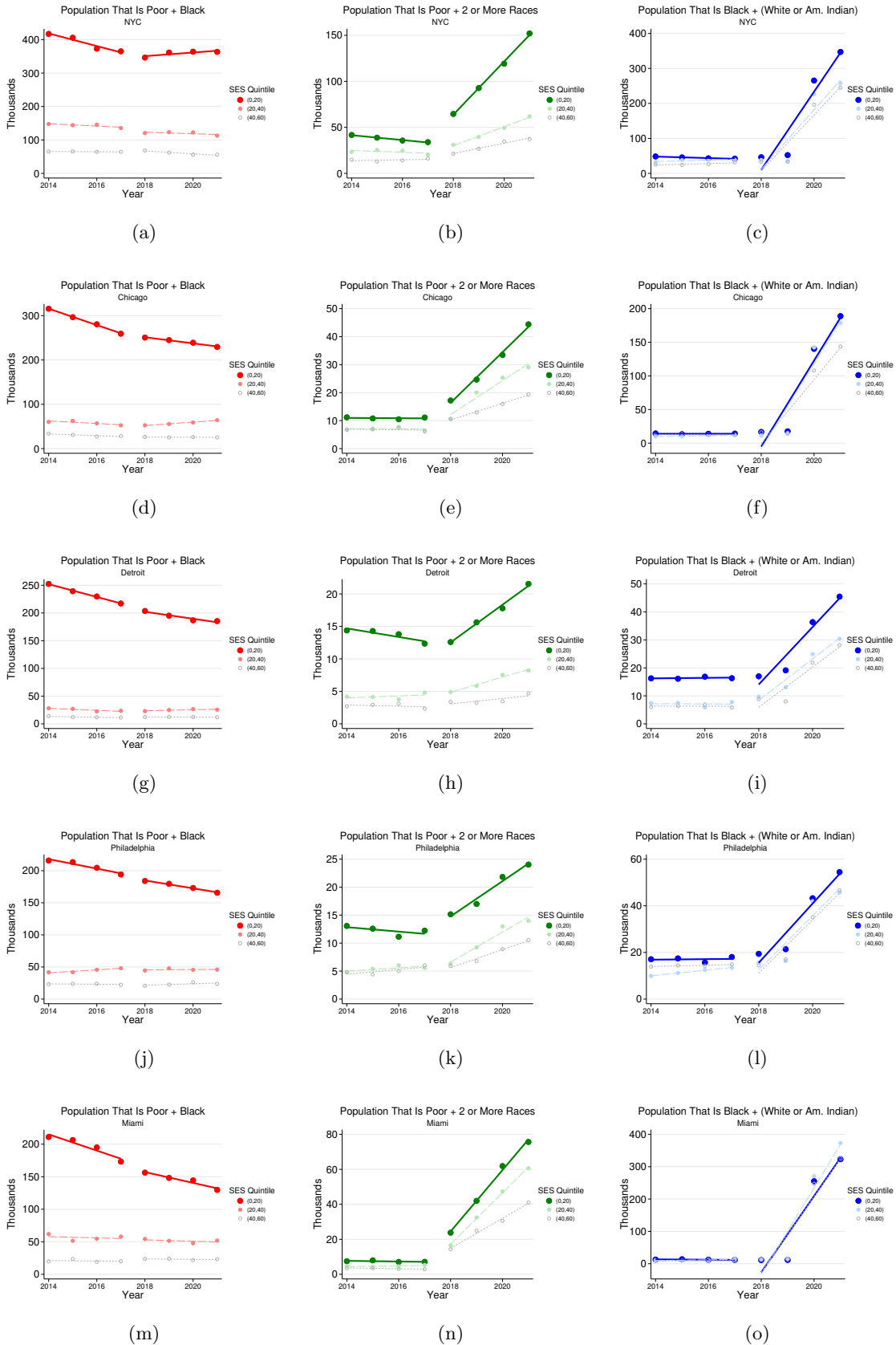


Figure 3: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)

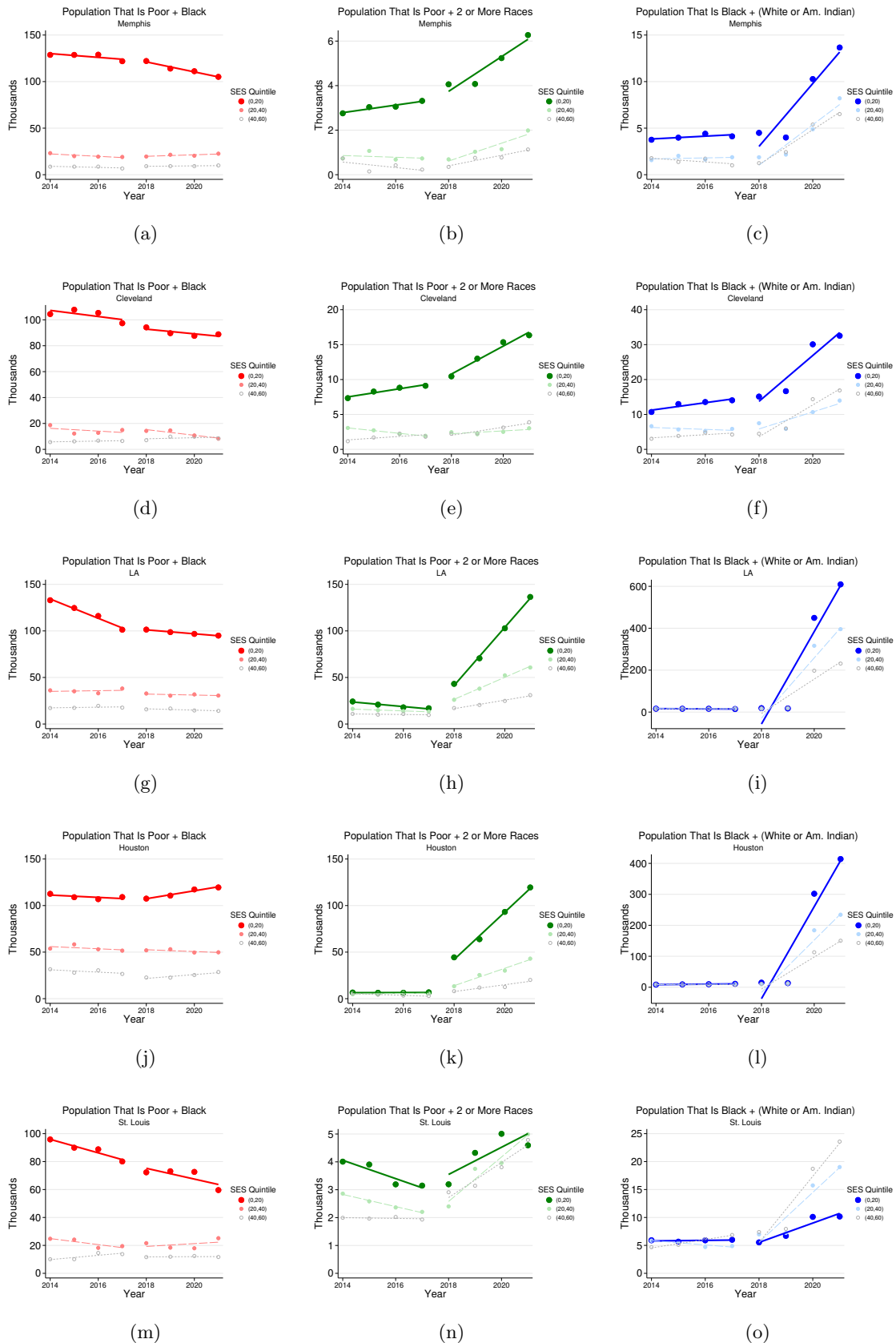


Figure 4: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)

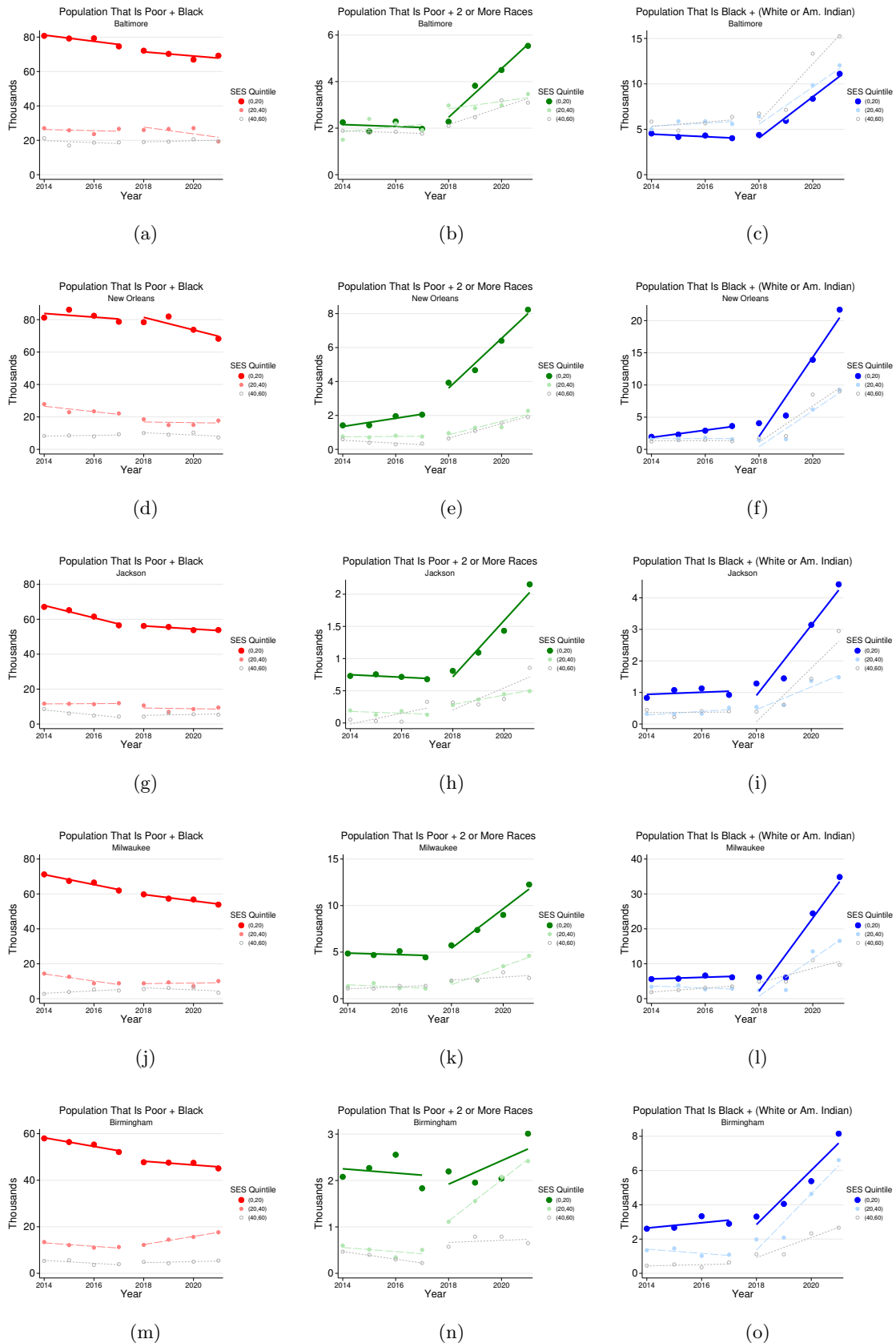


Figure 5: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)

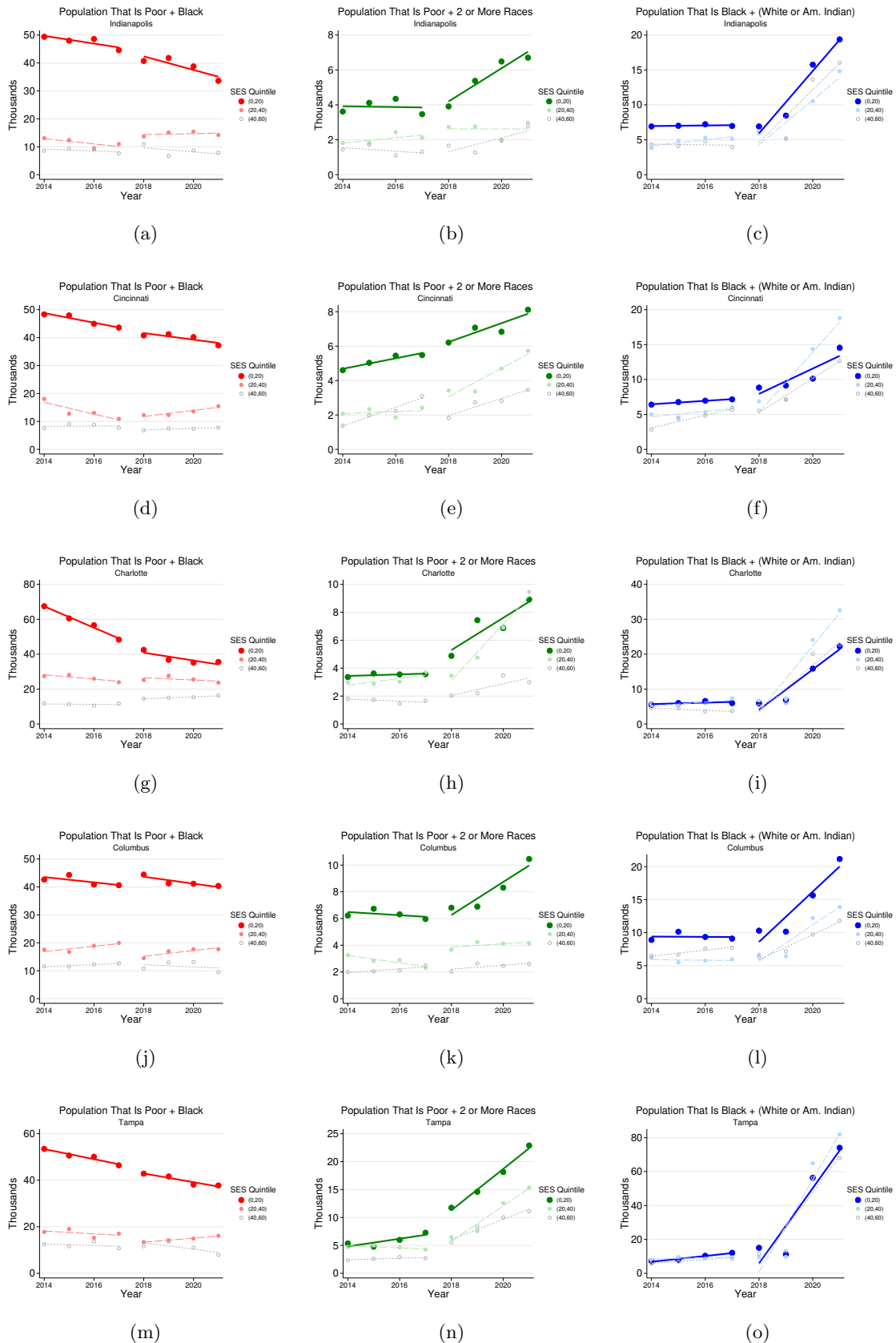


Figure 6: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)

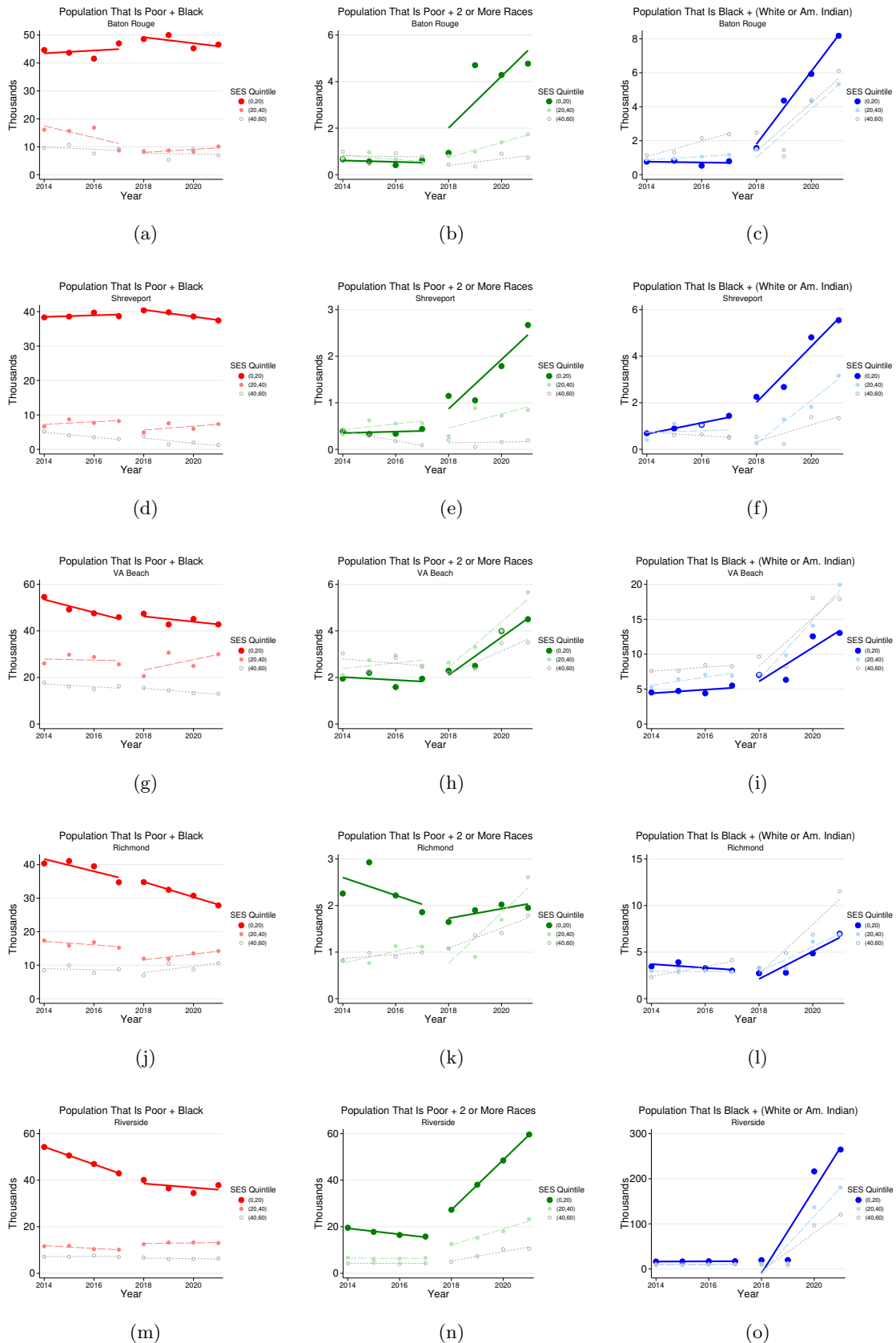


Figure 7: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)

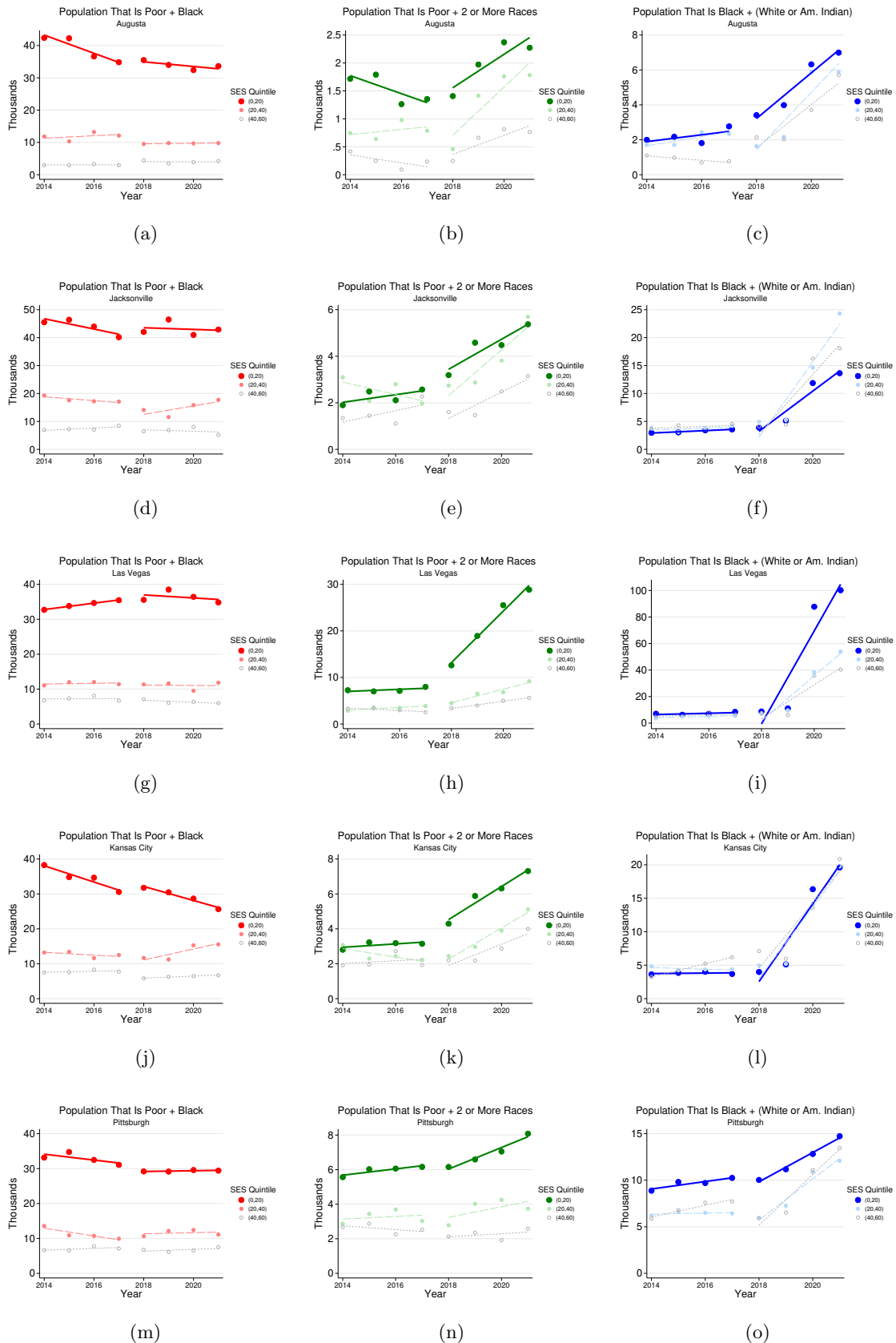


Figure 8: Population by Neighborhood SES Quintile and Race, by City and Vintage of the American Community Survey (ACS)

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

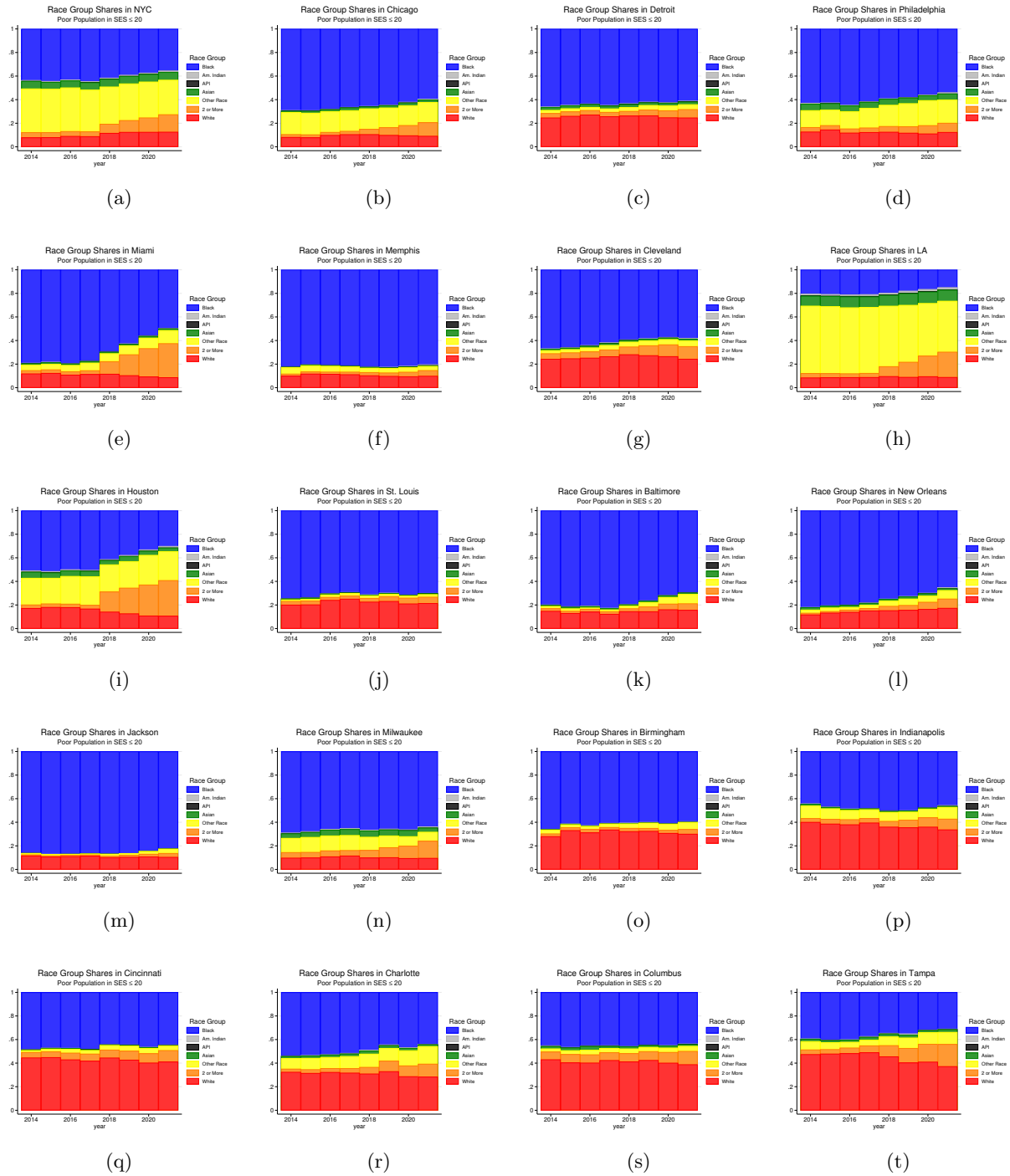


Figure 9: Racial Shares in the Bottom Quintile of Neighborhood SES, by City and Vintage of the American Community Survey (ACS)

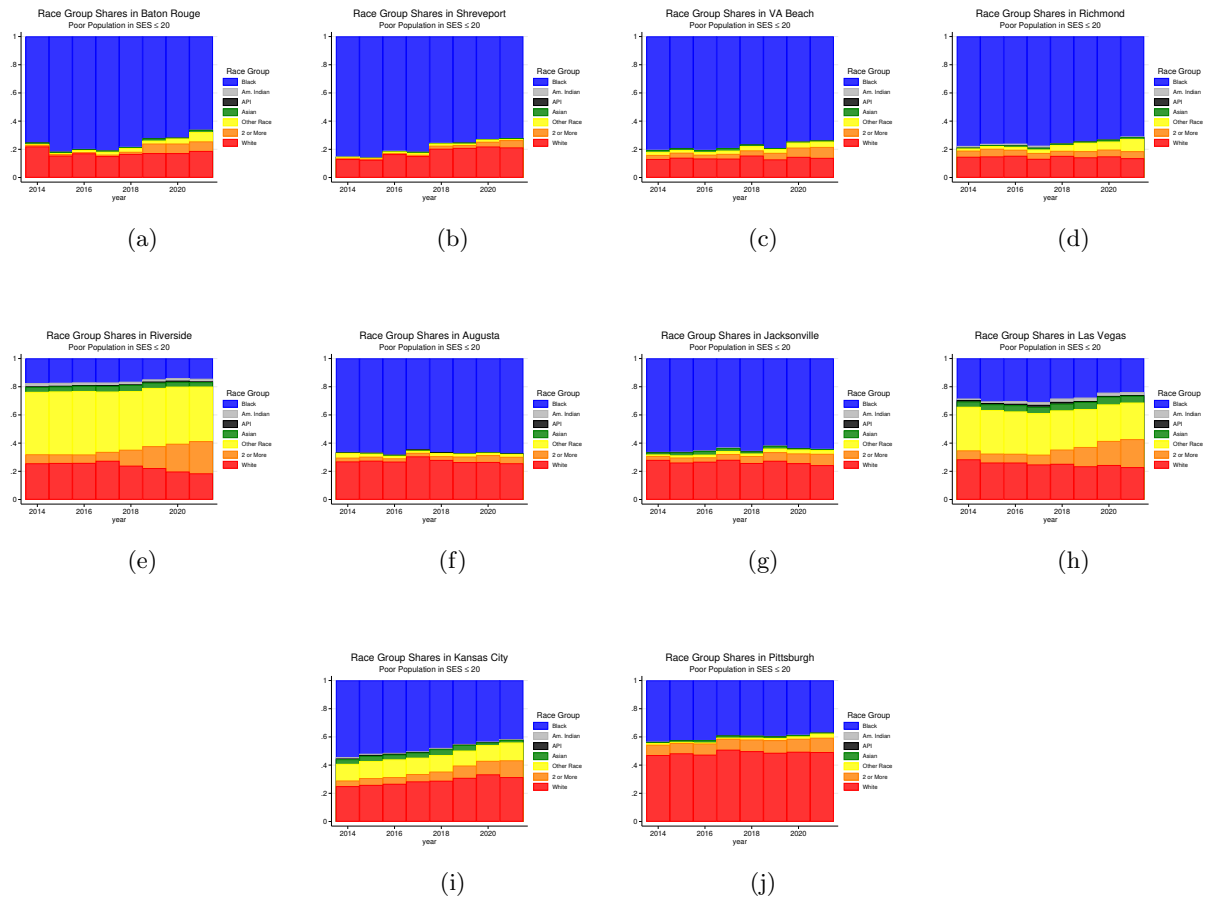


Figure 10: Racial Shares in the Bottom Quintile of Neighborhood SES, by City and Vintage of the American Community Survey (ACS)

# E Appendix: Black Population

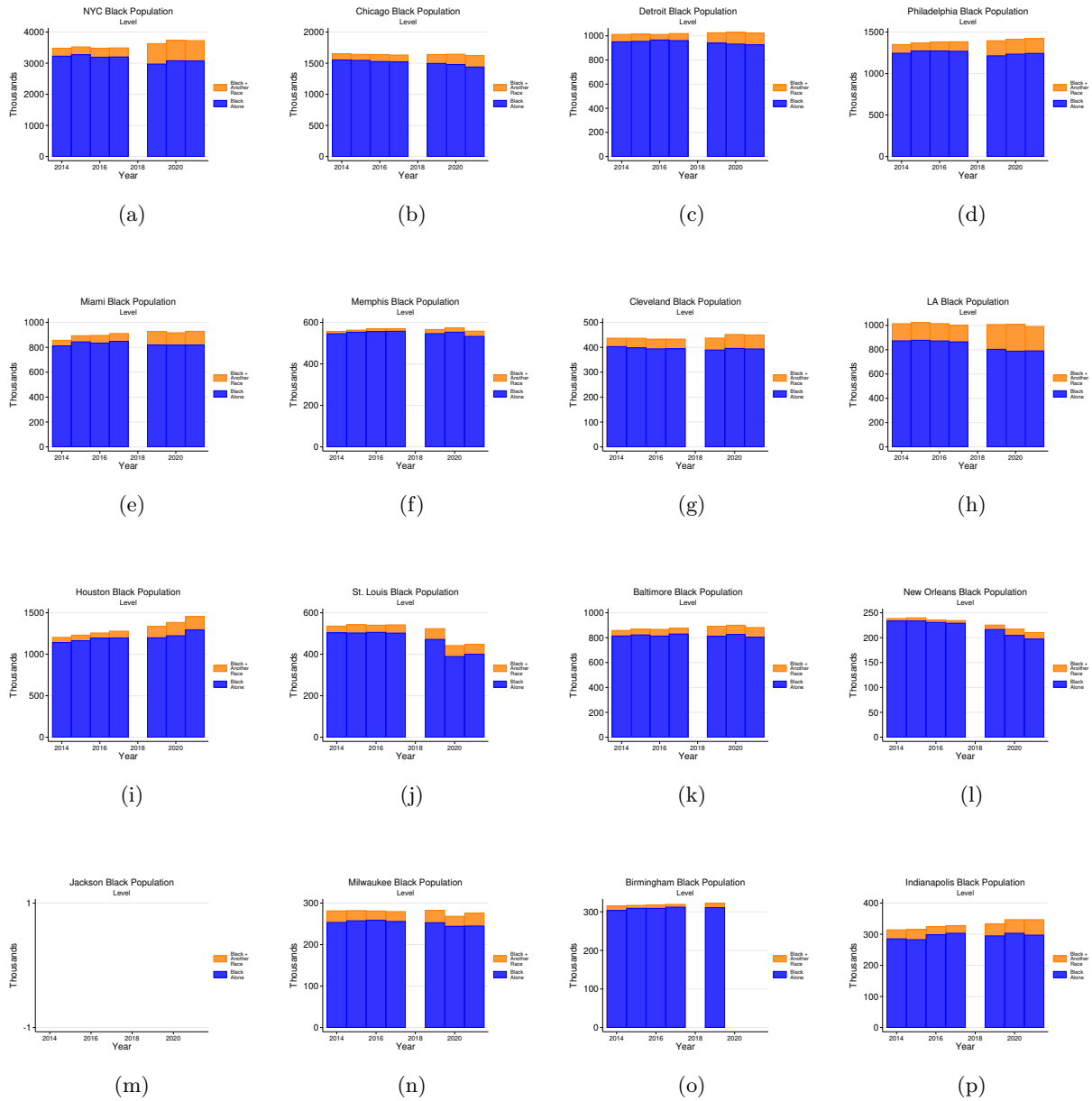


Figure 11: Black Population in the “Black Alone” or “Black and Another Race” Bins, by Vintage of the ACS

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.

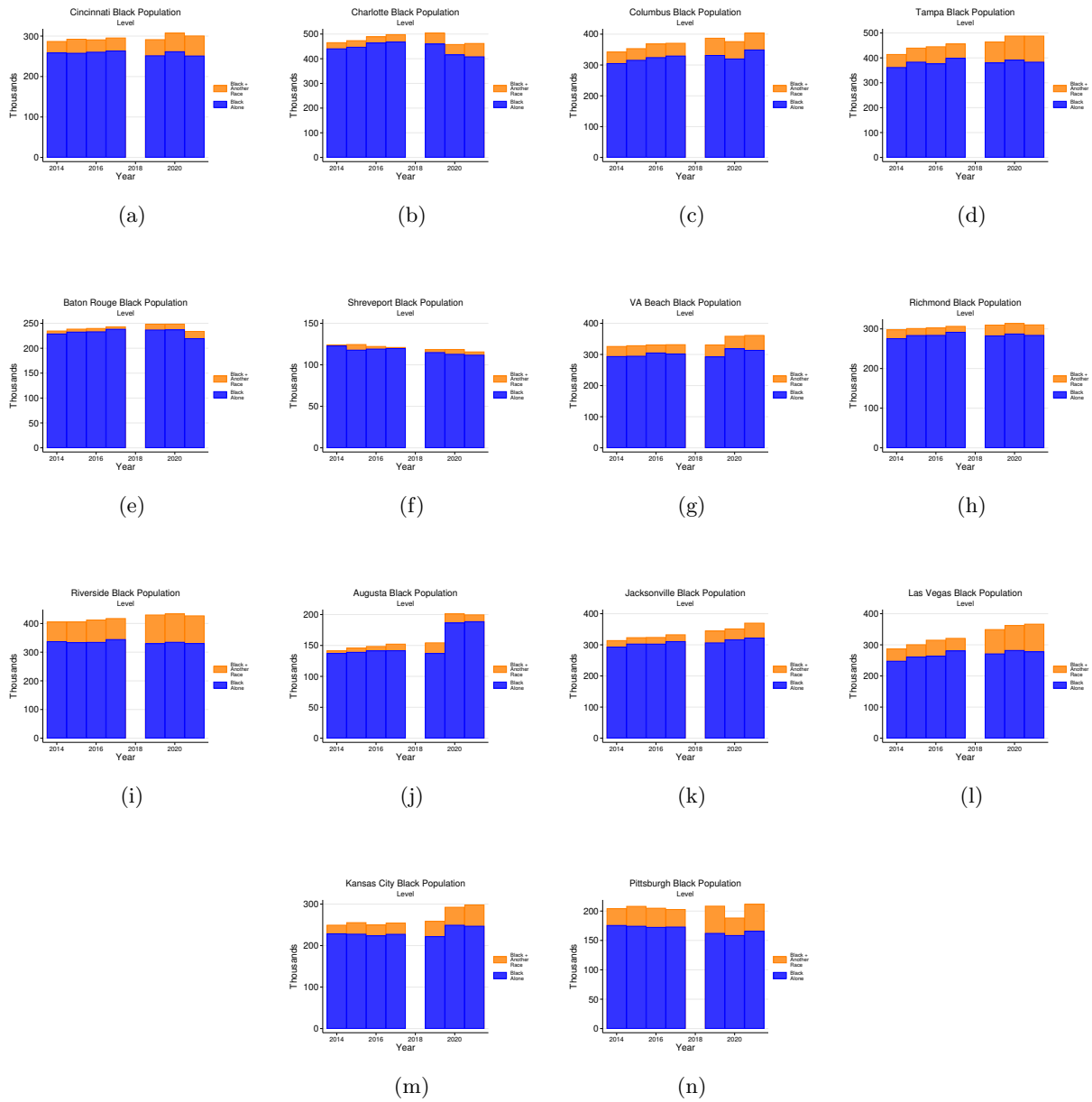


Figure 12: Black Population in the “Black Alone” or “Black and Another Race” Bins, by Vintage of the ACS

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.

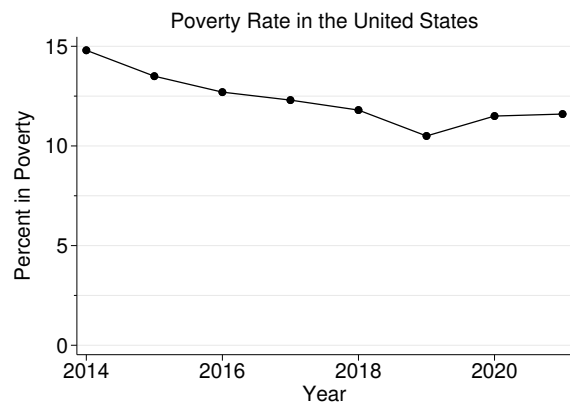


Figure 13: National Poverty Rate in the United States  
Note: Data are obtained from Table A-3 of Shrider and Bijou (2025).