

Changing Opportunity: Sociological Mechanisms Underlying Growing Class Gaps and Shrinking Race Gaps in Economic Mobility*

Raj Chetty, Harvard University
Will Dobbie, Harvard University
Benjamin Goldman, Harvard University
Sonya R. Porter, U.S. Census Bureau
Crystal S. Yang, Harvard University

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Abstract

We show that intergenerational mobility changed rapidly by race and class in recent decades and use these trends as a lens to identify the causal mechanisms underlying changes in economic mobility. For white children in the U.S. born between 1978 and 1992, earnings increased for children from high-income families but decreased for children from low-income families, increasing earnings gaps by parental income (“class”) by nearly 30%. Earnings increased for Black children at all parent income levels, reducing Black-white earnings gaps for children from low-income families by 30%. Class gaps grew and race gaps shrunk similarly for pre-labor market and non-monetary outcomes. Using a quasi-experimental design, we show that the divergent trends in economic mobility were caused by differential changes in childhood environments by race and class, as proxied by changes in parental employment rates. Children’s outcomes improve across cohorts when they move to communities where parental employment rates in their race and class group are increasing, with monotonically larger effects for children who move at younger ages. Children’s outcomes are most strongly related to the parental employment rates of peers they are more likely to interact with, such as those in their own birth cohort, suggesting that the relationship between children’s outcomes and parental employment rates is mediated by social interaction. Our findings imply that community-level improvements in a given generation can propagate to the next generation and thereby generate rapid changes in economic mobility.

*Any opinions and conclusions expressed herein are those of the author and do not represent the views of the U.S. Census Bureau. The Census Bureau has ensured appropriate access and use of confidential data and has reviewed these results for disclosure avoidance protection (Project 7519874: CBDRBFY2022-CES010-004, CBDRB-FY2023-CES005-025, CBDRB-FY23-0375, CBDRB-FY24-0007, CBDRB-FY24-0143). We thank Elizabeth Ananat, Dalton Conley, David Cutler, Stefanie DeLuca, Brad Foster, John Friedman, Edward Glaeser, Nathaniel Hendren, Lawrence Katz, Kaylee Matheny, Bruce Sacerdote, and numerous seminar participants for helpful comments and discussions. We are indebted to Ana Sanchez Chico, Dhruv Gaur, Shipra Karan, Vinay Ravinder, Nico Rotundo, and our other Harvard and Opportunity Insights pre-doctoral fellows for their outstanding contributions to this work. This research was funded by the Bill & Melinda Gates Foundation, Chan-Zuckerberg Initiative, Overdeck Foundation, and Harvard University.

I Introduction

Racial and socioeconomic disparities in economic outcomes are shaped in large part by rates of intergenerational mobility (Becker and Tomes, 1979; Chetty et al., 2020*b*; Jácome, Kuziemko and Naidu, 2021; Collins and Wanamaker, 2022; Davis and Mazumder, 2022). For example, if Black children have lower odds of climbing the income ladder relative to their parents compared to white children, racial disparities in income will persist in the long run irrespective of current income levels (Becker and Tomes, 1979). Motivated by this reasoning, many studies have examined differences in rates of intergenerational mobility across subgroups and the mechanisms underlying these differences using cross-sectional comparisons for a single generation of children (e.g., Bhattacharya and Mazumder, 2011; Chetty et al., 2020*b*; Derenoncourt, 2022). However, much less is known about how and why intergenerational mobility has *changed* over time, particularly in recent decades.¹ Understanding the mechanisms underlying changes in economic mobility is particularly important for developing interventions to increase mobility and narrow disparities going forward.

We characterize recent trends in economic mobility by race and class and identify the causal mechanisms underlying these changes.² Our primary analysis uses de-identified data from federal income tax returns linked to information from decennial Census data and the Numident database for 57 million children born between 1978 and 1992. These data give us information on children’s and parents’ earnings, employment rates, marital status, mortality, and residential locations. We supplement these data by linking information on educational attainment, occupation, and other variables from the American Community Survey and information on Scholastic Aptitude Test (SAT) and American College Testing (ACT) standardized test scores.

We divide our analysis into four parts. We begin by documenting national trends in intergenerational mobility. Between the 1978 and 1992 birth cohorts, earnings in adulthood fell sharply for white children growing up in low-income families. At the same time, earnings increased for white children growing up in high-income families. These divergent trends increased the intergenerational persistence of income ranks for white children by 28%, resulting in growing white class gaps: the gap in average household incomes for white children raised in low- (25th percentile) versus high-income (75th percentile) families grew from \$13,780 in the 1978 birth cohort to \$16,300 in the 1992 birth cohort. In contrast, earnings in adulthood increased across all parent income levels for Black children. As a result of these trends, Black-white race gaps shrank: the gap in average household incomes between Black and white children raised in low-income families fell by 28%, from \$16,190 for children born in 1978 to \$11,600 for children born in 1992. Inter-

¹Several studies document historical trends in economic mobility using surveys and Census data for the 1830-1980 birth cohorts (e.g., Jácome, Kuziemko and Naidu, 2021; Collins and Wanamaker, 2022; Davis and Mazumder, 2022; Ward, 2023). We complement this work by studying more recent trends in economic mobility using administrative data covering nearly the entire U.S. population for the 1978-1992 birth cohorts, permitting a finer-grained disaggregation of changes in mobility and analysis of mechanisms than prior work.

²We focus on five race and ethnicity groups—non-Hispanic white children, non-Hispanic Black children, Hispanic children, non-Hispanic Asian children, and non-Hispanic American Indian and Alaskan Native (AIAN) children—who together comprise 98.4% of the children with non-missing (self-reported) race information in our sample. As has been noted in prior work, there is considerable heterogeneity in outcomes within these five groups, and our conclusions should not be interpreted as applying uniformly to all subgroups within each of these populations. For simplicity, we use “race” to refer to race and ethnicity, “white” to refer to non-Hispanic white individuals, “Black” to refer to non-Hispanic Black individuals, “American Indian” to refer to American Indian and Alaskan Native individuals, and so on.

generational mobility generally changed much more modestly for Hispanic, Asian, and American Indian children during the period we study.

We find a similar pattern of growing white class gaps and shrinking Black-white race gaps (and little change for other racial and ethnic groups) across a broad range of economic outcomes, including employment rates, indicators for reaching the upper tail of the income distribution, and alternative measures of income such as individual earnings instead of household income. The trends are also insensitive to specification choices such as varying the ages and number of years used to measure parents' and children's incomes or changing the years in which outcomes are measured to account for business cycle effects.³

We find growing white class gaps and shrinking Black-white race gaps for early-life outcomes such as educational attainment and standardized SAT and ACT test scores, indicating that outcomes began to diverge before children entered the labor market. We also find similar trends in non-monetary outcomes, such as marriage, incarceration, and mortality rates, showing that the changes extended well beyond economic outcomes. For example, the white class gap in early adulthood mortality more than doubled between the 1978 and 1992 birth cohorts, while the Black-white race gap in early adulthood mortality decreased by nearly 80%.

Outcomes deteriorated for low-income white families and improved for low-income Black families in nearly every part of the country, but the magnitudes of these changes varied substantially across areas. Economic mobility fell the most for low-income white families in the Great Plains and the coasts, areas that had enjoyed relatively high rates of mobility in the 1978 birth cohort. By the 1992 cohort, these areas had levels of economic mobility comparable to the Southeast and industrial Midwest (e.g., Ohio and Michigan), which had low levels of mobility throughout the period we study. For low-income Black families, economic mobility increased sharply in the Southeast and the industrial Midwest, with modest changes on the coasts. Trends differed even among cities with similar demographic characteristics and economic trajectories. For example, Charlotte and Atlanta—two rapidly growing cities in the Southeast with similar demographics—both had very low rates of economic mobility for children born in 1978, particularly for low-income Black families. Economic mobility increased sharply in Charlotte and reached the national average for low-income Black families by the 1992 birth cohort, but remained low in Atlanta. Despite these trends, low-income Black families in the 1992 birth cohort still had significantly lower levels of economic mobility than low-income white families in virtually every county because the Black-white gaps in mobility were so large in the 1978 birth cohort.

In the second part of the paper, we use the differential trends in mobility across subgroups and areas as a lens to study the determinants of changes in economic mobility. We start by showing that changes in family characteristics such as parental education, wealth, occupation, or marital status explain less than 10% of the growing white class gaps and shrinking Black-white race gaps. We then show that the differential trends persist even when we control for childhood Census tract by cohort fixed effects, implying that white class gaps grew and Black-white race gaps shrunk even among children who grew up in the same Census tract. The divergence in economic mobility must therefore be driven by factors that impact race and class groups

³We also find similar trends by gender, although the absolute magnitude of the change in the Black-white gap for men is larger than for women, partly because the starting level of the Black-white gap is much larger for men than women (Chetty et al., 2020b).

differently *within* a given neighborhood.

One set of factors that prior ethnographic and sociological research suggests could generate differential impacts across subgroups are changes in the social environment in which children grow up. For example, Wilson (1996) argues based on ethnographic studies of Black families in the South Side of Chicago that the disappearance of work in a community can lead to social disorganization, family dissolution, and a lack of role models that affect downstream economic outcomes. Motivated by this hypothesis, we study the relationship between changes in children's outcomes and the economic and social conditions of parents in their "community," defined based on their race, class (parental income during childhood), and childhood county.

We find that changes in children's outcomes—earnings, SAT/ACT scores, and educational attainment—are strongly positively correlated with changes in parental employment rates across cohorts in their community, even controlling for the employment status of a child's own parents. For example, the outcomes of white children with low-income parents deteriorated much more sharply in areas where employment rates for low-income white parents fell more. The intercept and slope of the relationship between changes in children's outcomes and parental employment rates are also virtually identical across race and class groups. As a result, the differential changes in children's outcomes by race and class can almost entirely be explained by the sharp fall in employment rates for low-income white parents relative to low-income Black and high-income white parents during the period we study. We find similar relationships between changes in children's outcomes and other community-level characteristics, such as parental marriage rates and parental mortality rates. In short, changes in economic mobility are strongly predicted by community-level changes in the parents' generation.

One explanation for the correlation between changes in parental employment rates and children's outcomes is that changes in childhood environments (as proxied by parental employment rates) have a causal exposure effect on children's outcomes. For example, higher parental employment rates may be associated with greater resources and positive social influences that shape children's behavior and ultimately improve their long-term outcomes in proportion to the number of years spent in a community (e.g., Ananat et al., 2011, 2017).⁴ An alternative explanation is that the correlation is driven by common shocks (e.g., to local labor demand) that affect both parents and children directly or selection in the types of parents and children who live in declining versus improving areas.

The third part of the paper tests between these explanations by estimating the causal exposure effects of changes in childhood environments on children's long-term outcomes. Our goal is to estimate the causal effect of spending an additional year of childhood in a given place during periods with higher versus lower parental employment rates. The ideal experiment to estimate this causal exposure effect would randomly assign children in different birth cohorts to communities at different ages, creating random variation in the number of years spent in each community within each birth cohort. We would then estimate the difference in

⁴We focus on parental employment rates as a simple summary measure of the economic and social conditions in the parents' generation, but caution that our analysis does not shed light on whether parental employment rates themselves are the key causal lever that affects children's outcomes. Rather, we test whether growing up in an area with changing parental employment rates—which is associated with changes in parental marriage and mortality rates, and presumably many other unobserved factors—has a causal exposure effect on children's outcomes in adulthood.

outcomes between children assigned at younger versus older ages to communities with increasing parental employment rates in early versus late birth cohorts. If changes in childhood environments have a causal exposure effect, we would expect to find that outcomes improve across cohorts when children move to communities with increasing parental employment rates, with monotonically larger effects for children who move at younger ages.

In the absence of such an experiment, we develop a quasi-experimental research design that compares children in different cohorts who move across counties at different ages. Consider a set of children who are born in a county where parental employment rates do not change significantly across cohorts (e.g., Atlanta – Fulton County) and move to a county (e.g., Charlotte – Mecklenburg County) where parental employment rates are increasing. We estimate the causal exposure effect based on the difference in outcomes between children who make this move at younger versus older ages in earlier versus later birth cohorts. This research design permits selection effects across cohorts that may lead to differences in potential outcomes between children who move to a given county when parental employment rates are low versus high. However, it requires that these selection effects do not differ by the age at which children move—a “constant selection by age” identification assumption that we evaluate after presenting our baseline results.⁵

We find that children’s outcomes improve across cohorts when they move to communities where parental employment rates are increasing, with monotonically larger effects for children who move at younger ages. Consider the set of children who move at a young age (e.g., before age 8) to a community where parental employment increased between the 1978-1992 cohorts. Among these children, earnings rise systematically as we move from early to late birth cohorts. In contrast, among children who made exactly the same moves at older ages (e.g., after age 16), there is little difference in earnings as we move from early to late birth cohorts. Under our identification assumption, these results imply that improvements in childhood environments (as proxied by parental employment rates) increase children’s earnings in proportion to childhood exposure.

The key potential threat to the validity of our identification assumption is that families with young children who move from one area (e.g., Atlanta) to another (e.g., Charlotte) when employment rates are higher in the destination may differ from families with older children who make the same move. For example, families who invest heavily in their children’s human capital may seek better (higher-parental-employment) environments especially when their children are young. We test for such selection by comparing siblings, netting out family fixed effects. When siblings move to a community with increasing parental employment rates, the younger sibling, who has more years of exposure to a high-parental-employment environment, earns significantly more than the older sibling. The differences in outcomes between siblings are proportional to the age gap between the siblings. These within-family comparisons rule out the possibility that our findings are driven by unobserved differences in fixed family characteristics, supporting the identification assumption underlying our research design.

⁵This research design is a dynamic generalization of the movers exposure effect design developed by Chetty and Hendren (2018), with the key difference that it is identified from variation in childhood environments across cohorts *within* counties rather than between counties. Additionally, we relate changes in children’s outcomes to an observable predictor—parental employment rates—rather than the outcomes of children of permanent residents, thereby providing an observable proxy for neighborhood quality rather than relying on ex-post outcomes.

The central innovation of our analysis relative to prior work analyzing the causal effects of place is that it establishes that *changes* in environments—as captured by observable factors such as parental employment or marriage rates—have a causal exposure effect on children’s long-term outcomes. Our findings demonstrate that one can potentially increase intergenerational mobility substantially through changes in childhood environments even within a few years, even without changing slower-moving factors such as segregation, housing stocks, or access to transportation.

In the fourth part of the paper, we explore what types of interventions could generate such change by studying the mechanisms through which changes in childhood environments lead to changes in economic mobility. One class of mechanisms is sociological: for example, connections to higher-income, employed adults may lead to job referrals, shape children’s aspirations, or influence their sense of identity through role-modeling or social mimicking mechanisms (e.g., Loury, 1977; Bourdieu, 1986; Akerlof and Kranton, 2000; Chetty et al., 2022; Newman and Skocpol, 2023). Another class of mechanisms is economic: for example, higher-income, employed adults may have the resources to support schools and other programs that improve children’s outcomes (e.g., Card and Krueger, 1992; Hoynes, Page and Stevens, 2011; Jackson and Mackevicius, 2024). We distinguish between these two mechanisms using variation in rates of interaction across different subgroups within a community, based on the logic that sociological mechanisms would predict heterogeneity by the degree of interaction more than economic mechanisms.

We first exploit high-frequency variation across birth cohorts generated by the fact that children are much more likely to interact with peers in their own cohort than surrounding cohorts. We find that children’s outcomes are strongly related to parental employment rates (and other correlated community-level characteristics) of other children in their *own* birth cohort. Parental employment rates in preceding or subsequent cohorts have much less predictive power for children’s outcomes after we control for parental employment rates in their own cohort, consistent with Deutscher (2020)’s findings in Australia. Insofar as economic resources are unlikely to vary so sharply across adjacent cohorts, the cohort-specificity of the impacts points in favor of social interaction mechanisms.⁶

Next, we exploit variation arising from people’s tendency to interact with others in their own race and class group. We find that the outcomes of white children growing up in low-income families are predicted solely by the employment rates of low-income white parents. Conditional on employment rates for low-income white parents, the employment rates of Black parents or high-income white parents are not strongly related to low-income white children’s outcomes. Similarly, for Black children growing up in low-income families, the employment rates of low-income Black parents are generally far more predictive of outcomes than the employment rates of low- and high-income white parents.

Counties with greater interaction across racial lines are an exception to this pattern. When Black children constitute a small share of a county’s population, they are more likely to interact with white peers (Blau, 1977; Currarini, Jackson and Pin, 2009; Cheng and Xie, 2013). In such counties, Black children’s outcomes are related to the employment rates of low-income *white* parents as well. Black children’s outcomes are also related to the employment rates of low-income white parents in counties with higher rates of interracial

⁶These findings also further support the view that changes in community environments have causal exposure effects on children’s outcomes since correlated shocks across adults and children (e.g., labor demand shocks) would be unlikely to have cohort-specific effects.

marriage, a proxy for cross-racial interaction, controlling for racial shares at the Census tract level. These findings provide further support for social interaction mechanisms, as captured, for example, by the Borjas (1992) model of “ethnic capital” in intergenerational mobility.⁷

We conclude by analyzing how much of the divergent trends in economic mobility by race and class at the national level can be explained by the causal effects of the changing environments in which children grow up, as proxied by parental employment rates. Over the period we study, the employment rates of low-income white parents’ fell sharply relative to those of low-income Black parents and high-income white parents.⁸ Coupled with our estimates of the causal effects of community-level parental employment rates on children’s outcomes, these trends in parental employment can explain 90% of the divergent trends in economic mobility by race and class between the 1978 and 1992 birth cohorts. In sum, a parsimonious theory—that children’s outcomes mimic those of parents in their social communities, which are shaped by their race, class, location, and birth cohort—provides a unified explanation of the divergent trends in economic mobility by race and class in the United States in recent decades.

Related Literature. This paper builds on three parts of a vast literature in economics and sociology studying intergenerational mobility and the drivers of racial and socioeconomic disparities. First, our work connects to studies examining trends in economic outcomes by parental income or race in the United States. Overall rates of intergenerational mobility, pooling racial groups, have been fairly stable in recent decades (Chetty et al., 2014b). Similarly, there has been little change in the Black-white income gap in percentile ranks when pooling parental income groups (Bayer and Charles, 2018). We show that disaggregating the data by race *and* parental income—which was infeasible with the data used in prior work—reveals divergent trends at the intersection of race and class. These trends were not evident in past work because the improving outcomes among high-income white families were offset by the deteriorating outcomes among low-income white families, leaving the unconditional Black-white gap relatively unchanged. Similarly, the improvement in children’s outcomes for low-income Black families muted the change in the intergenerational correlation of parent and child income when pooling racial groups.

Second, our paper relates to an extensive body of ethnographic and observational research on the drivers of racial disparities, especially the literature initiated by Wilson (1986, 1987, 1996) and Massey and Denton (1993) on how the decline of economic activity, compounded by racial and economic segregation, can help explain the challenges faced by Black communities in urban areas. Our quasi-experimental evidence supports this mechanism and shows that in recent decades, the same forces also impacted low-income white Americans.

Third, our work builds on the literature studying the causal effects of neighborhood environments

⁷While these results suggest that sociological mechanisms were important in driving the trends we study here, they do not imply that economic resources do not matter for economic opportunity more broadly.

⁸These differential trends in parental employment rates are consistent with prior work documenting analogous differential trends by race and class in employment rates, incarceration rates, well-being, and health among adults (e.g., Stevenson and Wolfers, 2008; Sawhill, 2018; Binder and Bound, 2019; Case and Deaton, 2020; Schwandt et al., 2021; Muller and Roehrkasse, 2022). Prior studies argue that these differential trends arise from factors such as the decline of manufacturing and rise of outsourcing (reducing employment rates at the bottom of the income distribution), civil rights legislation and reductions in discriminatory practices (potentially increasing employment among Black individuals), and skill-biased technical change (sustaining employment at the top of the income distribution). We do not take a stance on the sources of these changes in parental employment rates and focus instead on the downstream consequences of these changes on children’s outcomes.

on children’s long-term outcomes (summarized by Chyn and Katz 2021). We contribute to this literature by showing how neighborhood effects change over time.⁹ Our analysis shows that the key unit in which change occurs is not the neighborhood as a whole but rather communities delineated by race and class *within* neighborhoods, perhaps because social interactions tend to be stratified along these lines. Most importantly, our results show that the causal effects of communities on economic mobility can change substantially within a decade. Hence, differences in economic mobility by race and class are malleable even though their roots may lie partly in historical factors such as the discriminatory “redlining” of neighborhoods (Aaronson et al., 2021) and slavery and Jim Crow laws (Althoff and Reichardt, 2023; Hornbeck and Logan, 2023; Derenoncourt et al., Forthcoming).

The paper is organized as follows. Section II describes our data. Section III characterizes national trends in intergenerational mobility. Section IV examines potential mechanisms for these trends, showing that changes in intergenerational mobility are correlated with changes in parental employment rates. Section V presents quasi-experimental evidence on the effects of changes in childhood environments on children’s outcomes. Section VI presents evidence on the relative importance of sociological versus economic mechanisms. Section VII reports counterfactuals showing how much of the national trends can be explained by differential changes in parental employment rates. We conclude in Section VIII by discussing implications for interventions to increase mobility going forward. Additional results and methodological details are presented in an Online Appendix. Statistics on children’s earnings (rates of upward mobility) and other outcomes by race, parental income group, birth cohort, and county can be downloaded from the [Census Bureau](#) or [Opportunity Insights](#) and visualized using the [Opportunity Atlas](#).

II Data

We study the factors underlying recent changes in economic opportunity by combining three sources of data housed at the Census Bureau: (1) the Census 2000 and 2010 short forms; (2) federal income tax returns in 1979, 1984, 1989, 1994-1995, and 1998-2019; and (3) the Census 2000 long form and 2005-2019 American Community Surveys (ACS). The Census short forms are designed to cover the entire population, the Census 2000 long form is a stratified random sample covering approximately one-sixth of households, and the American Community Survey is a stratified random sample covering approximately 2.5% of households in each year (U.S. Department of Commerce, Bureau of the Census, 2000, 2003, 2014). These datasets are linked by unique person identifiers as described in Chetty et al. (2020a), who show that linkage rates are approximately 90% for the cohorts we study.

The remainder of this section describes how we construct our analysis sample, defines the variables we use, and presents summary statistics. Our sample and variables build on those used by Chetty et al. (2020a) and much of this section is taken from Section II of that paper.

⁹A smaller, more recent set of studies investigates how manufacturing shocks affect changes in economic mobility across cohorts (Ananat et al., 2017; McNeil, Luca and Lee, 2023; Tuhkuri, 2023; Seltzer, 2024). We contribute to this line of work by showing that changes in parental employment rates (and associated factors) affect children’s outcomes through a childhood exposure effect mediated by social interaction and establishing that this mechanism explains divergent national trends in economic mobility by race and class in recent decades.

Changing Opportunity

Sociological Mechanisms Underlying Growing Class Gaps and Shrinking Race Gaps in Economic Mobility

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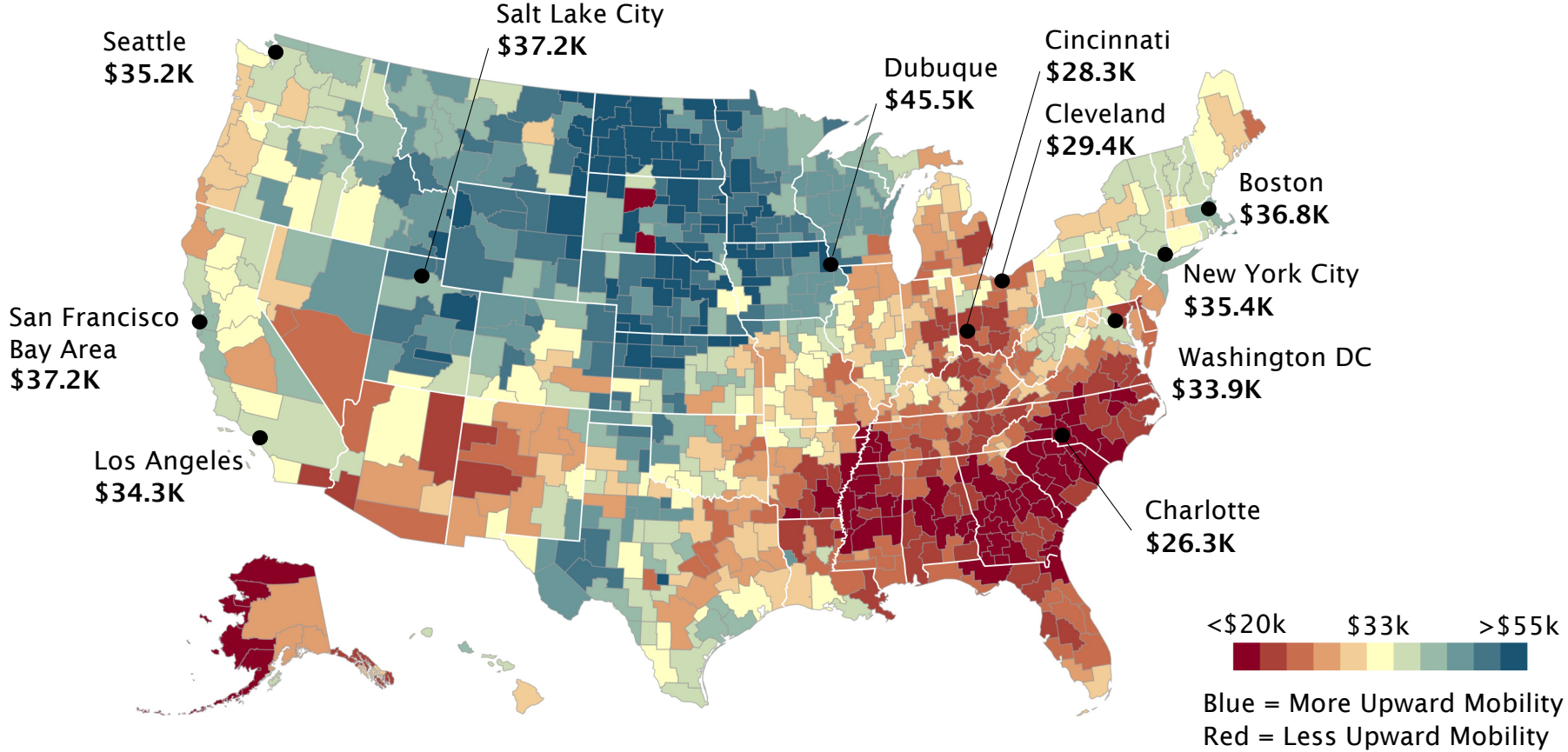
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The Geography of Upward Mobility in the United States

Average Household Income at Age 35 for Children born in 1980 whose Parents Earned \$27K



Source: Chetty, Hendren, Kline, Saez (QJE 2014)



Call to Action on Improving Economic Mobility

Charlotte, NC

2018

The Charlotte Observer

Land of Opportunity? Not by a long shot.

“When the headline broke about the Harvard University/UC Berkeley study that ranked Charlotte-Mecklenburg 50th out of 50 in upward mobility for children born into our lowest income quintile, many in our community responded with disbelief. How, on the one hand, can we be such a vital and opportunity-rich community, and on the other, be ranked dead last in the odds that our lowest income children and youth will be able to move up the economic ladder as they become adults?”

2019



Charlotte Hornets ✓

@hornets



Source: The Charlotte Observer (2018); X (Formerly Twitter) ([2019](#))



Efforts to Increase Economic Mobility

Charlotte, NC

Investment by Non-Profits



Newly announced Mayor's Racial Equity Initiative seeks to raise a quarter-of-a-billion dollars to address inequities and boost opportunity in Charlotte Mecklenburg

More than \$195 million in initial commitments announced from corporate, public, foundation and individual sectors

The vision for this effort is to establish a public-private partnership for achieving racial equity, social justice, economic opportunity and upward mobility.

- Vi Lyles, Mayor of Charlotte NC

Private-Sector Impact



PARTNERSHIP IN ACTION

A Collaborative, Scalable Partnership

Year Up is a key partner and strategic source of talent...The program is a role model for preparing Opportunity Youth for first-time professional employment.

Public Policy Changes

JUNE 18, 2021

SLATE

The Most Important Housing Reform in America Has Come to the South

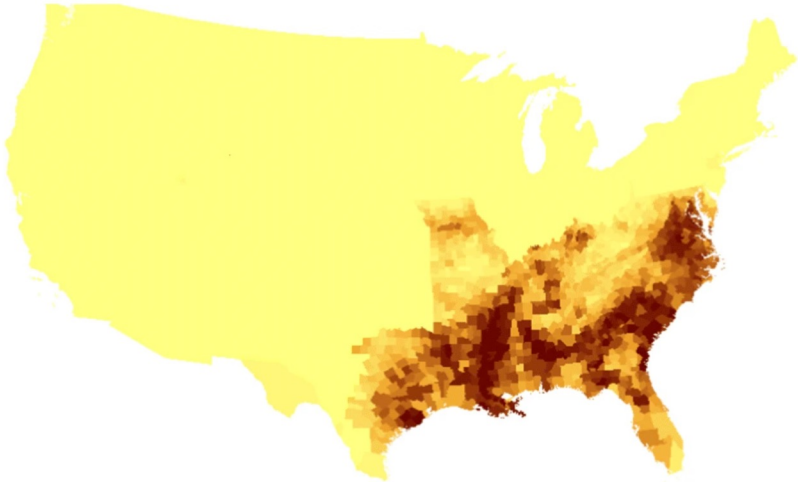
Charlotte's Comprehensive Plan prescribes legalizing duplexes and triplexes citywide, giving more people more access to more types of housing in more neighborhoods, and undoing a policy originally intended to circumvent the Supreme Court's ban on racial zoning by keeping renters out.



Rates of Slavery in the 1860s vs. Present-Day Upward Mobility

Rates of Slavery (1860)

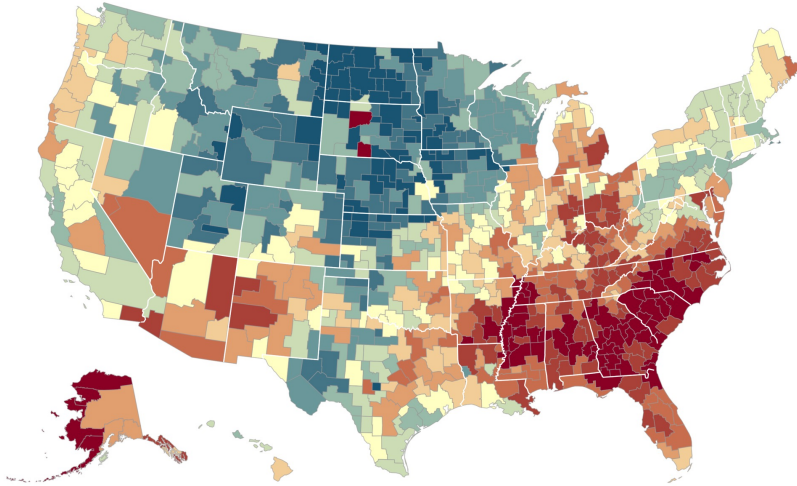
Share of the Population that Were Enumerated as Slaves in the 1860 Census



Yellow = Lower Share of Slaves
Brown = Higher Share of Slaves

Upward Mobility

Average Household Income at Age 35 for Children whose Parents Earned \$27k (25th percentile)



Blue = More Upward Mobility
Red = Less Upward Mobility

Source: Berger (2018); Chetty, Hendren, Kline, Saez (2014)

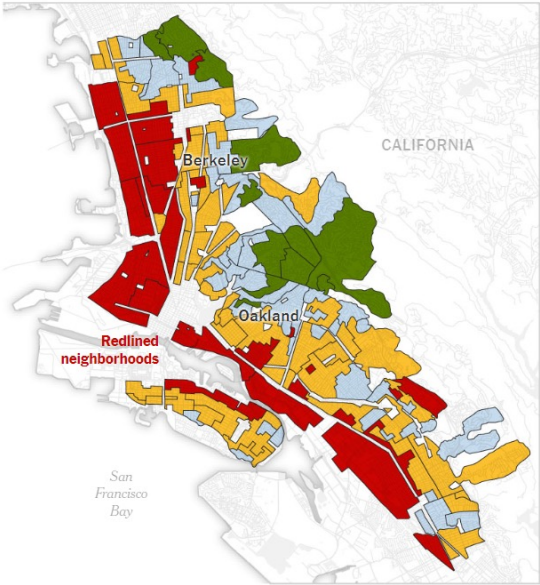


Redlining in the 1930s vs. Present-Day Upward Mobility

Oakland, CA

Redlining Boundaries (1930s)

Neighborhood grade, 1930s

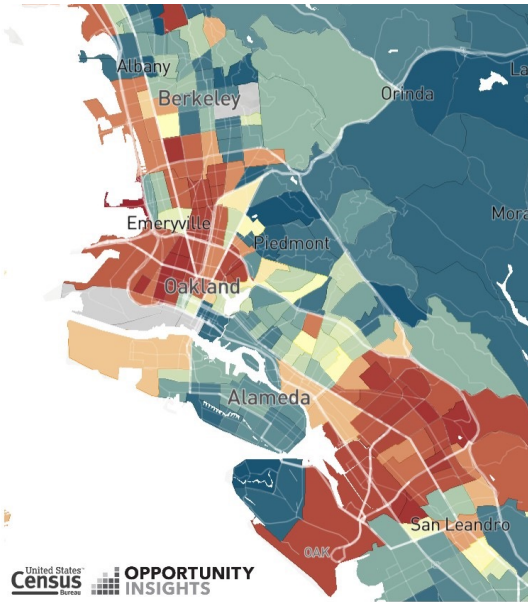


Green = "Best"
Blue = "Still Desirable"

Yellow = "Declining"
Red = "Hazardous"

Upward Mobility

Average Household Income at Age 35 for Children whose Parents Earned \$27k (25th percentile)



Blue = More Upward Mobility
Red = Less Upward Mobility

Source: Lane, Morello-Frosch, Marshall, and Apte (2022); Chetty, Friedman, Hendren, Jones, Porter (2018)



New Data Give us a Lens to Study Changes in Opportunity

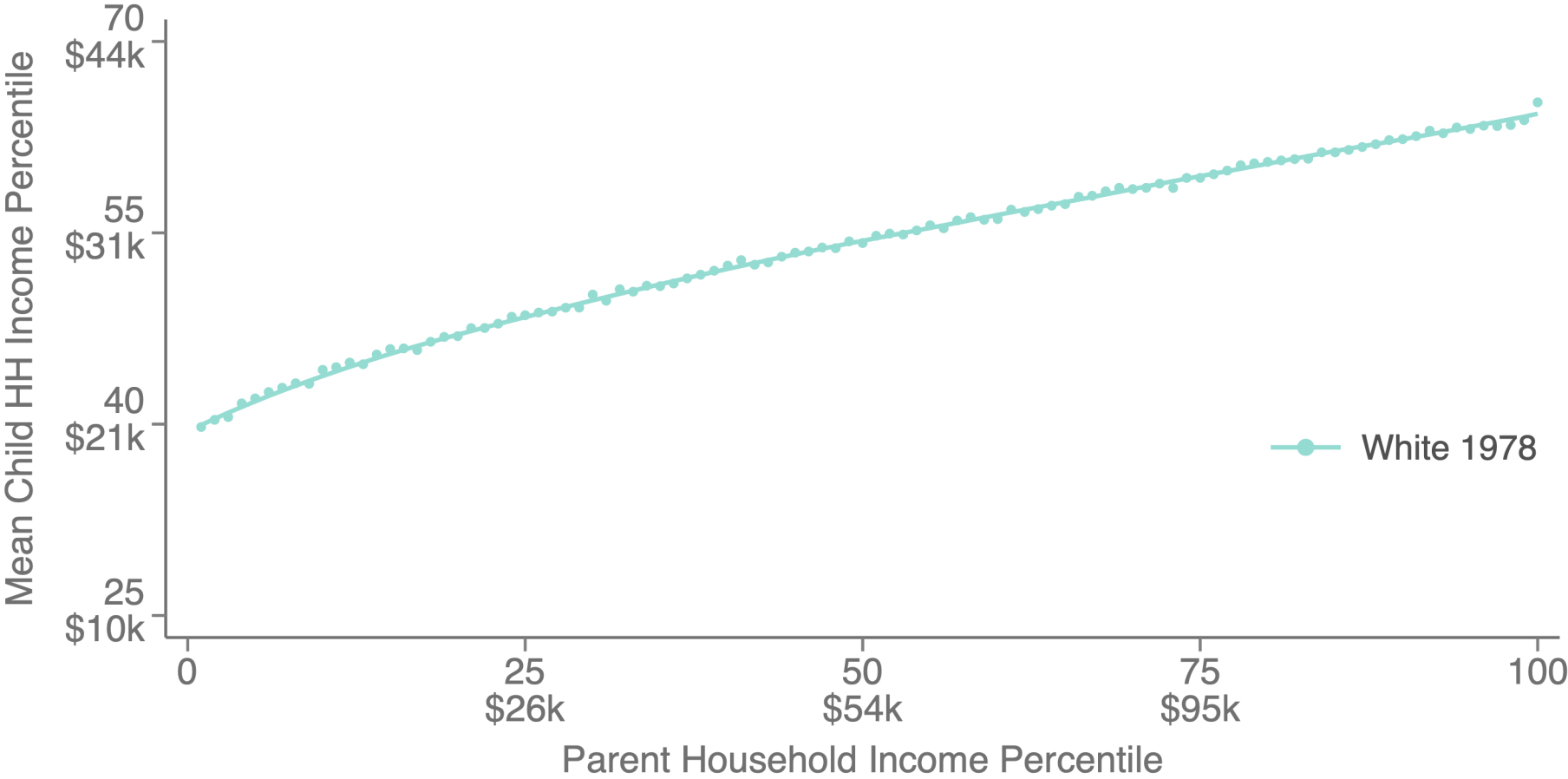
- 2014 Land of Opportunity study focused on children born in 1980
- We use an additional decade of tax data to analyze changes in outcomes for 57 million children born in the **1978-1992 cohorts**
 - Measure children's incomes in adulthood at age 27 (from 2005 to 2019)
- First look at how opportunity can **change** within a place and what mechanisms underlie changes in opportunity



Changing Opportunity: National Trends by Race and Class

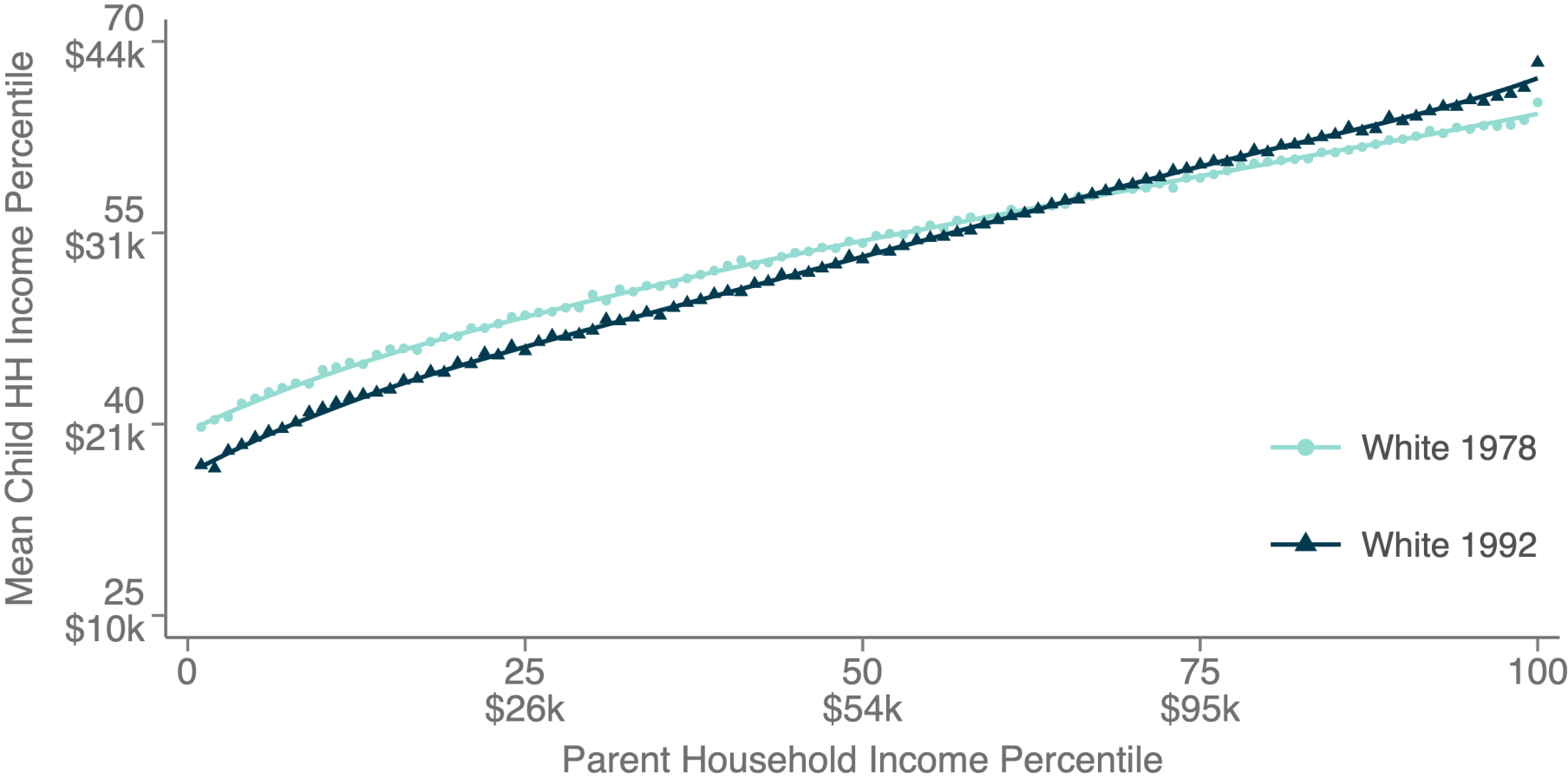
Intergenerational Mobility for the 1978 vs. 1992 Birth Cohorts, by Race and Class

Mean Child Household Income Percentile at Age 27 vs. Parent Household Income Percentile



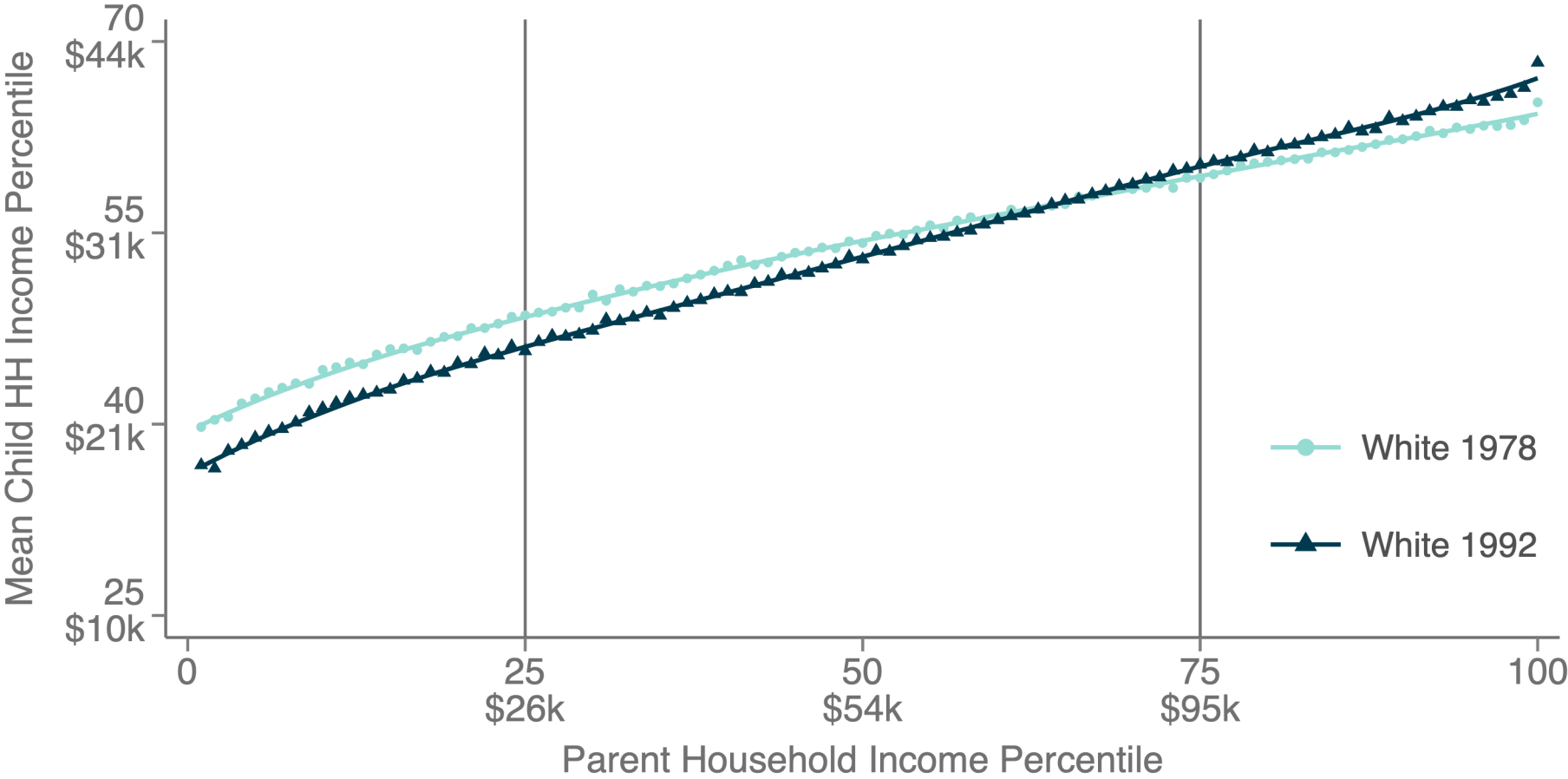
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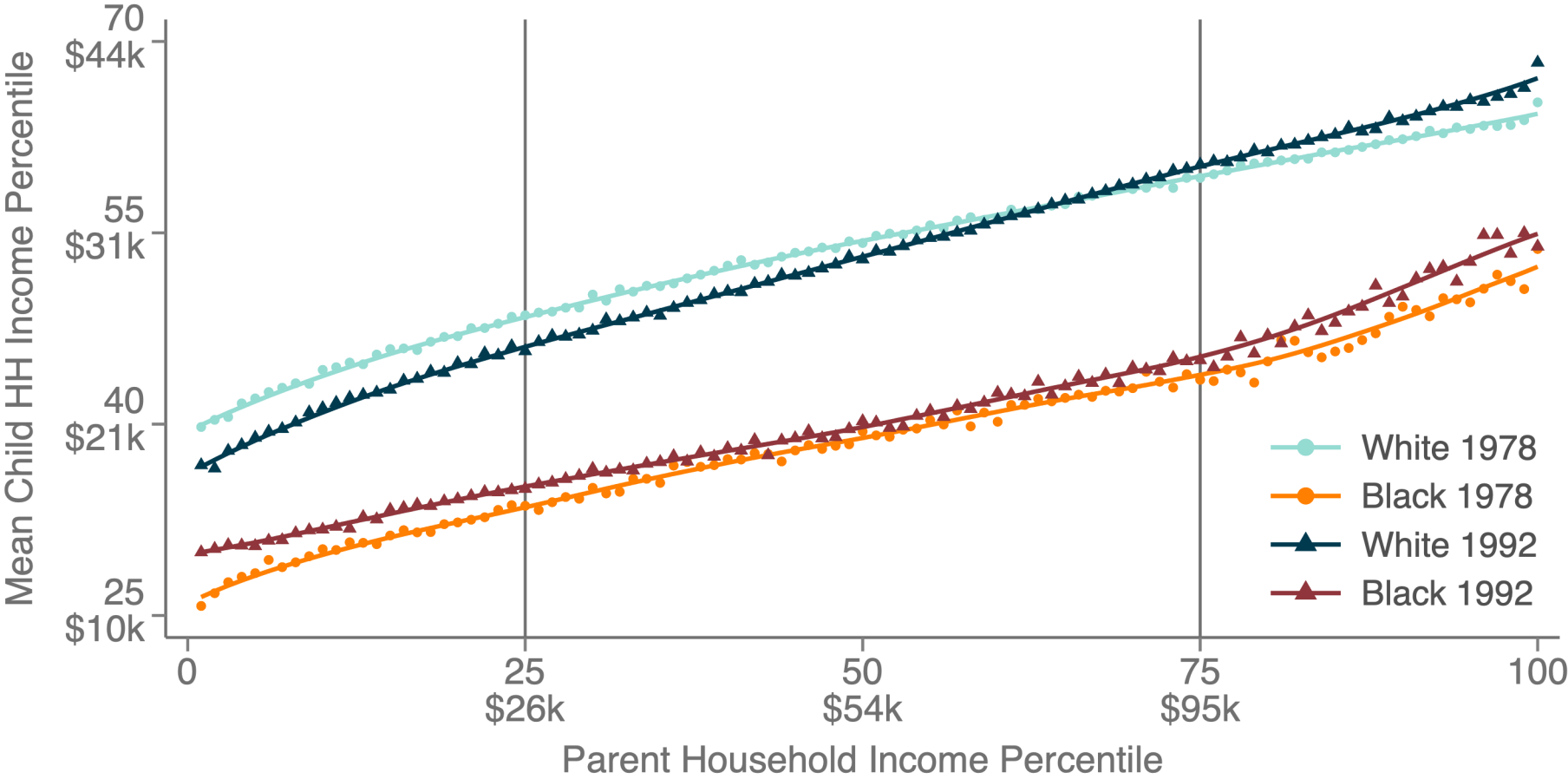
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Mean Child Household Income Percentile at Age 27 vs. Parent Household Income Percentile

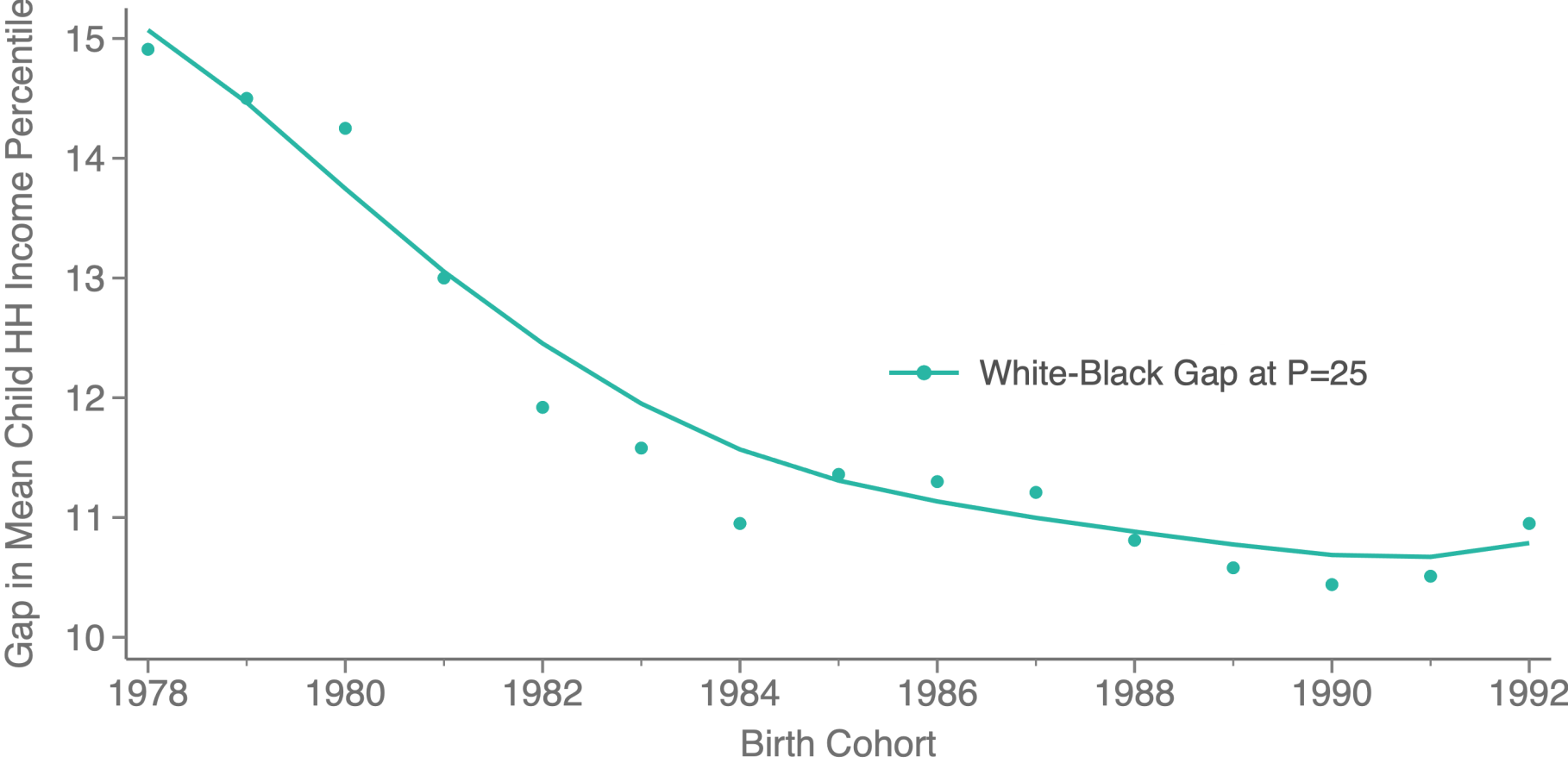


Intergenerational Mobility for the 1978 vs. 1992 Birth Cohorts, by Race and Class

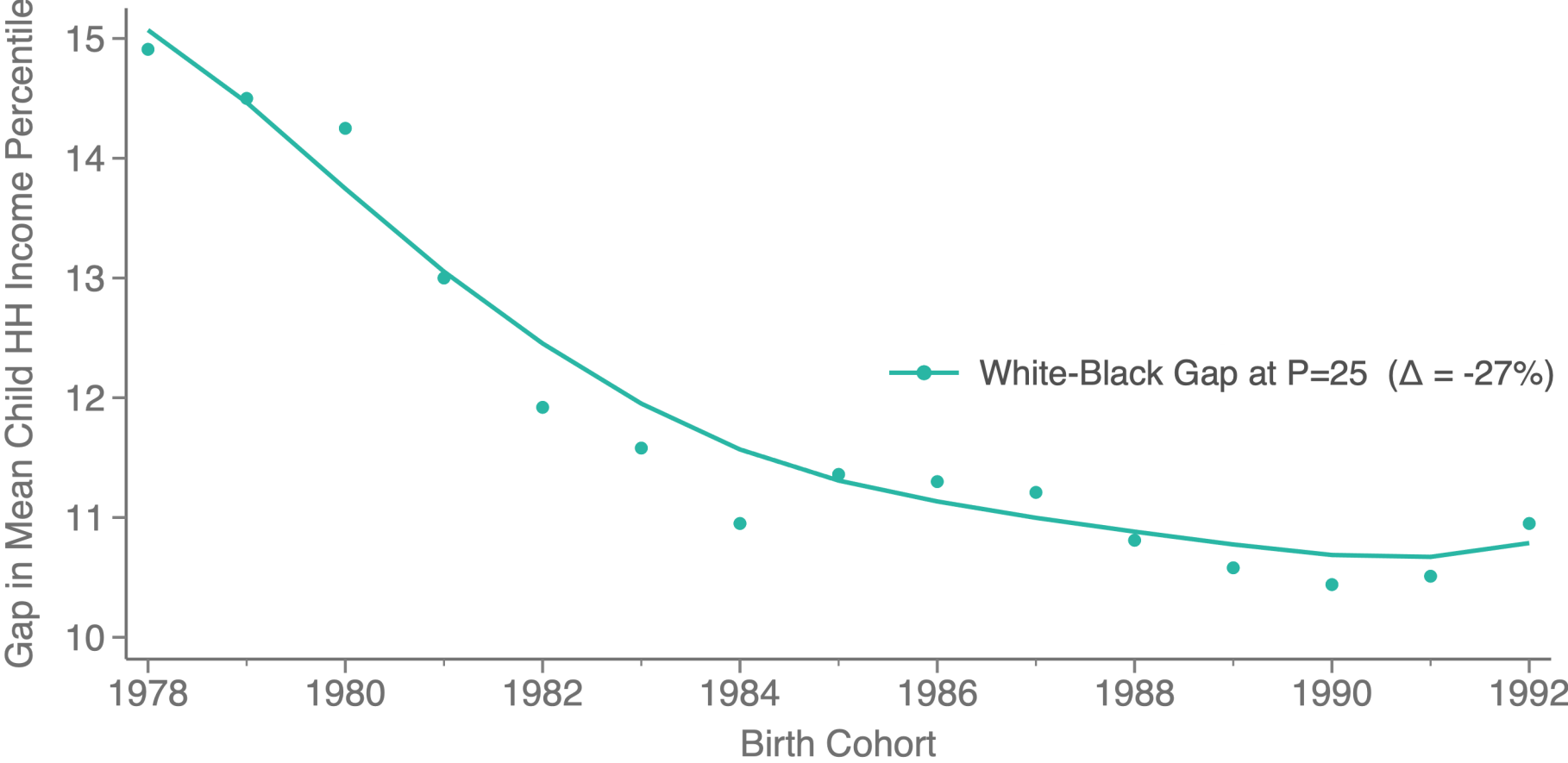
Mean Child Household Income Percentile at Age 27 vs. Parent Household Income Percentile



White-Black Gap for Children with Low-Income (P=25) Parents, by Birth Cohort

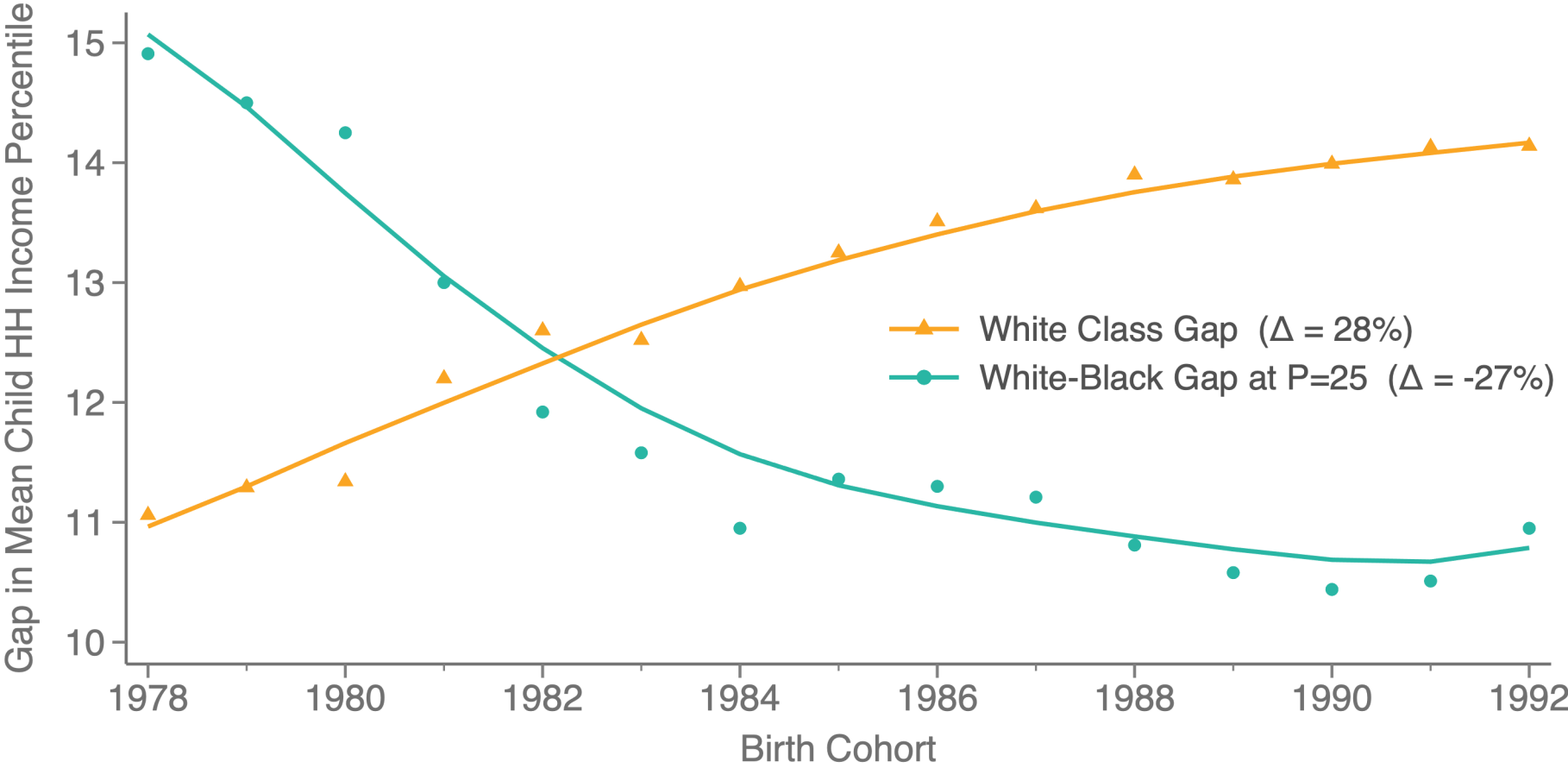


White-Black Gap for Children with Low-Income (P=25) Parents, by Birth Cohort



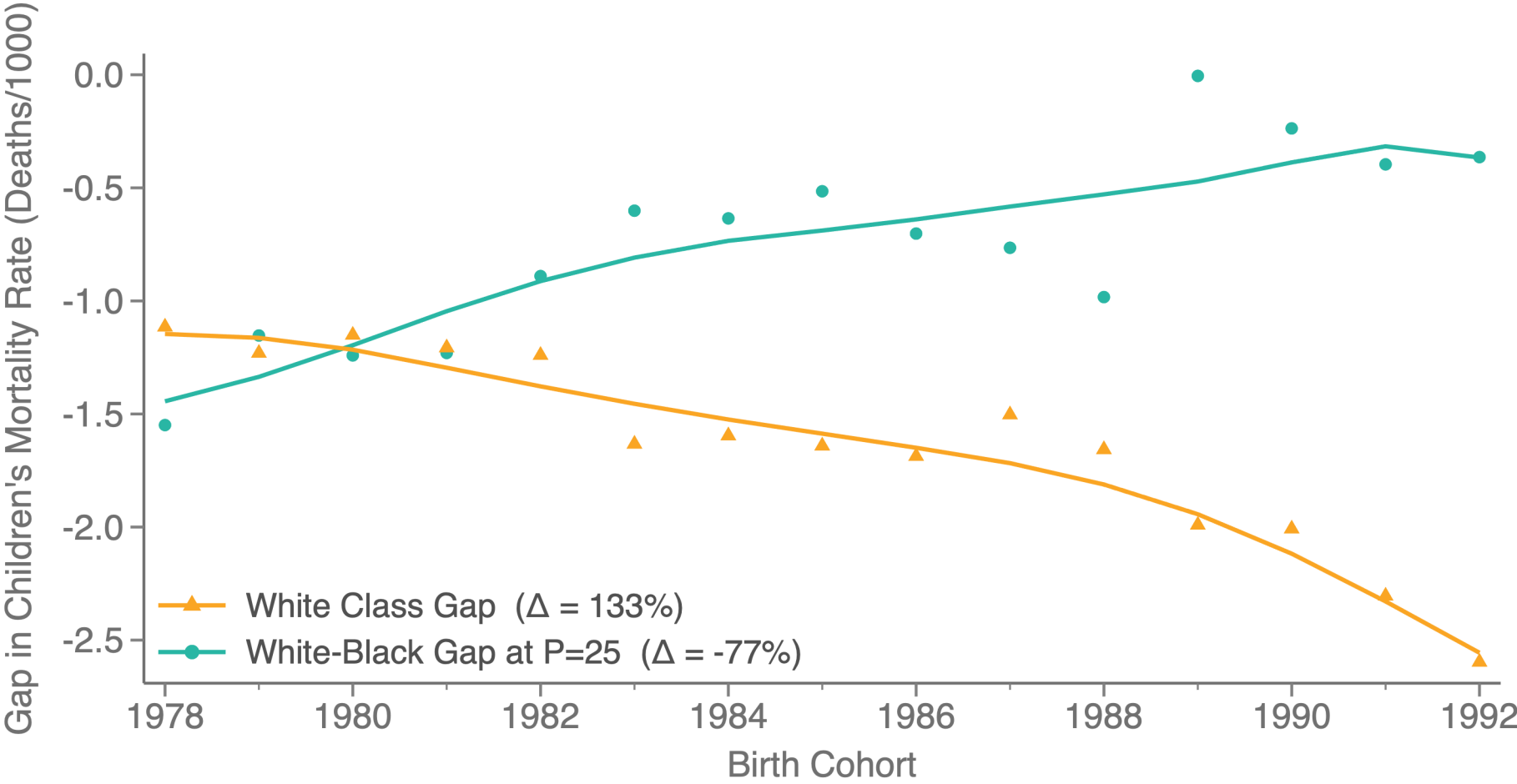
Growing Class Gaps, Shrinking Race Gaps

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



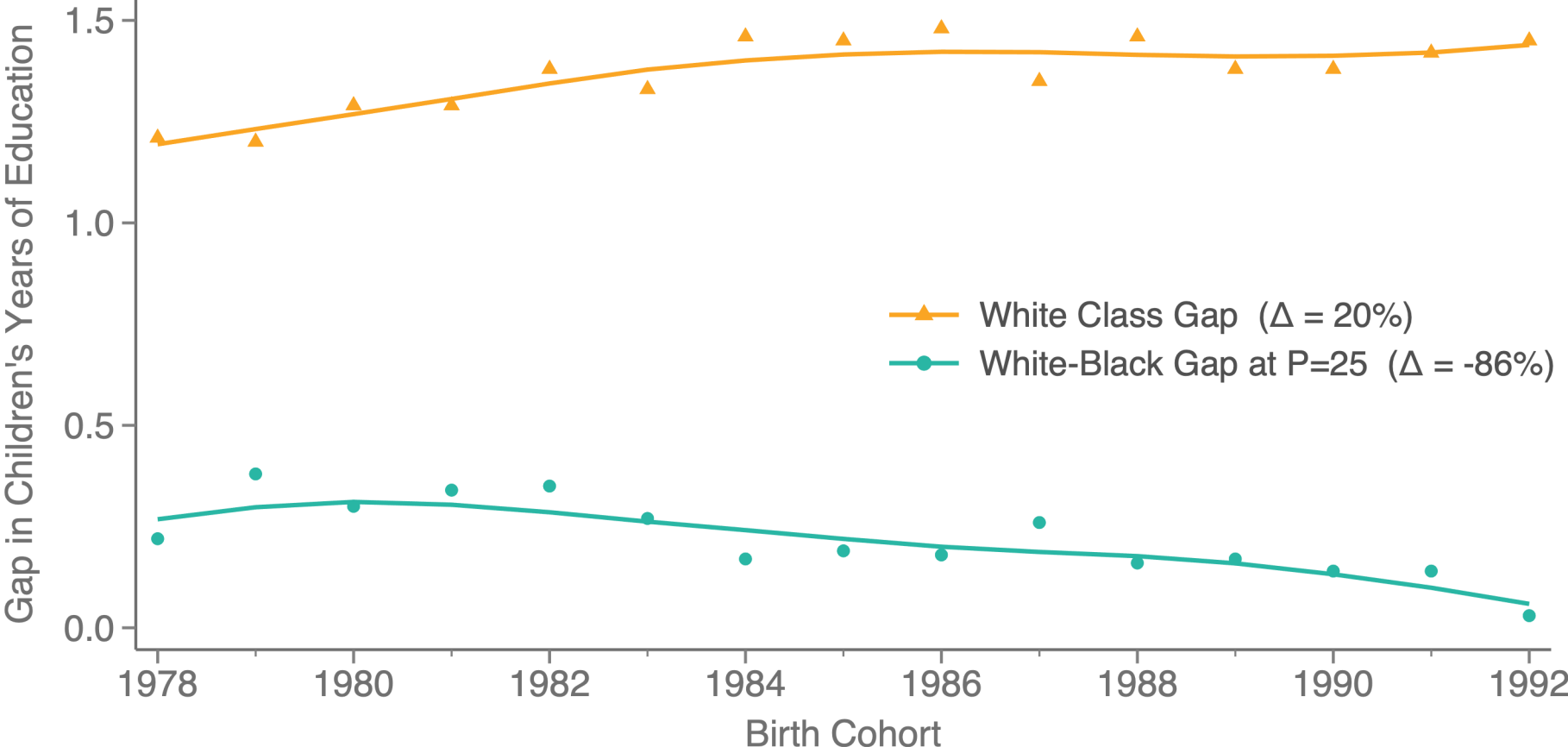
Growing Class Gaps, Shrinking Race Gaps in Mortality Rates between Ages 24-27

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



Growing Class Gaps, Shrinking Race Gaps in Educational Attainment at Age 27

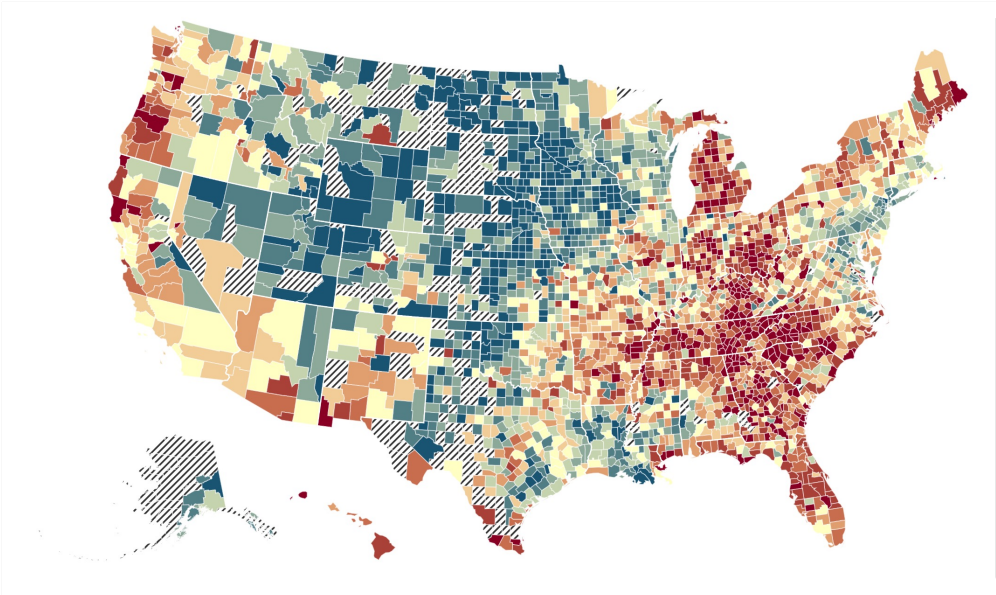
White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



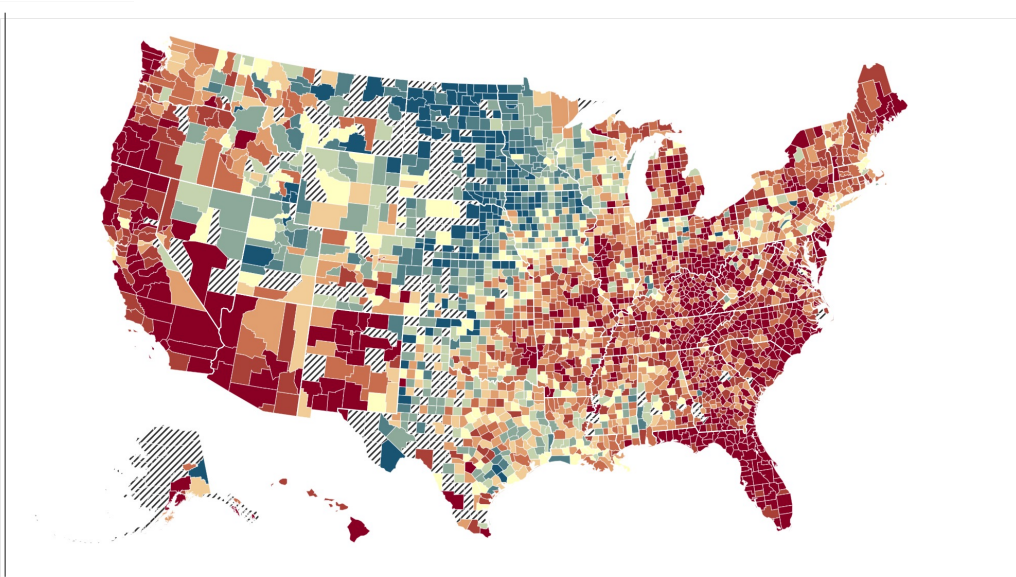
Changes in Opportunity for White Americans

White Children with Low-Income Parents

1978 Birth Cohort



1992 Birth Cohort



Household Income Percentile at Age 27 for
Children with Parents at 25th Percentile

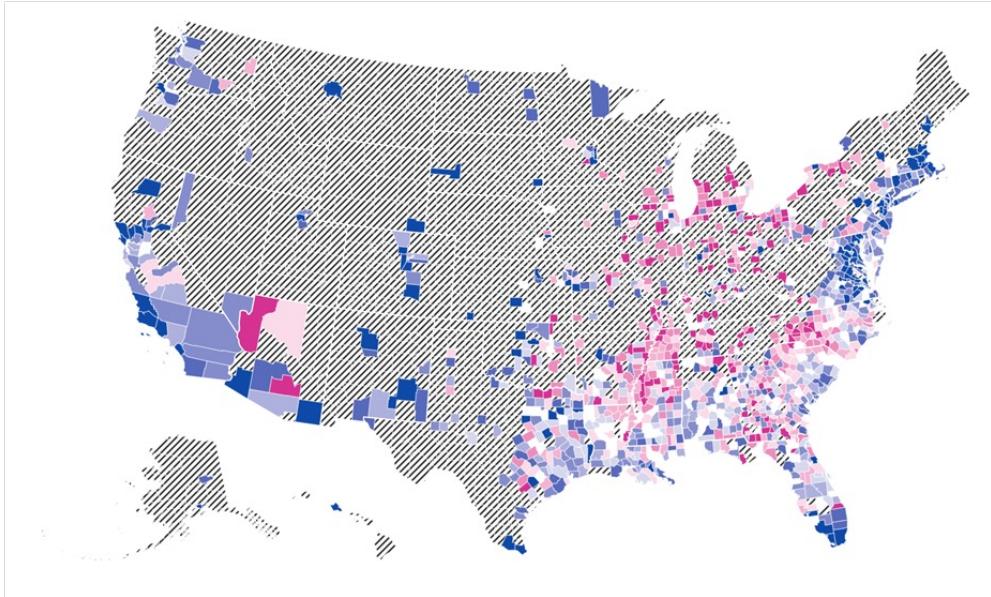
<\$44.7k \$48.4k >\$55.2k



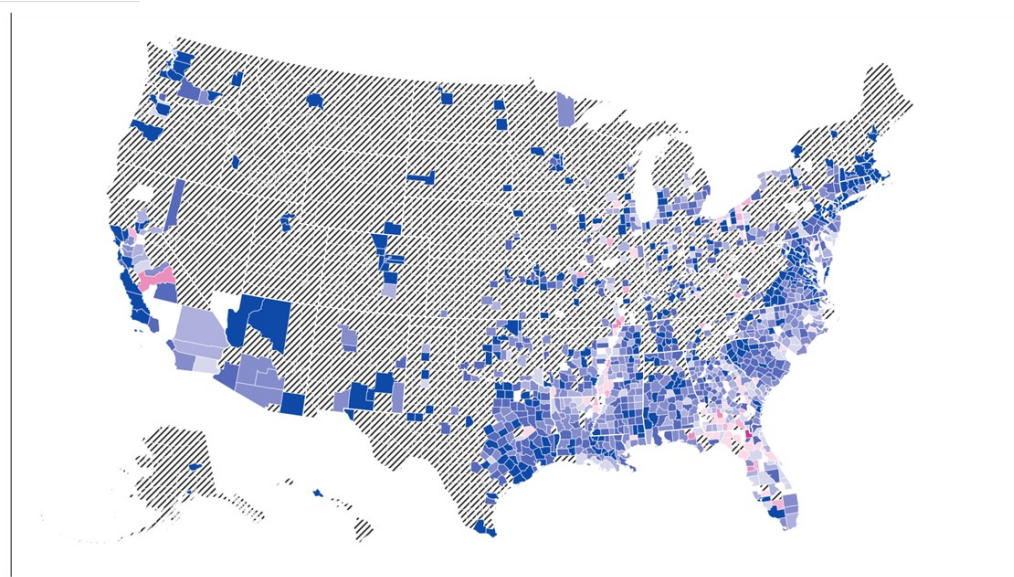
Changes in Opportunity for Black Americans

Black Children with Low-Income Parents

1978 Birth Cohort



1992 Birth Cohort



Household Income Percentile at Age 27 for
Children with Parents at 25th Percentile

<\$30.5k

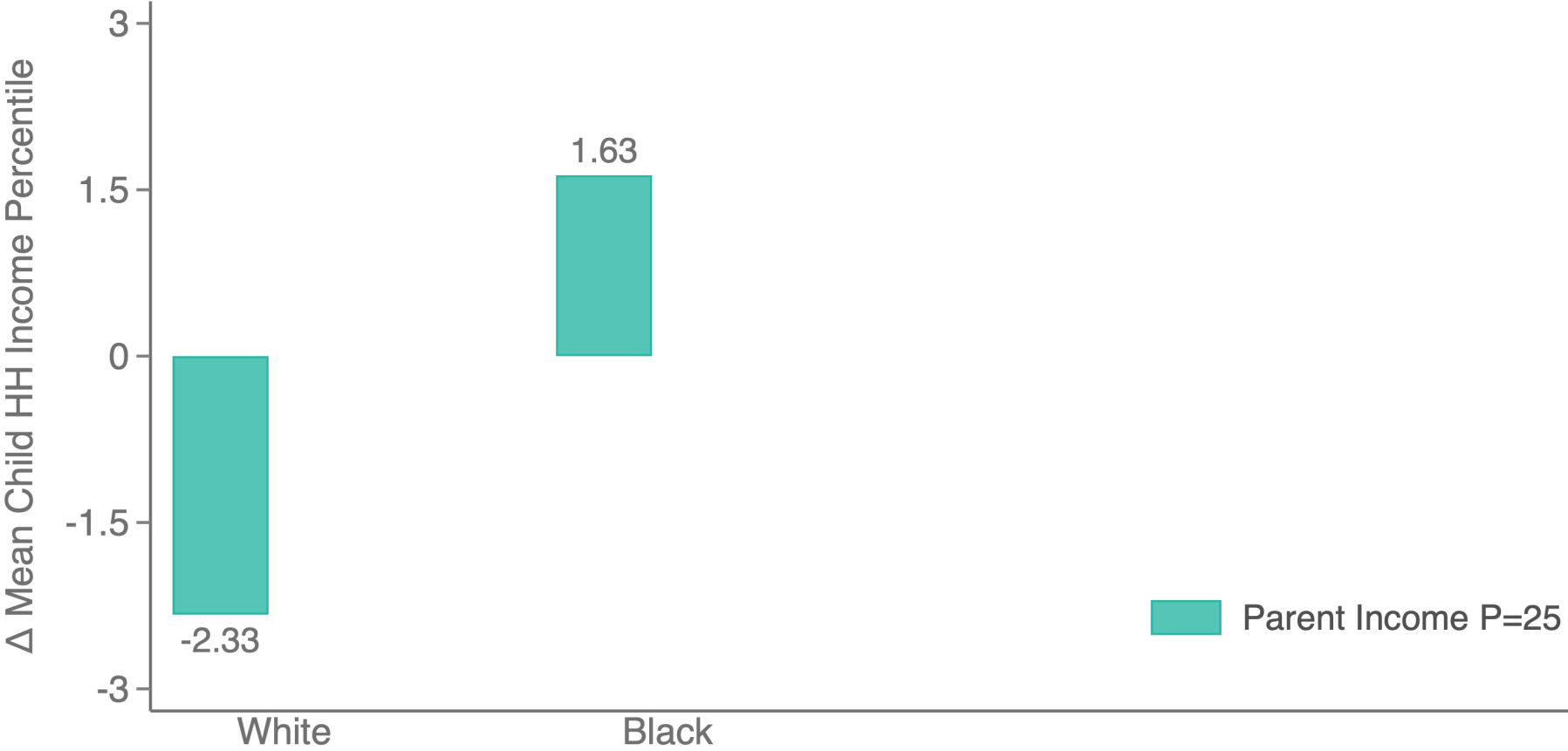
\$33.2k

>\$36.7k



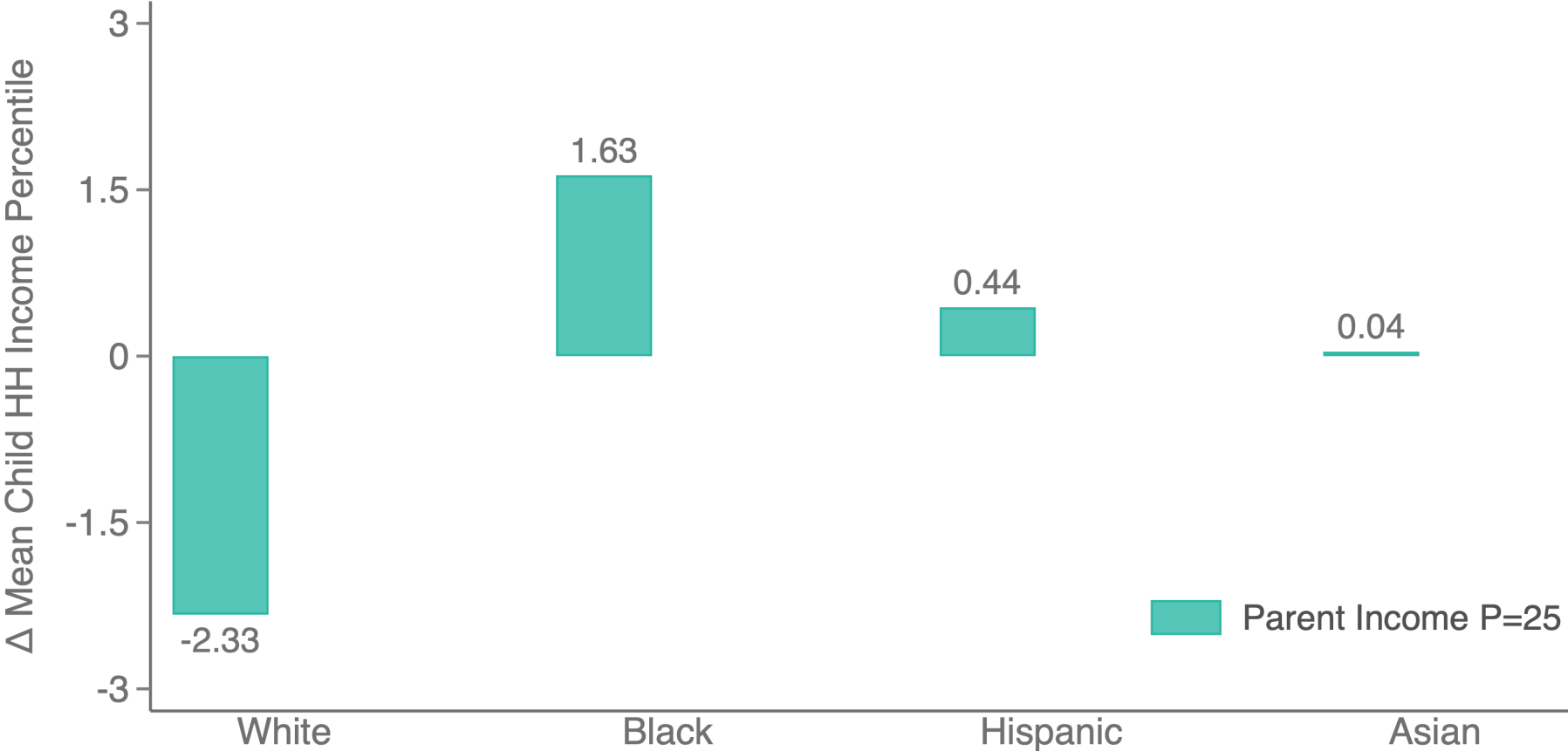
Change in Mean Child Household Income Percentile by Race and Class

Household Income Percentile at Age 27, 1992-1978 Cohort Difference



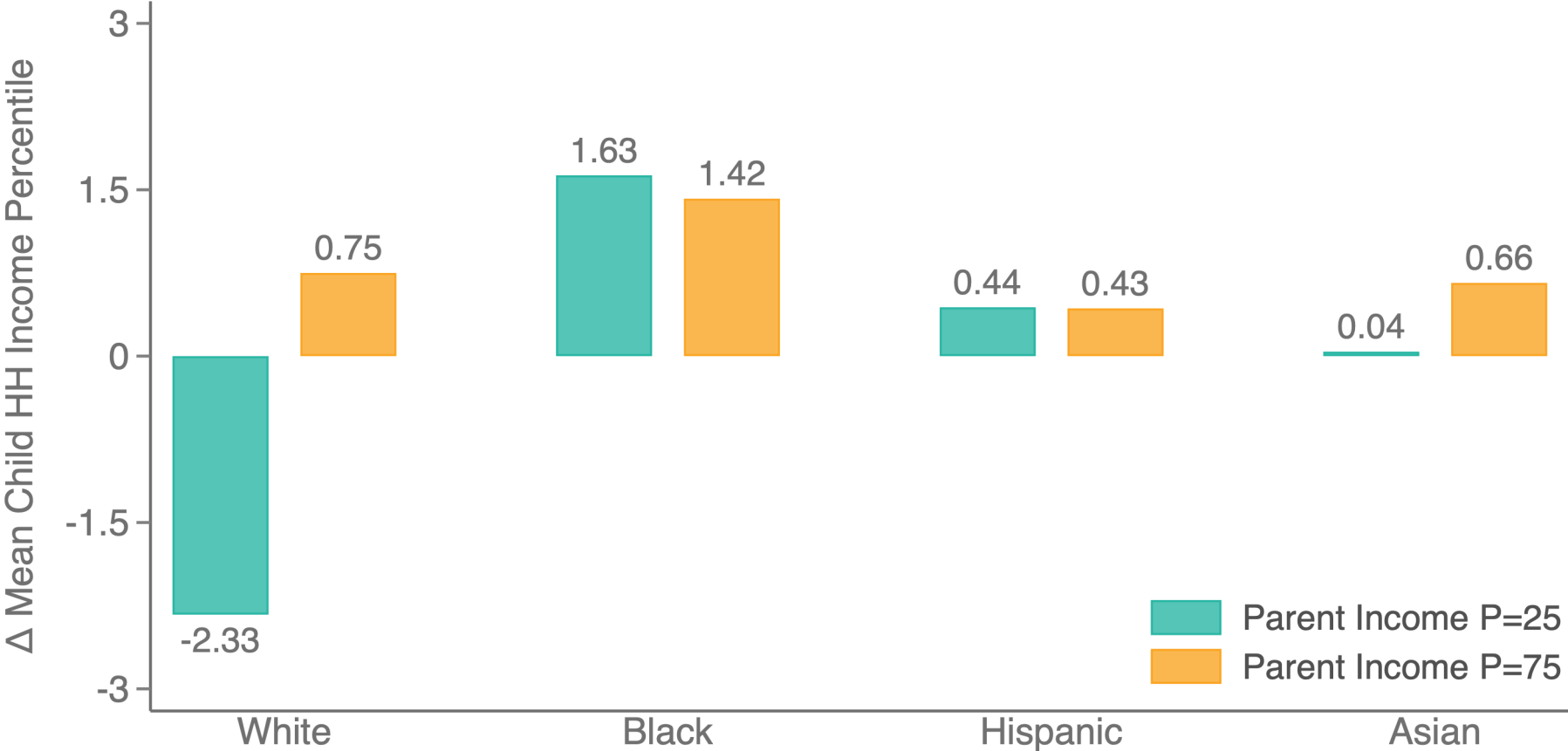
Change in Mean Child Household Income Percentile by Race and Class

Household Income Percentile at Age 27, 1992-1978 Cohort Difference



Change in Mean Child Household Income Percentile by Race and Class

Household Income Percentile at Age 27, 1992-1978 Cohort Difference



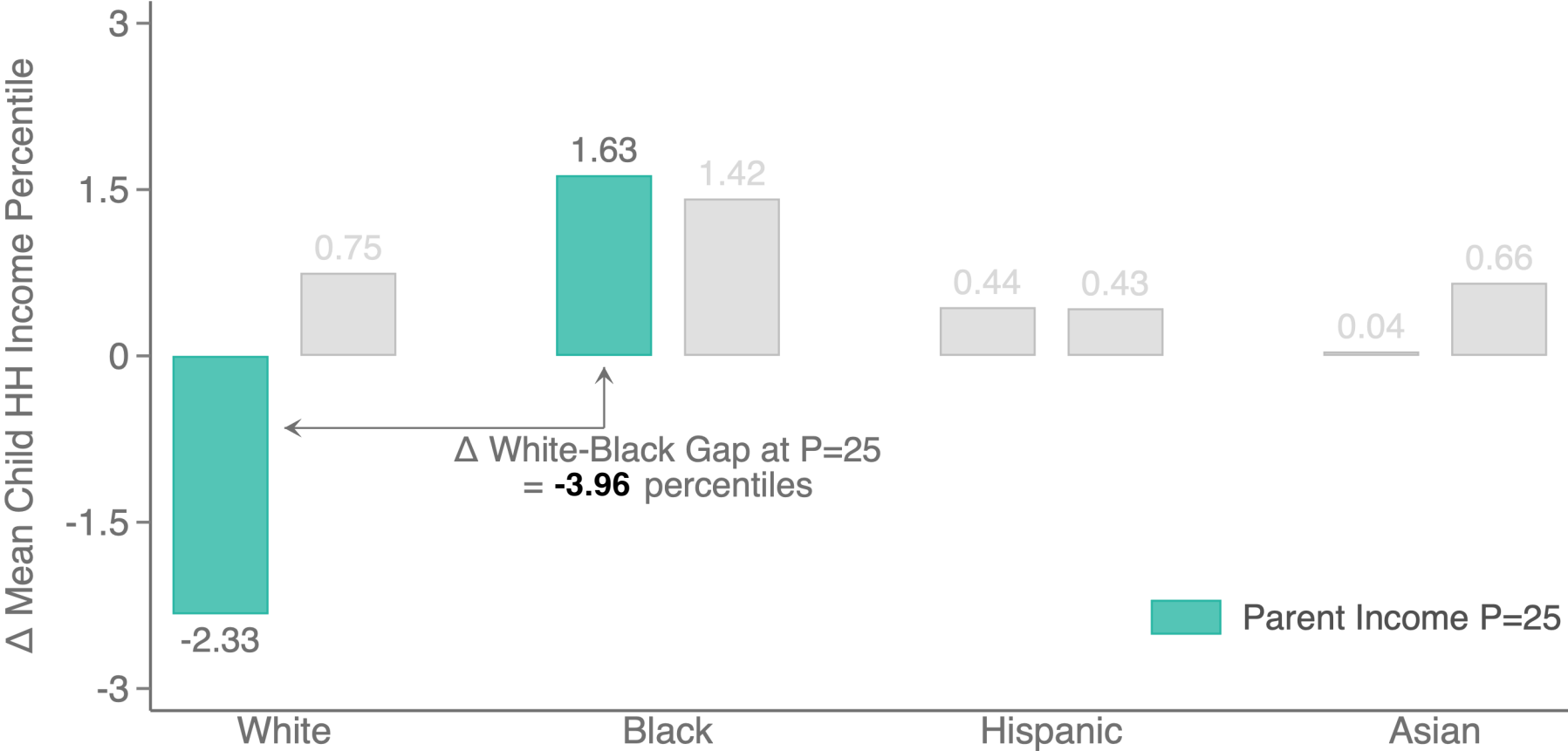
Mechanisms Underlying Trends in Mobility

Potential Explanations for Growing Class Gaps and Shrinking Race Gaps

- Begin by considering two natural explanations for changes in intergenerational mobility by race and class:
 1. Changes in family-level characteristics (e.g., education, marriage, wealth, occupation)
 2. Differential shocks across areas (e.g., predominantly Black vs. White areas)

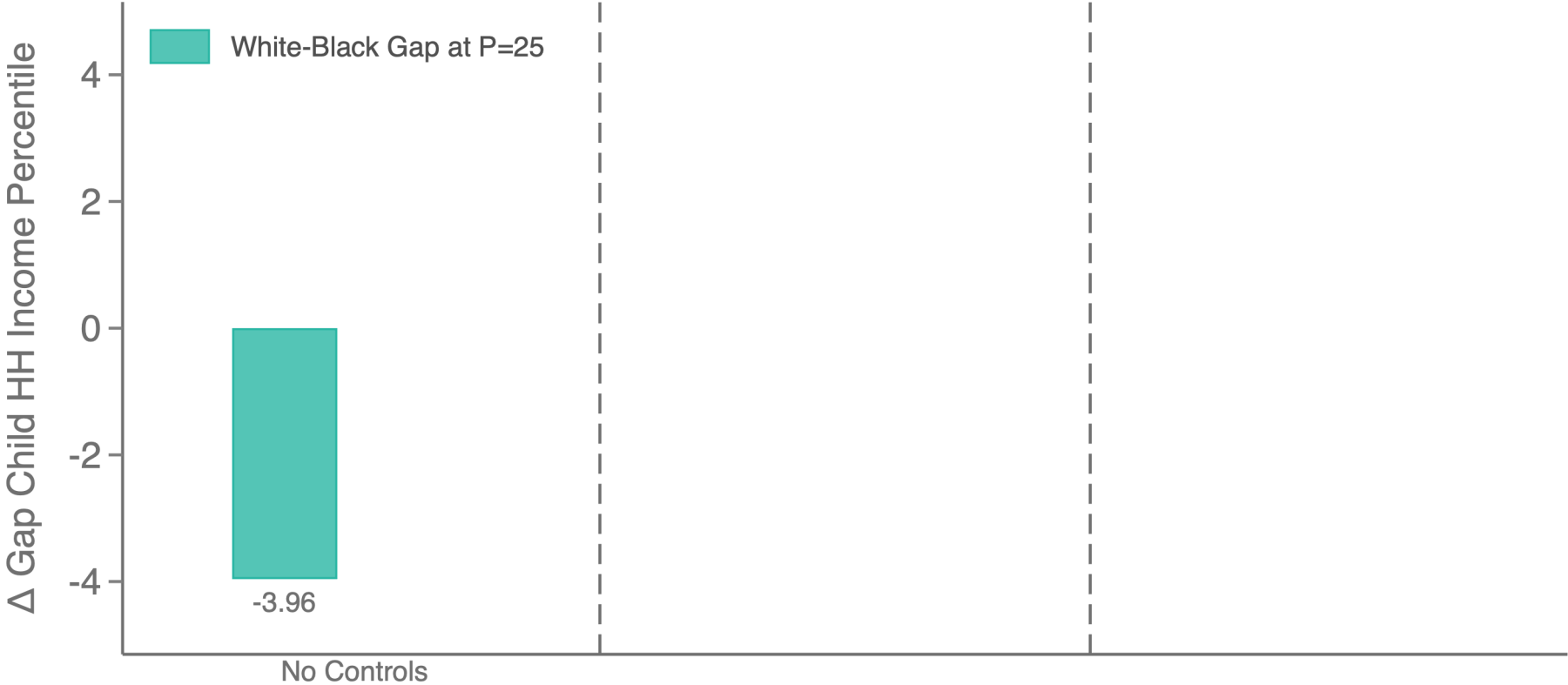
Change in Mean Child Household Income Percentile by Race and Class

Household Income Percentile at Age 27, 1992-1978 Cohort Difference



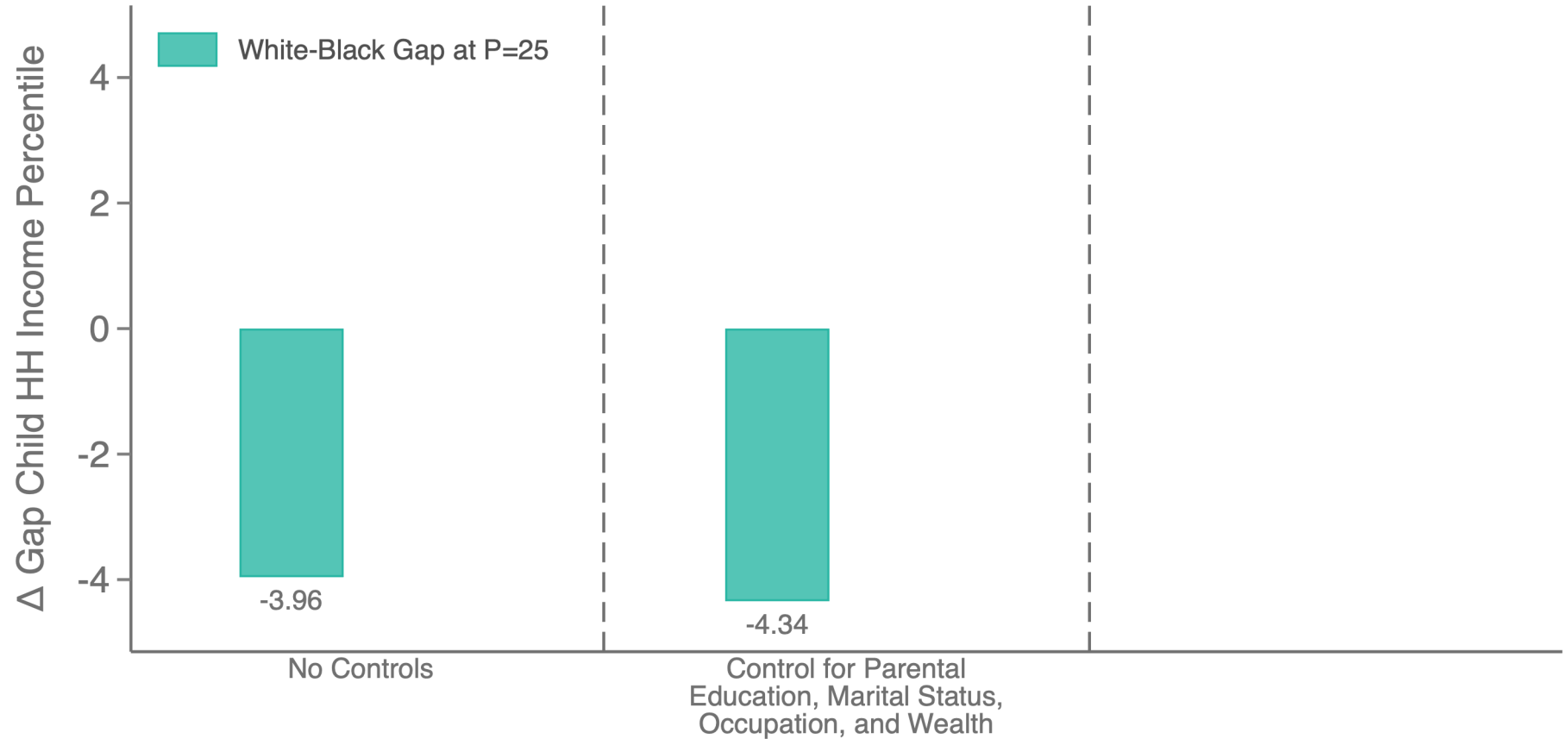
Can Family Characteristics or Neighborhoods Explain Changes in Gaps?

Household Income Percentile at Age 27, 1992-1978 Cohort Difference



Can Family Characteristics or Neighborhoods Explain Changes in Gaps?

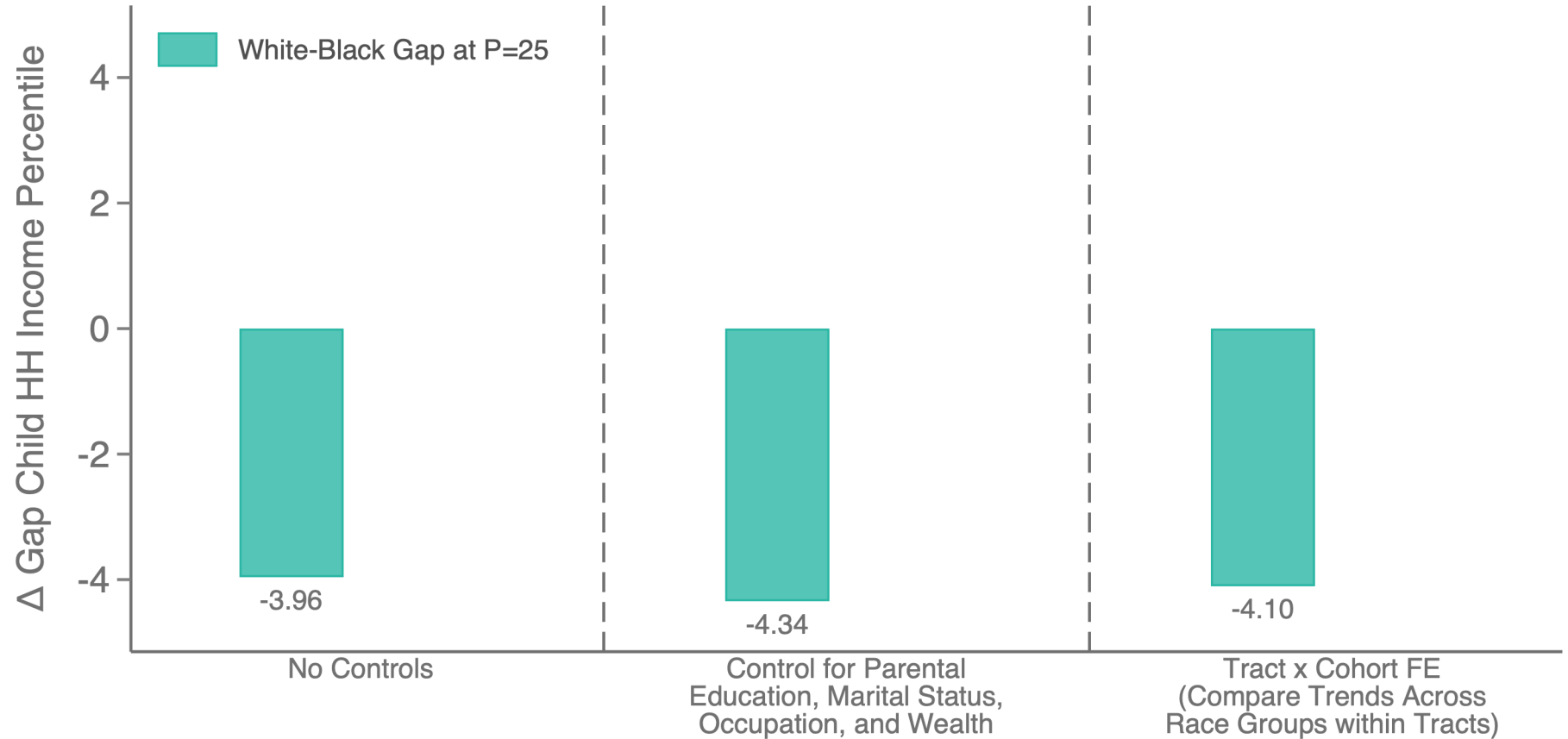
Household Income Percentile at Age 27, 1992-1978 Cohort Difference



$$Y = \beta_1 White + \beta_2 Cohort + \beta_3 White \times Cohort + \Gamma X \times White + \Gamma X \times Cohort + \varepsilon$$

Can Family Characteristics or Neighborhoods Explain Changes in Gaps?

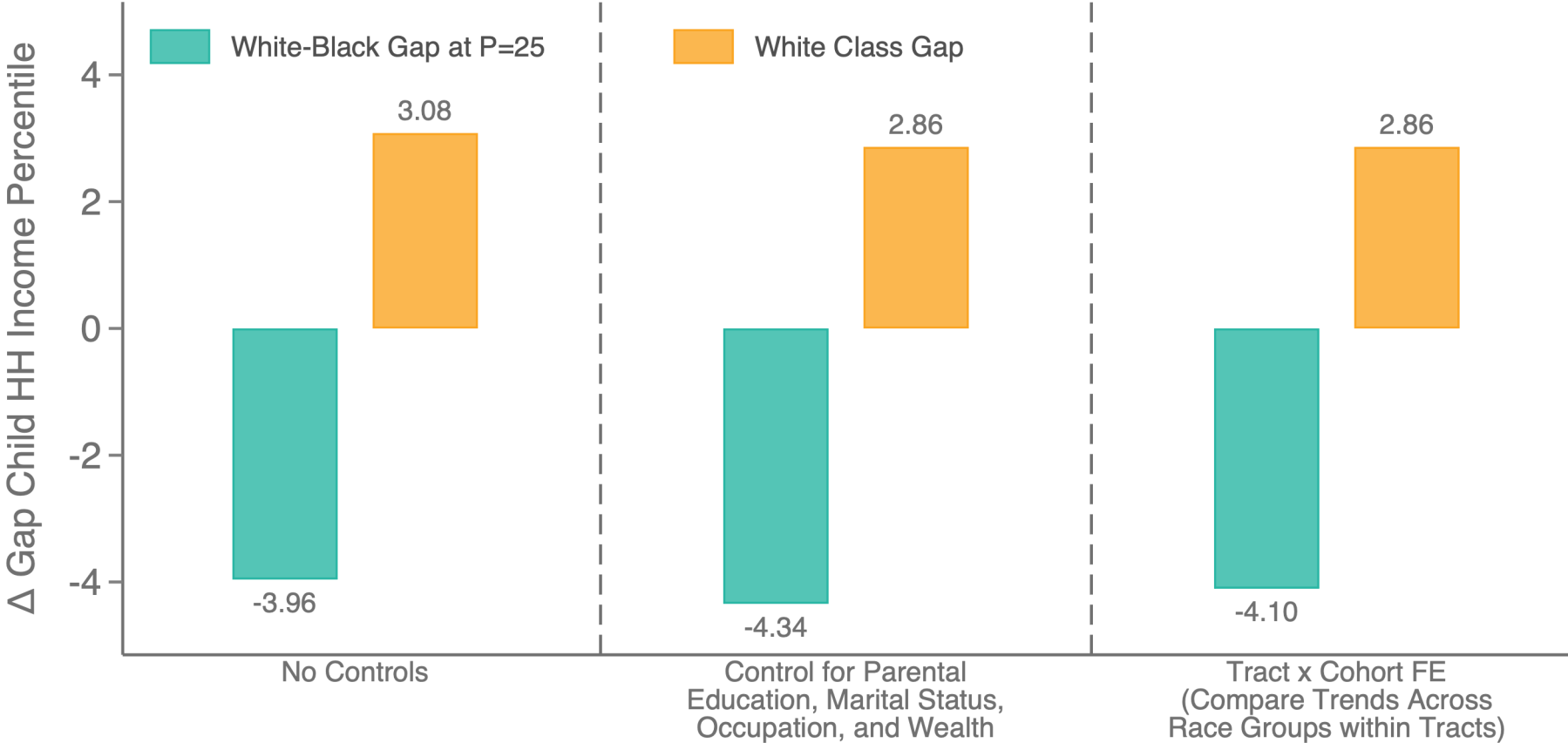
Household Income Percentile at Age 27, 1992-1978 Cohort Difference



$$Y = \beta_1 White + \beta_2 Cohort + \beta_3 White \times Cohort + \alpha_{nw} + \alpha_{nc} + \varepsilon$$

Can Family Characteristics or Neighborhoods Explain Changes in Gaps?

Household Income Percentile at Age 27, 1992-1978 Cohort Difference



What Drives the Divergence in Outcomes by Race and Class?

- Changes in intergenerational mobility by race and class must be driven by differential trends **within areas**
- One prominent hypothesis for such changes emphasized in prior ethnographic work in sociology: changes in community-level **employment rates**

Many of today's problems...crime, family dissolution, welfare, low levels of social organization, and so on...are fundamentally a consequence of the disappearance of work.

- William Julius Wilson
When Work Disappears (1996)

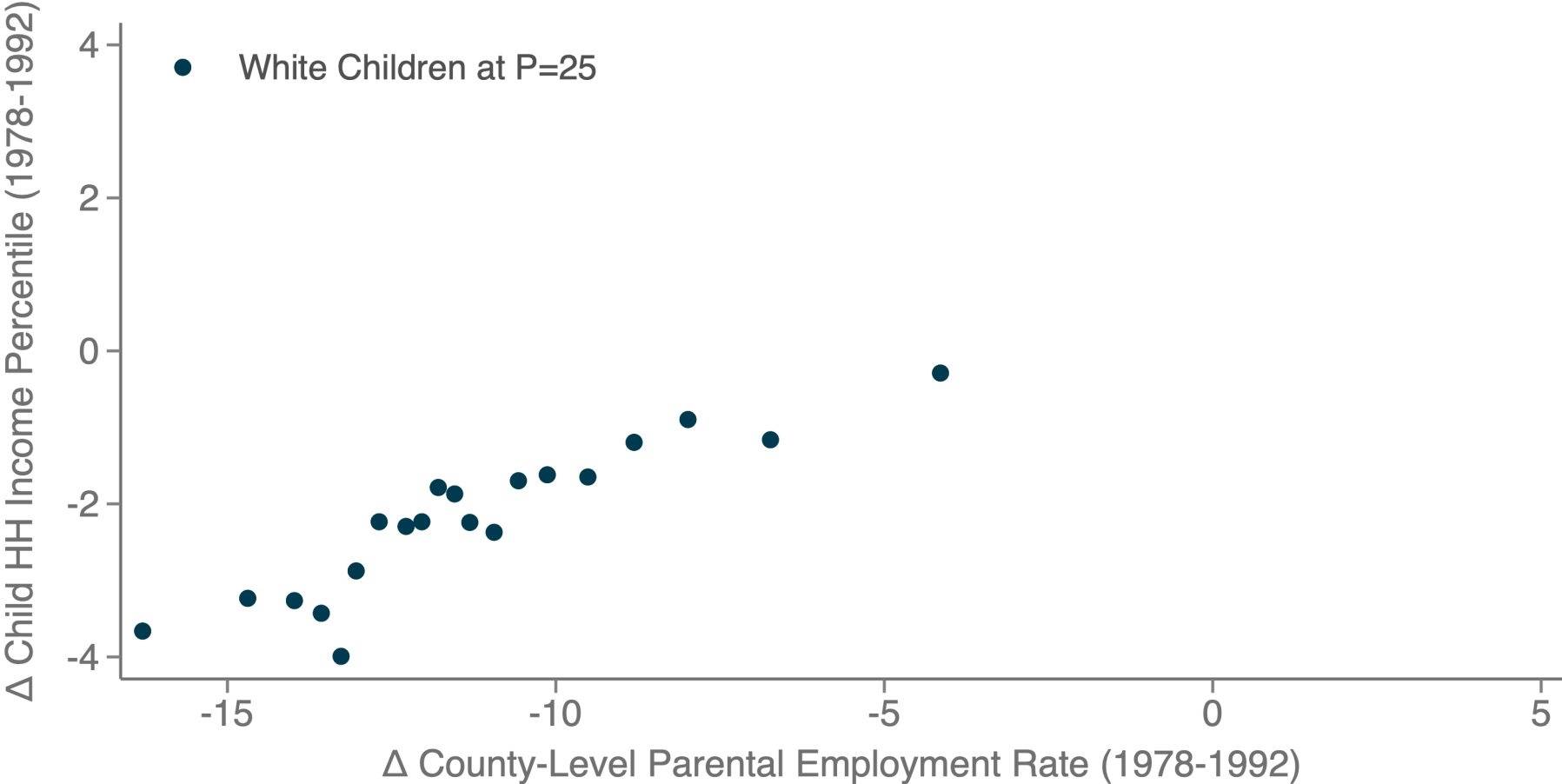


Explaining Geographic Divergence in Outcomes by Race and Class

- Motivated by this hypothesis, examine link between changes in **parental employment rates** and economic mobility at race x class x neighborhood (“community”) level
 - Use parental employment rates as a proxy for community-level environmental conditions more broadly
- Measure county-level changes in parental employment rates by race and class from 1978 to 1992 birth cohorts
 - Define “class” as parent’s income percentile during childhood (ages 13-17)
 - In baseline analysis, measure parental employment rates when child is 27

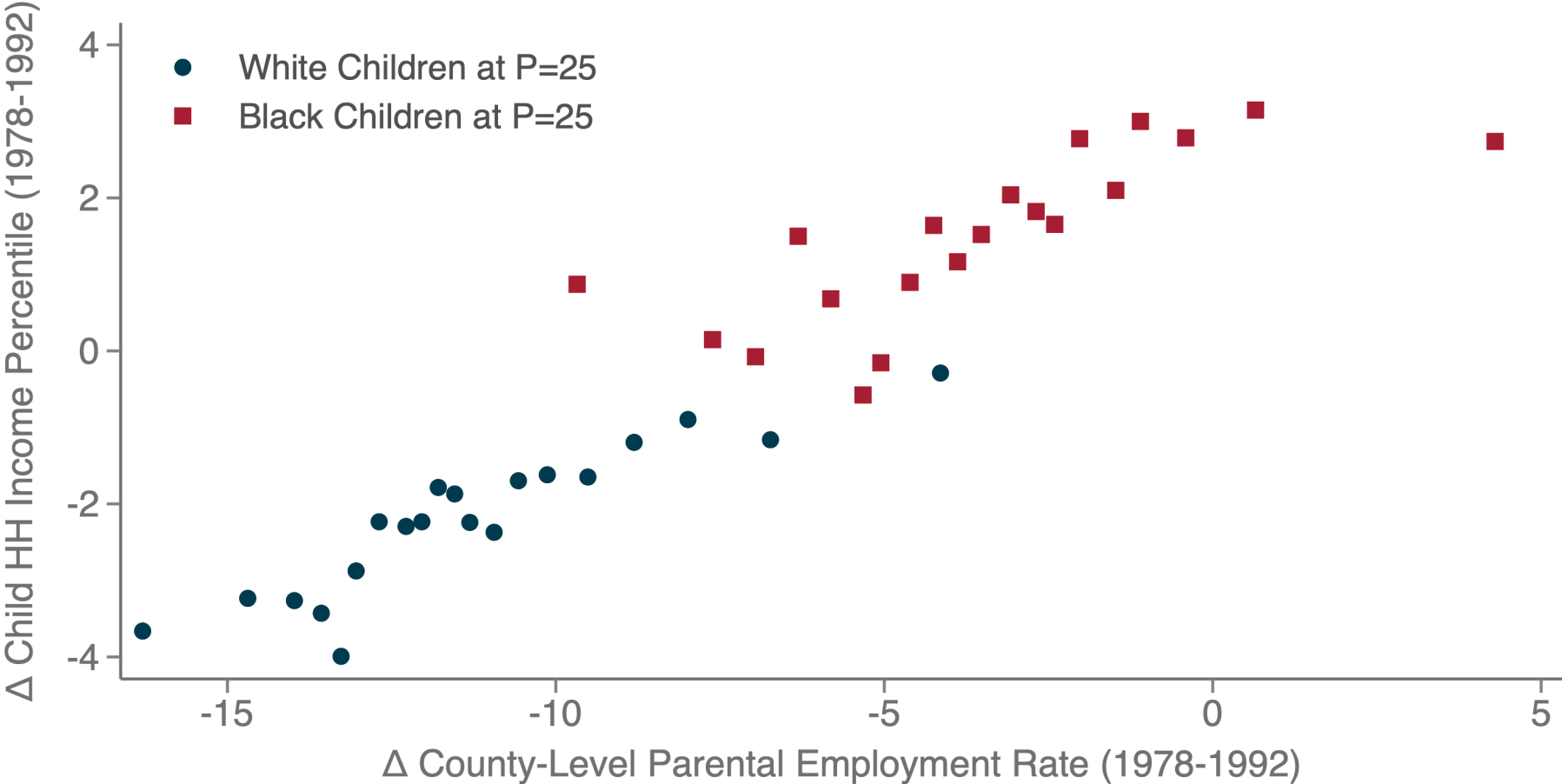
Changes in Children's Income Percentiles vs. Parent Employment Rates, 1978-92 Cohorts

By County, Race, and Class



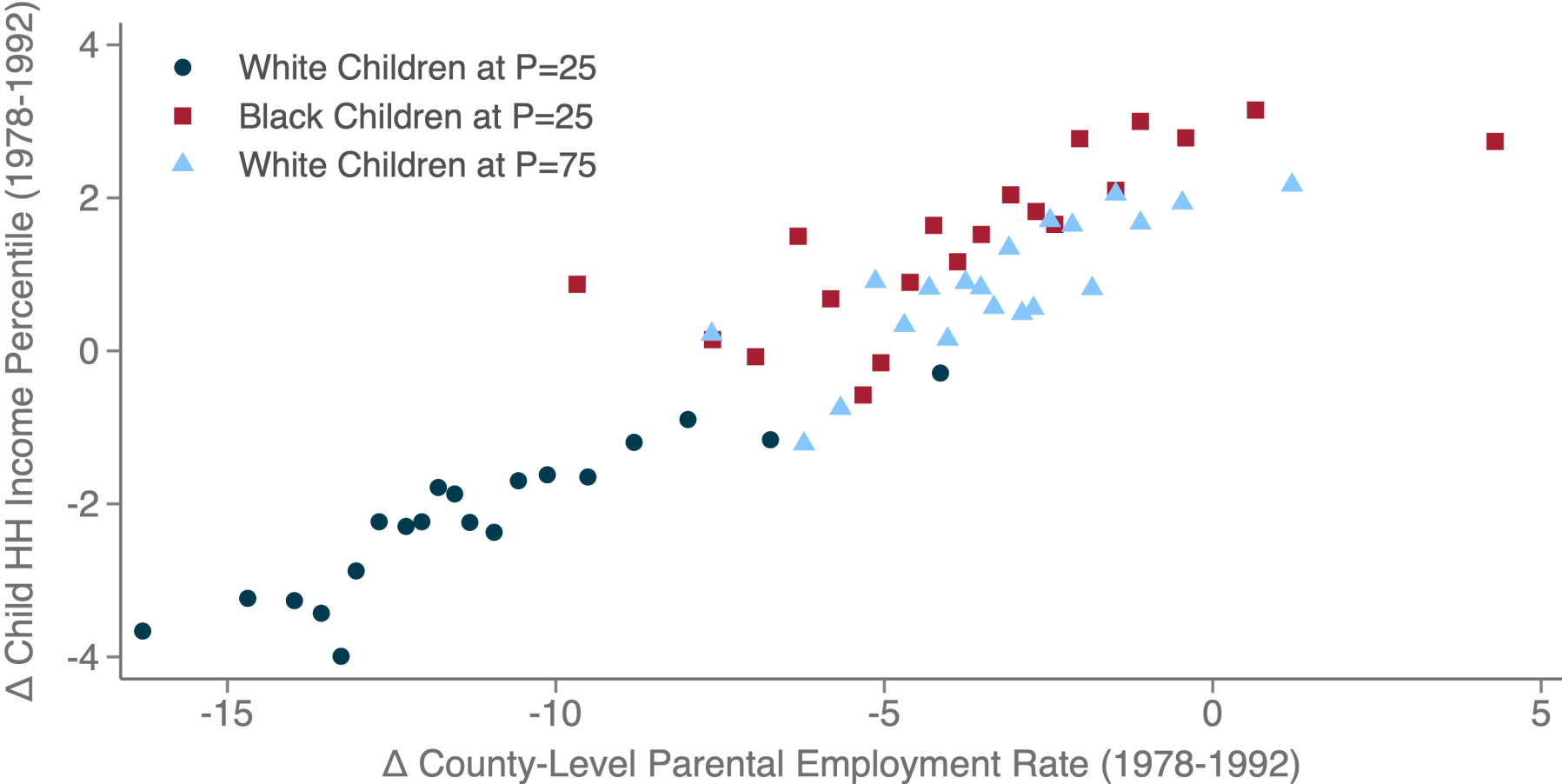
Changes in Children's Income Percentiles vs. Parent Employment Rates, 1978-92 Cohorts

By County, Race, and Class



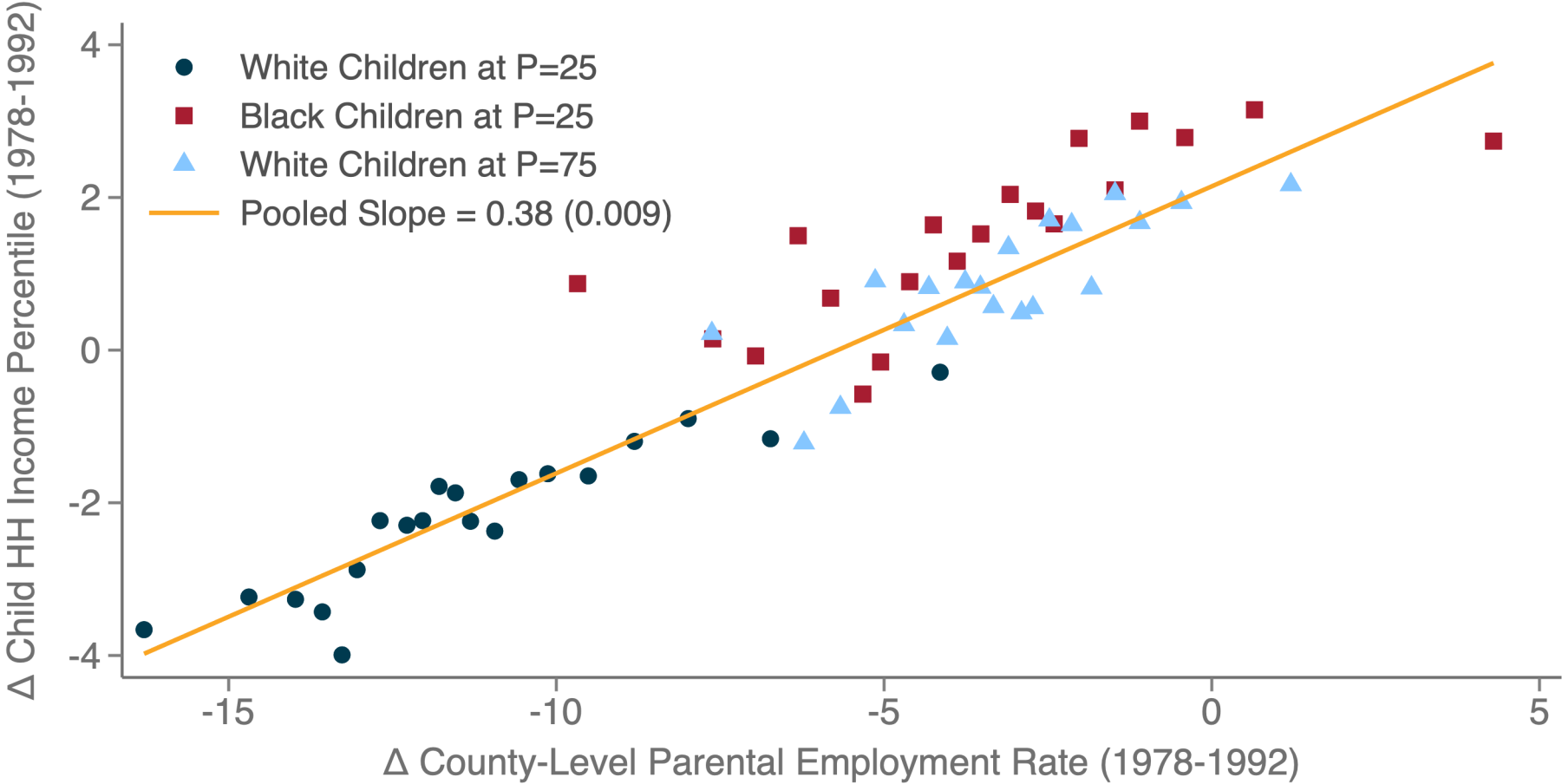
Changes in Children's Income Percentiles vs. Parent Employment Rates, 1978-92 Cohorts

By County, Race, and Class



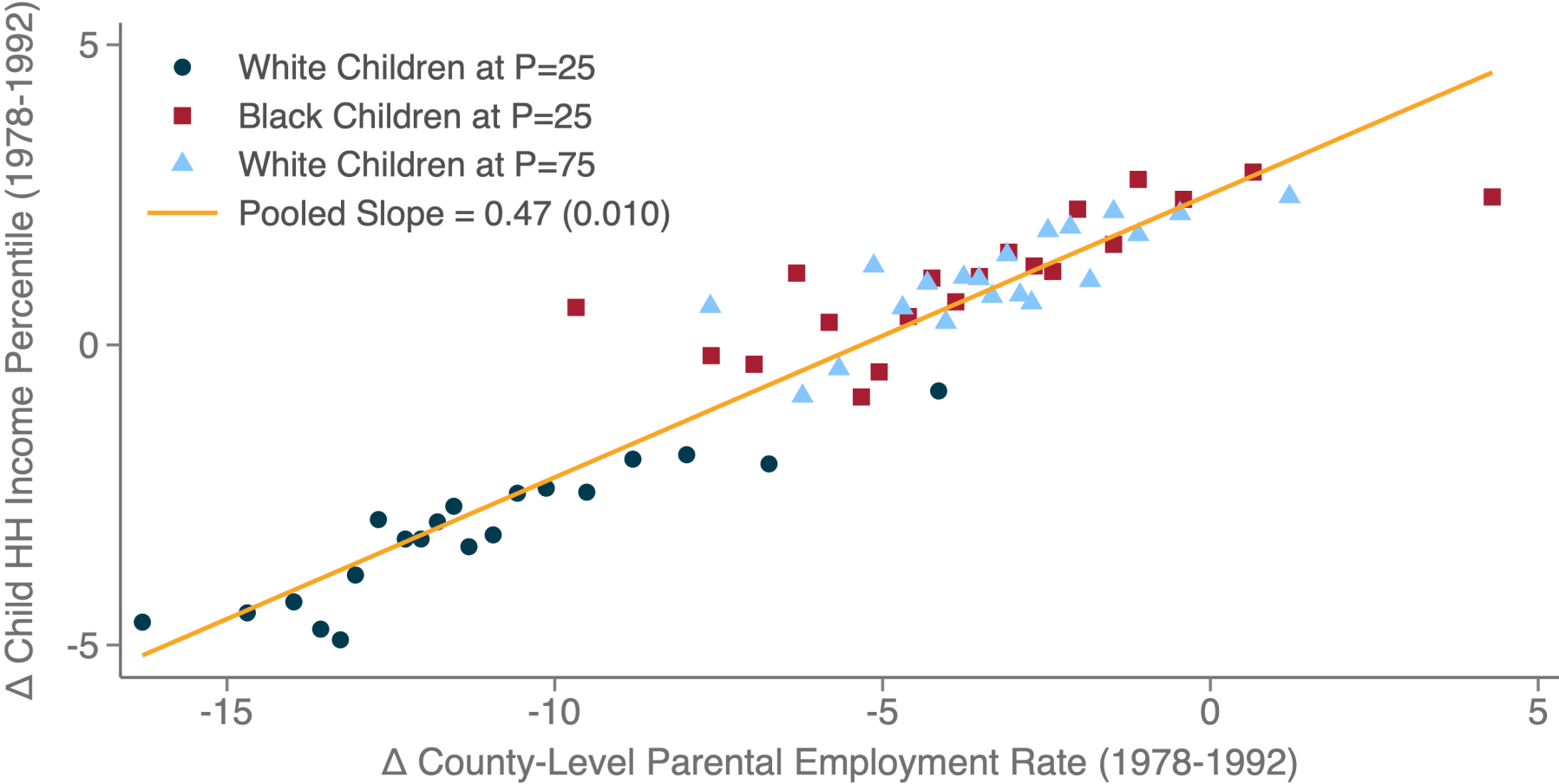
Changes in Children's Income Percentiles vs. Parent Employment Rates, 1978-92 Cohorts

By County, Race, and Class



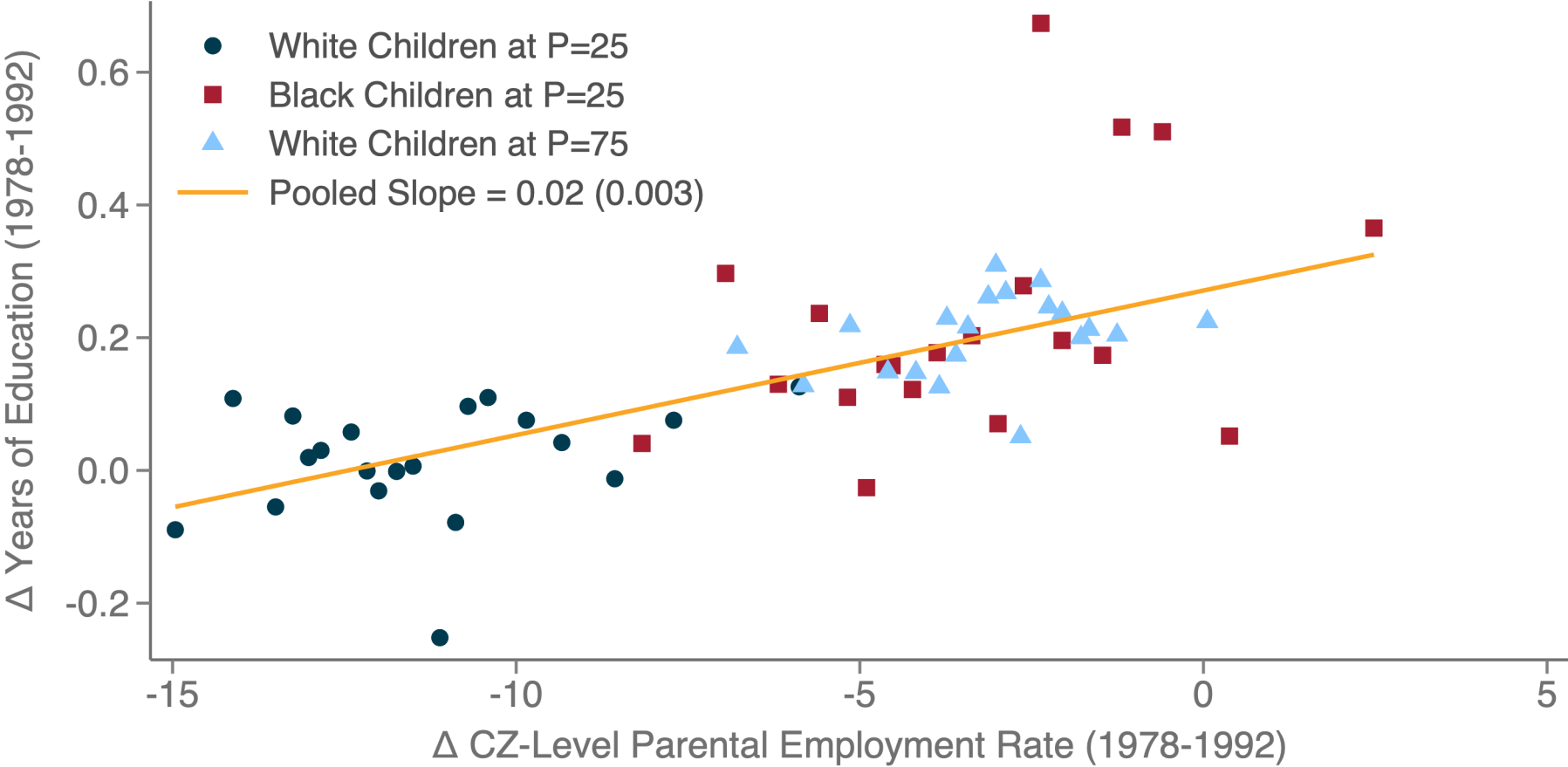
Changes in Children's Income Percentiles vs. Parent Employment Rates, 1978-92 Cohorts

By County, Race, and Class; Own Parents are Employed



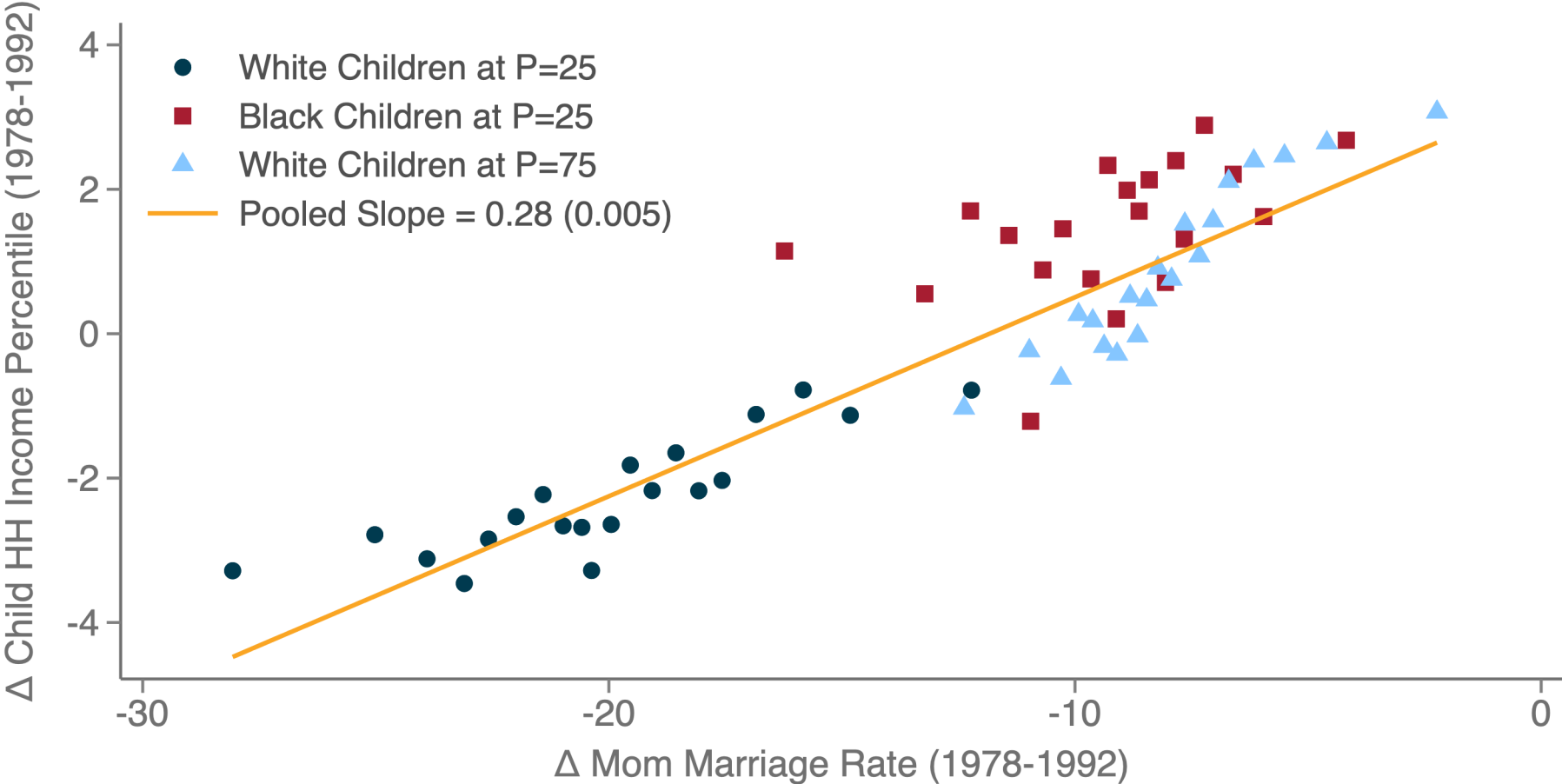
Changes in Children's Years of Education vs. Parent Employment Rates, 1978-92 Cohorts

By CZ, Race, and Class



Changes in Children's Income Percentiles vs. Mom Marriage Rates, 1978-92 Cohorts

By County, Race, and Class



Why are Changes in Mobility Related to Changes in Parent Employment Rates?

Two Theories for Link Between Changes in Mobility and Parent Employment

1. Changes in the **labor market**

- Intergenerational persistence in occupational choice by race and class → labor demand shocks that affect parents also affect kids [e.g., Staiger 2023]

2. Changes in pre-labor market **childhood environment**

- Growing up in a community with lower parental employment impacts children's outcomes, e.g. by changing aspirations or educational investment decisions [e.g., Wilson 1987, Borjas 1992, 1994, Ananat et al. 2011, 2017]

Distinguishing Labor Market Factors from Impacts of Childhood Environment

- Consider a community with increasing parental employment rates across cohorts
- Ideal experiment: randomly move children in the same cohort to this community at different ages
- These children enter the same labor market regardless of age at move, but have **different childhood exposure** to parental employment rates during childhood
- If changes in labor market matter, age at move will not affect outcomes; if childhood environment matters, age at move will affect outcomes via exposure effect

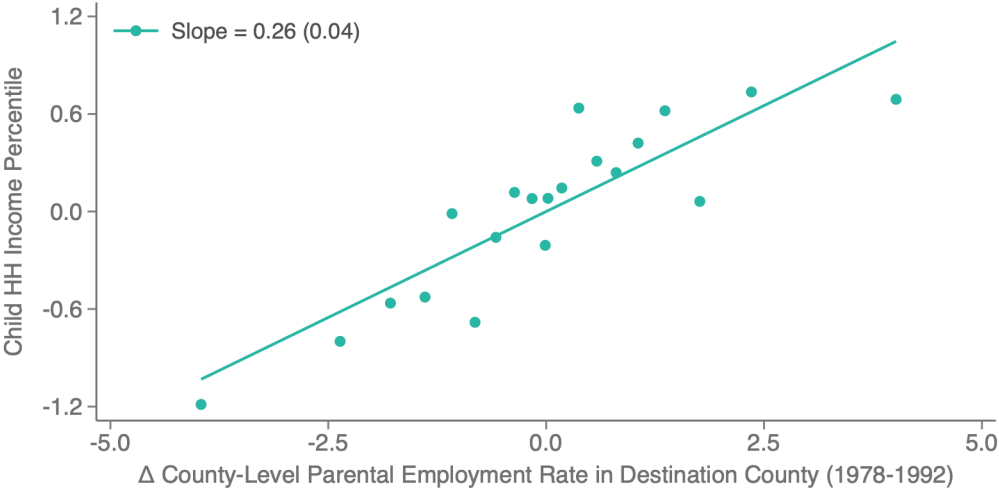
Quasi-Experimental Variation

- Approximate this experiment by looking at families who move across counties
- Compare children who move from the same origin county to destinations that have the same initial (1978 cohort) parent employment rate, but different trends
- Does the impact of these moves vary with child age at move?
- Present results by child age at move, then return to identification assumption underlying this design

Child Household Income Percentile vs. Trend in Parent Employment Rates in Destination

1992 Birth Cohort, Children who Move Across Counties

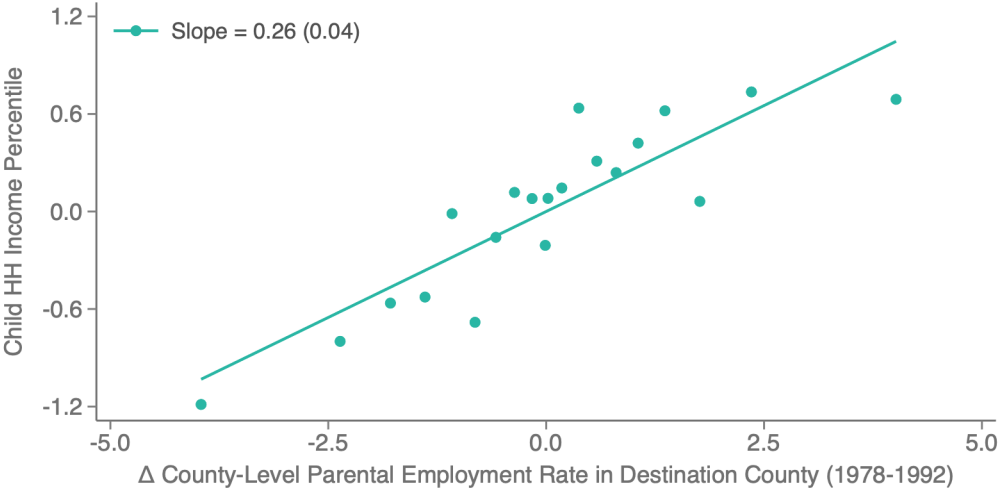
Move Before Age 8



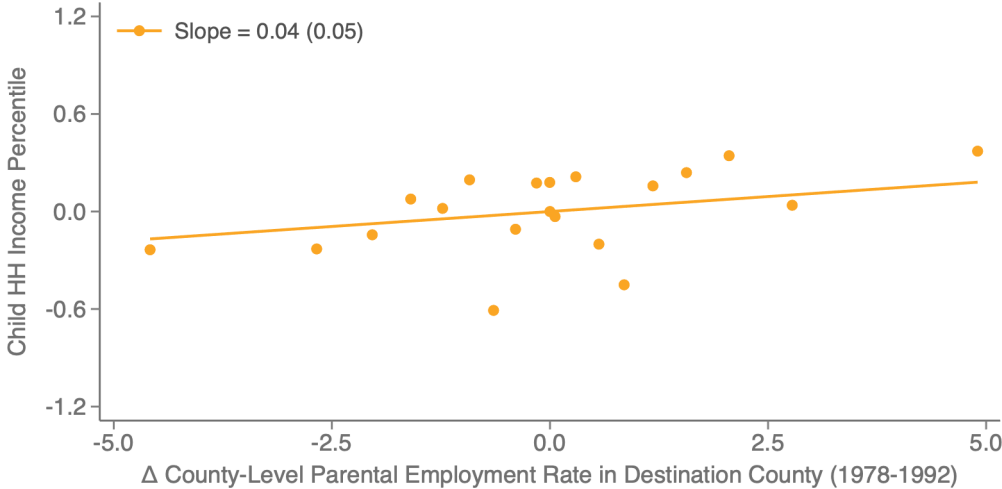
Child Household Income Percentile vs. Trend in Parent Employment Rates in Destination

1992 Birth Cohort, Children who Move Across Counties

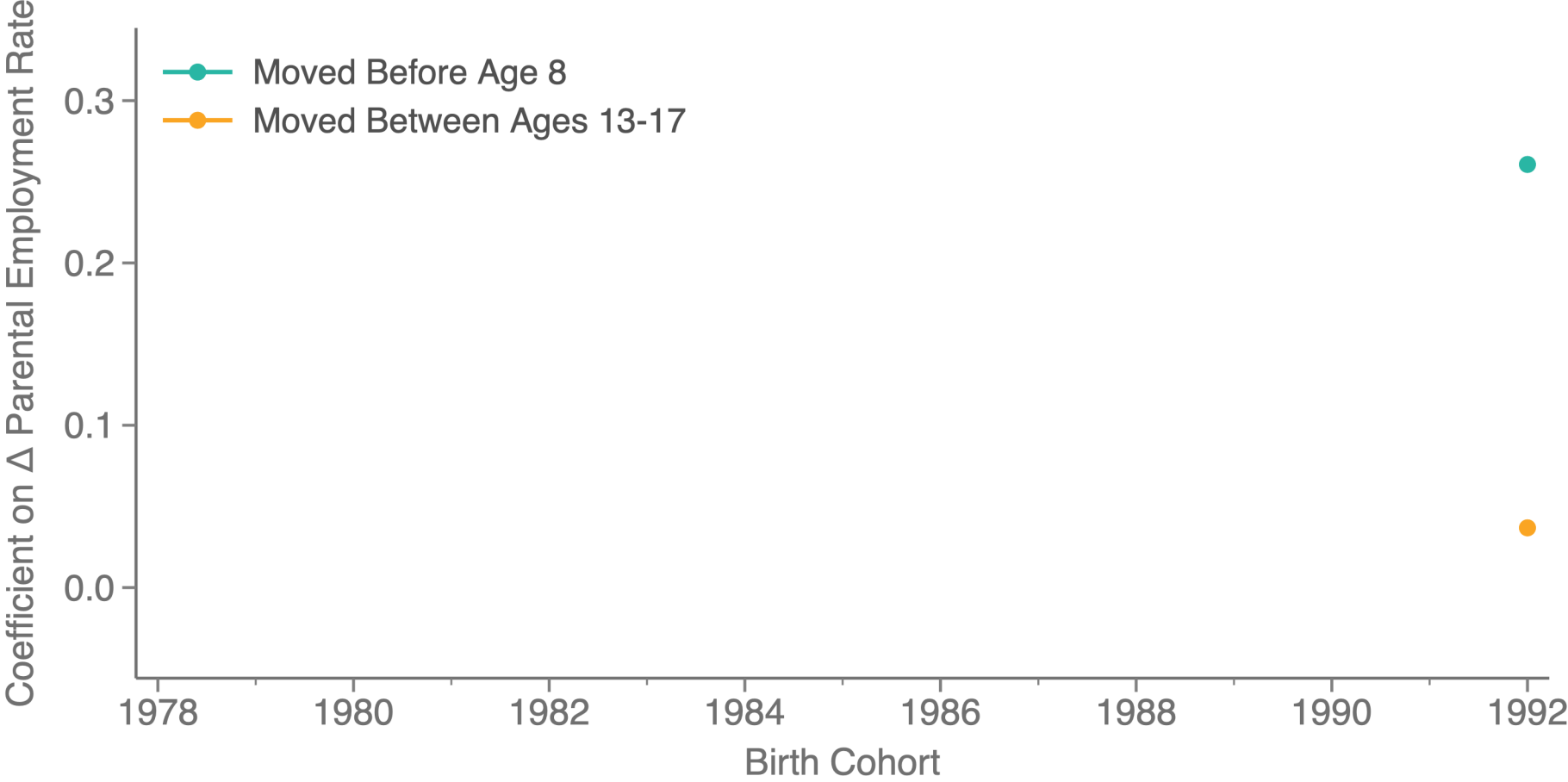
Move Before Age 8



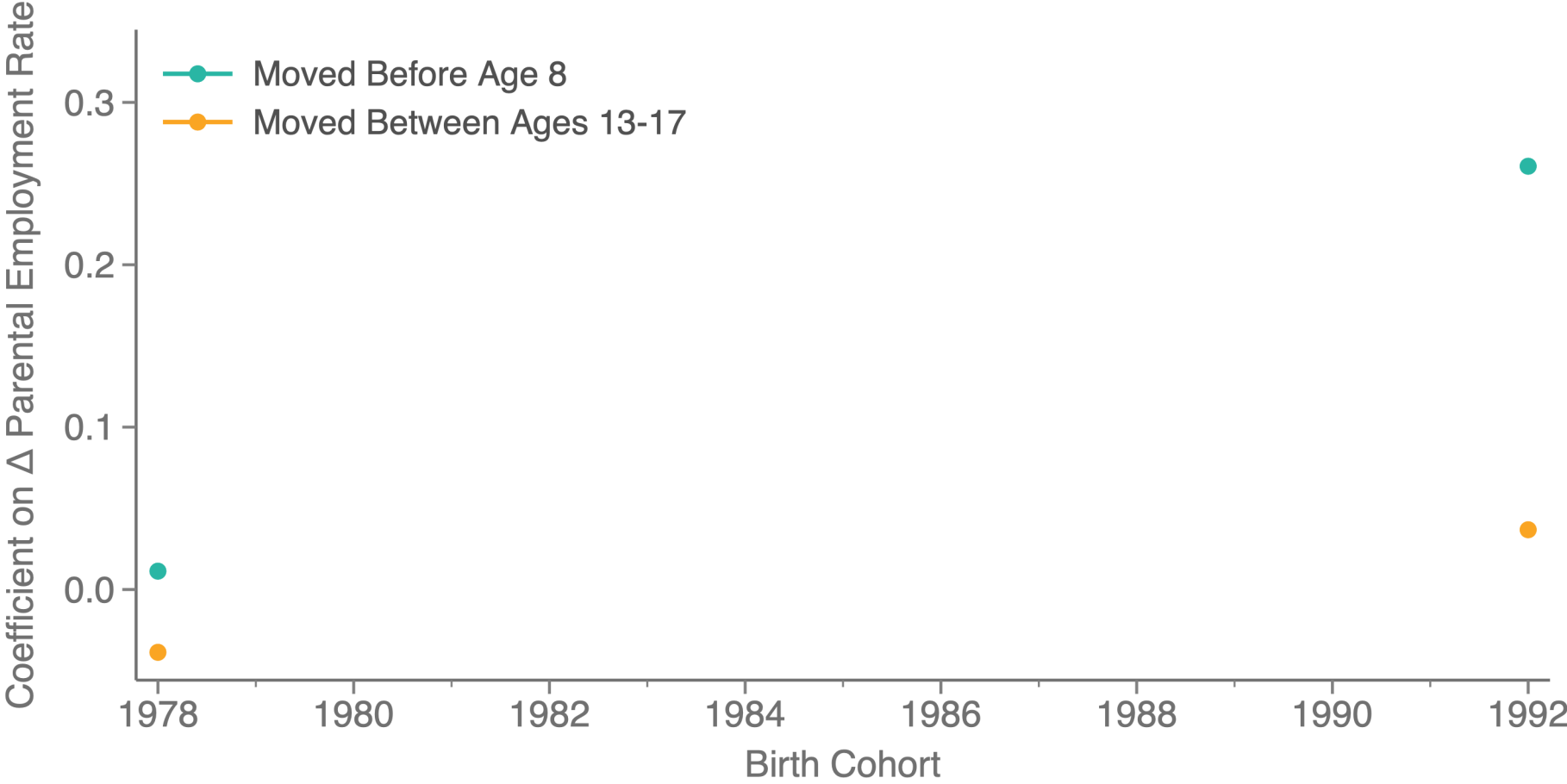
Move Between Ages 13-17



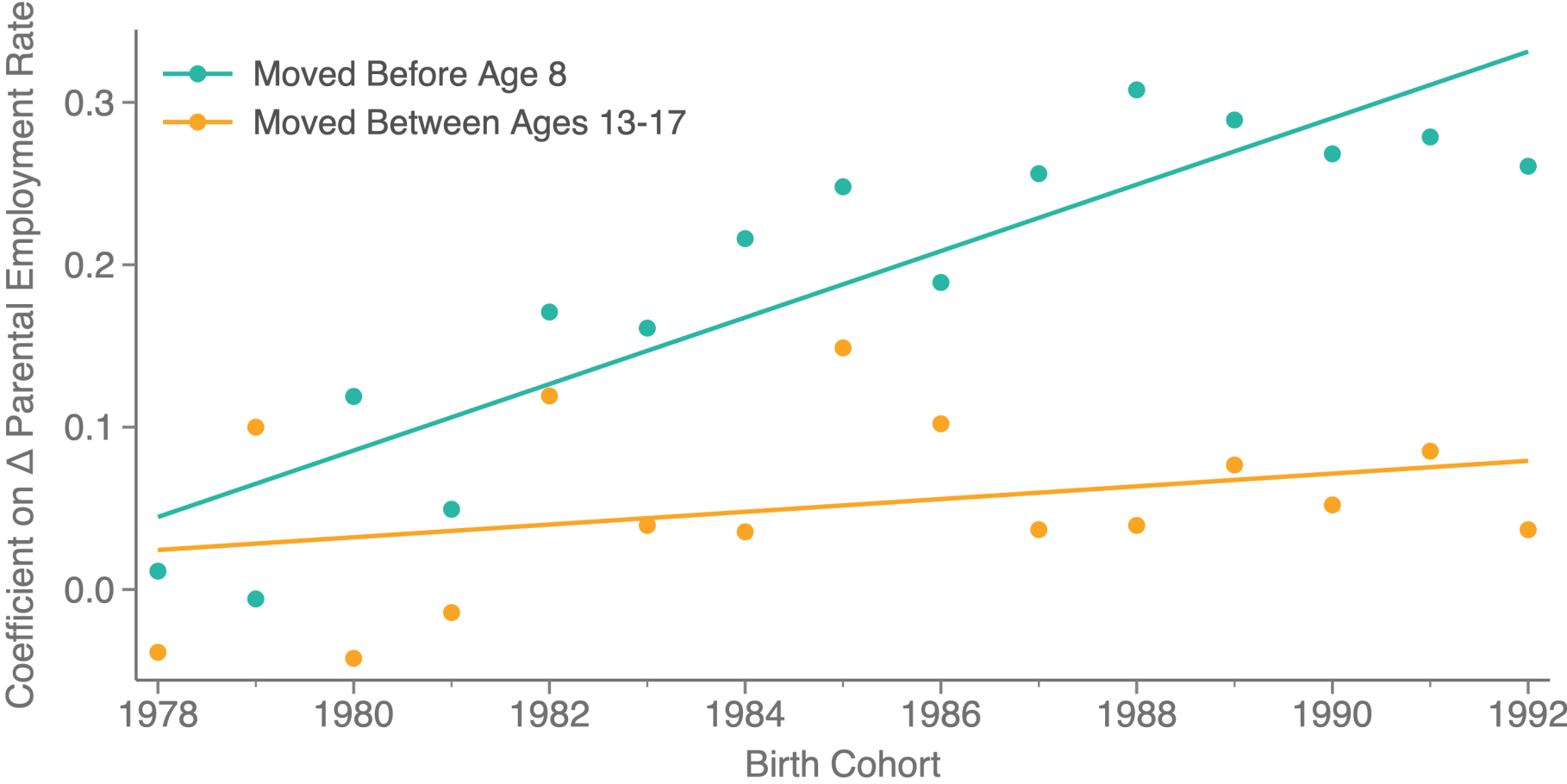
Effect of Trends in Parent Employment Rate in Destination by Move Age and Cohort



Effect of Trends in Parent Employment Rate in Destination by Move Age and Cohort



Effect of Trends in Parent Employment Rate in Destination by Move Age and Cohort



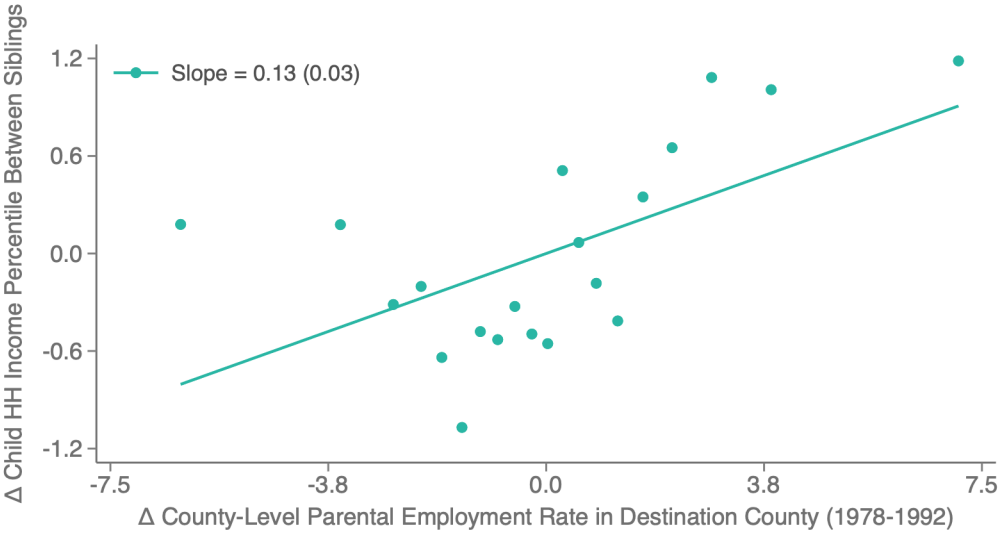
Identification

- Key assumption: children's potential outcomes are independent of age at which they move to areas with increasing vs. decreasing parental employment rates
[e.g., Chetty and Hendren 2018, Deutscher 2019, Alesina et al. 2020]
- Potential concern: families who move with young children to areas with higher parental employment rates are positively selected
- Compare outcomes of **siblings** within families to evaluate this concern and validity of identification assumption

Differences in Siblings' Outcomes vs. Trend in Parent Employment Rates in Destination

Younger Sibling's Minus Older Sibling's Income Percentile

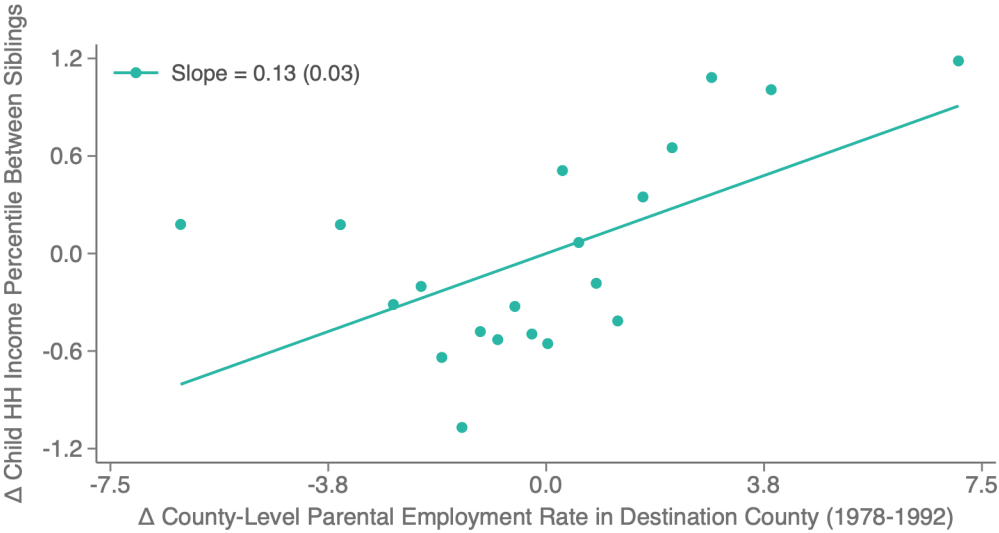
Siblings with Age Difference ≥ 4



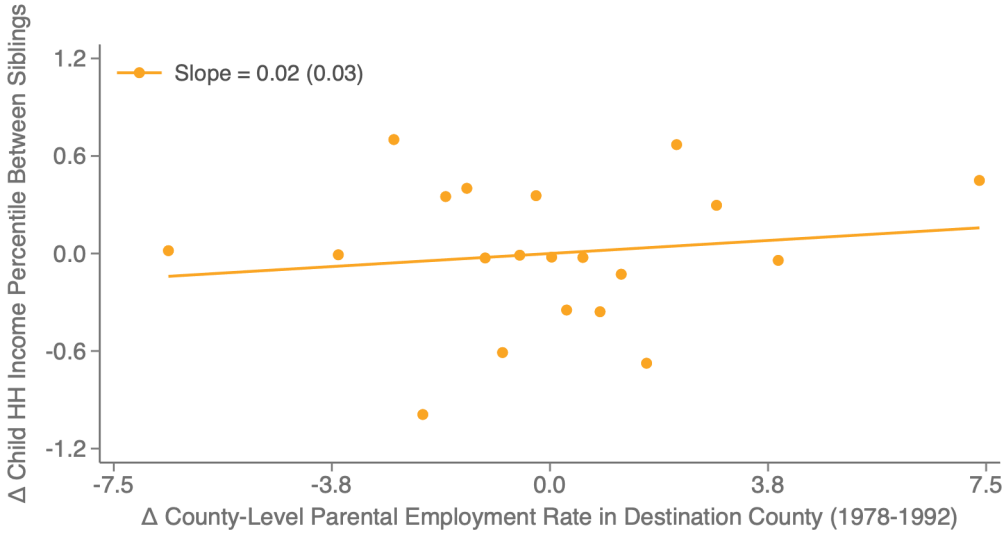
Differences in Siblings' Outcomes vs. Trend in Parent Employment Rates in Destination

Younger Sibling's Minus Older Sibling's Income Percentile

Siblings with Age Difference ≥ 4



Siblings with Age Difference < 4



Why Does Childhood Exposure to Higher Parent Employment Improve Outcomes?

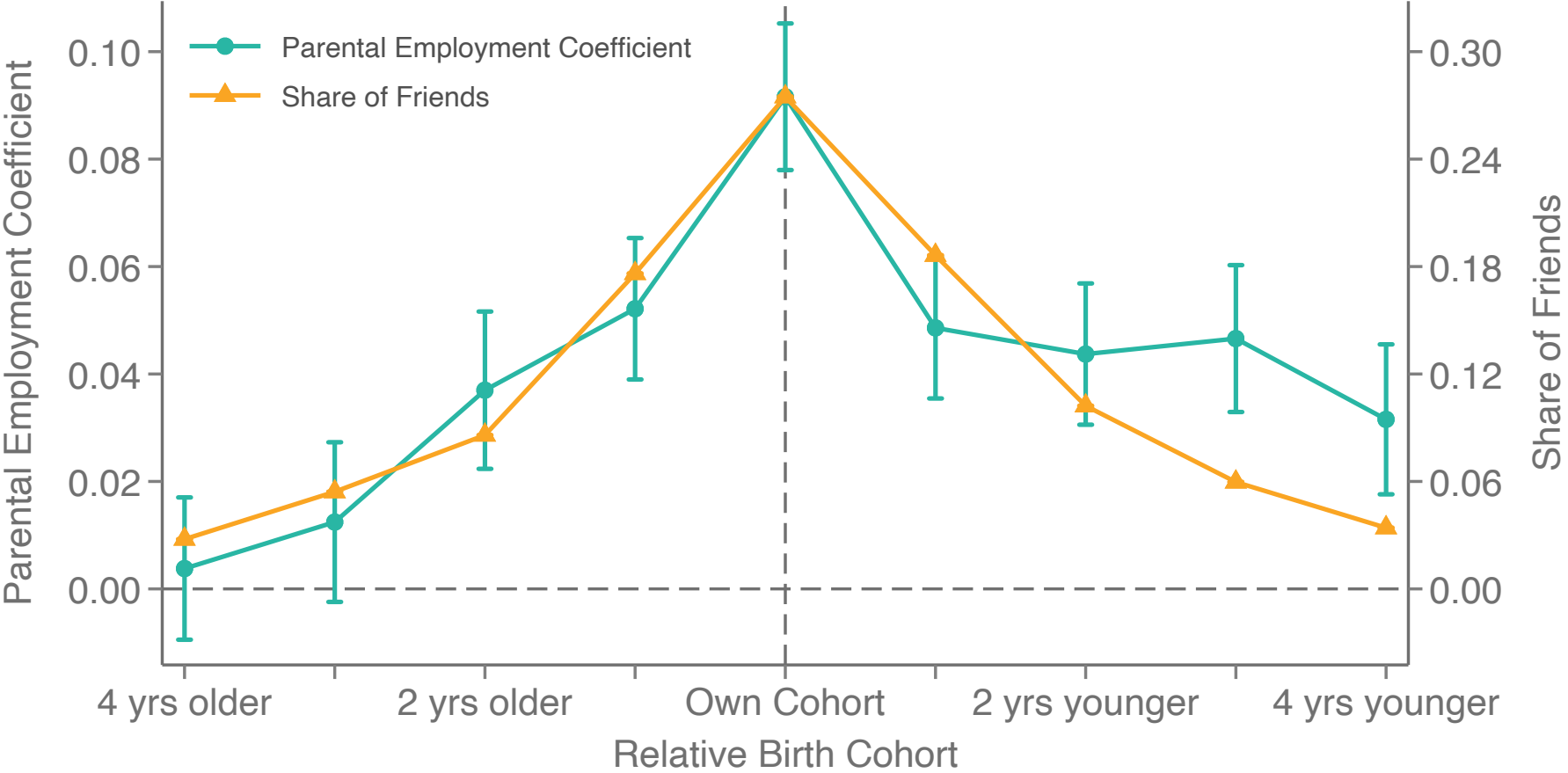
Why Does Exposure to Areas With Higher Parental Employment Increase Mobility?

- One class of explanations is **sociological**: children's outcomes depend upon whom they interact with (job referrals, aspirations)
[e.g., Loury 1977, Bourdieu 1986, Putnam 2016, Chetty et al. 2022]
- Another class of explanations is **economic**: richer parents → schools have more resources, better programs for children, etc.
- Test between these explanations by exploiting differences in friendship patterns across groups



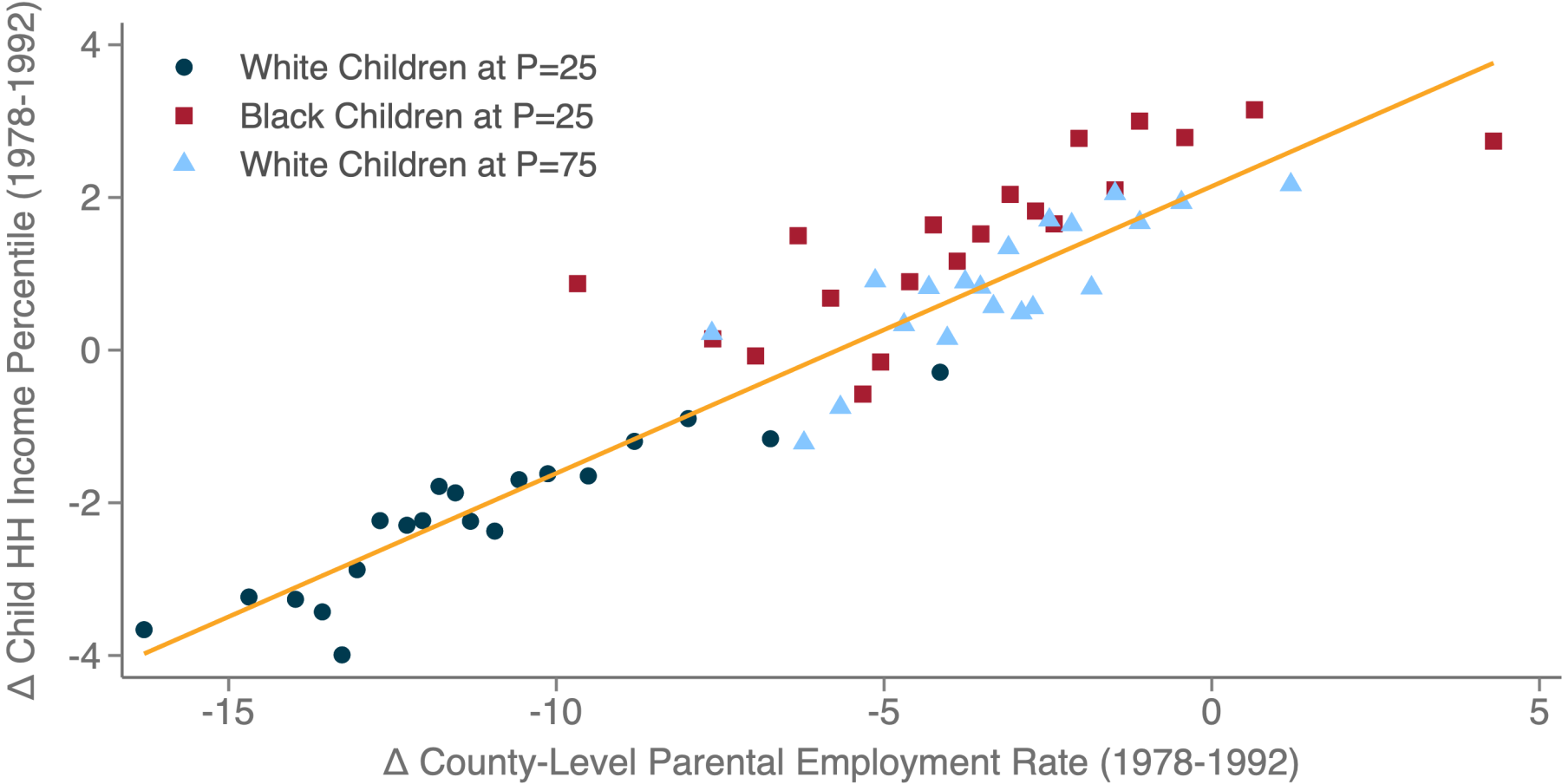
Effect of Changes in Parental Employment Rates Across Cohorts

Friendship Rates and Parent Employment Effects in Own Cohort vs. Adjacent Cohorts



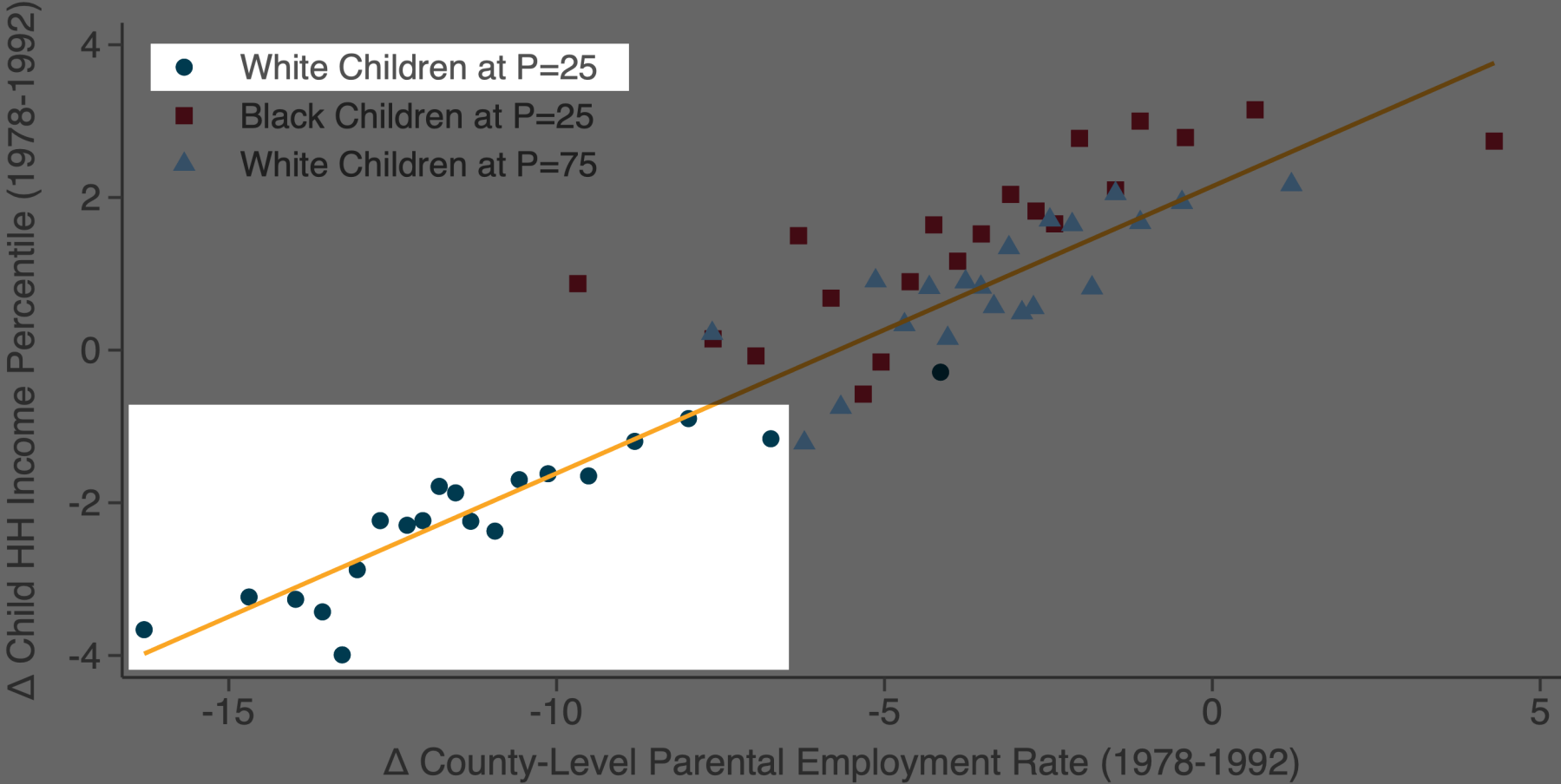
Changes in Children's Income Percentiles vs. Parent Employment Rates, 1978-92 Cohorts

By County, Race, and Class



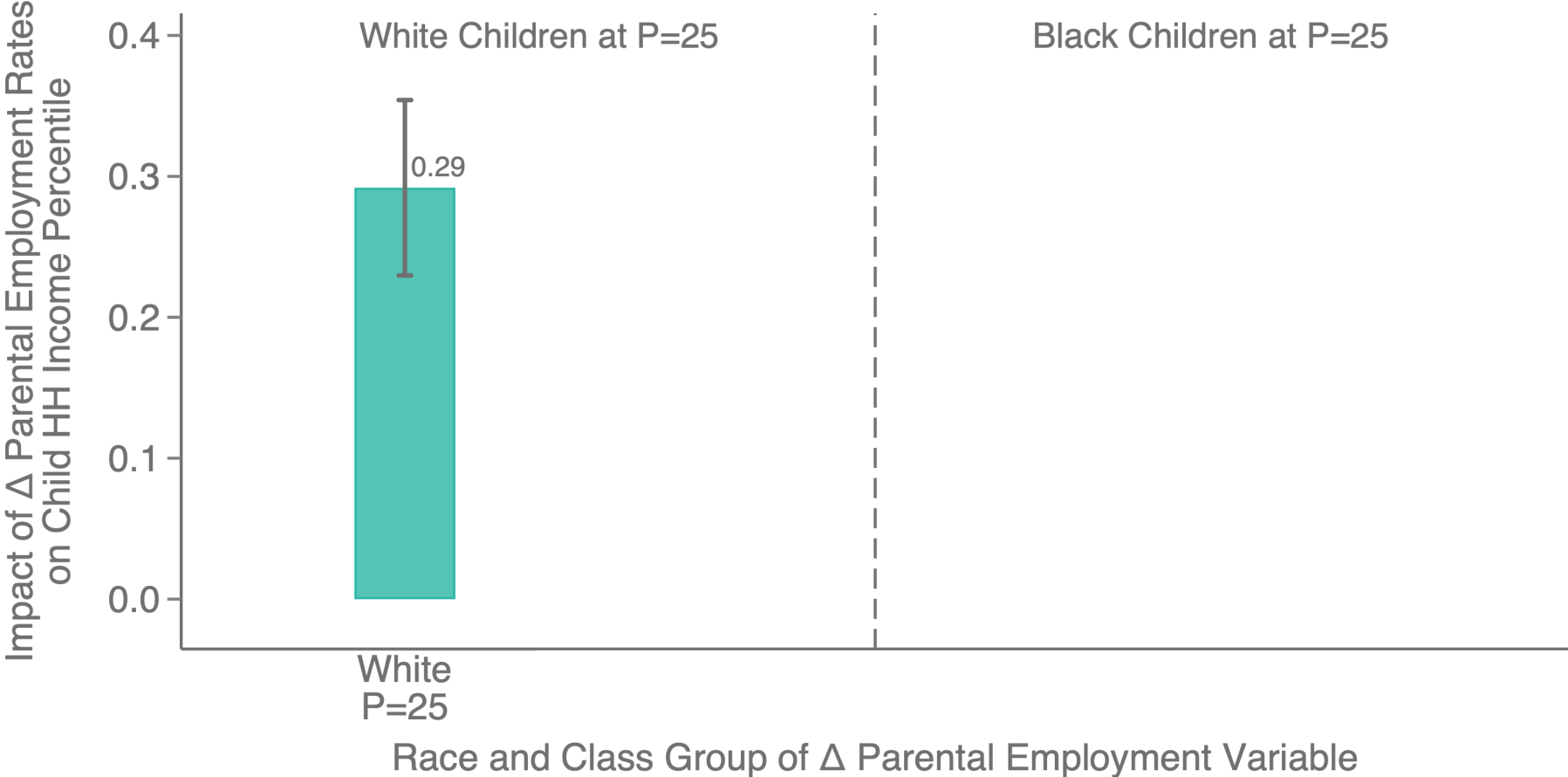
Changes in Children's Income Percentiles vs. Parent Employment Rates, 1978-92 Cohorts

By County, Race, and Class



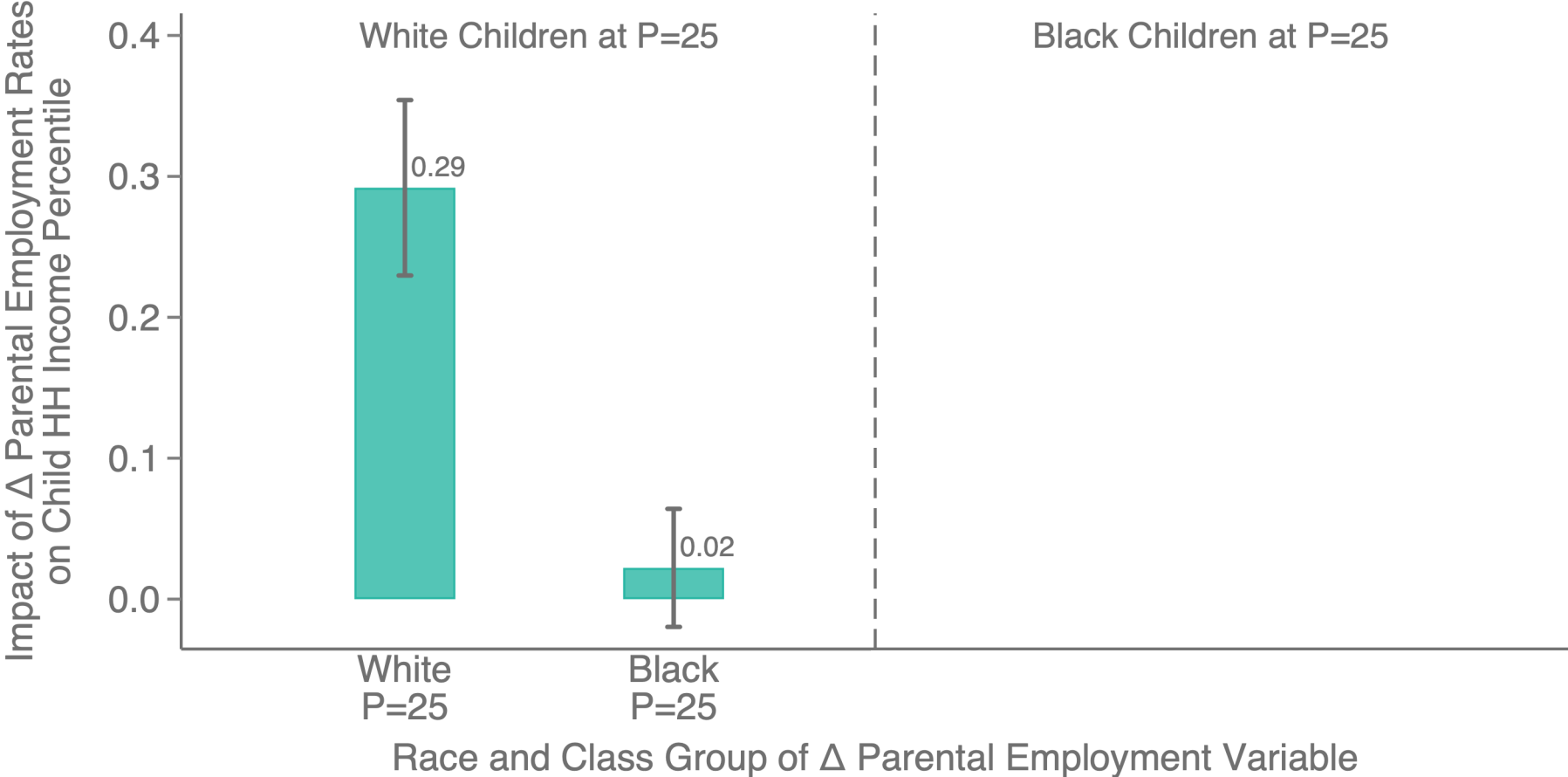
Effect of Group-Specific Changes in Parent Employment Rates on Children's Incomes

Multivariable OLS Regression Estimates



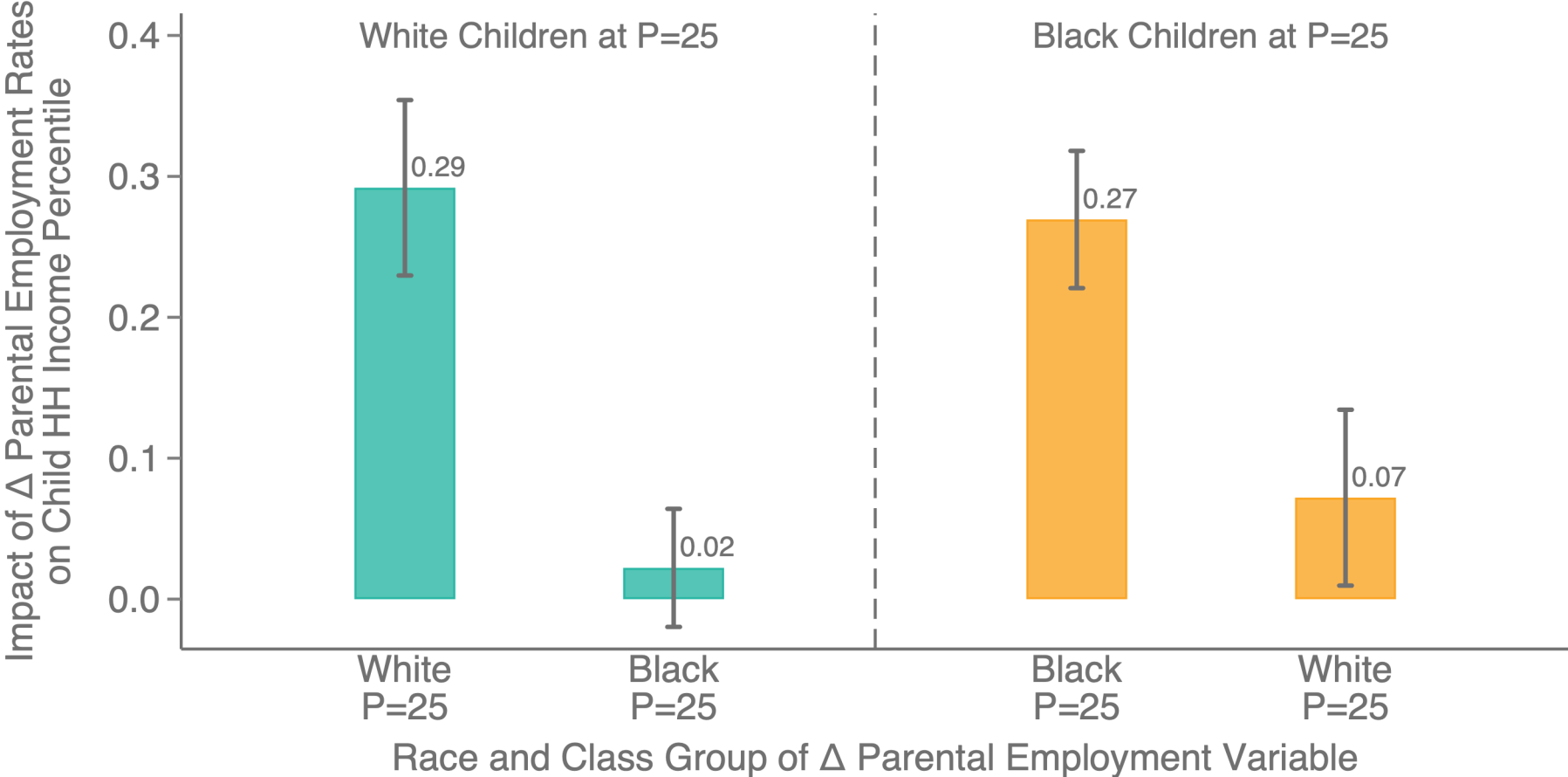
Effect of Group-Specific Changes in Parent Employment Rates on Children's Incomes

Multivariable OLS Regression Estimates



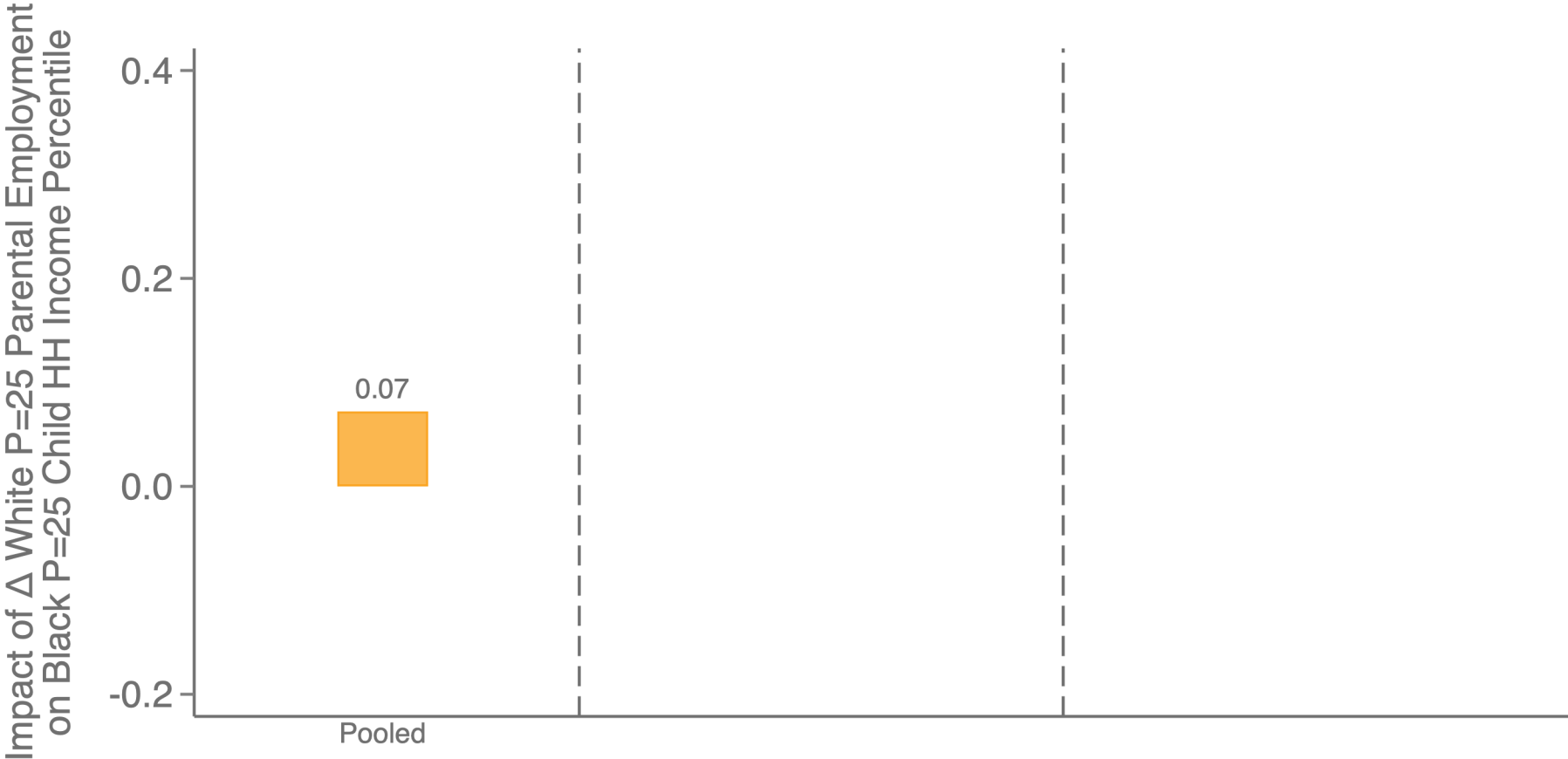
Effect of Group-Specific Changes in Parent Employment Rates on Children's Incomes

Multivariable OLS Regression Estimates



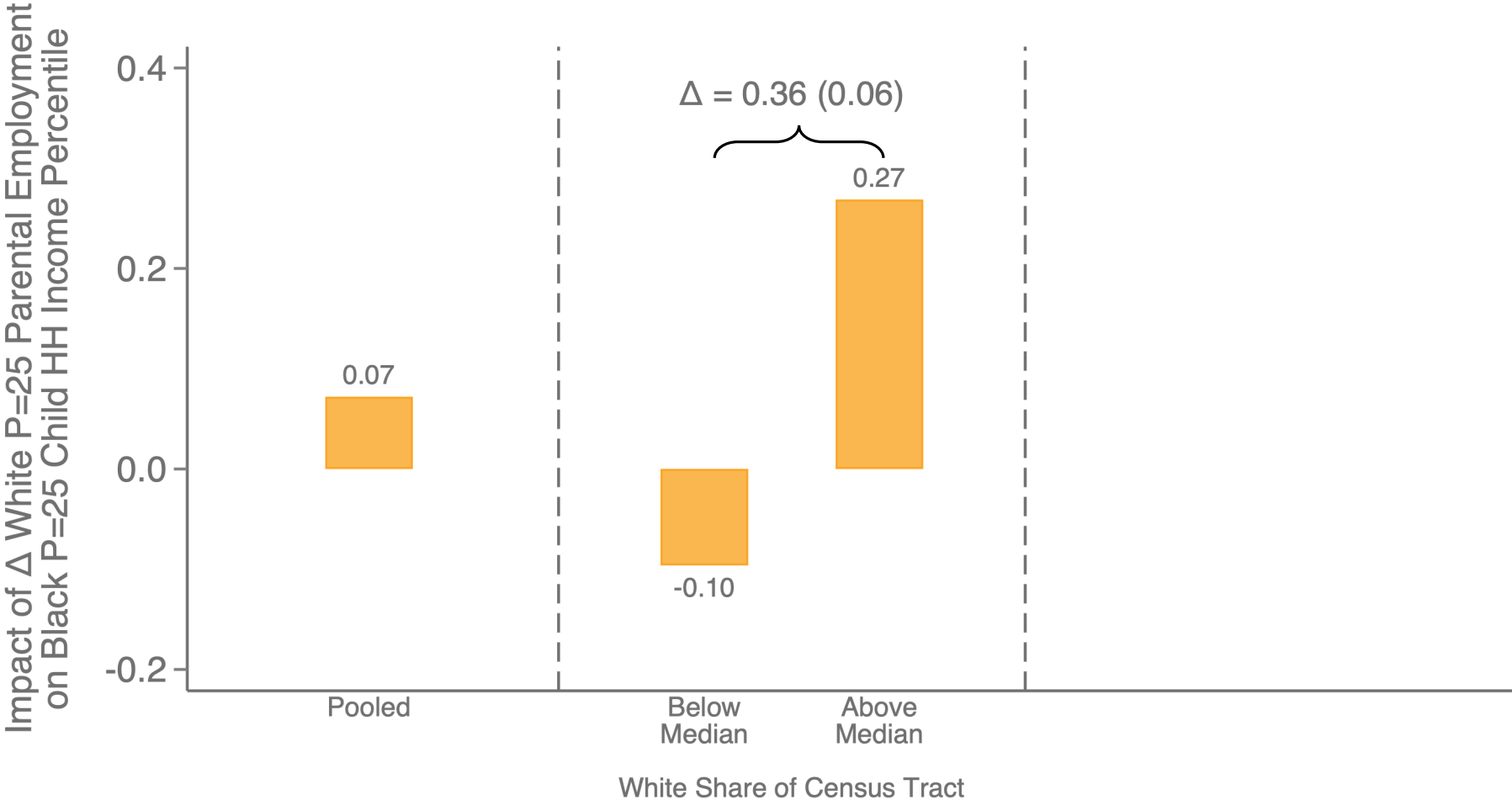
Effect of Changes in White Parents' Employment Rates on Black Children's Incomes

Multivariable OLS Regression Estimates



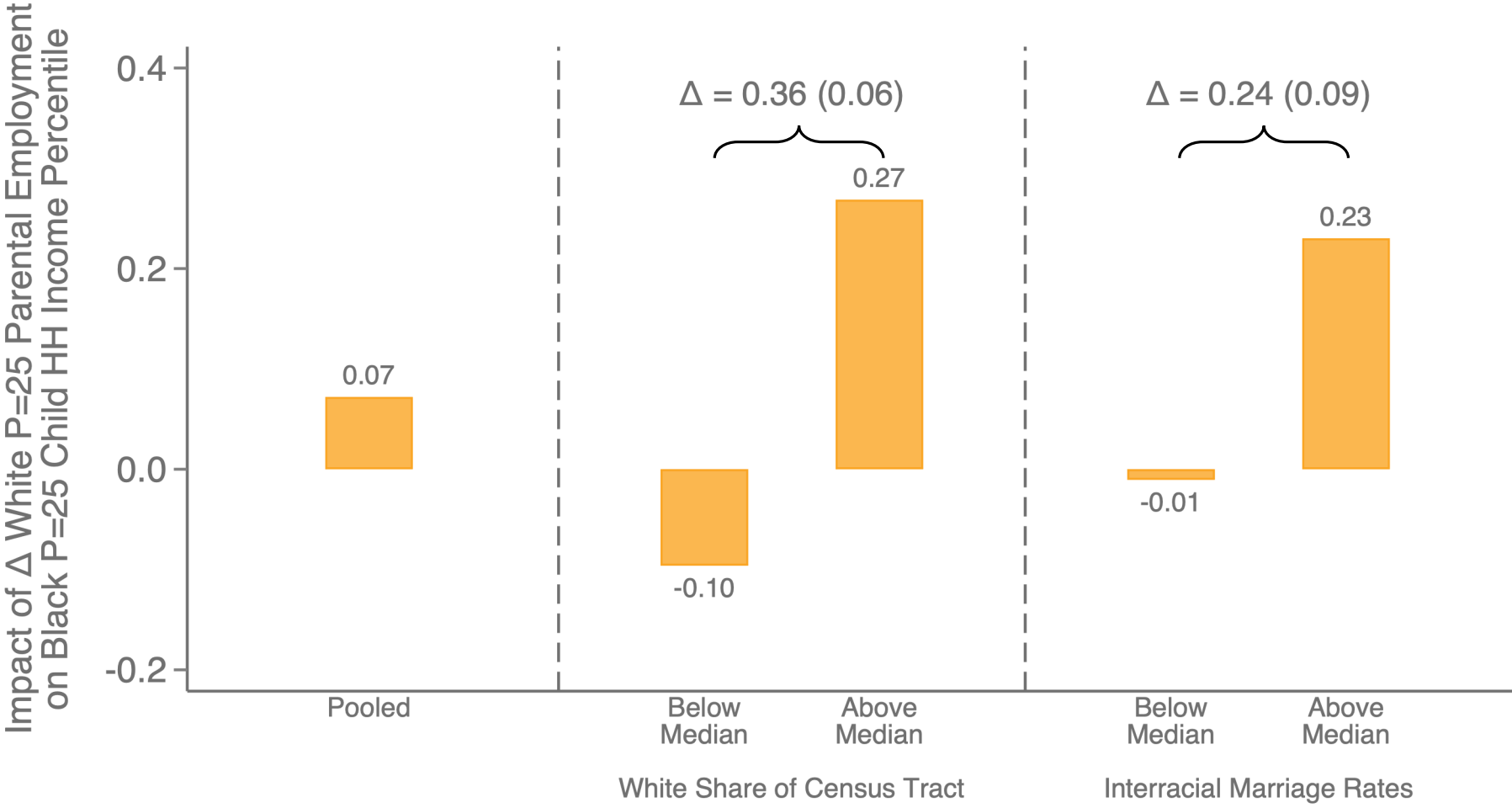
Effect of Changes in White Parents' Employment Rates on Black Children's Incomes

Multivariable OLS Regression Estimates



Effect of Changes in White Parents' Employment Rates on Black Children's Incomes

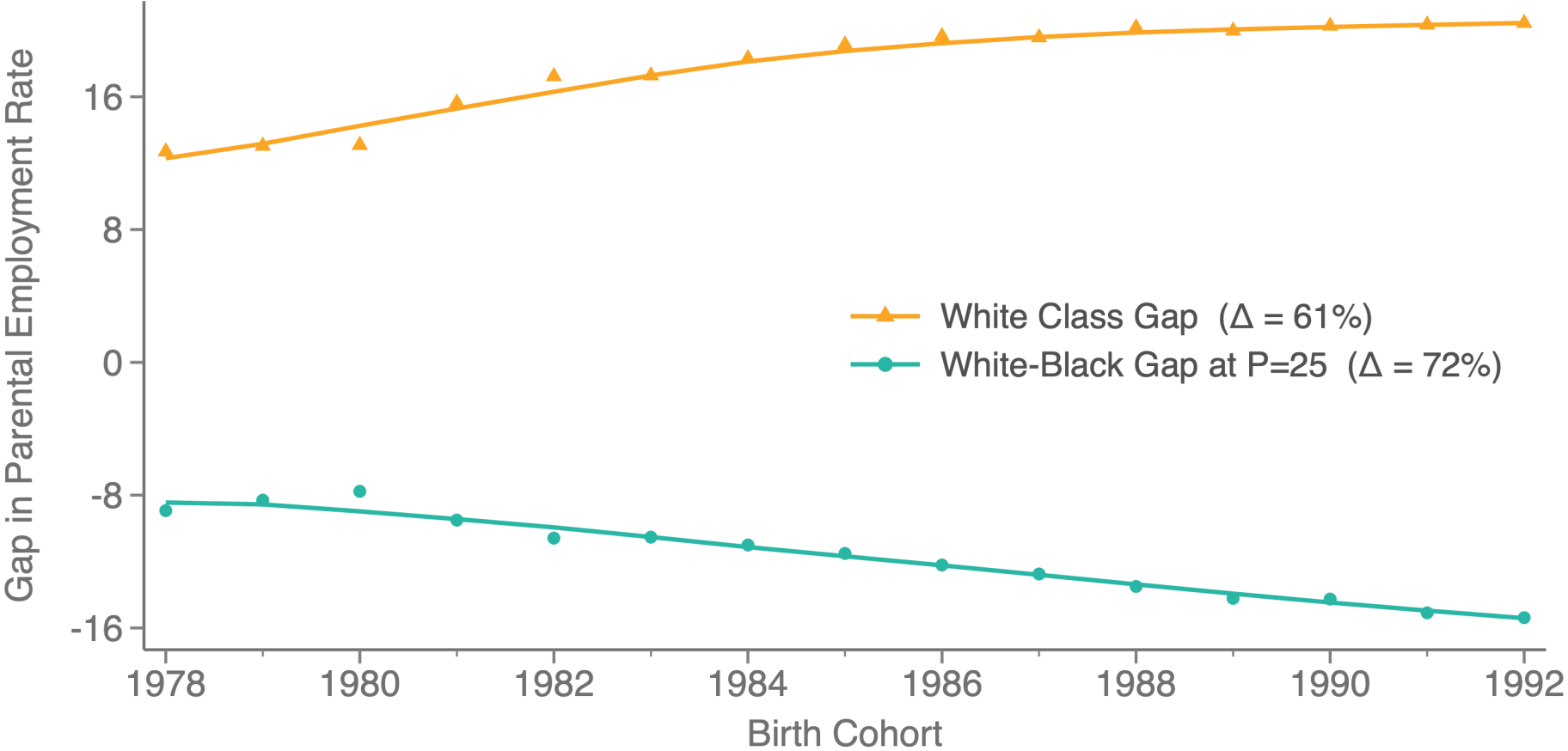
Multivariable OLS Regression Estimates



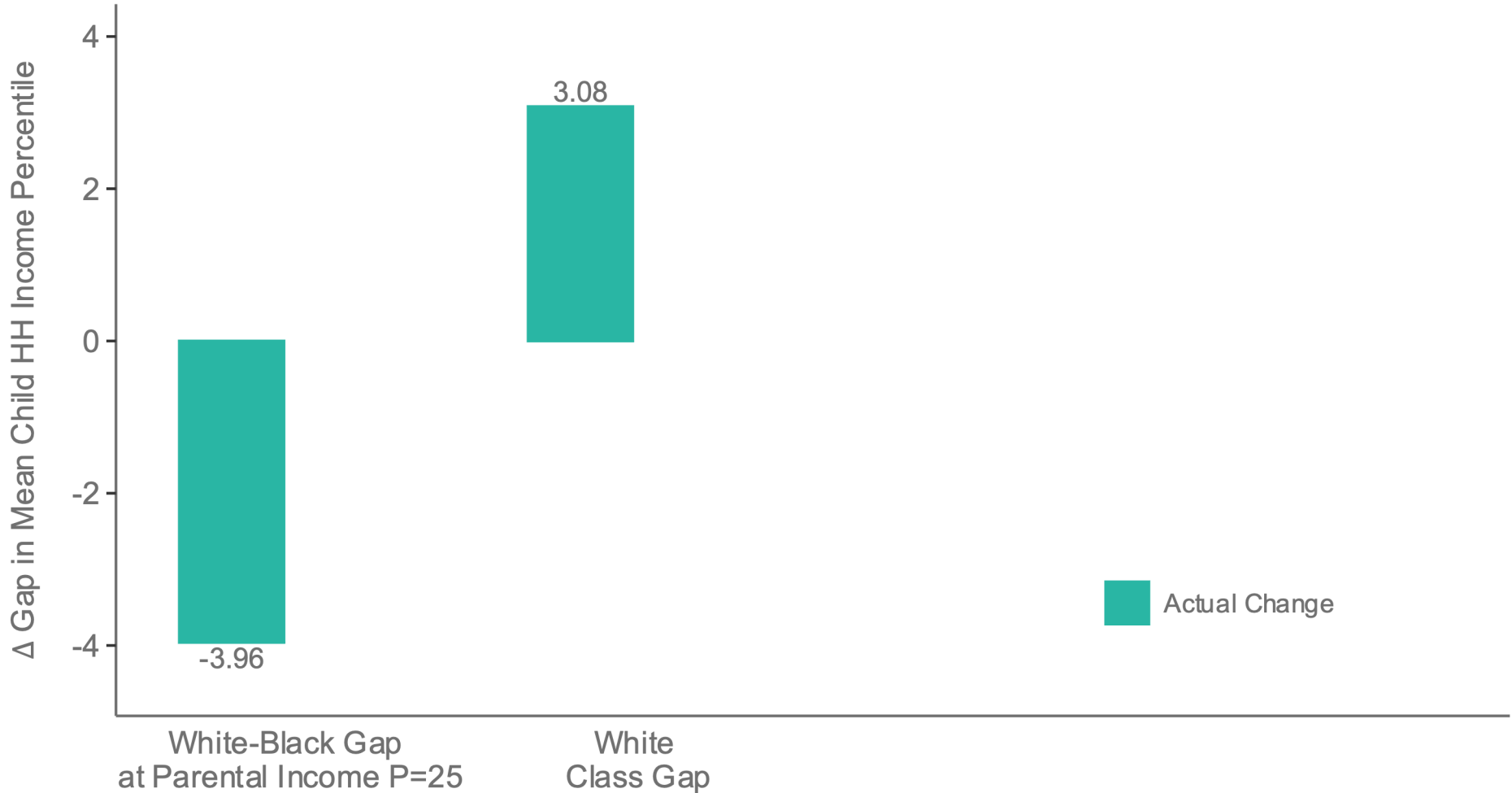
Conclusion: Explaining Shrinking Race Gaps and Growing Class Gaps

Growing Class Gaps, Shrinking Race Gaps in Parent Employment

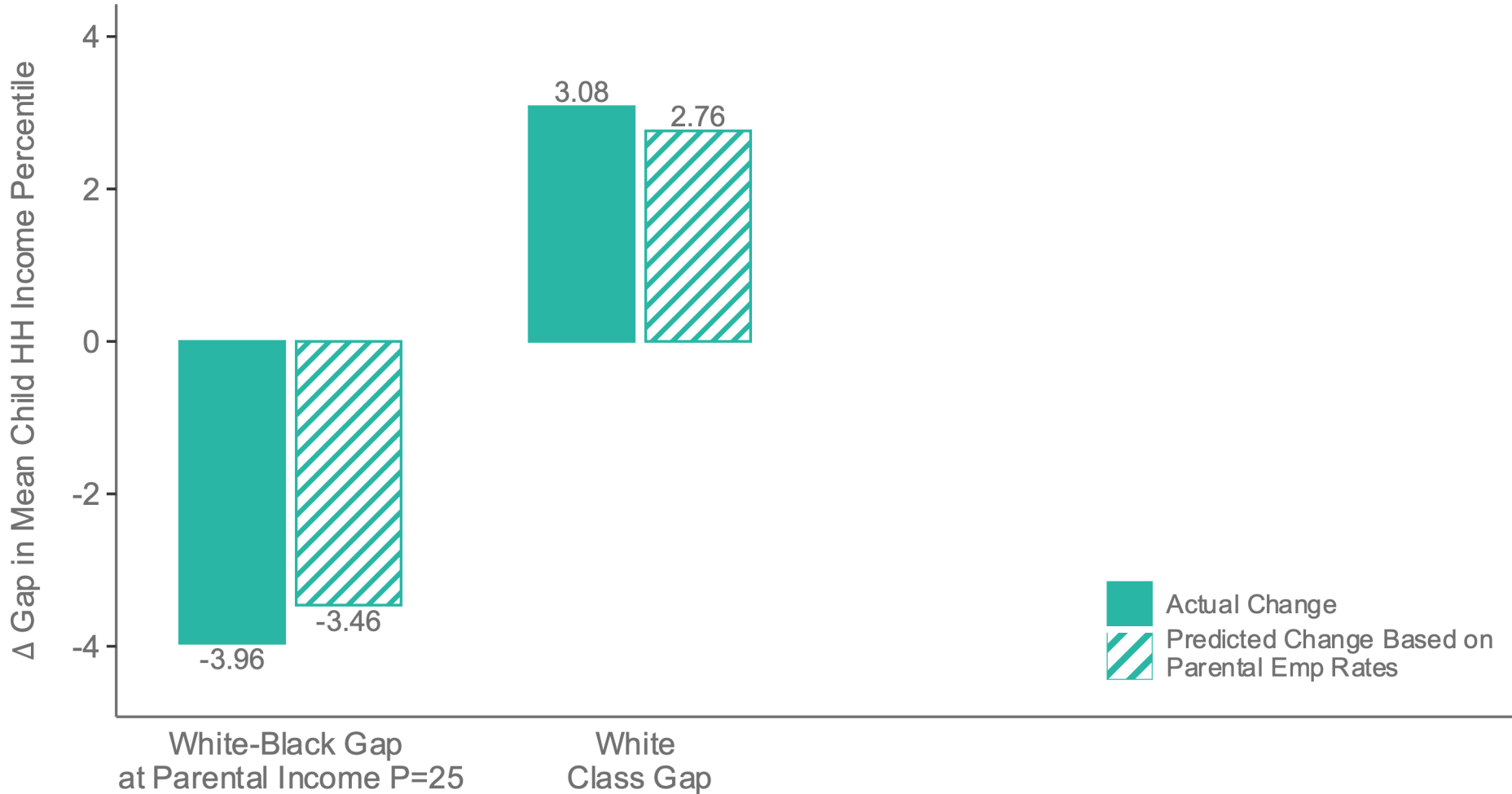
White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



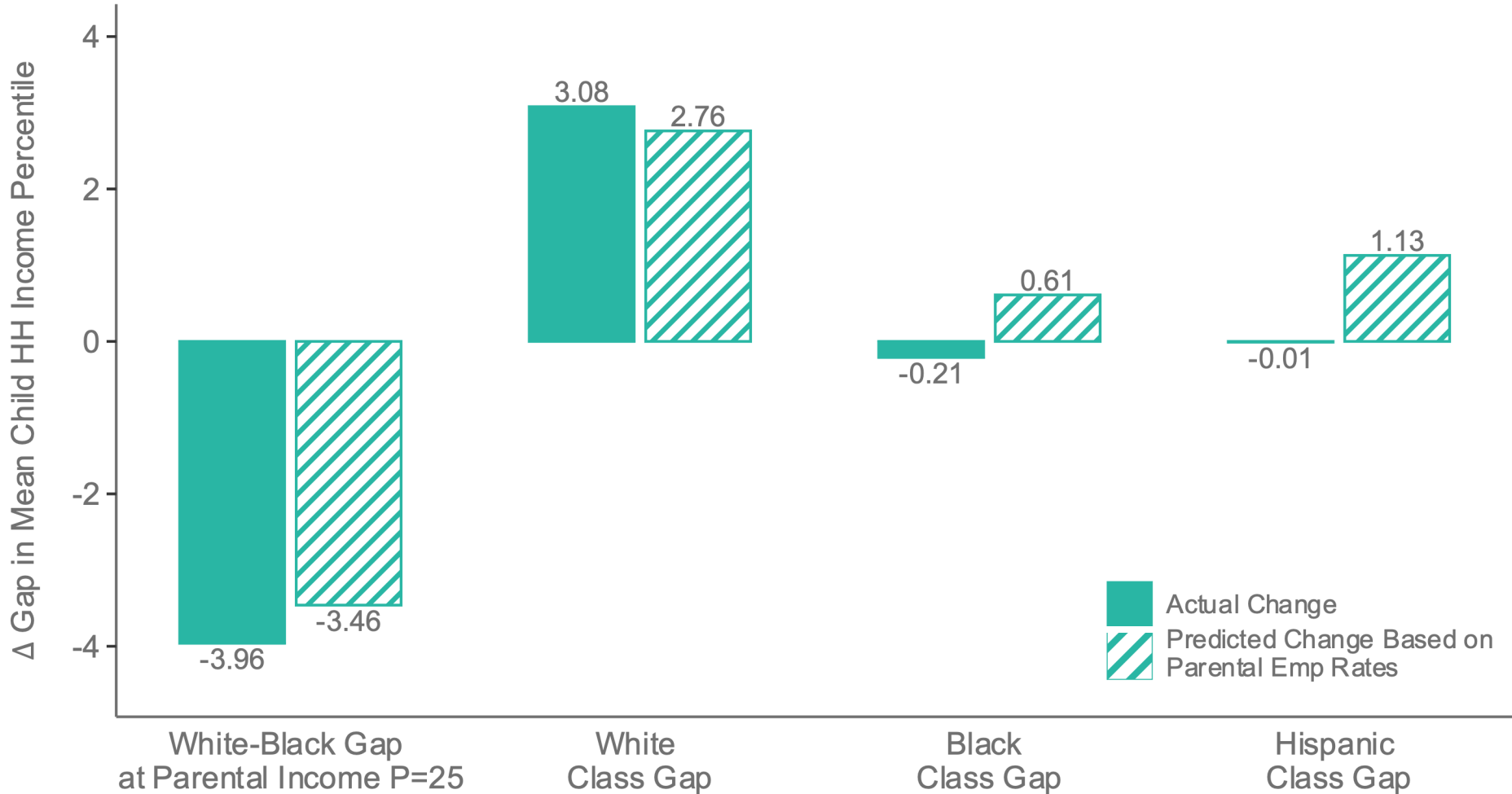
Explaining National Trends in Intergenerational Mobility Gaps by Race and Class



Explaining National Trends in Intergenerational Mobility Gaps by Race and Class



Explaining National Trends in Intergenerational Mobility Gaps by Race and Class



Implications for Increasing Mobility Going Forward

Implications

- Most important takeaway: changing opportunity is feasible in short timeframes
- What do these findings imply for efforts to increase mobility going forward?
 1. Support **next generation** in communities where parents' employment rates are currently falling (not just current generation)
 2. Focus on **social communities** within neighborhoods – not just neighborhoods as a whole – as unit of change
 3. Provide **social capital** in addition to financial and human capital



New Publicly Available Data on Changes in Opportunity

- Key open question: what interventions can create changes in social communities that increase mobility?
- To support the field in making progress on answering this question, we will release **new data on changes in mobility**



Trends in Economic Mobility Across Areas

Changes in mobility rates among largest metro areas

Rank in 1978	Commuting Zone	Rank in 1992
1	Salt Lake City	1
2	Minneapolis	8
3	Boston	4
4	Manchester	7
5	San Diego	18
46	Raleigh	41
47	Indianapolis	31
48	Detroit	46
49	Atlanta	50
<u>50</u>	<u>Charlotte</u>	<u>38</u>



Trends in Economic Mobility Across Areas

Changes in mobility rates among largest metro areas

Most Improved

Commuting Zone	Rank (78)	Rank (92)
Brownsville	22	3
Austin	38	13
Nashville	43	27
<u>Charlotte</u>	<u>50</u>	<u>38</u>
Grand Rapids	32	14

Least Improved

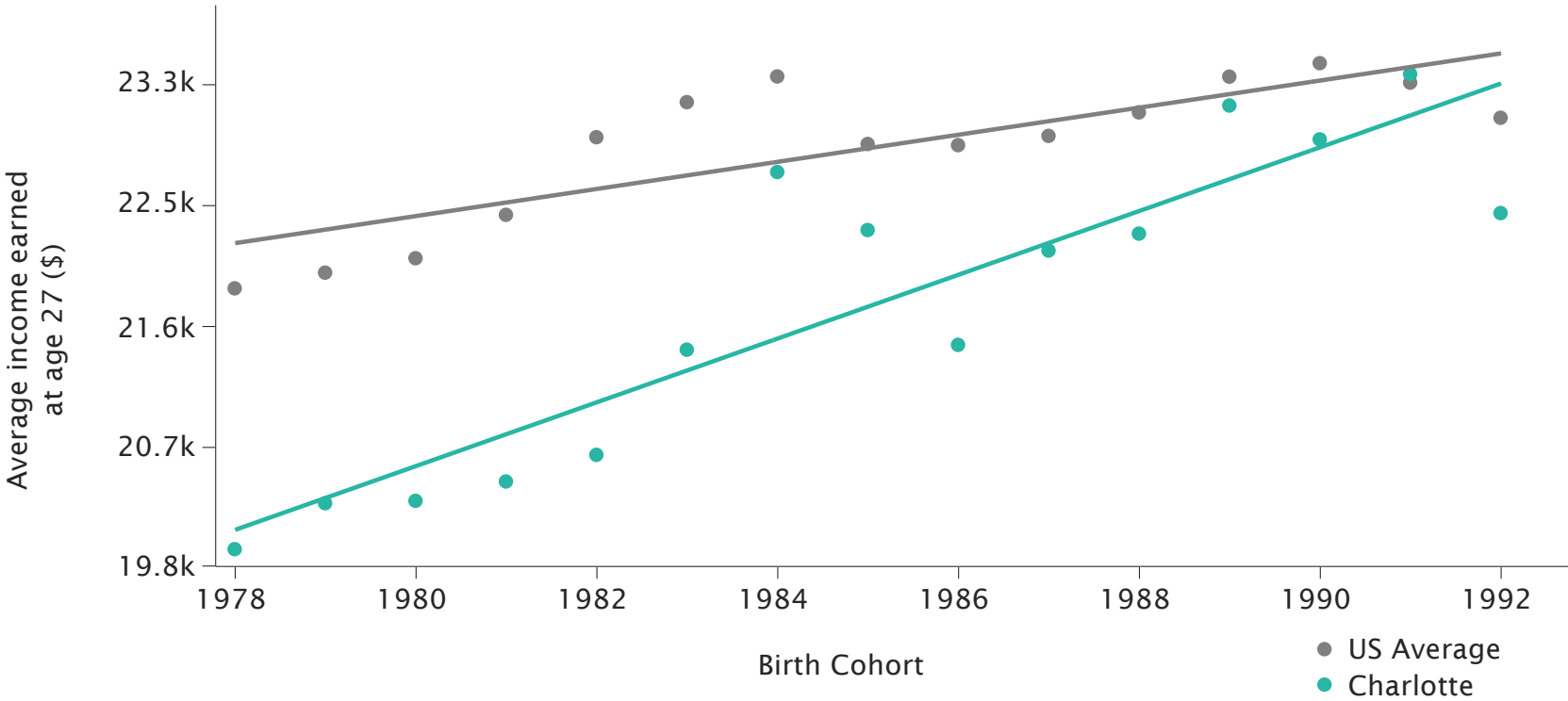
Commuting Zone	Rank (78)	Rank (92)
Providence	8	20
Washington DC	38	13
San Diego	11	26
Las Vegas	17	33
Philadelphia	25	44

Source: Chetty, Dobbie, Goldman, Porter, Yang (2023)



Trends in Economic Mobility in Charlotte

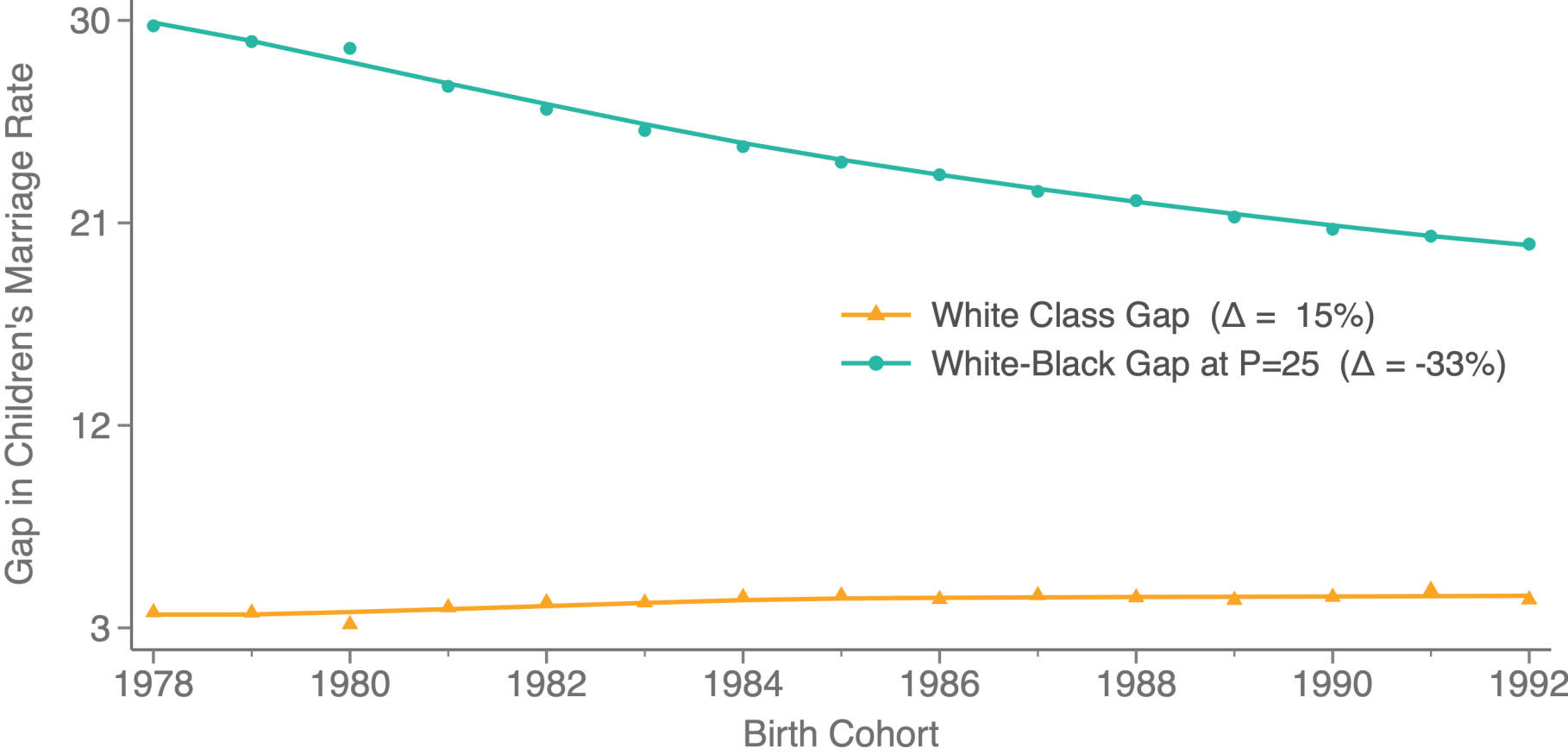
Black Children Growing up in Families at 25th Percentile of National Income Distribution



Appendix: Trends in Other Outcomes

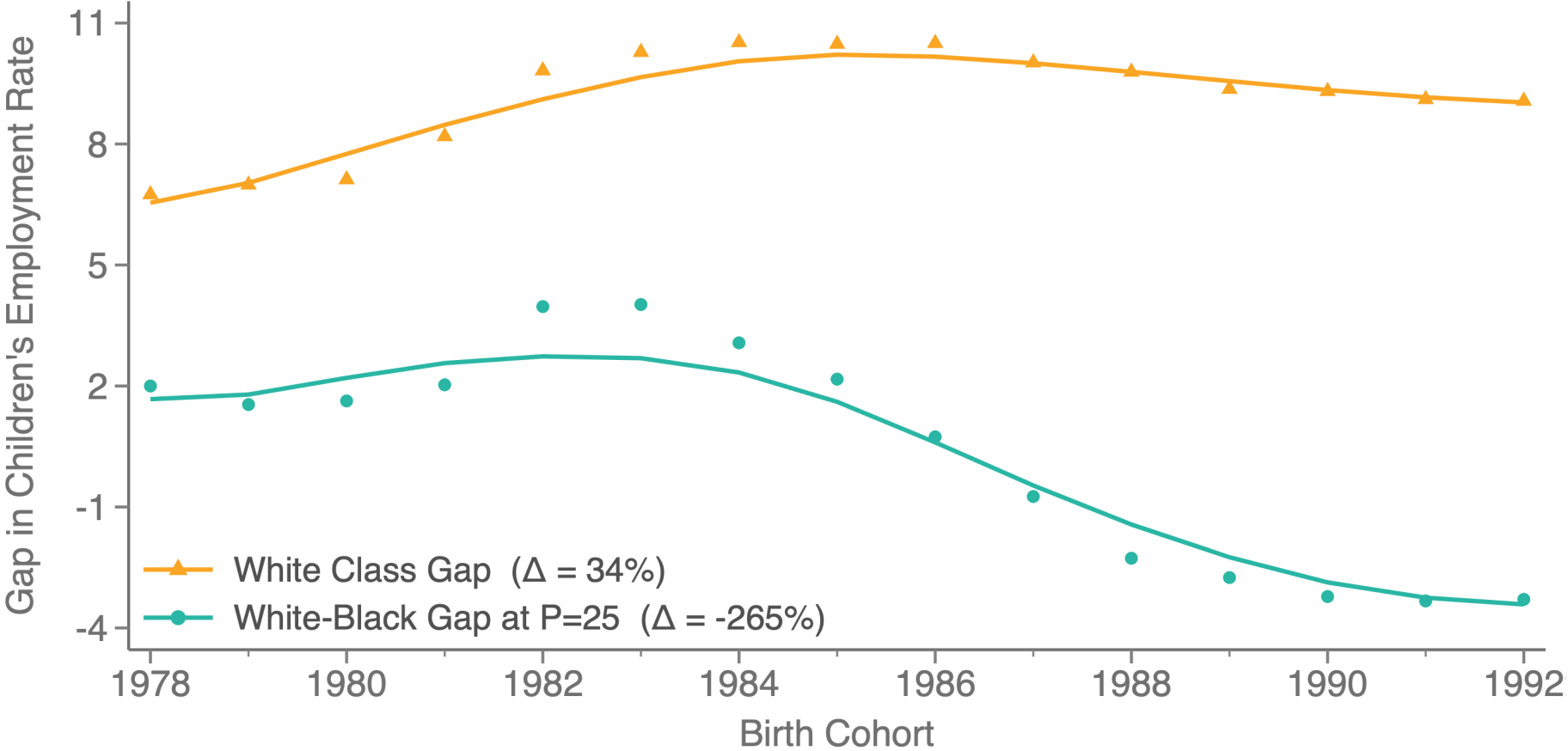
Growing Class Gaps, Shrinking Race Gaps in Marriage Rates at Age 27

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



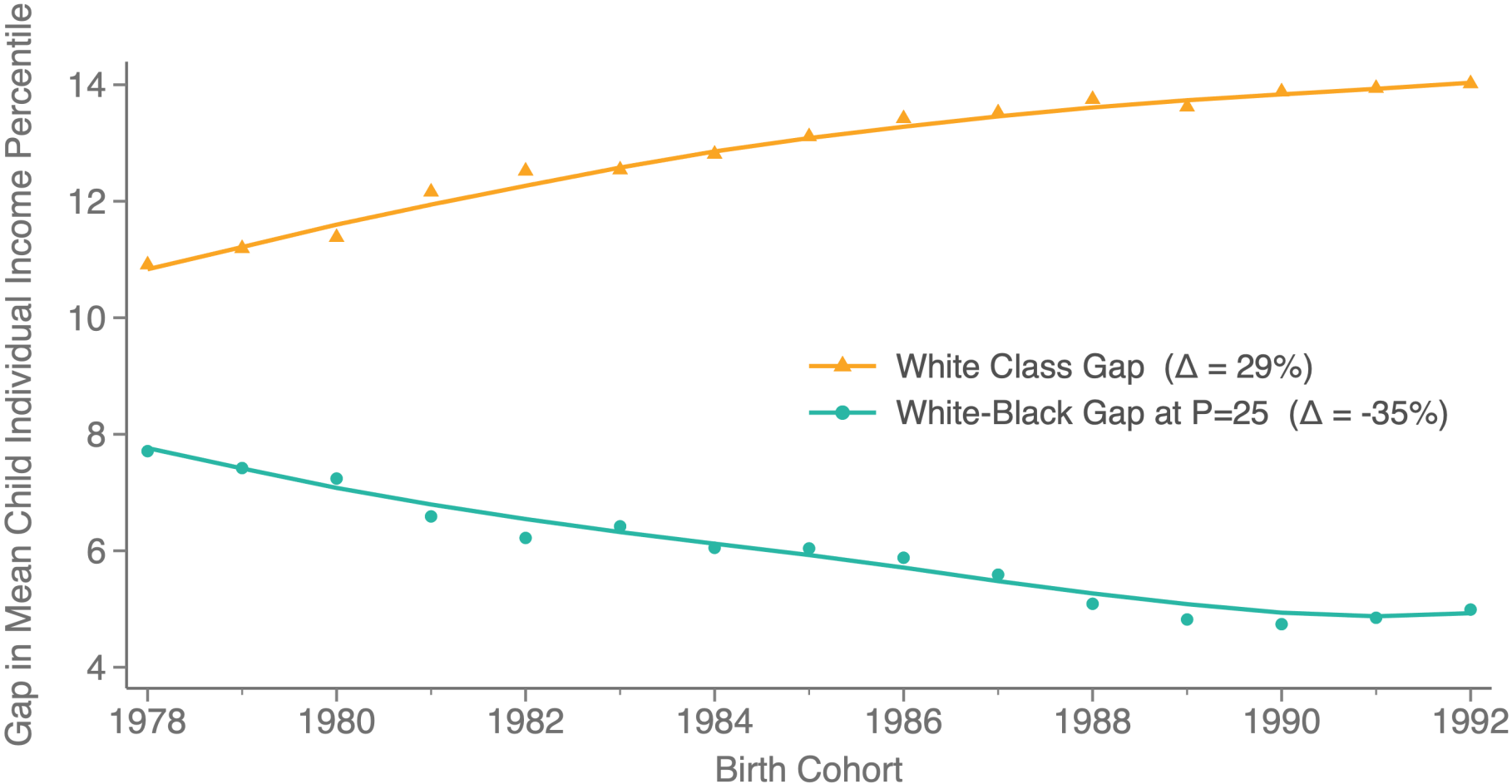
Growing Class Gaps, Shrinking Race Gaps in Employment Rate at Age 27

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



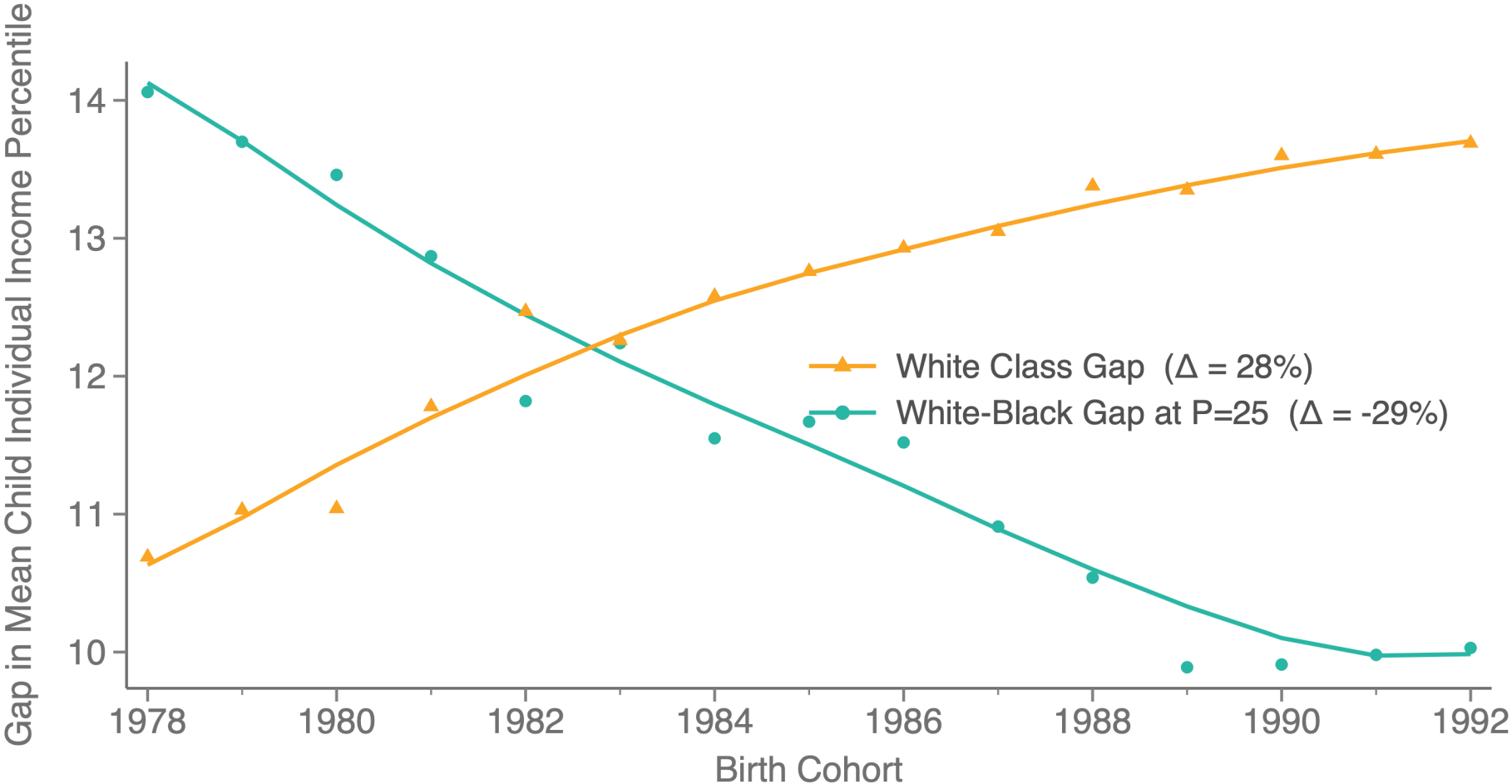
Growing Class Gaps, Shrinking Race Gaps in Individual Income Percentiles (Pooled)

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



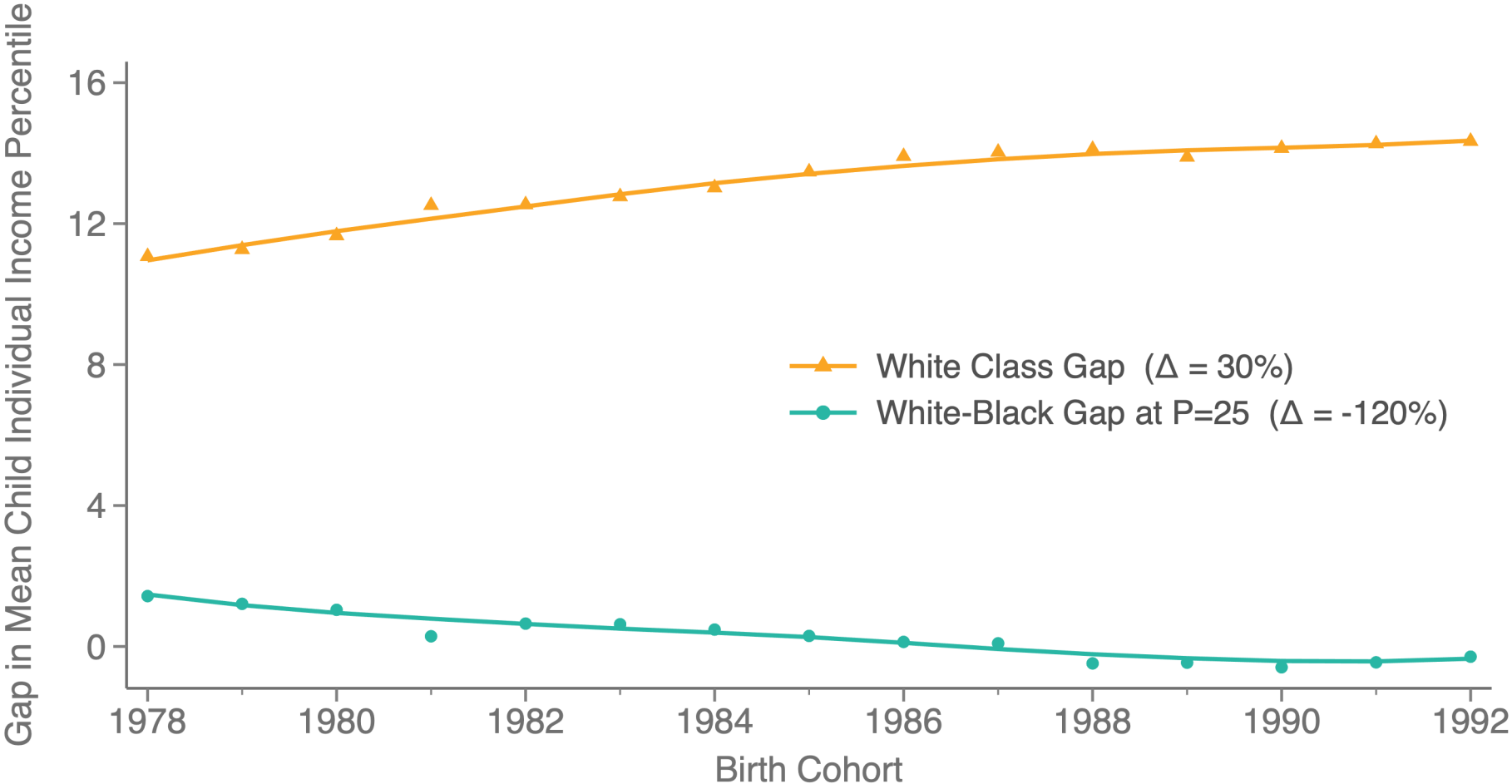
Growing Class Gaps, Shrinking Race Gaps in Individual Income Percentiles (Men)

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



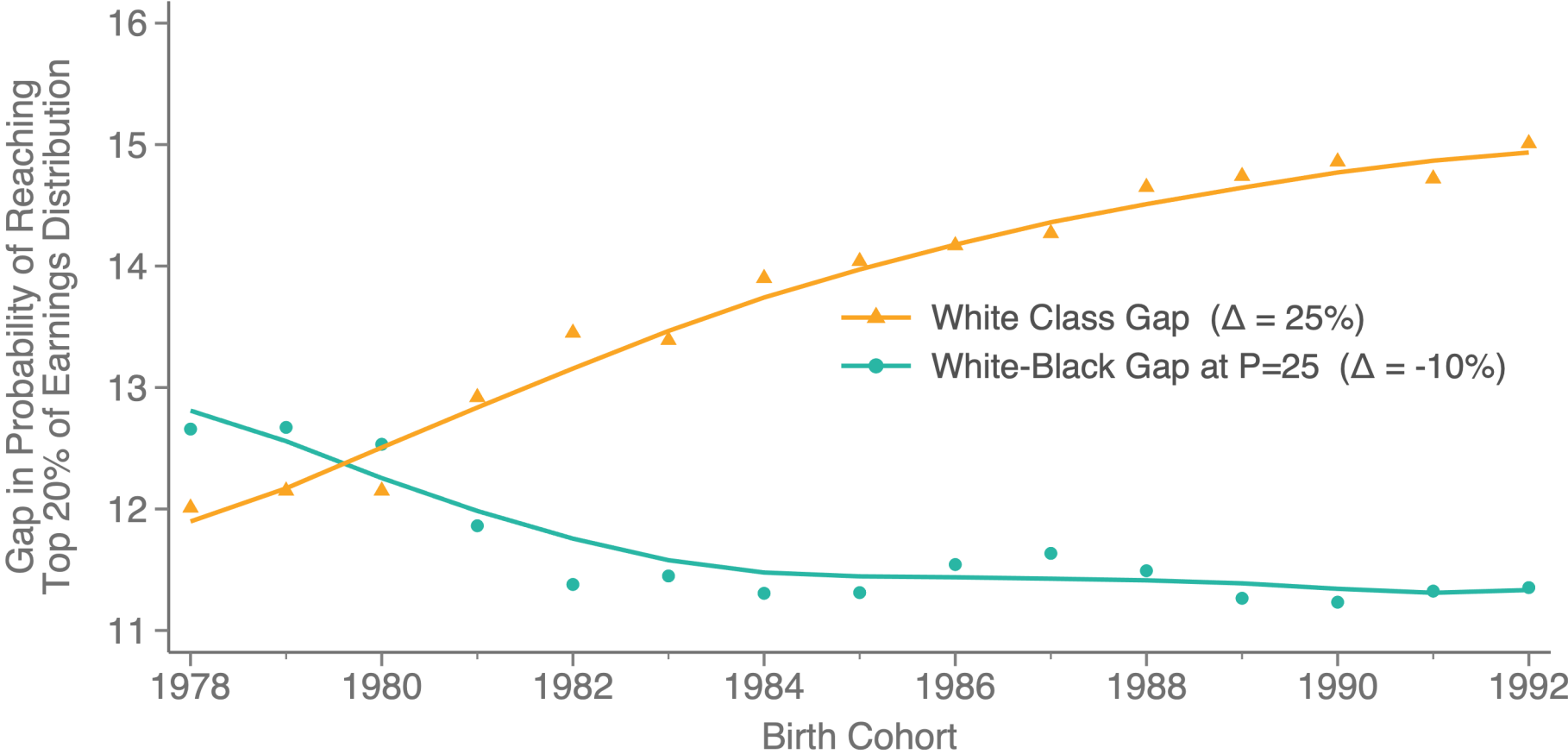
Growing Class Gaps, Shrinking Race Gaps in Individual Income Percentiles (Women)

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



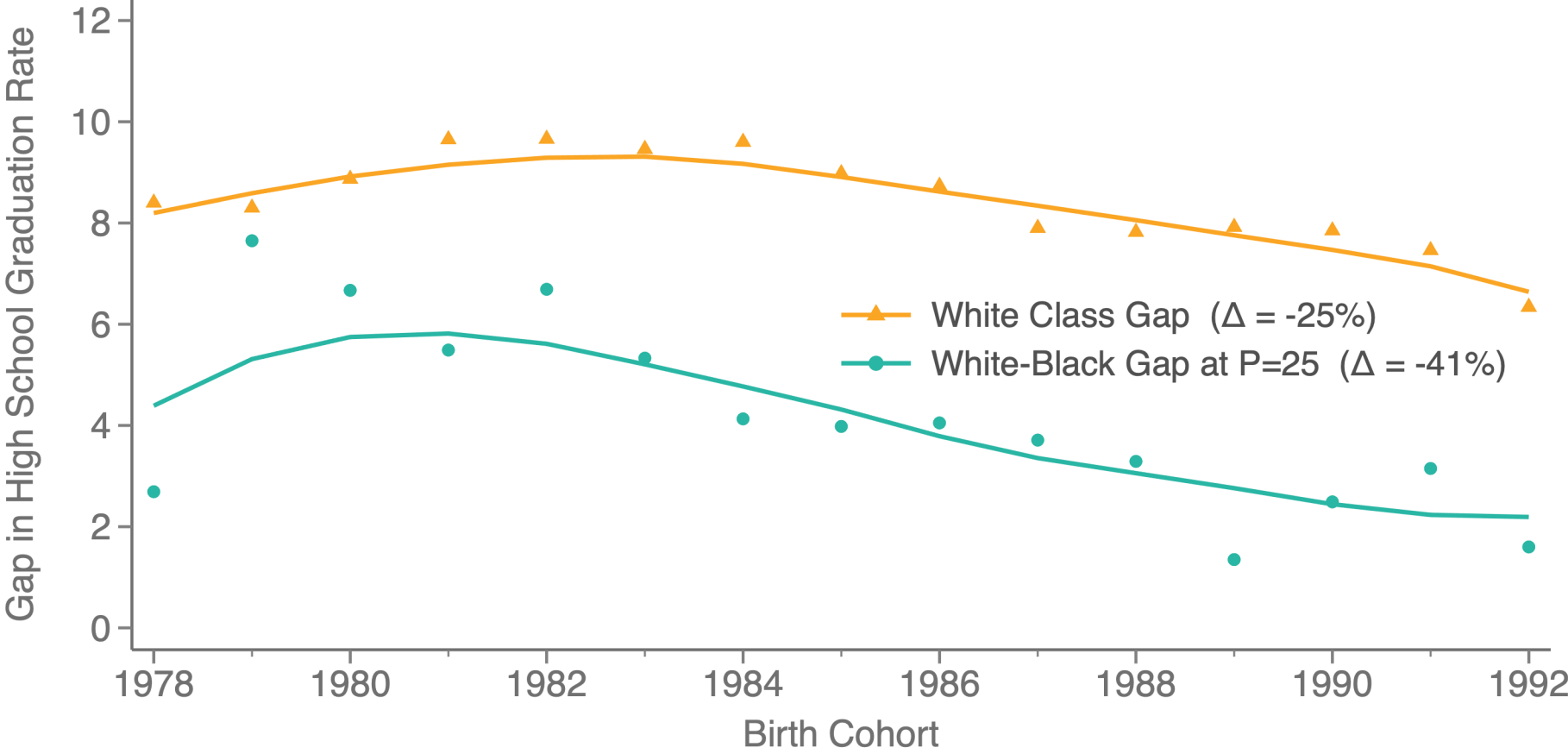
Growing Class Gaps, Shrinking Race Gaps in Reaching Top 20% of Income at Age 27

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



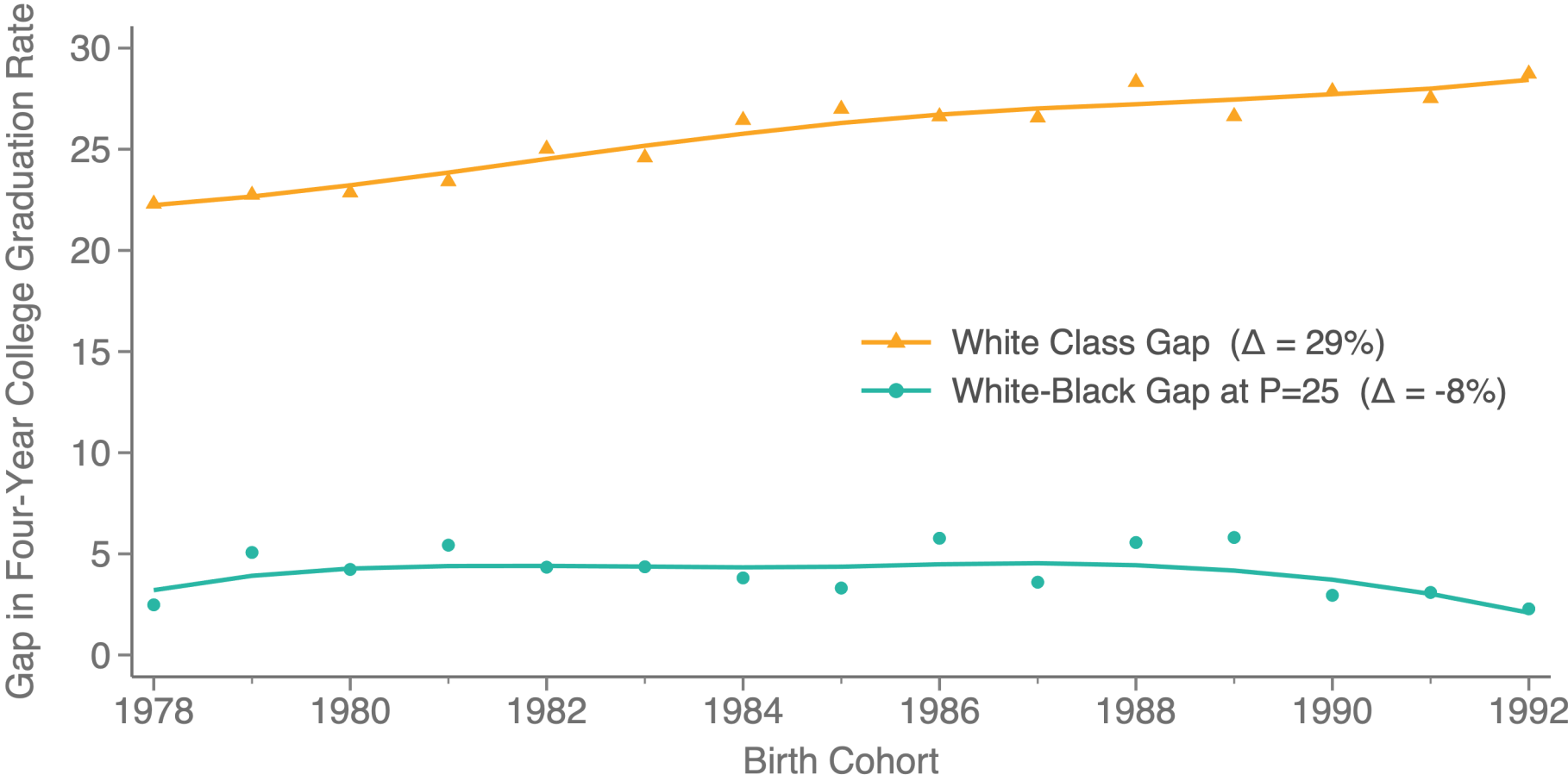
Growing Class Gaps, Shrinking Race Gaps in High School Graduation Rate

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



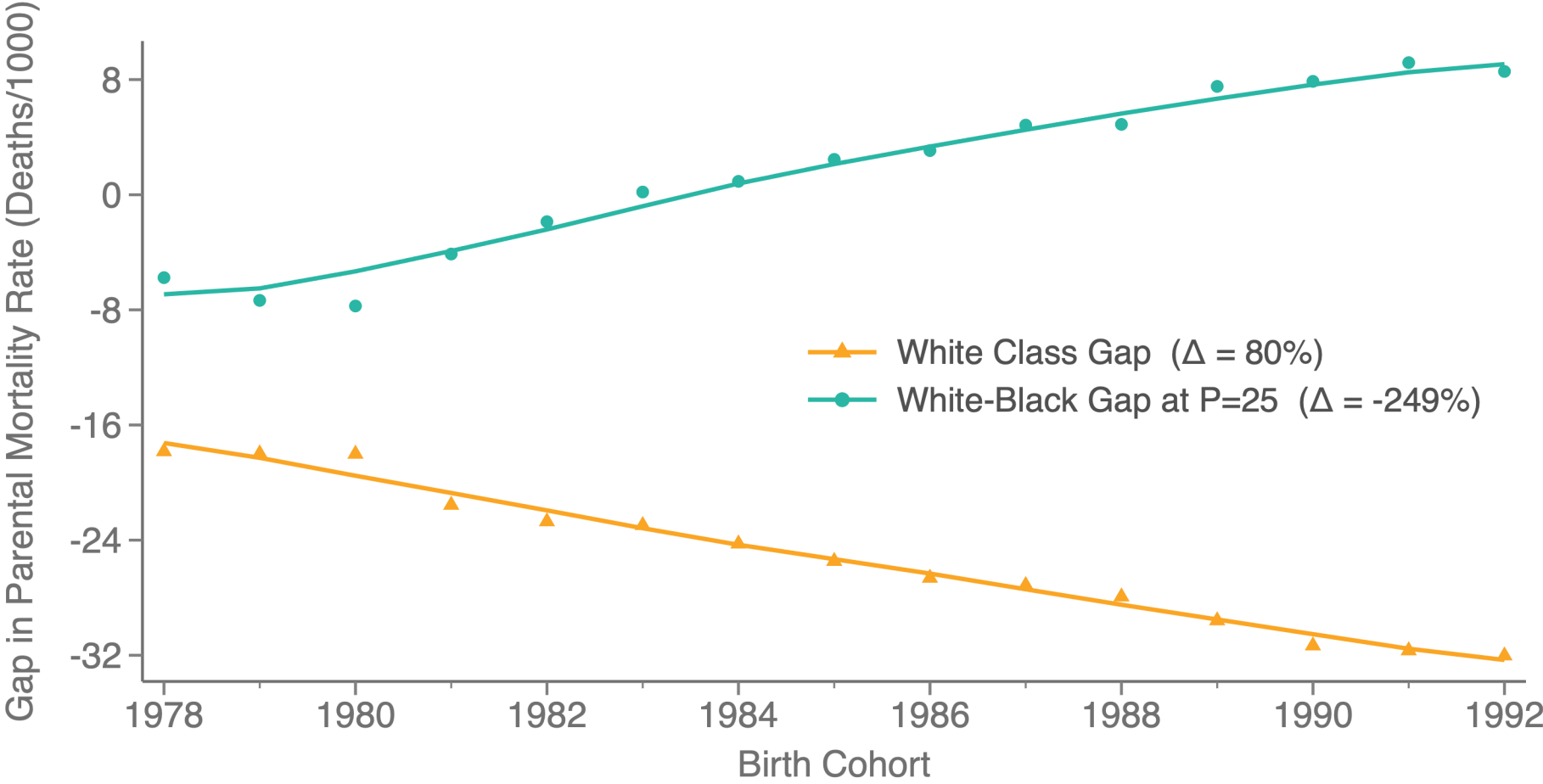
Growing Class Gaps, Shrinking Race Gaps in Four-Year College Graduation Rate

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



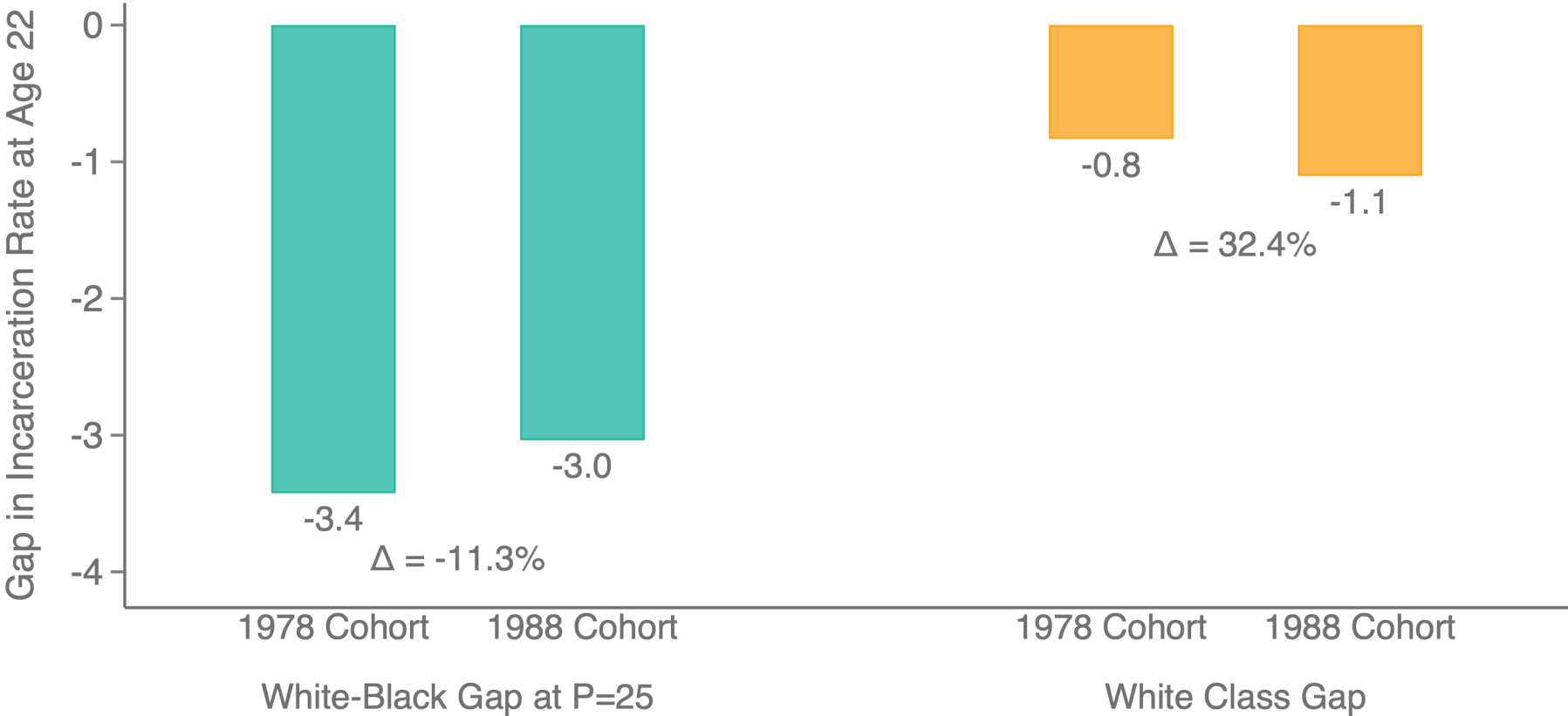
Growing Class Gaps, Shrinking Race Gaps in Parent Mortality Rate

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



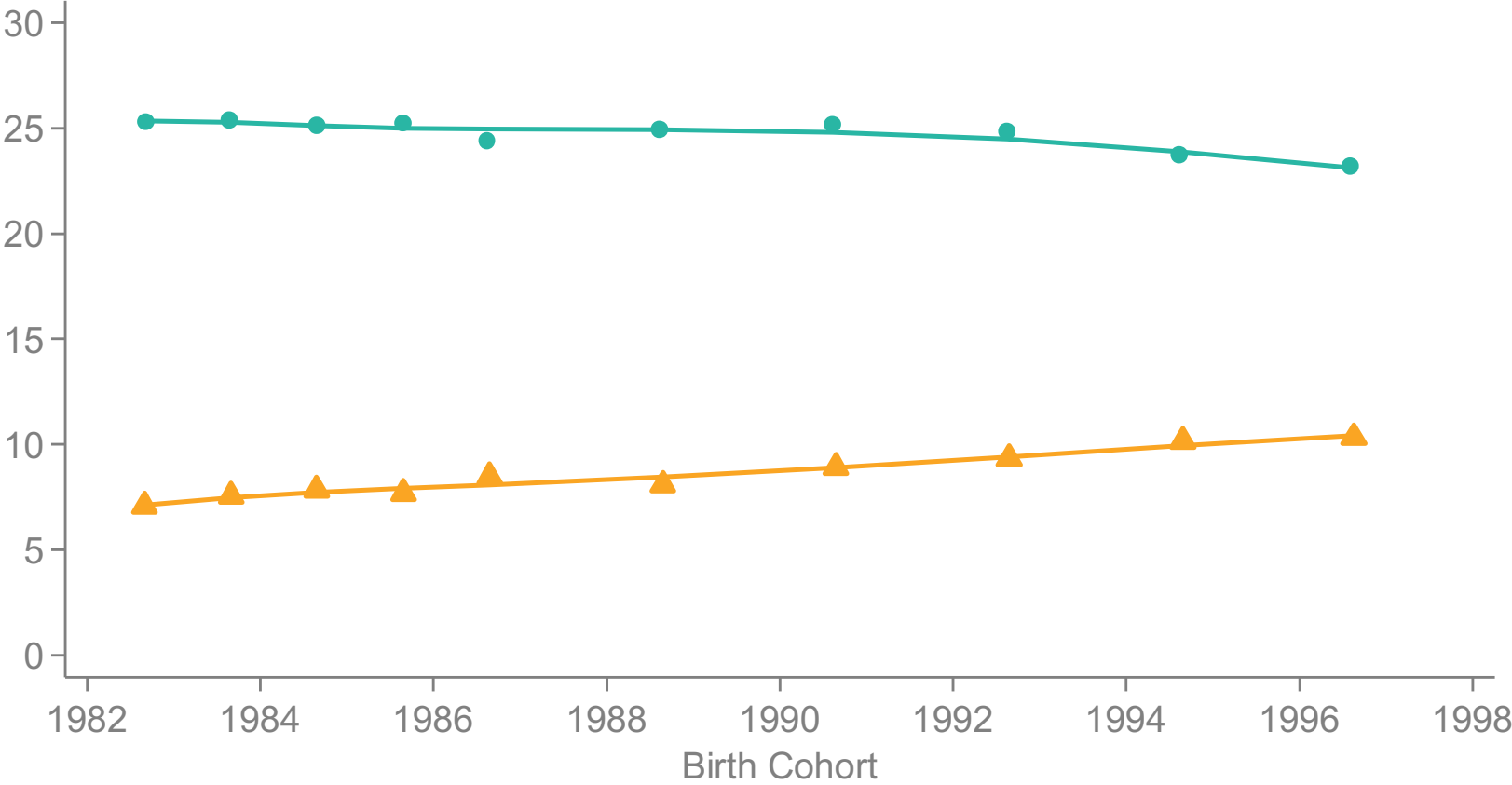
Growing Class Gaps, Shrinking Race Gaps in Incarceration Rate

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



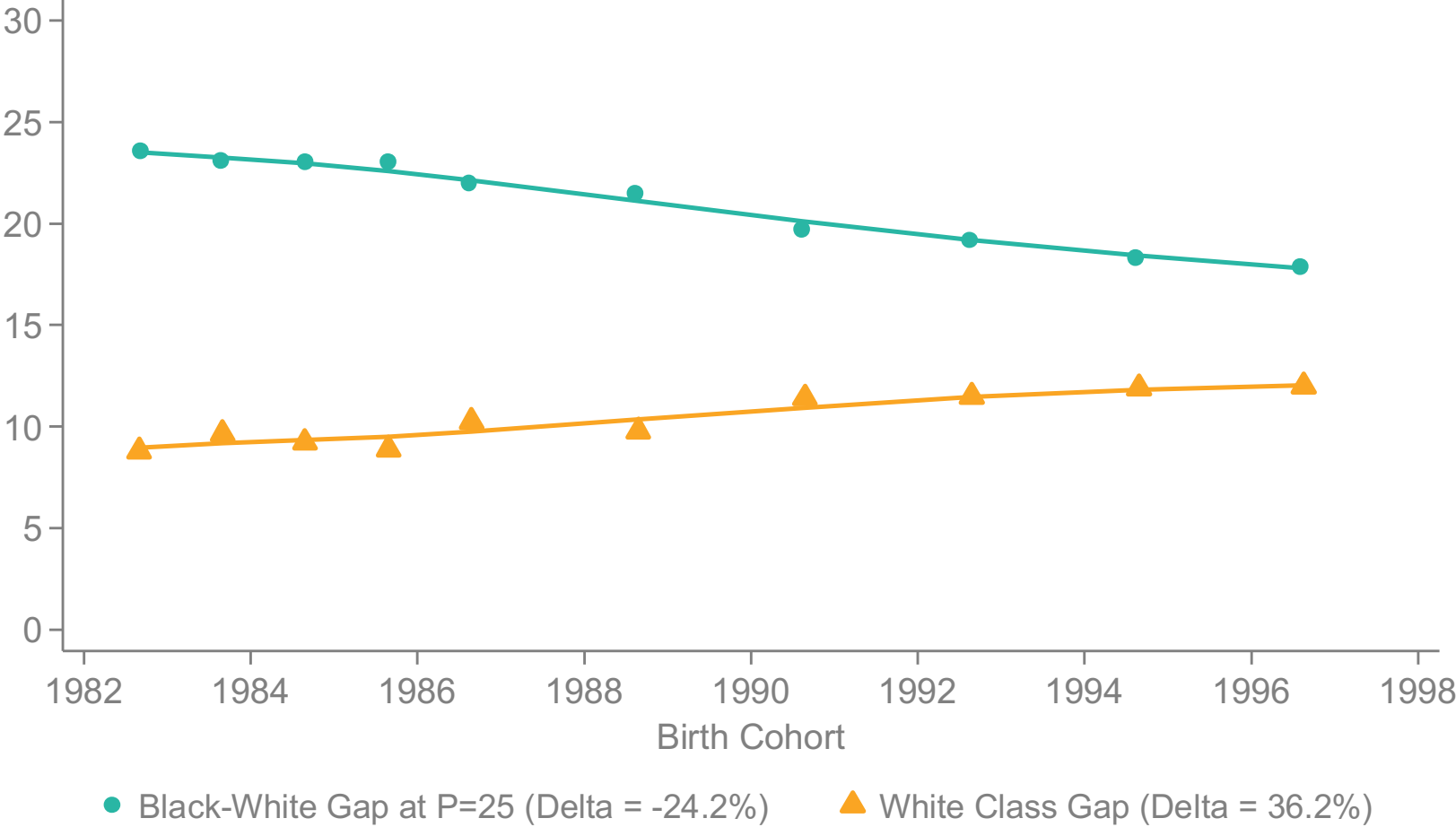
Growing Class Gaps, Shrinking Race Gaps in SAT Percentile Ranks

All States



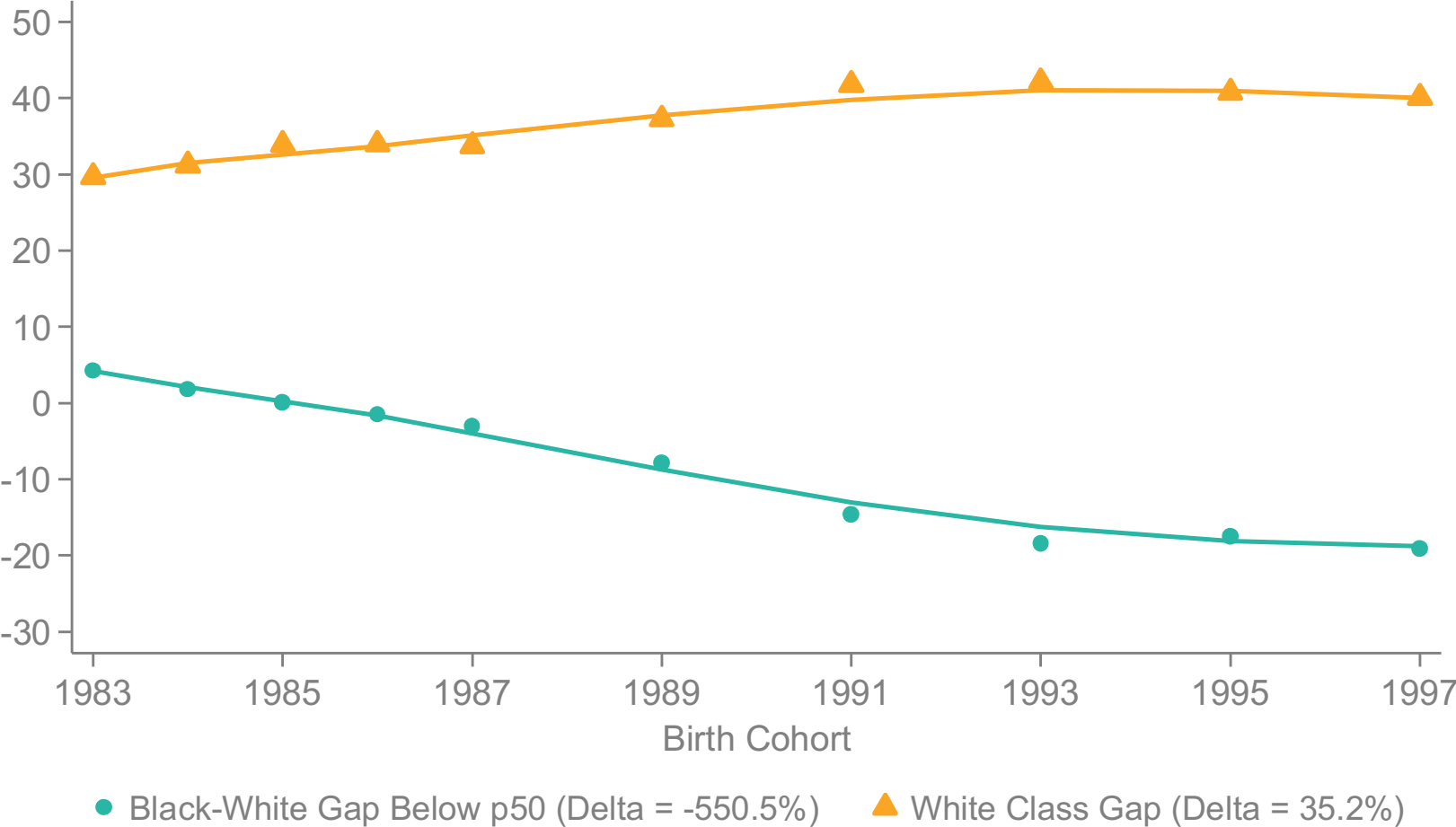
● Black-White Gap at P=25 (Delta = -8.3%) ▲ White Class Gap (Delta = 45.7%)

Growing Class Gaps, Shrinking Race Gaps in SAT/ACT Percentile Ranks



Trends in White-Black and White Class Gaps in SAT/ACT Test-Taking Rates

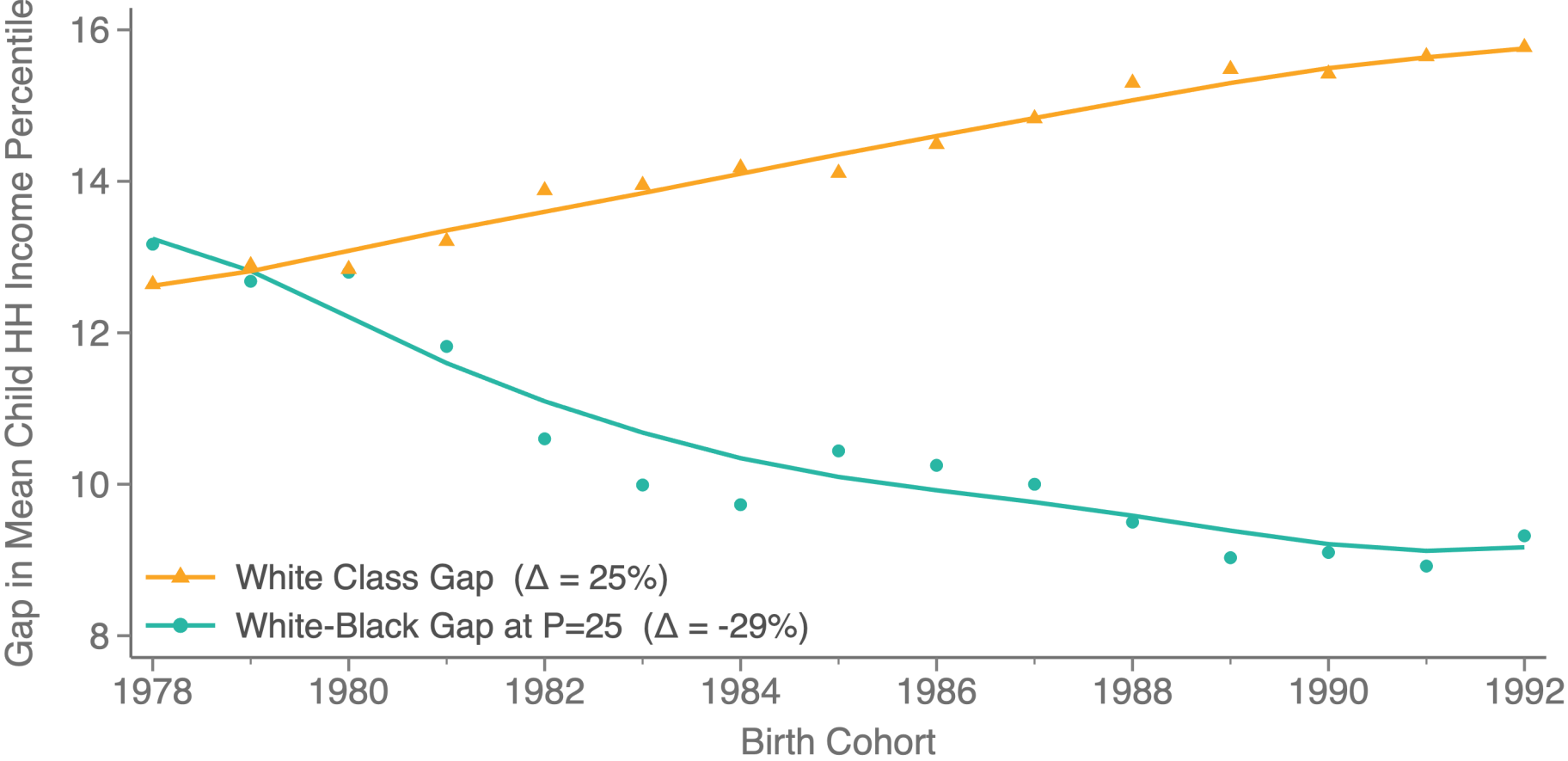
White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort



Appendix: Sensitivity Analysis

Growing Class Gaps, Shrinking Race Gaps

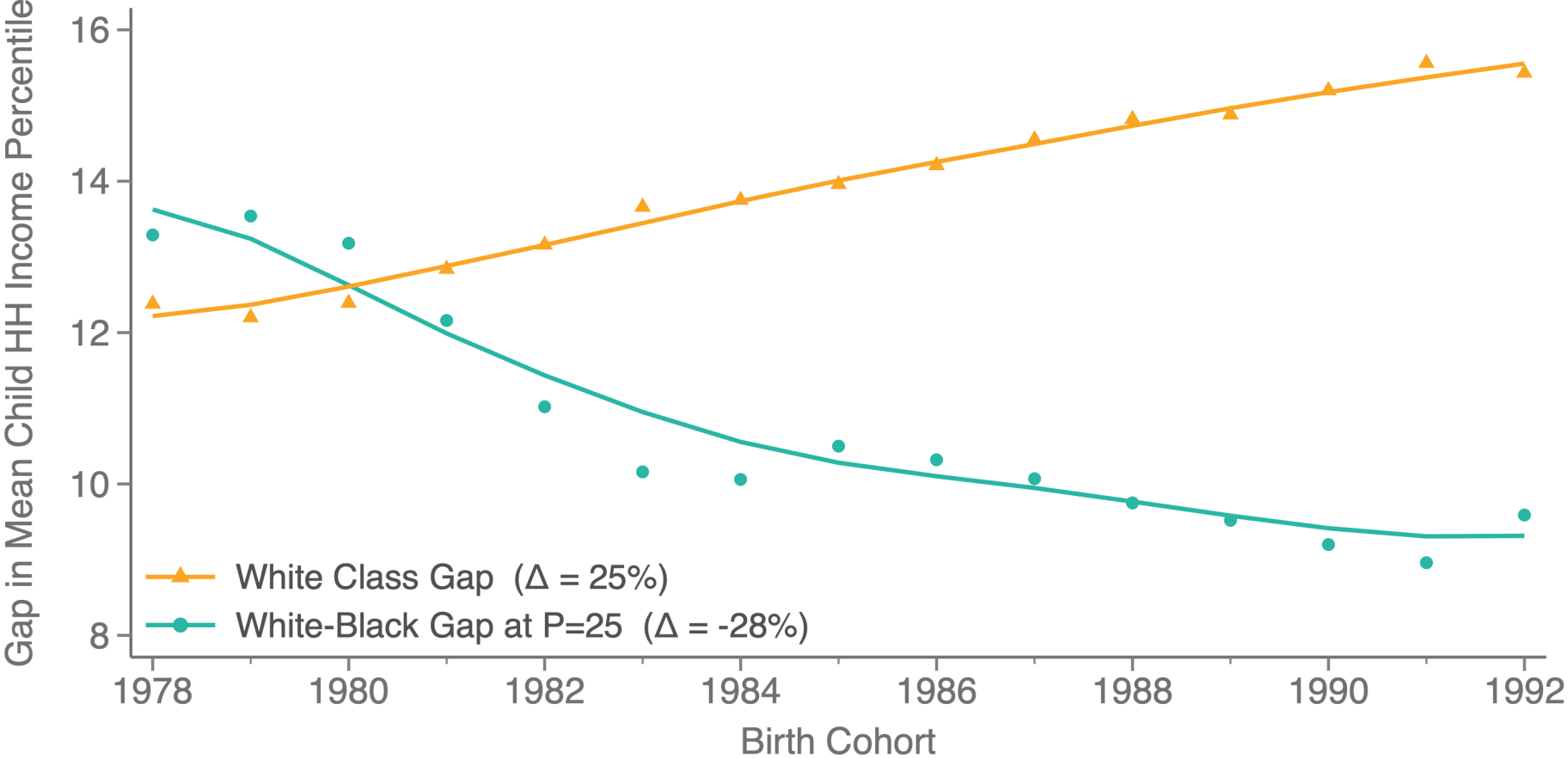
White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort
Parent Income at Child Ages 0-18



Growing Class Gaps, Shrinking Race Gaps

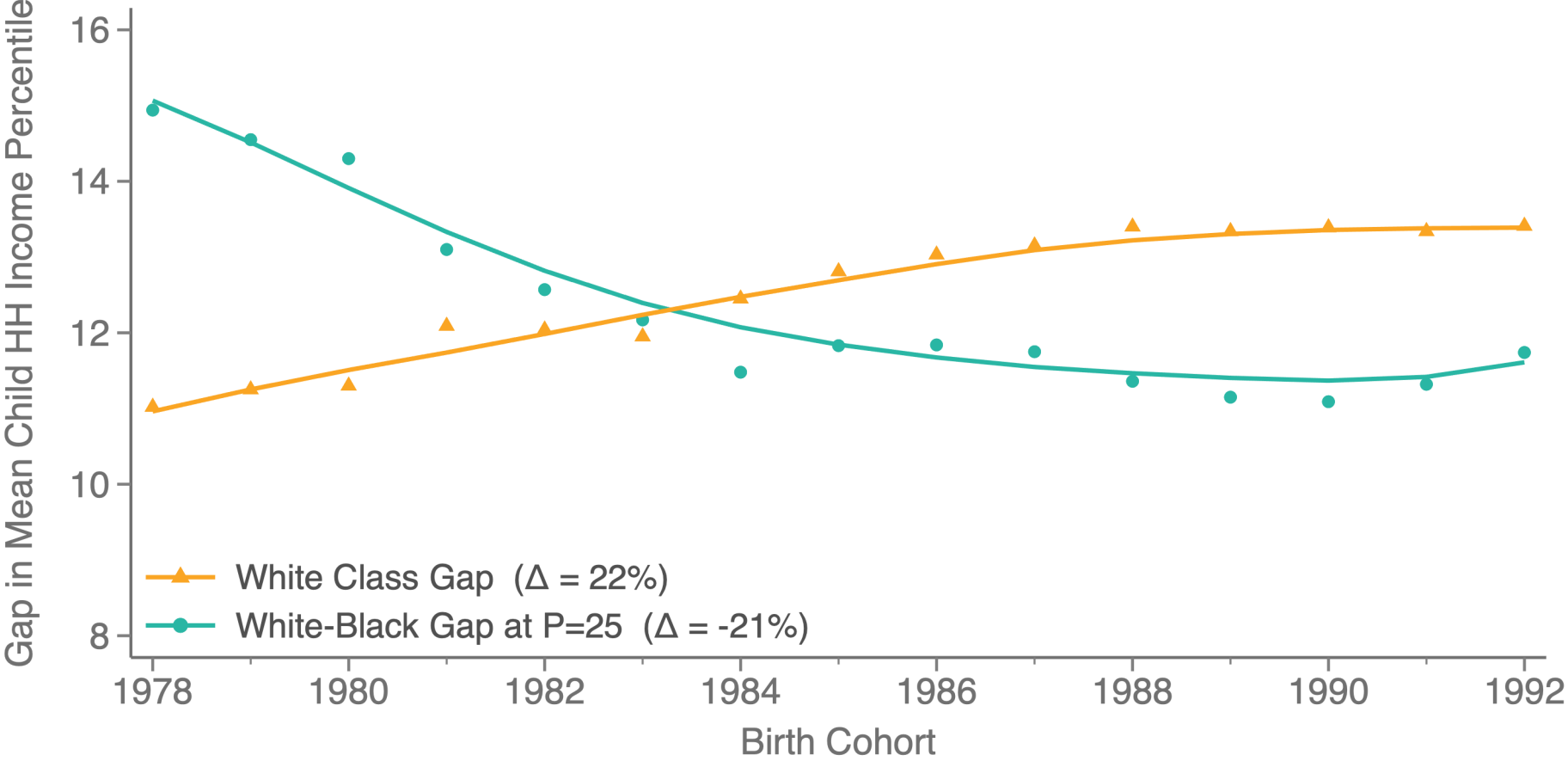
White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort

Parent Income at Child Ages 0-5, 6-12, 13-18



Growing Class Gaps, Shrinking Race Gaps

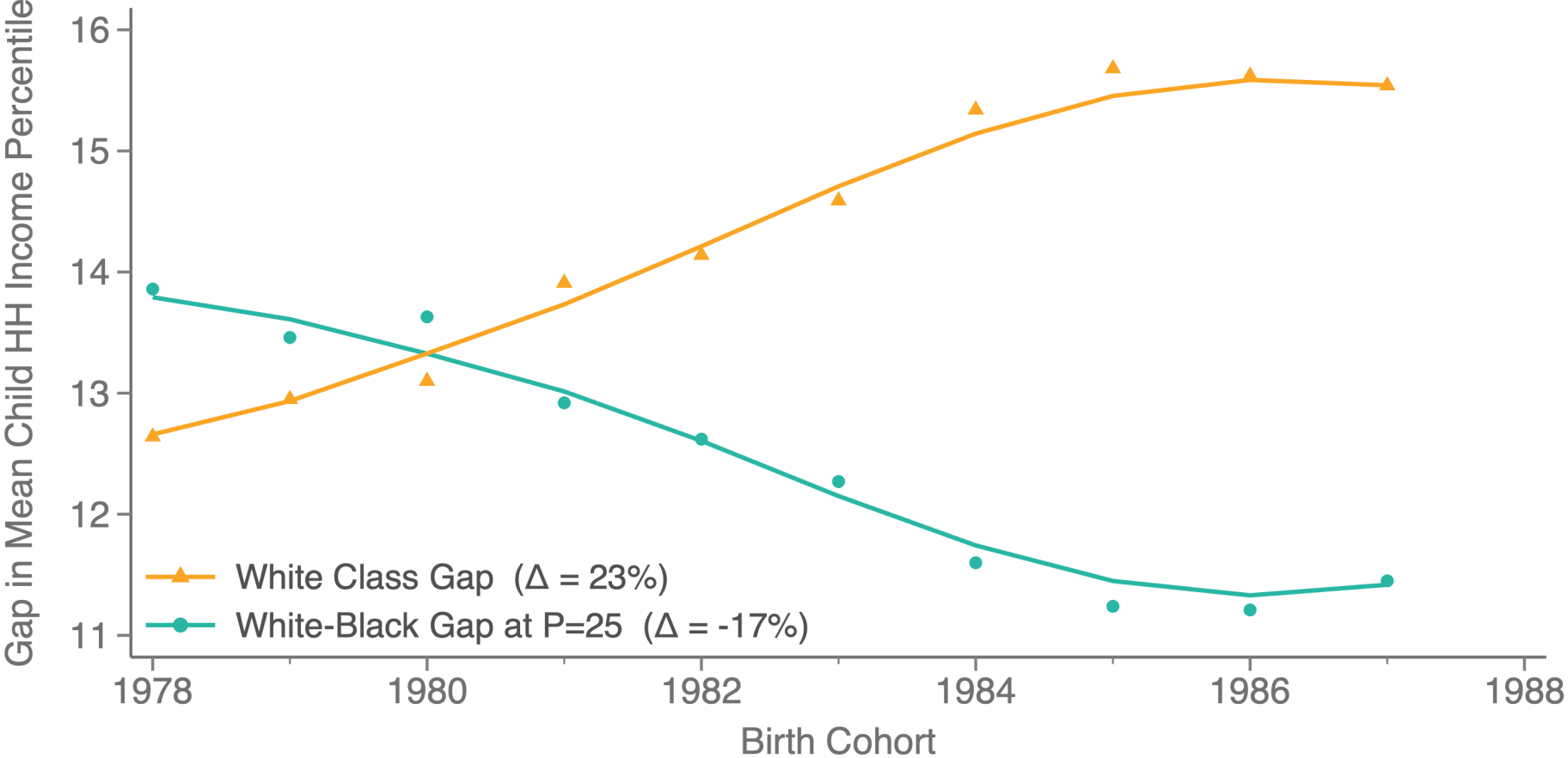
White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort
Mother's HH Income at Child Ages 13-17



Growing Class Gaps, Shrinking Race Gaps

White-Black Gap for Children with Low-Income Parents vs. White Class Gap, by Birth Cohort

Child HH Income at Age 32



Growing Class Gaps, Shrinking Race Gaps in Individual Income at Age 27 by Gender

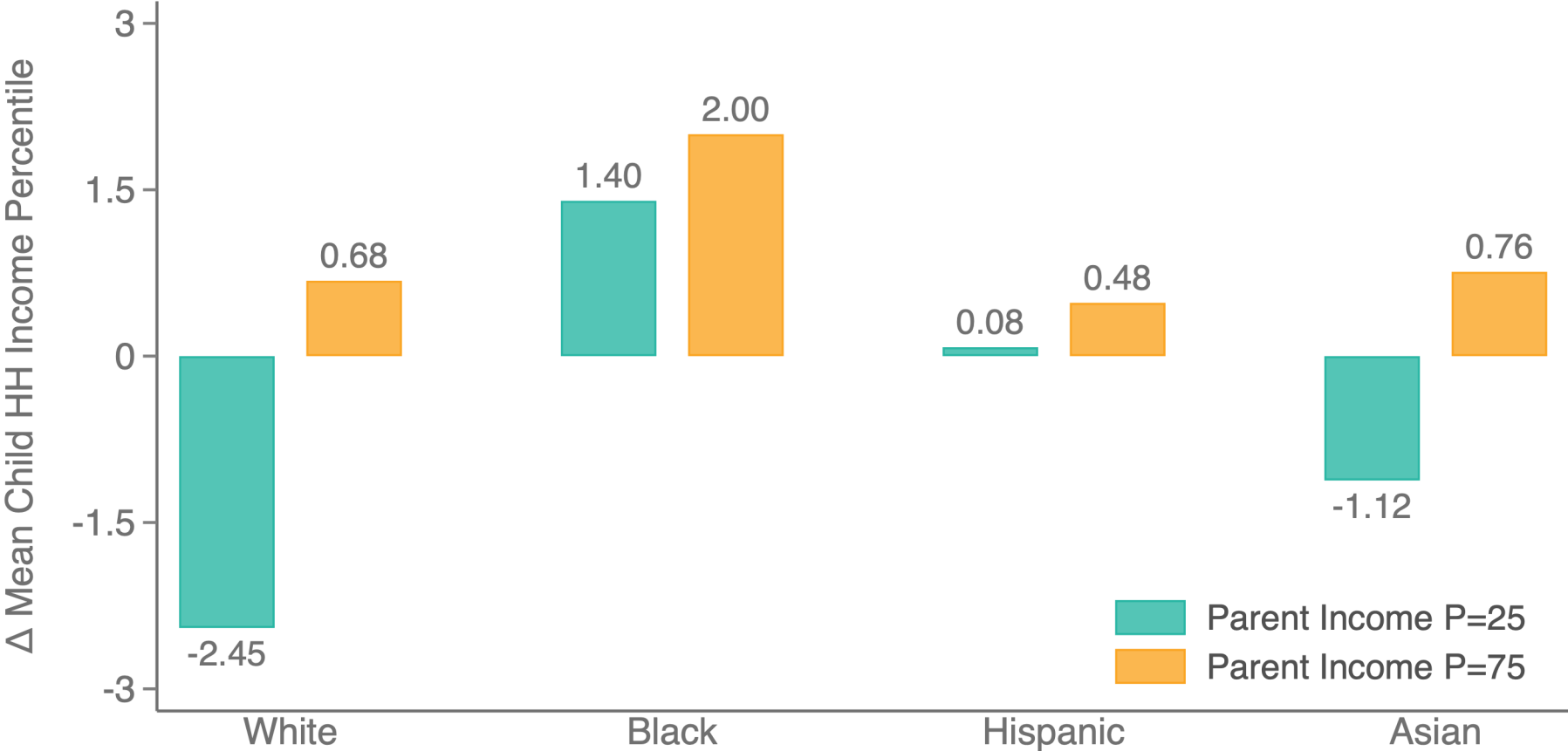
White-Black Gap for Children with Low-Income Parents vs. White Class Gap, 1992-1978 Cohort Difference



Change in Mean Child Household Income Percentile by Race and Class

Household Income Percentile at Age 27, 1992-1978 Cohort Difference

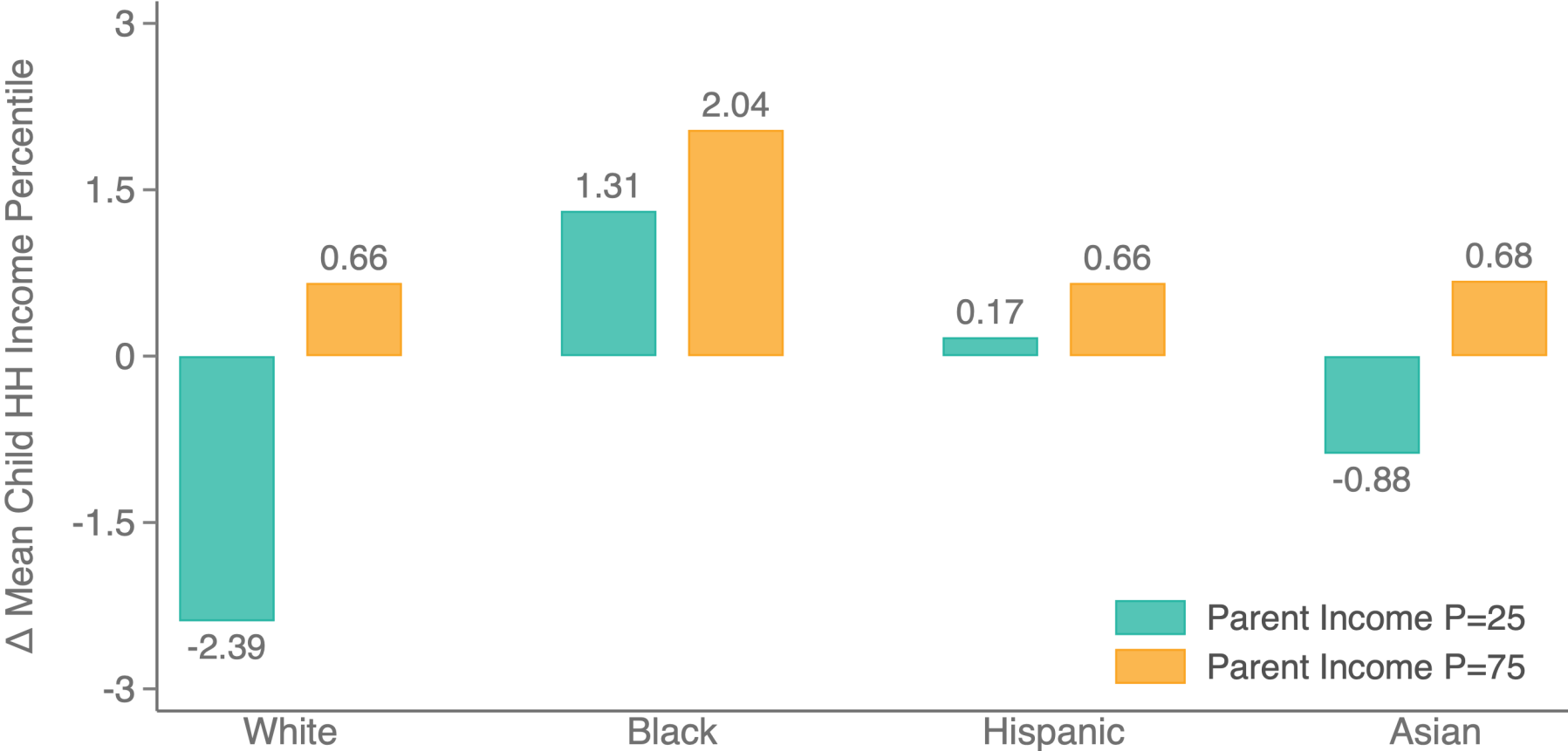
Parent Income at Child Ages 0-18



Change in Mean Child Household Income Percentile by Race and Class

Household Income Percentile at Age 27, 1992-1978 Cohort Difference

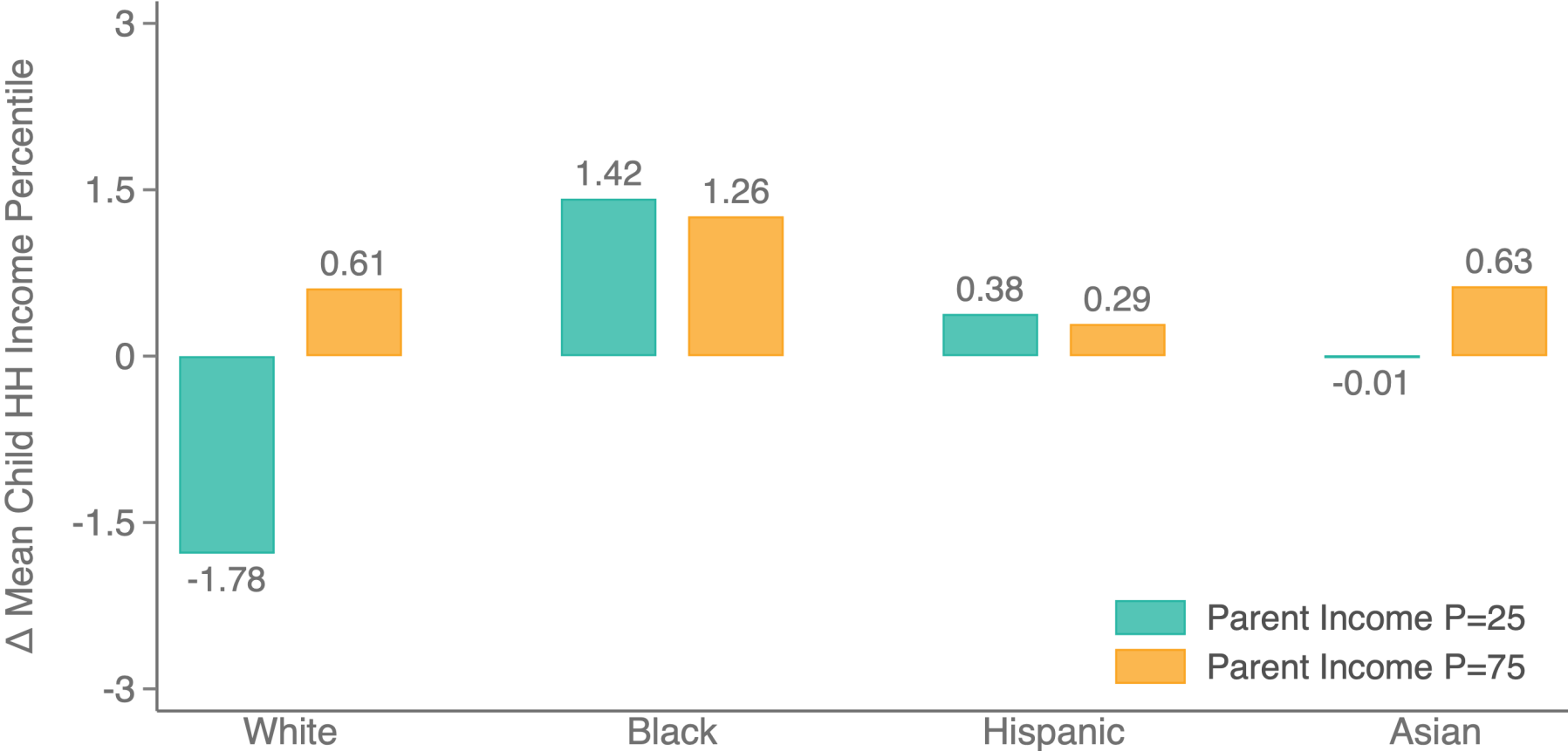
Parent Income at Child Ages 0-5, 6-12, 13-18



Change in Mean Child Household Income Percentile by Race and Class

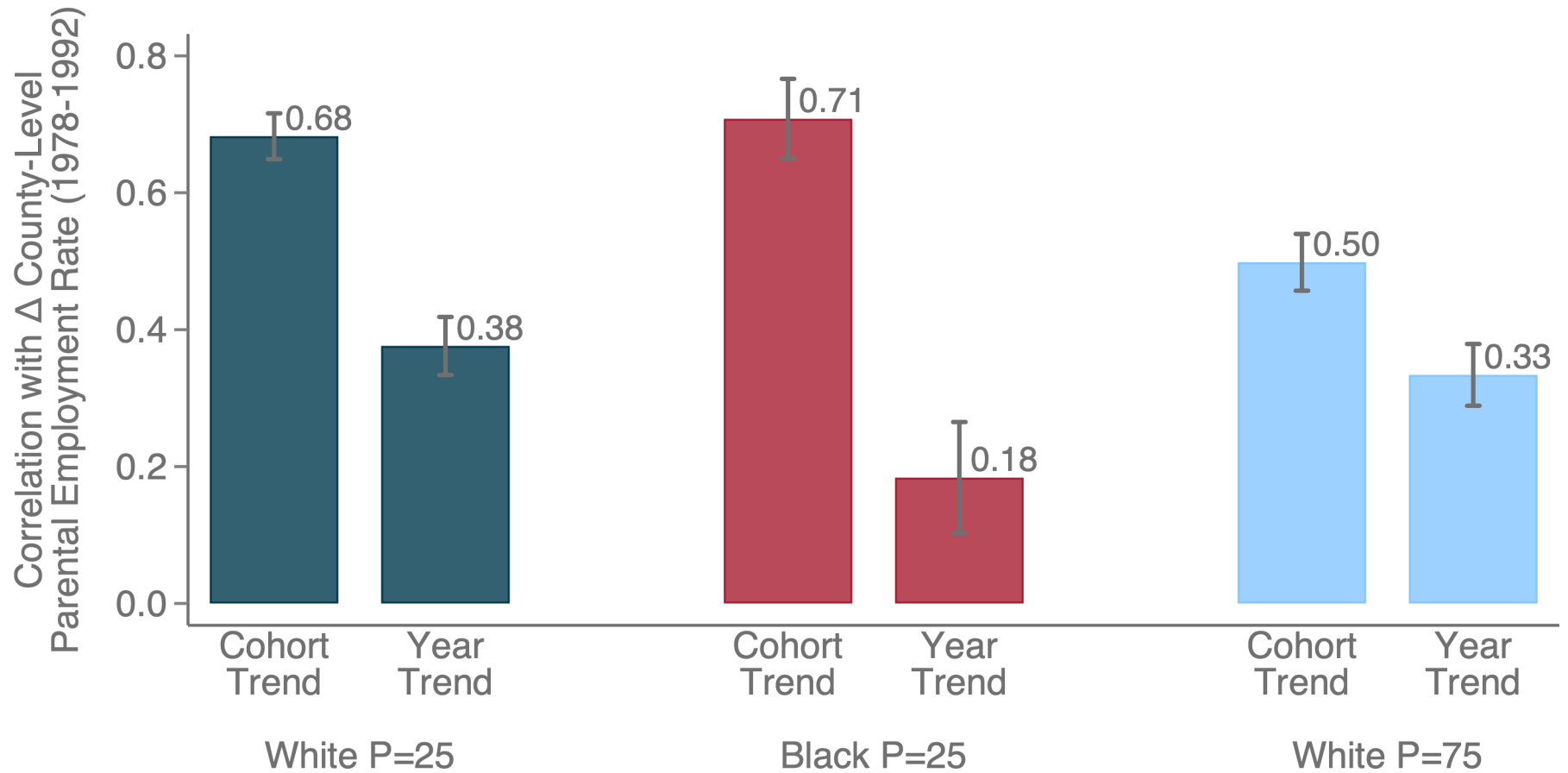
Household Income Percentile at Age 27, 1992-1978 Cohort Difference

Mother's HH Income at Child Ages 13-17



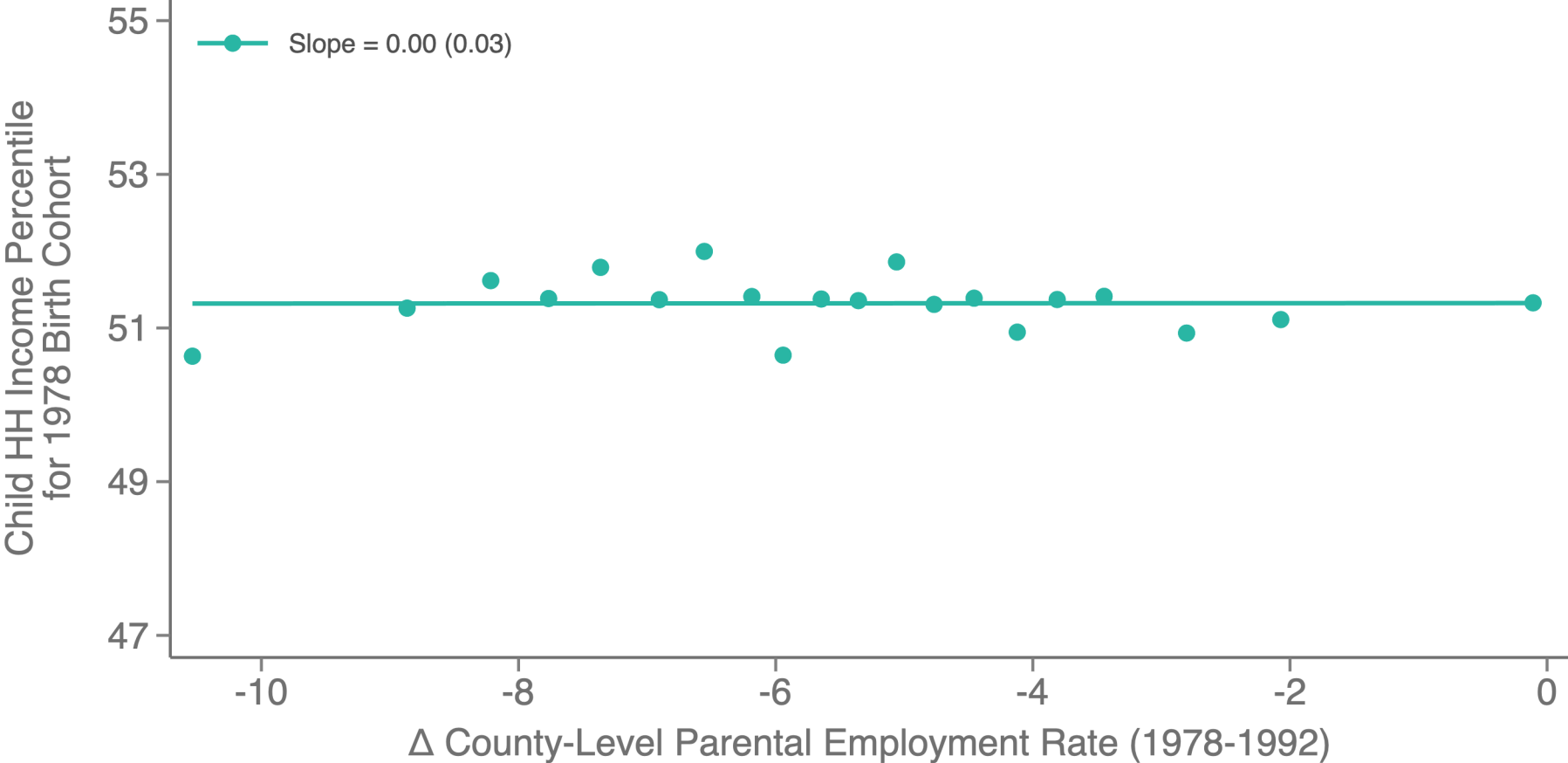
Year vs. Cohort Trends in Parent Employment Rates

Correlation with the Group-Specific Change Parent Employment from the 1978-1992 Birth Cohorts at Age 27



Children's Income Percentile for 1978 Birth Cohort vs. Change in Parent Employment Rate

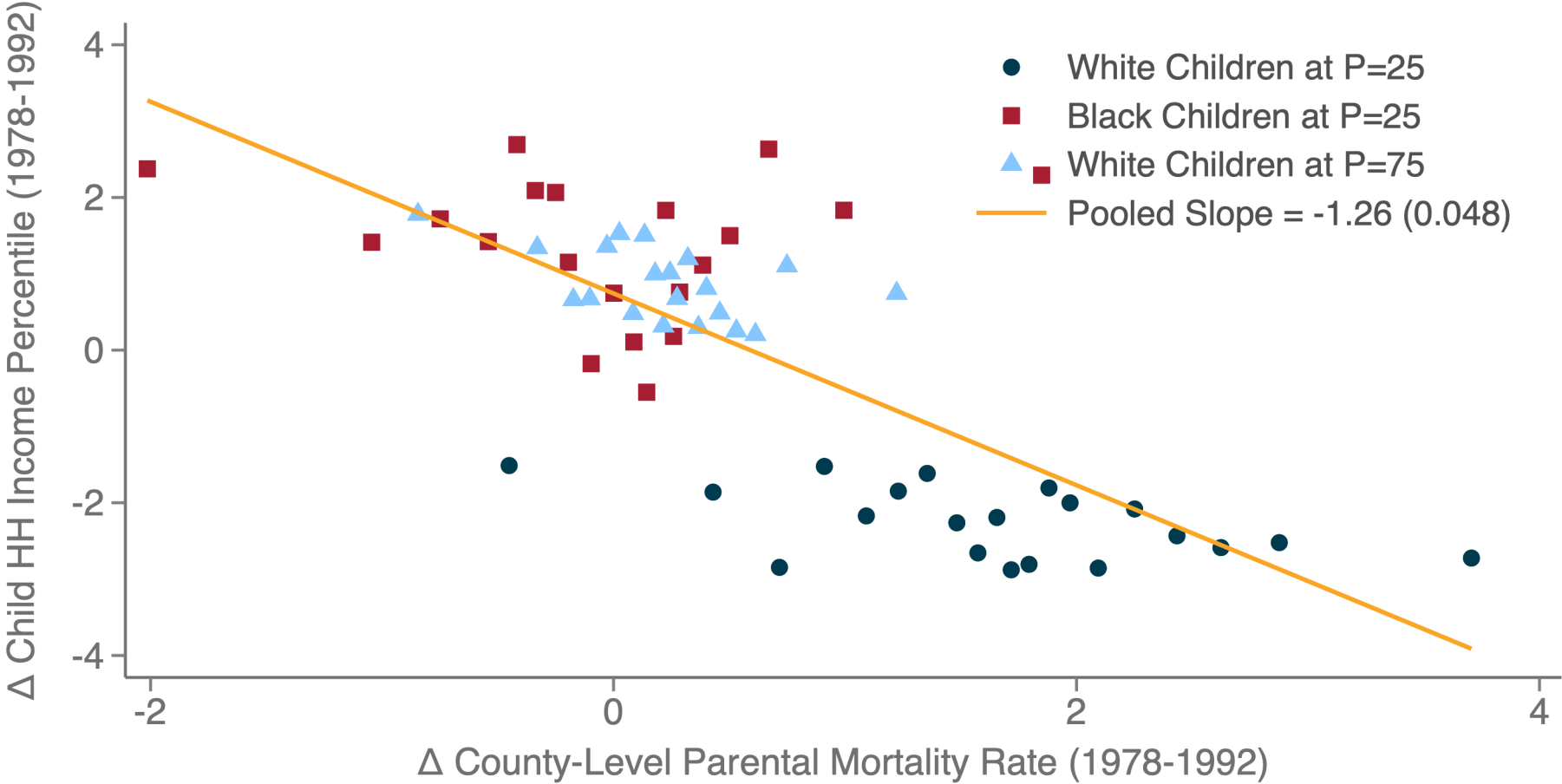
By County, 1978-1992 Birth Cohorts



Appendix: Other Area Level Binscatters

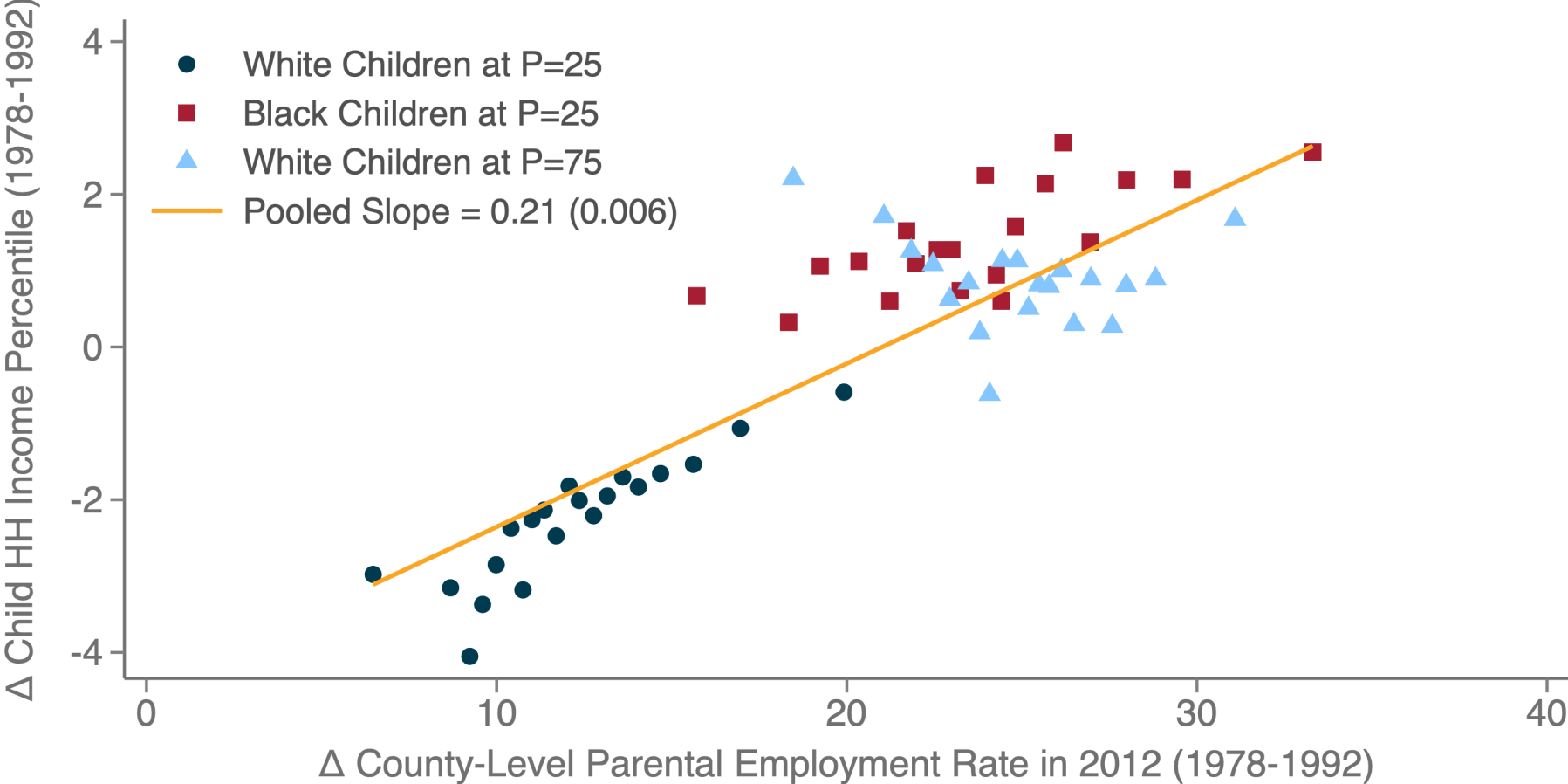
Changes in Children's Income Percentiles vs. Parent Mortality Rates, 1978-92 Cohorts

By County, Race, and Class



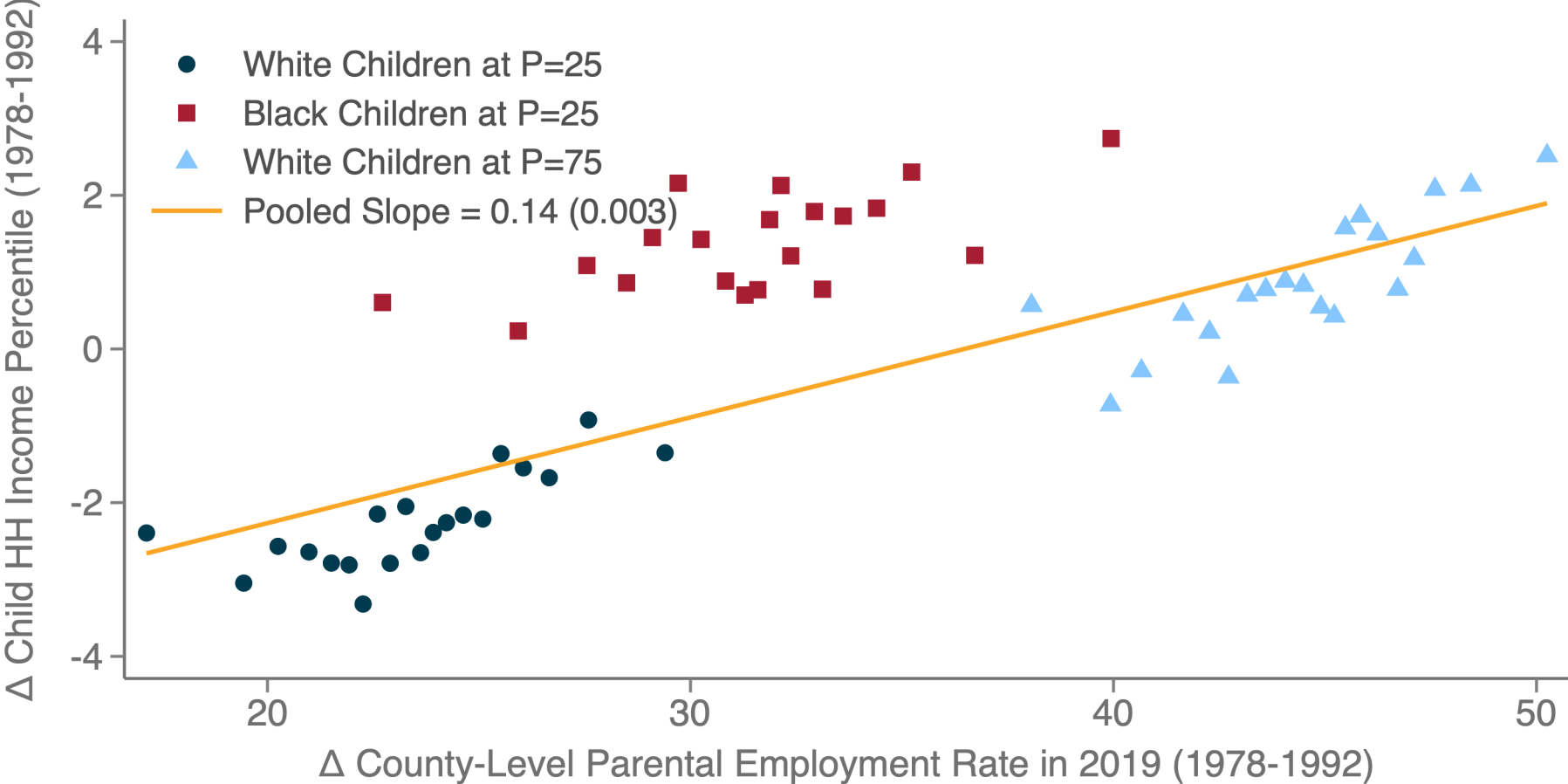
Changes in Children's Income Percentiles vs. Parent Employment Rates in 2012, 1978-92 Cohorts

By County, Race, and Class



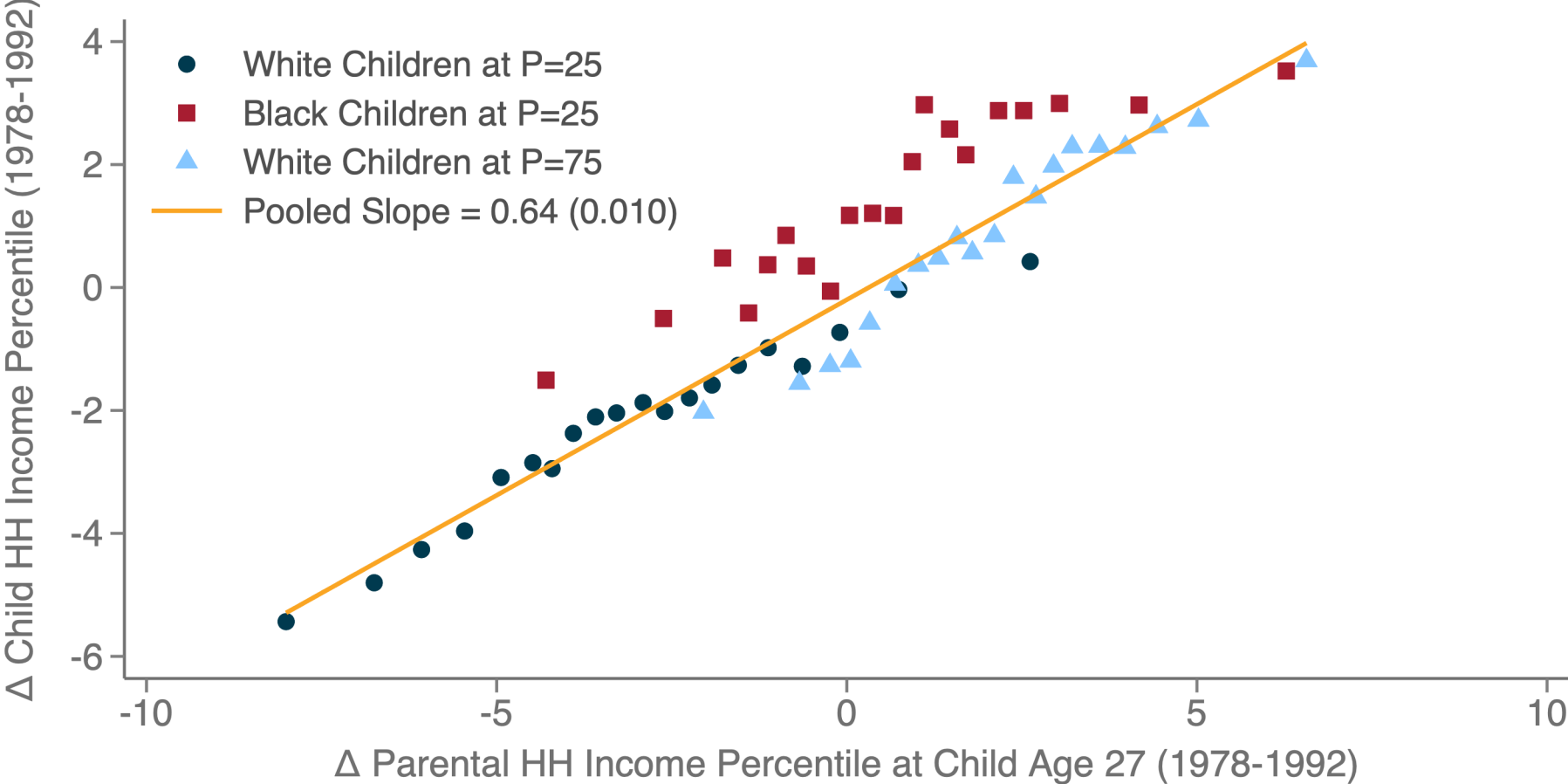
Changes in Children's Income Percentiles vs. Parent Employment Rates in 2019, 1978-92 Cohorts

By County, Race, and Class



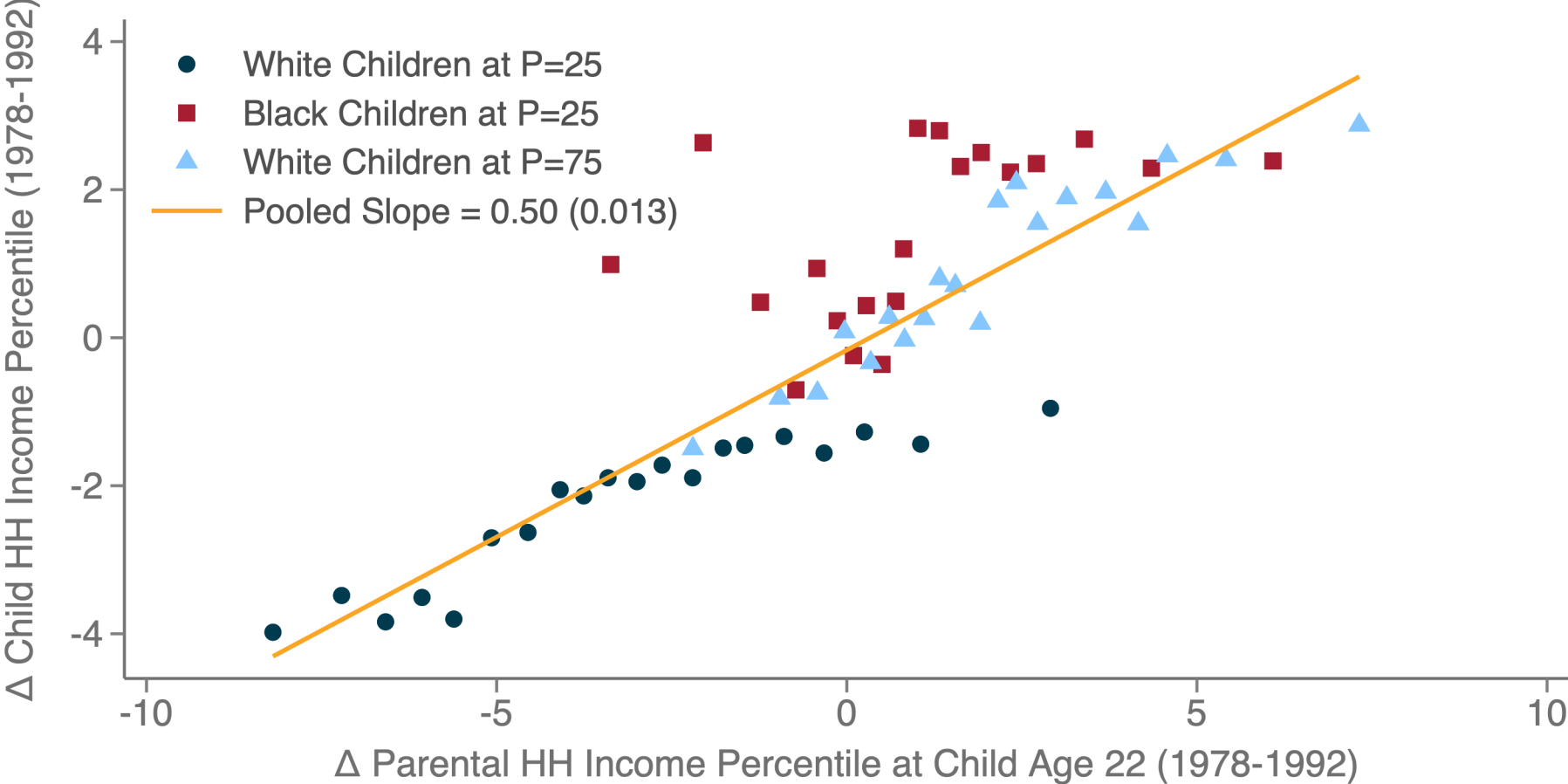
Changes in Children's Income Percentiles vs. Parent HH Income at Child Age 27, 1978-92 Cohorts

By County, Race, and Class



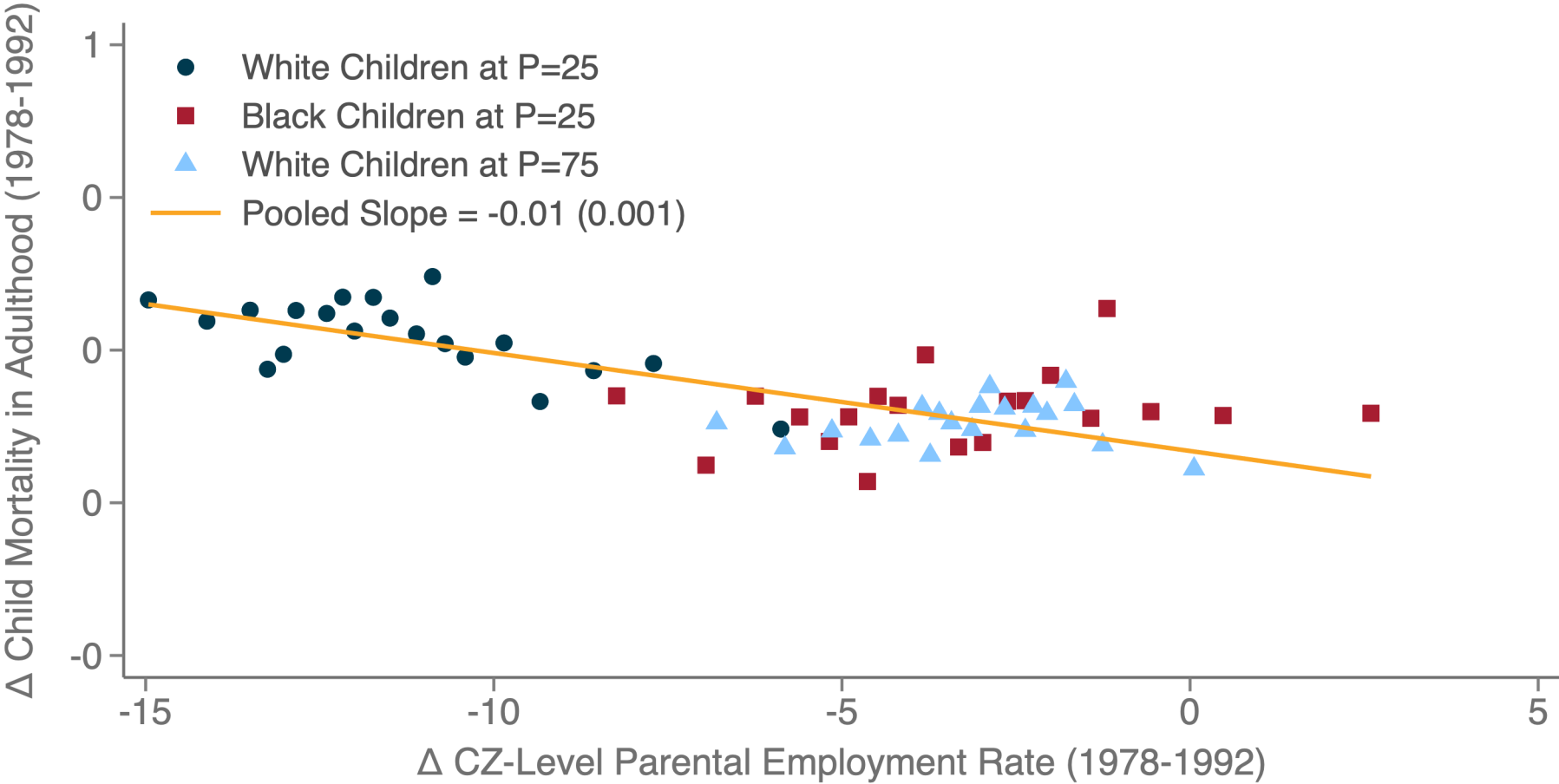
Changes in Children's Income Percentiles vs. Parent HH Income at Child Age 22, 1978-92 Cohorts

By County, Race, and Class



Changes in Children's Mortality vs. Parent Employment Rates, 1978-92 Cohorts

By CZ, Race, and Class



Changes in Children's SAT Percentiles vs. Parent Employment Rates

By County, Race, and Class

