A Civil Rights Agenda for California's Next Quarter Century

Academic Disparities in California's Central and Imperial Valleys

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About the Series

A Civil Rights Agenda for the Next Quarter Century

The Civil Rights Project was founded in 1996 at Harvard University, during a period of increasingly conservative courts and political movements that were limiting, and sometimes reversing, major civil rights reforms. In 2007 the Project moved to UCLA. Its goal was — and still is — to bring together researchers, lawyers, civil rights advocates and governmental and educational leaders to create a new generation of civil rights research and communicate what is learned to those who could use it to address the problems of inequality and discrimination. Created a generation after the civil rights revolution of the 1960s, CRP's vision was to produce new understandings of challenges and research-based evidence on solutions. The Project has always maintained a strong, central focus on equal education and racial change.

We are celebrating our first quarter century by taking a serious look forward — not at the history of the issues, not at the debates over older policies, not at celebrating prior victories but at the needs of the next quarter century. Since the work of civil rights advocates and leaders of color in recent decades has often been about defending threatened, existing rights, we need innovative thinking to address the challenges facing our rapidly changing society. Political leaders often see policy in short two- and four-year election cycles but we decided to look at the upcoming generation. Because researchers are uniquely qualified to think systematically, this series is an attempt to harness the skills of several disciplines, to think deeply about how our society has changed since the civil rights revolution and what the implications are for the future of racial justice.

This effort includes two very large sets of newly commissioned work. This paper is one of several in a series on the potential for social change and equity policies in California, a vast state whose astonishing diversity foretells the future of the U.S. and whose profound inequality warns that there is much work to be done. The second set of studies is national in scope. All these studies will initially be

issued as working papers. They will be brought together in statewide conferences and in the U.S. Capitol and, eventually, as two major books, which we hope will help light the way in the coming decades. At each of the major events, scholars will exchange ideas and address questions from each other, from leaders and from the public.

The Civil Rights Project, like the country, is in a period of transition, identifying leadership for its next chapter. We are fortunate to have collaborated with a remarkable network of important scholars across the U.S., who contributed to our work in the last quarter century and continue to do so in this new work. We are also inspired by the nation's many young people who understand that our future depends on overcoming division. They are committed to constructing new paths to racial justice. We hope these studies open avenues for this critical work, stimulate future scholars and lawyers, and inform policymaking in a society with the unlimited potential of diversity, if it can only figure out how to achieve genuine equality.

Gary Orfield

Patricia Gándara

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Foreword

In spite of the fact that the Central and Imperial Valleys are a critical source of food for the U.S. population, and represent an enormously important economic resource for California, the region has been largely ignored by policymakers. Its history may be at least partly to blame. California is the nation's single most productive agricultural state, but it has also been an area of strong economic and social polarization, with a great conflict between largely Latino agricultural workers and white landowners that came to a head in the 1960s and 70s during the national boycotts of California's grapes. It is the area where so many migrant workers and families lived in a virtually separate society and where there were rigid systems of stratification in the rural towns.

School segregation has also been rampant, both within and between schools, with the children of the landowners faring well, while the children of those who worked the land being left behind. In these communities there continues to be a damaging educational lag compared to California as a whole. For example, a University of California campus was only recently established in the Central Valley (in Merced); most of the other UC campuses are located in affluent coastal areas, sufficiently distant from the Valleys to discourage low-income students from applying to or attending a UC campus. In spite of notable new education funding, there does not appear to be significant progress in educational outcomes and the trends suggest that severe gaps will remain, harming the future of the people left behind and the development of the human capital of the region, with negative consequences for the state as a whole.

This paper shows the low average level of education in the Central Valley, how it compares with the rest of the state, and how it is distributed by race and ethnicity. The paper has not aimed to show causes or consequences, or to propose and support specific educational reforms. In the face of other studies (commissioned for this series by the Civil Rights Project), which show a slowing of birth rates and a dangerously inadequate number of young people preparing to fill the state's jobs, California

cannot afford to under-educate the students of this region. Moreover, this pattern of persisting inequality tends to perpetuate the Valley's past. It challenges state and local educators and leaders to address these inequalities with urgency.

As the region's economy is changing, educational requirements rise, and it is no longer economically viable—or morally defensible–to educate a class of individuals only to sustain menial labor. This means that addressing educational weaknesses will have ever more urgency. In California, with its excellent higher education system, access to a desirable four-year college campus depends on educational qualifications gained in the K-12 public education system. But lacking the qualifications, far too many students defer college. Lacking adequate preparation, college counseling, and understanding of the complex financial aid system the state offers, too many of these students do not see a college education as something they can aspire to. Yet, success in completing college has a very powerful impact on income, employment and mobility, making preparation for college an extremely high-stakes issue, both for individuals and for the state.

This study points to the persistent under-education of low income students of color, but it also points out an area of additional concern. Latino students, as a group, are not achieving the levels of higher education that they need, but there are also differences by class, with lower-income Latinos lagging behind more middle-income Latinos. What's more, Black students show a pervasive and persistent lack of educational preparation, even as compared to Latinos. As these researchers show, the undereducation of these groups does not appear to be directly related to district budgets in most cases. It is urgent that we identify the chief impediments to making educational progress in the Valleys. The state cannot afford to lose another generation of these Californians.

-Patricia Gándara and Gary Orfield

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Executive Summary

Introduction

California, known for having the largest economy in the United States, faces significant educational inequities. This report focuses on the racial and ethnic academic disparities in California's Central and Imperial Valleys (CIV). Despite California's overall economic strength, the CIV remains a pocket of severe socio-economic hardship, with marked disparities in educational outcomes that have persisted over time. Using a decade's worth of data on K-12 students, we examine standardized test scores in mathematics and English language arts (ELA), absenteeism, and graduation rates while controlling for student-level demographics and school district characteristics. We find persistent achievement gaps between racial/ethnic groups in standardized test scores, absenteeism, and graduation rates despite efforts to address these disparities through state policies and funding. The findings in this report underscore the pressing need for targeted policies and interventions to address these disparities. In addition to threatening affected students' long-term well-being and economic prospects, persistent inequities in California's education system may hinder the state's and nation's future economic growth and result in a significant loss of untapped human potential.

Key Findings

1. **Persistent Achievement Gaps:** The report reveals significant gaps in standardized test scores in English Language Arts (ELA) and mathematics between different racial and ethnic groups within the CIV region. Latino, Black, and economically disadvantaged students consistently underperform compared to their non-Hispanic White peers. On average, Hispanic students scored 5 to 6 percentiles lower in ELA and math standardized tests, while Black students scored nearly 11 percentiles lower than their non-Hispanic White peers. Economically disadvantaged students exhibited similarly pronounced deficits, with their performance lagging behind their more affluent peers. In addition, these

academic gaps are present in all grades, but especially in middle and high school, when gaps tend to widen.

2. **Disparities in Absenteeism and Graduation Rates:** The report also highlights disparities in absenteeism and graduation rates, critical indicators of student engagement and success. Hispanic students exhibited a chronic absenteeism rate approximately 1.5 percentage points higher than their non-Hispanic White peers. In the case of Black students, this gap widened to over 3.2 percentage points, highlighting the significant challenge of ensuring equitable access to educational engagement and support. Economically disadvantaged students also showed higher absenteeism rates, exacerbating their substantial academic challenges. Graduation rates, while improving across all groups, still reflect deep-seated inequities. Hispanic students continue to graduate at slightly lower rates than their non-Hispanic White peers, with economically disadvantaged Hispanic students experiencing wider gaps. Although the overall graduation rate for Black students has improved over time, the findings raise concerns about the quality of education, as these gains have not been matched by corresponding improvements in standardized test scores.
3. **Geographic Concentration of Disparities:** The report documents significant inequities within the CIV region, with the most severe disparities concentrated in the San Joaquin, Stanislaus, Merced, Madera, Fresno, and Imperial counties, particularly in ELA and math test scores. These geographic disparities suggest that local factors, including school district resources, community support, and economic conditions, play a significant role in shaping educational outcomes.

   The geographic analysis further highlights that there are areas where economically disadvantaged Hispanic students experience even larger performance gaps than their non-Hispanic White peers. In some districts, these students score 10 to 15 percentiles lower on

standardized tests. Chronic absenteeism rates are particularly high in eastern counties, such as Fresno and Tulare, where economic challenges are most severe.

Implications and Recommendations

Persistent educational inequities in the CIV region demand urgent policy interventions. Despite increased funding and targeted programs over the last several years, the slow pace of progress suggests that current strategies may need to be revised. The report recommends a comprehensive review of educational policies and the adoption of evidence-based interventions specifically designed to meet the needs of these historically marginalized student groups, including:

- **Strategic Funding Allocation:** There is a need for a more strategic allocation of resources, focusing on the most disadvantaged districts within the CIV. This approach should include increasing per-student funding and ensuring that these resources are effectively used to address the specific needs of the most at-risk students.
- **Improving School Attendance:** Interventions aimed at improving school attendance are crucial, as absenteeism is closely linked to academic performance. Programs that address the underlying causes of chronic absenteeism, such as economic hardship, health issues, and lack of transportation, could significantly improve educational outcomes.
- **Support for Economically Disadvantaged Students:** Given the strong correlation between economic disadvantage and poor academic performance, the report calls for expanding programs designed to support economically disadvantaged students. This could include after-school tutoring, mentorship initiatives, and free lunch programs.
- **Family-Community-School Partnerships:** Strengthening partnerships between schools, families, and communities is essential to creating supportive learning environments. Engaging families in school initiatives and fostering collaboration with teachers while involving local businesses, non-profits, and community leaders in educational efforts can

provide additional resources and opportunities for students, particularly in marginalized areas.

Conclusion

The findings of this report underscore the persistent and substantial disparities in educational outcomes among different racial and ethnic groups in California's Central and Imperial Valleys. These disparities have far-reaching consequences for the individuals directly affected and the broader economy, given the strong link between education, future earnings, health outcomes, and civic participation. Despite allocating billions of dollars in additional funding to schools serving historically marginalized students, the slow improvement across various academic measures suggests that current strategies may be insufficient to address the root causes of these disparities.

Academic Disparities in California's Central and Imperial Valleys

Catalina Amuedo-Dorantes and Jose R. Bucheli

Introduction

While the state of California boasts the largest economy in the United States, it also ranks among the top ten states in income inequality. According to a report from the Public Policy Institute of California (Thorman et al., 2023), the gap between high and low-income families in the state is among the largest in the country, with families in the 90th percentile of the income distribution earning 11 times more than those in the 10th percentile. This gap has only risen over time. In 1980, families at the top of the income distribution earned roughly 7 times more than those at the bottom (Thorman et al., 2023). Importantly, Black and Latino families have a disproportionate representation at the bottom of the income distribution, accounting for 56 percent of families at or below the 10th percentile, as opposed to only 12 percent of families in the top decile (Thorman et al., 2023).

As with income, California struggles with significant educational inequities. Governor Jerry Brown implemented reforms after the Great Recession to channel more resources to economically disadvantaged youth and implement a new, more balanced accountability system for schools. However, progress has been slow. In 2018, about 50 percent of all children taking the Smarter Balanced adaptive standardized test met or exceeded the state's English language learning standards, and about 40 percent achieved a passing score in the math component (Cano and Hong, 2022). This was barely a percentage-point improvement year-over-year. Disaggregating these figures by student characteristics reveals that only 35 percent of Latino, Black, and economically disadvantaged students met the English language standards, and just 25 percent met the standards in mathematics. Although this was a two-percentage-point improvement from the previous year, researchers have alerted that, at the current pace, it would take decades to close the achievement gap (Cano, 2020).

To narrow these gaps, the state has reallocated funding for disadvantaged students and created an accountability system for school districts. Disadvantaged and low-performing students receive approximately $15.2 billion annually in the form of additional per-student funding for their schools, districts, county offices of education, as well as for after-school, college preparation, STEM, and outreach programs (Petek, 2020). Additionally, the state created an accountability system to identify school districts with low-performing pupils, with a mandate that all districts must develop plans to help these students. Yet, very little is known about how academic gaps in California's poorest region—the Central and Imperial Valleys (CIV)—have progressed after the adoption of these and other measures.

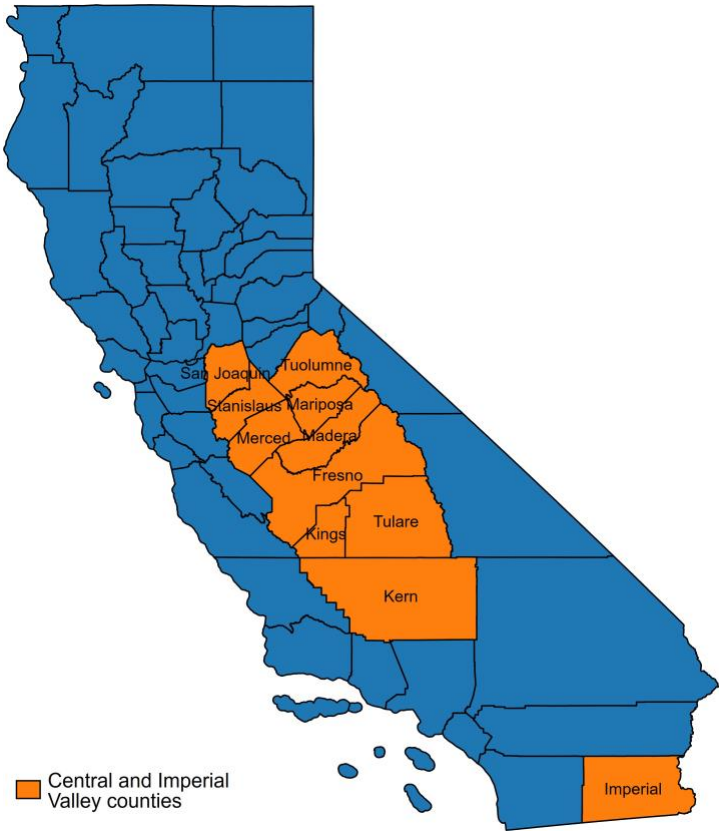
Considering the well-documented long-term benefits of education on immediate outcomes, such as discipline (Pearman et al., 2019), and other outcomes later in life, including employment, earnings, health, and involvement in criminal activity (e.g., Becker and Chiswick, 1966; Clark and Royer, 2013; Lochner and Moretti, 2004), supporting the academic progression of disadvantaged groups and regions is vital for social equity and future economic growth. In that regard, studies have estimated how closing the educational achievement gaps between minority and non-minority children would expand the U.S. economy by 5.8 percent (or $2.3 trillion) by 2050, with an average annual increase in GDP of $551 billion (Lynch and Oak- ford, 2014). There is an urgent need to address these gaps and deepen our understanding of racial and ethnic inequities in education.

This report aims to assess students' academic progression and document achievement gaps within school districts in California's Central and Imperial Valleys. We are also interested in potential gaps across demographic groups. Our focus is on English language arts (ELA) and mathematics standardized test scores, absenteeism, and graduation rates. A secondary aim of this project is to understand when any observed gaps develop and key predictors of such gaps, paying close attention to the role of student characteristics.

California's Central and Imperial Valleys

The counties in the Central and Imperial Valleys (CIV) of California, outlined in Figure 1, play a vital role in the state's economy and national and international food supply chains. The region, known as the "breadbasket of the world," produces a large share of the fruits, vegetables, nuts, and dairy products consumed daily in the United States, and accounts for more than half of California's agricultural production value (Sleeter, 2012). Its fertile soil, mild climate, and access to water from the Sacramento and San Joaquin rivers, make it one of the most productive agricultural areas in the United States (Sleeter, 2012). In addition, the Valleys play a crucial role in the state's water supply and distribution given its system of aqueducts and reservoirs primarily designed to sustain agriculture and the development of local rural economies (Hanak et al., 2019).

Figure 1: Central and Imperial Valley Counties in California



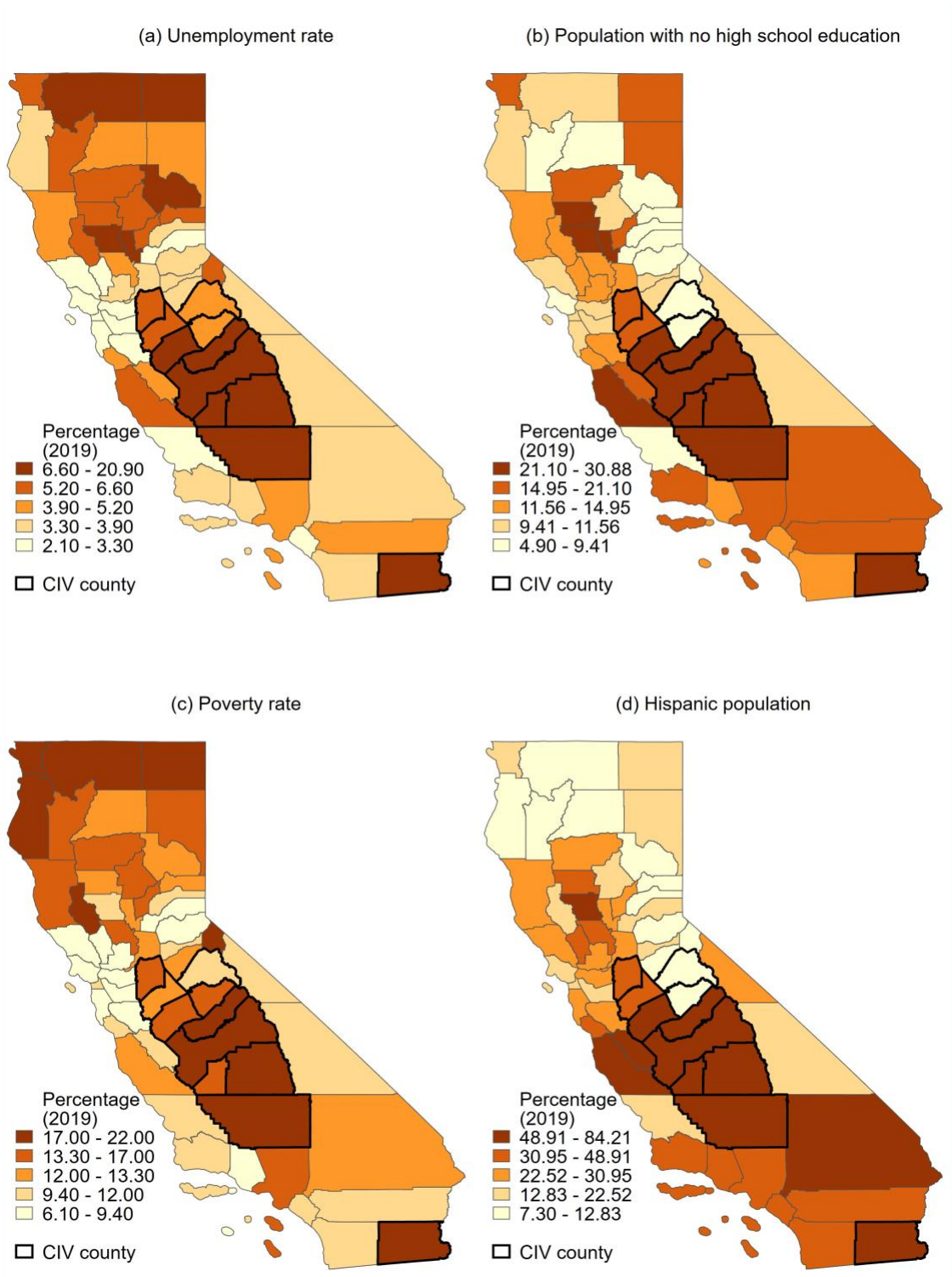
Note: The Central Valley includes the following counties: Fresno, Kern, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, Tulare, and Tuolumne. The Imperial Valley is identified by Imperial County. Source: California Regional Economies Employment (CREE) Series and State of California Department of Justice.

Historically, the CIV region has drawn agricultural workers from various parts of the world. Latinos and Filipinos constitute the vast majority of the agricultural labor force and have played a significant role in building the Central Valley's agrarian power since the Bracero Program (1942-1964) (Effland, 2016). According to data provided by California's Employment Development Department, the region boasted a workforce of nearly 250,000 agricultural laborers as of August 2022 (State of California Employment Development Department, 2023).

These workers have a well-documented history of labor organizing in the central part of the Valley, culminating in the formation of the United Farm Workers (UFW) union in 1962 (Sawyer and Almaguer, 2022). Cesar Chavez, later joined by Dolores Huerta, denounced the deplorable working and living conditions that farm laborers endured, which included the denial of access to water, adequate work breaks in sweltering conditions, restroom facilities, and even a place to rest (Sawyer et al., 2021). The UFW's influence extended nationally, particularly during the 1960s, garnering significant support, even from then-presidential candidate Robert Kennedy. Through boycotts and skillful legislative efforts, the UFW gained legal backing and crucial legislation to address labor issues, including child labor and the right to organize. However, contemporary challenges in labor relations continue to affect the education provided to students in the Valley.

Despite its critical role in the state's economy, its storied history, and national recognition, the CIV remains the most impoverished and frequently overlooked part of California, as displayed in Figure 2. Within California, the CIV region exhibits some of the highest unemployment and poverty rates in the state, along with some of the lowest educational attainment. Furthermore, these traits appear to predominantly afflict Hispanics, who have a higher representation in this part of the state.

Figure 2: Selected Outcomes of California Counties



Note: The Central Valley includes Fresno, Kern, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, Tulare, and Tuolumne counties. The Imperial Valley is identified by Imperial County. Source: California Regional Economies Employment (CREE) Series and State of California Department of Justice.

Table 1 provides more detailed statistics on some of these and additional traits. Using data from U.S. Bureau of Labor Statistics' Local Area Unemployment Statistics (LAUS) and the U.S. Census Bureau's American Community Survey (ACS) and Small Area Income and Poverty Estimates (SAIPE) program, the table compares CIV counties to other counties in the state. Several differences are worth highlighting. Median household income in CIV counties averaged $58,000 in 2019, compared to $74,000 in the rest of the state. Poverty rates, which had dropped from 21 percent to roughly 17 percent from 2010 to 2019, were still higher than for the rest of the state, where they hovered at around 12 percent in 2019. At 8 percent in 2019, unemployment rates in CIV counties were nearly twice as high as in other parts of California. Moreover, the share of the population with less than a high school education stood at 22.2 percent in 2019 in the CIV region vs. 12.7 percent in the rest of the state. Similarly, the share of the population with a college degree in the Central Valley only reached 19 percent relative to 31 percent in other California counties—a gap that widened since 2010. Of particular relevance to our analysis is the population composition of these areas. Close to 19 percent of the population in CIV counties in 2019 was foreign-born and the share of Hispanics in CIV counties nearly doubled that of the rest of the state. Other minority groups, such as Black residents, also had slightly higher proportional representation in the CIV, accounting for 3.7 percent compared to 3 percent in the rest of the state.

Narrowing our focus, Table 2 informs on some of the traits of school districts in CIV and non-CIV counties in California using data from the Education Data Partnership (Ed-Data).[1] We present traits at the beginning and end of the decade to assess their evolution.

[1] Ed-Data was established as a partnership between the California Department of Education (CDE), EdSource, and the Fiscal Crisis & Management Assistance Team (FCMAT). See: https://www.ed-data.org.

Table 1: County Descriptive Statistics (AY 2010 and 2019)

	CIV counties		Non-CIV counties	
	2010	2019	2010	2019
Non-Hispanic White (%)	0.439	0.391	0.614	0.572
	(0.208)	(0.216)	(0.174)	(0.181)
Hispanic (%)	0.443	0.489	0.235	0.263
	(0.202)	(0.214)	(0.136)	(0.144)
Black or African American (%)	0.040	0.037	0.031	0.030
	(0.022)	(0.019)	(0.035)	(0.032)
Foreign-born (%)	0.196	0.194	0.164	0.165
	(0.084)	(0.077)	(0.099)	(0.101)
Adults with less than high school (%)†	0.261	0.222	0.152	0.127
	(0.084)	(0.076)	(0.060)	(0.056)
Adults with high school diploma only (%)†	0.255	0.259	0.229	0.233
	(0.027)	(0.024)	(0.047)	(0.063)
Adults with some college or associate's degree (%)†	0.328	0.332	0.348	0.332
	(0.041)	(0.040)	(0.057)	(0.061)
Adults with a bachelor's degree or higher (%)†	0.16	0.19	0.27	0.31
	(0.03)	(0.05)	(0.10)	(0.12)
Unemployment rate (%)	0.18	0.08	0.13	0.05
	(0.04)	(0.04)	(0.03)	(0.02)
Poverty rate (%)	0.21	0.17	0.15	0.12
	(0.04)	(0.03)	(0.04)	(0.04)
Median household income ($)	44,095.91	58,353.82	53,368.87	74,007.11
	(2,840.74)	(5,828.96)	(13,441.65)	(22,850.12)
Population	375,381.55	404,502.64	691,661.55	741,148.26
	(312,802.71)	(342,578.92)	(1,549,199.05)	(1,621,243.44)
Observations	11	11	47	47

Note: Means; standard deviations in parentheses. Of the 58 counties in California, 11 are located in the CIV and 47 in other regions. The data come from U.S. Bureau of Labor Statistics' Local Area Unemployment Statistics (LAUS) and the U.S. Census Bureau's American Community Survey (ACS) and Small Area Income and Poverty Estimates (SAIPE) program. CIV=Central and Imperial Valley districts.

† The 2010 figure corresponds to the 2008–2012 ACS 5-year estimates, and the 2019 figure corresponds to the 2017–2021 ACS 5-year estimates.

The Hispanic youth population has experienced substantial growth throughout the state, with its share increasing from 56 to 63 percent in CIV school districts and from 34 to 40 percent in other areas. The share of students eligible for free or reduced-price meals also increased in both CIV and non-CIV counties, reaching 70 percent in the former and 53 percent in the latter, compared to initial levels of 65 percent and 46 percent, respectively. Over the period represented, graduation rates grew in both sets of counties, rising from 79 to 84 percent in CIV counties and from 82 to 85 percent in the rest of the state. Additionally, dropout rates declined from 15 to 11 percent in CIV counties and from 12 to 9 percent elsewhere in California. Student-to-teacher ratios increased more noticeably in CIV counties, while teachers' average years of work experience decreased. Finally, in 2019, per-student expenditures averaged approximately $15,200 in CIV counties, compared to $16,000 in non-CIV counties, with the average enrollment in CIV districts being close to half of that in non-CIV districts.

Overall, large economic disparities are evident in the pronounced racial inequities among students in CIV schools and the limited opportunities available to them (Cano and Hong, 2022). These disparities are likely to have accentuated during the COVID-19 pandemic, which laid bare significant limitations in the capacities of families to support children transitioning to virtual education. Resource shortages became all the more apparent, with increased challenges in hiring teachers, and low enrollment rates for vital programs like Transitional Kindergarten and full-day kindergarten despite their critical role in bridging academic gaps (Gold and Sequeira, 2023).

The enduring poverty and educational inequalities in the CIV region warrant significant attention, especially considering the region's expanding population and its vital role in providing for both California and the United States. In what follows, we shed light on the status of students in this area and the ongoing achievement gaps that must be addressed to foster advancement and equality in educational and economic opportunities within the state.

Table 2: School District Descriptive Statistics (AY 2010 and 2019)

	CIV school districts		Non-CIV school districts	
	2010	2019	2010	2019
Non-Hispanic White (%)	0.331	0.277	0.476	0.404
	(0.258)	(0.244)	(0.269)	(0.251)
Hispanic (%)	0.559	0.630	0.339	0.399
	(0.280)	(0.271)	(0.250)	(0.258)
Black or African American (%)	0.025	0.020	0.038	0.031
	(0.035)	(0.031)	(0.065)	(0.056)
Asian (%)	0.025	0.023	0.056	0.060
	(0.036)	(0.039)	(0.097)	(0.107)
American Indian or Alaska Native (%)	0.013	0.010	0.023	0.022
	(0.042)	(0.036)	(0.054)	(0.073)
Native Hawaiian or Pacific Islander (%)	0.003	0.002	0.005	0.004
	(0.009)	(0.004)	(0.007)	(0.011)
Filipino (%)	0.009	0.008	0.015	0.015
	(0.019)	(0.015)	(0.028)	(0.028)
Two or more races (%)	0.010	0.021	0.023	0.054
	(0.026)	(0.023)	(0.032)	(0.054)
Ethnic Diversity Index	28.20	26.15	34.24	36.63
	(14.17)	(15.09)	(13.94)	(14.14)
English learners (%)	0.256	0.261	0.159	0.162
	(0.204)	(0.188)	(0.156)	(0.140)
Free/reduced price meals eligible (%)	0.653	0.699	0.459	0.527
	(0.231)	(0.196)	(0.259)	(0.245)
Graduation rate (%)	0.794	0.840	0.820	0.847
	(0.128)	(0.205)	(0.128)	(0.180)
Suspension rate (%)	.	0.037	.	0.035
		(0.029)		(0.037)
Expulsion rate (%)	.	0.001	.	0.000
		(0.002)		(0.001)
Dropout rate (%)	0.150	0.109	0.118	0.093
	(0.104)	(0.169)	(0.095)	(0.130)
Student-teacher ratio	19.89	21.56	19.32	19.71
	(3.96)	(25.51)	(7.14)	(17.72)
Teachers' average experience (years)	10.52	9.77	10.87	10.03
	(3.21)	(3.03)	(3.42)	(3.77)
Expenditures per student ($)	9,536.45	15,178.23	9,888.67	16,036.92
	(9,399.15)	(17,588.24)	(6,018.78)	(8,643.87)
Enrollment	3,524.30	3,851.34	6,947.26	6,765.88
	(7,605.28)	(7,927.20)	(26,307.04)	(23,922.22)
Observations	246	242	780	782

Note: Means; standard deviations in parentheses. The ethnic diversity index, developed by Ed-Data, is a measure of a district's ethnic variety, where a value of 100 indicates an even distribution among different ethnic/racial groups, and 0 means all students come from one ethnic group. The data in the table come Ed-Data. CIV=Central and Imperial Valley districts.

Data

To learn about individual-level academic outcomes, we use the California Longitudinal Pupil Achievement Data System (CALPADS),[2] which includes longitudinal academic information for the universe of students in grades K-12. The data include information on distinct academic years in the 2009–2010 through 2018–2019 period, depending on the outcome of interest.[3] The data also contains individual-level information on school enrollment, as well as on the students' gender, race, ethnicity, socioeconomic disadvantage, and whether the student is a migrant student or has an individualized educational plan (IEP). This information allows us to examine the academic performance and progress of students in CIV counties. Specifically, we focus on academic performance, absenteeism, and success in CIV districts by looking at students' English language arts (ELA) and mathematics standardized test scores, chronic absenteeism and share of absent days, and graduation rates.

Empirical research in California and throughout the country has found that high school standardized test scores are a good predictor of college academic performance, graduation rates, and institutional quality, as well as earnings later in life (University of California Academic Senate, 2020; Chetty et al., 2014). The CALPADS dataset includes ELA and math scores from the California Assessment of Student Performance and Progress (CAASPP) standardized tests for almost 900,000 students in grades 3 through 8 and 11 during the academic years 2014–2015 through 2018–2019. To make the data comparable across academic years and school grades, we transform the scores into percentiles within grade and academic year.

Graduation rates are associated with earnings later in life (Torpey, 2021). We use CALPADS individual-level graduation data for 136,000 12th graders during the 2009–2010 through 2018–2019

[2] See: https://www.cde.ca.gov/ds/sp/cl/

[3] The COVID-19 pandemic disrupted the collection of data in the 2019–2020 academic year.

academic years to evaluate progress in this dimension and potential disparities within CIV school districts.

Empirical research has also documented the relationship between higher school absences and lower academic performance. This literature underscores the detrimental effects of increased absences and chronic absenteeism on several outcomes, including test scores, course grades, overall GPA, the likelihood of dropping out, and the probability of graduating without a high school diploma (Ansari and Pianta, 2019; Aucejo and Romano, 2016; Kirksey, 2019; Klein et al., 2022; Smerillo et al., 2018). These studies have found that chronic absenteeism, even as early as kindergarten, can have rather pervasive effects on academic performance (Gottfried, 2014). Accordingly, we examine absenteeism through two related outcomes: chronic absenteeism and the share of absent days. Chronic absenteeism is an indicator for when a student misses 10 percent or more of the instructional days in an academic year.[4] It is coded as a dichotomous variable. The share of absent school days is coded as a continuous variable. The CALPADS sample includes both variables for approximately 1.7 million K-12 students during the 2016–2017 through 2018–2019 academic years.

In Table 3, we provide some summary statistics for the sample of youth attending school in the CIV region. Average ELA and math test scores were in the 44th percentile, indicating students in the CIV region only performed better than 44 percent of the testing population. Approximately 14 percent of students exhibited chronic absenteeism, with a share of school absences that hovered around 6 percent, and their graduation rates averaged 97 percent. Depending on the sample being used, the share of Hispanic students ranged from 59 percent to 66 percent. An also rather large share of students—between 63 and 74 percent—were economically disadvantaged, with economically disadvantaged Hispanics averaging between 45 and 55 percent across the various samples. English

[4] According to the California Education Code (EC) section 60901(c)(1), chronic absenteeism is defined as "a pupil who is absent on 10 percent or more of the school days in the school year when the total number of days a pupil is absent is divided by the total number of days the pupil is enrolled and school was actually taught in the regular day schools of the district, exclusive of Saturdays and Sundays."

language learners represented 20 percent of the students, about 10 percent had individualized education plans (IEP), and 2 percent were migrants.

In addition to these individual-level traits, the CALPADS data identifies the schools and school districts where students are enrolled. This level of geographical disaggregation enables us to identify individuals attending schools in CIV districts. The CIV status is assigned based on the location of the school district in the Central and Imperial Valley counties, as defined by the California Regional Economies Employment (CREE) Series and the State of California Department of Justice.[5] Figure 1 presents a map of the state indicating the 11 Central and Imperial Valley counties used to designate CIV school districts.

Lastly, we gather and merge annual information on school district characteristics that help us account for other factors likely impacting students' academic performance from Ed-Data. In particular, we collect data on each school district's ethnic diversity index,[66] suspension rate, dropout rate, graduation rate, expulsion rate, student-teacher ratio, and expenditures per student. These data are merged to the CALPADS data using school district codes available in both datasets.

[5] Available at: https://www.labormarketinfo.edd.ca.gov/data/california-regional-economies- employment(CREE).html and https://oag.ca.gov/gambling/game/central_valley.

[6] The ethnic diversity index, developed by Ed-Data, is a measure of a district's ethnic variety, where a value of 100 indicates an even distribution among different ethnic/racial groups, and 0 means all students come from one ethnic group.

Table 3: Student Descriptive Statistics

	Sample		
	Test Scores	Absenteeism	Graduation
Outcomes			
ELA test score percentile	44.406		
	(28.112)		
Math test score percentile	43.595		
	(27.526)		
Chronic absenteeism (%)		0.137	
		(0.344)	
Share of days absent (%)		0.059	
		(0.099)	
Twelfth graders graduating HS (%)			0.971
			(0.168)
Individual-level controls			
Female (%)	0.490	0.483	0.495
	(0.500)	(0.500)	(0.500)
Age	12.813	12.862	18.289
	(2.661)	(3.871)	(0.533)
White (%)	0.177	0.732	0.759
	(0.382)	(0.443)	(0.428)
Hispanic (%)	0.661	0.606	0.589
	(0.473)	(0.489)	(0.492)
Black (%)	0.043	0.077	0.059
	(0.204)	(0.266)	(0.236)
Asian (%)	0.068	0.106	0.105
	(0.252)	(0.307)	(0.306)
Other race (%)	0.046	0.085	0.077
	(0.210)	(0.279)	(0.267)
English language learner (%)	0.199		
	(0.399)		
Migrant student (%)	0.022	0.017	0.019
	(0.147)	(0.128)	(0.138)
Individualized educational plan (IEP) (%)	0.097		
	(0.296)		
Disadvantaged socioeconomic status (%)	0.738	0.707	0.630
	(0.440)	(0.455)	(0.483)
Hispanic and disadvantaged socioeconomic status (%)	0.552	0.495	0.449
	(0.497)	(0.500)	(0.497)
District-level controls			
Ethnic Diversity Index	33.375	33.248	32.155
	(15.570)	(15.505)	(14.491)
Graduation rate (%)	0.880	0.877	0.895
	(0.065)	(0.085)	(0.046)
Suspension rate (%)	0.058	0.057	0.062
	(0.018)	(0.021)	(0.023)
Expulsion rate (%)	0.002	0.002	0.002
	(0.002)	(0.002)	(0.002)
Dropout rate (%)	0.064	0.064	0.056
	(0.044)	(0.055)	(0.032)
Student-teacher ratio	21.624	21.567	21.923
	(2.258)	(2.523)	(2.205)
Expenditures per student ($)	12,632.327	14,042.145	13,421.115
	(5,552.083)	(17,673.194)	(12,234.607)
Observations	889,836	1,778,809	135,679

Note: Means; standard deviations in parentheses. The ethnic diversity index, developed by Ed-Data, is a measure of a district's ethnic variety, where a value of 100 indicates an even distribution among different ethnic/racial groups, and 0 means all students come from one ethnic group. The test scores sample corresponds to the 2013–2014 through 2018–2019 academic years. The absenteeism sample includes the 2016—2017 through 2018—2019 academic years, and the graduation sample goes from 2009–2010 to 2018— 2019. CIV=Central and Imperial Valley districts.

Main Findings

Prevalence of Educational Disparities within the CIV

Tables 4 through 6 present the coefficients from regression analyses estimating gaps in test score percentiles, absenteeism, and graduation rates between White students and students from various demographic groups. We use two model specifications for each outcome to gauge the robustness of the estimated gaps to the inclusion of school district covariates.[7]

Table 4 displays the results for test score percentiles. We interpret the coefficients as the difference in percentiles capturing students' performance relative to their peers in the same grade and year. Focusing on student-level traits, we find evidence of Hispanic students scoring, on average, between 5 and 6 percentiles below non-Hispanic White students in ELA and math standardized tests. These gaps double in size in the case of Black students and students of economically disadvantaged backgrounds. Even larger gaps are observed for English learners and students with an IEP, whose test scores fluctuate between 17 and 21 percentile points lower than those of non-English learners and students without an IEP. Finally, Hispanic students from economically disadvantaged backgrounds scored between 10 and 11 percentiles below their non-Hispanic White and non-economically disadvantaged counterparts.[8] Meanwhile, Asian students scored 7 to 8 percentiles above non-Hispanic White students.

The above patterns extend to other academic outcomes, where Hispanic, Black, and economically disadvantaged students performed worse than non-Hispanic Whites from non-economically disadvantaged backgrounds, while Asian students performed better. Examining school absences, the estimates in Table 5 indicate that chronic absenteeism rates were approximately 1.5

[7] Tables 4–6 present the coefficients for our key variables of interest. The tables reporting the coefficients on all control variables can be found in Appendix Tables A1–A3.

[8] This is computed by adding up the estimated coefficients corresponding to the following terms: Hispanic, disadvantaged socioeconomic status, and their interaction.

percentage points higher for Hispanic students compared to their non-Hispanic White peers. The gap widened considerably for Black students, exceeding 3.2 percentage points. Moreover, the disparities further increased to 6.5 percentage points for economically disadvantaged students, and overall, they appeared to rise with school expulsion rates. Similarly, the estimates in Table 6 reveal that Hispanic youth were slightly less likely to graduate than their non-Hispanic White counterparts, with a gap of half a percentage point. This gap roughly doubled for Hispanic students from economically disadvantaged backgrounds.

Table 4: Adjusted Gaps in Test Score Percentiles for 4th through 8th and 11th Grade Students (AY 2014–2019)

	English Language Arts		Mathematics	
	(1)	(2)	(3)	(4)
Student characteristics				
Female	5.125***	5.125***	-0.893***	-0.893***
	(0.084)	(0.084)	(0.086)	(0.086)
Age	-2.927***	-2.927***	-3.522***	-3.522***
	(0.107)	(0.107)	(0.101)	(0.101)
Hispanic	-5.016***	-5.013***	-6.423***	-6.418***
	(0.198)	(0.198)	(0.186)	(0.186)
Black	-10.277***	-10.278***	-11.058***	-11.059***
	(0.226)	(0.226)	(0.224)	(0.224)
Asian	7.028***	7.027***	8.126***	8.126***
	(0.263)	(0.263)	(0.277)	(0.277)
English Learner	-20.576***	-20.578***	-16.989***	-16.990***
	(0.224)	(0.224)	(0.203)	(0.203)
Student with IEP	-21.216***	-21.216***	-21.459***	-21.459***
	(0.258)	(0.258)	(0.258)	(0.258)
Migrant student	0.327	0.327	2.422***	2.422***
	(0.270)	(0.270)	(0.285)	(0.285)
Disadvantaged socioeconomic status	-10.368***	-10.366***	-10.404***	-10.401***
	(0.191)	(0.191)	(0.209)	(0.209)
Hispanic and economically disadvantaged	4.943***	4.938***	5.516***	5.510***
	(0.207)	(0.207)	(0.214)	(0.214)
School district characteristics	N	Y	N	Y
Grade FEs	Y	Y	Y	Y
School FEs	Y	Y	Y	Y
Academic year FEs	Y	Y	Y	Y
Observations	889,817	889,817	889,817	889,817
R-squared	0.343	0.343	0.318	0.318

Note: In columns (1) and (2), the dependent variable is the English language arts test score percentile. In columns (3) and (4), the dependent variable is the mathematics test score percentile. All model specifications include grade, school district, and academic year fixed effects. Clustered standard errors at the school district level in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Adjusted Differences in Absenteeism for K-12 Students (AY 2014–2019)

	Chronic absenteeism			Share of absent days	
	(1)	(2)		(3)	(4)
Student characteristics					
Female	0.003***	0.003***		0.000	0.000
	(0.001)	(0.001)		(0.000)	(0.000)
Age	0.035***	0.035***		0.012***	0.012***
	(0.001)	(0.001)		(0.001)	(0.001)
Hispanic	0.015***	0.015***		0.005***	0.005***
	(0.002)	(0.002)		(0.000)	(0.000)
Black	0.032***	0.032***		0.008***	0.008***
	(0.002)	(0.002)		(0.001)	(0.001)
Asian	-0.074***	-0.074***		-0.021***	-0.021***
	(0.003)	(0.003)		(0.001)	(0.001)
Migrant student	-0.016***	-0.016***		-0.005***	-0.005***
	(0.004)	(0.004)		(0.001)	(0.001)
Disadvantaged socioeconomic status	0.065***	0.065***		0.015***	0.015***
	(0.002)	(0.002)		(0.001)	(0.001)
Hispanic and economically disadvantaged	-0.017***	-0.017***		-0.005***	-0.005***
	(0.002)	(0.002)		(0.001)	(0.001)
School district characteristics	N	Y		N	Y
Grade FEs	Y	Y		Y	Y
School FEs	Y	Y		Y	Y
Academic year FEs	Y	Y		Y	Y
Observations	1,712,875	1,712,875		1,776,164	1,776,164
R-squared	0.108	0.108		0.167	0.168

Note: In columns (1) and (2), the dependent variable is chronic absenteeism, which is an indicator for when a student has missed at least 10 percent of the instructional days. In columns (3) and (4), the dependent variable is a student's share of instructional days absent. All model specifications include grade, school district, and academic year fixed effects. Clustered standard errors at the school district level in parentheses.

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

Table 6: Adjusted Differences in Graduation Rates (AY 2010–2019)

	Graduation rates	
	(1)	(2)
Student characteristics		
Female	0.015***	0.015***
Age	(0.001) -0.021***	(0.001) -0.021***
Hispanic	(0.003) -0.004***	(0.003) -0.004***
Black	(0.002) -0.010***	(0.002) -0.010***
Asian	(0.003) 0.010***	(0.003) 0.010***
	(0.002)	(0.002)
Migrant student	0.001	0.001
Disadvantaged socioeconomic status	(0.005) -0.013***	(0.005) -0.013***
Hispanic and economically disadvantaged	(0.002) 0.006**	(0.002) 0.006**
	(0.002)	(0.002)
School district characteristics	N	Y
School FEs	Y	Y
Academic year FEs	Y	Y
Observations	135,667	135,667
R-squared	0.079	0.079

Note: The dependent variable, graduation, is an indicator variable for a student leaving school after meeting all state and local high school graduation requirements and receiving a high school diploma. All model specifications include academic year and school district fixed effects. Clustered standard errors at the school district level in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Evolution of Student Achievement Gaps

Of particular relevance for policymaking is the temporal evolution of the aforementioned gaps. Figures 3 through 7 display the trajectory of each demographic group over the period being examined in relation to standardized test scores, absences, and graduation rates.

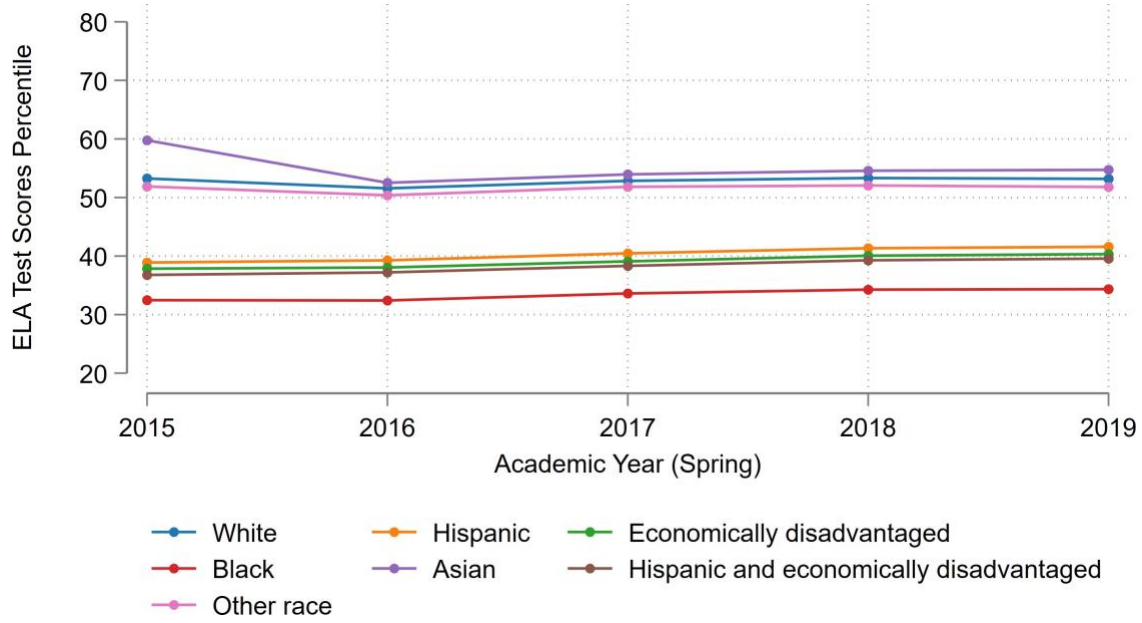
Regarding test scores, Figures 3 and 4 indicate that the gaps in both ELA and math performance across student groups remained persistent and generally unchanged between 2015 and 2019. On average, Asian and non-Hispanic White students consistently achieved ELA and math scores 15 to 20 percentiles higher than Hispanic, Black, and economically disadvantaged students.

In terms of chronic absenteeism rates, Figure 5 reveals that the gaps across student groups remained stagnant over time, with all groups, particularly Black students, exhibiting higher rates than Asian students. The average chronic absenteeism rate for Black students was 22 percent, whereas non-Hispanic Whites and Hispanics had rates around 14–15 percent, and Asian students had a rate of approximately 7 percent. Similarly, Figure 6 illustrates that, on average, Black students were absent from the classroom for about 8 percent of school days, which is higher than the rates for Hispanics and non-Hispanic Whites, who missed around 6 percent of school days, and Asians, who missed around 4 percent.

Lastly, Figure 7 depicts the trends in graduation rates across various student groups. It reveals that, prior to 2014, significant disparities existed, with graduation rates hovering around 86 percent for Blacks, 90 percent for Hispanics, 92.5 percent for non-Hispanic Whites, and close to 95 percent for Asians. However, between 2014 and 2016, these gaps narrowed. Since then, the graduation rate for Black students increased to around 95 percent, while Hispanics and non-Hispanic Whites achieved a graduation rate of 96 percent, and Asian students attained a graduation rate nearing 98 percent. While the significant rise in graduation rates is promising, the lack of a corresponding increase in standardized

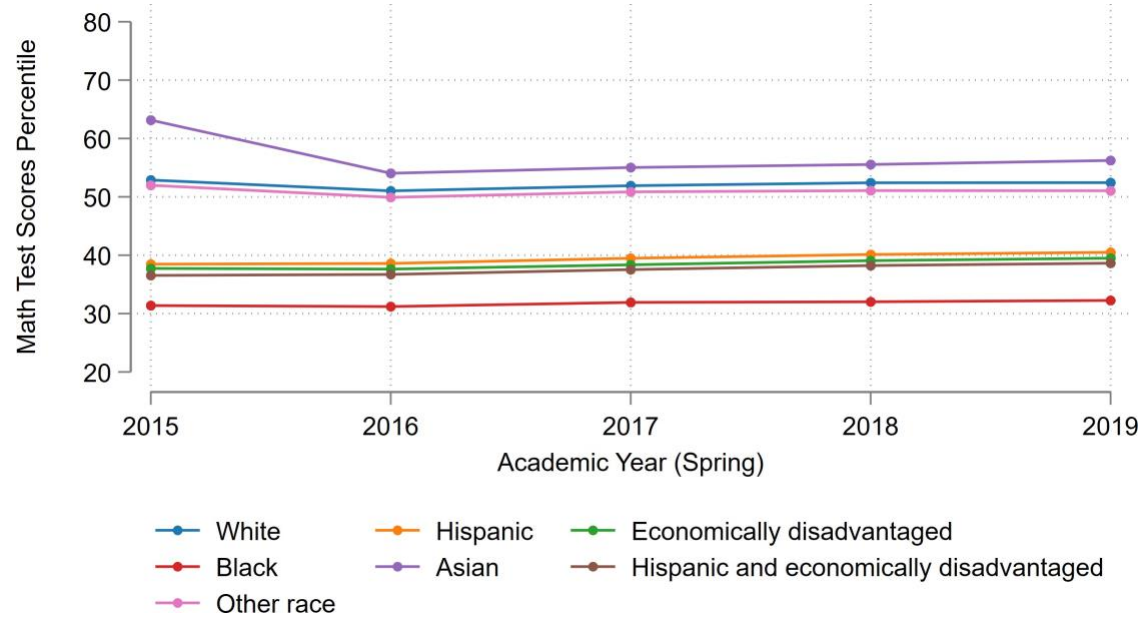
test scores highlights the limitations of using graduation rates alone to accurately measure progress in addressing academic achievement disparities.

Figure 3: ELA Test Scores Percentiles by Group and Academic Year



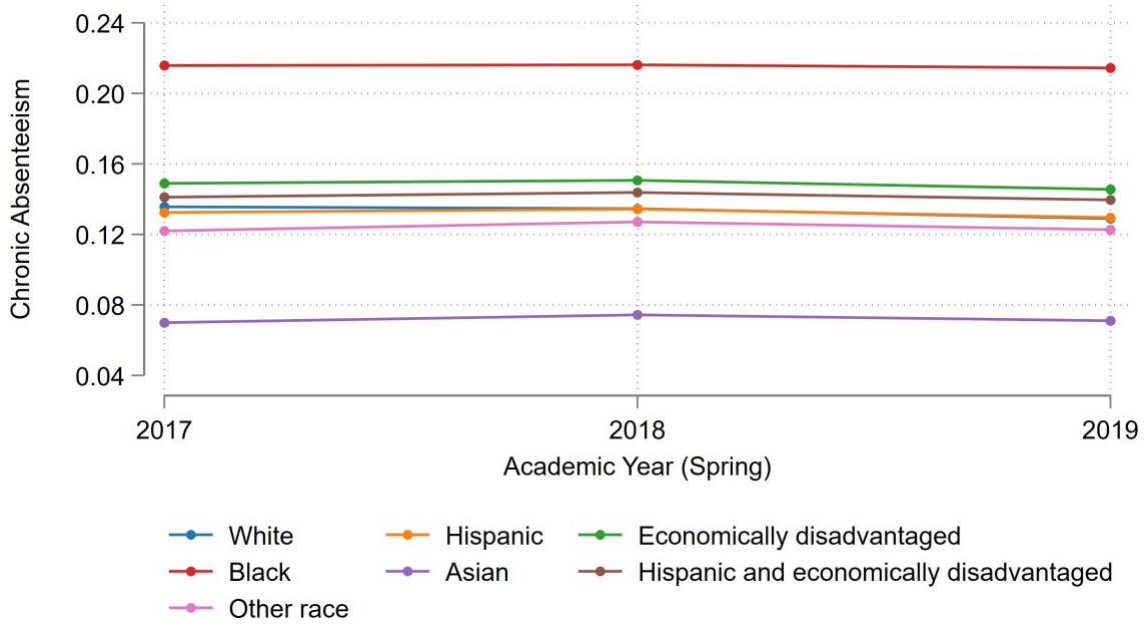
Note: Test score percentiles are generated within grade and academic year.

Figure 4: Math Test Scores Percentiles by Group and Academic Year



Note: Test score percentiles are generated within grade and academic year.

Figure 5: Chronic Absenteeism by Group and Academic Year



Note: Chronic absenteeism is an indicator for when a student misses at least 10 percent of the instructional days.

Figure 6: Share of Absent Days by Group and Academic Year

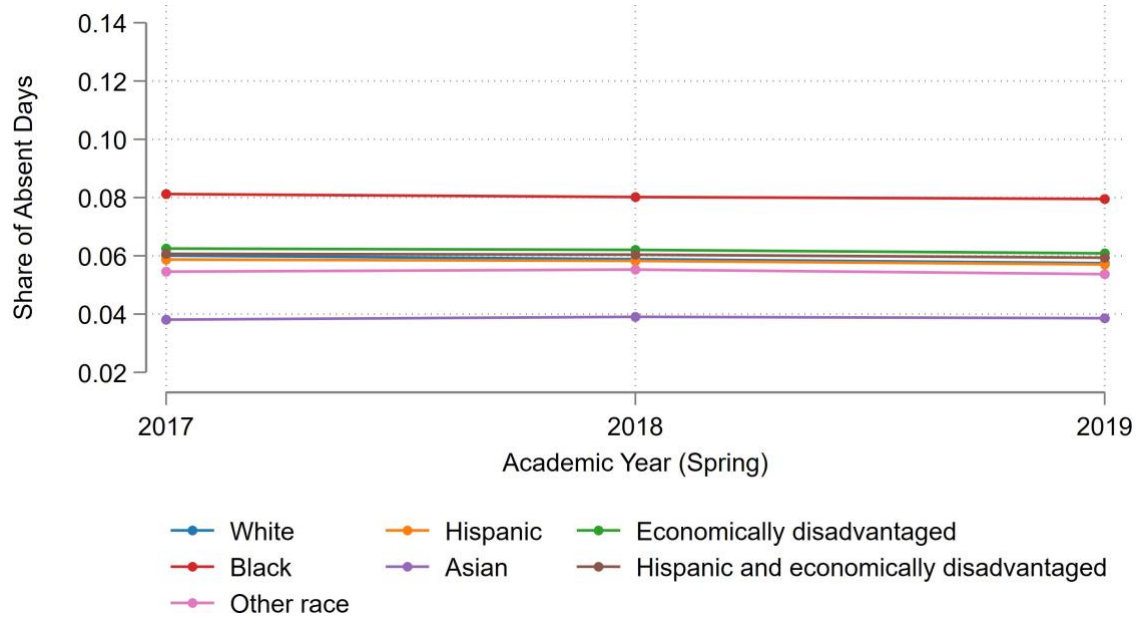
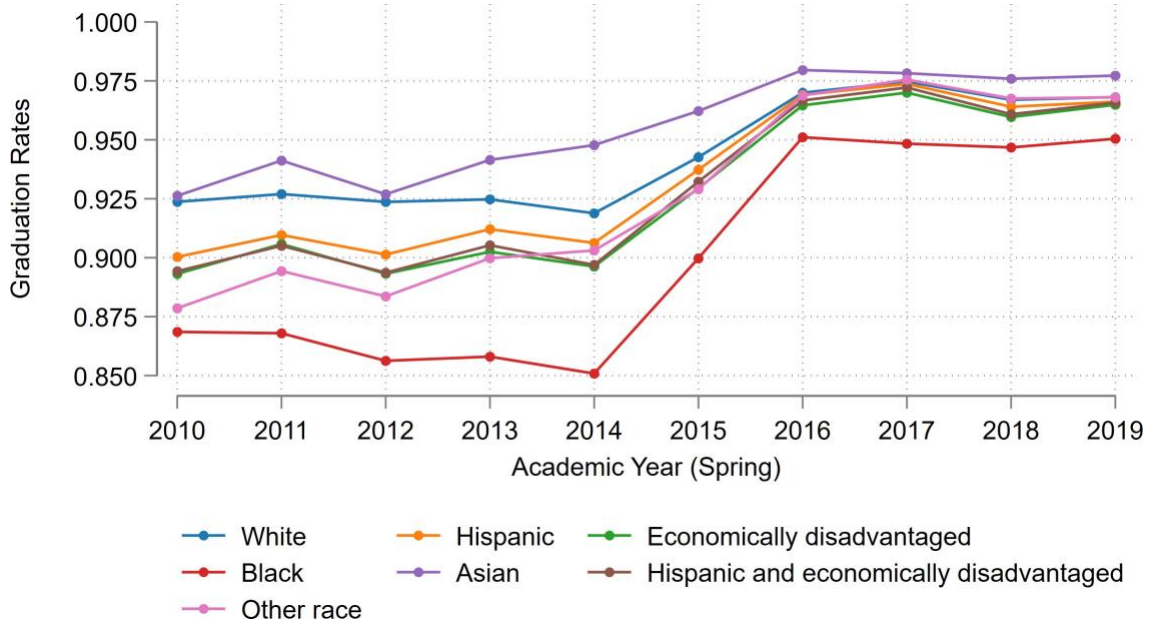


Figure 7: Graduation Rates by Group and Academic Year



Gaps by Demographic Group and Grade

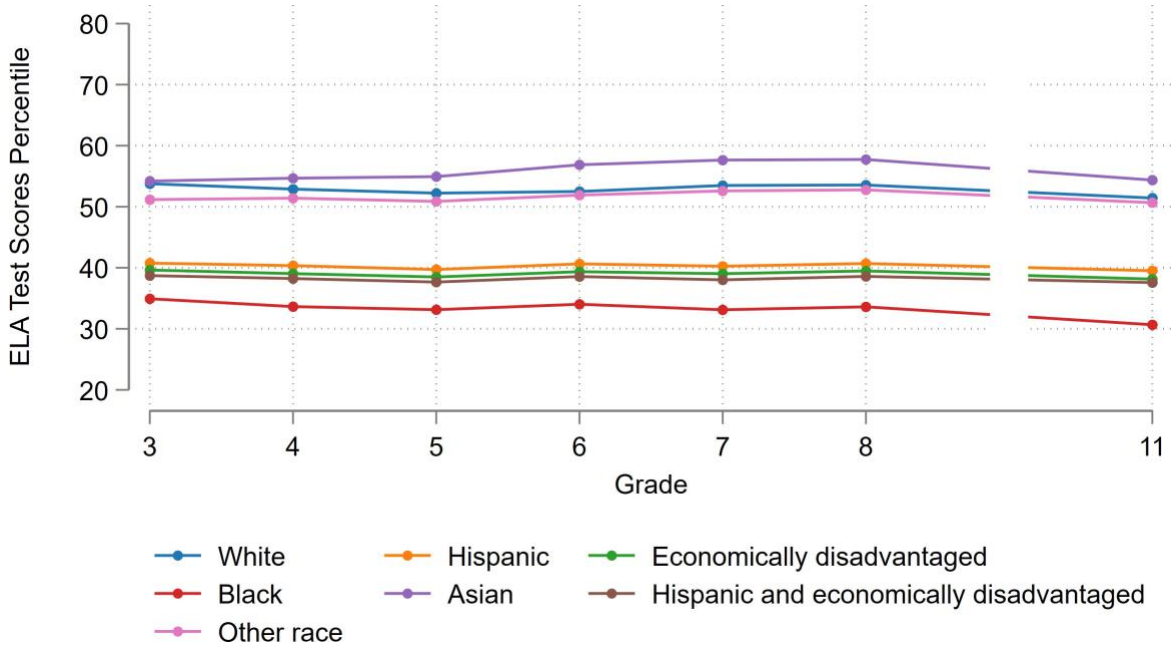
We also examine how the disparities in academic performance across demographic groups varied by grade to identify when these differences emerged. Figures 8 and 9 display the average standardized test scores for ELA and math, respectively, broken down by grade and demographic group. Consistent with the overall trends in test scores observed in Figures 3 and 4, we found persistent gaps across grades for all groups, with these gaps somewhat widening after grade 6.

Regardless of grade, Black students' average ELA scores remained in the 35th percentile, while those of Hispanics in the 40th percentile. On the other had, non-Hispanic Whites and Asians exhibited average scores around the 53rd to 55th percentiles. In terms of math, Black students' average test scores ranked close to the 30th percentile, with a slight decline in higher grades. Hispanic students' scores hovered around the 40th percentile, and the scores for non-Hispanic Whites and Asians fluctuated around the 50th to 56th percentiles, respectively.

As with standardized test scores, Figure 10 reveals persistent gaps in absenteeism rates among different demographic groups of students across grade levels, with an observable decline in school attendance rates in middle and high school (grades 6–8 and 9–12). In general, chronic absenteeism

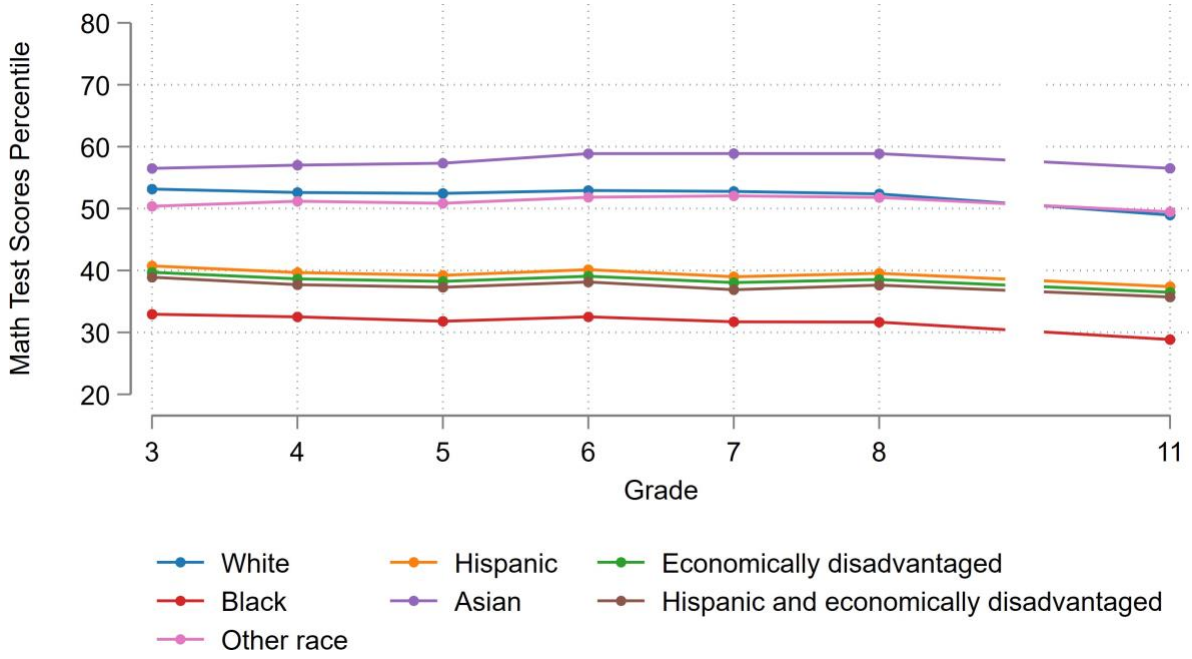
rates for Hispanics and non-Hispanic Whites were about 5 percentage points higher than those for Asian students across most grades. Moreover, Black students experienced chronic absenteeism rates about 15 percentage points higher than their Asian counterparts. A similar trend is evident for the share of absent school days in Figure 11. The gap between Hispanic and non-Hispanic Whites students, relative to Asian students, averaged 2 percentage points until grade 6 and then doubled in subsequent grades. Similarly, the gap between Black and Asian students stood at about 4 percentage points during elementary school but widened to 5–6 percentage points in higher grades.

Figure 8: ELA Test Scores Percentiles by Group and Grade (AY 2014–15 through 2018–19)



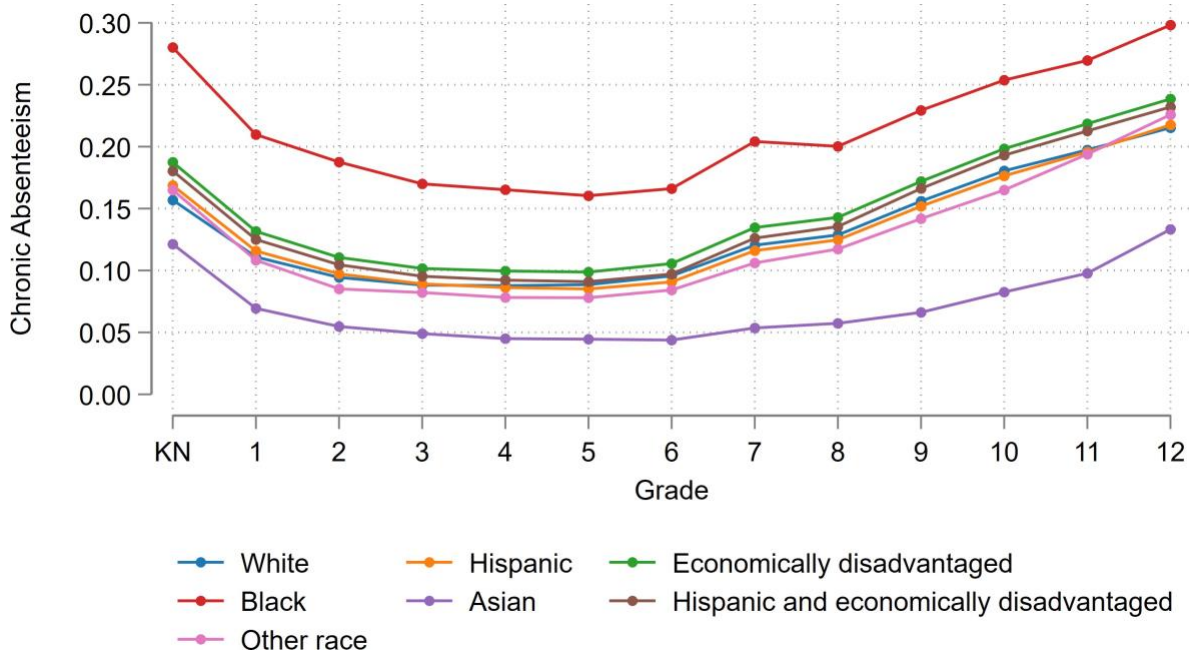
Note: Test score percentiles are generated within grade and academic year. Test scores are available for 3rd through 8th grade and in 11th grade.

Figure 9: Math Test Scores Percentiles by Group and Grade (AY 2014–15 through 2018–19)



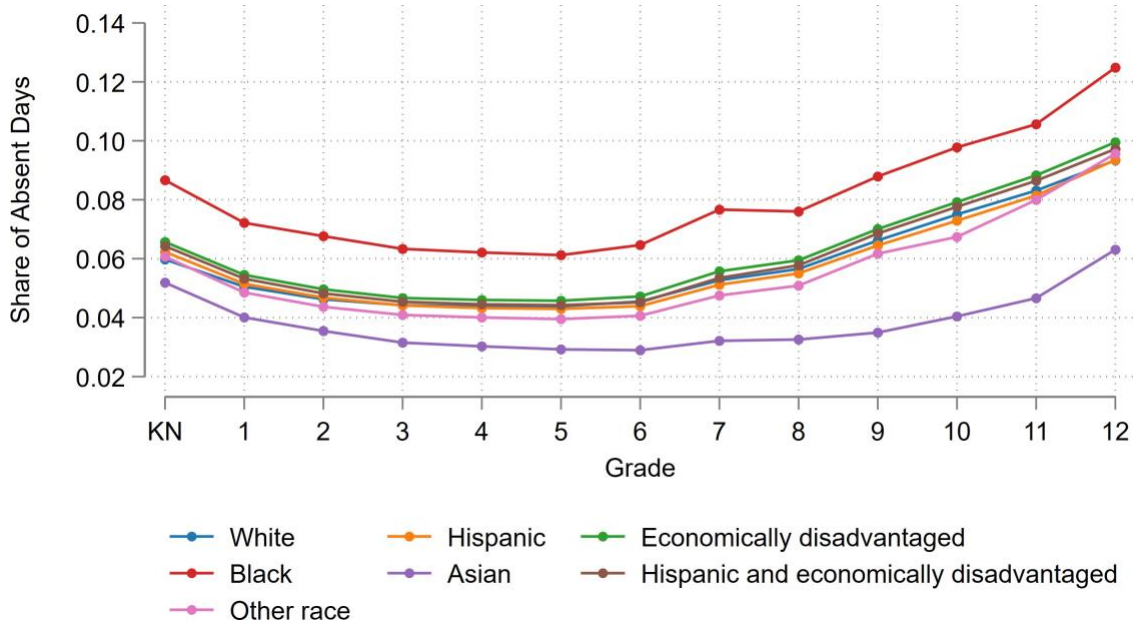
Note: Test score percentiles are generated within grade and academic year. Test scores are available for 3rd through 8th grade and in 11th grade.

Figure 10: Chronic Absenteeism by Group and Grade (AY 2016–2017 through 2018–2019)



Note: Chronic absenteeism is an indicator for when a student misses at least 10 percent of the instructional days.

Figure 11: Share of Absent Days by Group and Grade (AY 2016-2017 through 2018–2019)



Geographical Distribution of Academic Disparities

Are these disparities evenly distributed throughout CIV school districts in California? To address this question, Figures A1 through A10 present heat maps depicting the magnitude of gaps in test scores percentiles, absenteeism rates, and graduation rates at the school district level for Hispanics and economically disadvantaged Hispanics relative to White students. The maps show substantial disparities at the district level across all outcomes. Furthermore, in each case, the gap for economically disadvantaged Hispanic students relative to non-Hispanic White students is even wider than the gap between Hispanic and White students. For instance, ELA test score gaps between economically disadvantaged Hispanic students and White students were particularly large in the San Joaquin, Stanislaus, and Merced counties, as well as in numerous school districts in Madera, Fresno, Kings, Tulare, Kern, and Imperial Valley counties (Figure A2). These locations also exhibit notable gaps in math test scores anywhere between 10 and 37 percentiles (Figure A4).

In terms of absenteeism rates, the disparities between economically disadvantaged Hispanic students and their White peers were particularly pronounced in the eastern regions of Tuolumne, Mariposa, and Fresno counties. In these areas, the gaps in chronic absenteeism rates ranged between

7.7 and 21.6 percentage points (Figure A6). Not surprisingly, these counties also exhibited the largest gaps in graduation rates between the two groups. In the eastern part of Fresno County, the gap in graduation rates ranged between 3.5 and 4.6 percentage points, and in certain districts in Madera County, it exceeded 7 points (Figure A10).

Lastly, Tables 7 and 8 provide an overview of characteristics of school districts that experienced the most significant improvements in ELA and math proficiency, chronic absenteeism, and graduation rates. Notably, the districts that experienced the greatest gains in meeting or exceeding ELA and math standards (Table 7) often had a higher percentage of non-Hispanic White students and a lower percentage of Hispanic students. These districts also tended to have a substantial proportion of students eligible for free or reduced-price meals, indicating higher levels of economic disadvantage. Despite this, these districts achieved remarkable improvements.

In terms of districts that made the most significant progress in lowering chronic absenteeism and increasing graduation rates, Table 8 indicates that these districts have a high percentage of English learners and economically disadvantaged students. Despite these challenges, they managed to lower absenteeism rates and boost graduation rates. Additionally, the data indicates that higher per-student expenditures in these districts may correlate with better outcomes. However, to the extent these are simple tabulations, higher expenditures per student in districts with a larger share of diverse students could be simply reflecting the greater financial support provided to these schools precisely with the goal of addressing persisting inequities. Given the pervasiveness of these disparities, it is crucial to pay close attention to academic interventions that may prove effective in narrowing gaps in student learning.

Table 7: CIV School Districts Ranked by Improvement in the Achievement of ELA and Math Standards

		District characteristics (2018–2019)						
Rank	District	Non-Hispanic White (%)	Hispanic (%)	Black or African American (%)	English learners (%)	Free/reduced price meals eligible (%)	Student-teacher ratio	Expenditures per student ($)
Percent of students meeting/exceeding ELA standards								
1	**Linns Valley-Poso Flat Union**	84.2	5.3	0.0	.	57.9	6.3	46,506
2	**McKittrick Elementary**	77.0	18.9	0.0	.	36.5	14.8	30,165
3	**Raymond-Knowles Union Elementary**	58.0	32.1	0.0	4.9	67.9	13.5	13,816
4	**General Shafter Elementary**	10.7	88.7	0.0	27.0	71.1	15.9	19,214
5	**Big Creek Elementary**	82.2	15.6	0.0	.	17.8	11.3	27,566
6	**Brawley Union High**	5.5	92.7	1.1	16.5	76.1	23.4	14,574
7	**Greenfield Union**	6.0	83.4	6.9	19.5	92.4	22.9	12,671
8	**Outside Creek Elementary**	17.5	81.6	0.0	26.2	98.0	21.0	10,268
9	**Firebaugh-Las Deltas Unified**	3.1	96.2	0.2	39.3	90.8	17.0	14,824
10	**El Tejon Unified**	51.7	41.4	0.9	6.8	65.8	21.6	14,775
Percent of students meeting/exceeding math standards								
1	**Linns Valley-Poso Flat Union**	84.2	5.3	0.0	.	57.9	6.3	46,506
2	**McKittrick Elementary**	77.0	18.9	0.0	.	36.5	14.8	30,165
3	**Raymond-Knowles Union Elementary**	58.0	32.1	0.0	4.9	67.9	13.5	13,816
4	**Paradise Elementary**	28.8	64.6	1.5	34.3	62.1	19.8	12,407
5	**Washington Colony Elementary**	5.4	91.6	0.4	34.3	87.2	19.3	11,191
6	**Belridge Elementary**	2.8	97.2	0.0	38.9	80.6	18.0	30,328
7	**Firebaugh-Las Deltas Unified**	3.1	96.2	0.2	39.3	90.8	17.0	14,824
8	**Kings River Union Elementary**	8.3	91.2	0.0	56.1	91.9	19.1	13,574
9	**Buttonwillow Union Elementary**	5.8	91.4	0.9	63.2	92.6	14.8	15,224
10	**Big Creek Elementary**	82.2	15.6	0.0	.	17.8	11.3	27,566

Note: The table ranks school districts in the CIV by their performance in improving the indicated outcomes. The changes in the proportion of students meeting or achieving ELA and math standards are estimated between the 2014–2015 and 2018–2019 academic years.

Table 8: CIV School Districts Ranked by Improvement in Chronic Absenteeism and Graduation Rates

		District characteristics (2018–2019)						
Rank	District	Non-Hispanic White (%)	Hispanic (%)	Black or African American (%)	English learners (%)	Free/reduced price meals eligible (%)	Student-teacher ratio	Expenditures per student ($)
Lowering chronic absenteeism								
1	**Pine Ridge Elementary**	78.6	16.5	2.9	.	26.2	17.2	22,944
2	**Maricopa Unified**	55.2	27.4	3.5	2.3	44.3	26.9	21,344
3	**Belridge Elementary**	2.8	97.2	0.0	38.9	80.6	18.0	30,328
4	**Allensworth Elementary**	0.0	100.0	0.0	65.9	96.6	17.6	11,250
5	**Buttonwillow Union Elementary**	5.8	91.4	0.9	63.2	92.6	14.8	15,224
6	**Summerville Union High**	75.0	14.8	0.9	0.1	36.0	14.0	19,889
7	**Westside Elementary**	43.1	43.0	3.2	9.2	59.1	26.9	18,427
8	**Outside Creek Elementary**	17.5	81.6	0.0	26.2	98.0	21.0	10,268
9	**Blake Elementary**	61.5	38.5	0.0	15.4	69.2	13.0	19,478
10	**Beardsley Elementary**	41.8	42.9	3.0	10.0	91.9	19.3	13,613
Improving graduation rates								
1	**Alpaugh Unified**	27.2	62.9	1.8	22.8	72.7	24.8	14,381
2	**Southern Kern Unified**	28.2	54.8	10.6	14.6	66.7	19.1	12,854
3	**McFarland Unified**	1.0	97.8	0.3	41.2	89.8	23.0	14,364
4	**Chawanakee Unified**	66.4	19.8	1.1	1.0	50.9	21.6	14,804
5	**Tulare Joint Union High**	18.1	75.7	2.8	11.2	68.7	22.7	14,007
6	**Newman-Crows Landing Unified**	17.3	76.2	1.7	30.7	63.7	20.9	13,680
7	**Hanford Joint Union High**	23.7	66.6	4.2	7.7	63.9	23.5	13,374
8	**Firebaugh-Las Deltas Unified**	3.1	96.2	0.2	39.3	90.8	17.0	14,824
9	**Lodi Unified**	20.5	44.9	6.9	19.2	65.9	20.0	12,711
10	**Kerman Unified**	8.1	85.6	0.5	32.6	81.0	24.3	11,982

Note: The table ranks school districts in the CIV by their performance in improving the indicated outcomes. The changes in chronic absenteeism rates are estimated between the 2016–2017 and 2018–2019 academic years, while the changes in graduation rates are estimated between the 2009–2010 and 2018–2019 academic years.

Discussion and Conclusions

California, known as the Golden State and boasting the largest economy in the country, also grapples with significant economic and educational inequities. Despite allocating approximately 40 percent of the state budget to public schools and community colleges (EdSource, 2009), the state's per-pupil investment just recently recovered, reaching the national average after dropping for almost a decade after the Great Recession (Hahnel, 2020). Even though investments have since increased, California, with its 6.2 million students in the public school system, barely hovers around the national average. Tracking student progress in regions enduring the highest levels of poverty, as is the case with the Central and Imperial Valleys, is critical and the purpose of this report.

Using data on the universe of students in grades K-12 over the span of a decade, we examine educational progress, as well as academic achievement gaps between various demographic groups within the CIV region. The findings reveal how non-White students, especially Black and economically disadvantaged Hispanics, continue to fare significantly worse than their White peers in ELA and math standardized tests, school absences, and graduation rates. The gaps are especially pronounced for Black students, who face disparities that are twice as large as those experienced by Hispanic students. These gaps persist across all grade levels and over time, even when accounting for other student-level socio-demographic traits and school district characteristics. Some districts exhibit particularly severe disparities despite receiving increased funding aimed at addressing these inequities. While it is unclear if this association is causal, this link suggests a need for further investigation.

Altogether, the findings underscore the enduring and substantial disparities when comparing White and Asian American students to their Latino, Black, and economically disadvantaged peers. Particularly troubling is how these trends align with those observed in California's largest school district, Los Angeles Unified, where economically disadvantaged students achieved math and reading

passing rates at less than half the level of their non-economically disadvantaged counterparts (Cano, 2020). These statistics are worrisome, as they may explain lower college attendance and graduation rates among underrepresented and disadvantaged groups in the state (e.g., Diaz et al., 2023). Similarly, the slow rate of improvement across various measures of academic progress despite the allocation of billions of dollars in additional funds to schools serving a substantial number of disadvantaged students is concerning. Collectively, our findings underscore the need for a comprehensive evaluation of strategies to enhance educational provision in the region.

Further attention to these inequities is well-warranted, especially in light of the COVID19 pandemic, which exacerbated disparities by negatively impacting school absenteeism rates and student performance in standardized tests. This effect was particularly pronounced in California, where students scored relatively low compared to those in other states in the latest round of federal academic achievement tests, and where pandemic closures further widened existing inequalities (Walters, 2022). Evidence shows that the existing academic achievement gaps later translate into differential college enrollment rates (Kurlaender et al., 2018), which can negatively impact a wide range of outcomes later in life, including employment and career opportunities, earnings, family formation, mental and physical health, civic and criminal involvement, and overall well-being. In addition to being the "breadbasket of the world," the CIV region is also home to roughly 10 million people and a place fostering great diversity and economic potential (State of California Department of Finance, 2022). Devising strategies that rectify these educational inequities might ensure a successful transition of these students into the workforce and increase their contributions to the state's and the country's economies.

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Appendix

Table A1: Adjusted Gaps in Test Score Percentiles for 4th through 8th and 11th Grade Students (AY 2014–2019)

	English Language Arts			Mathematics	
	(1)	(2)		(3)	(4)
Student characteristics					
Female	5.125***	5.125***		-0.893***	-0.893***
	(0.084)	(0.084)		(0.086)	(0.086)
Age	-2.927***	-2.927***		-3.522***	-3.522***
	(0.107)	(0.107)		(0.101)	(0.101)
Hispanic	-5.016***	-5.013***		-6.423***	-6.418***
	(0.198)	(0.198)		(0.186)	(0.186)
Black	-10.277***	-10.278***		-11.058**	-11.059***
	(0.226)	(0.226)		(0.224)	(0.224)
Asian	7.028***	7.027***		8.126***	8.126***
	(0.263)	(0.263)		(0.277)	(0.277)
Other race	1.567***	1.565***		1.271***	1.271***
	(0.254)	(0.254)		(0.263)	(0.263)
English Learner	-20.576***	-20.578***		-16.989***	-16.990***
	(0.224)	(0.224)		(0.203)	(0.203)
Student with IEP	-21.216***	-21.216***		-21.459***	-21.459***
	(0.258)	(0.258)		(0.258)	(0.258)
Migrant student	0.327	0.327		2.422***	2.422***
	(0.270)	(0.270)		(0.285)	(0.285)
Disadvantaged socioeconomic status	-10.368***	-10.366***		-10.404***	-10.401***
	(0.191)	(0.191)		(0.209)	(0.209)
Hispanic and economically disadvantaged	4.943***	4.938***		5.516***	5.510***
	(0.207)	(0.207)		(0.214)	(0.214)
School district characteristics					
Ethnic Diversity Index		0.141			0.016
		(0.101)			(0.093)
Graduation rate		0.078**			0.108***
		(0.034)			(0.037)
Suspension rate		-0.017			0.001
		(0.070)			(0.072)
Expulsion rate		-0.189			-0.876
		(0.592)			(0.558)
Dropout rate		0.081***			0.113***
		(0.031)			(0.035)
Student-teacher ratio		-0.010			-0.025
		(0.048)			(0.041)
Expenditures per student		0.000***			0.000**
		(0.000)			(0.000)
grade	Y	Y		Y	Y
schoolcode	Y	Y		Y	Y
Academic year FEs	Y	Y		Y	Y
Observations	889,817	889,817		889,817	889,817
R-squared	0.343	0.343		0.318	0.318

Note: In columns (1) and (2), the dependent variable is the English language arts test score percentile. In columns (3) and (4), the dependent variable is the mathematics test score percentile. All model specifications include grade, school district, and academic year fixed effects. Clustered standard errors at the school district level in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A2: Adjusted Differences in Absenteeism for K-12 Students (AY 2014–2019)

	Chronic absenteeism			Share of absent days	
	(1)	(2)		(3)	(4)
Student characteristics					
Female	0.003***	0.003***		0.000	0.000
	(0.001)	(0.001)		(0.000)	(0.000)
Age	0.035***	0.035***		0.012***	0.012***
	(0.001)	(0.001)		(0.001)	(0.001)
Hispanic	0.015***	0.015***		0.005***	0.005***
	(0.002)	(0.002)		(0.000)	(0.000)
Black	0.032***	0.032***		0.008***	0.008***
	(0.002)	(0.002)		(0.001)	(0.001)
Asian	-0.074***	-0.074***		-0.021***	-0.021***
	(0.003)	(0.003)		(0.001)	(0.001)
Other race	-0.029***	-0.029***		-0.009***	-0.009***
	(0.003)	(0.003)		(0.001)	(0.001)
Migrant student	-0.016***	-0.016***		-0.005***	-0.005***
	(0.004)	(0.004)		(0.001)	(0.001)
Disadvantaged socioeconomic status	0.065***	0.065***		0.015***	0.015***
	(0.002)	(0.002)		(0.001)	(0.001)
Hispanic and economically disadvantaged	-0.017***	-0.017***		-0.005***	-0.005***
	(0.002)	(0.002)		(0.001)	(0.001)
School district characteristics					
Ethnic Diversity Index		0.001			0.001*
		(0.001)			(0.000)
Graduation rate		-0.000			-0.000
		(0.000)			(0.000)
Suspension rate		0.001			-0.000
		(0.001)			(0.001)
Expulsion rate		0.013**			0.006**
		(0.006)			(0.002)
Dropout rate		0.000			-0.000
		(0.000)			(0.000)
Student-teacher ratio		-0.000			-0.000
		(0.001)			(0.000)
Expenditures per student		-0.000***			-0.000
		(0.000)			(0.000)
schoolcode	Y	Y		Y	Y
Academic year FEs	Y	Y		Y	Y
grade	Y	Y		Y	Y
Observations	1,712,875	1,712,875		1,776,164	1,776,164
R-squared	0.108	0.108		0.167	0.168

Note: In columns (1) and (2), the dependent variable is chronic absenteeism, which is an indicator for when a student has missed at least 10 percent of the instructional days. In columns (3) and (4), the dependent variable is a student's share of instructional days absent. All model specifications include grade, school district, and academic year fixed effects. Clustered standard errors at the school district level in parentheses.

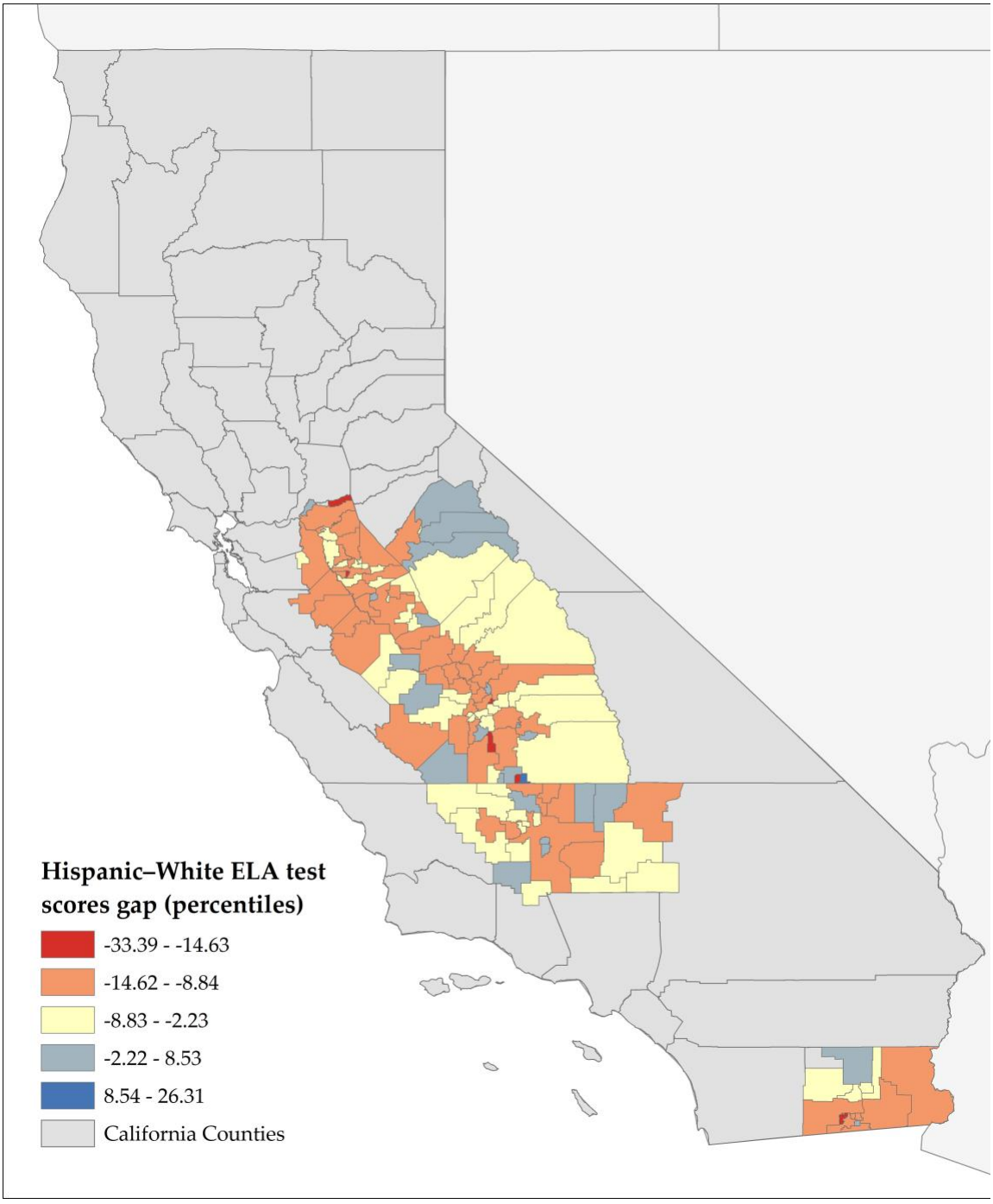
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A3: Adjusted Differences in Graduation Rates (AY 2010–2019)

	Graduation rates	
	(1)	(2)
Student characteristics		
Female	0.015***	0.015***
Age	(0.001)	(0.001)
	-0.021***	-0.021***
Hispanic	(0.003)	(0.003)
	-0.004***	-0.004***
Black	(0.002)	(0.002)
	-0.010***	-0.010***
Asian	(0.003)	(0.003)
	0.010***	0.010***
	(0.002)	(0.002)
Other race	0.004	0.004
	(0.002)	(0.002)
Migrant student	0.001	0.001
Disadvantaged socioeconomic status	(0.005)	(0.005)
	-0.013***	-0.013***
Hispanic and economically disadvantaged	(0.002)	(0.002)
	0.006**	0.006**
	(0.002)	(0.002)
School district characteristics		
Ethnic Diversity Index		0.000
Graduation rate		(0.001)
		0.001*
		(0.001)
Suspension rate		0.000
		(0.001)
Expulsion rate		-0.008
		(0.006)
Dropout rate		-0.001
Student-teacher ratio		(0.001)
		0.001**
		(0.001)
Expenditures per student		-0.000
		(0.000)
schoolcode	Y	Y
Academic year FEs	Y	Y
Observations	135,667	135,667
R-squared	0.079	0.079

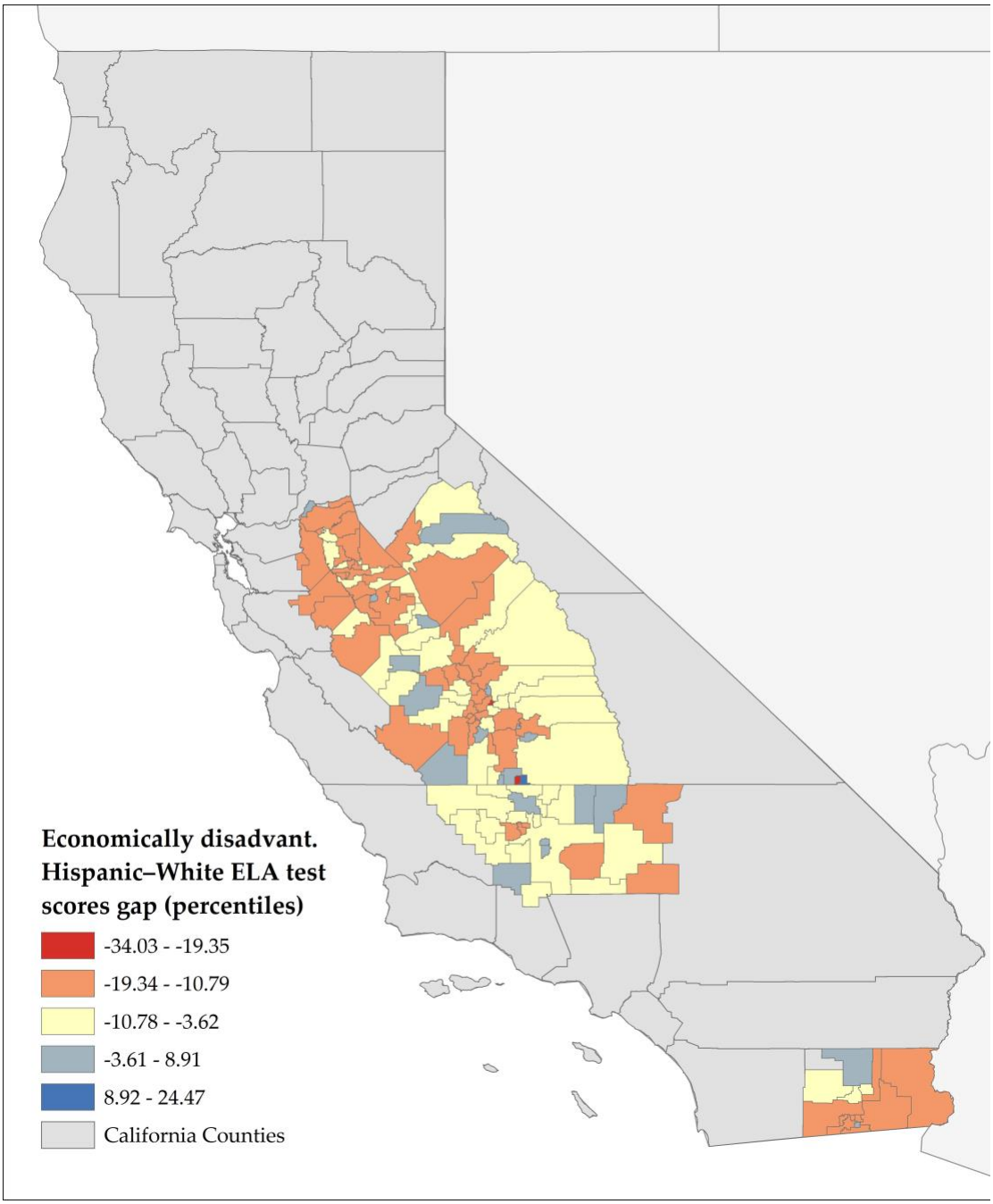
Note: The dependent variable, graduation, is an indicator variable for a student leaving school after meeting all state and local high school graduation requirements and receiving a high school diploma. All model specifications include academic year and school district fixed effects. Clustered standard errors at the school district level in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Figure A1: Gaps in ELA Test Score Percentiles between Hispanic and White Students, by CIV School District (AY 2014–2019)



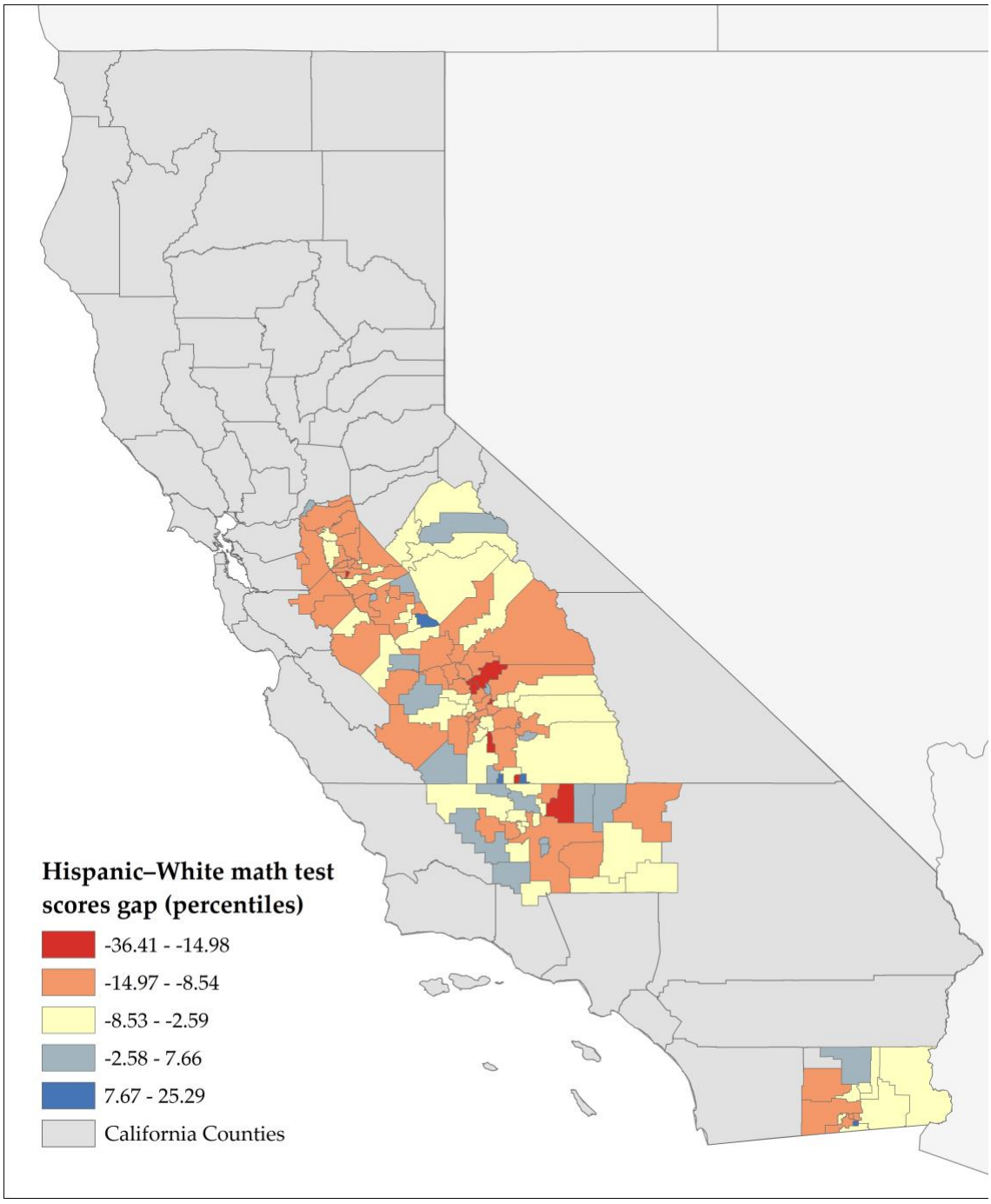
Note: Test score percentiles are calculated within grade and academic year with data for the entire state. Legend categories generated with Jenks natural breaks.

Figure A2: Gaps in ELA Test Score Percentiles between Economically Disadvantaged Hispanic and White Students, by CIV School District (AY 2014–2019)



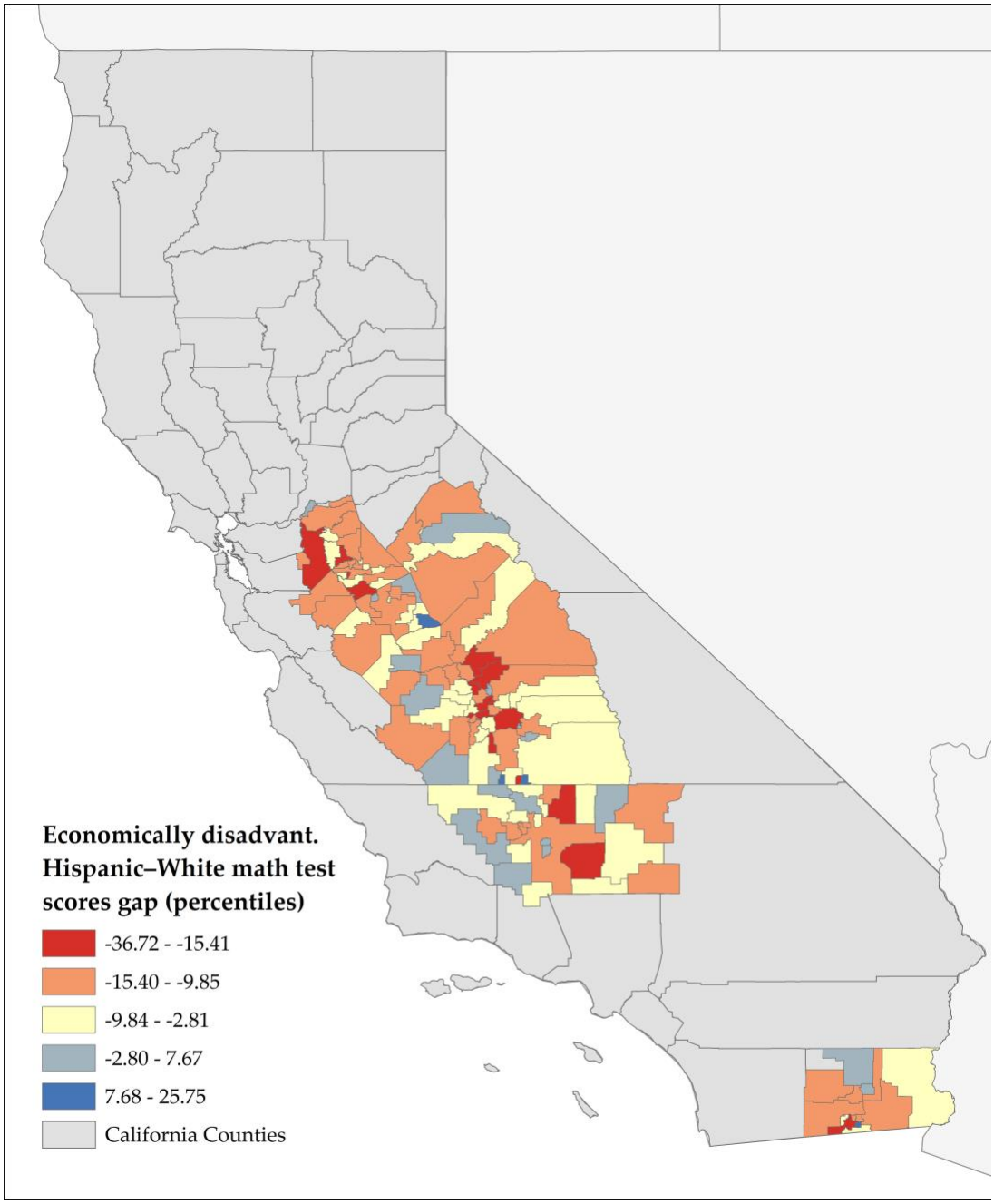
Note: Test score percentiles are calculated within grade and academic year with data for the entire state. Legend categories generated with Jenks natural breaks.

Figure A3: Gaps in Math Test Score Percentiles between Hispanic and White Students, by CIV School District (AY 2014–2019)



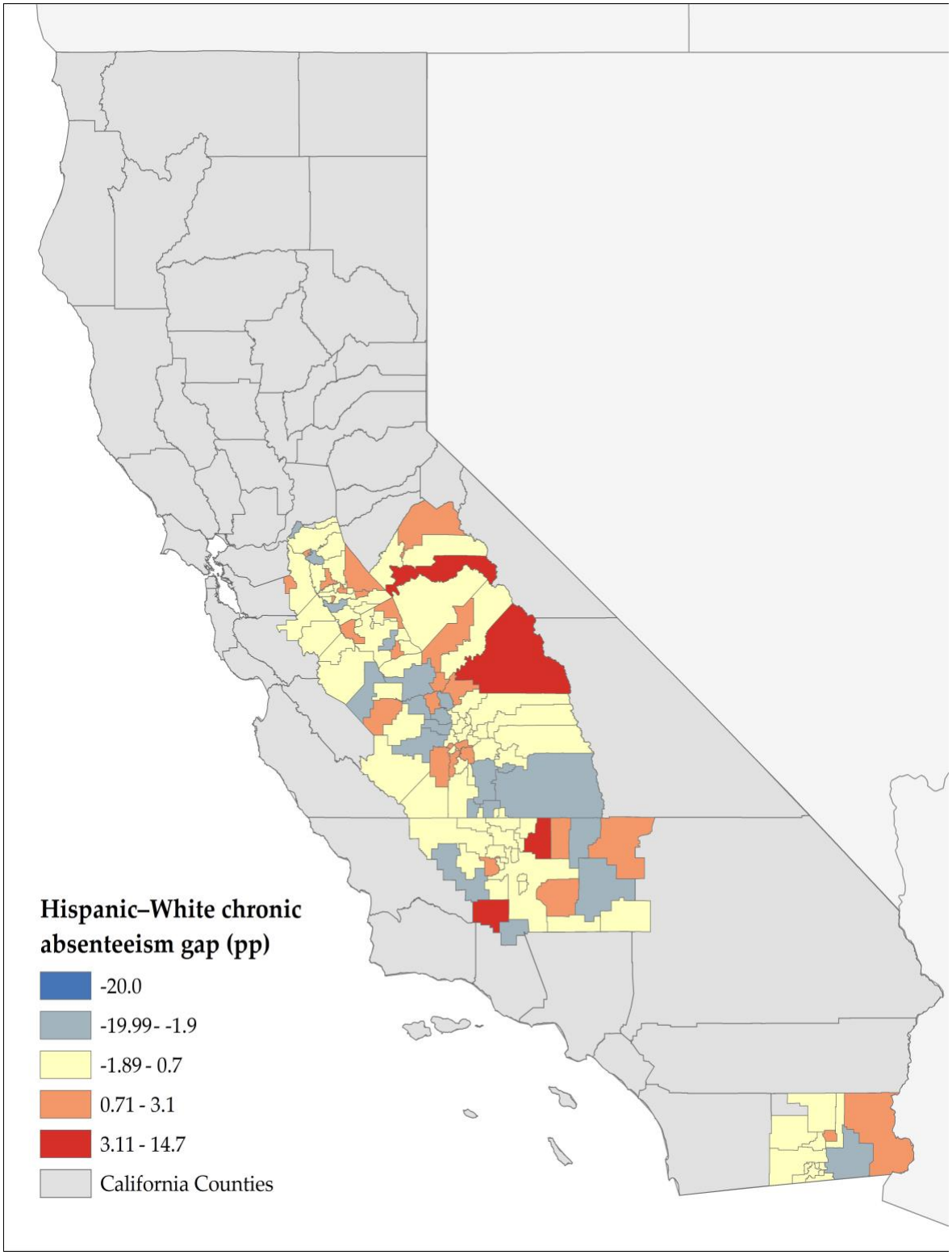
Note: Test score percentiles are calculated within grade and academic year with data for the entire state. Legend categories generated with Jenks natural breaks.

Figure A4: Gaps in Math Test Score Percentiles between Economically Disadvantaged Hispanic and White Students, by CIV School District (AY 2014–2019)



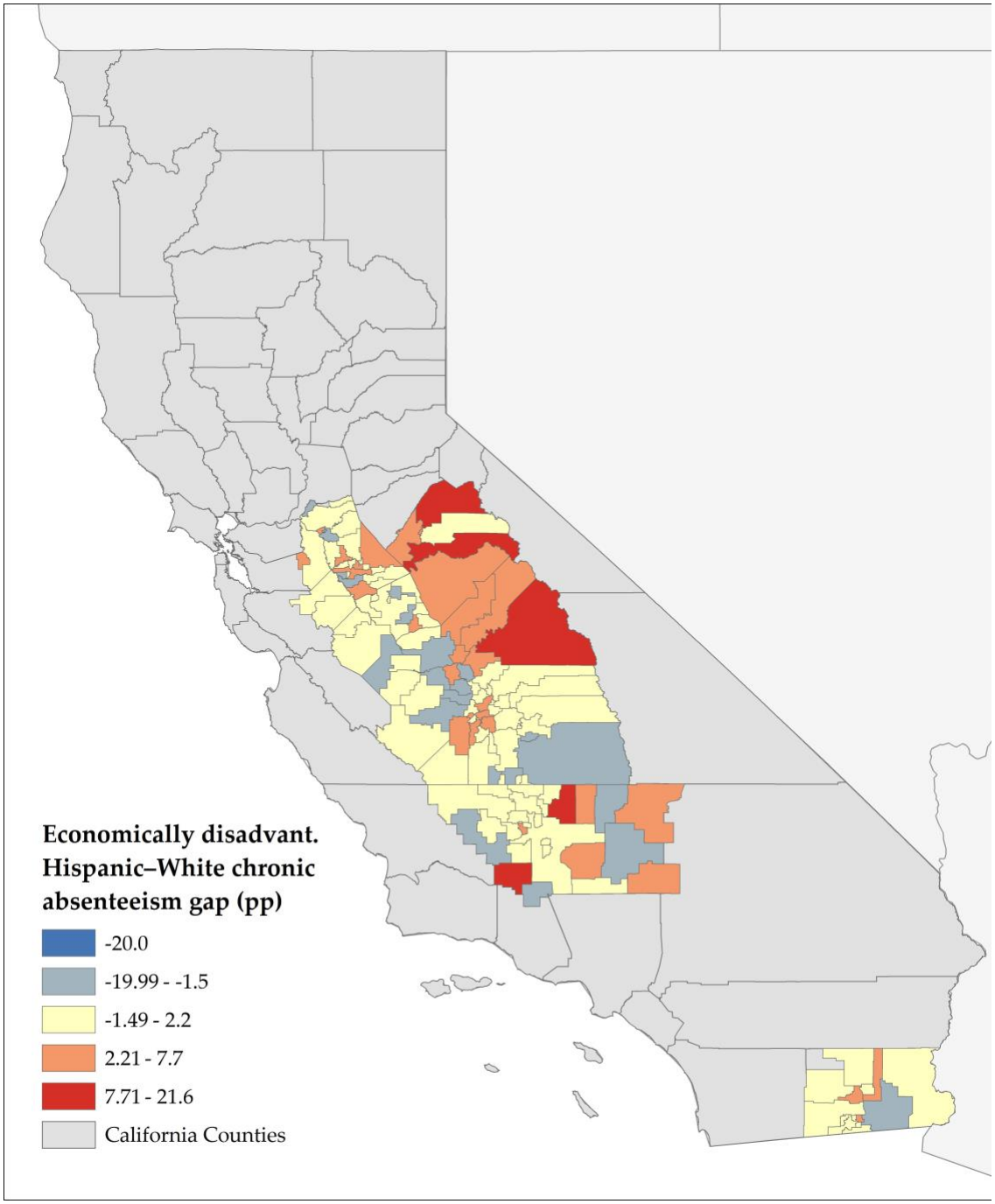
Note: Test score percentiles are calculated within grade and academic year with data for the entire state. Legend categories generated with Jenks natural breaks.

Figure A5: Gaps in Chronic Absenteeism between Hispanic and White Students, by CIV School District (AY 2014–2019)



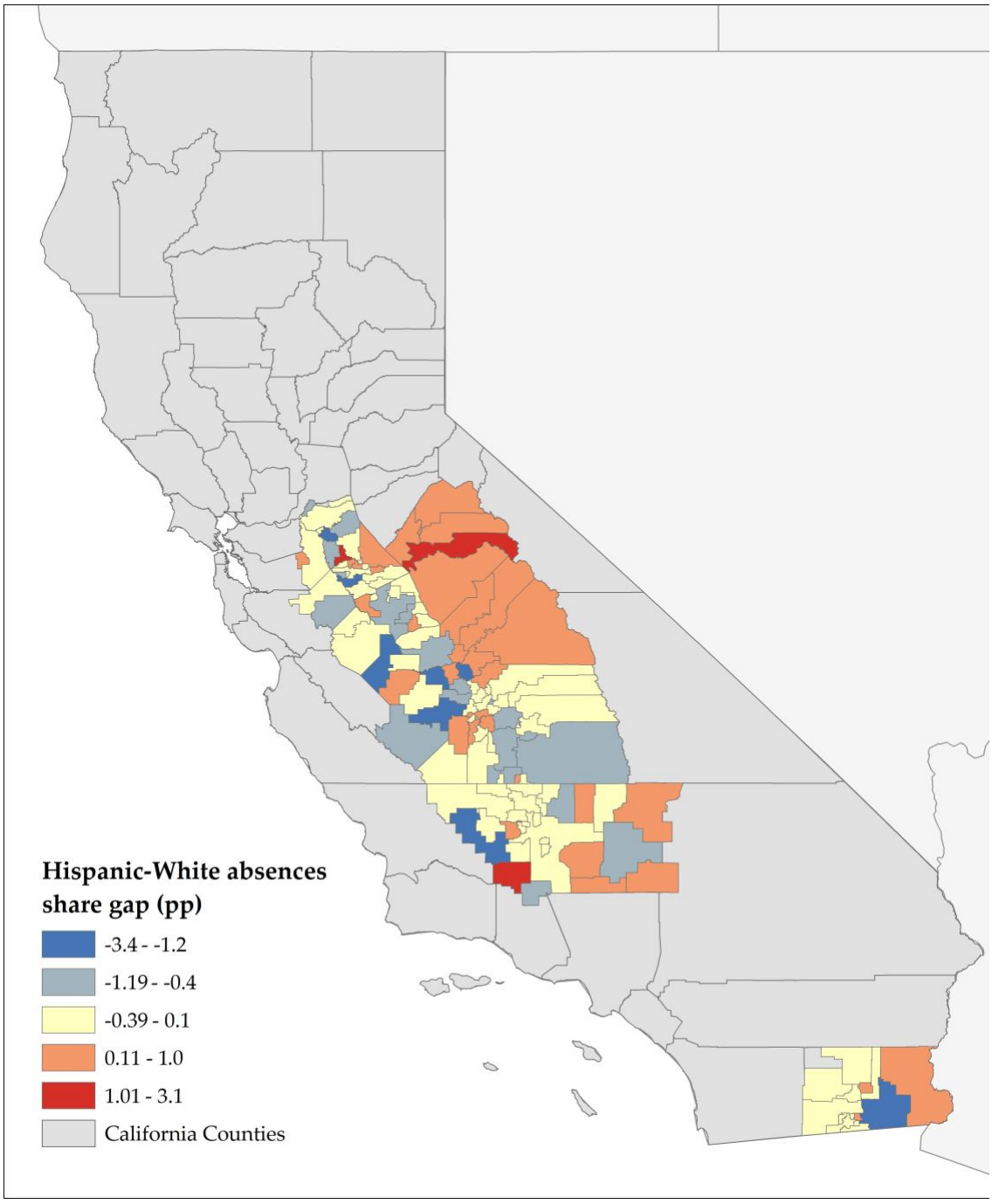
Note: Chronic absenteeism is an indicator for when a student misses at least 10 percent of the instructional days. Legend categories generated with Jenks natural breaks.

Figure A6: Gaps in Chronic Absenteeism between Economically Disadvantaged Hispanic and White Students, by CIV School District (AY 2014–2019)



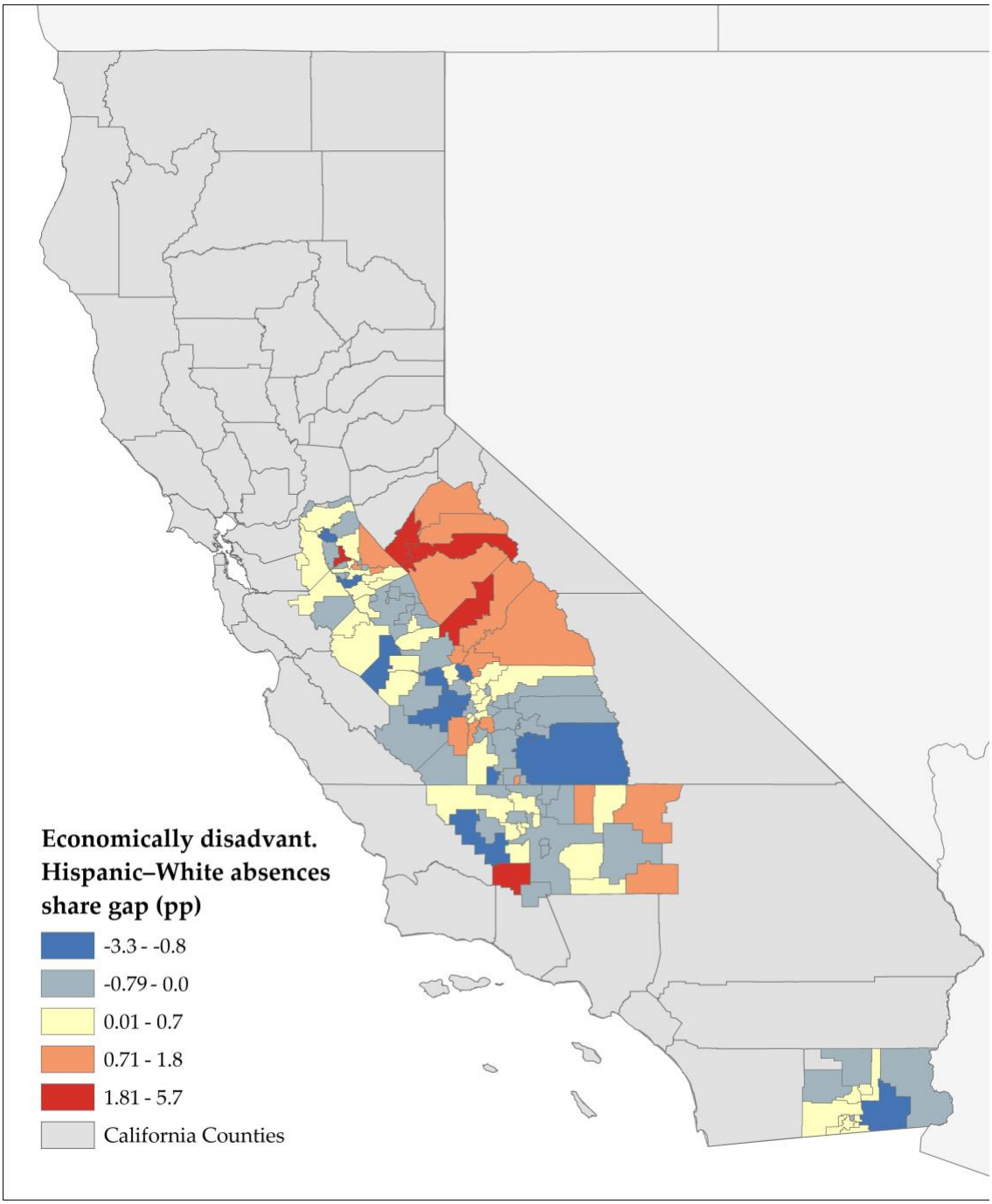
Note: Chronic absenteeism is an indicator for when a student misses at least 10 percent of the instructional days. Legend categories generated with Jenks natural breaks.

Figure A7: Gaps in Share of Absent Days between Hispanic and White Students, by CIV School District (AY 2014–2019)



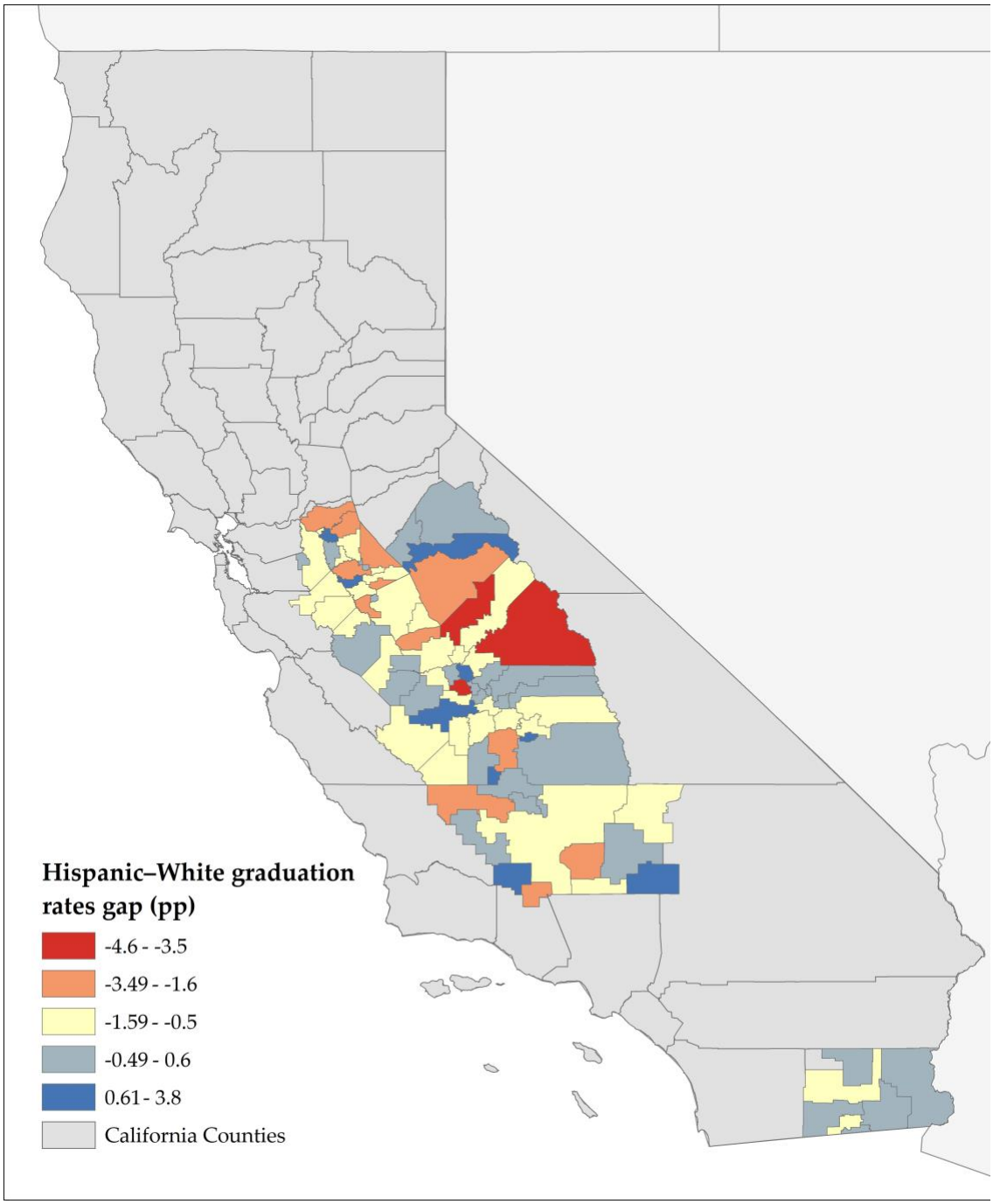
Note: Legend categories generated with Jenks natural breaks.

Figure A8: Gaps in Share of Absent Days between Economically Disadvantaged Hispanic and White Students, by CIV School District (AY 2014–2019)



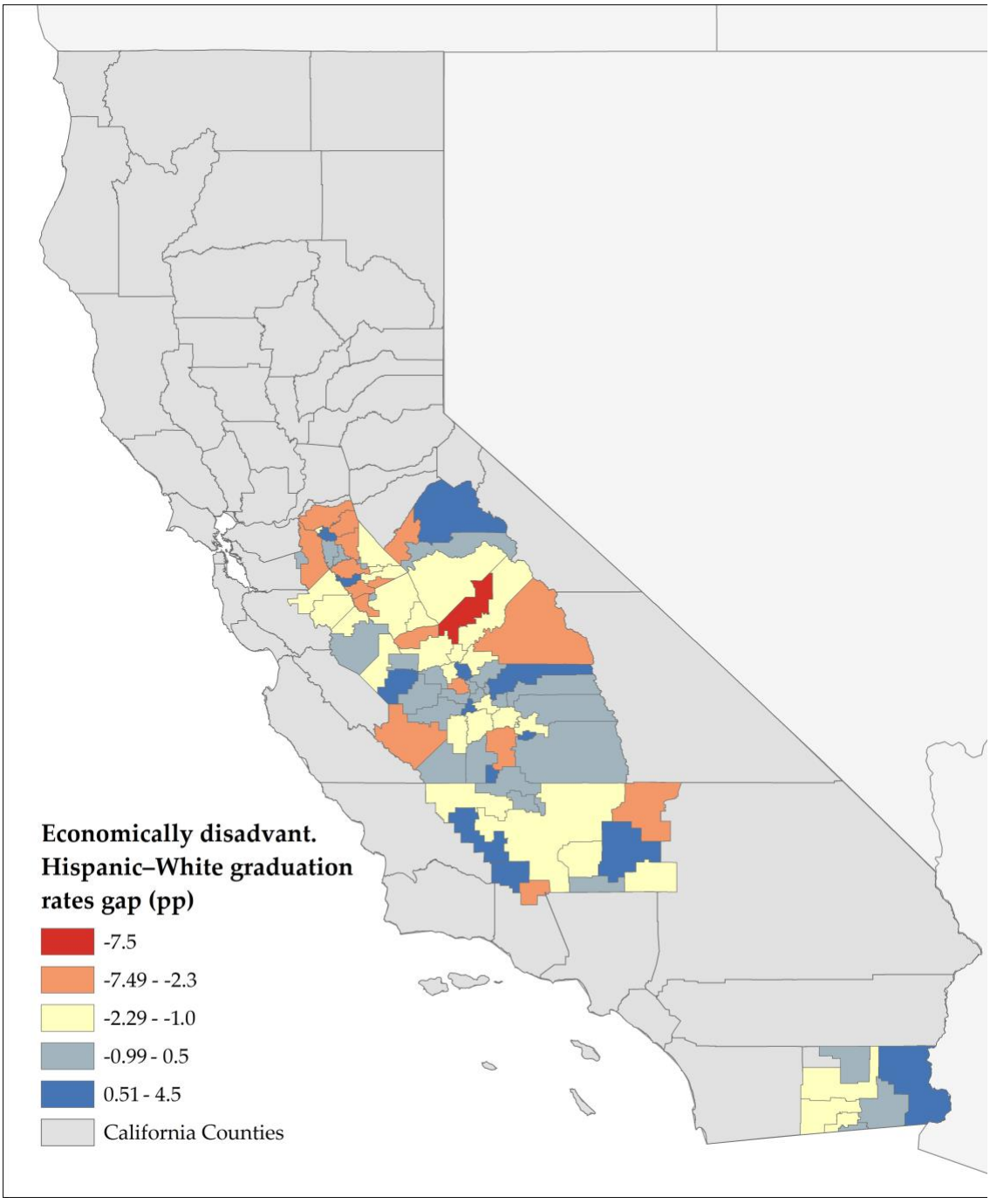
Note: Legend categories generated with Jenks natural breaks.

Figure A9: Gaps in Graduation Rates between Hispanic and White Students, by CIV School District (AY 2010–2019)



Note: Legend categories generated with Jenks natural breaks.

Figure A10: Gaps in Graduation Rates between Economically Disadvantaged Hispanic and White Students, by CIV School District (AY 2010–2019)



Note: Legend categories generated with Jenks natural breaks.