

A Civil Rights Agenda for California's Next Quarter Century



California's Demographic Future:
Ethnic & Racial Change in the School-Age Population

DECEMBER 2024

Raeven Faye Chandler

Nicolas Patoine-Hamel

The Civil Rights Project



Proyecto Derechos Civiles

25 YEAR
ANNIVERSARY

Suggested Citation:

Chandler, Raeven Faye and Patoine-Hamel, Nicolas (2024). *California's Demographic Future: Ethnic & Racial Change in the School-Age Population*. Los Angeles, CA: The Civil Rights Project/Proyecto Derechos Civiles, UCLA.

© 2024 Civil Rights Project/Proyecto Derechos Civiles, UCLA

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

Acknowledgements

This report is based on research funded in part by the Bill & Melinda Gates Foundation. The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Foundation.

Foreword

California has a history of vast waves of population growth and change and has been deeply affected by large immigrations throughout its history. It has long had a low birthrate and, in the last three years, actually lost population for the first time in its history. In the century after statehood, new residents to California arrived from other states. In the last half century, however, there have been massive immigrations from Latin America and Asia. California was an overwhelmingly white society in the mid-twentieth century. The 1960 Census reported that it was 92 percent white and very rapidly growing, but its birth rates have dropped decade after decade since 1970 and so did immigration from other states. The historic migration from Mexico, and the high birth rates of young Latino families over a lengthy period, offset a long and deep decline in white birthrates and migration. Since the Great Recession, birthrates for all groups of residents have reached a new low, far below the level needed to maintain a stable population into the future. Immigration has substantially dropped in spite of the pile up on the Southern border. If these trends continue, California's communities could have fewer children and more dependent elderly, and it could become an aging society with a severe shortage of young workers.

California is a large and very important state, with an economy that would be the world's fourth largest, if it were a separate country. The state needs workers and the workers need more education for success in its future economy. California combines great wealth with profound inequality. Though rich overall, it has high poverty, especially considering its high cost of living. Latino, Black and Native peoples far more often face poverty. Recently, the state has experienced net outmigration to other states, likely linked to housing costs and the state's cost of

living. (However, some recent research concludes that this thinking is overstated in California.¹)

These trends are a special challenge to Southern California, which presently has a vibrant economy but will face a significant decline, especially in its numbers of young people, unless policies change.

Projections on what the future will look like if the recent trends continue are a key tool for institutions and leaders making long-term plans. The California Department of Finance makes projections regularly because population trends are related to economic growth and public resources. Demographic projections are a science with far more certainty than many others. For example, young people who will graduate from college in 2043 are already born; we also know a lot about birthrates and migration patterns over time. These trends rarely change quickly. Policy makers thinking about social, economic and educational policies need the best data they can obtain. From a civil rights perspective, it is very important to understand how the racial and ethnic composition of the state is likely to change, and whether we are on a path toward substantially narrowing the large racial and ethnic gaps in educational preparation.

Projections cannot, of course, predict major policy changes, but those are rare. No new immigration framework has been enacted in three decades, and there is extreme political conflict over these issues in Washington. The 1965 immigration reform, which ended the virtual exclusion of substantial nonwhite immigration into the U.S., had a great impact on California, but that was nearly 60 years ago. The most recent major new immigration legislation was the 1986 law that legalized a few million long-term undocumented residents in the U.S., and greatly aided the families affected. The efforts of the Obama administration to find a long-term path to citizenship for the “dreamers,” who immigrated to the U.S. as children and have grown up as Americans, have failed to this point because of resistance in Congress and challenges in the courts. The Trump administration

¹ See <https://www.universityofcalifornia.edu/press-room/uc-studies-contrary-popular-belief-residents-are-not-fleeing-california> and <https://5070012.fs1.hubspotusercontent-na1.net/hubfs/5070012/10.19.2023%20White%20Paper%20Debunking%20Californias%20Biggest%20Myths.pdf>

adopted administrative policies that lowered immigration on the Southern border, and some of those policies have continued under President Biden. At the same time, significant groups of immigrants have been “paroled” into the state with temporary residential and work permits. Although California’s recent policies support immigrants, it is the federal government that shapes immigration policy. We cannot predict how policy will evolve, but the projections in this paper include estimates of both the likely consequences of a dramatic reduction in immigration as well as the implications of a sharp increase. The future population will not change substantially with such drastic changes in either direction. In all cases, the projections show that the vast majority of the young people in California’s future will be children of the state’s residents, not immigrants. The vast majority of current Latino youth, for example, were born here and are citizens.

The projections contained within this report focus on school age children—who are the future of the state—and have somber news for California leaders, communities, and institutions. The state’s population of young people is not expected to grow but will shrink in its two largest urban complexes, the San Francisco Bay Area and Southern California. Southern California, the largest and most important region, where most Californians live, is facing a substantial decline in young people if existing trends continue. One of the world’s most successful urbanized regions will be short of workers and students. Apart from this paper we are publishing another study showing the nation’s labor force needs more immigration.² The projected changes show limited educational gains across the state, if current relationships are extended, except modest gains for Latinos. If current trends continue the projections for Blacks show almost no progress in college completion over the next three decades, a major and shocking threat to resolving opportunity gaps for this

² Hinojosa-Ojeda, R., Pleitez, M. (2024). *U.S. Economic Vitality Depends on Immigration*. Los Angeles, CA: The Civil Rights Project/Proyecto Derechos Civiles, UCLA.

important group. These projections in Black higher education require urgent consideration by the public, the state's leadership and higher education institutions. Latinos are predicted to increase educational levels but still to be well below whites and Asians at mid-century. As the white population ages and gradually declines further as a share of California's future population, it will become critical to increase the preparation of Latinos, who will be an even larger share of new workers.

The only groups that are likely to substantially gain population, if current trends continue, are Asians and multiracial young people.³ Asians, on average, arrive with advanced education and do very well in the California economy, although some subgroups show a profile more like Latinos. In demographic terms Asians tend to have small families and are well below the reproduction level needed to sustain a given population over time. The long-term stratification of educational success, with Asians and Whites at the top and Black and Latinos on the bottom, is very likely to remain in mid-century unless there are dramatic changes.

Among the important and surprising finding in these projections is that the rapid shrinkage in recent years of the white minority in the schools will continue but slow over the next three decades, whereas the multiracial population that is part-white will grow significantly. The study we commissioned on multiracial population changes shows substantial intermarriage rates for Asians and Latinos with whites.⁴ Even if there was a very large increase in immigration, the share of Latino students is likely to decline, as Latinos' average age rises while current birthrates and immigration levels lessen. Black and Latino leaders, and their supporters in the state, are facing profound challenges that must be overcome, if the state is to become less unequal by mid-century. This report

³ We published a new study of the national issues concerning civil rights for our multiracial population by Gregory Leslie and Natalie Masuoka, *Discrimination in the 21st Century: How Civil Rights Policies Can Best Embrace the Growing Mixed-Race Population*, Los Angeles: Civil Rights Project, August 2023

⁴ Same

does not include projections of the Native American population because of their relatively small numbers or significantly varying population counts using different methods, and complexity of Indian identity and tribal relationships, which are discussed in detail in a national projection we published.⁵

This report is part of a series we have commissioned. It is not about solutions but about the realities we are very likely to face, unless there are major policy or socio-economic changes. The collection of in-depth research discusses trends – in education, race relations, housing and other areas – and analyzes changes in policy and law that could make a difference. The series is not about short-term policy disputes. It is designed to help Californians think about the real structure of their state and the challenges that must be addressed. Faced with challenges from fast-growing competitors, where the cost of living and the cost of labor are much lower, we must defy the trends and find solutions over the long run, if this remarkable state is to retain its national leadership.

As we consider these challenges, it is very important to understand where the current pathway is headed. Our great complex state is already showing substantial evidence of stagnation, the kind this report projects to the mid-century. As we see reports of population decline in California, significant net domestic outmigration, an aging population, and declining international immigration, we are also witnessing a sharp drop in college enrollment, especially in community colleges. The Great Recession and the pandemic only made things worse – in spite of the remarkable economic recovery from the pandemic. This report points to long term trends. It shows that California has very vital interests in immigration policy, since immigration is the most likely source of the population California needs to sustain or grow its population in the long term. The projections in this study are not the kind of trends that can support a prosperous, growing

⁵ Carolyn A. Liebler, *American Indian and Alaska Native Populations: Envisioning the Future*, Los Angeles: Civil Rights Project, Nov. 2023.

California. We believe that these careful estimates, by skilled demographers, deserve urgent public attention

-Gary Orfield

Table of Contents

About the Series	3
Foreword.....	6
Table of Tables	13
Table of Figures.....	13
Executive Summary.....	14
Introduction.....	17
Methodology.....	19
Findings.....	26
Little Statewide Changes in Racial Ethnic Heterogeneity	26
Varying Changes between California Regions and Cities	27
Alternative Scenarios: High and Low Immigration.....	37
Policy Implications.....	40
Conclusion	41
References.....	44
Appendix: H-Index	46

Table of Tables

Table 1: California MSAs and Projected Areas of the LSD-USA	22
Table A1: H-Index of School Age Population (5-18 years).....	46

Table of Figures

Figure 1: Map of the California Projected Areas of the LSD-USA	23
Figure 2: Share of the School-Age Population (Ages 5-18) by Race/Ethnicity in 2020 and 2025, California	27
Figure 3: Share of the School-Age Population (Ages 5-18) by Race/Ethnicity, San Francisco Bay Area.....	28
Figure 4: Share of the School-Age Population (Ages 5-18) by Race/Ethnicity, Southern California	30
Figure 5: Share of the School-Age Population (Ages 5-18) by Race/Ethnicity, Rest of California...	31
Figure 6: Speaking Another Language at Home, All Children	32
Figure 7: Speaking Another Language at Home, Children with Foreign-born Mothers	33
Figure 8: Expected Dropout Rate by Race/Ethnicity.....	35
Figure 9: Expected College or Higher Education Degree Attainment by Race/Ethnicity.....	35
Figure 10: Expected Educational Achievement, Hispanics	36
Figure 11: Change in Expected Educational Achievement, Blacks	37

Executive Summary

The ethnoracial composition of California has seen decades of change mainly due to large waves of immigrants from Asia and Central and South America. While many states have experienced population decline, particularly among the youth and working-age populations, California has grown. However, small changes have begun to occur within the state, including smaller migration flows and falling birth rates. Population changes among school-age children have significant policy implications for a multitude of community institutions, including education, healthcare, and community planning.

What should schools and educators across California expect over the coming decades? How is the school-age population (ages 5-18) expected to change with respect to its ethnoracial composition, generational status, home language, and educational attainment? Employing an innovative microsimulation model, we project a small increase in the number of California's school-age children in 2050 and very little change in ethnoracial diversity due to the current state of ethnoracial heterogeneity across the state.

A summary of our findings follows:

Ethnoracial Diversity among California School-Age Youth. By 2050, non-Hispanic White children are projected to compose 23% of the population age 5-18, Hispanics 49%, Blacks 7%, Asians and Pacific Islanders 16%, and children with multiracial or other identities 6%. This represents a decrease of 3% among non-Hispanic White and Hispanic children, a 4% increase among Asian and Pacific Islanders and a 1% increase among multiracial children and those with other identities, respectively. No change is expected to be seen among Black children.

Ethnoracial Geographic Differences. Changes are not expected to occur uniformly across the state, nor among all ethnoracial groups. All regions are projected to see decreases among non-Hispanic White children, with the San Francisco Bay Area region experiencing the greatest decline

(5%), and Southern California seeing the smallest (3%). All regions are projected to experience increases among Asian and Pacific Islanders, ranging from 5% in the Bay Area to 3% in the Rest of California. Southern California will have the greatest change among Hispanic children with a 5% decrease projected, whereas only a 1% decrease in the Rest of California and no change in the Bay Area is expected. See Table 1 for complete explanation of geographic areas of analyses.

Reductions in the Number of Children of Immigrants. The share of children of immigrant mothers in California would decline from 3 million to 1.9 million.

Declines in non-English Home Language Use. Like projections for the U.S., substantial declines are expected in the share of California's children speaking a non-English language at home, particularly among Hispanics (a 17-percentage point drop from 62% to 45%) and Asian/PI children (a 7-percentage point drop from 57% to 50%).

Gains in Educational Attainment for Hispanics. California could see fewer high school dropouts (decreasing from 12% to 10%) and more college graduates (increasing from 35% to 39%) by 2050. However, these projected improvements are largely confined to Hispanics with high school dropout rates expected to decrease from 15% to 11% in 2050, while the proportion of Hispanics completing college could increase from 27% to 35%.

Reducing Immigration in the Future Will Not Change These Trends. If immigration scenarios were to change we could expect an 11% decrease from the 2020 baseline scenario among school-age children in a low immigration scenario, while a high immigration scenario could project a 12% increase. However, any change in immigration would have little impact on the ethnoracial composition of the child population in California. The major reason being that California is already very heterogeneous. Any changes among ethnoracial composition related to changes in immigration patterns are likely to be concentrated among Hispanics and Asian and Pacific Islanders.

The findings of this report are of great importance when considering educational resource allocation, as well as discussions focusing on curriculum development and culturally appropriate family and community support services.

California's Demographic Future: Ethnic & Racial Change in the School-Age Population

Raeven Faye Chandler and Nicolas Patoine-Hamel

Introduction

Often, we think about a future that is much like the present. This has almost always been a mistake when considering the State of California, which has gone through vast waves of growth and change and has been deeply affected by interstate immigration for generations and, in the last half century, by massive international immigration from Latin America and Asia. Birth rates among many groups, however, have been declining for decades. Since the Great Recession, California birth rates have reached a new low, far below the level needed to maintain a stable population in the long term, and immigration saw a large decline during the COVID-19 pandemic (Johnson, McGhee, Subramaniam, & Hsieh, 2023). As of the release of the 2022 American Community Survey (ACS) five-year estimates, only two statistical areas in the state saw any increase among the youth population (under 18) since the 2017 five-year estimates, both of which are micropolitan areas (Clearlake and Susanville) (U.S. Census Bureau, 2024). Although immigration appears to be rebounding, these numbers are still lower than historical rates and may not be enough to offset increases in out-migration to other states and growth in the elderly population across the state.

California is a large state with a massive economy which has remained the world's 5th largest since 2017 (Office of the Governor of California, 2024). The state needs workers and the workers need more education to successfully participate in its economy. Projections on what the future will look like, if the recent trends among key demographic processes continue, are a key tool for institutions and local leaders making long-term plans. Demographic projections are a science with more certainty than many others because, for example, the young people who will graduate from college in 2043 have already been born and we know much about the birth rates and migration

patterns that have happened in the state in the past. Policymakers thinking about social, economic, and educational policies need the best data they can obtain to make the most informed decisions for future planning. From a civil rights perspective, it is important to understand how the racial and ethnic composition of the state is likely to change over time and to understand whether we are progressing on a path toward substantially narrowing the large racial and ethnic gaps in well-being that exist, to better prepare for these shifts.

Projections cannot predict major policy changes, but those are rare. The Immigration and Nationality Act of 1965, which ended a virtual exclusion of substantial non-White immigration into the U.S. did have a great impact on California, but that was nearly 60 years ago. There has now been no major new immigration legislation since the 1986 Immigration Reform and Control Act, which legalized a few million undocumented residents in the U.S. The Trump administration adopted policies that lowered immigration on the Southern border and some of them have continued while others have ended or been modified under President Biden’s administration. However, no large-scale immigration policy comparable to those of the 1960s and 80s has been enacted.

Our projections, which focus on school-age children—the future of California—have some somber news for many leaders and institutions within the state should the demographic trends of the recent past continue. The population of young people in the state is not expected to grow dramatically and the Southern California region is facing a probable decline in young people. Ethn racially, the only groups that are likely to substantially gain numbers on the current trajectory are Asians and multiracial young people. Across-the-state expected educational gains are limited, except for among Hispanics, and we anticipate almost no progress in college completion for Black residents in the next three decades. We expect little likelihood of change in the stratification of educational success, with Asians and White residents at the top and Black and Hispanic residents remaining on the bottom.

Among the surprises in the projections are the fact that the growth of students over recent decades will be very small, and growth is only expected among Asians, those who identify as “other race,” and the multiracial population that identifies as being part-White along with another ethnoracial group other than Black. Even with a very large increase in immigration, the share of Hispanic students is likely to decline as Hispanics become an aging population with low birth rates and lower immigration, a major change from earlier periods, consolidated in the Great Recession period.

This report is not about solutions to, or policies that may affect these trends, it is about the realities we are very likely to face unless there are major policy or economic changes. As we contemplate those issues, it is very important to consider where we are headed on our current pathway in this great, complex state which is already beginning to show signs of the kind of demographic stagnation that this report projects to the mid-century. The press has featured reports of recent population decline in California, significant net domestic out-migration, declining international immigration, and a sharp drop in college enrollment, especially in community colleges. Current conditions are, of course, related to the pandemic and subsequent recovery but this report points to long-term trends. These are not the kind of trends that can support a prosperous, growing California.

Methodology

This paper uses results generated in the microsimulation model (LSD-USA) designed by Bélanger, Sabourin, Marois, Van Hook, and Vézina (2019). Researchers previously used this model to project socioeconomic and cultural consequences of population changes in the United States for the school-age population (Van Hook, Bélanger, Sabourin, & Patoine-Hamel, 2023). The following

analysis focuses solely on the projections from their work for the State of California, rather than the national level.

The LSD-USA extends beyond typical cohort-component projection models because it projects the population at the individual level, accounts for the interconnections of demographic processes (including fertility, mortality, internal migration, labor force participation, and educational attainment), and illustrates how population change is related to a variety of other demographic and socioeconomic factors, such as race, ethnicity, generational status, English language proficiency, and education. As discussed later, this model also allows us to generate projections under a variety of scenarios, including variations in the level of expected immigration.

A detailed description of LSD-USA is available online (Bélanger, Sabourin, Vézina, Marois, D'Ovidio, Lafontaine, Van Hook, & Morse, 2019). The results generated in this analysis use an updated version (LSD-USA 2.0), which differs from the original LSD-USA model, in that it further models interracial and interethnic marriage as a function of the ethnoracial composition of regional marriage markets and a set of individual characteristics. Interracial and interethnic unions, in turn, determine the children's ethnoracial identity.

Base Population

The base population is a database used as a point of departure for a microsimulation projection model. We construct the LSD-USA 2.0 base population by extracting relevant variables from the 2015 ACS 1% Integrated Public Use Microdata file (ACS-IPUMS).⁶

The variables included in the model are age, sex, region of residence, immigrant status, age at immigration, place of birth, education, language spoken at home, English proficiency, and race/ethnicity. In addition to those variables, religion and literacy were inputted from other data

⁶ The 1% microdata file contains more than 3 million cases, which is sufficient for modeling purposes. Due to technical limitation of the simulation model, it is simpler to focus on these 3 million cases than 15 million.

sources (Bélanger et al., 2019a). For children living with their parents, variable values for the mother were added to their children’s characteristics. This allowed us to estimate intergenerational transmission of socio-cultural characteristics such as education, language, or ethnicity, as well as to derive useful demographic variables such as generational status.

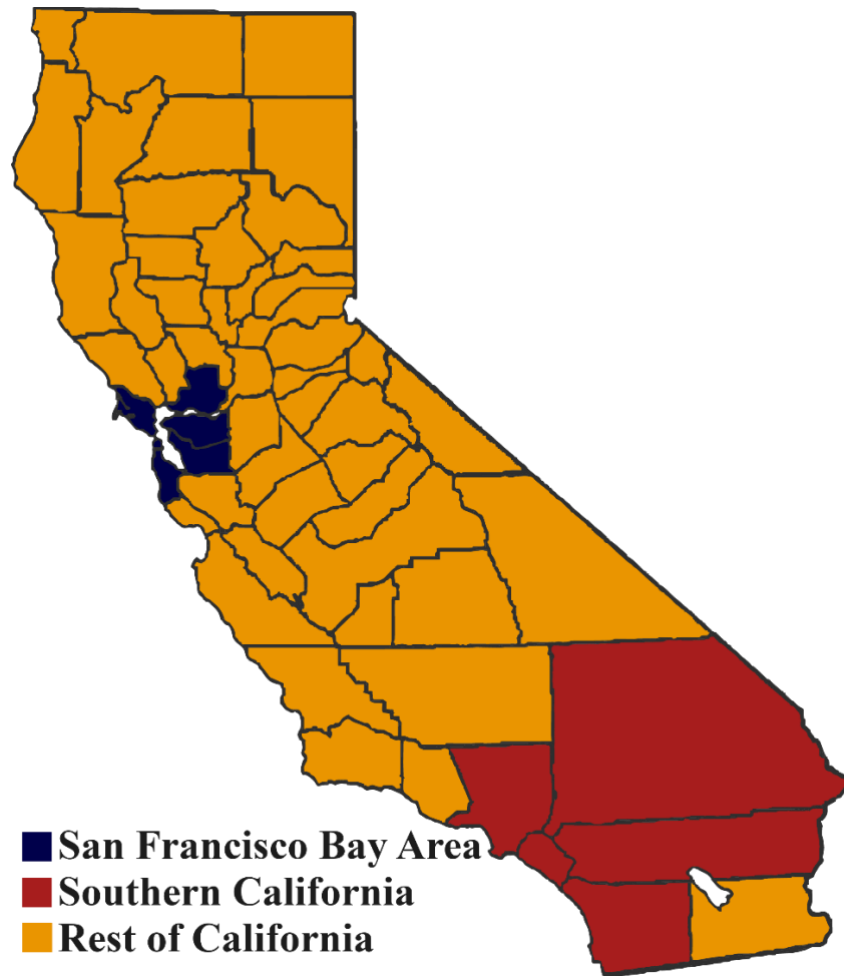
Geography and Projected Areas

We divide California into three distinct geographic areas for analyses and comparison: San Francisco Bay Area, Southern California, and Rest of California. The areas are derived by the Census Metropolitan Statistical Areas (MSAs), specifically the San Francisco-Oakland-Hayward and Vallejo-Fairfield MSAs as the “San Francisco Bay Area”; the Los Angeles-Long Beach-Anaheim, Riverside-San Bernardino-Ontario, and the San Diego-Carlsbad MSAs as the “Southern California Area”; all the other California MSAs are combined in the “Rest of California” region. Table 1 shows the California MSAs that are included in each projected area in our modeling and Figure 1 shows a map representing the boundaries of our analysis. Note that the El Centro MSA has not been included in the Southern California area in the model as the sociodemographic characteristics of the region are more akin to those observed in the “Rest of California.” Although this region is, geographically speaking, located in the Southern region of California, its population dynamics are more analogous to the MSAs included in the Rest of California modeled area. Similarly, it is possible that some other MSAs could be considered by residents as “Bay Area” MSAs given proximity or commuting patterns. However, MSA groups were combined due to shared demographic profiles of race/ethnicity and age structure.

Table 1: California MSAs and Projected Areas of the LSD-USA

Modeled Area	MSA Title	MSA Code
San Francisco Bay Area	San Francisco-Oakland-Hayward, CA	41860
	Vallejo-Fairfield, CA	46700
Southern California	Los Angeles-Long Beach-Anaheim, CA	31080
	Riverside-San Bernardino-Ontario, CA	40140
	San Diego-Carlsbad, CA	41740
Rest of California	Bakersfield, CA	12540
	El Centro, CA	20940
	Oxnard-Thousand Oaks-Ventura, CA	37100
	San Luis Obispo-Paso Robles-Arroyo Grande, CA	42020
	Santa Maria-Santa Barbara, CA	42200
	Chico, CA	17020
	Fresno, CA	23420
	Hanford-Corcoran, CA	25260
	Madera, CA	31460
	Merced, CA	32900
	Modesto, CA	33700
	Napa, CA	34900
	Redding, CA	39820
	Sacramento-Roseville-Arden/Arcade, CA	40900
	Salinas, CA	41500
	San Jose-Sunnyvale-Santa Clara, CA	41940
	Santa Cruz-Watsonville, CA	42100
	Santa Rosa, CA	42220
	Stockton-Lodi, CA	44700
Visalia-Porterville, CA	47300	
Yuba City, CA	49700	

Figure 1: Map of the California Projected Areas of the LSD-USA



Intergenerational Transmission of Race and Ethnicity

The ACS invites respondents to identify with one or more racial groups, so individuals can check any combination of the following broad categories: White, Black, Asian/Pacific Islander (a group that includes multiple subgroups, e.g., Chinese, Korean, Native Hawaiian), American Indian or Alaskan Native, and some other race. In a separate question, the ACS asks about Hispanic ethnicity. Thus, individuals can have multiple racial identities, and Hispanics can identify with any single race or combination. We collapsed the hundreds of possible racial and ethnic combinations to a manageable number, focusing on six combinations:

1. “non-Hispanic White alone,” non-Hispanic White respondents with no other racial identity.
2. “Hispanic,” a group that may be of any race.
3. “Black,” non-Hispanic Black respondents, including those who may report another ethnoracial identity.
4. “Asian/Pacific Islanders alone,” non-Hispanic Asian or Pacific Islander respondents with no other racial identity.
5. “White and other race,” non-Hispanic White respondents with at least one other ethnoracial identity except Black. We use the term “multiracial” to refer to this category throughout the report.
6. “Other,” a group composed of American Indians and Alaskan Native respondents and individuals who report being “other race.”

Those who identify as Black or any racial combination with Black are combined because multiracial Black individuals are much more likely to identify and be treated by others as Black rather than their other ethnoracial identity. This contrasts with people from multiethnic/racial Hispanic-White or Asian-White backgrounds, whose identities tend to be more fluid, and outcomes often fall between their two identities (Alba, 2020).

In the microsimulation model, a child’s race and ethnicity are determined at birth based on a set of probabilities that relate the race and ethnicity of both the mother and father of the child. To ascertain the race and ethnicity of the child’s father, the model simulates partnering behaviors for women using a multinomial logistic regression stratified by race/ethnicity of the woman. The race and ethnicity of her male partner (i.e., her child’s father) is determined stochastically based on regional distribution of ethnoracial groups, as well as her demographic characteristics such as generational status, marital status, birth cohort, and education.

Home Language

Home language is a dichotomous variable indicating whether an individual speaks English versus another language at home. Home language is determined for individuals in the simulation using logistic regression models stratified by immigration status for children and adults. The models relate home language use to race/ethnicity, place of residence, age, duration of U.S. residence, and for children, mother's home language.

Future Educational Attainment

Educational attainment in the model is determined at birth using an ordered logit based on sex, generation status, race/ethnicity, place of residence, and mother's education. Individual educational histories then unfold as the simulation advances. Since the focus of this report is on children who have not yet completed their education, their current educational attainment is merely a reflection of their age. To show what the future holds for those children, we instead report their prospective educational attainment, which is their future final education level, as simulated at birth by the microsimulation model. This prospective look on education gives us a better idea of expected levels of educational attainment for these cohorts. It is important to note there are complications with this proxy as the ACS does not account for immigrants leaving U.S. schools before completing high school, as opposed to immigrants who do not complete high school in their home country and do not enroll upon settling in the U.S.

Alternative Scenarios

In total, we analyze projections from three different scenarios: one baseline scenario, one low immigration scenario, and one high immigration scenario. The baseline scenario depicts the most probable outcome if recently observed trends in immigration, mobility, fertility, mortality, partnering, educational attainment and other relevant behaviors extend into the future. All parameters for the baseline scenario are derived from the ACS, and vital statistics (mortality and

fertility figures) (Bélanger et al. 2019a). We also examine two additional projected scenarios representing changes in U.S. migration policies. In each scenario, we change one aspect of the baseline to address the impact of such potential changes.

1. Reduced immigration. Flow of immigration decreases by 50%.
2. Increased immigration. Flow of immigration increases by 50%.

These alternative immigration scenarios are consistent with the U.S. Census Bureau's National Population Projections series in which projections are generated using three possible alternative immigration scenarios: zero immigration, high immigration, and low immigration (Johnson, 2020).

Findings

California could see a very slight increase among its school-age population (5-18) from 7.1 million (2020) to 7.2 million (2050) *if recent trends were to hold into the future*. Although some change within the representation of each race/ethnicity is expected, as well as some of the socio-economic characteristics of each group, the overall population and ethnoracial composition of the state is not expected to change drastically over the coming decades based on the baseline scenario.

Little Statewide Changes in Racial Ethnic Heterogeneity

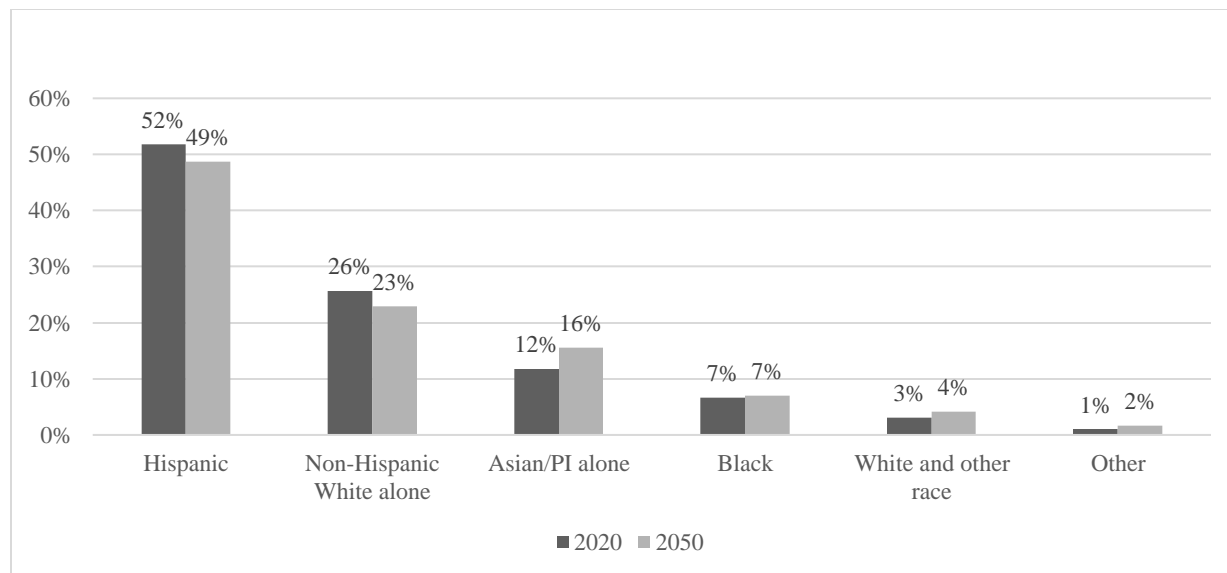
Similar to most other states that are already ethnoracially heterogeneous, the heterogeneity of California's school-age population (5-18) is expected to increase minimally from 2020 to 2050.⁷ This increase is attributable to a decrease in numbers of the non-Hispanic White group (from 1.8 million to 1.6 million), but also a decrease among the Hispanic group (from 3.7 million to 3.5 million), as well as a slight increase in other minority groups, notably for Asians (roughly 840 thousand to 1.1 million). It should be noted that a similar pattern is found in the 2022 ACS five-year estimates for

⁷ See appendix for an explanation of the measure of ethnoracial heterogeneity (H-Index).

race/ethnicity with the State of California and most MSAs seeing a decrease in the proportion of White residents and increases among Asians and Pacific Islanders (U.S. Census Bureau, 2024).

As shown in Figure 2, non-Hispanic White individuals could see their representation drop from 26% to 23%, while Hispanic individuals could see their proportion among the 5-18 population decrease from 52% to 49%. Conversely, the Asian group could see its representation increase from 12% to 16%, while no change among the proportion of Black school-age children is expected over 30 years, representing 7% of the 5-18 total population in 2020 and 2050. The other projected ethnoracial groups, multiracial and other groups not specified, could both see a percentage point increase in representation among school-age children, increasing their group representation from 3% to 4% and 1% to 2%, respectively.

Figure 2: Share of the School-Age Population (Ages 5-18) by Race/Ethnicity in 2020 and 2025, California



Varying Changes between California Regions and Cities

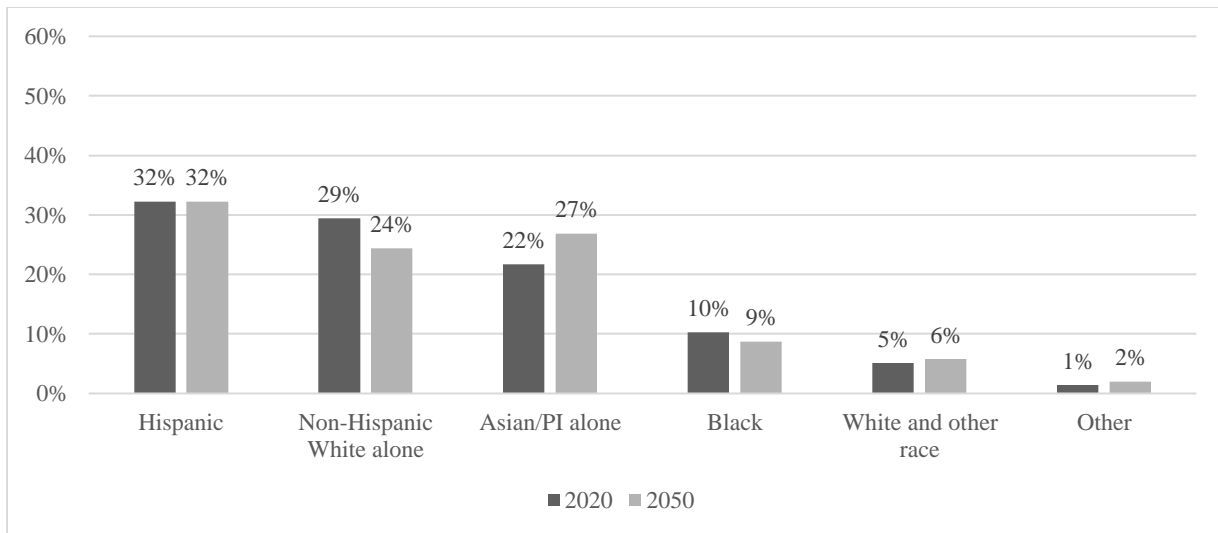
Although there is little change in the 5-18 population when looking at statewide projections, the three areas in California we provide projections for show important differences when looking at the possible changes amongst each ethnoracial group over the three next decades. Here we

investigate how the projected demographic change of the school-age population within the California regions in the model could individually vary over time.

San Francisco Bay Area

The San Francisco Bay Area is expected to see a small increase (8.8%) in proportion of school-age population by 2050, from roughly 820 thousand to 900 thousand. While the absolute number of non-Hispanic White and Black children could drop (9% and 6%, respectively), the numbers of Asians, Hispanic, multiracial children and children of other races may increase by 36%, 24%, 10% and 55%, respectively. This could result in a relatively similar demographic portrait of today’s Bay Area, but with a lower proportion of White school-age children (from 29% to 24%), a higher share of Asian children (from 22% to 27%), and slightly more multiracial and “Other” children (5% to 6% and 1% to 2%, respectively) among the population aged 5-18 (see Figure 3). This does not translate into a significant increase of the area’s H-index though, as San Francisco’s population is already quite ethnoracially diverse.

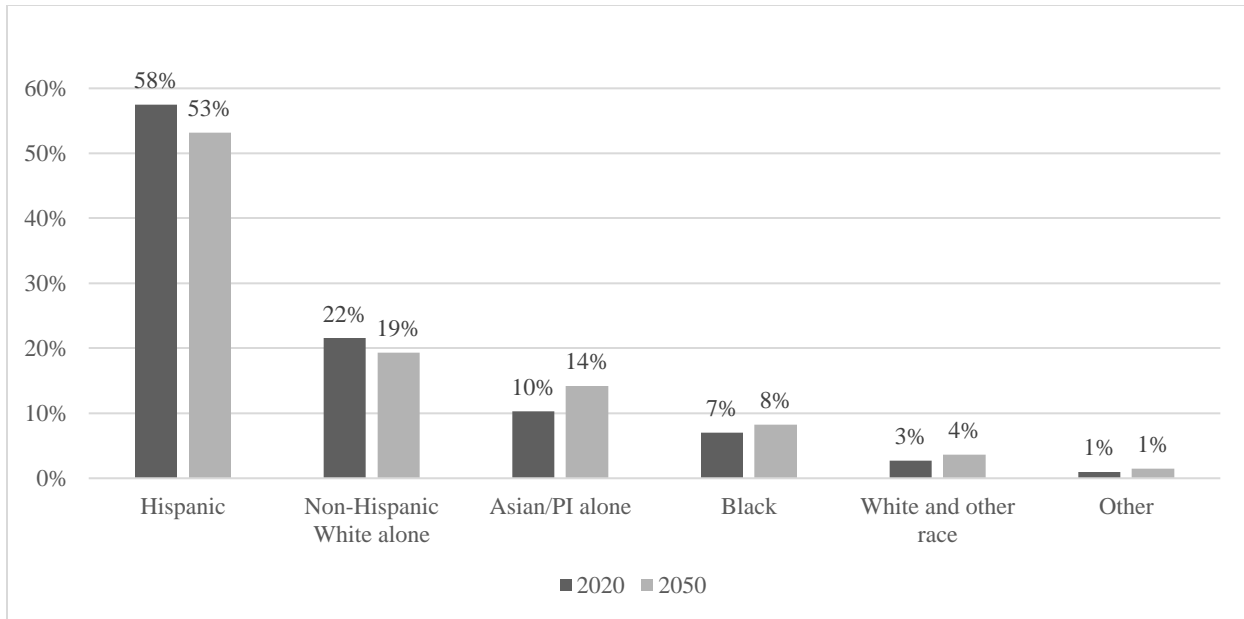
Figure 3: Share of the School-Age Population (Ages 5-18) by Race/Ethnicity, San Francisco Bay Area



Southern California

Southern California could see the most change of all projected areas in terms of population changes. The area is projected to see a decrease in its total number of children over the next three decades from 3.7 million in 2020 to 3.27 million in 2050. This is mainly because projections show the number of non-Hispanic White and Hispanic school-age children dropping by 8%, as shown in Figure 4. Meanwhile the other, smaller, racial ethnic groups could see their numbers increase and represent an overall higher share of the total 5-18 population in this area, thus increasing the ethnoracial heterogeneity of Southern California (H-Index growth 0.61 to 0.65). By 2050, Hispanics could remain the most represented racial ethnic group (from 58 to 53%) followed by Whites (22% to 19%) and Asians (10 to 14%). Meanwhile, the share of Black and multiracial children could increase by one percentage point each to 8% and 4%, respectively.

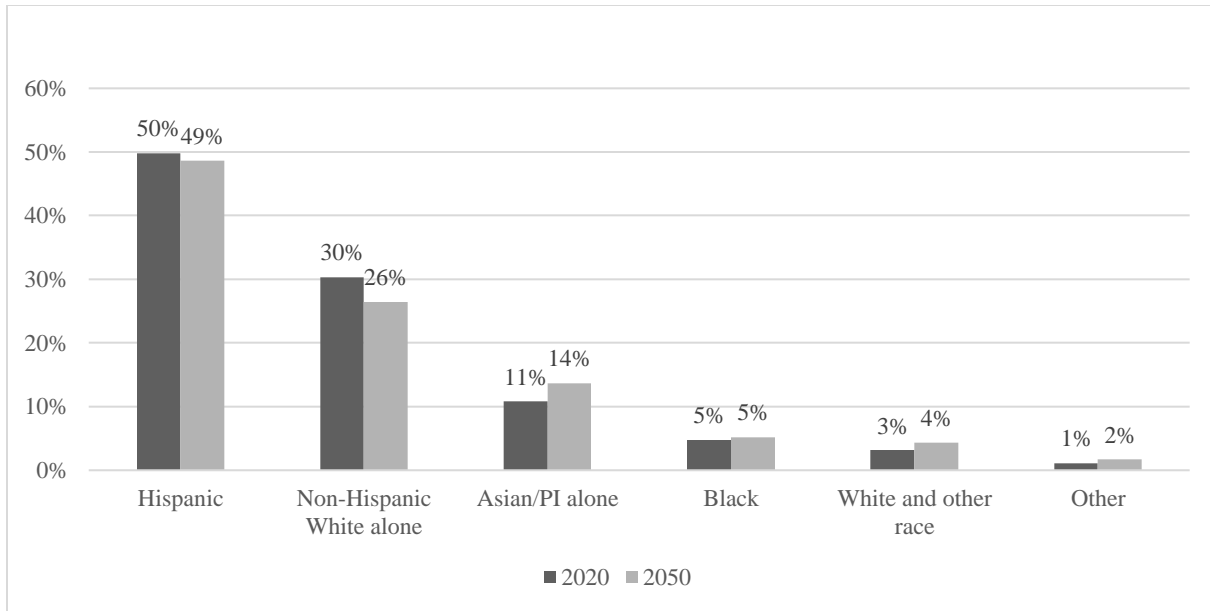
Figure 4: Share of the School-Age Population (Ages 5-18) by Race/Ethnicity, Southern California



Rest of California

The remaining areas of California could see the total 5-18 population increase from 2.6 million in 2020 to 3 million by 2050, while the heterogeneity index (H-Index) may also climb from 0.64 to 0.67. Non-Hispanic Whites could see a 1% increase in their overall numbers but would represent less of the total school-age population of the area, that is from 30% to 26%. In Figure 5 we see that non-White groups, especially Asians, are expected to grow significantly more, contributing to much of the overall population increase in the area. By 2050, Asian school-age children would constitute 14% of the area’s 5-18 population, while that figure was 11% in 2020.

Figure 5: Share of the School-Age Population (Ages 5-18) by Race/Ethnicity, Rest of California

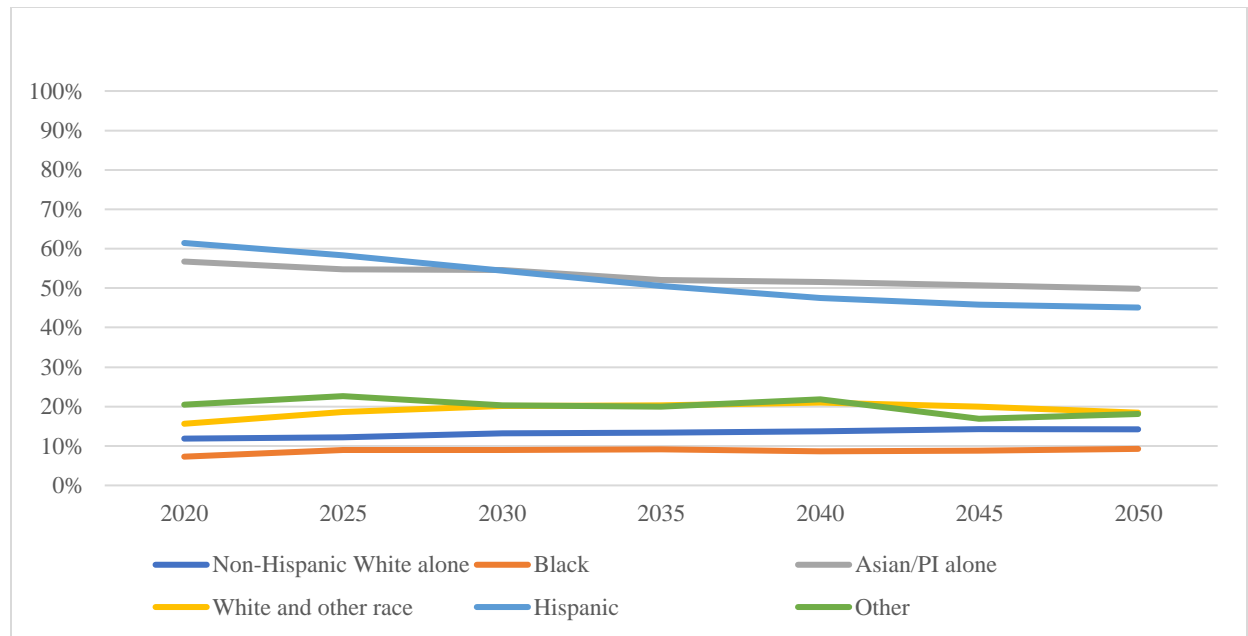


Statewide California

English More Spoken at Home, even in Households with Immigrant Mothers

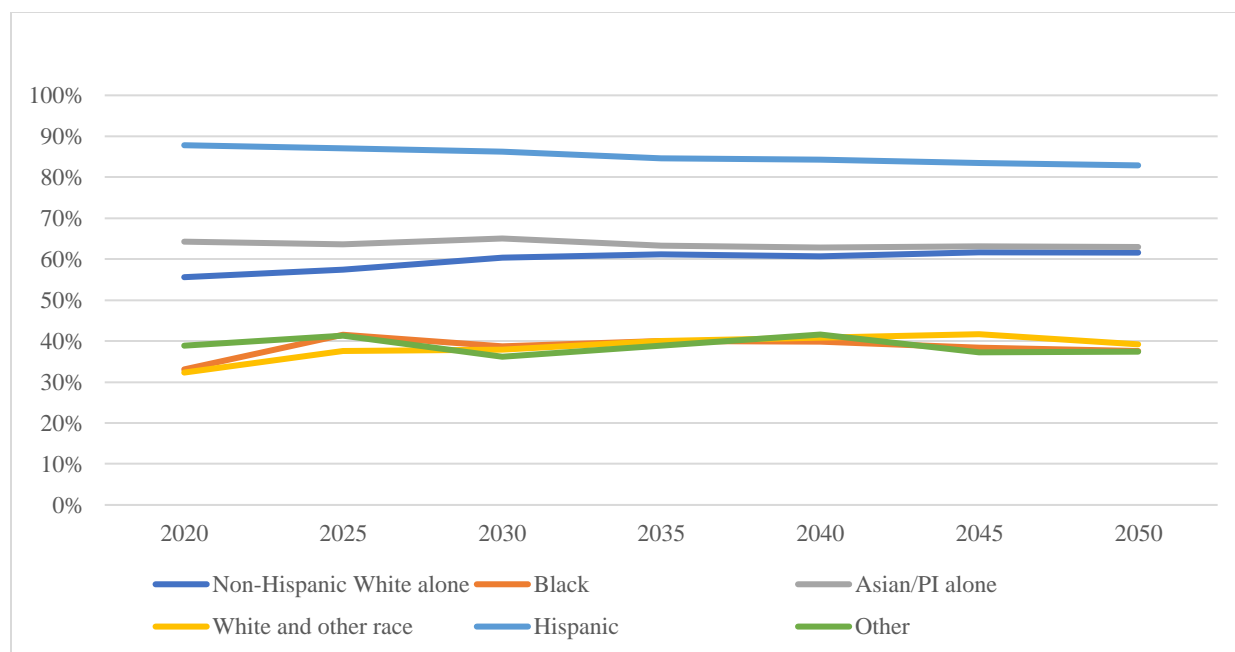
Another potential concern about projected increases in ethnoracial heterogeneity is that schools may need to accommodate more children with limited English proficiency. The LSD-USA 2.0 projections do not report on the share of children with limited English proficiency because of the mismatch between Census measures (based on parental report) and school-based assessments. However, we can look at the projected share of children living in homes where a non-English language is spoken. Although many children who primarily speak a language other than English at home are bilingual, a large share either have limited English proficiency or had limited English proficiency when they first started formal schooling. Figure 6 displays the rates of California children statewide living in homes where a language other than English is spoken.

Figure 6: Speaking Another Language at Home, All Children



Like the national level, the two ethnic/racial groups who speak another language at home the most in California are Asians and Hispanics. This is unsurprising given that a greater share of these ethnoracial groups either are immigrants or have immigrant parents. In 2020, 61.5% of California’s Hispanic and 56.8% of Asian school-age children spoke another language other than English at home. Over the coming decades, these groups could see a decrease in this rate dropping to 45% and 50% respectively, by 2050. This rate is much higher for children with immigrant mothers, but we still project a small decline, especially for Hispanics. The rate of children with immigrant mothers speaking another language at home could decrease from 76% to 67% (see Figure 7). Hispanics would contribute most to this statistic as 88% spoke another language than English in 2020, compared to the projected 83% in 2050.

Figure 7: Speaking Another Language at Home, Children with Foreign-born Mothers



Although we project a slight increase in ethnoracial heterogeneity in California, the proportion of school-age children speaking another language at home could drop from 43% to 35%. As explained above, this is mainly because the Hispanic group, nearly half of California’s 5-18 population, are less likely to be first or second-generation immigrants over time and tend to speak English more commonly at home. Similarly, Asian school-age children, driving much of the projected increase in California’s racial heterogeneity and 5-18 population numbers, are increasingly second or third-generation immigrants.

Increases in Educational Attainment for Hispanic, but Not for Black Children

The projections of the completed educational attainment of children are based on the child’s race/ethnicity, sex, place of residence, generational status, and mother’s education. The projections shown in Figure 8 indicate an overall increase in educational attainment, but we must keep in mind that this could be the case only if their structural opportunities change. Furthermore, the model does not account for any policy changes or educational reforms over the next decades. Thus, the model

projects the educational attainment of children in California if no changes were made to affect the *status quo*.

By 2050, California could expect to see fewer high school dropouts (decreasing from 12% to 10%) and more college graduates (increasing from 35% to 39%), as displayed in Figures 8 and 9. These educational gains are especially driven by the potential strides in educational achievement of the Hispanic group.

Most groups are projected to experience little change in educational attainment: Asians/Pacific Islanders and non-Hispanic Whites are projected to remain the group least likely to drop out of high school and most likely to complete college, while Black youths could remain the ones with less favorable outcomes. Hispanic students on the other hand, who have similar educational achievement to Black Americans in 2020, could see their expected dropout rate decrease from 15% to 11% in 2050, while the proportion of them completing college could increase from 27% to 35%. Figure 8 shows the projected dropout rate of all racial ethnic groups from 2020 to 2050, and Figure 9 shows the rate of individuals expected to obtain a college degree or more.

Although there is little expected fluctuation in educational outcomes among most ethnoracial groups (except those included in our “Other” category, which is likely influenced by small population numbers), the Hispanic group could see much positive change in those measures. Figure 10 shows the distribution of Hispanic individuals across educational attainment categories in 2020 and in 2050. As mentioned above, we expect fewer Hispanic children to drop out of high school or only have a high school degree with a greater number expected to obtain a college or professional degree.

Figure 8: Expected Dropout Rate by Race/Ethnicity

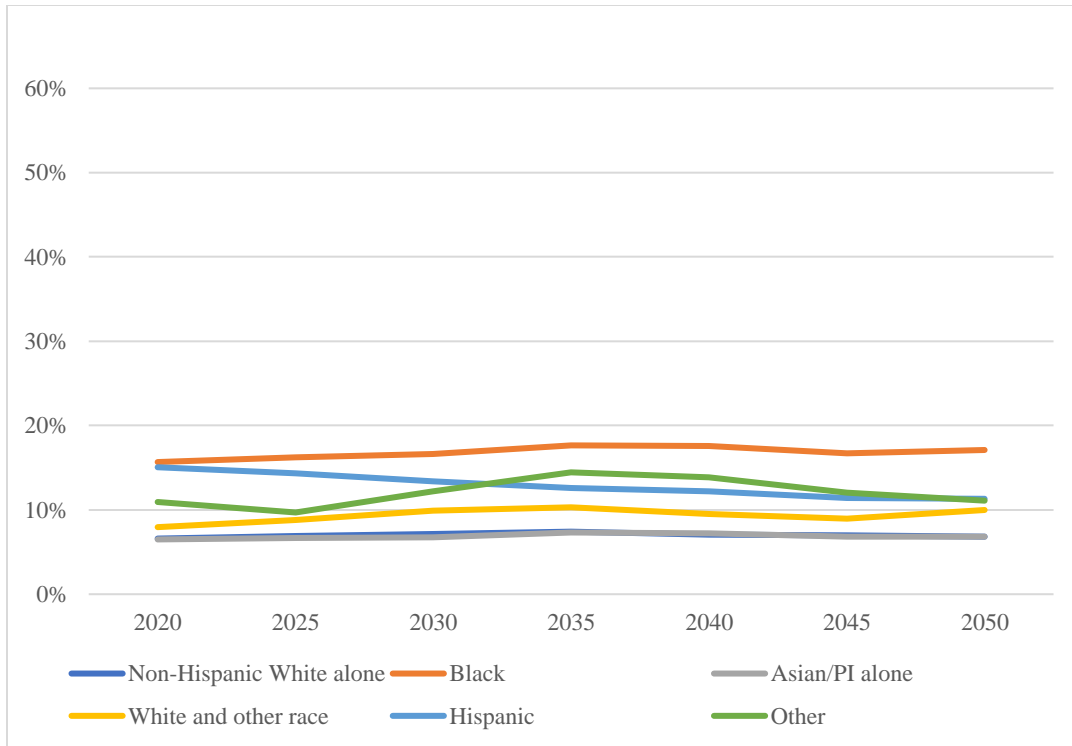


Figure 9: Expected College or Higher Education Degree Attainment by Race/Ethnicity

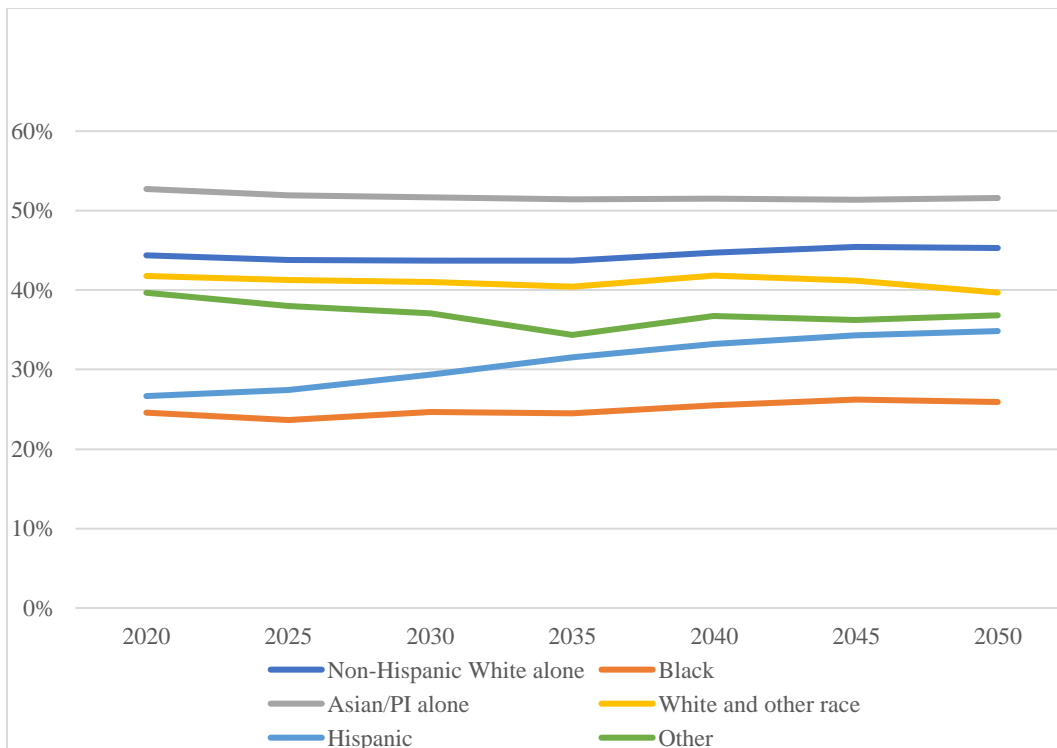
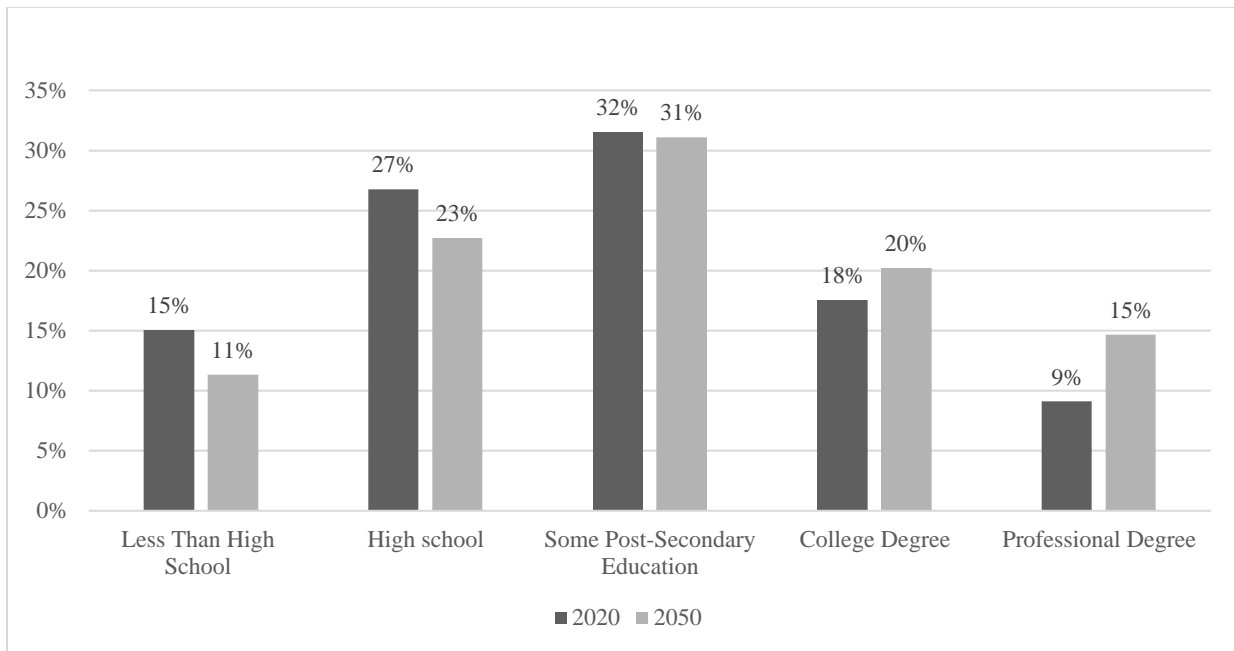
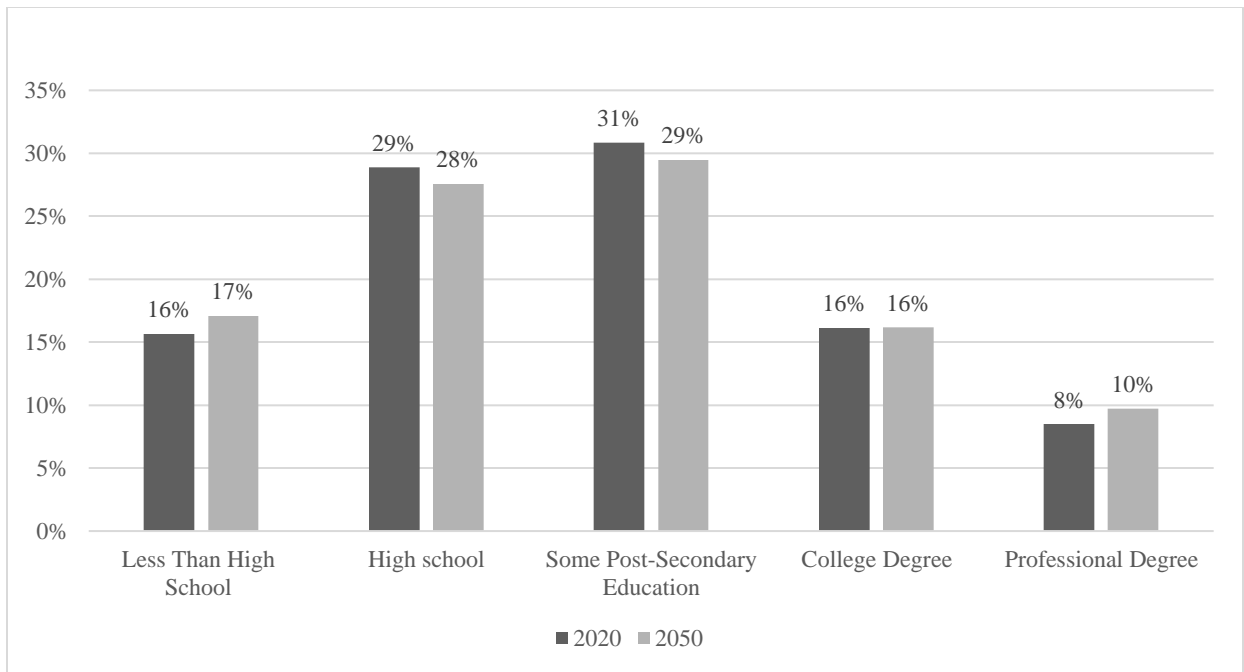


Figure 10: Expected Educational Achievement, Hispanics



Black individuals, who are the most disadvantaged group in terms of expected educational achievement in 2020, are not projected to see much change over the next decades in that matter. Figure 11 shows that there is not much change in educational achievement categories over time. The lack of improvement of this group’s educational achievement shows the absence of intergenerational educational mobility for this group. Our projection reflects recent trends in educational improvement, which show that Black students could continue to lag behind Asian and White children in multiple indicators of school success, including school readiness, reading and math test scores, grade retention, grades, high school completion, and college attendance (de Brey, Musu, McFarland, Wilkinson-Flicker, Diliberti, Zhang, Branstetter, & Wang, 2019; Reardon & Portilla, 2016).

Figure 11: Change in Expected Educational Achievement, Blacks



Alternative Scenarios: High and Low Immigration

The previous projection results use the baseline scenario, which relies on demographic conditions observed during the 2010 decade. This includes fertility, mortality, migration rates, and the association of these processes with a variety of socioeconomic and demographic variables such as age, place of residence, race/ethnicity, generational status, education, and English language use.

Most demographic processes are unlikely to be impacted by policy or social changes: people get older, mortality increases with age, fertility rates decline with women’s age and increases in education, and immigrants are more likely than U.S.-born individuals to use a language other than English at home. Changes in immigration policy, though, could drastically transform the demographic portrait of the country and of the State of California. Immigration policy is repeatedly at the forefront of many political debates and the U.S. government can and has severely restricted immigration in the past. For instance, in 2020 as a response to the COVID-19 pandemic. On the other hand, demand for foreign labor and human capital is likely to intensify as the older Baby

Boomer generation retires, and as high tech and service-sector workers are increasingly in demand (Orrenius, Zavodny, & Gullo, 2020).

Considering the uncertainty surrounding changes in immigration practices in the U.S., we also include alternative scenarios, which modify the expected number of newly entering immigrants. Like the U.S. Census Bureau Projections, we set our model to include a scenario with a 50% increase and a 50% decrease in the number of new immigrants each year between 2020 and 2050. These alternative scenarios represent a rather great fluctuation in the number of immigrants each year but show general trends on how immigration policies may affect the demographic composition of school-age children.

Any fluctuation in immigration would result in changes in the overall number of children in California over the coming decades. Our baseline scenario projects a 0.5% increase in the school-age population by 2050. In the low immigration scenario, we could expect an 11% decrease from the 2020 baseline scenario, while the high immigration scenario could project a 12% increase. However, we do not expect the overall ethnoraical composition of California's school-age children by 2050 to vary dramatically across any of these scenarios. We could however expect a slight increase of the statewide ethnoraical heterogeneity under all immigration scenarios. This is partly because California's population is already quite racially/ethnically diverse, and international immigration is not the only factor influencing growth among non-Black populations of color.

The level of immigration would influence the size of each ethnoraical group overall by 2050 but has little impact on the ethnoraical composition of the school-age children population. Only Asian/PI and Hispanic communities could see their populations increase among this age group during this time. Relative to the baseline scenario, a fifty percent increase in immigration would increase the share of Asian/PI children by 2 percentage points, while reducing immigration in half would reduce their share by 4 percentage points. Inversely, the share of Hispanic children could

decrease with a greater number of new immigrants: a 2-percentage point increase under the low immigration scenario and a 2-percentage point decrease under the high scenario. This reflects a recent shift in the composition of immigration flows toward higher levels of Asian migration and lower levels of immigration from Latin America (Frey, 2016). Accordingly, the projected number of Asian/PI children depends heavily on the level of immigration going forward, ranging from 750 thousand under the low immigration scenario to 1.5 million under the high immigration scenario. Overall, immigration is unlikely to change much of the multiracial and multiethnic patchwork that is California's schoolchildren.

Unsurprisingly, rates of non-English language use in the home would increase with an increase in the annual number of immigrants. Our projections show higher immigration leading to higher rates of non-English language use for all ethnoracial groups, including those identifying as Black and White. The percentage using a non-English language at home for all school-age children would vary between 30% for the low immigration scenario and 38% for the high immigration scenario. However, even for the high immigration scenario, the same trend as in the baseline scenario appears: a slow decline in non-English language use for both Asian/PI and Hispanic individuals.

In sum, growth in ethnoracial heterogeneity in California is likely to continue even if substantial reductions in immigration occur. The major reason is that the State of California is already quite ethnoracially heterogeneous, and growth will occur due to U.S. births regardless of immigration. Changes in immigration will ultimately lead to variation in the number of school-age children, but the demographic portrait of these children would remain similar.

Policy Implications

Given that the largest metropolitan areas in California (San Francisco Bay Area and Southern California) are expected to see decreases in the 5-18 population in the future, but the rest of the state will likely experience increases, proper planning on behalf of educators, community planners, and local stakeholders is necessary. As declines in school-age children are driven largely by decreases in the number of White children, ethnoracial diversity among the youth will increase. Thus, both elementary and secondary school educators and administrators should prepare for these changes in their communities to teach to, and account for, varying needs among their growing ethnoracially diverse student bodies.

As we also anticipate growth in the proportion of Hispanic individuals receiving college degrees, it would behoove colleges and universities around the state to focus on ensuring that they are also familiar with and prepared to address the needs of a changing student population.

Unfortunately, the outlook is not as positive for Black children as we do not expect to see many changes in the coming years, compared to other non-White racial/ethnic groups. However, we want to stress the limitations included in the underlying assumptions of our model which may have an impact on our bleak projections for Black youth. For instance, no other indicators of economic status are included, levels of attainment throughout grade and high school are unaccounted for, and mother's education remains stagnant over time. That is, we cannot account for any changes in mother's education that may occur later in life and may influence the child's educational trajectory. This is an important caveat as Black education continues to rise, particularly among Black women (U.S. Census Bureau, 2022). Nevertheless, without strategic efforts to address education opportunities for Black children, we expect the ethnoracial gap in outcomes to grow, leaving Black students further behind their peers.

Although we do project a slight decrease in the number of Black high school dropouts, we do not foresee growth in the proportion of Black young adults who receive a college degree. Thus, interventions addressing educational attainment among Black youth in California must occur at different ages and schooling simultaneously. We encourage colleges and universities to continue to focus their efforts on the recruiting and retention of Black students to increase the higher education completion rates among this group, ultimately having an impact on the educational attainment of later generations. Similarly, we need to continue supporting strategies that assist Black students in lower grade levels to promote growth among those completing high school and pursuing higher levels of education later. Although we recognize many schools and districts already strive to do so, we continue to promote the strategy of making teaching bodies more reflective of the student body at all grade levels. Previous research has highlighted the impact of race-matching among students and teachers on educational outcomes (Delhomme, 2022; Hill & Jones, 2018), and how this relationship may be influenced by the school's overall ethnoracial diversity (Banerjee, 2018). Egalite, Kisida, & Winters (2015), stress that this impact may be particularly experienced by low-income students.

Conclusion

Using an innovative microsimulation technique, in this paper we project socio-economic and cultural consequences of population changes in various areas of California. Overall, the state is only expected to see a small increase in the number of school-age children in 2050 and given the current ethnoracial heterogeneity, very little change in ethnoracial diversity. These changes, however, do not occur uniformly across California. The Bay Area, for instance, is expected to see a small increase among this age group, whereas Southern California is expected to see the greatest change, with a decrease of around 441 thousand. We expect roughly an increase of over 407 thousand 5–18-year-

olds in the remaining areas of the state. Note that much of these shifts in population are driven by decreases among non-Hispanic White and Hispanic children, as well as increases among other groups, especially Asian children.

A major talking point concerning growth among non-White immigrant children and children of immigrants concerns English language proficiency. We find that like the U.S. generally, Asian and Hispanic children in California comprise the majority of those residing in homes where English is not the primary language. However, we project declines in the proportion of children living in these homes, as the generational status of Hispanic and Asian students continue to progress.

Changes in educational expectations among California youths are expected as well with decreases in high school dropouts and increases in college graduates. These changes are not driven by all racial/ethnic groups equally though. Much of this change is attributed to educational gains among Hispanic youths. Unfortunately, very little change is expected among Black students. This is a projection that should be of major concern to educators and policymakers alike, highlighting the previous and likely continued structural inequalities faced by these children.

When we estimate differences based on potential variation in immigration trends (i.e. 50% lower than that observed in 2010 and 50% higher) we project an 11% decrease in the number of school-age children from the 2020 baseline scenario, as compared to a 12% increase. However, given the ethnoracial diversity of California already, fluctuations in immigration are expected to change the race/ethnic composition of the state only minimally.

The model uses assignment procedures that are consistent with the patterns observed in the ACS, but that does not mean that our projections are without limitations. The ACS collects data on children's race/ethnicity from the person who fills the questionnaire, usually one of the child's parents. Ethnoracial identity can be fluid and as we are not specifically projecting the self-identification of the child, but rather what we would expect the parent to report on behalf of the

child, some of our projections may be skewed, particularly for multiracial children. Moreover, measures of race/ethnicity have changed in the recent past and could change in the future, which could alter the numbers of people who identify in each category even in the absence of any social change in identification or in the treatment of groups. Our projection model is not capable of anticipating these kinds of changes. We rely on the ACS for our projection, and our baseline reflects the current ACS definitions and data collection practices. These definitions and practices have and could change again in the future, as the ethnoracial categories in our projections are based on subjective indicators of identity from the ACS and not any form of objective measurement of ancestry. Moreover, our projections may reinforce the assumption of fixed racial and ethnic categories, something that has been posited by several scholars of race/ethnicity, mainly Richard Alba (2015) and Herbert Gans (2017). Indeed, these changes have been shown historically and have made an impact on ethnic identification among European immigrants over time (Gans, 1979). We are not able to account for these unknown changes with the project model used here.

Finally, there are assumptions held throughout our modeling that, if changed, may have a great impact on our findings. Our baseline assumes recent immigration, mobility, fertility, mortality, partnering, and educational attainment trends will hold into the future and therefore the findings presented here are a picture of what we would expect to see based on current population dynamics and processes and not forecasting the future. The only assumption that was manipulated was immigration wherein we provided alternative scenarios if immigration were to greatly increase or decrease. The remainder of our assumptions remained static.

References

- Alba, R. (2015). "Opinion | The Myth of a White Minority." *The New York Times*, June 11, 2015, sec. Opinion. <https://www.nytimes.com/2015/06/11/opinion/the-myth-of-a-white-minority.html>.
- Alba, R. (2020). *The Great Demographic Illusion: Majority, Minority, and the Expanding American Mainstream*. Princeton University Press. Princeton, NJ. 10.1515/9780691202112.
- Banerjee, N. (2018). Effects of teacher-student ethnoracial matching and overall teacher diversity in elementary schools on educational outcomes. *Journal of Research in Childhood Education*, 32(1), 94-118.
- Bélanger, A., Sabourin, P., Marois, G., Van Hook, J., & Vézina, S. (2019a). **A framework for the prospective analysis of super-diversity**. *Demographic Research*, 41(11), 293-330. <https://dx.doi.org/10.4054/DemRes.2019.41.11>
- Bélanger, A., Sabourin, P., Vézina, S., Marois, G., D'Ovidio, K., Lafontaine, O., Van Hook, J., & Morse, A. (2019b). "The United States Microsimulation Model (LSD-USA): Methodological Document." Institut national de la recherche scientifique Urbanisation Culture Société.
- de Brey, C., Musu, L., McFarland, J., Wilkinson-Flicker, S., Diliberti, M., Zhang, A., Branstetter, C., & Wang, X. (2019). *Status and Trends in the Education of Racial and Ethnic Groups 2018 (NCES 2019-038)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <https://nces.ed.gov/pubs2019/2019038.pdf/>.
- Delhommer, S. (2022). High school role models and minority college achievement. *Economics of Education Review*, 87, 102222
- Egalite, A. J., Kisida, B., & Winters, M. A. (2015). Representation in the classroom: The effect of own-race teachers on student achievement. *Economics of Education Review*, 45, 44-52.
- Frey, W. (2016). The "Diversity Explosion" Is America's Twenty-first-Century Baby Boom. In E. Lewis & N. Cantor (Ed.), *Our Compelling Interests: The Value of Diversity for Democracy and a Prosperous Society* (pp. 16-36). Princeton: Princeton University Press. <https://doi.org/10.1515/9781400881260-004>.
- Gans, H. J. (2017). "Opinion | The Census and Right-Wing Hysteria." *The New York Times*, May 11, 2017, sec. Opinion. <https://www.nytimes.com/2017/05/11/opinion/sunday/the-census-and-right-wing-hysteria.html>.
- Gans, H. J. (1979). Symbolic ethnicity: The future of ethnic groups and cultures in America. *Ethnic and racial studies*, 2(1), 1-20.

- Hill, A. J., & Jones, D. B. (2018). A teacher who knows me: The academic benefits of repeat student-teacher matches. *Economics of Education Review*, 64, 1-12.
- Johnson, H., McGhee, E., Subramaniam, C, and Hsieh, V. (2023). What's Behind California's Recent Population Decline-and Why It Matters. Public Policy Institute of California, Explainer. <https://www.ppic.org/publication/whats-behind-californias-recent-population-decline-and-why-it-matters/>
- Johnson, S. (2020). "A Changing Nation: Population Projections under Alternative Migration Scenarios," Current Population Reports, P25-1146, U.S. Census Bureau, Washington, DC.
- Office of the Governor of California. (2024). California remains the world's 5th largest economy. <https://www.gov.ca.gov/2024/04/16/california-remains-the-worlds-5th-largest-economy/>
- Orrenius, P. M., Zavodny, M., & Gullo, S. (2020): How Does Immigration Fit into the Future of the U.S. Labor Market?, IZA Discussion Papers, No. 13013, Institute of Labor Economics (IZA), Bonn
- Reardon, S. & Portilla, X. (2016). Recent Trends in Income, Racial, and Ethnic School Readiness Gaps at Kindergarten Entry (CEPA Working Paper No.15-02). Retrieved from Stanford Center for Education Policy Analysis: <http://cepa.stanford.edu/wp15-02>
- U.S. Census Bureau. (2022). Current Population Survey. Selected Years 1940 to 2020; and Censuses of Population 1940 and 1950, Table A-2 <https://www.census.gov/data/tables/time-series/demo/educational-attainment/cps-historical-time-series.html>
- U.S. Census Bureau. (2024). *2018-2022 American Community Survey 5-Year Estimates. Table CP05.* <https://data.census.gov/table/ACSCP5Y2022.CP05?q=CA&g=310XX00US12540,17020,17340,18860,20940,21700,23420,25260,31080,31460,32900,33700,34900,37100,39780,39820,40140,40900,41500,41740,41860,41940,42020,42100,42200,42220,43760,44700,45000,46020,46380,46700,47300,49700&y=2022&d=ACS%205-Year%20Estimates%20Comparison%20Profiles>
- Van Hook, J., Bélanger, A., Sabourin, P. & Patoine-Hamel, N. (2023). The Changing Racial and Ethnic Composition of the School-Age Population in the U.S. UCLA Civil Rights Project/Proyecto Derechos Civiles, November 2023.

Appendix: H-Index

To summarize the racial and ethnic heterogeneity of geographic areas, we use the Simpson H-Index. This index accounts for the probability that two people taken at random from the population will be from two different ethnic/racial groups. The H-Index varies from 0 (fully homogeneous) to 1 (fully heterogeneous). It is important to note that the H-Index is only a measure of the overall ethnoracial composition of an area and does not indicate anything about the degree of residential integration or segregation within the area. Table A1 shows the H-Index of the school-age population (5-18) of each California projected area in 2020 and in 2050 under the different immigration scenarios.

Table A1: H-Index of School Age Population (5-18 years)

Region	2020	Baseline Scenario	Low Immigration Scenario	High Immigration Scenario
		2050	2050	2050
San Francisco Bay Area	0.75	0.75	0.75	0.75
Southern California	0.61	0.65	0.63	0.67
Rest of California	0.64	0.67	0.65	0.68
Total	0.65	0.68	0.66	0.69