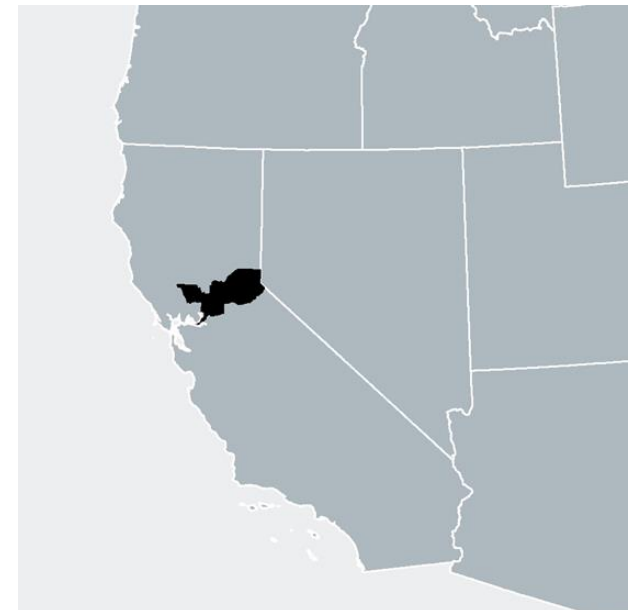


Advancing Health Equity and Inclusive Growth in the **Sacramento Region**



Summary

The four-county Sacramento metro is a growing and vibrant region. While the nation is projected to become majority people of color by 2044, Sacramento will reach that milestone in the early 2020s. By 2050, nearly two in three residents will be people of color. This demographic transformation presents a major asset to the region, but persistent racial and economic inequities threaten long-term economic prosperity.

Full-time workers at the bottom end of the income distribution have experienced real decreases in their wages since 1979 while those at the top have experienced gains at a rate higher than the national average. More than half of renter households in the region are paying too much for rent and racial inequities persist across economic, educational, health, and housing measures.

The Sacramento region's economy could have been over \$19 billion stronger in 2014 alone if racial gaps in income were eliminated. Inclusive growth is the path to sustainable economic prosperity and health equity. To build a Sacramento economy that works for all, city and regional leaders must commit to putting all residents on the path to economic security through protections for existing residents, investments in young people, and incorporating community voice into regional decision-making processes.

Indicators

DEMOGRAPHICS

How racially/ethnically diverse is the region?

Race/Ethnicity and Nativity, 2014

Asian or Pacific Islander, Latino, White, and Black Populations by Ancestry, 2014

Percent People of Color by Census Block Group, 2014

How is the area's population changing over time?

Growth Rates of Major Racial/Ethnic Groups by Nativity, 2000 to 2014

Net Change in Population by Geography, 2000 to 2014

Racial/Ethnic Composition, 1980 to 2014

Race/Ethnicity Dot Map by Census Block Group, 1990 and 2014

Race/Ethnicity Dot Map by Census Block Group, 1990 and 2014 (Zoom View)

Racial/Ethnic Composition, 1980 to 2050

Racial Generation Gap: Percent People of Color (POC) by Age Group, 1980 to 2014

Median Age (in years) by Race/Ethnicity, 2014

English-Speaking Ability Among Immigrants by Race/Ethnicity, 2000 and 2014

Household Linguistic Isolation by Census Tract, 2014

ECONOMIC VITALITY

Is the region producing good jobs?

Average Annual Growth in Jobs and GDP, 1990 to 2007 and 2009 to 2014

Growth in Jobs and Earnings by Industry Wage Level, 1990 to 2015

Access to good jobs

How close is the region to reaching full employment?

Unemployment Rate, March 2017

Unemployment Rate by Census Tract, 2014

Unemployment Rate by Race/Ethnicity, 2014

Unemployment Rate by Educational Attainment and Race/Ethnicity, 2014

Can all workers earn a living wage?

Median Hourly Wage by Educational Attainment and Race/Ethnicity, 2014

Inclusive growth

Are incomes increasing for all workers?

Real Earned Income Growth for Full-Time Wage and Salary Workers, 1979 to 2014

Median Hourly Wage by Race/Ethnicity, 2000 and 2014

Is the middle class expanding?

Households by Income Level, 1979 and 2014

Is the middle class becoming more inclusive?

Racial Composition of Middle-Class Households and All Households, 1979 and 2014

Is inequality low and decreasing?

Income Inequality, 1979 to 2014

Indicators

Economic security

Is poverty low and decreasing?

Poverty Rate by Race/Ethnicity, 2000 and 2014

Child Poverty Rate by Race/Ethnicity, 2014

Percent Population Below the Poverty Level by Census Tract, 2014

Is the share of working poor low and decreasing?

Working-Poor Rate by Race/Ethnicity, 2000 and 2014

Strong industries and occupations

Which industries are projected to grow?

Industry Employment Projections, 2012-2022

Which occupations are projected to grow?

Occupational Employment Projections, 2012-2022

What are the region's strongest industries?

Strong Industries Analysis, 2015

What are the region's strongest occupations?

Strong Occupations Analysis, 2011

What are the region's high-opportunity occupations?

Occupation Opportunity Index: Occupations by Opportunity Level for Workers with a High School Diploma or Less

Occupation Opportunity Index: Occupations by Opportunity Level for Workers with More Than a High School Diploma but Less Than a Bachelor's Degree

Occupation Opportunity Index: Occupations by Opportunity Level for Workers with a Bachelor's Degree or Higher

Is race/ethnicity a barrier to economic success?

Opportunity Ranking of Occupations by Race/Ethnicity and Nativity, All Workers

Opportunity Ranking of Occupations by Race/Ethnicity and Nativity, Workers with Low Educational Attainment

Opportunity Ranking of Occupations by Race/Ethnicity and Nativity, Workers with Middle Educational Attainment

Opportunity Ranking of Occupations by Race/Ethnicity and Nativity, Workers with High Educational Attainment

READINESS

Skilled Workforce

Does the workforce have the skills for the jobs of the future?

Share of Working-Age Population with an Associate's Degree or

Higher by Race/Ethnicity and Nativity, 2014, and Projected Share of Jobs that Will Require an Associate's Degree or Higher, 2020

Youth Preparedness

Do all children have access to opportunity?

Composite Child Opportunity Index by Census Tract

Are youth ready to enter the workforce?

Share of 16- to 24-Year-Olds Not Enrolled in School and without a High School Diploma by Race/Ethnicity and Nativity, 1990 to 2014

Indicators

Share of 16- to 24-Year-Olds Not Enrolled in School and without a High School Diploma by Race/Ethnicity, Nativity, and Gender, 2014

Disconnected Youth: 16- to 24-Year-Olds Not in School or Work by Race/Ethnicity, 1990 to 2014

Disconnected Youth: 16- to 24-Year-Olds Not in School or Work by Race/Ethnicity and Gender, 1990 to 2014

Health-Promoting Environments

Can all residents access healthy food?

Percent Living in Limited Supermarket Access Areas (LSAs) by Race/Ethnicity, 2014

Percent Population by Federal Poverty Level (FPL) and Food Environment, 2014

Percent People of Color by Census Block Group and Limited Supermarket Access Block Groups, 2014

Do all residents live in areas with clean air?

Air Pollution: Exposure Index by Race/Ethnicity, 2014

Air Pollution: Exposure Index by Poverty Status, 2014

Health of Residents

Do all residents have the opportunity to live long and healthy lives?

Adult Overweight and Obesity Rates by Geography, 2012

Adult Overweight and Obesity Rates by Race/Ethnicity, 2012

Adult Diabetes Rates by Geography, 2012

Adult Diabetes Rates by Race/Ethnicity, 2012

Adult Asthma Rates by Geography, 2012

Adult Asthma Rates by Race/Ethnicity, 2012

Share of Adults Who Have Had a Heart Attack by Geography, 2012

Share of Adults Who Have Had a Heart Attack by Race/Ethnicity, 2012

Share of Adults with Angina or Coronary Heart Disease by Geography, 2012

Share of Adults with Angina or Coronary Heart Disease by Race/Ethnicity, 2012

Life Expectancy by Geography, 2015

Life Expectancy by Race/Ethnicity, 2015

Do residents have access to health insurance and health-care services?

Health Insurance Rates by Geography, 2014

Health Insurance Rates by Race/Ethnicity, 2014

CONNECTEDNESS

Can all residents access affordable, quality housing?

Share of Low-Wage Jobs and Affordable Rental Housing Units by County, 2014

Low-Wage Jobs, Affordable Rental Housing, and Jobs-Housing Ratio by County, 2014

Renter Housing Burden and Homeowner Housing Burden by Race/Ethnicity, 2014

Percent Rent-Burdened Households by Census Tract, 2014

Do residents have transportation choices?

Percent Households without a Vehicle by Census Tract, 2014

Means of Transportation to Work by Annual Earnings, 2014

Percent Using Public Transit by Annual Earnings and Race/Ethnicity and Nativity, 2014

Indicators

Average Travel Time to Work in Minutes by Census Tract, 2014

Do neighborhoods reflect the region's diversity?

Residential Segregation, 1980 to 2014

Residential Segregation, 1990 and 2014, Measured by the Dissimilarity Index

ECONOMIC BENEFITS OF EQUITY

What are the economic benefits of inclusion?

Actual GDP and Estimated GDP without Racial Gaps in Income, 2014

Percent Gain in Income with Racial Equity, 2014

Source of Income Gains, 2014

Foreword

The Sacramento region works when all have a stake in the economy and all can participate, prosper, and reach their full potential. We are stronger as a region when everyone works, has a home, access to quality health care and education, and where all are treated fairly, with dignity and respect for our individual contributions.

Unfortunately, this is not our reality, as this report shows in great detail. Opportunity is out of reach for far too many people.

Our collaborative, the Healthy Sacramento Coalition is committed to taking bold action setting in place new policies, systems, and structures that advance equity: just and fair inclusion. We are a coalition of 42 organizations working across the areas that affect the health, wealth, and well-being of Sacramentans across our region, focusing on the “social determinants of health”. We chose this focus because they play a key role in determining our ability to be healthy and realize our full potential in our economy and in our communities.

We developed this report and accompanying data profile in partnership with PolicyLink and the USC Program for Environmental and Regional Equity to examine the state of equity in Sacramento. It is abundantly clear that our current structures and policies are broken.

The good news is that we can fix them with a little Sacramento ingenuity. Even better, the policies we recommend will stabilize a boom and bust economy and expand the gross domestic product of the region by more than \$19 billion dollars. When we restore our opportunity pathways, all will be able to contribute and participate in our economy. This will lift everyone in the region.

This report defines and launches our change agenda. We demand change to our current short-sighted policies that benefit far too few. We offer, instead, a vision of inclusion and prosperity that will benefit everyone: an “all-in” Sacramento.

Acknowledgments

PolicyLink and the Program for Environmental and Regional Equity (PERE) at the University of Southern California are grateful to the Robert Wood Johnson Foundation for their generous support of this project. This equity profile and the accompanying policy brief are part of a series of reports produced in partnership with local community coalitions in Sacramento, Fresno, Long Island, Buffalo, and Cincinnati. This profile features demographic, economic, and health indicators to build a data-backed case for equity while the brief lifts up policy solutions to advance health equity, inclusive growth, and a culture of health. These communities are also a part of the All-In Cities initiative at PolicyLink, which supports community leaders in advancing racial economic inclusion and equitable growth.

We also thank the Healthy Sacramento Coalition for their continued partnership. The analyses and recommendations in the profile and the brief were informed by local focus groups convened by the members of the Coalition, which included the Sacramento

Area Congregations Together and Neighborhood Wellness Foundation, as well as interviews conducted with local leaders in the business, philanthropy, research, and advocacy sectors. We are grateful for the time and leadership of our local partners and all that they do to build a more just and equitable Sacramento.

This profile was written by Ángel Ross at PolicyLink; the data, charts, and maps were prepared by Sheila Xiao, Pamela Stephens, and Justin Scoggins at PERE; and Rosamaria Carrillo of PolicyLink assisted with formatting, editing, and design. Rebecca Flourney assisted with development of the framework presented in the profile.

Introduction

Overview

America's cities and metropolitan regions are the nation's engines of economic growth and innovation, and where a new economy that is equitable, resilient, and prosperous must be built.

Policy changes that advance *health equity* can guide leaders toward a new path of shared prosperity. Health equity means that everyone has a fair and just opportunity to be healthy. This requires removing obstacles to attaining and maintaining good health, such as poverty and discrimination, and addressing the social determinants of health: education, employment, income, family and social support, community safety, air and water quality, and housing and transit. Health equity promotes inclusive growth, because healthy people are better able to secure jobs, fully participate in society, and contribute to a vibrant local and regional economy.

This profile analyzes the state of health equity and inclusive growth in the Sacramento region, and the accompanying policy brief, *Health Equity Now: Toward an All-In*

Sacramento, summarizes the data and presents recommendations to advance health equity and inclusive growth. They were created by PolicyLink and the Program for Environmental and Regional Equity (PERE) in partnership with the Healthy Sacramento Coalition, whose broader vision is to eliminate health inequities in Sacramento.

The data used in this profile were drawn from a regional equity indicators database that includes the largest 100 cities, the largest 150 metropolitan areas, all 50 states, and the United States as a whole. The database incorporates hundreds of data points from public and private data sources including the U.S. Census Bureau, the U.S. Bureau of Labor Statistics, the Behavioral Risk Factor Surveillance System (BRFSS), and the Integrated Public Use Microdata Series (IPUMS). Note that while we disaggregate most indicators by major racial/ethnic groups, certain populations have too little data to report confidently. See the "Data and methods" section for a more detailed list of data sources.

We hope this information is used broadly by residents and community groups, elected officials, planners, business leaders, funders, and others working to build a stronger and more equitable Sacramento.

Introduction

What is an equitable region?

Regions are equitable when all residents – regardless of race/ethnicity, nativity, family income, neighborhood of residence, or other characteristics – can fully participate in the region’s economic vitality, contribute to its readiness for the future, and connect to its assets and resources.

Strong, equitable cities:

- Possess **economic vitality**, providing high-quality jobs to their residents and producing new ideas, products, businesses, and economic activity so the region remains sustainable and competitive.
- Are **ready for the future**, with a skilled, ready workforce, and a healthy population.
- Are **places of connection**, where residents can access the essential ingredients to live healthy and productive lives in their own neighborhoods, reach opportunities located throughout the region (and beyond) via transportation or technology, participate in political processes, and interact with other diverse residents.

Introduction

Why equity matters now

The face of America is changing.

Our country's population is rapidly diversifying. Already, more than half of all babies born in the United States are people of color. By 2030, the majority of young workers will be people of color. And by 2044, the United States will be a majority people-of-color nation.

Yet racial and income inequality is high and persistent.

Over the past several decades, long-standing inequities in income, wealth, health, and opportunity have reached unprecedented levels. Wages have stagnated for the majority of workers, inequality has skyrocketed, and many people of color face racial and geographic barriers to accessing economic opportunities.

Racial and economic equity is necessary for economic growth and prosperity.

Equity is an economic imperative as well as a moral one. Research shows that inclusion and diversity are win-win propositions for nations, regions, communities, and firms.

For example:

- More equitable regions experience stronger, more sustained growth.¹
- Regions with less segregation (by race and income) and lower income inequality have more upward mobility.²
- The elimination of health disparities would lead to significant economic benefits from reductions in health-care spending and increased productivity.³
- Companies with a diverse workforce achieve a better bottom line.⁴
- A diverse population more easily connects to global markets.⁵
- Less economic inequality results in better health outcomes for everyone.⁶

The way forward is with an equity-driven growth model.

To secure America's health and prosperity, the nation must implement a new economic model based on equity, fairness, and opportunity. Leaders across all sectors must remove barriers to full participation, connect more people to opportunity, and invest in human potential.

Regions play a critical role in shifting to inclusive growth.

Local communities are where strategies are being incubated to foster equitable growth: growing good jobs and new businesses while ensuring that all – including low-income people and people of color – can fully participate as workers, consumers, entrepreneurs, innovators, and leaders.

¹ Manuel Pastor, "Cohesion and Competitiveness: Business Leadership for Regional Growth and Social Equity," OECD Territorial Reviews, Competitive Cities in the Global Economy, Organisation For Economic Co-Operation And Development (OECD), 2006; Manuel Pastor and Chris Benner, "Been Down So Long: Weak-Market Cities and Regional Equity" in Retooling for Growth: Building a 21st Century Economy in America's Older Industrial Areas (New York: American Assembly and Columbia University, 2008); Randall Eberts, George Erickcek, and Jack Kleinhenz, "Dashboard Indicators for the Northeast Ohio Economy: Prepared for the Fund for Our Economic Future" (Cleveland, OH: Federal Reserve Bank of Cleveland, 2006), <https://www.clevelandfed.org/newsroom-and-events/publications/working-papers/working-papers-archives/2006-working-papers/wp-0605-dashboard-indicators-for-the-northeast-ohio-economy.aspx>.

² Raj Chetty, Nathaniel Hendren, Patrick Kline, and Emmanuel Saez, "Where is the Land of Economic Opportunity? The Geography of Intergenerational Mobility in the U.S.," Quarterly Journal of Economics 129 (2014): 1553-1623, http://www.equality-of-opportunity.org/assets/documents/mobility_geo.pdf.

³ Darrell Gaskin, Thomas LaVeist, and Patrick Richard, The State of Urban Health: Eliminating Health Disparities to Save Lives and Cut Costs (New York, NY: National Urban League Policy Institute, 2012).

⁴ Cedric Herring, "Does Diversity Pay?: Race, Gender, and the Business Case for Diversity," American Sociological Review 74 (2009): 208-22; Slater, Weigand and Zwirlein, "The Business Case for Commitment to Diversity," Business Horizons 51 (2008): 201-209.

⁵ U.S. Census Bureau, "Ownership Characteristics of Classifiable U.S. Exporting Firms: 2007," Survey of Business Owners Special Report, June 2012, https://www2.census.gov/econ/sbo/07/sbo_export_report.pdf.

⁶ Kate Pickett and Richard Wilkinson, "Income Inequality and Health: A Causal Review," Social Science & Medicine 128 (2015): 316-326.

Introduction

Equity indicators framework

The indicators in this profile are presented in five sections. The first section describes the region's demographics. The next three sections present indicators of the region's economic vitality, readiness, and connectedness. The final section explores the economic benefits of equity. Below are the questions answered within each of the five sections.

Demographics:

Who lives in the region, and how is this changing?

- Is the population growing?
- Which groups are driving growth?
- How diverse is the population?
- How does the racial/ethnic composition vary by age?

Economic vitality:

How is the region doing on measures of economic growth and well-being?

- Is the region producing good jobs?
- Can all residents access good jobs?
- Is growth widely shared?
- Do all residents have enough income to sustain their families?
- Are race/ethnicity and nativity barriers to economic success?
- What are the strongest industries and occupations?

Readiness:

How prepared are the region's residents for the 21st century economy?

- Does the workforce have the skills for the jobs of the future?
- Are all youth ready to enter the workforce?
- Are residents healthy? Do they live in health-promoting environments?
- Are health disparities decreasing?
- Are racial gaps in education decreasing?

Connectedness:

Are the region's residents and neighborhoods connected to one another and to the region's assets and opportunities?

- Do residents have transportation choices?
- Can residents access jobs and opportunities located throughout the region?
- Can all residents access affordable, quality, convenient housing?
- Do neighborhoods reflect the region's diversity? Is segregation decreasing?

Economic benefits of equity:

What are the benefits of racial economic inclusion to the broader economy?

- What are the projected economic gains of racial equity?
- Do these gains come from closing racial wage or employment gaps?

Introduction

Policy change is the path to health equity and inclusive growth

Equity is just and fair inclusion into a society in which all can participate, prosper, and reach their full potential. Health equity, as defined by the Robert Wood Johnson Foundation, means that everyone has a just and fair opportunity to be healthy. This requires removing obstacles to health, such as poverty, discrimination, and their consequences, which include powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care.

Many of the conditions and policies that advance health equity also promote inclusive growth. Healthy people are better able to secure jobs and participate in their full capacity, creating a vibrant local economy. In a highly complementary way, equitable economic growth – where all residents have access to good jobs and entrepreneurial opportunities – supports the health of residents throughout the region. This happens through tackling structural barriers and ensuring greater economic security, which reduces stress and increases people's access to health care and preventive services.¹

Ensuring that policies and systems serve to increase inclusion and remove barriers is particularly important given the history of urban and metropolitan development in the United States. Regions and cities are highly segregated by race and income. Today's cities are patchworks of concentrated advantage and disadvantage, with some neighborhoods home to good schools, bustling commercial districts, services, parks, and other crucial ingredients for economic success, while other neighborhoods provide few of those elements.

These patterns of exclusion were created and continue to be maintained by public policies at the federal, state, regional, and local levels. From redlining to voter ID laws to exclusionary zoning practices and more, government policies have fostered racial inequities in health, wealth, and opportunity. Reversing the trends and shifting to equitable growth requires dismantling barriers and enacting proactive policies that expand opportunity.

Health equity can be achieved through policy and systems changes that remove barriers, build opportunity, and address the social determinants of health, or through the factors outside of the health-care system that play a fundamental role in health outcomes. Social determinants of health include both structural drivers, like the inequitable distribution of power and opportunity, and the environments of everyday life – where people are born, live, learn, work, play, worship, and age.² There are seven key social determinants of health: education, employment, income, family and social support, community safety, air and water quality, and housing and transit.³

¹ Steven H. Woolf, Laudan Aron, Lisa Dubay, Sarah M. Simon, Emily Zimmerman, and Kim X. Luk, *How Are Income and Wealth Linked to Economic Longevity* (Washington, DC: The Urban Institute and the Center on Society and Health, April 2015), <http://www.urban.org/sites/default/files/publication/49116/2000178-How-are-Income-and-Wealth-Linked-to-Health-and-Longevity.pdf>.

² Rachel Davis, Diana Rivera, and Lisa Fujie Parks, *Moving from Understanding to Action on Health Equity: Social Determinants of Health Frameworks and THRIVE* (Oakland, CA: The Prevention Institute, August 2015), <https://www.preventioninstitute.org/sites/default/files/publications/Moving%20from%20Understanding%20to%20Action%20on%20Health%20Equity%20%E2%80%93%20Social%20Determinants%20of%20Health%20Frameworks%20and%20THRIVE.pdf>.

³ County Health Rankings and Roadmaps, "Our Approach" (University of Wisconsin Population Health Institute, 2016), <http://www.countyhealthrankings.org/our-approach>.

Introduction

Health equity and inclusive growth are intertwined

The interconnection between health equity and inclusive growth can be seen across the four dimensions of our framework.

Economic vitality

In a region that cultivates inclusive growth and health equity, good jobs are accessible to all, including less-educated workers, and residents have enough income to sustain their families and save for the future. The region has growing industries, and race/ethnicity and nativity are not barriers to economic success. Economic growth is widely shared, and incomes among lower-paid workers are increasing. The population becomes healthier and more productive, because income is a documented determinant of good health, and reduced economic inequality has been linked to better health outcomes for everyone.

Readiness

In a region that cultivates inclusive growth and health equity, all residents have the skills needed for jobs of the future, and youth are ready to enter the workforce. High levels of good health are found throughout the

population, and racial gaps in health are decreasing. Residents have health insurance and can readily access health-care services.

Connectedness

In a region that cultivates inclusive growth and health equity, residents have good transportation choices linking them to a wide range of services that support good health and economic and educational opportunities. Many residents choose to walk, bike, and take public transit – increasing exercise for these residents and reducing air pollution, which positively influence health. Local neighborhood and school environments support health and economic opportunity for all residents, allowing everyone to participate fully in the local economy. Neighborhoods are less segregated by race and income, and all residents wield political power to make their voices heard.

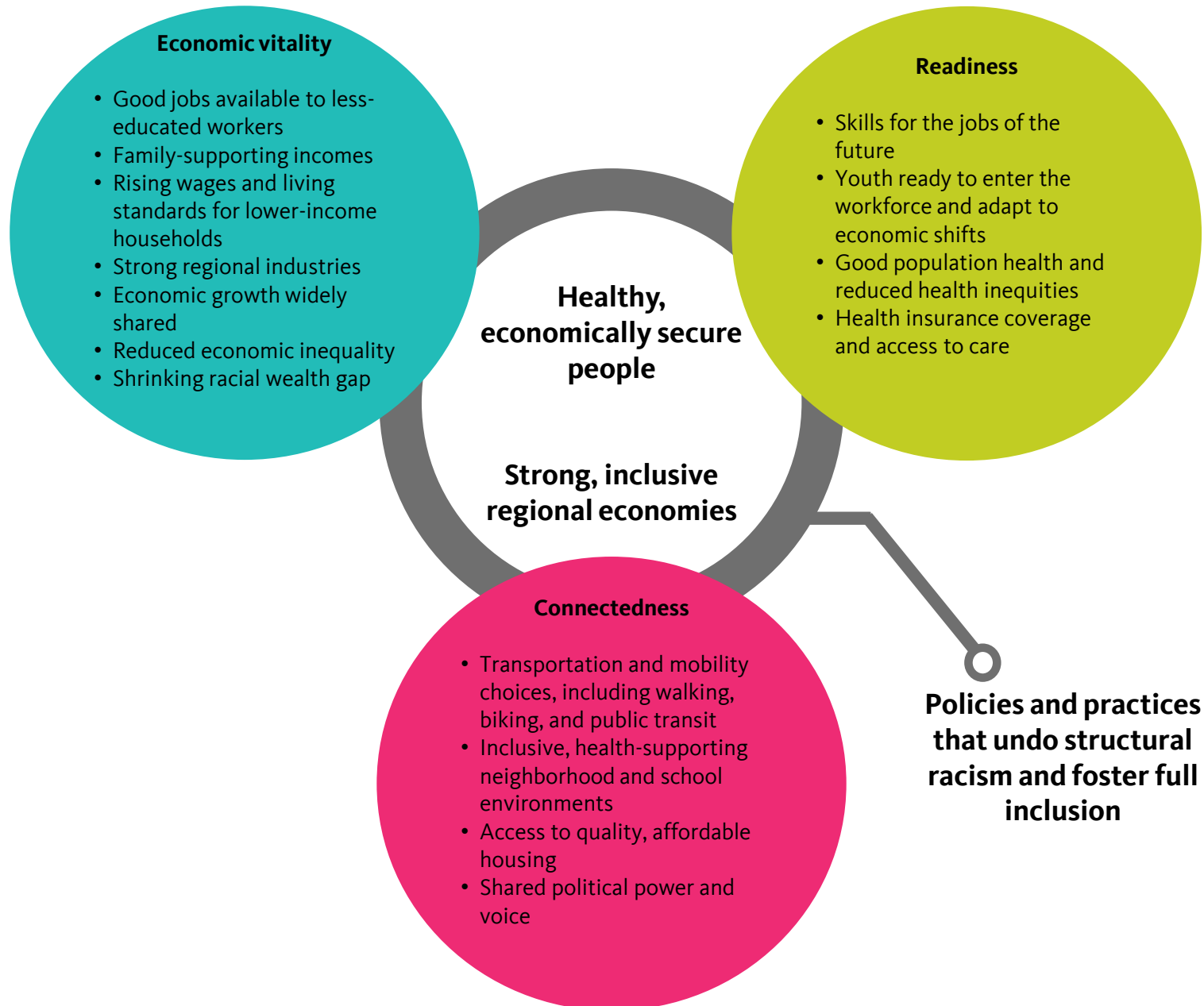
Economic benefits of equity

The elimination of racial health disparities and improving health for all generates significant economic benefits from reductions in health-

care spending and increased productivity. Research shows that economic growth is stronger and more sustainable in regions that are more equitable.

Introduction

Key drivers of health equity and inclusive growth



Introduction

Geography

This profile describes demographic, economic, and health conditions in the Sacramento region, which consists of El Dorado, Placer, Sacramento, and Yolo counties. This regional geography matches the Sacramento–Arden–Arcade–Roseville, California Metropolitan Statistical Area as defined by the U.S. Office of Management and Budget.

Unless otherwise noted, all data reflect the Sacramento region, which may be referred to as simply “Sacramento” or “Sacramento Metro Area.” Information on data sources and methodology can be found in the “Data and methods” section beginning on page 103.



Demographics

Highlights

Who lives in the region, and how is this changing?

- Growth in the Sacramento region's communities of color has outpaced overall population growth since 2000.
- The region's fastest-growing demographic groups are also younger than Whites on average.
- The U.S.-born Latino population grew by over 134,000 people while the U.S.-born White population grew by less than 38,000 people.
- The region's racial generation gap has doubled since 1980. A large racial generation gap (the difference in the share of seniors of color and youth of color) often corresponds with lower investments in educational systems and infrastructure to support youth.

Growth in Black immigrant population since 2000:

122%

The median age of Latinos in the region:

27

Racial generation gap in 2014 (in percentage points):

32

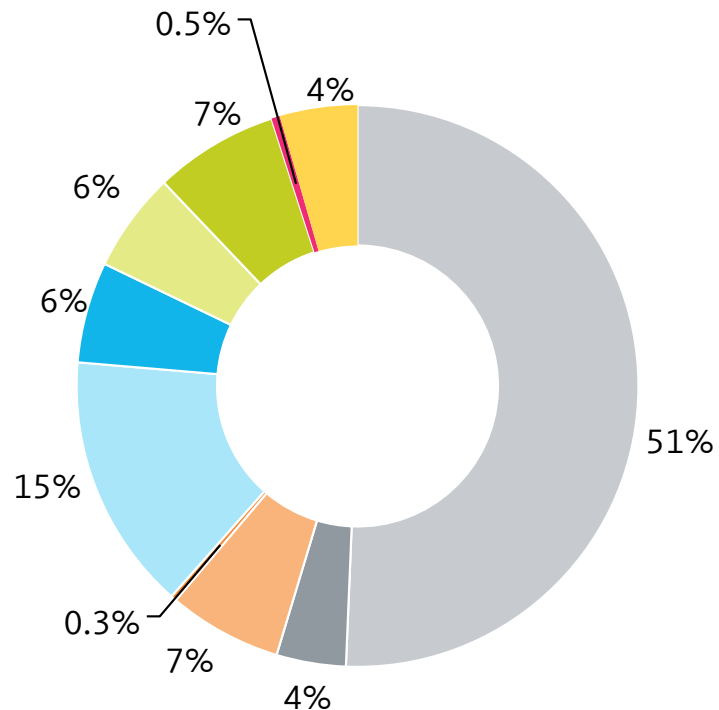
Demographics

How racially/ethnically diverse is the region?

The region has a higher percentage of White people than the state as a whole. Whites (including White immigrants) account for 55 percent of the population, compared to 39 percent statewide. Latinos make up 21 percent of the region's population and Asians or Pacific Islanders account for another 13 percent.

Race/Ethnicity and Nativity, 2014

- White, U.S.-born
- White, Immigrant
- Black, U.S.-born
- Black, Immigrant
- Latino, U.S.-born
- Latino, Immigrant
- Asian or Pacific Islander, U.S.-born
- Asian or Pacific Islander, Immigrant
- Native American and Alaska Native
- Mixed/other



Source: Integrated Public Use Microdata Series.

Note: Data represent a 2010 through 2014 average. The IPUMS American Community Survey (ACS) microdata was adjusted to match the ACS summary file percentages by race/ethnicity.

Demographics

How racially/ethnically diverse is the region?

Communities of color in the region are diverse. People of Mexican ancestry make up the largest Latino subgroup, but South Americans are more likely to be immigrants. Southeast Asians make up the largest Asian or Pacific Islander ancestry group, and more than half are immigrants.

Asian or Pacific Islander, Latino, White, and Black Populations by Ancestry, 2014

Asian or Pacific Islander	Population	% Immigrant	Latino	Population	% Immigrant
Southeast Asian	120,714	55%	Mexican	294,865	33%
East Asian	81,491	54%	Central American	19,923	56%
South Asian	39,359	69%	Caribbean	11,873	7%
Pacific Islander	12,650	48%	South American	7,014	62%
Other Asian or Pacific Islander	31,375	48%	Other Latino	119,172	11%
Total	285,588	56%	Total	452,847	28%
White	Population	% Immigrant	Black	Population	% Immigrant
Western European	698,221	3%	Sub-Saharan African	10,419	47%
North American	179,186	2%	European	2,577	N/A
Eastern European	101,394	41%	Caribbean/West Indian	1,872	N/A
Middle Eastern/North African	21,208	57%	Latin American	192	N/A
Other White	201,114	6%	North African/Southwest Asian	95	N/A
Total	1,201,123	7%	African American/Other Black	135,762	1%
			Total	150,915	5%

Source: Integrated Public Use Microdata Series.

Note: Data represent a 2010 through 2014 average. "N/A" indicates that data on the percent immigrant is not available.

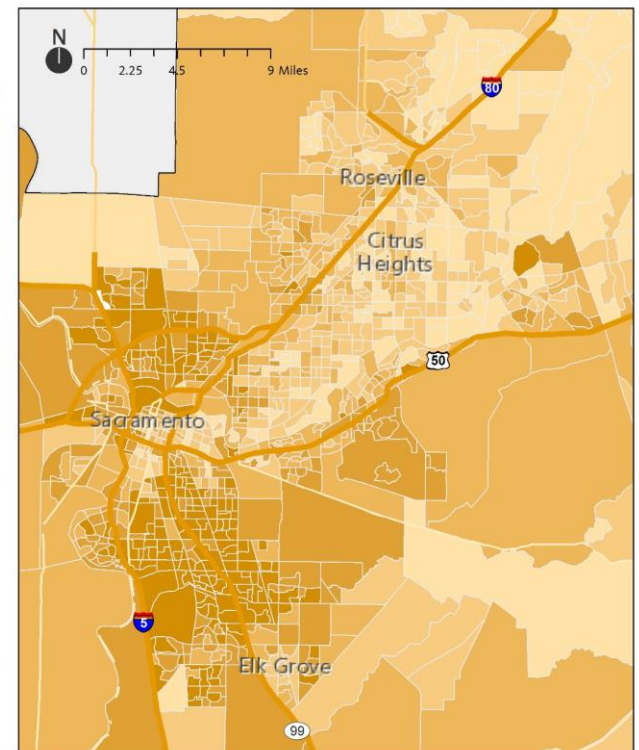
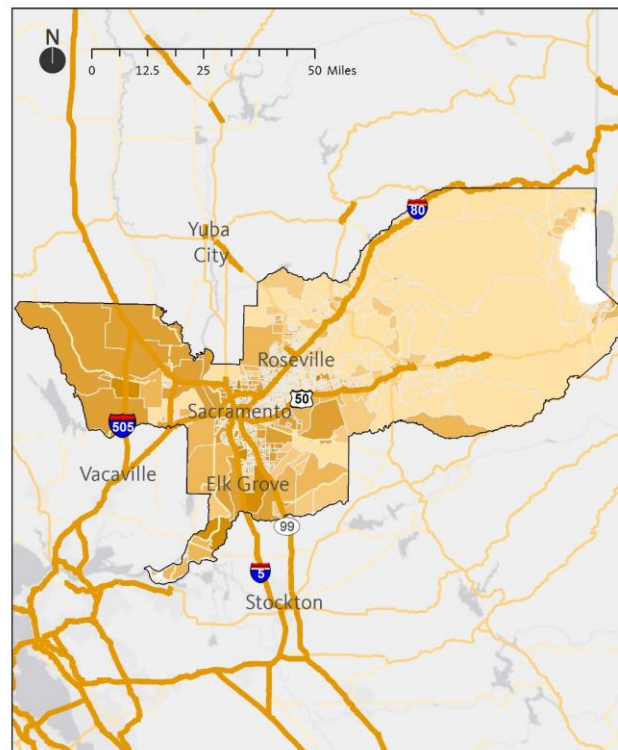
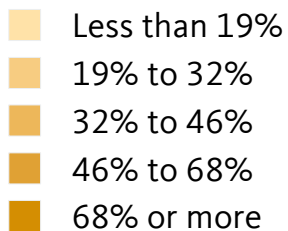
Demographics

How racially/ethnically diverse is the region?

Communities of color are spread throughout Sacramento, but are more concentrated on the west side of the region.

People of color make up the majority of Sacramento and Yolo counties, while El Dorado and Placer counties are much less racially diverse.

Percent People of Color by Census Block Group, 2014

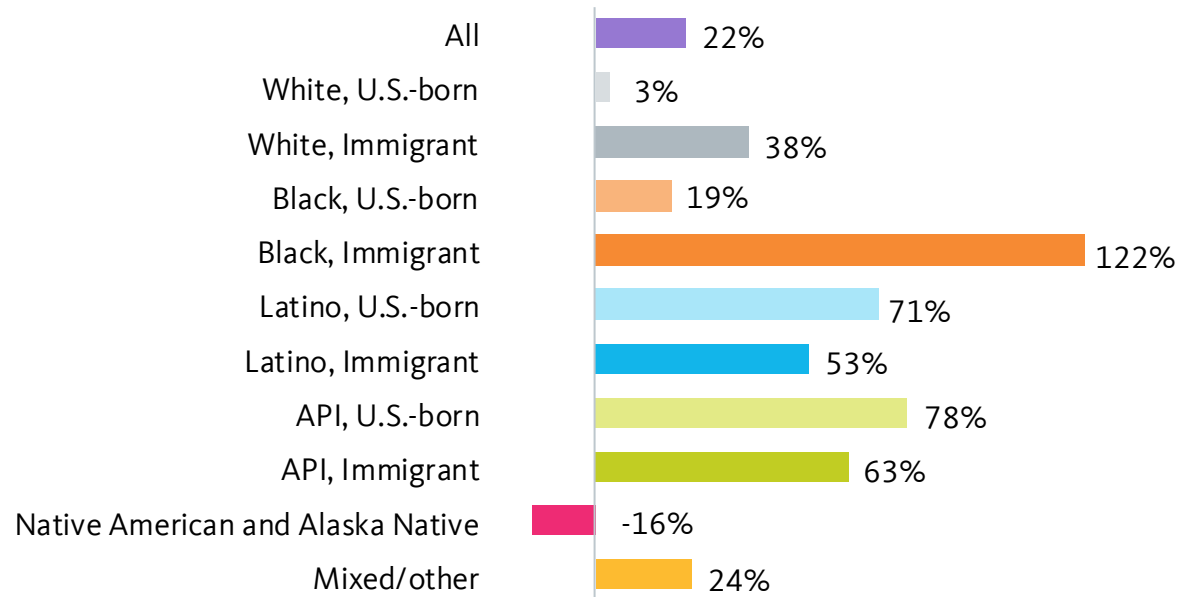


Demographics

How is the area's population changing over time?

Communities of color and immigrants are driving the region's growth. The Black immigrant population is relatively small but was the fastest-growing group over the last decade, adding over 4,000 people. Asian or Pacific Islander immigrants and U.S.-born Latinos added more than 61,000 and 134,000 residents respectively.

Growth Rates of Major Racial/Ethnic Groups by Nativity, 2000 to 2014



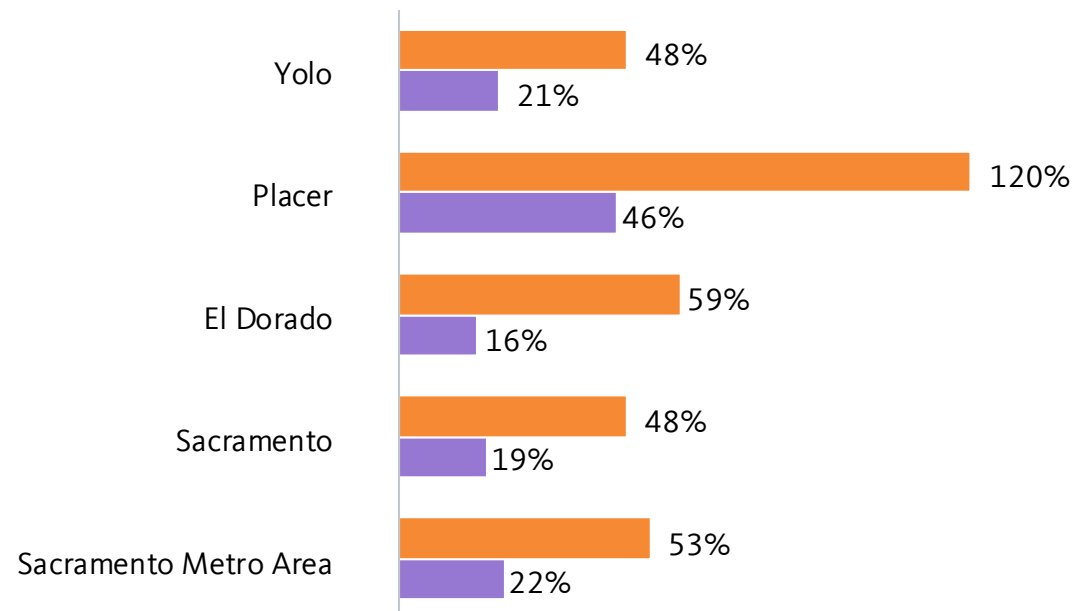
Demographics

How is the area's population changing over time?

Growth in communities of color has outpaced population growth across the region. While the overall population increased by nearly 22 percent from 2000 to 2014, the people-of-color population grew by nearly 53 percent. The people-of-color population grew fastest in Placer County.

Net Change in Population by Geography, 2000 to 2014

- People-of-color Growth
- Total Population Growth



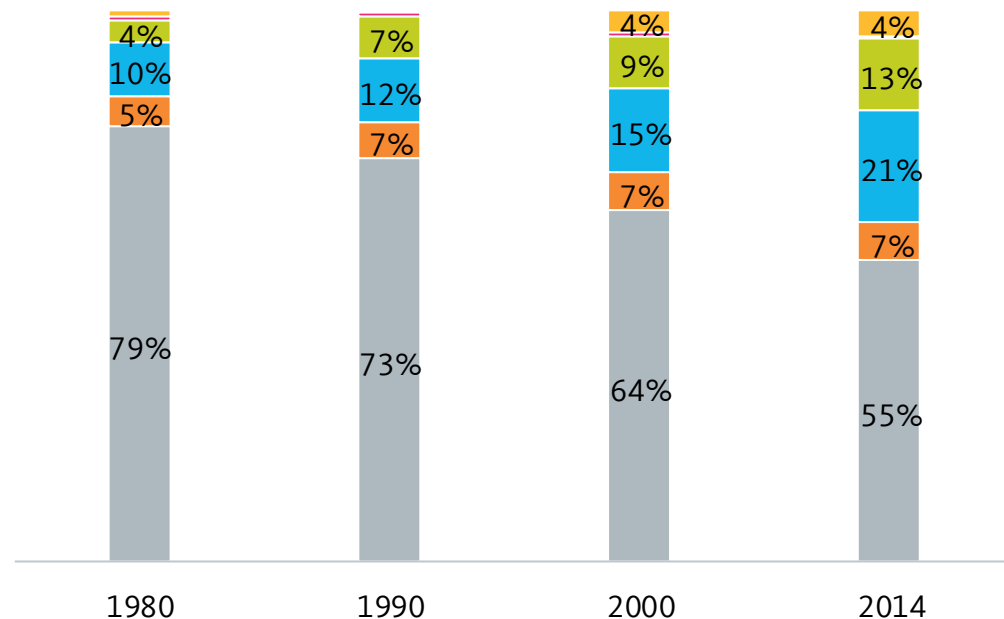
Demographics

How is the area's population changing over time?

Though Whites still make up a majority of the population, demographic change is happening quickly in the region. The Latino population share has doubled since 1980 and the Asian or Pacific Islander population share has tripled. The White population share declined from 79 percent in 1980 to 55 percent in 2014.

Racial/Ethnic Composition, 1980 to 2014

- Mixed/other
- Native American
- Asian or Pacific Islander
- Latino
- Black
- White



Source: U.S. Census Bureau.

Note: Data for 2014 represent a 2010 through 2014 average. Shares by race/ethnicity in 2014 may differ slightly from those reported on page 18 due to rounding. Much of the increase in the Mixed/other population between 1990 and 2000 is due to a change in the survey question on race.

Demographics

How is the area's population changing over time?

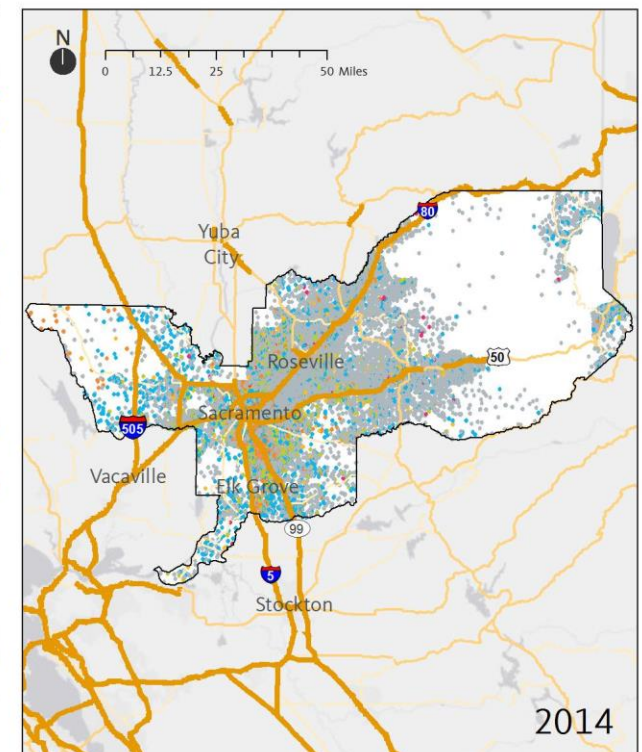
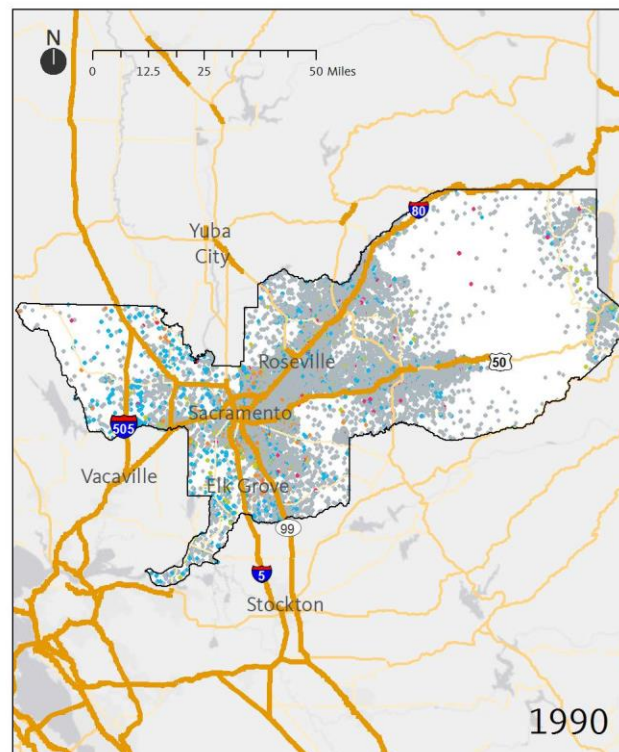
The White population, represented by grey dots, still makes up a majority of the region, though the Latino and Asian or Pacific Islander populations have grown substantially. The region has experienced considerable population growth, notably in the city of Roseville and south of route 50.

Race/Ethnicity Dot Map by Census Block Group, 1990 and 2014

Race/ethnicity

1 Dot = 25

- White
- Black
- Latino
- Asian or Pacific Islander
- Native American
- Mixed/other



Demographics

How is the area's population changing over time?

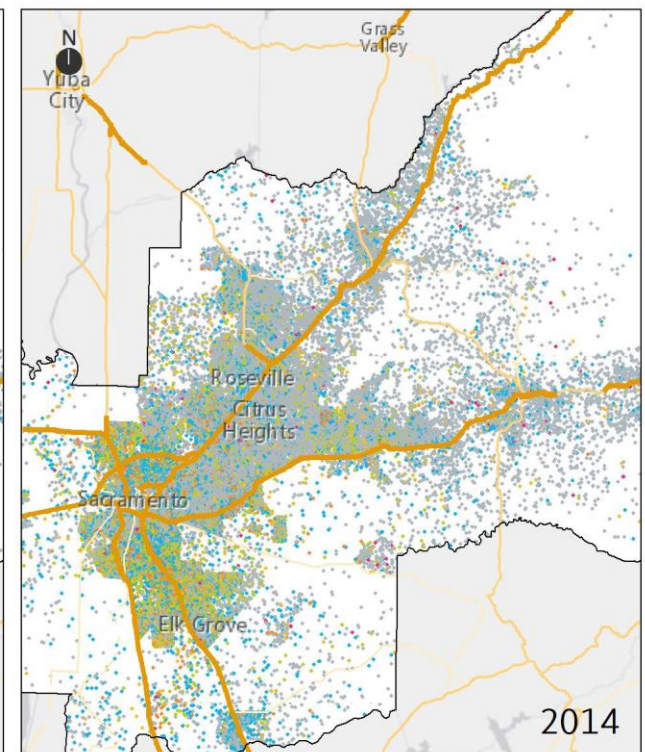
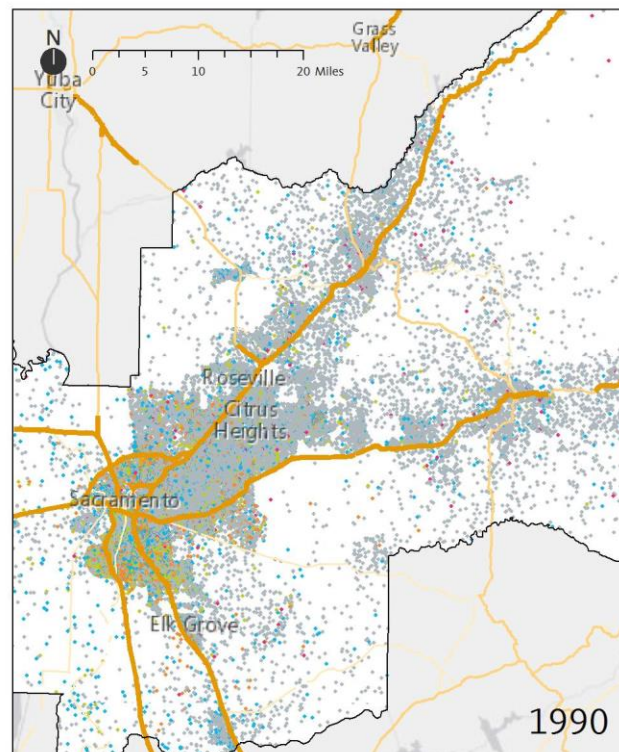
Zooming in closer on the urban core of the region, large increases in the Latino and Asian or Pacific Islander populations are more apparent, as are population increases in the suburban cities of the region, including Elk Grove, and Folsom (which is just southeast of Citrus Heights).

Race/Ethnicity Dot Map by Census Block Group, 1990 and 2014 (Zoom View)

Race/ethnicity

1 Dot = 25

- White
- Black
- Latino
- Asian or Pacific Islander
- Native American
- Mixed/other



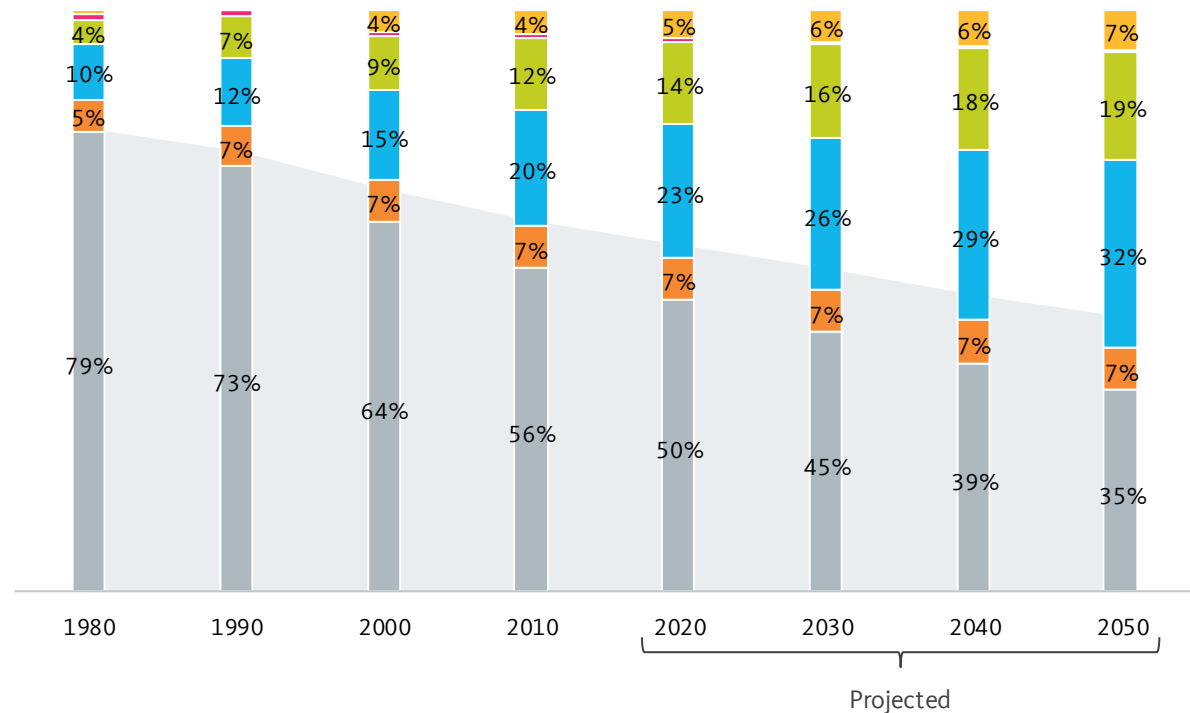
Demographics

How is the area's population changing over time?

The Sacramento metro area is projected to become majority people of color by the early 2020s and by 2050, nearly two in three residents will be people of color. The Latino population share is projected to grow from 20 percent in 2010 to 32 percent by 2050.

Racial/Ethnic Composition, 1980 to 2050

- U.S. % White
- Mixed/other
- Native American
- Asian or Pacific Islander
- Latino
- Black
- White



Sources: U.S. Census Bureau; Woods & Poole Economics, Inc.

Note: Much of the increase in the Mixed/other population between 1990 and 2000 is due to a change in the survey question on race.

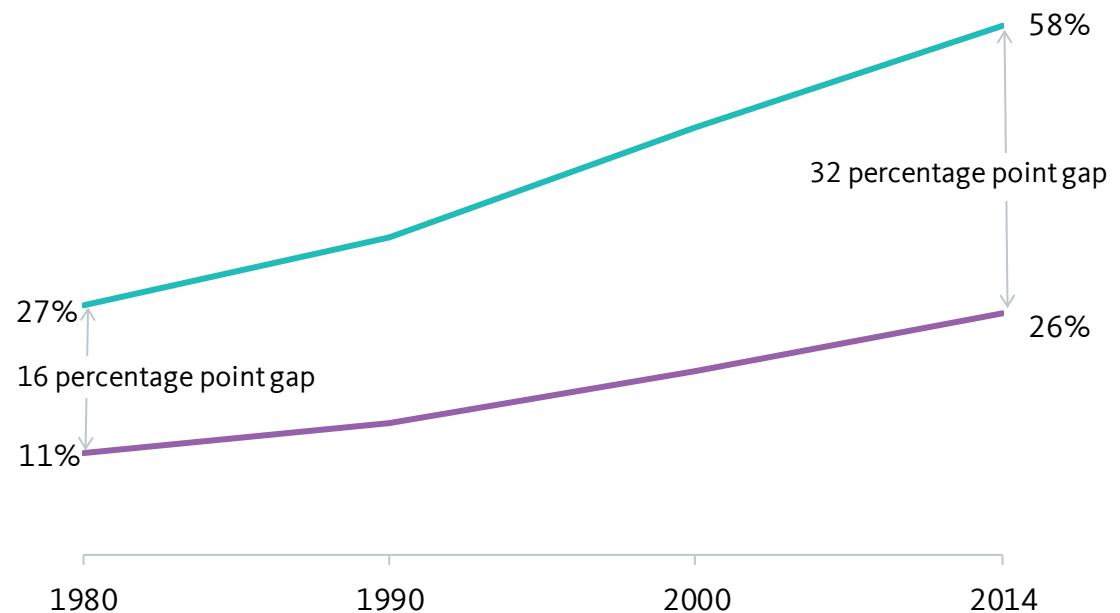
Demographics

How is the area's population changing over time?

The racial generation gap has doubled since 1980. By 2014, 58 percent of youth were people of color compared with just 26 percent of seniors. A large racial generation gap often corresponds with lower investments in educational systems and infrastructure to support youth.

Racial Generation Gap: Percent People of Color (POC) by Age Group, 1980 to 2014

- Percent of seniors who are POC
- Percent of youth who are POC

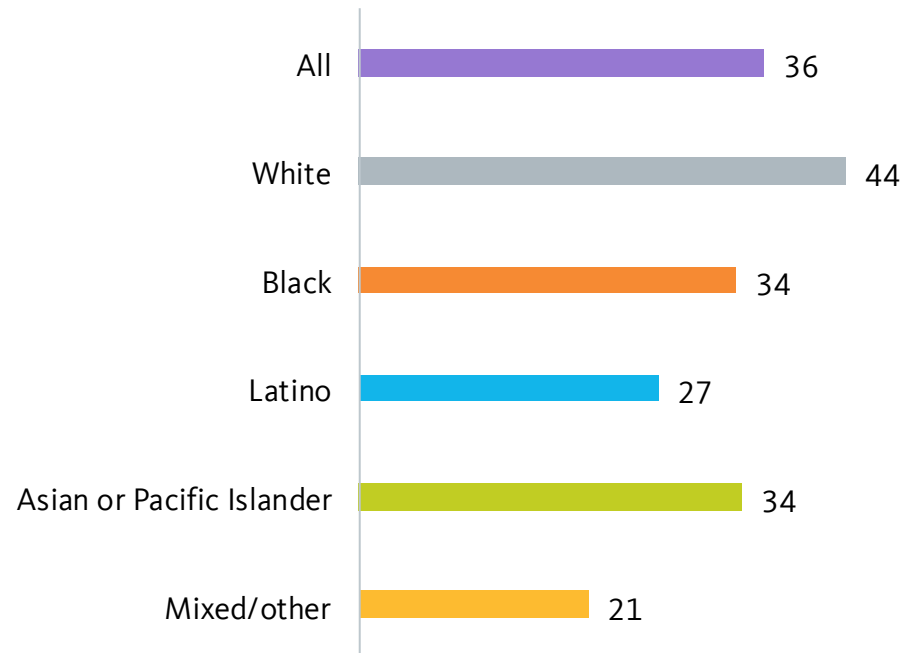


Demographics

How is the area's population changing over time?

The region's fastest-growing demographic groups are younger than Whites. People of other or mixed races have the youngest median age at 21 years old. The median ages of Latinos (27 years), Asians or Pacific Islanders (34 years), and Blacks (34 years) are lower than that of Whites (44 years).

Median Age (in years) by Race/Ethnicity, 2014



Demographics

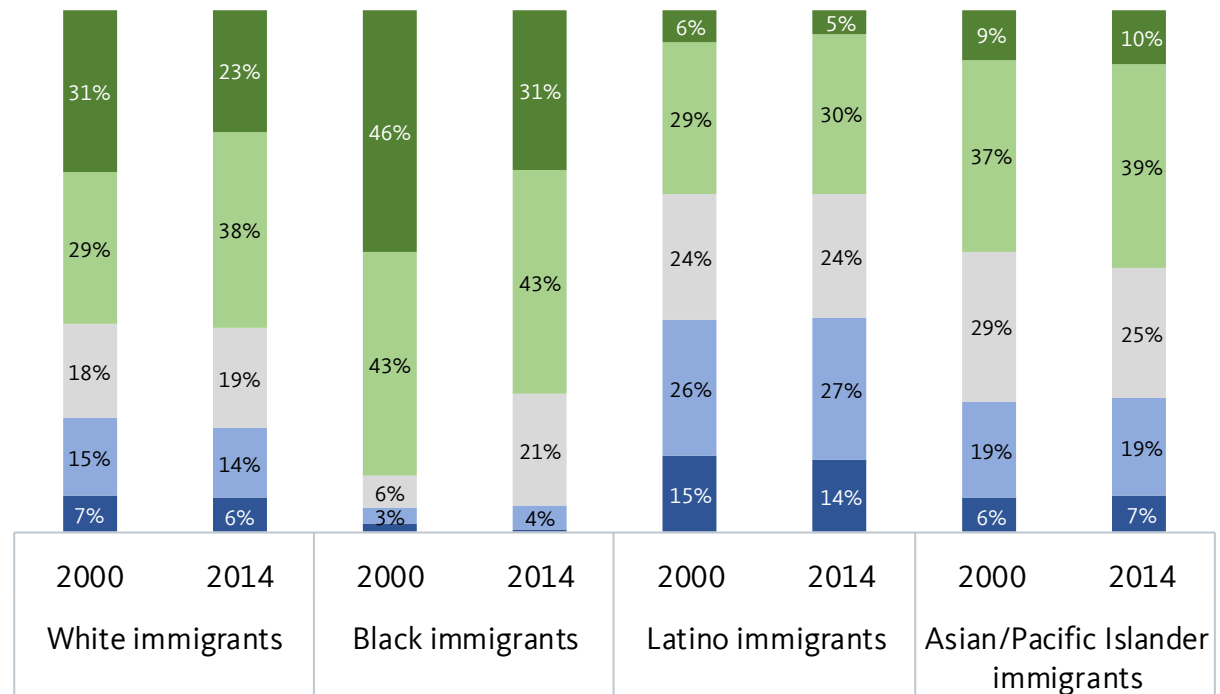
How is the area's population changing over time?

As a whole, 29 percent of Sacramento's immigrants do not speak English well or at all, including 41 percent of Latino immigrants and just more than one in four Asian or Pacific Islander immigrants. Language barriers are known to impact access to health and other vital services.

English-Speaking Ability
Among Immigrants by
Race/Ethnicity, 2000 and 2014

Percent speaking English

- Only
- Very well
- Well
- Not well
- Not at all



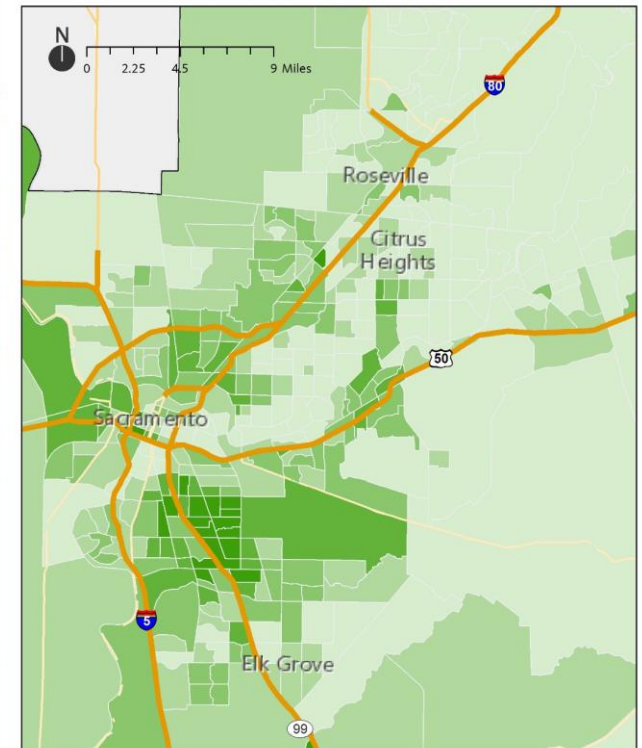
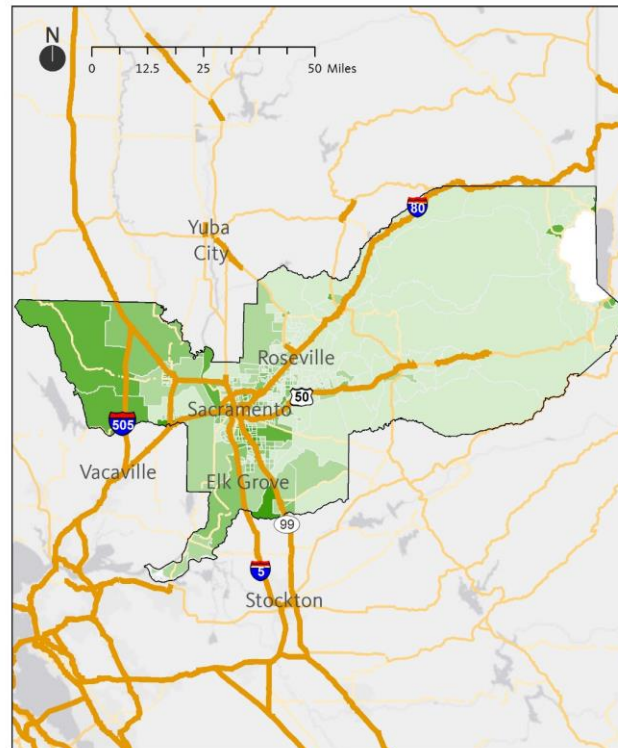
Demographics

How is the area's population changing over time?

Pockets of linguistic isolation are found throughout the region, with higher concentrations in Yolo and Sacramento Counties. Linguistically isolated households are defined as those in which no member age 14 or older speaks only English or speaks English at least “very well.”

Household Linguistic Isolation by Census Tract, 2014

- Less than 3%
- 3% to 7%
- 7% to 12%
- 12% to 18%
- 18% or more



Economic vitality

Highlights

How is the region doing on measures of economic growth and well-being?

- Jobs have grown in step with the nation since 2009, but GDP growth lags slightly behind the national average.
- Low-wage and middle-wage jobs have grown faster than high-wage jobs since 1990, and have seen faster earnings growth than the statewide average.
- Although education is a leveler, racial gaps persist in the labor market. Even at the highest levels of education, Black workers earn \$7/hour less than their White counterparts.
- Poverty and working poverty have grown over the last decade. Latinos are more than three times as likely as Whites to be working full time with a family income less than 200 percent of the federal poverty level.

Real wage growth for workers at the 20th percentile since 1979:

-7%

Share of Black children living in poverty:

41%

Wage gap between Whites and Latinos:

\$9/hr

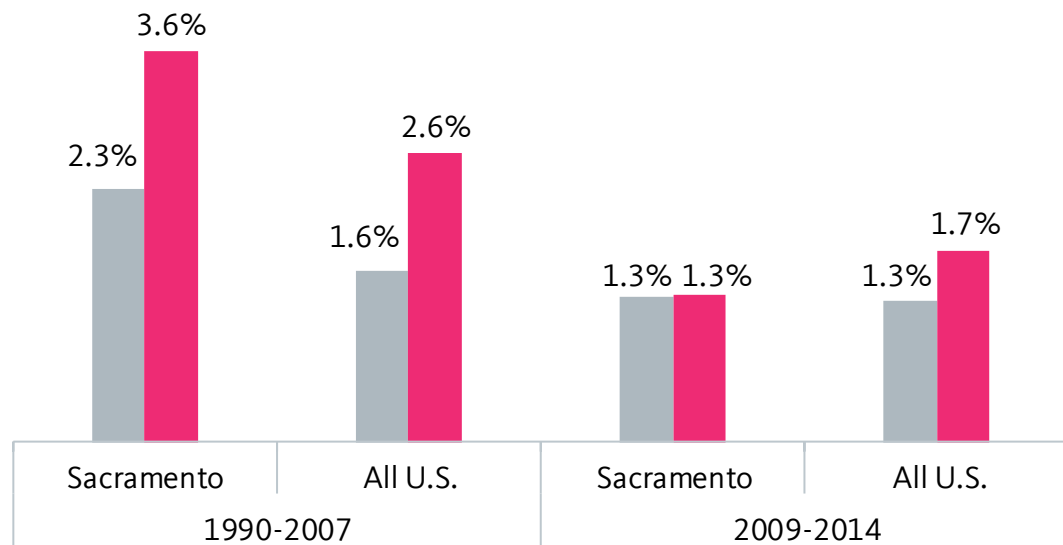
Economic vitality

Is the region producing good jobs?

Sacramento is still recovering from the Great Recession. Pre-downturn, the region's economy outperformed the nation in terms of job and GDP growth. Since 2009, growth in jobs and GDP have been about the same as the national average.

Average Annual Growth in
Jobs and GDP, 1990 to 2007
and 2009 to 2014

■ Jobs
■ GDP



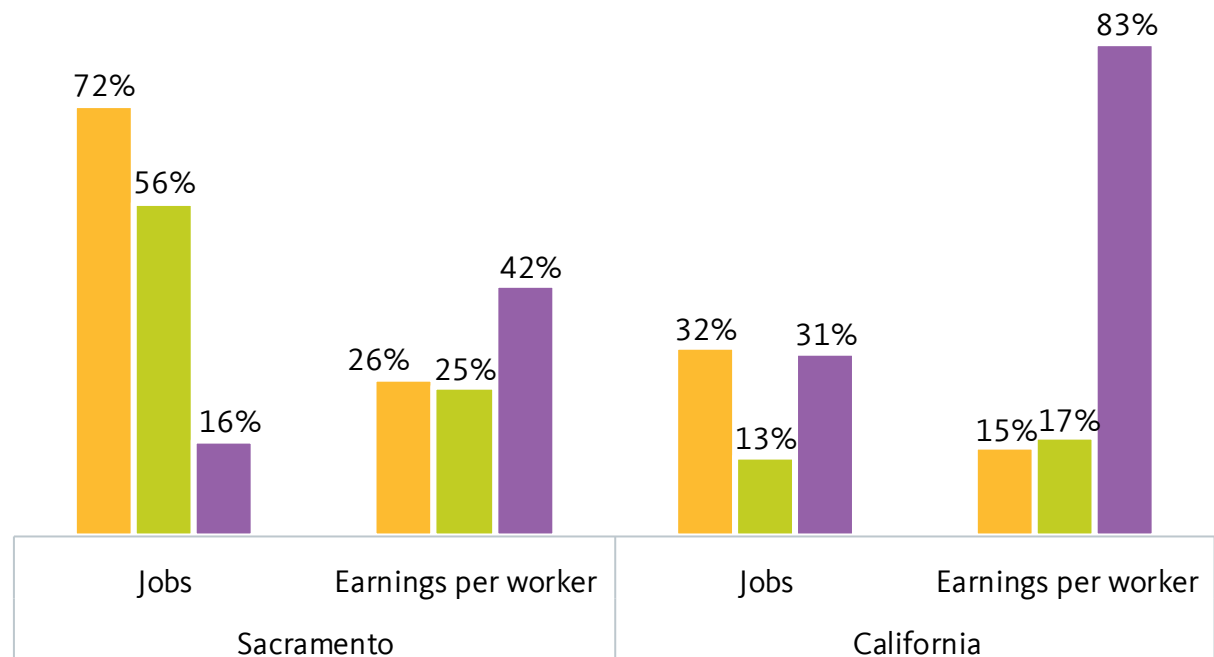
Economic vitality

Is the region producing good jobs?

Low-wage and middle-wage jobs have grown considerably faster than high-wage jobs from 1990 to 2015, and faster than the statewide average. Compared to the statewide average, earnings per worker in Sacramento have grown faster among low- and middle-wage jobs, and slower among high-wage jobs.

Growth in Jobs and Earnings by Industry Wage Level, 1990 to 2015

- Low wage
- Middle wage
- High wage

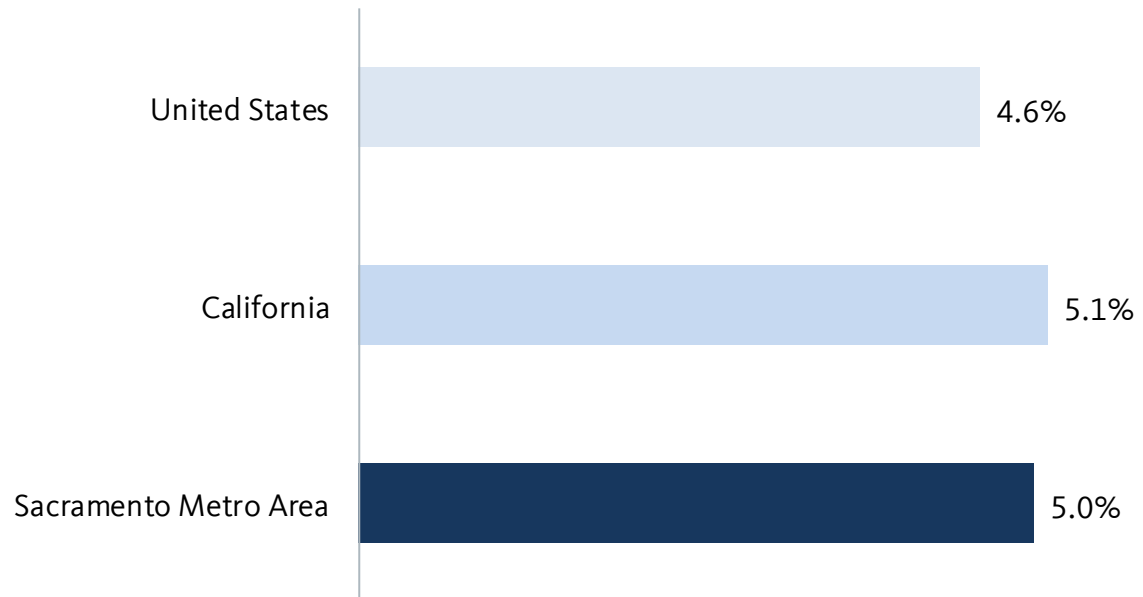


Access to good jobs

How close is the region to reaching full employment?

Unemployment has declined in the region and is similar to the national rate. The unemployment rate in the country was 4.6 percent in March 2017, and it was 5.1 percent in California. In Sacramento, it was 5.0 percent.

Unemployment Rate, March 2017



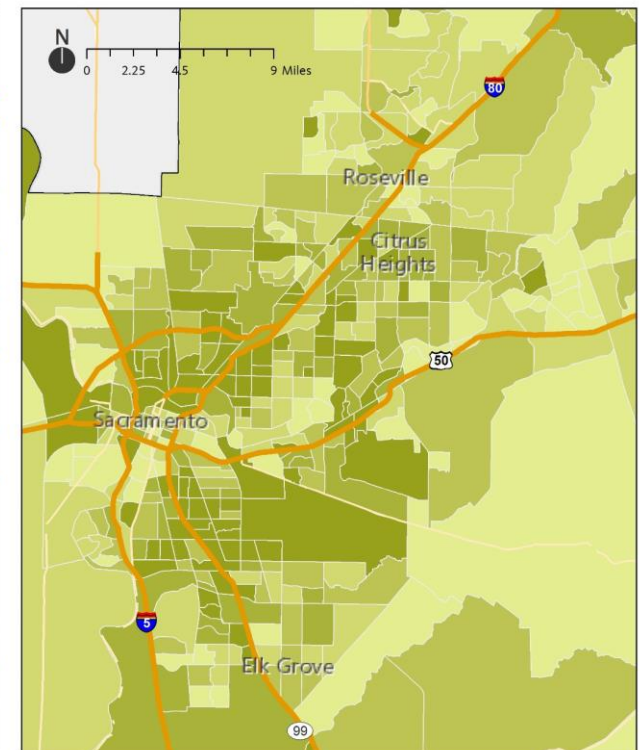
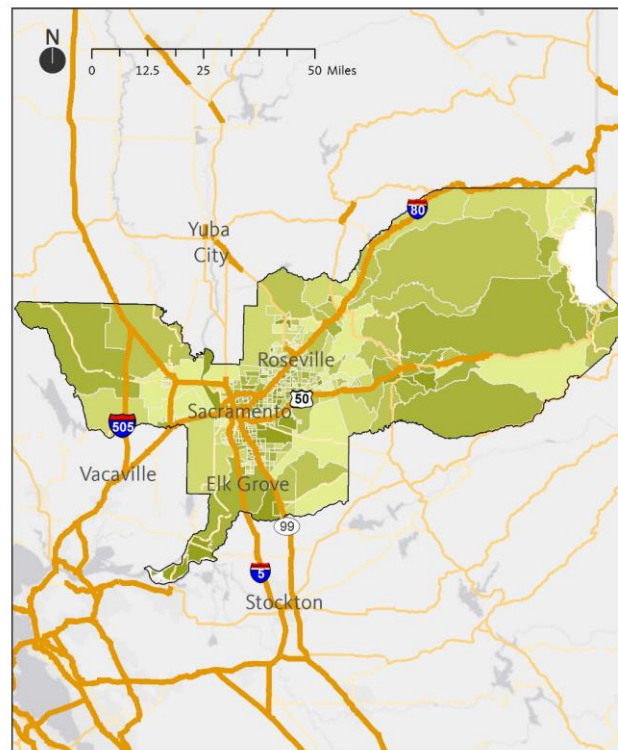
Access to good jobs

How close is the region to reaching full employment?

Unemployment is lower in Sacramento than the state overall, but it varies geographically. Unemployment rates are less than 7 percent in neighborhoods like Land Park in Sacramento, but 16 percent or higher in communities located in the southernmost part of Sacramento County.

Unemployment Rate by Census Tract, 2014

- Less than 7%
- 7% to 10%
- 10% to 13%
- 13% to 16%
- 16% or more

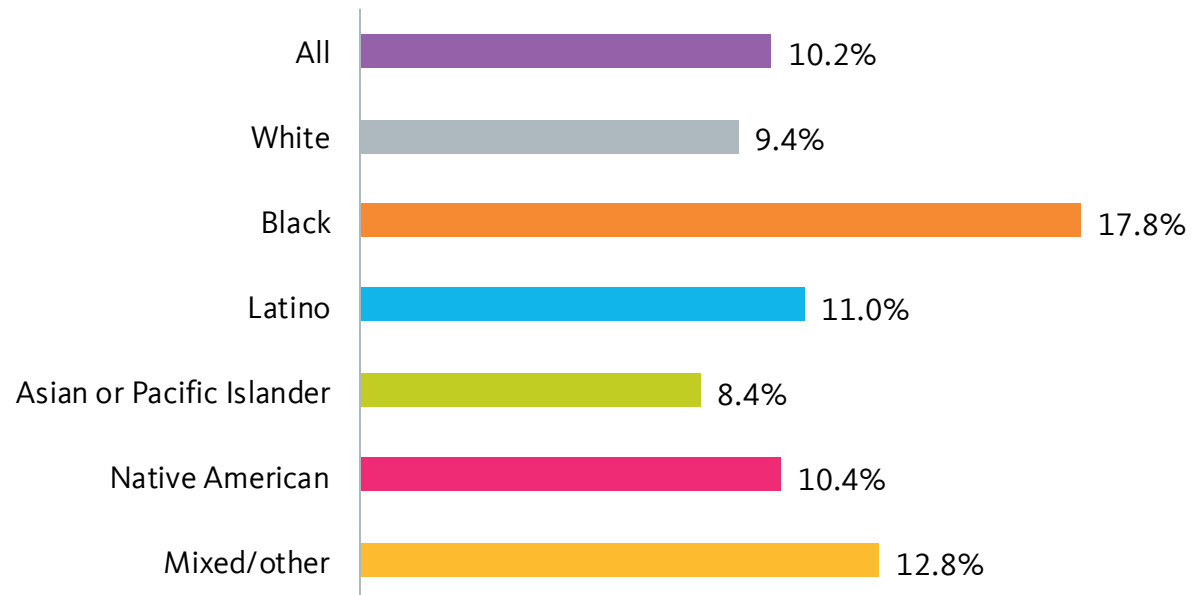


Access to good jobs

How close is the region to reaching full employment?

Overall unemployment is 10 percent, but racial inequities persist. Rates of unemployment in the region are highest for African Americans (17.8 percent), those of mixed/other races (12.8 percent), and Latinos (11.0 percent). Whites and Asian or Pacific Islanders have the lowest unemployment rates (9.4 and 8.4 percent, respectively).

Unemployment Rate by
Race/Ethnicity, 2014



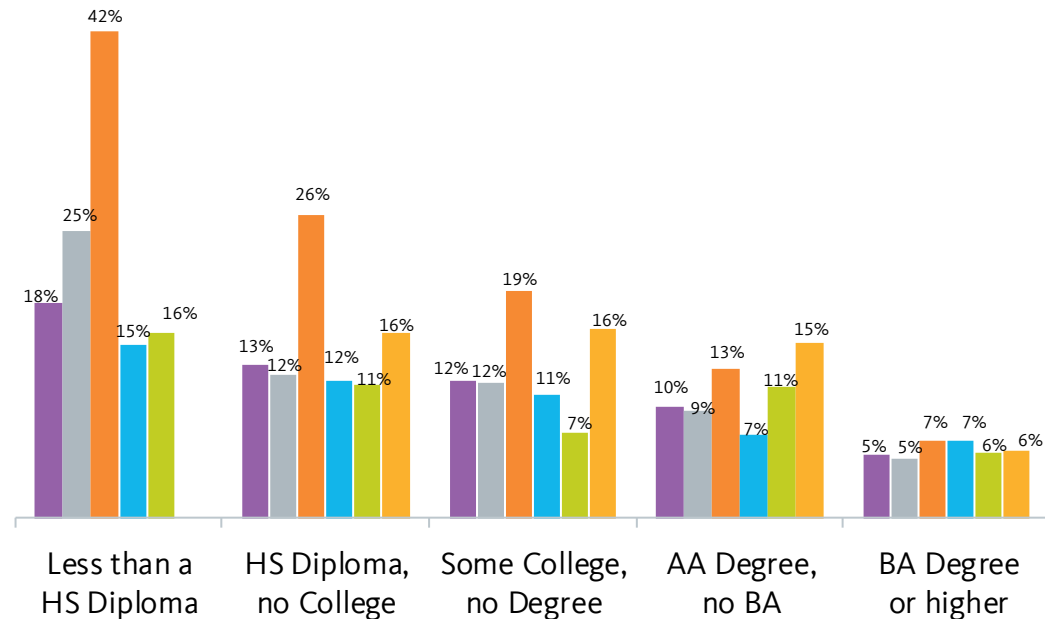
Access to good jobs

How close is the region to reaching full employment?

Unemployment declines as education levels increase, but racial gaps remain. The Black unemployment rate among those without a high school diploma is 42 percent compared with 15 percent among Latinos. At the other end of the education spectrum, the Black and Latino unemployment rates are the same among those with a bachelor's degree or higher.

Unemployment Rate by Educational Attainment and Race/Ethnicity, 2014

- All
- White
- Black
- Latino
- Asian or Pacific Islander
- Mixed/other



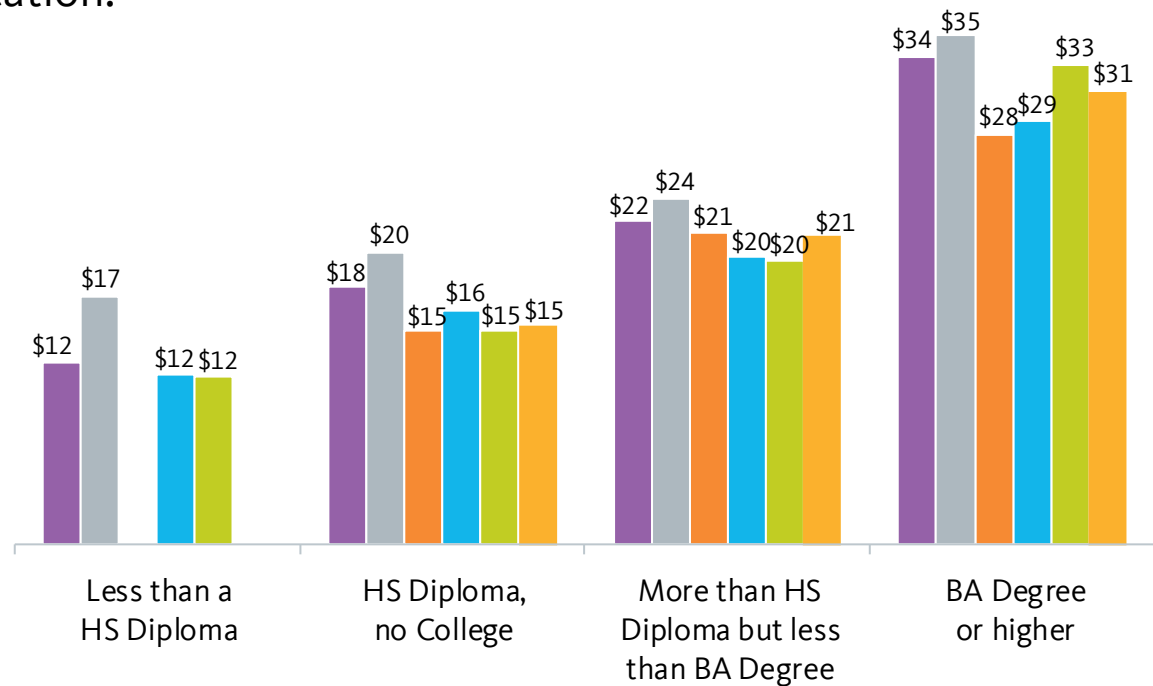
Access to good jobs

Can all workers earn a living wage?

Racial wage gaps persist regardless of education. In fact, the gaps are largest among the most educated part of the population: White workers with a bachelor's degree or higher make about \$7/hour more, on average, than Black workers with the same level of education. The smallest gaps are among the population with some college education.

Median Hourly Wage by Educational Attainment and Race/Ethnicity, 2014

- All
- White
- Black
- Latino
- Asian or Pacific Islander
- Mixed/other



Source: Integrated Public Use Microdata Series. Universe includes civilian noninstitutional full-time wage and salary workers ages 25 through 64.
 Note: Data represent a 2010 through 2014 average. Values are in 2014 dollars. Data for some racial/ethnic groups are excluded due to small sample size.

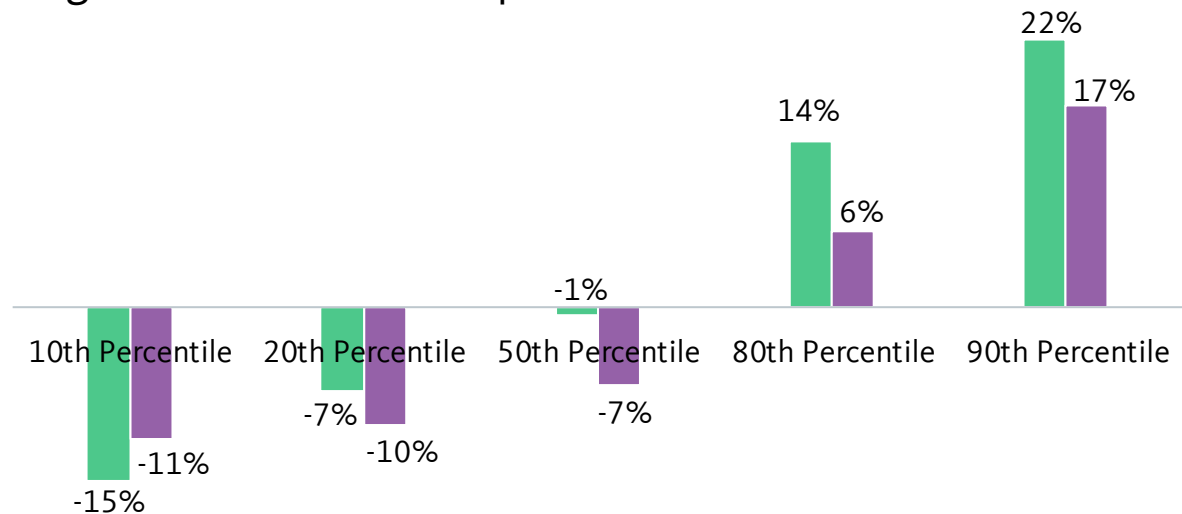
Inclusive growth

Are incomes increasing for all workers?

Only workers at the 80th and 90th percentiles have seen their wages grow over the past three decades. Workers at the 20th percentile and below have experienced the most significant wage declines. Wage declines have been steeper in Sacramento than in the U.S. overall among those in the 10th percentile, while wage increases have been stronger for those at the top.

Real Earned Income Growth for Full-Time Wage and Salary Workers, 1979 to 2014

■ Sacramento
■ United States



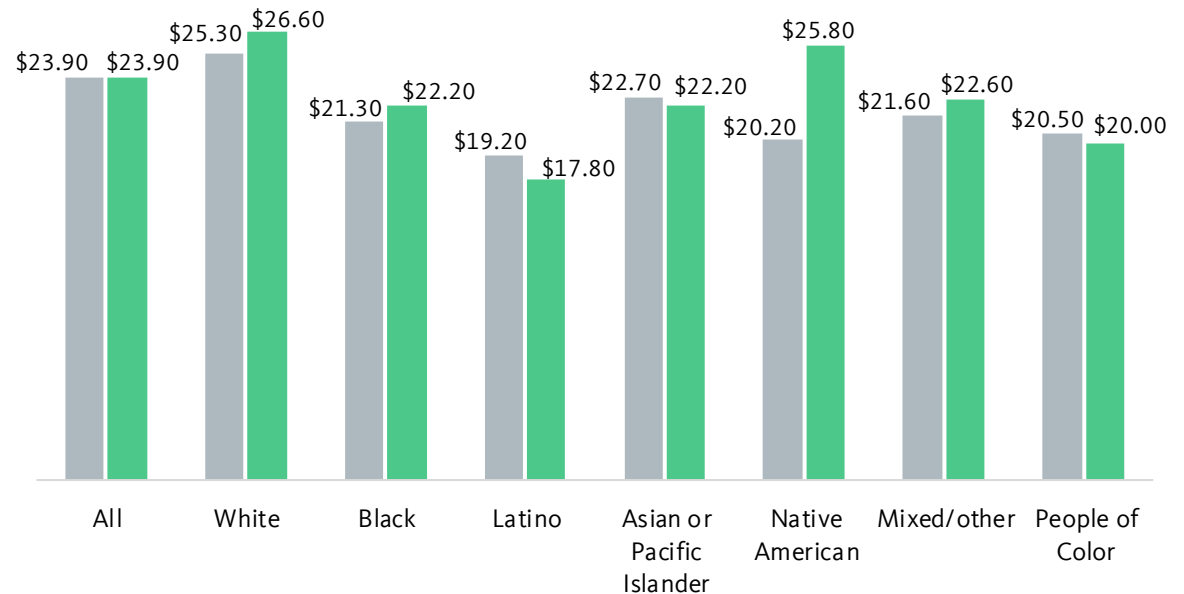
Inclusive growth

Are incomes increasing for all workers?

Wages have increased for Whites and decreased for people of color from 2000 to 2014. The White median wage increased by just over a dollar an hour. The Black median wage also grew by nearly a dollar an hour, while the Latino median wage declined by more than a dollar an hour.

Median Hourly Wage by Race/Ethnicity, 2000 and 2014

■ 2000
■ 2014

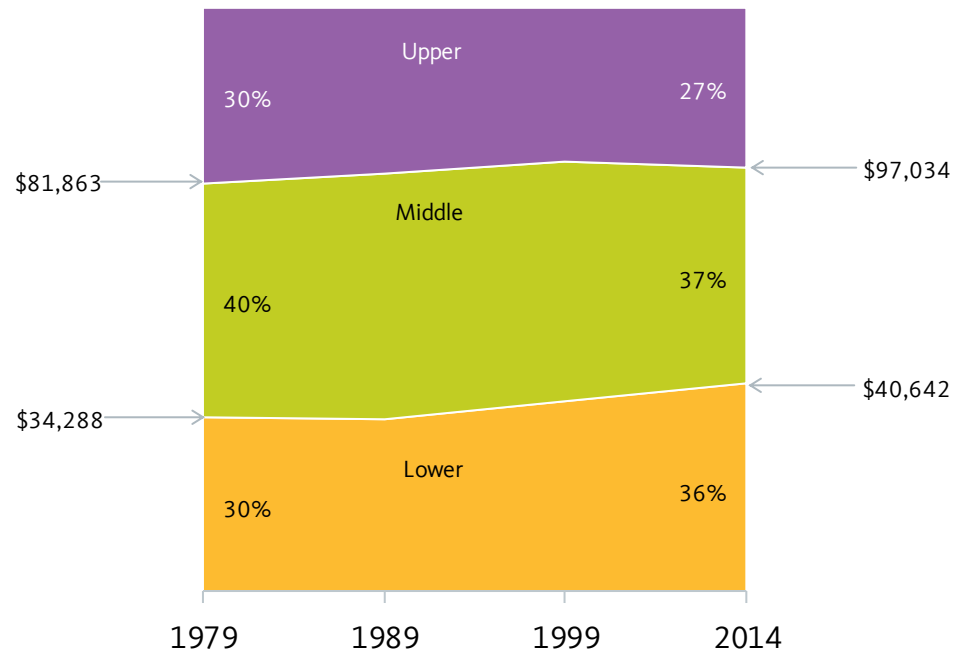


Inclusive growth

Is the middle class expanding?

The city's middle class has declined as a share of all households. Since 1979, the share of middle-income and upper-income households have each declined three percentage points. Meanwhile, the share of lower-income households has increased by six percentage points.

Households by Income Level,
1979 and 2014



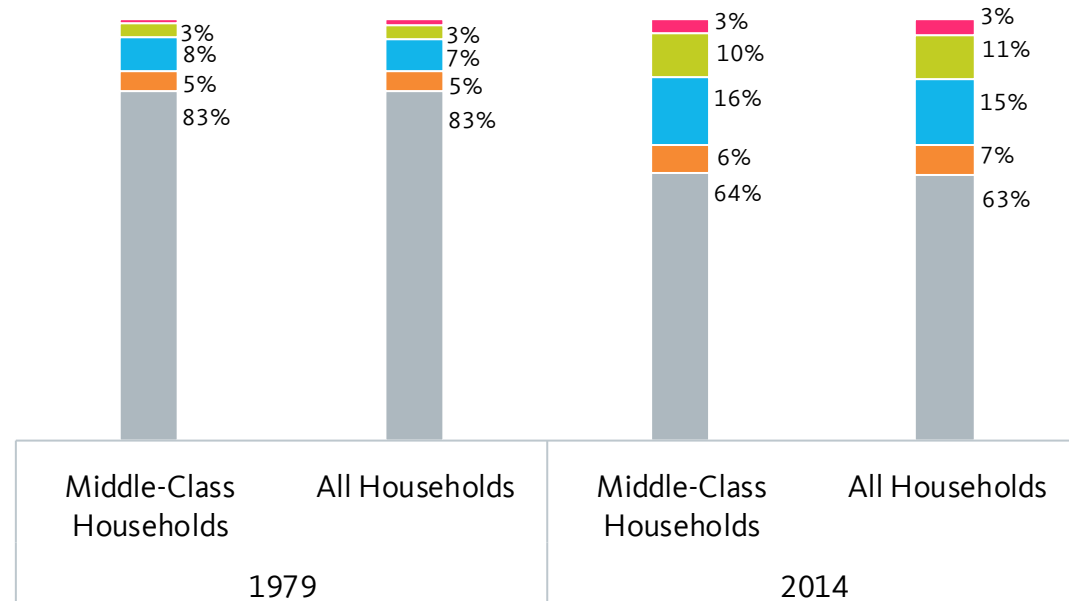
Inclusive growth

Is the middle class becoming more inclusive?

Though the share of middle-class households has declined, the middle class remains fairly representative of the population. Latinos make up 15 percent of all households in Sacramento and 16 percent of middle-class households. Whites make up 63 percent of all households and 64 percent of middle-class households.

Racial Composition of Middle-Class Households and All Households, 1979 and 2014

- Native American or Other
- Asian
- Latino
- Black
- White



Inclusive growth

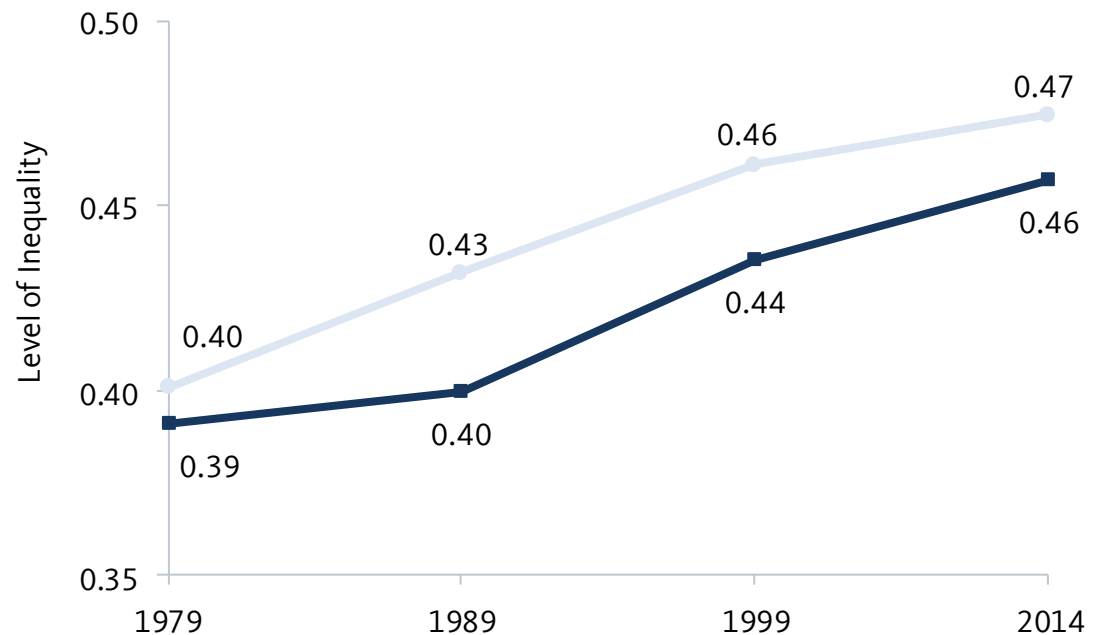
Is inequality low and decreasing?

Income inequality, as measured by the Gini coefficient, has increased each decade since 1979 in Sacramento. A growing body of research suggests that living in a community with high levels of income inequality is associated with lower life expectancy.

Income Inequality, 1979 to 2014

- Sacramento Metro Area
- United States

Inequality is measured here by the Gini coefficient for household income, which ranges from 0 (perfect equality) to 1 (perfect inequality: one household has all of the income).



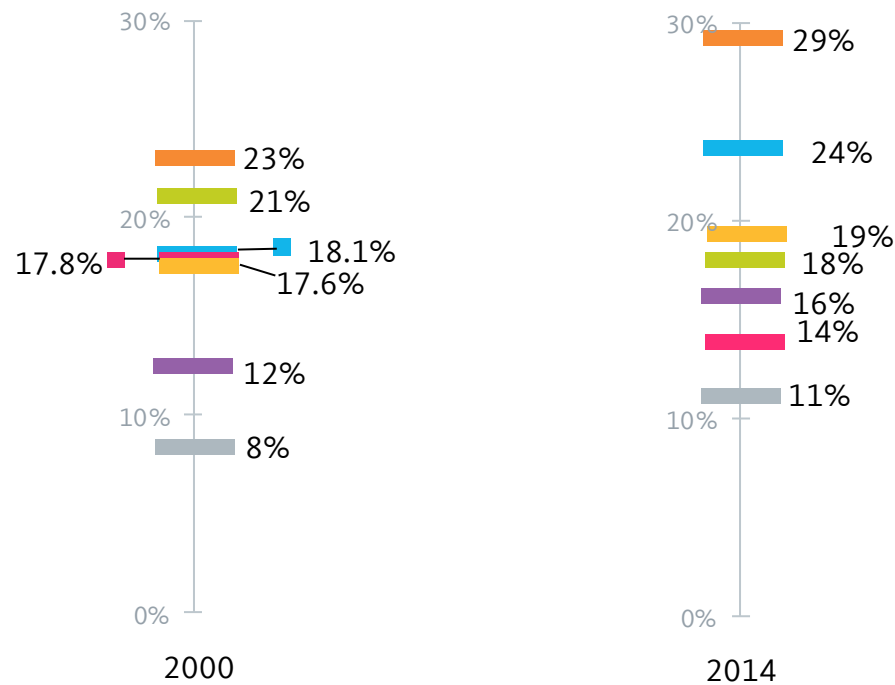
Economic security

Is poverty low and decreasing?

Poverty is on the rise in the region, although Black and Latino poverty is highest. The overall poverty rate is 16 percent but the Black poverty rate is 29 percent – nearly three times as high as that for the White population.

Poverty Rate by Race/Ethnicity, 2000 and 2014

- All
- White
- Black
- Latino
- Asian/Pacific Islander
- Native American
- Mixed/other

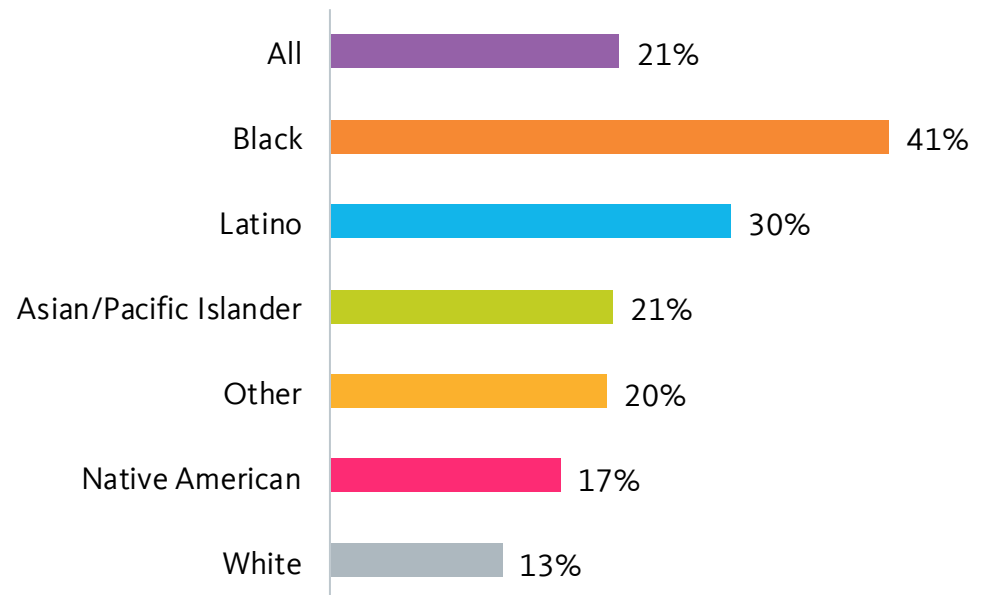


Economic security

Is poverty low and decreasing?

Children of color also have the highest poverty rates. More than one in five children in the region live in poverty. But, Black children are more than three times as likely as White children to grow up in poverty. A wealth of research finds that children who grow up in poverty are more likely to have serious health problems.

Child Poverty Rate by Race/Ethnicity, 2014



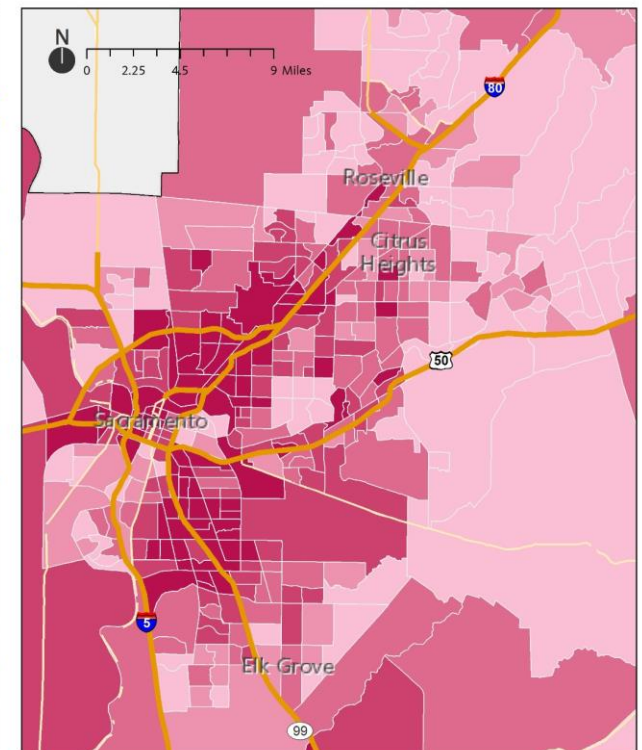
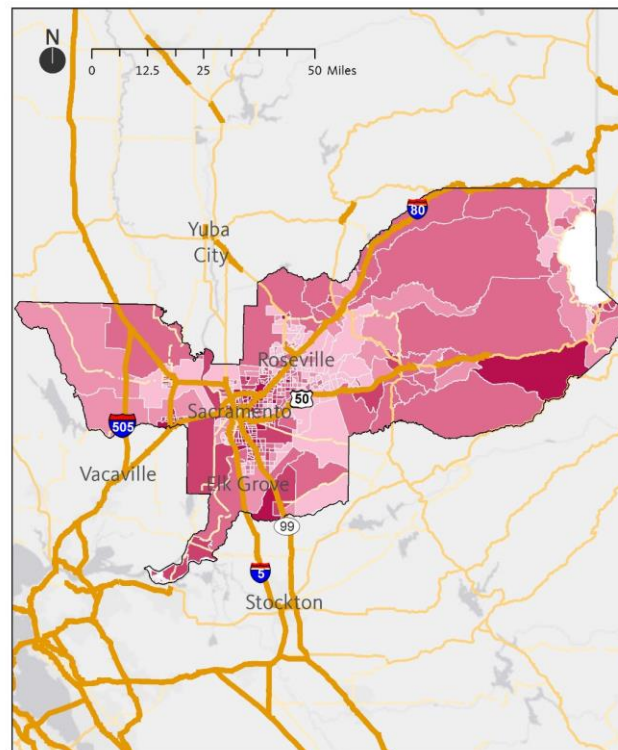
Economic security

Is poverty low and decreasing?

Poverty is growing in Sacramento and differences by neighborhood remain. Some low-poverty census tracts border high-poverty ones. A pocket of neighborhoods just east of the city of Sacramento have poverty rates less than 7 percent but are surrounded by areas with poverty rates exceeding 16 percent.

Percent Population Below the Poverty Level by Census Tract, 2014

- Less than 7%
- 7% to 10%
- 10% to 16%
- 16% to 25%
- 25% or more



Economic security

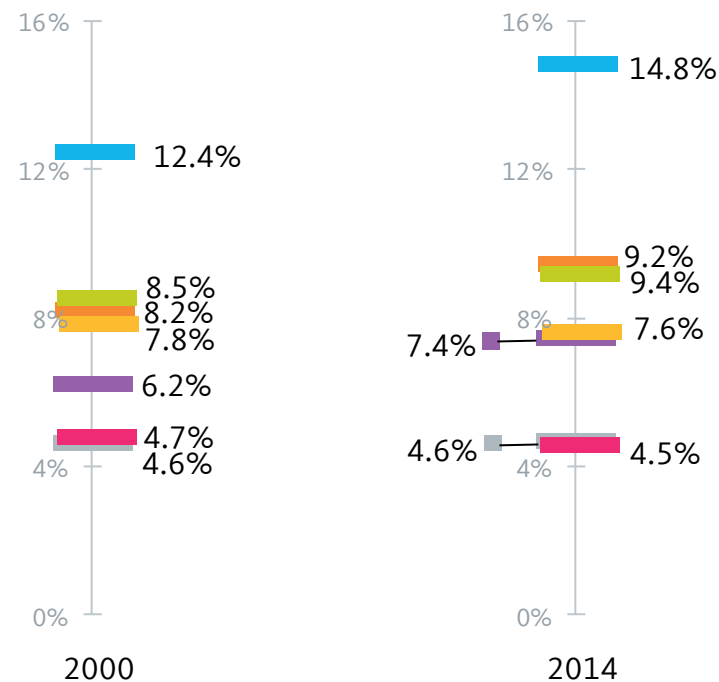
Is the share of working poor low and decreasing?

Rates of working poverty have increased for Black and Latino workers but remained stable among White workers.

The working-poor rate – defined as working full time with incomes below 200 percent of the federal poverty level – is highest among Latinos (15 percent) and Asians or Pacific Islanders and those of mixed/other races (9 percent).

Working-Poor Rate by Race/Ethnicity, 2000 and 2014

- All
- White
- Black
- Latino
- Asian/Pacific Islander
- Native American
- Mixed/other



Strong industries and occupations

Which industries are projected to grow?

The Sacramento metro area is projected to gain 168,700 jobs by 2022. Health care and social assistance is projected to add 32,800 jobs followed by trade, transportation, and utilities with 27,400 jobs.

Industry Employment Projections, 2012-2022

Industry	2012 Estimated Employment	2022 Projected Employment	Total 2012- 2022 Employment Change	Annual Avg. Percent Change	Total Percent Change
Health Care and Social Assistance	108,300	141,100	32,800	3%	30%
Trade, Transportation, and Utilities	138,800	166,200	27,400	2%	20%
Construction	38,400	59,200	20,800	5%	54%
Professional, Scientific and Technical Services	51,900	66,600	14,700	3%	28%
Accommodation and Food Services	69,800	84,500	14,700	2%	21%
Administrative and Support and Waste Management and Remediation Services	49,400	63,500	14,100	3%	29%
Government	221,500	235,200	13,700	1%	6%
Self Employment	60,800	68,800	8,000	1%	13%
Educational Services (Private)	13,000	17,800	4,800	4%	37%
Finance and Insurance	35,700	40,100	4,400	1%	12%
Other Services	28,500	32,600	4,100	1%	14%
Manufacturing	33,900	36,800	2,900	1%	9%
Arts, Entertainment, and Recreation	14,700	17,000	2,300	2%	16%
Real Estate and Rental and Leasing	12,400	14,600	2,200	2%	18%
Management of Companies and Enterprises	9,500	11,100	1,600	2%	17%
Total Farm	8,600	9,500	900	1%	10%
Private Household Workers	2,300	2,600	300	1%	13%
Mining and Logging	400	500	100	2.5%	25%
Unpaid Family Workers	700	700	0	0%	0%
Information	15,600	14,500	-1,100	-1%	-7%
Total Employment	914,200	1,082,900	168,700	2%	18%

Strong industries and occupations

Which occupations are projected to grow?

Roughly 18,270 jobs projected to be added by 2022 will be in office and administrative support services. Construction and extraction occupations and personal care and service occupations are also expected to grow by more than 17,000 jobs each.

Occupational Employment Projections, 2012-2022

Occupation	2012 Estimated Employment	2022 Projected Employment	Total 2012- 2022 Employment Change	Annual Avg. Percent Change	Total Percent Change
Office and Administrative Support Occupations	152,690	170,960	18,270	1%	12%
Construction and Extraction Occupations	38,320	56,060	17,740	5%	46%
Personal Care and Service Occupations	44,550	61,670	17,130	4%	38%
Food Preparation and Serving Related Occupations	73,760	89,240	15,480	2%	21%
Sales and Related Occupations	91,460	105,750	14,290	2%	16%
Business and Financial Operations Occupations	65,550	75,680	10,130	2%	15%
Healthcare Practitioners and Technical Occupations	46,230	56,330	10,100	2%	22%
Transportation and Material Moving Occupations	45,240	54,370	9,140	2%	20%
Management Occupations	59,760	68,540	8,780	1%	15%
Education, Training, and Library Occupations	57,910	64,110	6,200	1%	11%
Computer and Mathematical Occupations	30,020	36,200	6,180	2%	21%
Building and Grounds Cleaning and Maintenance Occupations	32,510	38,230	5,730	2%	18%
Installation, Maintenance, and Repair Occupations	27,820	33,370	5,550	2%	20%
Healthcare Support Occupations	21,130	26,110	4,980	2%	24%
Production Occupations	26,570	30,880	4,320	2%	16%
Life, Physical, and Social Science Occupations	17,050	20,000	2,950	2%	17%
Community and Social Service Occupations	15,680	18,380	2,700	2%	17%
Arts, Design, Entertainment, Sports, and Media Occupations	13,630	16,160	2,530	2%	19%
Architecture and Engineering Occupations	17,990	20,440	2,450	1%	14%
Protective Service Occupations	20,670	22,850	2,180	1%	11%
Legal Occupations	9,320	10,330	1,020	1%	11%
Farming, Fishing, and Forestry Occupations	6,510	7,210	690	1.1%	11%
Total, All Occupations	914,200	1,082,900	168,700	2%	19%

Source: State of California Employment Development Department, Labor Market Information Division.

Note: Industry detail may not add up to totals due to independent rounding and suppression.

Strong industries and occupations

What are the region’s strongest industries?

Understanding which industries are strong and competitive in the region is critical for developing effective strategies to attract and grow businesses. To identify strong industries in the region, 19 industry sectors were categorized according to an “**industry strength index**” that measures four characteristics: size, concentration, job quality, and growth. Each characteristic was given an equal weight (25 percent each) in determining the index value. “Growth” was an average of three indicators of growth (change in the number of jobs, percent change in the number of jobs, and real wage growth). These characteristics were examined over the last decade to provide a current picture of how the region’s economy is changing.

Given that the regional economy has experienced widespread employment decline in almost all industries, it is important to note that this index is only meant to provide general guidance on the strength of various industries. Its interpretation should be informed by examining all four metrics of size, concentration, job quality, and growth.

Industry strength index =

Size (2015)	+ Concentration (2015)	+ Job quality (2015)	+ Growth (2005-2015)
Total Employment The total number of jobs in a particular industry.	Location Quotient A measure of employment concentration calculated by dividing the share of employment for a particular industry in the region by its share nationwide. A score > 1 indicates higher-than-average concentration.	Average Annual Wage The estimated total annual wages of an industry divided by its estimated total employment.	Change in the number of jobs
			Percent change in the number of jobs
			Real wage growth

Note: This industry strength index is only meant to provide general guidance on the strength of various industries in the region, and its interpretation should be informed by an examination of individual metrics used in its calculation, which are presented in the table on the next page. Each indicator was normalized as a cross-industry z-score before taking a weighted average to derive the index.

Strong industries and occupations

What are the region's strongest industries?

The health care and social assistance industry is one of the strongest in the region – adding nearly 49,000 jobs from 2005 to 2015 with an average annual wage of more than \$55,000.

Strong Industries Analysis, 2015

Industry	Size	Concentration	Job Quality	Growth			Industry Strength Index
	Total employment	Location Quotient	Average annual wage	Change in employment	% Change in employment	Real wage growth	
	(2015)	(2015)	(2015)	(2005 to 2015)	(2005 to 2015)	(2005 to 2015)	
Health Care and Social Assistance	124,512	1.0	\$55,274	48,552	64%	0%	88.6
Utilities	3,180	0.9	\$111,312	912	40%	25%	62.9
Professional, Scientific, and Technical Services	52,642	0.9	\$85,582	6,727	15%	22%	55.6
Finance and Insurance	36,849	1.0	\$82,375	-10,029	-21%	13%	18.1
Management of Companies and Enterprises	11,842	0.8	\$82,654	2,023	21%	8%	11.1
Administrative and Support and Waste Management and Remediation Services	55,740	1.0	\$37,338	7,777	16%	14%	3.4
Construction	49,622	1.2	\$59,262	-23,395	-32%	9%	-1.1
Agriculture, Forestry, Fishing and Hunting	9,375	1.1	\$33,111	1,779	23%	19%	-6.3
Accommodation and Food Services	79,682	0.9	\$18,442	10,317	15%	4%	-14.6
Retail Trade	96,928	0.9	\$31,848	-1,613	-2%	-7%	-15.2
Arts, Entertainment, and Recreation	14,874	1.0	\$28,560	1,602	12%	10%	-27.6
Other Services (except Public Administration)	27,921	1.0	\$38,514	-9,571	-26%	16%	-30.2
Wholesale Trade	24,134	0.6	\$62,371	-2,878	-11%	6%	-34.4
Information	12,580	0.7	\$70,979	-7,083	-36%	7%	-35.1
Manufacturing	36,127	0.4	\$75,268	-12,672	-26%	2%	-43.2
Education Services	11,585	0.6	\$36,946	382	3%	21%	-43.5
Real Estate and Rental and Leasing	13,666	1.0	\$46,344	-2,796	-17%	-9%	-43.9
Transportation and Warehousing	20,878	0.7	\$45,275	602	3%	-1%	-48.0
Mining	486	0.1	\$79,160	-94	-16%	6%	-67.7

Sources: U.S. Bureau of Labor Statistics; Woods & Poole Economics, Inc. Universe includes all private sector jobs covered by the federal Unemployment Insurance (UI) program.

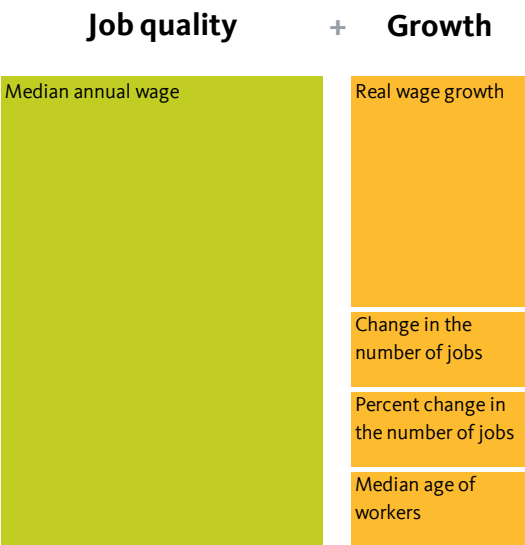
Note: Dollar values are in 2015 dollars.

Strong industries and occupations

What are the region’s strongest occupations?

Understanding which occupations are strong and competitive in the region can help leaders develop strategies to connect and prepare workers for good jobs. To identify “high-opportunity” occupations in the region, we first developed an **“occupation opportunity index”** based on measures of job quality and growth, including median annual wage, real wage growth, job growth (in number and share), and median age of workers. A high median age of workers indicates that there will be replacement job openings as older workers retire.

Occupation opportunity index =



Strong industries and occupations

What are the region's strongest occupations?

Health diagnosing and treating practitioners is one of the highest opportunity occupations with an average annual wage above \$100,000. Supervisors of protective service workers have seen considerable wage growth although overall employment numbers are fairly low.

Strong Occupations Analysis, 2011

Occupation	Employment	Job Quality	Growth				Occupation Opportunity Index
	(2011)	Median Annual Wage (2011)	Real Wage Growth (2011)	Change in Employment (2005-11)	% Change in Employment (2005-11)	Median Age (2010)	
Health Diagnosing and Treating Practitioners	25,360	\$111,108	24%	3,570	16%	46	2.11
Lawyers, Judges, and Related Workers	5,530	\$114,531	2%	310	6%	46	1.82
Supervisors of Protective Service Workers	1,040	\$79,826	42%	740	247%	45	1.75
Top Executives	14,770	\$106,472	-3%	-100	-1%	47	1.53
Other Management Occupations	14,020	\$95,213	19%	-540	-4%	46	1.52
Engineers	9,520	\$98,132	15%	-310	-3%	43	1.51
Operations Specialties Managers	10,490	\$95,417	2%	1,970	23%	45	1.35
Plant and System Operators	1,800	\$71,339	24%	1,110	161%	45	1.17
Advertising, Marketing, Promotions, Public Relations, and Sales Managers	3,800	\$92,056	-5%	-420	-10%	41	1.03
Computer Occupations	27,130	\$79,961	7%	3,650	16%	42	0.99
Life Scientists	2,270	\$80,774	8%	630	38%	41	0.99
Other Healthcare Practitioners and Technical Occupations	1,860	\$75,873	N/A	N/A	N/A	40	0.97
Architects, Surveyors, and Cartographers	1,680	\$81,026	3%	80	5%	44	0.90
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	5,110	\$52,126	43%	3,160	162%	38	0.88
Law Enforcement Workers	2,520	\$74,170	23%	-3,310	-57%	41	0.84
Physical Scientists	3,860	\$78,367	2%	1,090	39%	40	0.83
Social Scientists and Related Workers	2,390	\$75,071	8%	-790	-25%	46	0.78
Mathematical Science Occupations	1,610	\$71,716	0%	130	9%	45	0.62
Supervisors of Construction and Extraction Workers	3,010	\$74,920	-1%	-1,960	-39%	43	0.57
Supervisors of Installation, Maintenance, and Repair Workers	2,010	\$66,260	8%	-570	-22%	46	0.55
Postsecondary Teachers	4,860	\$75,481	-5%	-1,980	-29%	39	0.51
Business Operations Specialists	35,420	\$64,549	6%	-460	-1%	43	0.47
Sales Representatives, Wholesale and Manufacturing	6,170	\$63,088	10%	-2,850	-32%	44	0.43
Drafters, Engineering Technicians, and Mapping Technicians	4,570	\$60,783	10%	-40	-1%	42	0.42
Health Technologists and Technicians	15,100	\$58,437	7%	3,570	31%	38	0.37
Preschool, Primary, Secondary, and Special Education School Teachers	26,680	\$59,301	6%	1,060	4%	44	0.37
Librarians, Curators, and Archivists	1,510	\$55,928	9%	220	17%	48	0.36
Supervisors of Office and Administrative Support Workers	14,470	\$60,640	2%	-820	-5%	46	0.33

Sources: U.S. Bureau of Labor Statistics; Integrated Public Use Microdata Series. Universe includes all nonfarm wage and salary jobs.

Note: Dollar values are in 2011 dollars. "N/A" indicates that data is not available.

Strong industries and occupations

What are the region's high-opportunity occupations?

Once the occupation opportunity index score was calculated for each occupation, occupations were sorted into three categories (high, middle, and low opportunity). The average index score is zero, so an occupation with a positive value has an above-average score while a negative value represents a below-average score.

Because education level plays such a large role in determining access to jobs, we present the occupational analysis for each of three educational attainment levels: workers with a high school degree or less, workers with more than a high-school degree but less than a bachelor's degree, and workers with a bachelor's or higher.

All jobs (2011)

High-opportunity
(28 occupations)

Middle-opportunity
(30 occupations)

Low-opportunity
(20 occupations)

Strong industries and occupations

What are the region's high-opportunity occupations?

Supervisors of construction and extraction workers are the only high-opportunity jobs for workers with a high school diploma or less.

Occupation Opportunity Index:
Occupations by Opportunity Level
for Workers with a High School
Diploma or Less

Occupation	Employment	Job Quality	Growth				Occupation Opportunity Index
	(2011)	Median Annual Wage (2011)	Real Wage Growth (2011)	Change in Employment (2005-11)	% Change in Employment (2005-11)	Median Age (2010)	
High-Opportunity							
Supervisors of Construction and Extraction Workers	3,010	\$74,920	-1.2%	-1,960	-39.4%	43	0.57
Middle-Opportunity							
Supervisors of Production Workers	1,610	\$56,020	6.3%	-540	-25.1%	45	0.23
Supervisors of Transportation and Material Moving Workers	2,250	\$49,868	-7.5%	30	1.4%	47	-0.07
Other Installation, Maintenance, and Repair Occupations	11,050	\$44,344	4.5%	-880	-7.4%	41	-0.13
Other Construction and Related Workers	1,740	\$47,357	-6.0%	-430	-19.8%	44	-0.18
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	7,570	\$43,946	4.2%	-2,440	-24.4%	41	-0.20
Supervisors of Building and Grounds Cleaning and Maintenance Workers	1,680	\$42,088	1.3%	30	1.8%	41	-0.22
Printing Workers	1,170	\$39,220	2.4%	-220	-15.8%	44	-0.27
Metal Workers and Plastic Workers	2,920	\$37,359	3.2%	-1,310	-31.0%	42	-0.37
Motor Vehicle Operators	17,170	\$34,478	0.0%	-740	-4.1%	43	-0.44
Nursing, Psychiatric, and Home Health Aides	8,510	\$28,928	5.2%	160	1.9%	43	-0.49
Material Recording, Scheduling, Dispatching, and Distributing Workers	23,980	\$32,681	0.9%	-990	-4.0%	39	-0.52
Textile, Apparel, and Furnishings Workers	1,620	\$23,631	7.2%	-140	-8.0%	45	-0.60
Building Cleaning and Pest Control Workers	16,450	\$24,150	2.5%	1,020	6.6%	44	-0.63
Low-Opportunity							
Construction Trades Workers	22,720	\$47,923	-0.9%	-26,540	-53.9%	37	-0.65
Supervisors of Food Preparation and Serving Workers	6,260	\$29,097	-2.8%	1,010	19.2%	34	-0.66
Grounds Maintenance Workers	6,130	\$25,568	9.6%	-2,080	-25.3%	35	-0.67
Other Personal Care and Service Workers	10,580	\$24,941	-2.7%	1,740	19.7%	41	-0.69
Material Moving Workers	21,170	\$26,940	6.3%	-2,250	-9.6%	33	-0.69
Other Protective Service Workers	8,520	\$25,126	1.8%	-140	-1.6%	38	-0.71
Food Processing Workers	2,460	\$31,273	-10.1%	-540	-18.0%	40	-0.72
Other Production Occupations	6,300	\$28,763	-1.7%	-3,430	-35.3%	40	-0.74
Personal Appearance Workers	2,460	\$21,625	-1.5%	530	27.5%	41	-0.77
Woodworkers	970	\$27,514	-5.7%	-1,240	-56.1%	42	-0.80
Assemblers and Fabricators	4,220	\$26,150	-11.5%	-1,180	-21.9%	42	-0.87
Animal Care and Service Workers	1,060	\$19,346	-9.1%	420	65.6%	33	-0.98
Cooks and Food Preparation Workers	19,980	\$20,664	-5.3%	910	4.8%	30	-0.99
Retail Sales Workers	49,320	\$22,487	0.1%	-5,100	-9.4%	27	-1.01
Agricultural Workers	2,430	\$19,521	-9.5%	-480	-16.5%	40	-1.03
Food and Beverage Serving Workers	35,030	\$18,789	-2.0%	590	1.7%	25	-1.05
Other Food Preparation and Serving Related Workers	8,850	\$18,703	-1.3%	-360	-3.9%	23	-1.08
Other Transportation Workers	1,880	\$24,263	-23.9%	-210	-10.0%	33	-1.17

Source: U.S. Bureau of Labor Statistics; Integrated Public Use Microdata Series. Universe includes all nonfarm wage and salary jobs for which the typical worker is estimated to have a high school diploma or less.

Note: Dollar values are in 2011 dollars.

Strong industries and occupations

What are the region's high-opportunity occupations?

Supervisors of protective service workers; plant and system operators; and electric and electrical equipment mechanics, installers, and repairers are high-opportunity jobs for workers with more than a high school diploma but less than a bachelor's degree.

Occupation Opportunity Index: Occupations by Opportunity Level for Workers with More Than a High School Diploma but Less Than a Bachelor's Degree

		Employment	Job Quality Median Annual Wage	Growth				Occupation Opportunity Index
				Real Wage Growth	Change in Employment	% Change in Employment	Median Age	
Occupation		(2011)	(2011)	(2011)	(2005-11)	(2005-11)	(2010)	
High-Opportunity	Supervisors of Protective Service Workers	1,040	\$79,826	42.0%	740	246.7%	45	1.75
	Plant and System Operators	1,800	\$71,339	24.4%	1,110	160.9%	45	1.17
	Electrical and Electronic Equipment Mechanics, Installers, and Repairers	5,110	\$52,126	42.7%	3,160	162.1%	38	0.88
	Law Enforcement Workers	2,520	\$74,170	22.6%	-3,310	-56.8%	41	0.84
	Supervisors of Installation, Maintenance, and Repair Workers	2,010	\$66,260	7.8%	-570	-22.1%	46	0.55
	Drafters, Engineering Technicians, and Mapping Technicians	4,570	\$60,783	9.7%	-40	-0.9%	42	0.42
	Health Technologists and Technicians	15,100	\$58,437	6.8%	3,570	31.0%	38	0.37
	Supervisors of Office and Administrative Support Workers	14,470	\$60,640	2.2%	-820	-5.4%	46	0.33
Middle-Opportunity	Legal Support Workers	2,620	\$57,652	0.9%	120	4.8%	41	0.21
	Other Education, Training, and Library Occupations	12,730	\$36,201	14.3%	130	1.0%	42	-0.18
	Secretaries and Administrative Assistants	23,630	\$40,773	-2.8%	940	4.1%	45	-0.25
	Supervisors of Sales Workers	8,960	\$41,155	-10.9%	720	8.7%	42	-0.39
	Life, Physical, and Social Science Technicians	2,310	\$39,432	0.5%	320	16.1%	30	-0.39
	Financial Clerks	20,680	\$37,116	-0.4%	-2,540	-10.9%	44	-0.40
	Other Healthcare Support Occupations	10,530	\$33,480	1.4%	1,490	16.5%	35	-0.47
	Information and Record Clerks	33,070	\$34,668	0.0%	-1,950	-5.6%	33	-0.56
Low-Opportunity	Other Office and Administrative Support Workers	38,890	\$33,124	-1.2%	-7,050	-15.3%	40	-0.65
	Entertainment Attendants and Related Workers	3,990	\$19,048	-2.2%	470	13.4%	30	-0.98

Sources: U.S. Bureau of Labor Statistics; Integrated Public Use Microdata Series. Universe includes all nonfarm wage and salary jobs for which the typical worker is estimated to have more than a high school diploma but less than a BA.
Note: Dollar values are in 2011 dollars.

Strong industries and occupations

What are the region's high-opportunity occupations?

Health diagnosing and treating practitioners, lawyers and judges, top executives, and other management occupations are high-opportunity occupations for workers with a bachelor's degree or higher.

Occupation Opportunity Index: Occupations by Opportunity Level for Workers with a Bachelor's Degree or Higher

		Employment	Job Quality Median Annual Wage	Growth				Occupation Opportunity Index
				Real Wage Growth	Change in Employment	% Change in Employment	Median Age	
High- Opportunity	Occupation	(2011)	(2011)	(2011)	(2005-11)	(2005-11)	(2010)	
	Health Diagnosing and Treating Practitioners	25,360	\$111,108	23.6%	3,570	16.4%	46	2.11
	Lawyers, Judges, and Related Workers	5,530	\$114,531	1.7%	310	5.9%	46	1.82
	Top Executives	14,770	\$106,472	-2.6%	-100	-0.7%	47	1.53
	Other Management Occupations	14,020	\$95,213	19.3%	-540	-3.7%	46	1.52
	Engineers	9,520	\$98,132	15.1%	-310	-3.2%	43	1.51
	Operations Specialties Managers	10,490	\$95,417	2.5%	1,970	23.1%	45	1.35
	Advertising, Marketing, Promotions, Public Relations, and Sales Managers	3,800	\$92,056	-5.0%	-420	-10.0%	41	1.03
	Computer Occupations	27,130	\$79,961	7.2%	3,650	15.5%	42	0.99
	Life Scientists	2,270	\$80,774	7.9%	630	38.4%	41	0.99
	Other Healthcare Practitioners and Technical Occupations	1,860	\$75,873	N/A	N/A	N/A	40	0.97
	Architects, Surveyors, and Cartographers	1,680	\$81,026	3.3%	80	5.0%	44	0.90
	Physical Scientists	3,860	\$78,367	1.9%	1,090	39.4%	40	0.83
	Social Scientists and Related Workers	2,390	\$75,071	8.1%	-790	-24.8%	46	0.78
	Mathematical Science Occupations	1,610	\$71,716	0.0%	130	8.8%	45	0.62
	Postsecondary Teachers	4,860	\$75,481	-4.5%	-1,980	-28.9%	39	0.51
	Business Operations Specialists	35,420	\$64,549	6.2%	-460	-1.3%	43	0.47
	Middle- Opportunity	Sales Representatives, Wholesale and Manufacturing	6,170	\$63,088	10.3%	-2,850	-31.6%	44
Preschool, Primary, Secondary, and Special Education School Teachers		26,680	\$59,301	5.7%	1,060	4.1%	44	0.37
Librarians, Curators, and Archivists		1,510	\$55,928	8.6%	220	17.1%	48	0.36
Financial Specialists		20,650	\$62,437	-3.0%	1,510	7.9%	43	0.33
Media and Communication Workers		3,530	\$58,350	1.7%	-500	-12.4%	43	0.23
Art and Design Workers		1,670	\$45,768	5.2%	-730	-30.4%	41	-0.11
Media and Communication Equipment Workers		1,010	\$37,403	9.5%	210	26.3%	39	-0.21
Sales Representatives, Services		7,370	\$53,831	-14.3%	-3,410	-31.6%	42	-0.21
Counselors, Social Workers, and Other Community and Social Service		11,420	\$46,844	-7.0%	-1,170	-9.3%	39	-0.26
Entertainers and Performers, Sports and Related Workers		2,270	\$32,690	21.6%	-840	-27.0%	34	-0.30
Other Sales and Related Workers	5,290	\$40,038	-10.4%	-1,000	-15.9%	46	-0.43	
Other Teachers and Instructors	6,290	\$40,429	-18.2%	850	15.6%	40	-0.52	

Sources: U.S. Bureau of Labor Statistics; Integrated Public Use Microdata Series. Universe includes all nonfarm wage and salary jobs for which the typical worker is estimated to have a BA degree or higher.

Note: Dollar values are in 2011 dollars. "N/A" indicates that data is not available.

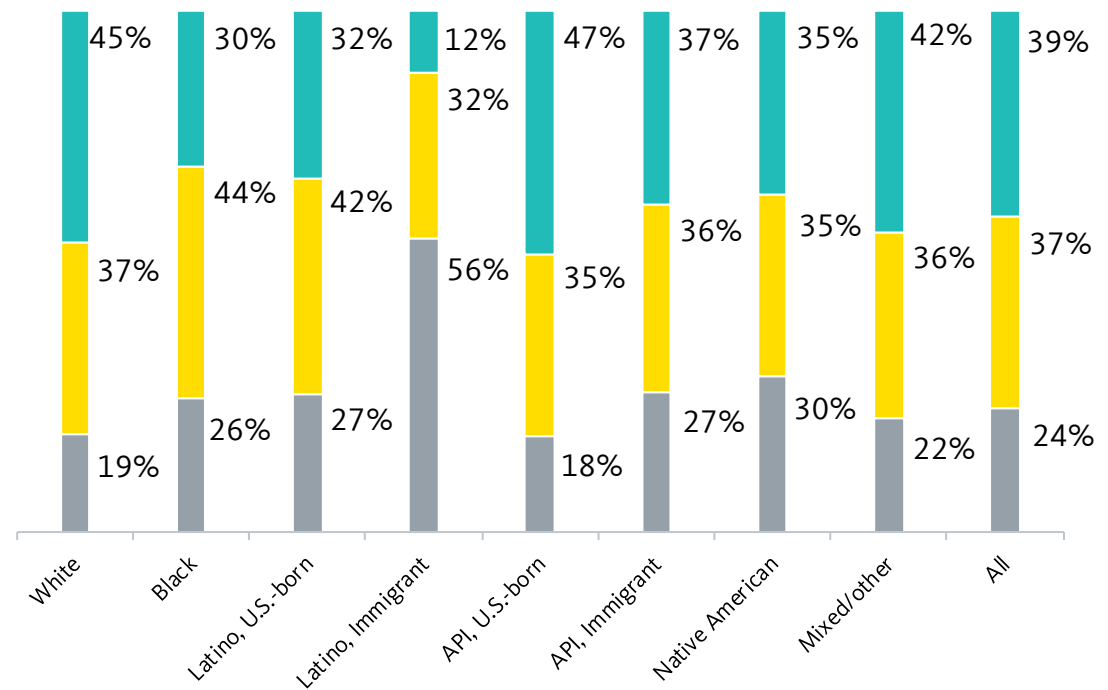
Strong industries and occupations

Is race/ethnicity a barrier to economic success?

Examining access to high-opportunity jobs by race/ethnicity, we find that White workers and U.S.-born Asian or Pacific Islander workers are most likely to be employed in high-opportunity occupations. Latino immigrant workers are most likely to be in low-opportunity occupations.

Opportunity Ranking of Occupations by Race/Ethnicity and Nativity, All Workers

- High Opportunity
- Middle Opportunity
- Low Opportunity



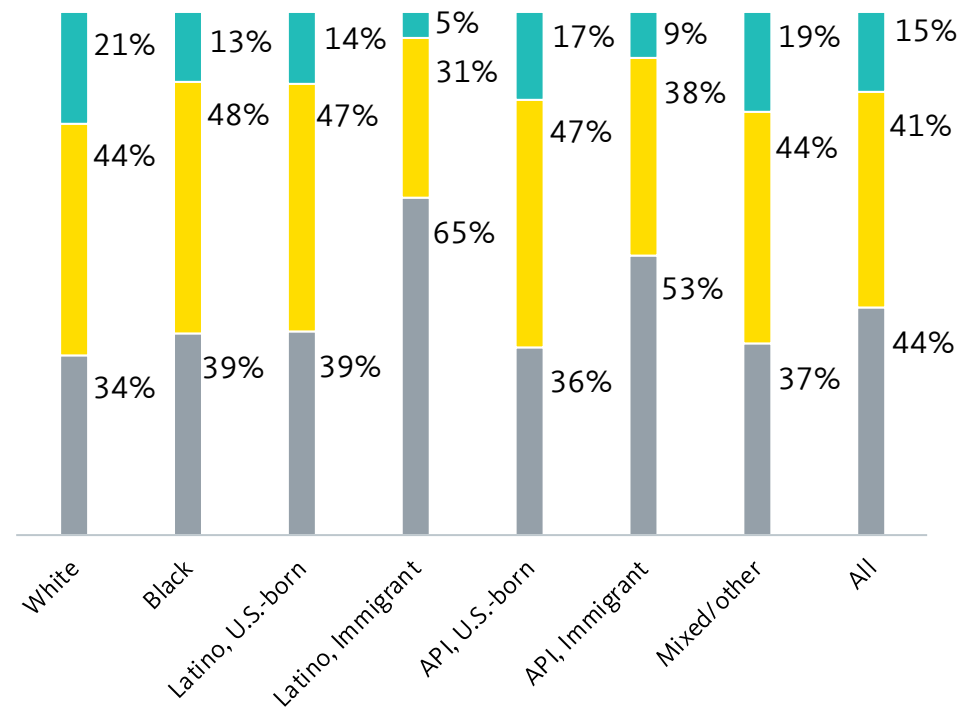
Strong industries and occupations

Is race/ethnicity a barrier to economic success?

Among workers with a high school degree or less, White workers are most likely to be in high-opportunity occupation jobs while immigrant Latino and API workers are the most likely to be in low-opportunity jobs.

Opportunity Ranking of Occupations by Race/Ethnicity and Nativity, Workers with Low Educational Attainment

- High Opportunity
- Middle Opportunity
- Low Opportunity

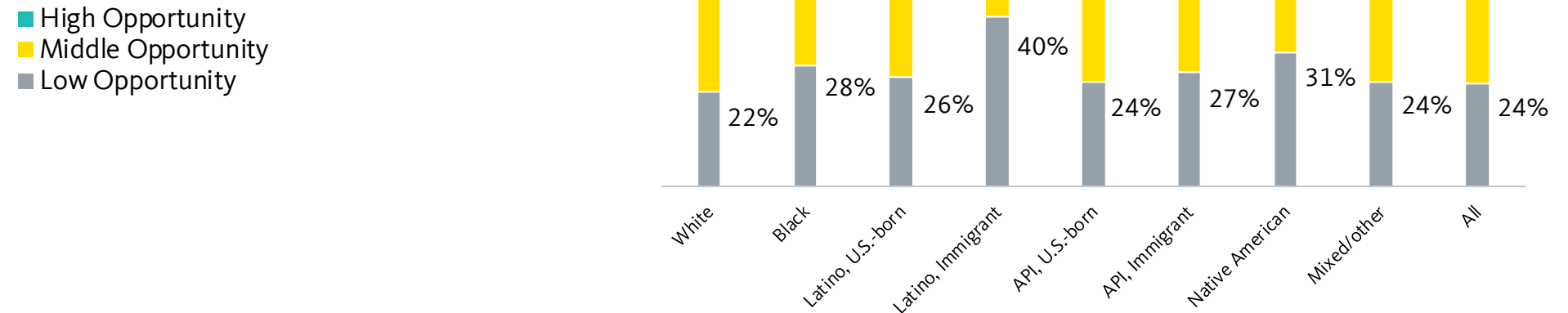


Strong industries and occupations

Is race/ethnicity a barrier to economic success?

Differences in job opportunity are generally smaller for workers with middle education levels. White workers are still most likely to be found in high-opportunity jobs. Asian or Pacific Islander immigrant and Black workers are most likely to be in middle-opportunity jobs. Nearly two in five Latino immigrant workers are in low-opportunity jobs.

Opportunity Ranking of Occupations by Race/Ethnicity and Nativity, Workers with Middle Educational Attainment



Strong industries and occupations

Is race/ethnicity a barrier to economic success?

Differences in access to high-opportunity jobs tend to decrease even more for workers with college degrees, although gaps across groups remain. Among the most educated workers, Latino immigrant workers are the least likely to be in high-opportunity jobs and are most likely to be in low-opportunity jobs.

Opportunity Ranking of Occupations by Race/Ethnicity and Nativity, Workers with High Educational Attainment



Readiness

Highlights

How prepared are the region's residents for the 21st century economy?

- A skills and education gap is looming, particularly for Latinos, African Americans, and Native Americans, whose rates of postsecondary education (having at least an associate's degree) are much lower than the share of future jobs that will require that level of education.
- Despite some progress since 2000, Latino young people were almost twice as likely as White and Asian or Pacific Islander youth to be without a high school degree and not in pursuit of one in 2014.
- The average Black resident of Sacramento has more exposure to air pollution than 90 percent of census tracts in the United States. Black adults also have the highest rate of asthma.

Percent of Latinos with an associate's degree or higher:

23%

Number of youth who are disconnected:

41,800

Share of Black adults with asthma:

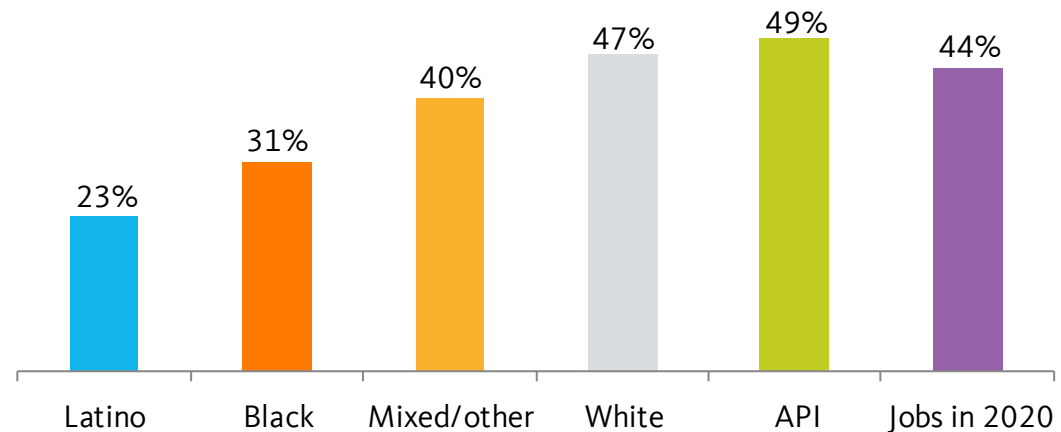
15%

Skilled workforce

Does the workforce have the skills for the jobs of the future?

The education levels of the region's population are not keeping up with employers' educational demands. By 2020, an estimated 44 percent of California jobs will require at least an associate's degree. Only 23 percent of Latinos have that level of education now.

Share of Working-Age Population with an Associate's Degree or Higher by Race/Ethnicity and Nativity, 2014, and Projected Share of Jobs that Require an Associate's Degree or Higher, 2020

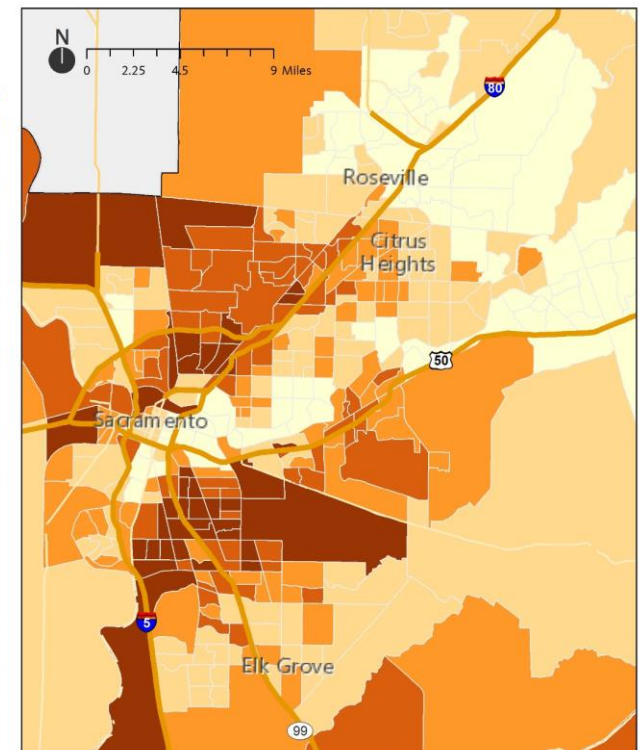
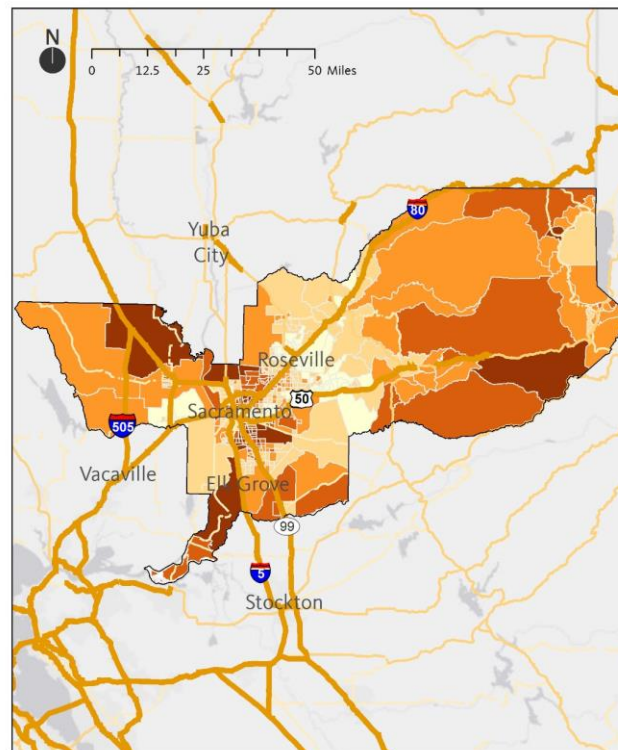
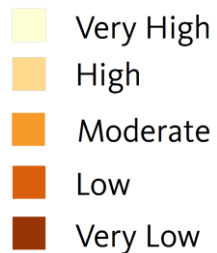


Youth preparedness

Do all children have access to opportunity?

The highest levels of opportunities for children are concentrated near downtown Sacramento, north Roseville, and the city of Rocklin. The areas ranked lowest on the child opportunity index include unincorporated communities and neighborhoods in all four counties.

Composite Child Opportunity Index by Census Tract



Sources: The diversitydatakids.org and the Kirwan Institute for the Study of Race and Ethnicity; TomTom, ESRI, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community.

Note: The Child Opportunity Index is a composite of indicators across three domains: educational opportunity, health and environmental opportunity, and social and economic opportunity. The vintage of the underlying indicator data varies, ranging from years 2007 through 2013. The map was created by ranking the census tract level Overall Child Opportunity Index Score into quintiles for the region.

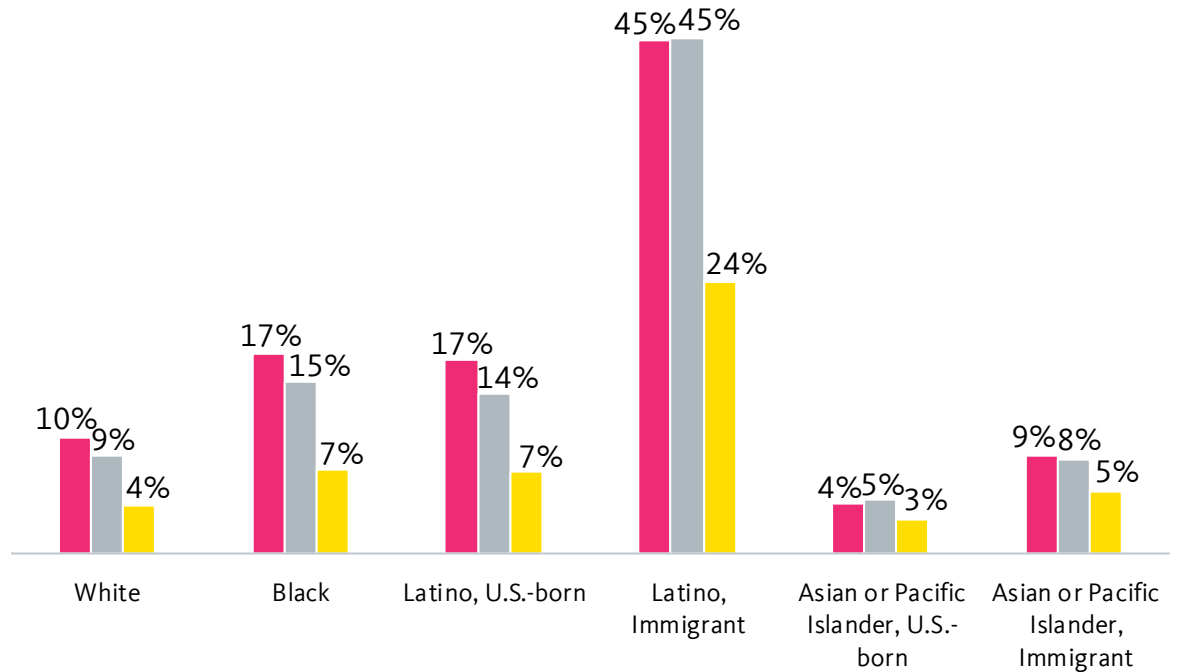
Youth preparedness

Are youth ready to enter the workforce?

More of Sacramento's youth are getting high school diplomas, but racial gaps remain. Despite improvements since 2000, Black and Latino youth were more likely than White and Asian or Pacific Islander youth to be without a high school diploma and not in pursuit of one in 2014.

Share of 16- to 24-Year-Olds
Not Enrolled in School and
without a High School
Diploma by Race/Ethnicity and
Nativity, 1990 to 2014

■ 1990
■ 2000
■ 2014



Source: Integrated Public Use Microdata Series.

Note: Data for 2014 represent a 2010 through 2014 average. Data for some racial/ethnic groups in some years are excluded due to small sample size.

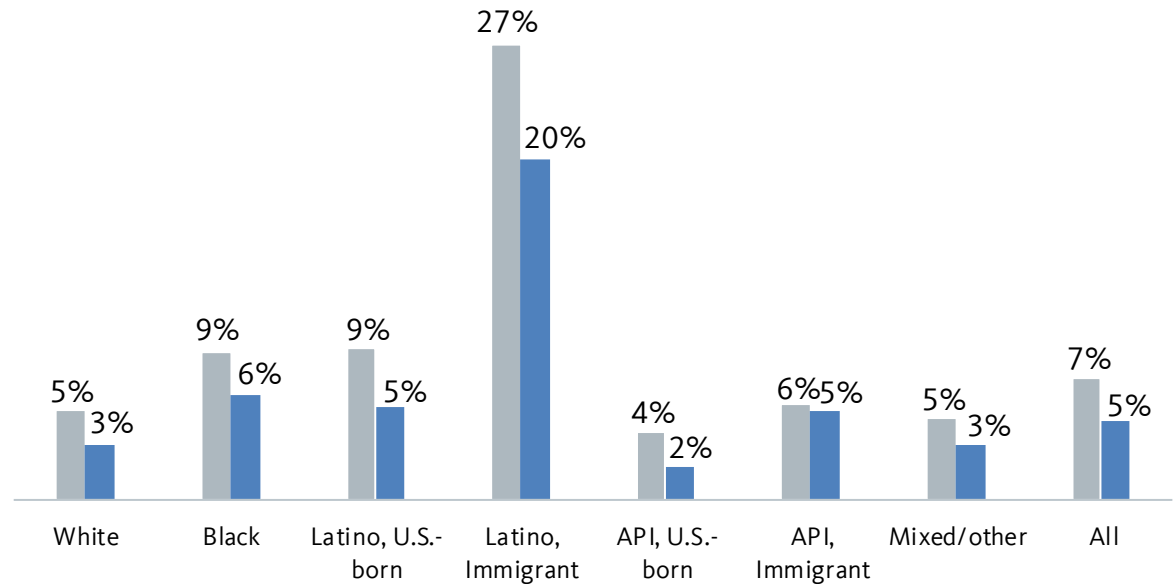
Youth preparedness

Are youth ready to enter the workforce?

Young women are less likely than men to drop out of high school across all races/ethnicities. Young Latina immigrant women are the most likely among the female population to have been pushed out of school and young Latino immigrant men are the most likely among the male population.

Share of 16- to 24-Year-Olds
Not Enrolled in School and
without a High School
Diploma by Race/Ethnicity,
Nativity, and Gender, 2014

■ Male
■ Female



Source: Integrated Public Use Microdata Series.

Note: Data represent a 2010 through 2014 average. Data for some racial/ethnic groups in some years are excluded due to small sample size

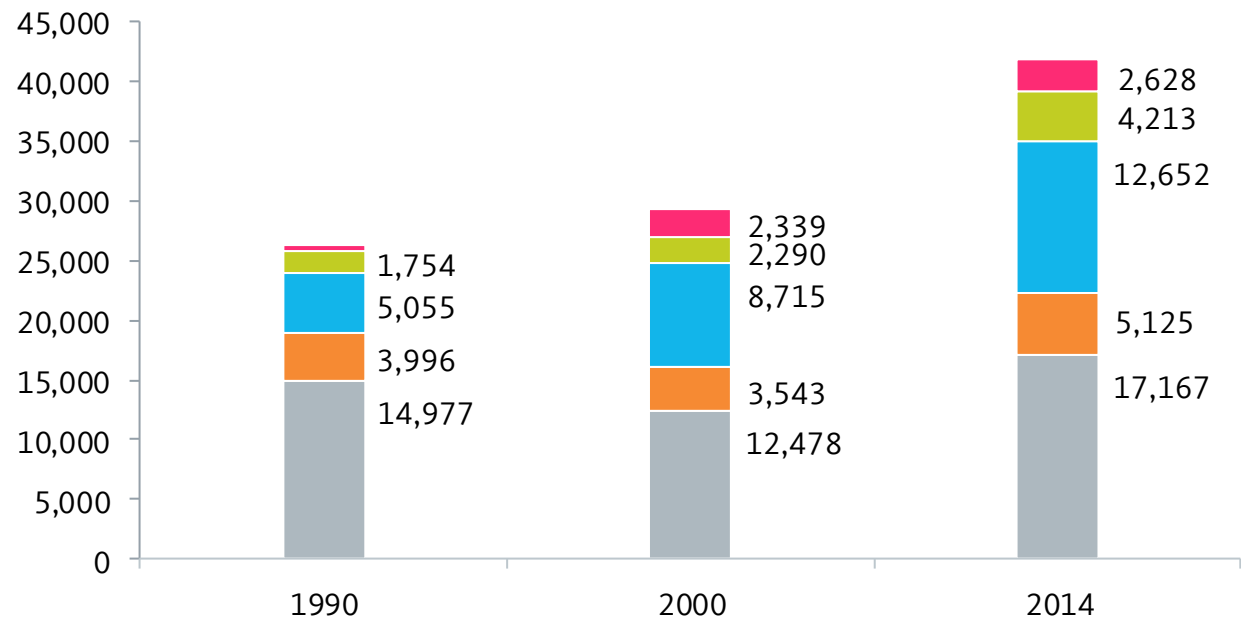
Youth preparedness

Are youth ready to enter the workforce?

The number of disconnected youth has increased in each decade since 1990, and youth of color are disproportionately disconnected. Of the nearly 41,800 disconnected youth, 30 percent are Latino. Youth of color make up 59 percent of disconnected youth, but 55 percent of all youth.

Disconnected Youth: 16- to 24-Year-Olds Not in School or Work by Race/Ethnicity, 1990 to 2014

- Native American or Other
- Asian/Pacific Islander
- Latino
- Black
- White



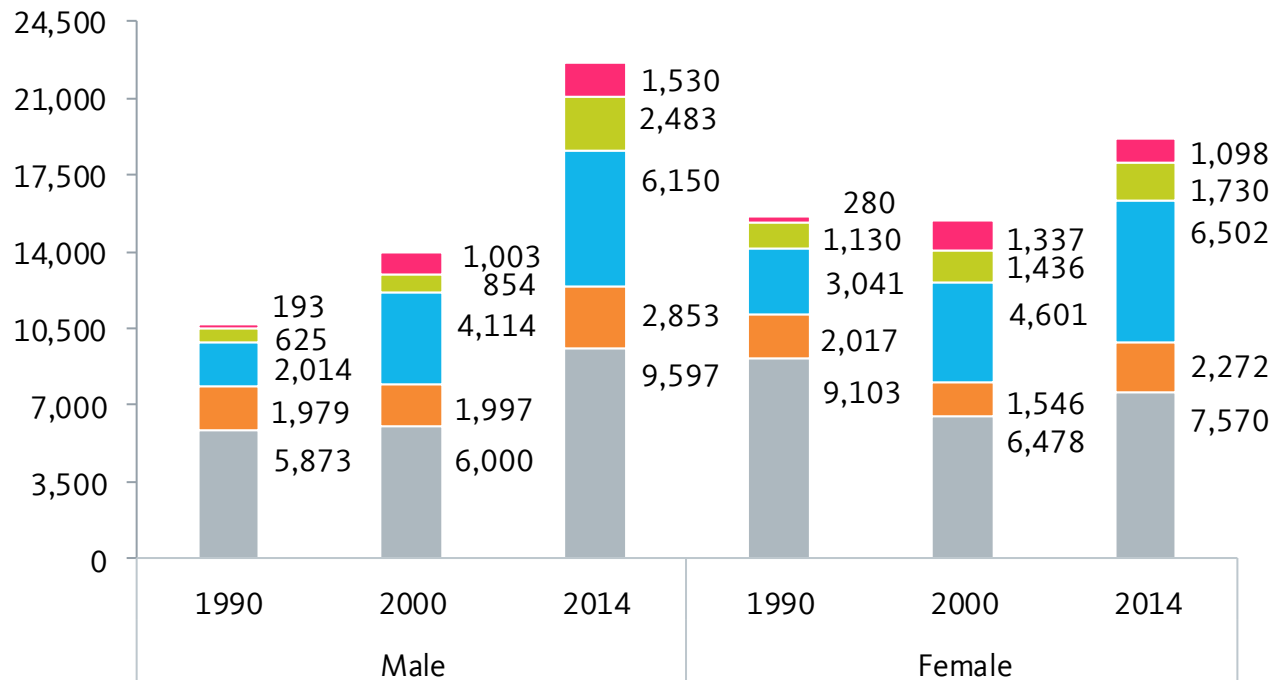
Youth preparedness

Are youth ready to enter the workforce?

Unlike gender disparities with other groups, a higher number of young Latinas are disconnected than young Latinos. Young White men make up 42 percent of disconnected young men in Sacramento while young White women make up just 39 percent of disconnected young women.

Disconnected Youth: 16- to 24-Year-Olds Not in School or Work by Race/Ethnicity and Gender, 1990 to 2014

- Native American or Other
- Asian/Pacific Islander
- Latino
- Black
- White



Source: Integrated Public Use Microdata Series.
 Note: Data for 2014 represent a 2010 through 2014 average.

Health-promoting environments

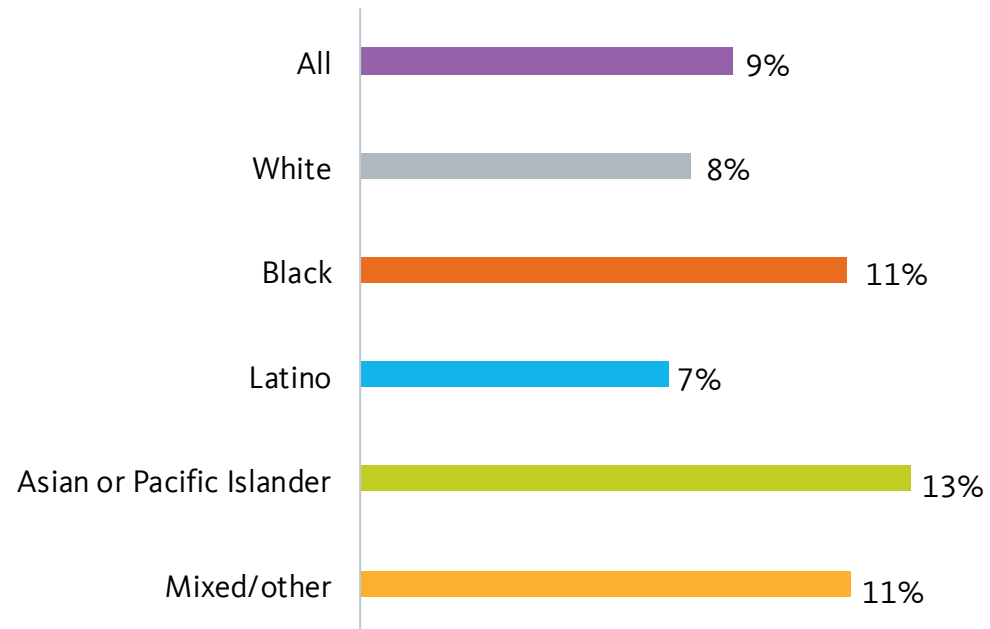
Can all residents access healthy food?

Asians or Pacific Islanders are the most likely to live in areas without adequate access to supermarkets in Sacramento.

White and Latino residents are the least likely to live in these areas. Access to healthy food is a critical component of a healthy, thriving community.

Percent Living in Limited Supermarket Access Areas (LSAs) by Race/Ethnicity, 2014

Limited supermarket access areas (LSAs) are defined as areas where residents must travel significantly farther to reach a supermarket than the “comparatively acceptable” distance traveled by residents in well-served areas with similar population densities and car ownership rates.



Source: The Reinvestment Fund, 2014 LSA analysis; U.S. Census Bureau.

Note: Data on population by race/ethnicity reflects a 2010 through 2014 average.

Health-promoting environments

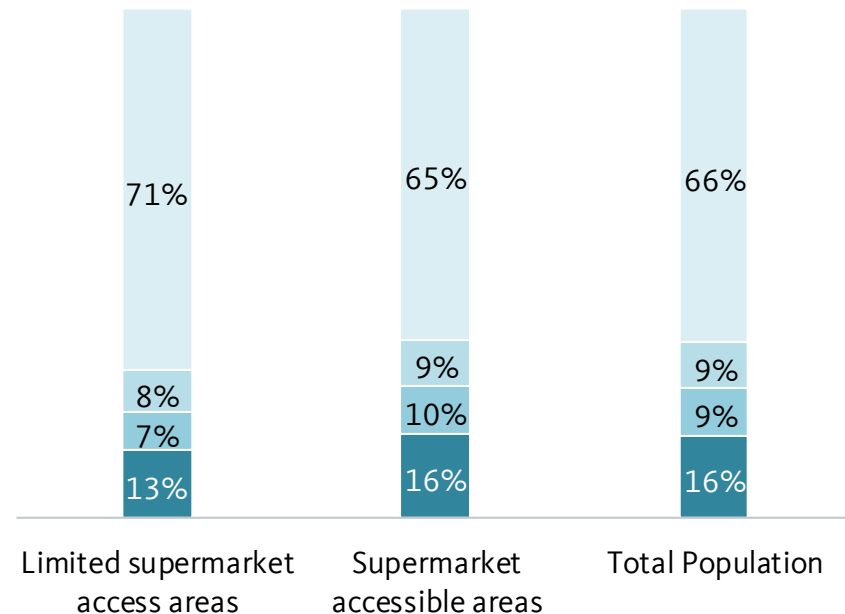
Can all residents access healthy food?

Interestingly, a greater share of residents of LSAs are at 200 percent of poverty or above. People at or above 200 percent of poverty make up 66 percent of the region's population but 71 percent of the population living in LSAs.

Percent Population by Federal Poverty Level (FPL) and Food Environment, 2014

- 200% or above FPL
- 150-199% FPL
- 100-149% FPL
- Below 100% FPL

Limited supermarket access areas (LSAs) are defined as areas where residents must travel significantly farther to reach a supermarket than the “comparatively acceptable” distance traveled by residents in well-served areas with similar population densities and car ownership rates.

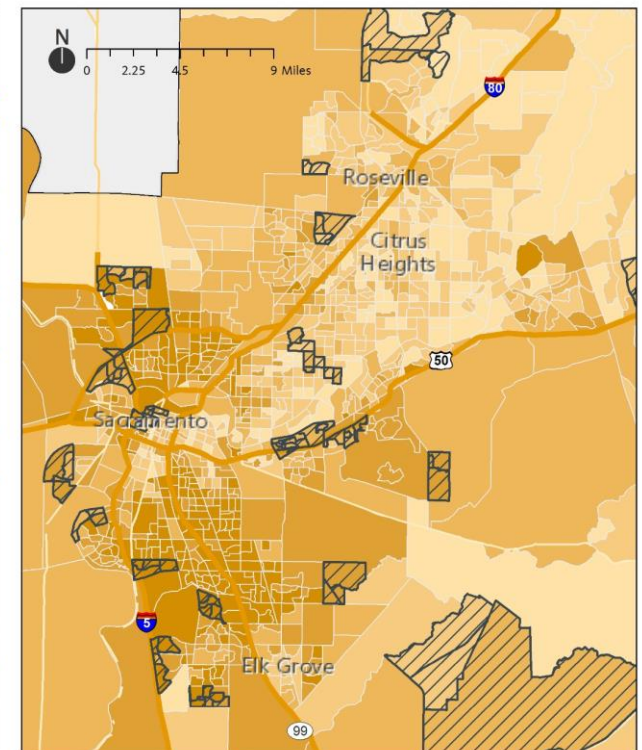
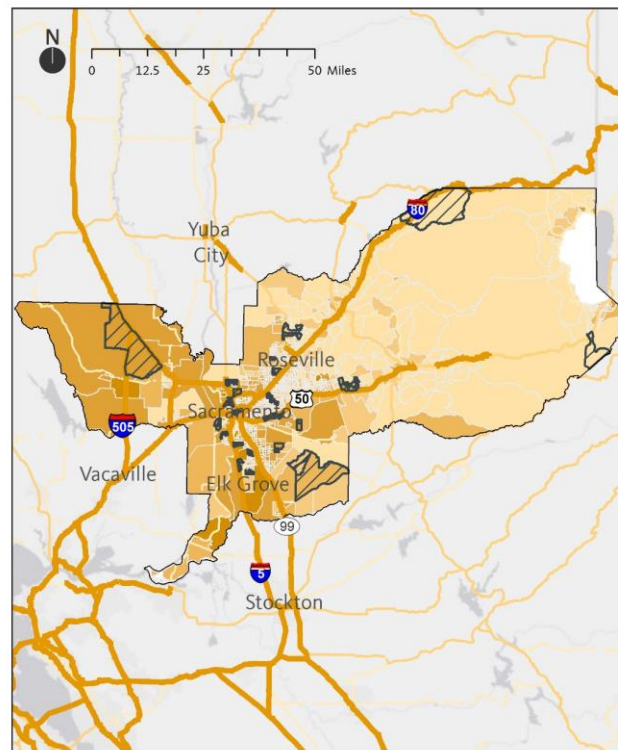
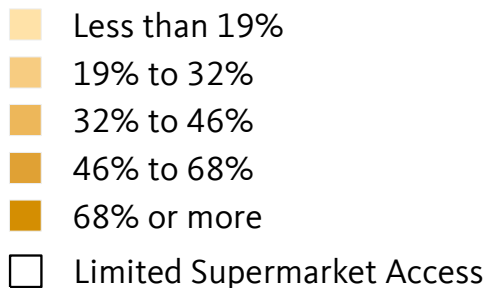


Health-promoting environments

Can all residents access healthy food?

Limited supermarket access areas are located across the region but tend to be common in communities of color. Block groups are drawn based on population size, not land area. Seemingly large block groups in the eastern part of the region have a comparable number of people to small block groups in the urban core.

Percent People of Color by Census Block Group and Limited Supermarket Access Block Groups, 2014



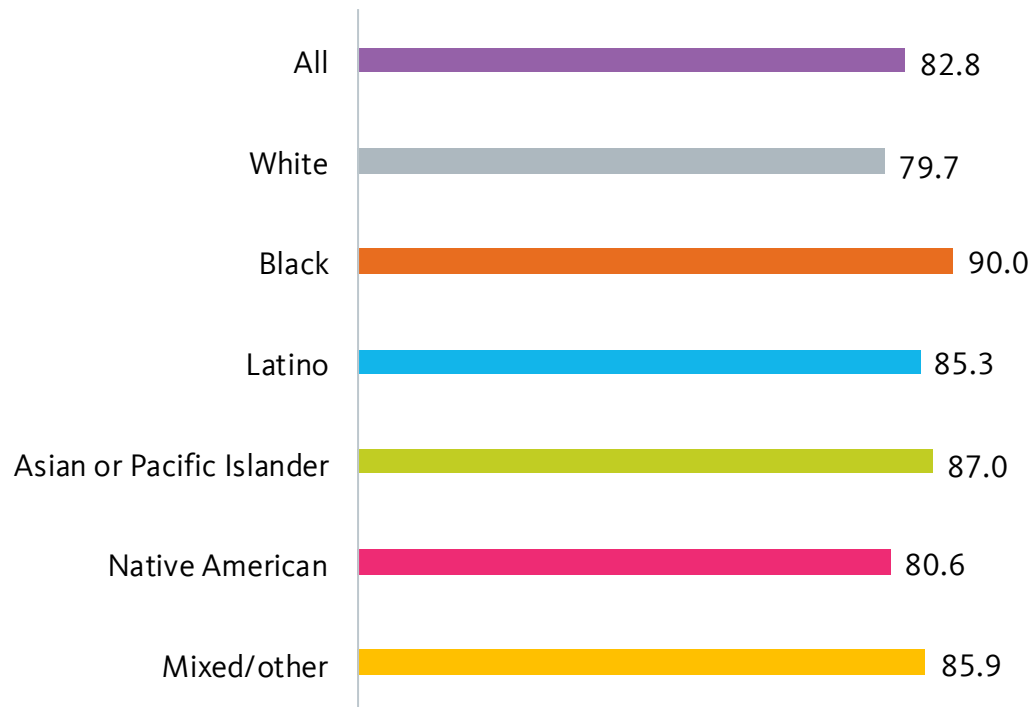
Health-promoting environments

Do all residents live in areas with clean air?

The average Sacramento resident has more exposure to air pollution than nearly 83 percent of census tracts in the United States. Black and Asian or Pacific Islander residents have the highest exposure overall.

Air Pollution: Exposure Index by Race/Ethnicity, 2014

Values range from 1 (lowest risk) to 100 (highest risk) on a national scale. The index value is based on a percentile ranking of each risk measure across all census tracts in the United States and taking the average ranking by geography and demographic group.



Health-promoting environments

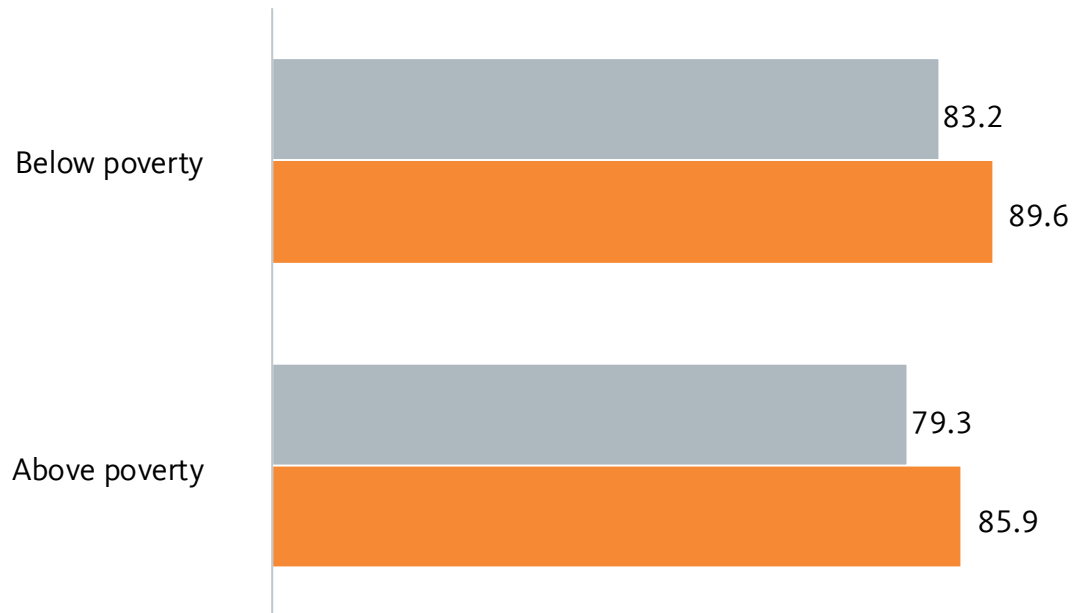
Do all residents live in areas with clean air?

Both race and class impact exposure to pollutants; however race impacts it more. In Sacramento, residents of color with a family income at or above the poverty level have a higher exposure on average than White residents with a family income below the poverty level.

Air Pollution: Exposure Index by Poverty Status, 2014

■ White
■ People of color

Values range from 1 (lowest risk) to 100 (highest risk) on a national scale. The index value is based on a percentile ranking of each risk measure across all census tracts in the United States and taking the average ranking by geography and demographic group.



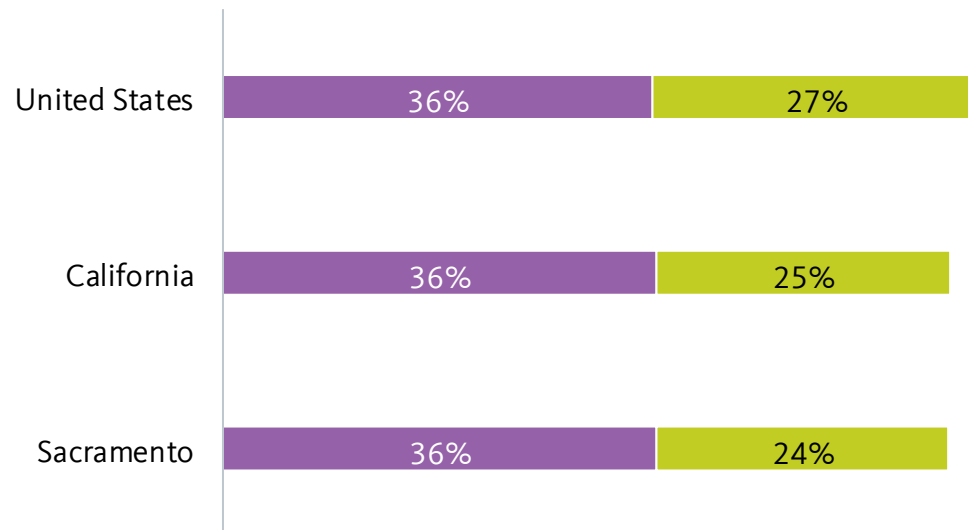
Health of residents

Do all residents have the opportunity to live long and healthy lives?

The rate of those who are overweight in Sacramento is comparable to the rate for both California and the United States overall. About one in four adults in the region are obese and 36 percent of adults are overweight. However, obesity rates are slightly lower in Sacramento compared with the state and national averages.

Adult Overweight and Obesity Rates by Geography, 2012

- Overweight
- Obese



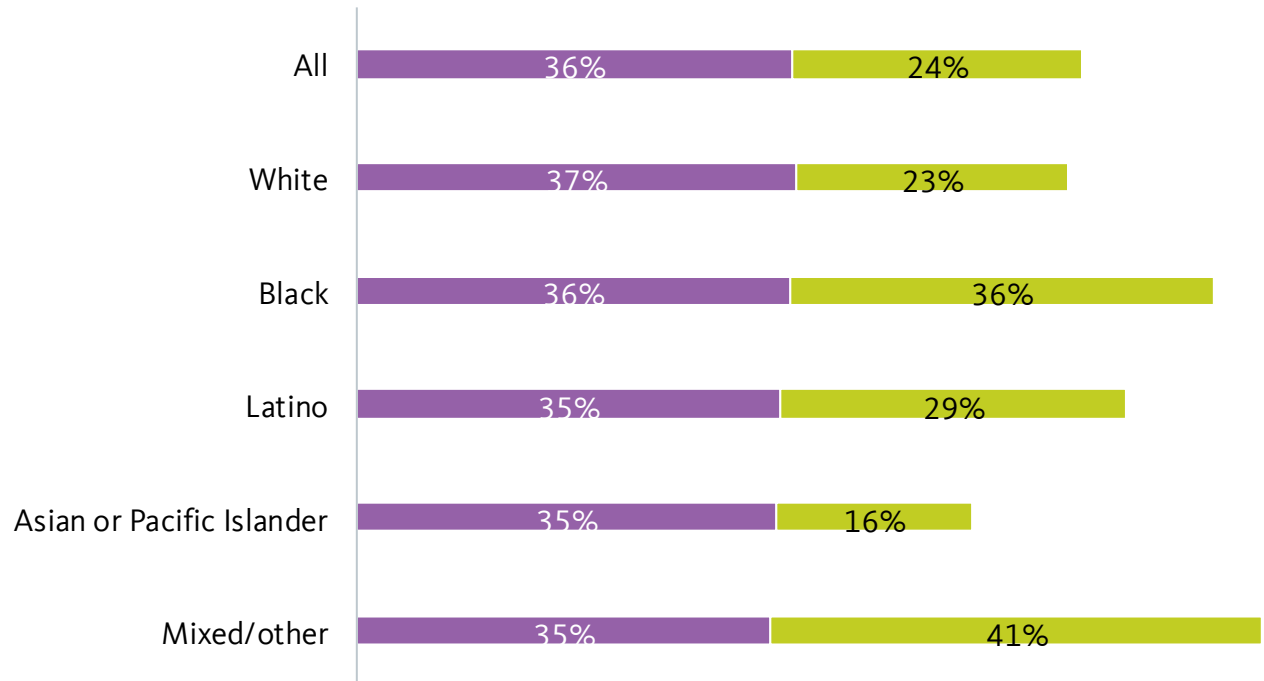
Health of residents

Do all residents have the opportunity to live long and healthy lives?

Adults of mixed/other races in Sacramento face the highest obesity rates followed by Black adults. While genetics matter, research shows there are other important social and environmental factors that influence obesity, including toxic stress, income, and education.

Adult Overweight and Obesity Rates by Race/Ethnicity, 2012

■ Overweight
■ Obese



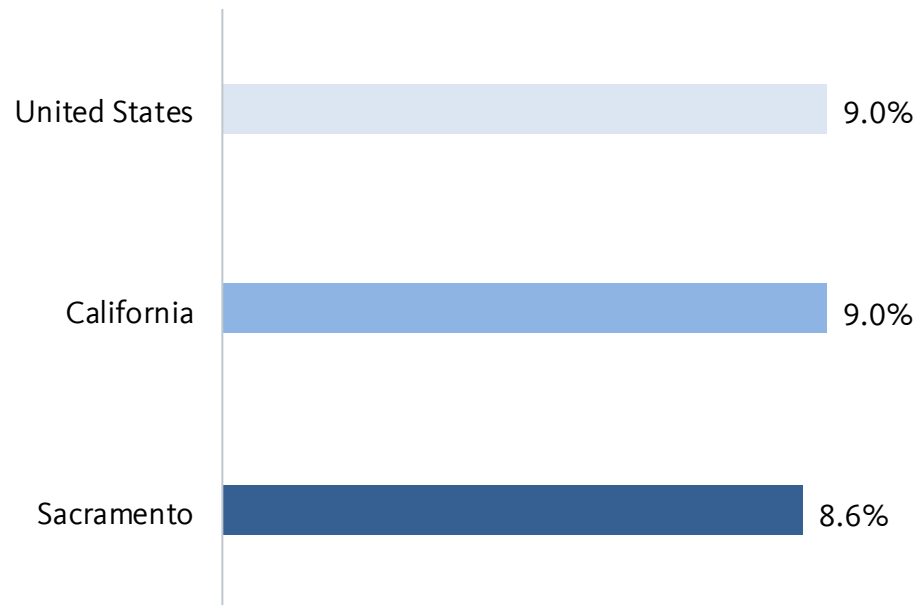
Source: Centers for Disease Control and Prevention. Universe includes all persons ages 18 or older.
Note: Data represent a 2008 through 2012 average. Data for some racial/ethnic groups are excluded due to small sample size.

Health of residents

Do all residents have the opportunity to live long and healthy lives?

When compared to the state and nation overall, Sacramento has a similar rate of adult diabetes. Just under 9 percent of adults in the region have diabetes .

Adult Diabetes Rates by Geography, 2012

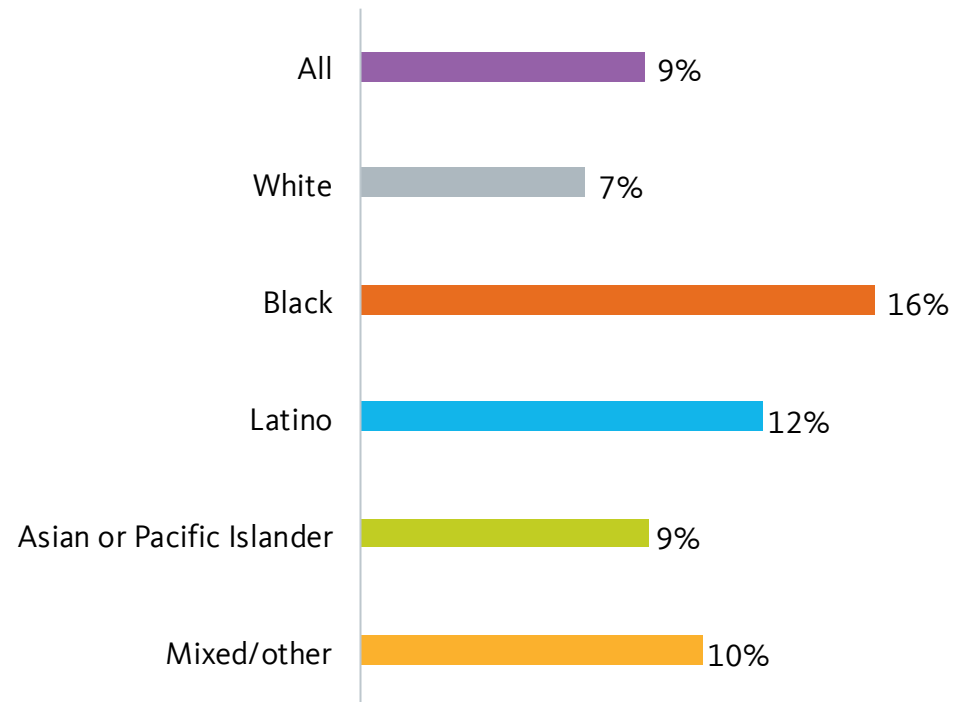


Health of residents

Do all residents have the opportunity to live long and healthy lives?

While the adult diabetes rate is slightly lower in Sacramento than in the state and nation overall, racial disparities are stark. Black adults are more than twice as likely as Whites to have diabetes. The social determinants of health, where people live, work, and age, are increasingly recognized as influencing growing rates of chronic diseases, such as diabetes.

Adult Diabetes Rates by Race/Ethnicity, 2012



Source: Centers for Disease Control and Prevention. Universe includes all persons ages 18 or older.

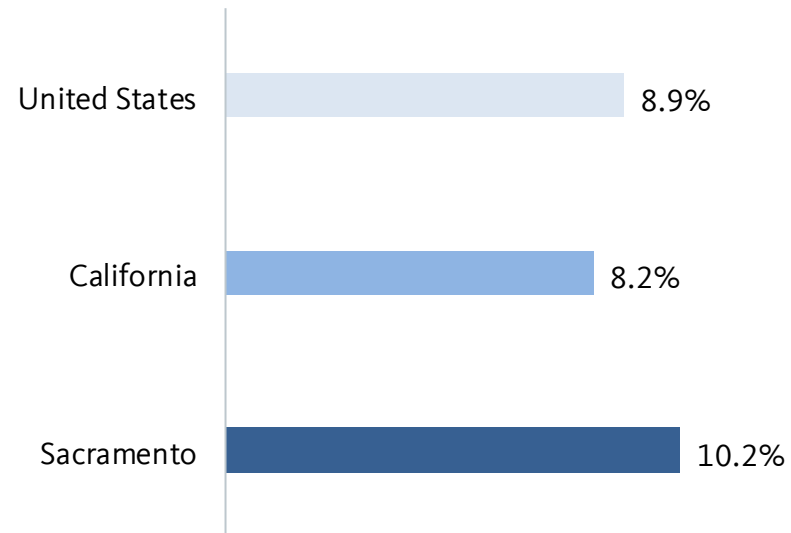
Note: Data represent a 2008 through 2012 average. Data for some racial/ethnic groups are excluded due to small sample size.

Health of residents

Do all residents have the opportunity to live long and healthy lives?

Given high exposure to air pollution, it is unsurprising that the share of adults living with asthma is higher in Sacramento than in the state and United States as a whole. One in 10 adults in the region has asthma.

Adult Asthma Rates by Geography, 2012

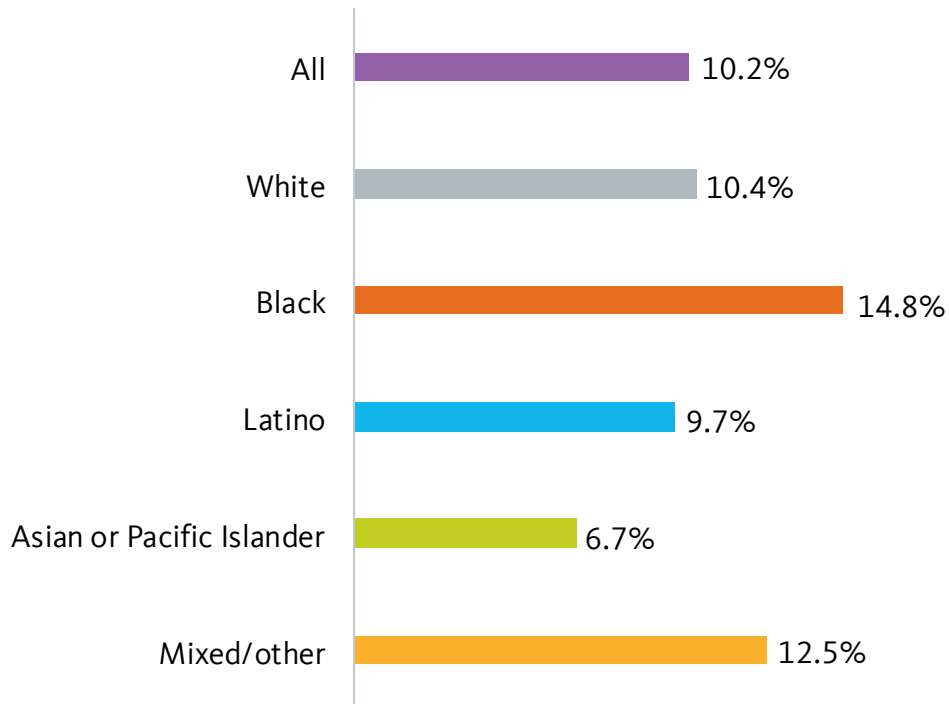


Health of residents

Do all residents have the opportunity to live long and healthy lives?

While the adult asthma rate is 10 percent overall, this ranges from 7 percent among Asian or Pacific Islander adults to 15 percent among Black adults. The Black population also has the highest exposure to air pollution in the region.

Adult Asthma Rates by
Race/Ethnicity, 2012

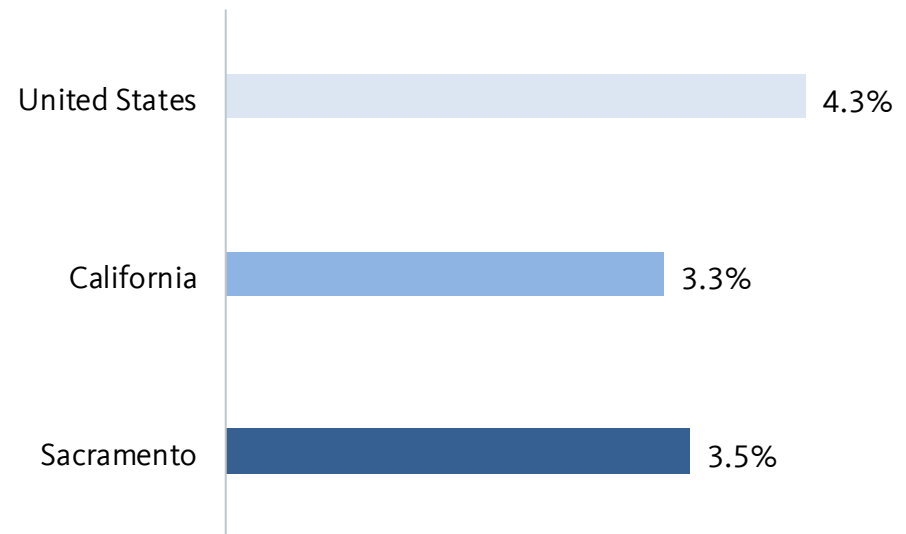


Health of residents

Do all residents have the opportunity to live long and healthy lives?

Heart disease is the leading cause of death in the United States. The share of adults who have had a heart attack is lower in Sacramento and California than in the nation.

Share of Adults Who Have Had a Heart Attack by Geography, 2012

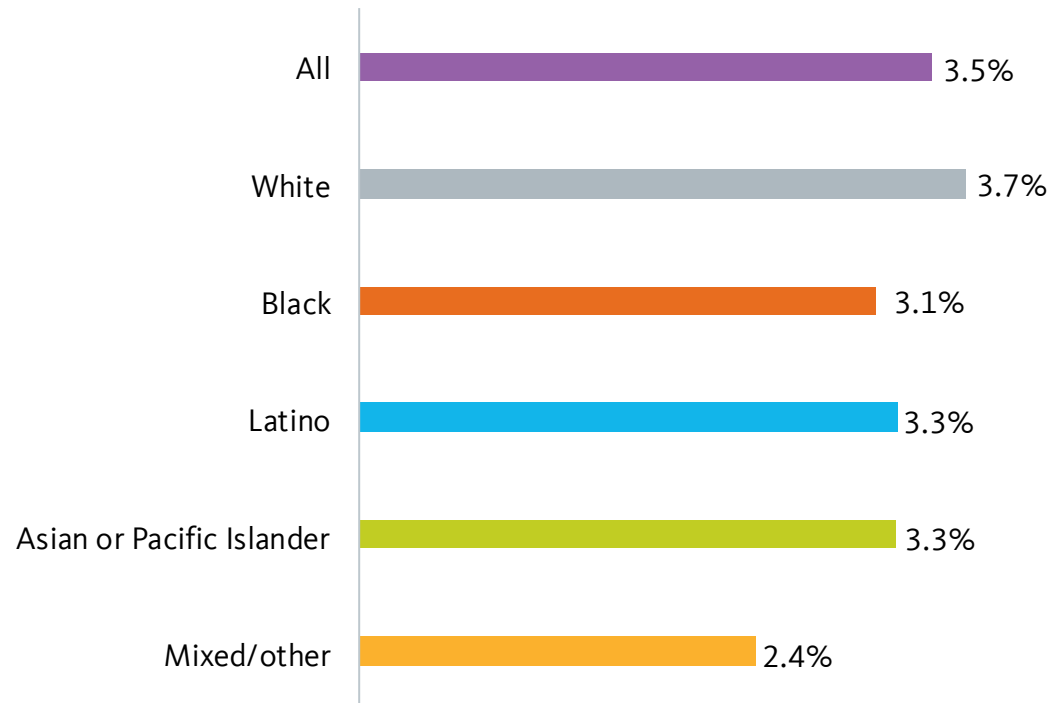


Health of residents

Do all residents have the opportunity to live long and healthy lives?

White adults in Sacramento are the most likely to have had a heart attack: 3.7 percent of White adults have had a heart attack compared with 2.4 percent of adults of mixed/other races.

Share of Adults Who Have Had a Heart Attack by Race/Ethnicity, 2012



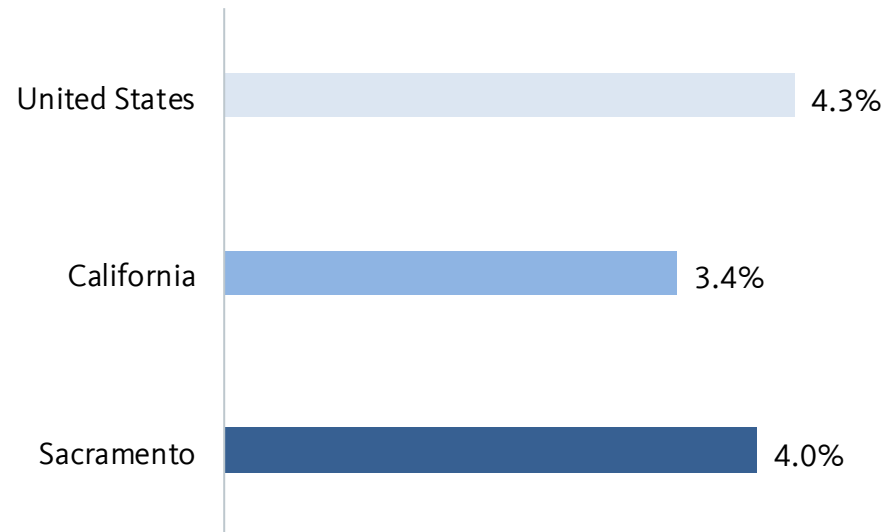
Source: Centers for Disease Control and Prevention. Universe includes all persons ages 18 or older.
 Note: Data represent a 2008 through 2012 average. Data for some racial/ethnic groups are excluded due to small sample size.

Health of residents

Do all residents have the opportunity to live long and healthy lives?

The share of adults with angina or coronary heart disease in Sacramento is similar to that in the United States overall.
 Four percent of adults in the region have angina or heart disease.

Share of Adults with Angina or Coronary Heart Disease by Geography, 2012



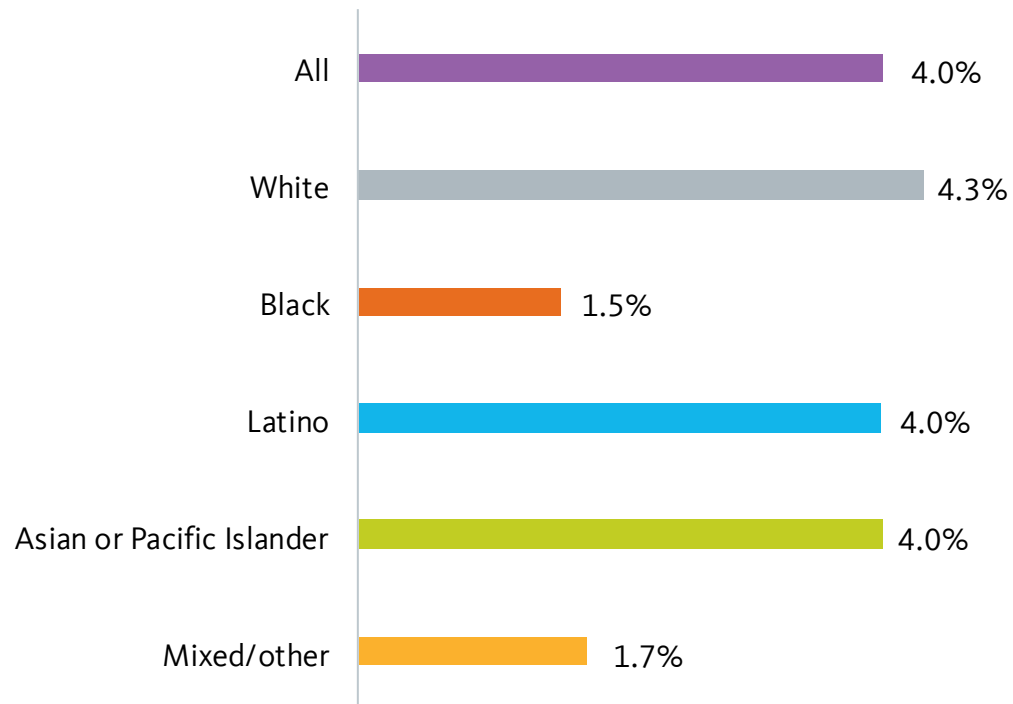
Source: Centers for Disease Control and Prevention. Universe includes all persons ages 18 or older.
 Note: Data represent a 2008 through 2012 average.

Health of residents

Do all residents have the opportunity to live long and healthy lives?

White, Latino, and Asian or Pacific Islander adults are the most likely in Sacramento to be living with angina or coronary heart disease. Importantly, these numbers are based on diagnoses, so people without access to care are less likely to be either diagnosed or subsequently treated.

Share of Adults with Angina or Coronary Heart Disease by Race/Ethnicity, 2012



Source: Centers for Disease Control and Prevention. Universe includes all persons ages 18 or older.

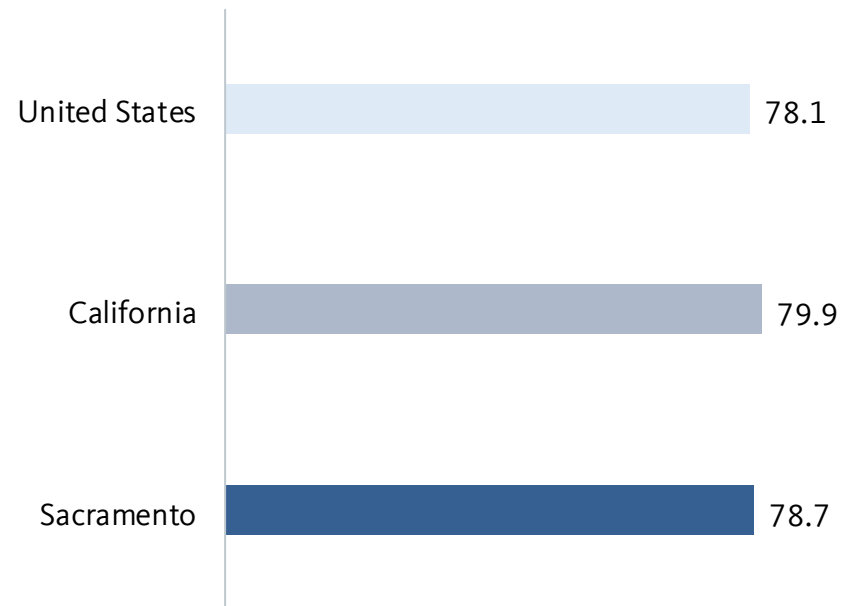
Note: Data represent a 2008 through 2012. Data for some racial/ethnic groups are excluded due to small sample size.

Health of residents

Do all residents have the opportunity to live long and healthy lives?

Health equity means that everyone has a just and fair opportunity to lead a long and healthy life, but life expectancy at birth varies from place to place. Life expectancy at birth in Sacramento is slightly higher than in the United States overall, but slightly lower than the California average.

Life Expectancy at Birth by Geography, 2015

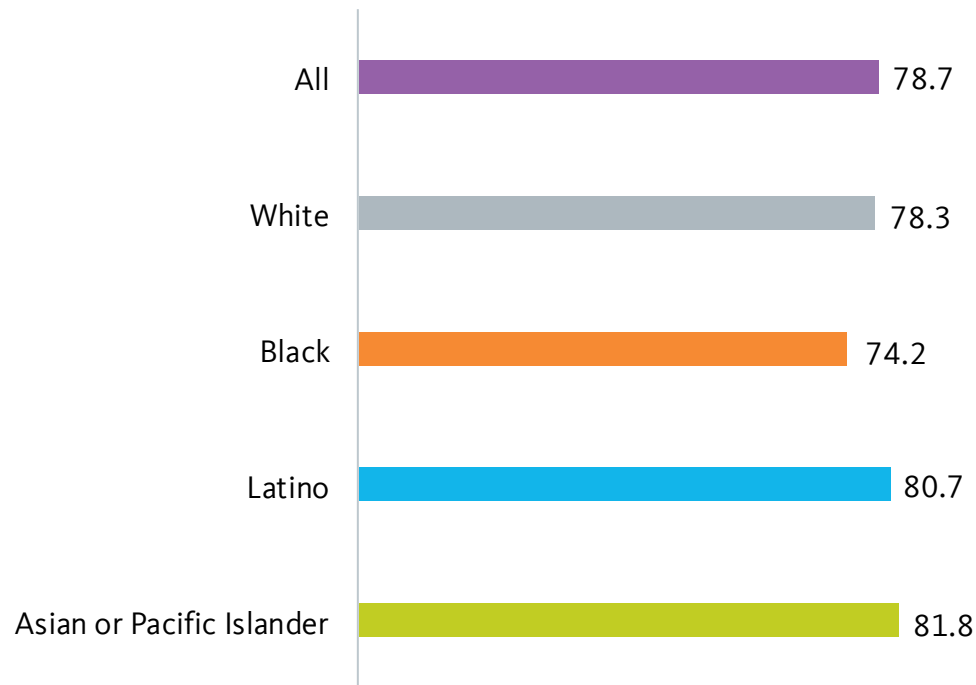


Health of residents

Do all residents have the opportunity to live long and healthy lives?

Life expectancy not only varies by place but also by race. In Sacramento, Black residents have the shortest life expectancy at birth while Asian or Pacific Islanders have the longest. Newborn Black babies can expect to live about four years less than Whites and six or eight years less than Latinos and Asians or Pacific Islanders.

Life Expectancy at Birth by Race/Ethnicity, 2015



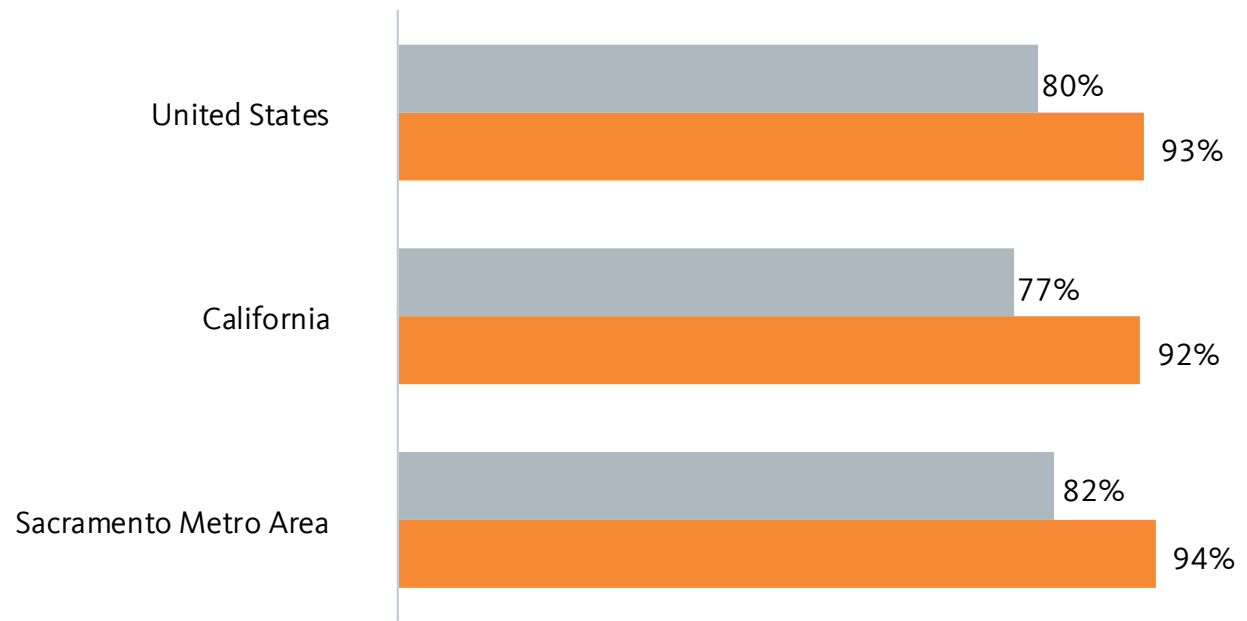
Health of residents

Do residents have access to health insurance and health-care services?

The share of children and adults with health insurance is higher in Sacramento than in the state and nation overall. Still, 18 percent of adults lack coverage. People without health insurance have worse access to care than those with health insurance. Without health insurance, many people go without needed medical treatment or preventative care.

Health Insurance Rates by Geography, 2014

- 18-64 years
- 0-17 years



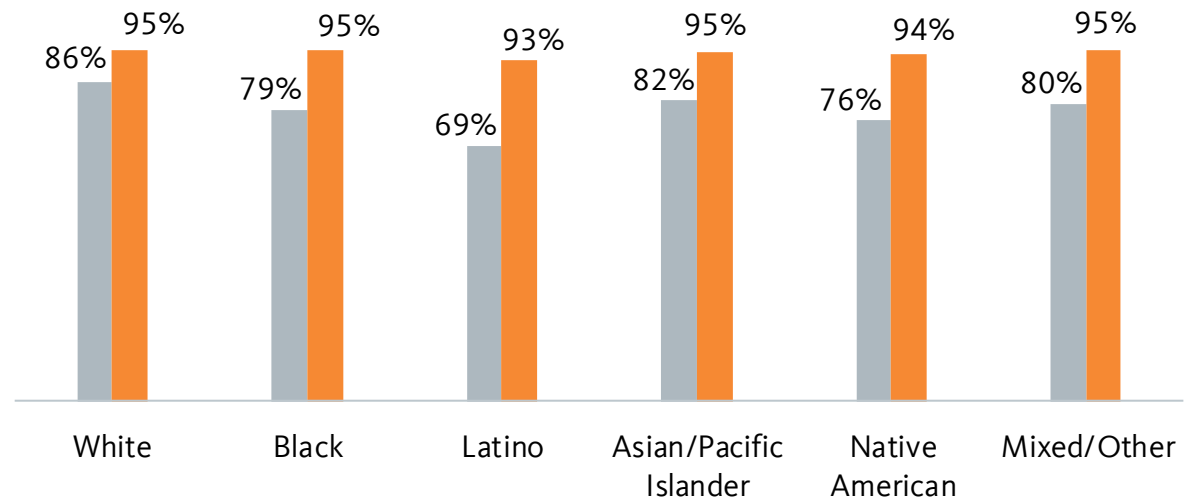
Health of residents

Do residents have access to health insurance and health-care services?

Latino children and adults are the least likely to have health insurance in the region: 31 percent of Latino adults and 7 percent of Latino children are uninsured.

Health Insurance Rates by Race/Ethnicity, 2014

- 18-64 years
- 0-17 years



Connectedness

Highlights

Are the region's residents and neighborhoods connected to one another and to the region's assets and opportunities?

To build a **culture of health** – where every person, no matter where they live, has an equal opportunity to live the healthiest life possible – we must improve people's opportunities to be healthier in the places where they live, learn, work, and play.

- Existing affordable rental housing is not meeting current demand: 24 percent of jobs are low wage but just 18 percent of rental housing units are affordable to low-wage workers.
- Low-income Black workers are the most likely to rely on public transit to get to work.
- Black, Latino, Native American, and mixed/other race renters and homeowners are the most likely to be paying more than 30 percent of their incomes on housing costs.

Share of renter households that pay too much for housing:

56%

Share of low-income Black workers who rely on public transit:

11%

Share of White residents who would need to move to achieve White-Black integration:

58%

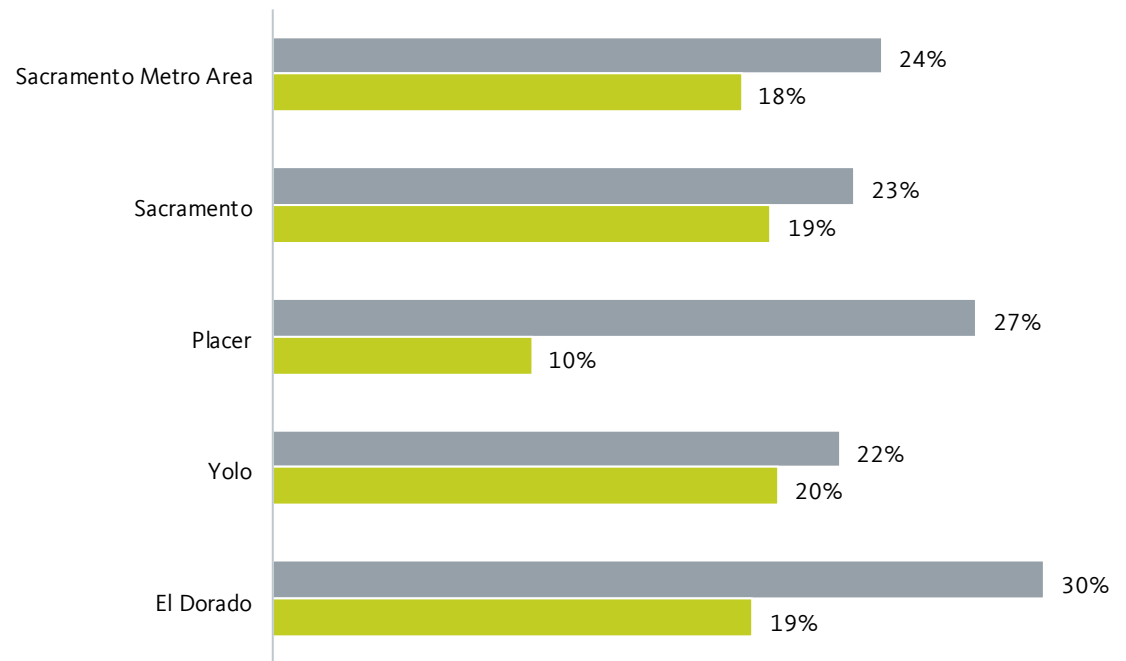
Connectedness

Can all residents access affordable, quality housing?

Across the region, 24 percent of jobs are low wage (paying \$1,250 per month or less) but just 18 percent of rental units are affordable when combining two low-wage workers' incomes. The mismatch is most extreme in Placer County where 27 percent of jobs are low-wage yet just 10 percent of rental housing units are affordable.

Share of Low-Wage Jobs and Affordable Rental Housing Units by County, 2014

- Share of jobs that are low-wage
- Share of rental housing units that are affordable



Connectedness

Can all residents access affordable, quality housing?

A ratio of low-wage jobs to affordable rental housing in a county that is higher than the regional average indicates a lower availability of affordable rental housing for low-wage workers in that county relative to the region overall. Placer County has the highest ratio followed by El Dorado County.

Low-Wage Jobs, Affordable Rental Housing, and Jobs-Housing Ratio by County, 2014

	Jobs (2012)		Housing (2014)			Jobs-Housing Ratios	
	All	Low-wage	All	Rental*	Affordable Rental*	All Jobs: All Housing	Low-wage Jobs- Affordable Rentals
Sacramento	593,241	134,358	519,460	222,292	43,124	1.1	3.1
Placer	129,620	35,503	134,111	38,198	3,848	1.0	9.2
Yolo	81,842	18,053	70,953	32,709	6,429	1.2	2.8
El Dorado	45,015	13,519	67,220	15,938	2,980	0.7	4.5
Sacramento Metro Area	849,718	201,433	791,744	309,137	56,381	1.1	3.6

*Includes only those units paid for in cash rent.

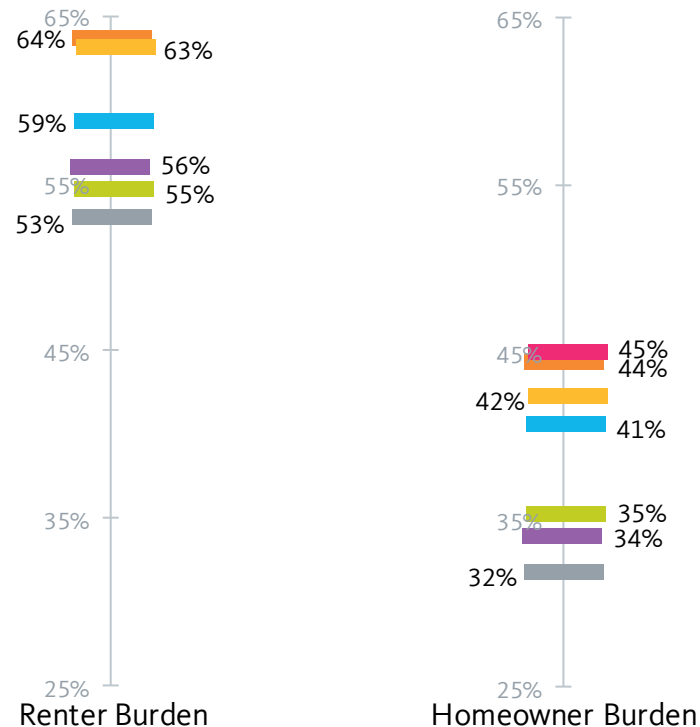
Connectedness

Can all residents access affordable, quality housing?

More than half of renter households and a third of homeowner households are cost burdened (paying more than 30 percent of income on housing costs). Black and mixed/other race households are among the most likely to be cost burdened regardless of whether they rent or own.

Renter Housing Burden and Homeowner Housing Burden by Race/Ethnicity, 2014

- All
- White
- Black
- Latino
- Asian/Pacific Islander
- Native American
- Mixed/other



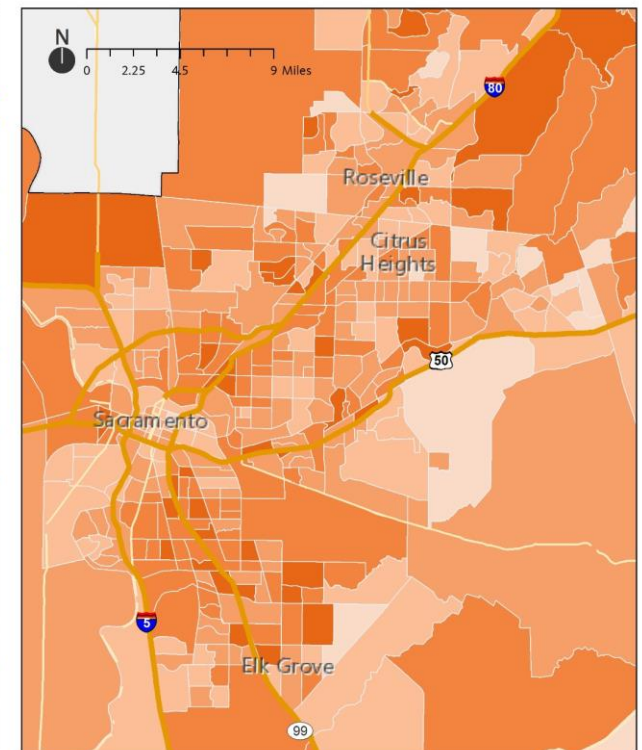
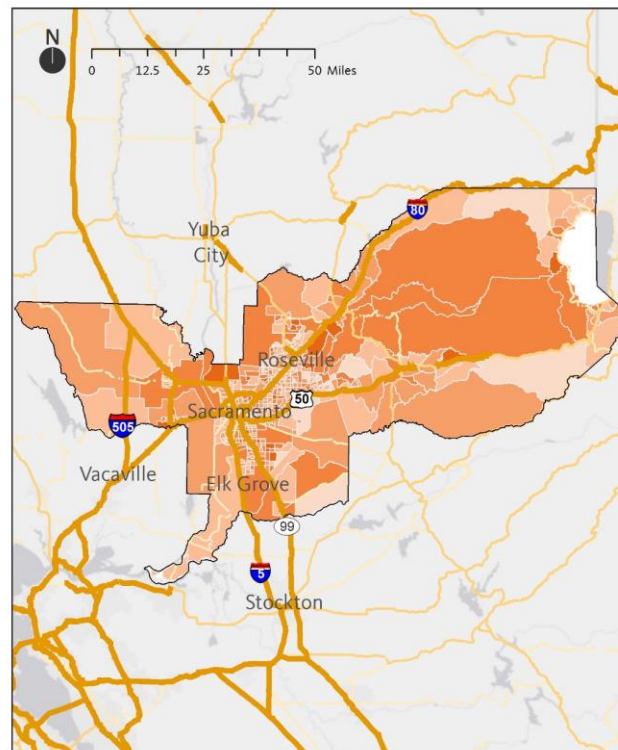
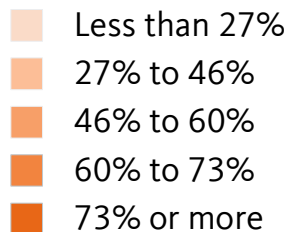
Connectedness

Can all residents access affordable, quality housing?

There are rent-burdened households throughout the region.

The darkest orange census tracts represent areas where *at least* 73 percent of households pay more than 30 percent of their income on rent.

Percent Rent-Burdened Households by Census Tract, 2014



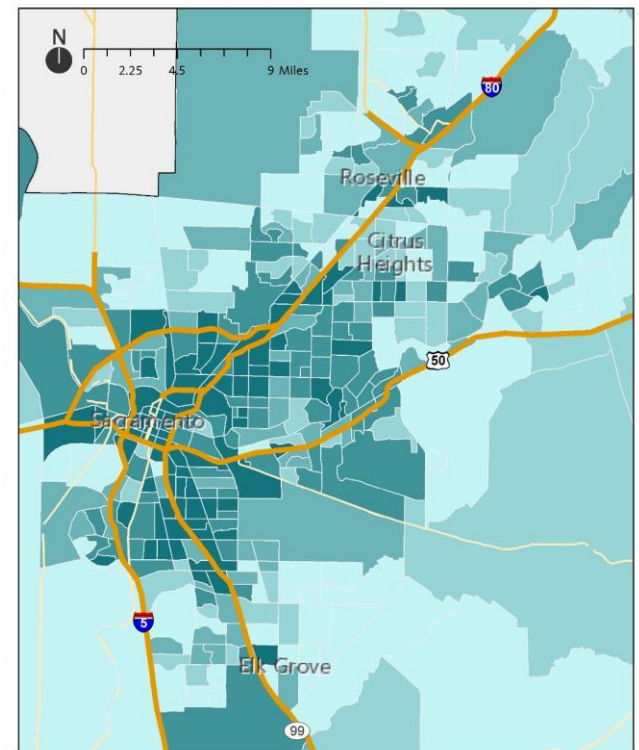
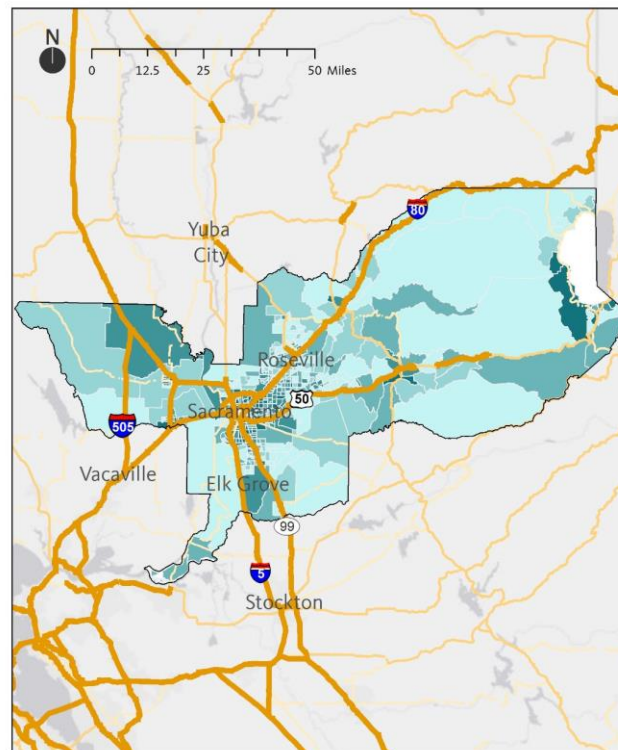
Connectedness

Do residents have transportation choices?

Car access also varies across the region, but is lowest in the city of Sacramento and in pockets across Placer County.

Percent Households without a Vehicle by Census Tract, 2014

- Less than 2%
- 2% to 4%
- 4% to 6%
- 6% to 11%
- 11% or more

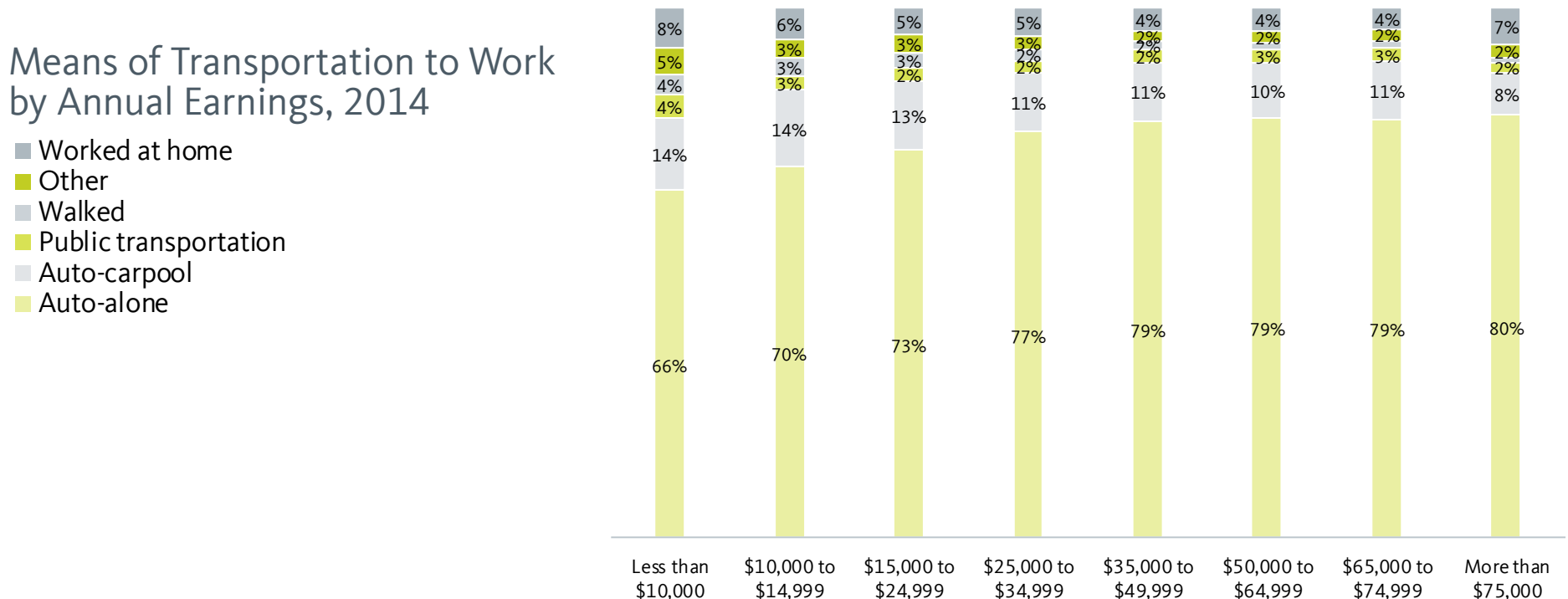


Connectedness

Do residents have transportation choices?

Lower-income residents are less likely than higher-income residents to drive alone to work. While 75 percent of all workers drive alone to work, single-driver commuting varies from 66 percent of workers earning under \$10,000 a year to 80 percent of workers earning more than \$75,000 a year.

Means of Transportation to Work by Annual Earnings, 2014



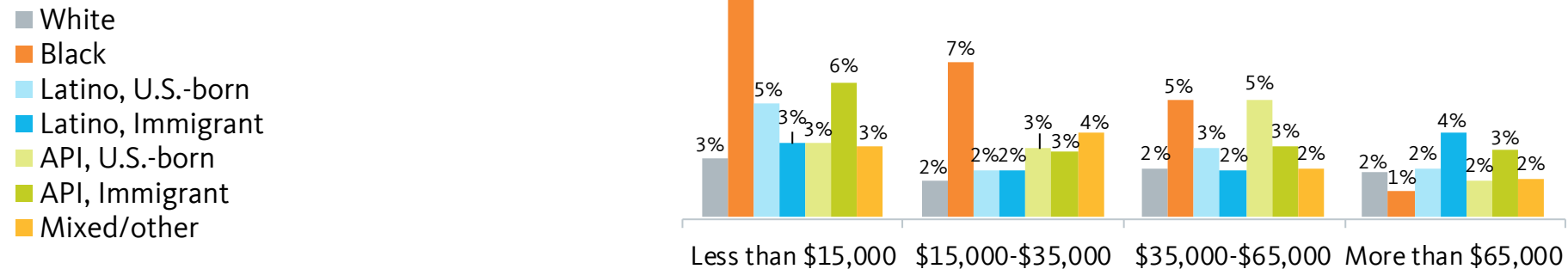
Source: U.S. Census Bureau. Universe includes workers ages 16 and older with earnings.
 Note: Data represent a 2010 through 2014 average. Dollar values are in 2014 dollars.

Connectedness

Do residents have transportation choices?

Low-income Black workers are the most likely to rely on the regional transit system to get to work. Very low-income Black workers are nearly four times as likely as very low-income White workers to use public transit.

Percent Using Public Transit by Annual Earnings and Race/Ethnicity and Nativity, 2014



Source: Integrated Public Use Microdata Series. Universe includes workers ages 16 and older with earnings.

Note: Data represent a 2010 through 2014 average. Data for some racial/ethnic groups in some earnings categories are excluded due to small sample size. Dollar values are in 2014 dollars.

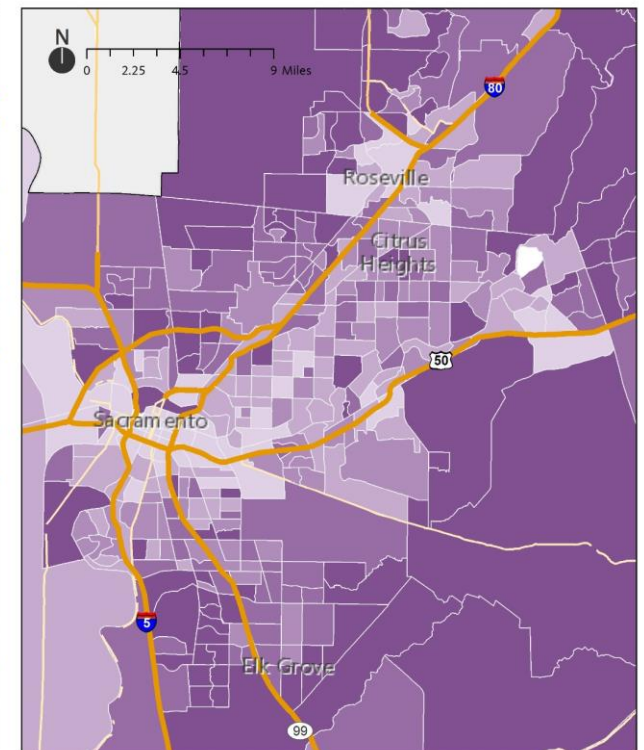
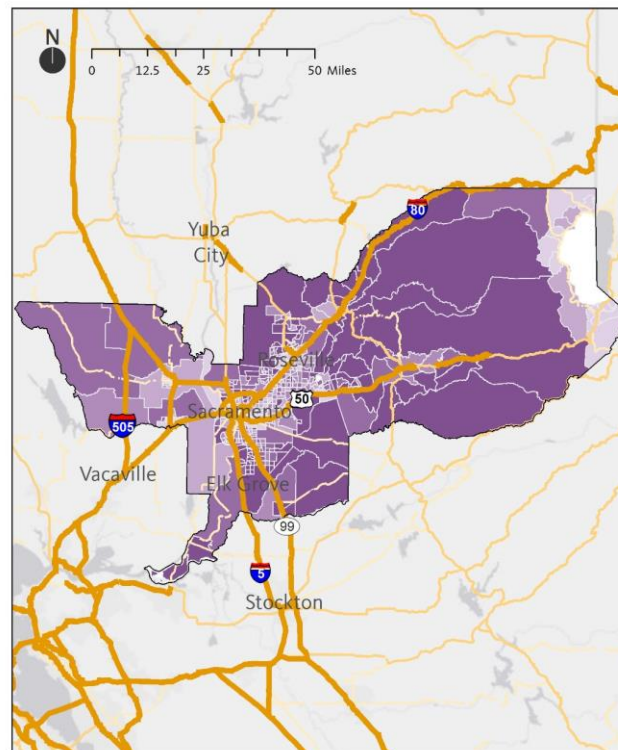
Connectedness

Do residents have transportation choices?

Neighborhoods with the highest commute times are scattered throughout the region. Residents of more rural areas in El Dorado and Placer counties have the highest commute times on average.

Average Travel Time to Work in Minutes by Census Tract, 2014

- Less than 21 minutes
- 21 to 24 minutes
- 24 to 26 minutes
- 26 to 29 minutes
- 29 minutes or more



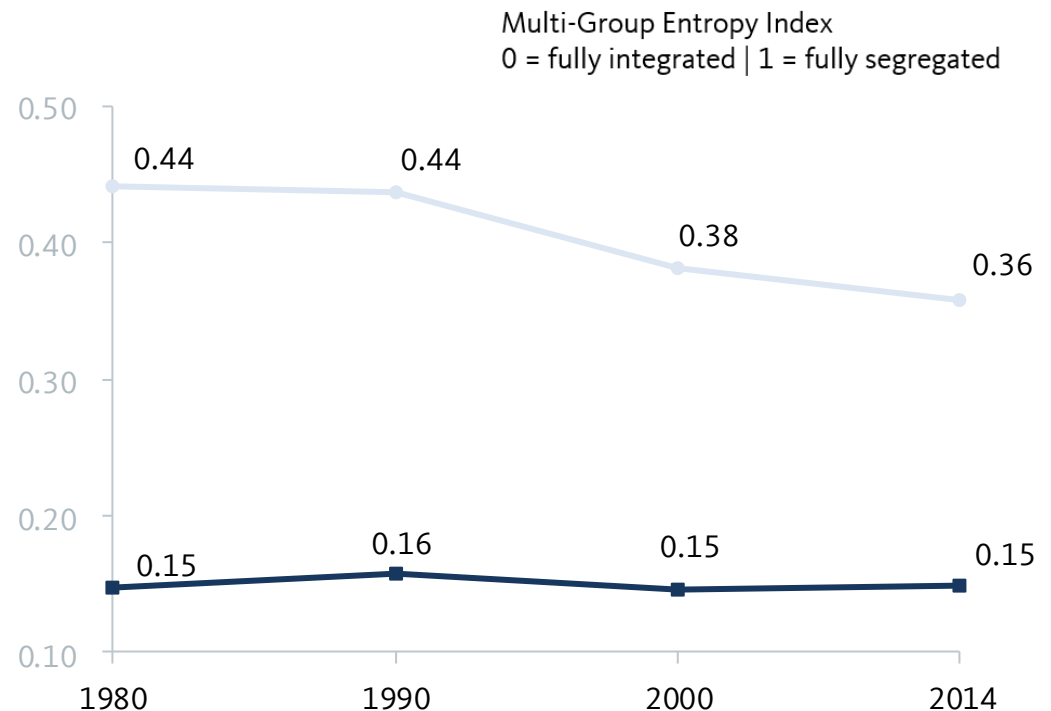
Connectedness

Do neighborhoods reflect the region's diversity?

Segregation, as measured by the entropy index, is lower in Sacramento than the nation overall, but it has not decreased since 2000. The entropy index ranges from 0, if all census tracts had the same racial/ethnic composition as the entire region (fully integrated), to 1, if all census tracts contained one group only (fully segregated).

Residential Segregation, 1980 to 2014

■ Sacramento
● United States



Source: U.S. Census Bureau.

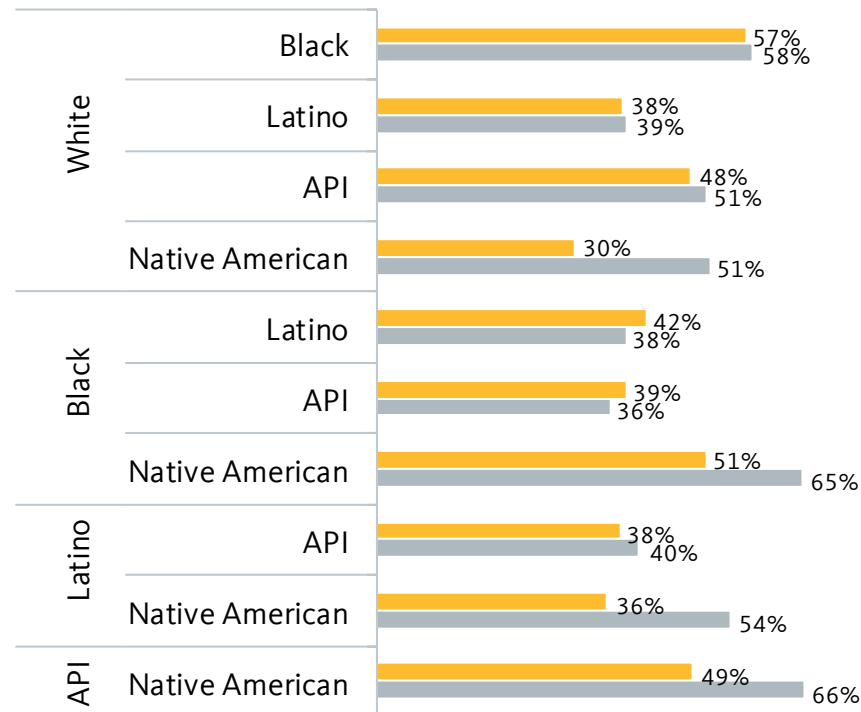
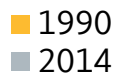
Note: Data for 2014 represent a 2010 through 2014 average.

Connectedness

Do neighborhoods reflect the region's diversity?

Segregation, as measured by the dissimilarity index, however, has increased for many groups since 1990. In order to achieve Black-White integration, 58 percent of White residents would need to move. Similarly, 51 percent of White residents would have to move to achieve White-Asian or Pacific Islander integration.

Residential Segregation, 1990 and 2014, Measured by the Dissimilarity Index



Source: U.S. Census Bureau.

Note: Data for 2014 represent a 2010 through 2014 average.

Economic benefits of equity

Highlights

What are the benefits of racial economic inclusion to the broader economy?

- The region's economy could have been more than \$19 billion stronger in 2014 if its racial gaps in income had been closed.
- Latinos would see a 70 percent gain in average annual income with racial equity in the region while average Black income would increase by 58 percent.
- For people of color as a whole, 56 percent of income gains with racial equity would come from closing racial wage gaps.

Potential gain in GDP with racial equity (in billions):

\$19.4

Percent gain in average Latino income with racial equity:

70%

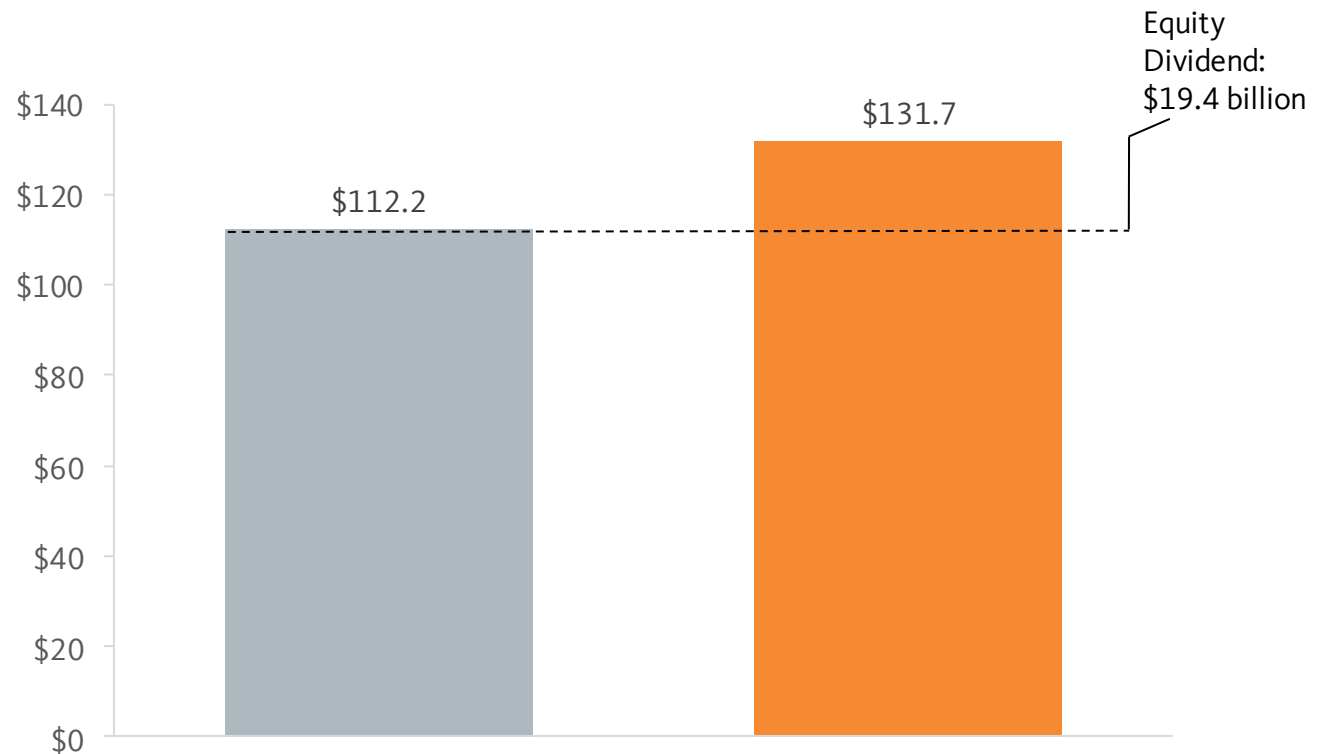
Economic benefits of equity

What are the economic benefits of inclusion?

Sacramento's GDP would have been over \$19 billion higher in 2014 if racial gaps in income were closed: a 17 percent increase. This is nearly five times the entire Sacramento County budget for FY 2016-2017.

Actual GDP and Estimated GDP without Racial Gaps in Income, 2014

- GDP in 2014 (billions)
- GDP if racial gaps in income were eliminated (billions)



Economic benefits of equity

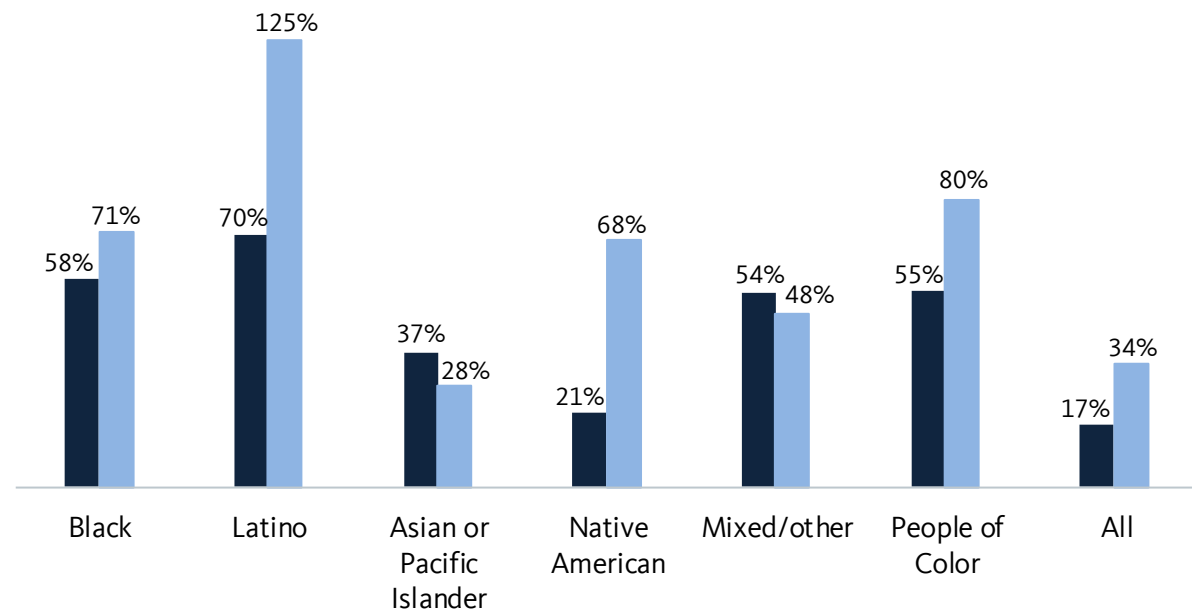
What are the economic benefits of inclusion?

Latinos would experience the largest gain in average income with racial equity in the region followed by Black residents.

Gains in average income would be higher for Asians or Pacific Islanders and those of mixed/other races in the region compared to California overall.

Percent Gain in Income with Racial Equity, 2014

- Sacramento
- California



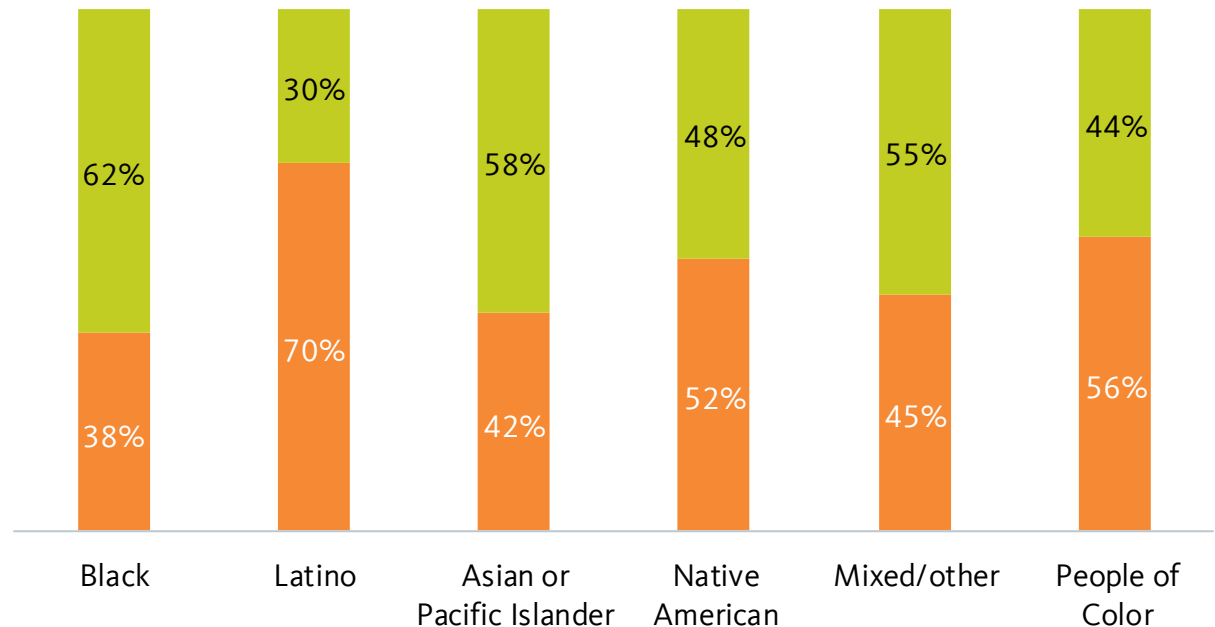
Economic benefits of equity

What are the economic benefits of inclusion?

For Latinos, the vast majority of these income gains would come from closing the racial wage gap with Whites. For Black residents, most of the gains would come from closing employment differences between Black and White workers (as measured by employment rates and hours worked).

Source of Income Gains, 2014

- Employment
- Wages



Data and methods

Data source summary and geography

Selected terms and general notes

Broad racial/ethnic origin

Nativity

Detailed racial/ethnic ancestry

Other selected terms

General notes on analyses

Summary measures from IPUMS microdata

Adjustments made to census summary data on race/ethnicity by age

Adjustments made to demographic projections

National projections

County and regional projections

Estimates and adjustments made to BEA data on GDP

Adjustments at the state and national levels

County and metropolitan-area estimates

Middle-class analysis

Assembling a complete dataset on employment and wages by industry

Growth in jobs and earnings by industry wage level, 1990 to 2015

Analysis of occupations by opportunity level

Health data and analysis

Analysis of access to healthy food

Air pollution data and analysis

Estimated life expectancy at birth

Measures of diversity and segregation

Estimates of GDP without racial gaps in income

Data and methods

Data source summary and geography

Unless otherwise noted, all of the data and analyses presented in this profile are the product of PolicyLink and the USC Program for Environmental and Regional Equity (PERE), and reflect the Sacramento region, including El Dorado, Placer, Sacramento, and Yolo counties. The specific data sources are listed in the table shown here.

While much of the data and analysis presented in this profile are intuitive, in the following text we describe some of the estimation techniques and adjustments made to create the underlying database, and provide more detail on terms and methods used. The reader should bear in mind that while only a single region is profiled here, many of the analytical choices in generating the underlying data and analyses were made with an eye toward replicating them in other regions and the ability to update them over time. Thus, while more regionally specific data may be available for some indicators, the data in this profile are drawn from our regional equity indicators database that provides data that are comparable and replicable over time.

Source	Dataset
Integrated Public Use Microdata Series (IPUMS)	1980 5% State Sample 1990 5% Sample 2000 5% Sample 2010 American Community Survey, 5-year microdata sample 2010 American Community Survey 2014 American Community Survey, 5-year microdata sample
U.S. Census Bureau	1980 Summary Tape File 1 (STF1) 1980 Summary Tape File 2 (STF2) 1980 Summary Tape File 3 (STF3) 1990 Summary Tape File 2A (STF2A) 1990 Modified Age/Race, Sex and Hispanic Origin File (MARS) 1990 Summary Tape File 4 (STF4) 2000 Summary File 1 (SF1) 2010 Summary File 1 (SF1) 2014 ACS 5-year Summary File (2012 5-year ACS) 2012 Longitudinal Employer-Household Dynamics, LODES 7 2014 National Population Projections 2015 Population Estimates 2015 ACS 1-year Summary File (2015 1-year ACS) 2010 TIGER/Line Shapefiles, 2010 Census Block Groups 2010 TIGER/Line Shapefiles, 2010 Census Tracts 2010 TIGER/Line Shapefiles, 2010 Counties
Geolytics	1980 Long Form in 2010 Boundaries 1990 Long Form in 2010 Boundaries 2000 Long Form in 2010 Boundaries
Woods & Poole Economics, Inc.	2016 Complete Economic and Demographic Data Source
U.S. Bureau of Economic Analysis	Gross Domestic Product by State Gross Domestic Product by Metropolitan Area Local Area Personal Income Accounts, CA30: Regional Economic Profile
U.S. Bureau of Labor Statistics	Quarterly Census of Employment and Wages Local Area Unemployment Statistics Occupational Employment Statistics
State of California Employment Development Department, Labor Market Information Division	2012-2022 Industry Employment Projections 2012-2022 Occupational Employment Projections
Centers for Disease Control and Prevention	Behavioral Risk Factor Surveillance System (BRFSS) WONDER Compressed Mortality Data
Reinvestment Fund	2014 Analysis of Limited Supermarket Access (LSA)
U.S. Environmental Protection Agency	2011 National-Scale Air Toxics Assessment (NATA)
Georgetown University Center on Education and the Workforce	Updated projections of education requirements of jobs in 2020, originally appearing in: Recovery: Job Growth And Education Requirements Through 2020; State Report
The diversitydatakids.org project and the Kirwan Institute for the Study of Race and Ethnicity	Child Opportunity Index Maps

Data and methods

Selected terms and general notes

Broad racial/ethnic origin

In all of the analyses presented, all categorization of people by race/ethnicity and nativity is based on individual responses to various census surveys. All people included in our analysis were first assigned to one of six mutually exclusive racial/ethnic categories, depending on their response to two separate questions on race and Hispanic origin:

- “White” and “non-Hispanic White” are used to refer to all people who identify as White alone and do not identify as being of Hispanic origin.
- “Black” and “African American” are used to refer to all people who identify as Black or African American alone and do not identify as being of Hispanic origin.
- “Latino” refers to all people who identify as being of Hispanic origin, regardless of racial identification.
- “Asian American and Pacific Islander,” “Asian or Pacific Islander,” “Asian,” and “API” are used to refer to all people who identify as Asian American or Pacific Islander alone and do not identify as being of Hispanic origin.

- “Native American” and “Native American and Alaska Native” are used to refer to all people who identify as Native American or Alaskan Native alone and do not identify as being of Hispanic origin.
- “Mixed/other” and “other or mixed race” are used to refer to all people who identify with a single racial category not included above, or identify with multiple racial categories, and do not identify as being of Hispanic origin.
- “People of color” or “POC” is used to refer to all people who do not identify as non-Hispanic White.

Nativity

The term “U.S.-born” refers to all people who identify as being born in the United States (including U.S. territories and outlying areas), or born abroad to American parents. The term “immigrant” refers to all people who identify as being born abroad, outside of the United States, to non-American parents.

Detailed racial/ethnic ancestry

Given the diversity of ethnic origin and the large presence of immigrants among the Latino and Asian populations, we sometimes present data for more detailed racial/ethnic categories within these groups. To maintain consistency with the broad racial/ethnic categories, and to enable the examination of second- and higher-generation immigrants, these more detailed categories (referred to as “ancestry”) are drawn from the first response to the census question on ancestry, recorded in the Integrated Public Use Microdata Series (IPUMS) variable “ANCESTR1.” For example, while country-of-origin information could have been used to identify Filipinos among the Asian population or Salvadorans among the Latino population, it could only do so for immigrants, leaving only the broad “Asian” and “Latino” categories for the U.S.-born population. While this methodological choice makes little difference in the numbers of immigrants by origin we report – i.e., the vast majority of immigrants from El Salvador mark “Salvadoran” for their ancestry – it is an important point of clarification.

Data and methods

Selected terms and general notes

(continued)

Other selected terms

Below we provide some definitions and clarification around some of the terms used in the profile:

- The terms “region,” “metropolitan area,” “metro area,” and “metro” are used interchangeably to refer to the geographic areas defined as Metropolitan Statistical Areas under the Office of Management and Budget (OMB) December 2003 definitions.
- The term “neighborhood” is used at various points throughout the profile. While in the introductory portion of the profile this term is meant to be interpreted in the colloquial sense, in relation to any data analysis it refers to census tracts.
- The term “communities of color” generally refers to distinct groups defined by race/ethnicity among people of color.
- The term “high school diploma” refers to both an actual high school diploma as well as high school equivalency or a General Educational Development (GED) certificate.
- The term “full-time” workers refers to all persons in the IPUMS microdata who reported working at least 45 or 50 weeks

(depending on the year of the data) and usually worked at least 35 hours per week during the year prior to the survey. A change in the “weeks worked” question in the 2008 American Community Survey (ACS), as compared with prior years of the ACS and the long form of the decennial census, caused a dramatic rise in the share of respondents indicating that they worked at least 50 weeks during the year prior to the survey. To make our data on full-time workers more comparable over time, we applied a slightly different definition in 2008 and later than in earlier years: in 2008 and later, the “weeks worked” cutoff is at least 50 weeks while in 2007 and earlier it is 45 weeks. The 45-week cutoff was found to produce a national trend in the incidence of full-time work over the 2005-2010 period that was most consistent with that found using data from the March Supplement of the Current Population Survey, which did not experience a change to the relevant survey questions. For more information, see [here](#).

General notes on analyses

Below we provide some general notes about the analysis conducted.

- In regard to monetary measures (income, earnings, wages, etc.) the term “real” indicates the data has been adjusted for inflation. All inflation adjustments are based on the Consumer Price Index for all Urban Consumers (CPI-U) from the U.S. Bureau of Labor Statistics, available at <https://www.bls.gov/cpi/cpid1612.pdf> (see table 24).

Data and methods

Summary measures from IPUMS microdata

Although a variety of data sources was used, much of our analysis is based on a unique dataset created using microdata samples (i.e., “individual-level” data) from IPUMS, for four points in time: 1980, 1990, 2000, and 2010 through 2014 pooled together. While the 1980 through 2000 files are based on the decennial census and cover about 5 percent of the U.S. population each, the 2010 through 2014 files are from the ACS and cover only about 1 percent of the U.S. population each. Five years of ACS data were pooled together to improve the statistical reliability and to achieve a sample size that is comparable to that available in previous years. Survey weights were adjusted as necessary to produce estimates that represent an average over the 2010 through 2014 period.

Compared with the more commonly used census “summary files,” which include a limited set of summary tabulations of population and housing characteristics, use of the microdata samples allows for the flexibility to create more illuminating metrics of equity and inclusion, and provides a more

nuanced view of groups defined by age, race/ethnicity, and nativity in each region of the United States.

The IPUMS microdata allows for the tabulation of detailed population characteristics, but because such tabulations are based on samples, they are subject to a margin of error and should be regarded as estimates – particularly in smaller regions and for smaller demographic subgroups. In an effort to avoid reporting highly unreliable estimates, we do not report any estimates that are based on a universe of fewer than 100 individual survey respondents.

A key limitation of the IPUMS microdata is geographic detail: each year of the data has a particular “lowest-level” of geography associated with the individuals included, known as the Public Use Microdata Area (PUMA) or “county groups.” PUMAs are drawn to contain a population of about 100,000, and vary greatly in geographical size from being fairly small in densely populated urban areas, to very large in rural areas, often

with one or more counties contained in a single PUMA.

Because PUMAs do not always neatly align with the boundaries of cities, counties, and metropolitan areas, the geography of the IPUMS microdata can pose a challenge for the creation of regional summary measures. This was not the case for the Sacramento region, however, as the geography of the region could be assembled perfectly by combining entire 1980 County Groups and 1990, 2000, and 2010 PUMAs.

Data and methods

Adjustments made to census summary data on race/ethnicity by age

For the racial generation gap indicator, we used the U.S. Census Bureau files to generate consistent estimates of populations by race/ethnicity and age group (under 18, 18-64, and over 64 years of age) for the years 1980, 1990, 2000, and 2014 (which reflects a 2010 through 2014 average), at the county level, which was then aggregated to the regional level and higher.

The racial/ethnic groups include non-Hispanic White, non-Hispanic Black, Hispanic/Latino, non-Hispanic Asian or Pacific Islander, non-Hispanic Native American/Alaskan Native, and non-Hispanic Other (including other single race alone and those identifying as multiracial). While for 2000, this information is readily available in the SF1 dataset, for 1980 and 1990, estimates had to be made to ensure consistency over time, drawing on two different summary files for each year.

For 1980, while information on total population by race/ethnicity for all ages combined was available at the county level for all the requisite groups in the STF1 dataset,

for race/ethnicity by age group we had to look to the STF2 dataset, where it was only available for non-Hispanic White, non-Hispanic Black, Hispanic, and the remainder of the population. To estimate the number of non-Hispanic Asians and Pacific Islanders, non-Hispanic Native Americans/Alaskan Natives, and non-Hispanic Others among the remainder for each age group, we applied the distribution of these three groups from the overall county population (of all ages) from STF1.

For 1990, population by race/ethnicity at the county level was taken from STF2A, while population by race/ethnicity was taken from the 1990 Modified Age Race Sex (MARS) file – special tabulation of people by age, race, sex, and Hispanic origin. However, to be consistent with the way race is categorized by the OMB Directive 15, the MARS file allocates all persons identifying as “Other race” or multiracial to a specific race. After confirming that population totals by county were consistent between the MARS file and STF2A, we calculated the number of “Other race” or

multiracial individuals who had been added to each racial/ethnic group in each county (for all ages combined) by subtracting the number that is reported in STF2A for the corresponding group. We then derived the share of each racial/ethnic group in the MARS file that was made up of other or mixed race people and applied this share to estimate the number of people by race/ethnicity and age group exclusive of the other or mixed race category, and finally the number of the other or mixed race people by age group.

For 2014 (which, again, reflects a 2010 through 2014 average), population by race/ethnicity and age was taken from the 2014 ACS 5-year summary file, which provides counts by race/ethnicity and age for the non-Hispanic White, Hispanic/Latino, and total population combined. County by race/ethnicity and age for all people of color combined was derived by subtracting non-Hispanic Whites from the total population.

Data and methods

Adjustments made to demographic projections

National projections

National projections of the non-Hispanic White share of the population are based on the U.S. Census Bureau's 2014 National Population Projections. However, because these projections follow the OMB 1997 guidelines on racial classification and essentially distribute the other single-race alone group across the other defined racial/ethnic categories, adjustments were made to be consistent with the six broad racial/ethnic groups used in our analysis.

Specifically, we compared the percentage of the total population composed of each racial/ethnic group from the Census Bureau's Population Estimates program for 2015 (which follows the OMB 1997 guidelines) to the percentage reported in the 2015 ACS 1-year Summary File (which follows the 2000 Census classification). We subtracted the percentage derived using the 2015 Population Estimates program from the percentage derived using the 2015 ACS to obtain an adjustment factor for each group

(all of which were negative except that for the mixed/other group) and carried this adjustment factor forward by adding it to the projected percentage for each group in each projection year. Finally, we applied the resulting adjusted projected population distribution by race/ethnicity to the total projected population from the 2014 National Population Projections to get the projected number of people by race/ethnicity in each projection year.

County and regional projections

Similar adjustments were made in generating county and regional projections of the population by race/ethnicity. Initial county-level projections were taken from Woods & Poole Economics, Inc. Like the 1990 MARS file described above, the Woods & Poole projections follow the OMB Directive 15-race categorization, assigning all persons identifying as other or multiracial to one of five mutually exclusive race categories: White, Black, Latino, Asian/Pacific Islander, or Native American. Thus, we first generated an adjusted version of the county-level Woods &

Poole projections that removed the other or multiracial group from each of these five categories. This was done by comparing the Woods & Poole projections for 2010 to the actual results from SF1 of the 2010 Census, figuring out the share of each racial/ethnic group in the Woods & Poole data that was composed of other or mixed-race persons in 2010, and applying it forward to later projection years. From these projections, we calculated the county-level distribution by race/ethnicity in each projection year for five groups (White, Black, Latino, Asian/Pacific Islander, and Native American), exclusive of other and mixed-race people.

To estimate the county-level share of population for those classified as other or mixed race in each projection year, we then generated a simple straight-line projection of this share using information from SF1 of the 2000 and 2010 Census. Keeping the projected other or mixed-race share fixed, we allocated the remaining population share to each of the other five racial/ethnic groups by applying the racial/ethnic distribution implied

Data and methods

Adjustments made to demographic projections

(continued)

by our adjusted Woods & Poole projections for each county and projection year. The result was a set of adjusted projections at the county level for the six broad racial/ethnic groups included in the profile, which were then applied to projections of the total population by county from the Woods & Poole data to get projections of the number of people for each of the six racial/ethnic groups.

Finally, an Iterative Proportional Fitting (IPF) procedure was applied to bring the county-level results into alignment with our adjusted national projections by race/ethnicity described above. The final adjusted county results were then aggregated to produce a final set of projections at the metro area and state levels.

Data and methods

Estimates and adjustments made to BEA data on GDP

The data on national gross domestic product (GDP) and its analogous regional measure, gross regional product (GRP) – both referred to as GDP in the text – are based on data from the U.S. Bureau of Economic Analysis (BEA). However, due to changes in the estimation procedure used for the national (and state-level) data in 1997, and a lack of metropolitan-area estimates prior to 2001, a variety of adjustments and estimates were made to produce a consistent series at the national, state, metropolitan-area, and county levels from 1969 to 2014.

Adjustments at the state and national levels

While data on gross state product (GSP) are not reported directly in the profile, they were used in making estimates of gross product at the county level for all years and at the regional level prior to 2001, so we applied the same adjustments to the data that were applied to the national GDP data. Given a change in BEA's estimation of gross product at the state and national levels from a standard industrial classification (SIC) basis to a North American Industry Classification

System (NAICS) basis in 1997, data prior to 1997 were adjusted to avoid any erratic shifts in gross product in that year. While the change to a NAICS basis occurred in 1997, BEA also provides estimates under an SIC basis in that year. Our adjustment involved figuring the 1997 ratio of NAICS-based gross product to SIC-based gross product for each state and the nation, and multiplying it by the SIC-based gross product in all years prior to 1997 to get our final estimate of gross product at the state and national levels.

County and metropolitan-area estimates

To generate county-level estimates for all years, and metropolitan-area estimates prior to 2001, a more complicated estimation procedure was followed. First, an initial set of county estimates for each year was generated by taking our final state-level estimates and allocating gross product to the counties in each state in proportion to total earnings of employees working in each county – a BEA variable that is available for all counties and years. Next, the initial county estimates were aggregated to metropolitan-area level, and

were compared with BEA's official metropolitan-area estimates for 2001 and later. They were found to be very close, with a correlation coefficient very close to one (0.9997). Despite the near-perfect correlation, we still used the official BEA estimates in our final data series for 2001 and later. However, to avoid any erratic shifts in gross product during the years up until 2001, we made the same sort of adjustment to our estimates of gross product at the metropolitan-area level that was made to the state and national data – we figured the 2001 ratio of the official BEA estimate to our initial estimate, and multiplied it by our initial estimates for 2000 and earlier to get our final estimate of gross product at the metropolitan-area level.

We then generated a second iteration of county-level estimates – just for counties included in metropolitan areas – by taking the final metropolitan-area-level estimates and allocating gross product to the counties in each metropolitan area in proportion to total earnings of employees working in each

Data and methods

Estimates and adjustments made to BEA data on GDP

(continued)

county. Next, we calculated the difference between our final estimate of gross product for each state and the sum of our second-iteration county-level gross product estimates for metropolitan counties contained in the state (that is, counties contained in metropolitan areas). This difference, total non-metropolitan gross product by state, was then allocated to the non-metropolitan counties in each state, once again using total earnings of employees working in each county as the basis for allocation. Finally, one last set of adjustments was made to the county-level estimates to ensure that the sum of gross product across the counties contained in each metropolitan area agreed with our final estimate of gross product by metropolitan area, and that the sum of gross product across the counties contained in the state agreed with our final estimate of gross product by state. This was done using a simple IPF procedure.

boundary changes since 1969 into county groups to maintain consistency with historical data. Any such county groups were treated the same as other counties in the estimate techniques described above.

We should note that BEA does not provide data for all counties in the United States, but rather groups some counties that have had

Data and methods

Middle-class analysis

To analyze middle-class decline over the past four decades, we began with the regional household income distribution in 1979 – the year for which income is reported in the 1980 Census (and the 1980 IPUMS microdata). The middle 40 percent of households were defined as “middle class,” and the upper and lower bounds in terms of household income (adjusted for inflation to be in 2014 dollars) that contained the middle 40 percent of households were identified. We then adjusted these bounds over time to increase (or decrease) at the same rate as real average household income growth, identifying the share of households falling above, below, and in between the adjusted bounds as the upper, lower, and middle class, respectively, for each year shown. Thus, the analysis of the size of the middle class examined the share of households enjoying the same relative standard of living in each year as the middle 40 percent of households did in 1979.

Data and methods

Assembling a complete dataset on employment and wages by industry

Analysis of jobs and wages by industry, reported on pages 33 and 51, is based on an industry-level dataset constructed using two-digit NAICS industries from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW). Due to some missing (or undisclosed) data at the county and regional levels, we supplemented our dataset using information from Woods & Poole Economics, Inc., which contains complete jobs and wages data for broad, two-digit NAICS industries at multiple geographic levels. (Proprietary issues barred us from using Woods & Poole data directly, so we instead used it to complete the QCEW dataset.) While we refer to counties in describing the process for "filling in" missing QCEW data below, the same process was used for the regional and state levels of geography.

Given differences in the methodology underlying the two data sources (in addition to the proprietary issue), it would not be appropriate to simply "plug in" corresponding Woods & Poole data directly to fill in the QCEW data for undisclosed industries.

Therefore, our approach was to first calculate the number of jobs and total wages from undisclosed industries in each county, and then distribute those amounts across the undisclosed industries in proportion to their reported numbers in the Woods & Poole data.

To make for a more accurate application of the Woods & Poole data, we made some adjustments to it to better align it with the QCEW. One of the challenges of using Woods & Poole data as a "filler dataset" is that it includes all workers, while QCEW includes only wage and salary workers. To normalize the Woods & Poole data universe, we applied both a national and regional wage and salary adjustment factor; given the strong regional variation in the share of workers who are wage and salary, both adjustments were necessary. Second, while the QCEW data are available on an annual basis, the Woods & Poole data are available on a decadal basis until 1995, at which point they become available on an annual basis. For the 1990-1995 period, we estimated the Woods & Poole annual jobs and wages figures using a

straight-line approach. Finally, we standardized the Woods & Poole industry codes to match the NAICS codes used in the QCEW.

It is important to note that not all counties and regions were missing data at the two-digit NAICS level in the QCEW, and the majority of larger counties and regions with missing data were only missing data for a small number of industries and only in certain years. Moreover, when data are missing it is often for smaller industries. Thus, the estimation procedure described is not likely to greatly affect our analysis of industries, particularly for larger counties and regions.

Data and methods

Growth in jobs and earnings by industry wage level, 1990 to 2015

The analysis on page 33 uses our filled-in QCEW dataset (see the previous page) and seeks to track shifts in regional job composition and wage growth by industry wage level.

Using 1990 as the base year, we classified broad industries (at the two-digit NAICS level) into three wage categories: low, middle, and high wage. An industry's wage category was based on its average annual wage, and each of the three categories contained approximately one-third of all private industries in the region.

We applied the 1990 industry wage category classification across all the years in the dataset, so that the industries within each category remained the same over time. This way, we could track the broad trajectory of jobs and wages in low-, middle-, and high-wage industries.

This approach was adapted from a method used in a Brookings Institution report, *Building From Strength: Creating Opportunity*

in Greater Baltimore's Next Economy. For more information, see https://www.brookings.edu/wp-content/uploads/2016/06/0426_baltimoreeconomy_vey.pdf.

While we initially sought to conduct the analysis at a more detailed NAICS level, the large amount of missing data at the three- to six-digit NAICS levels (which could not be resolved with the method that was applied to generate our filled-in two-digit QCEW dataset) prevented us from doing so.

Data and methods

Analysis of occupations by opportunity level

The analysis of high-opportunity occupations on pages 52-57 and occupational opportunity by race/ethnicity and nativity on pages 58-61 are related and based on an analysis that seeks to classify occupations in the region by opportunity level. Industries and occupations with high concentrations in the region, strong growth potential, and decent and growing wages are considered strong.

To identify “high-opportunity” occupations, we developed an “occupation opportunity index” based on measures of job quality and growth, including median annual wage, wage growth, job growth (in number and share), and median age of workers (which represents potential job openings due to retirements).

Once the “occupation opportunity index” score was calculated for each occupation, occupations were sorted into three categories (high, middle, and low opportunity). Occupations were evenly distributed into the categories based on employment. The strong occupations shown on page 53 are those found in the top, or high category (though not

all occupations may be listed due to limited space). There are some aspects of this analysis that warrant further clarification. First, the “occupation opportunity index” that is constructed is based on a measure of job quality and set of growth measures, with the job-quality measure weighted twice as much as all of the growth measures combined. This weighting scheme was applied both because we believe pay is a more direct measure of “opportunity” than the other available measures, and because it is more stable than most of the other growth measures, which are calculated over a relatively short period (2005-2011). For example, an increase from \$6 per hour to \$12 per hour is fantastic wage growth (100 percent), but most would not consider a \$12-per-hour job as a “high-opportunity” occupation.

Second, all measures used to calculate the “occupation opportunity index” are based on data for metropolitan statistical areas from the Occupational Employment Statistics (OES) program of the U.S. Bureau of Labor Statistics (BLS), with one exception: median

age by occupation. This measure, included among the growth metrics because it indicates the potential for job openings due to replacements as older workers retire, is estimated for each occupation from the 2010 5-year IPUMS ACS microdata file (for the employed civilian noninstitutional population ages 16 and older). It is calculated at the metropolitan statistical area level (to be consistent with the geography of the OES data), except in cases for which there were fewer than 30 individual survey respondents in an occupation; in these cases, the median age estimate is based on national data.

Third, the level of occupational detail at which the analysis was conducted, and at which the lists of occupations are reported, is the three-digit standard occupational classification (SOC) level. While considerably more detailed data is available in the OES, it was necessary to aggregate to the three-digit SOC level in order to align closely with the occupation codes reported for workers in the ACS microdata, making the analysis reported on pages 58-61 possible.

Data and methods

Analysis of occupations by opportunity level

(continued)

Fourth, while most of the data used in the analysis are regionally specific, information on the education level of “typical workers” in each occupation, which is used to divide occupations in the region into the three groups by education level (as presented on pages 55-57), was estimated using national 2010 IPUMS ACS microdata (for the employed civilian noninstitutional population ages 16 and older). Although regionally specific data would seem to be the better choice, given the level of occupational detail at which the analysis is conducted, the sample sizes for many occupations would be too small for statistical reliability. And, while using pooled 2006-2010 data would increase the sample size, it would still not be sufficient for many regions, so national 2010 data were chosen given the balance of currency and sample size for each occupation. The implicit assumption in using national data is that the occupations examined are of sufficient detail that there is not great variation in the typical educational level of workers in any given occupation from region to region. While this may not hold true in reality, we would note

that a similar approach was used by Jonathan Rothwell and Alan Berube of the Brookings Institution in *Education, Demand, and Unemployment in Metropolitan America* (Washington D.C.: Brookings Institution, September 2011).

We should also note that the BLS does publish national information on typical education needed for entry by occupation. However, in comparing these data with the typical education levels of actual workers by occupation that were estimated using ACS data, there were important differences, with the BLS levels notably lower (as expected). The levels estimated from the ACS were determined to be the appropriate choice for our analysis as they provide a more realistic measure of the level of educational attainment necessary to be a viable job candidate – even if the typical requirement for entry is lower.

Fifth, it is worthwhile to clarify an important distinction between the lists of occupations by typical education of workers and

opportunity level, presented on pages 55-57, and the charts depicting the opportunity level associated with jobs held by workers with different education levels and backgrounds by race/ethnicity and nativity, presented on pages 59-61. While the former are based on the national estimates of typical education levels by occupation, with each occupation assigned to one of the three broad education levels described, the latter are based on actual education levels of workers in the region (as estimated using 2010 5-year IPUMS ACS microdata), who may be employed in any occupation, regardless of its associated “typical” education level.

Lastly, it should be noted that for all of the occupational analysis, it was an intentional decision to keep the categorizations by education and opportunity level fairly broad, with three categories applied to each. For the categorization of occupations, this was done so that each occupation could be more justifiably assigned to a single typical education level; even with the three broad categories some occupations had a fairly even

Data and methods

Analysis of occupations by opportunity level

(continued)

distribution of workers across them nationally, but, for the most part, a large majority fell in one of the three categories. In regard to the three broad categories of opportunity level, and education levels of workers shown on pages 59-61, this was kept broad to ensure reasonably large sample sizes in the 2010 5-year IPUMS ACS microdata that was used for the analysis.

Data and methods

Health data and analysis

Health data presented are from the Behavioral Risk Factor Surveillance System (BRFSS) database, housed in the Centers for Disease Control and Prevention. The BRFSS database is created from randomized telephone surveys conducted by states, which then incorporate their results into the database on a monthly basis.

The results of this survey are self-reported and the population includes all related adults, unrelated adults, roomers, and domestic workers who live at the residence. The survey does not include adult family members who are currently living elsewhere, such as at college, a military base, a nursing home, or a correctional facility.

The most detailed level of geography associated with individuals in the BRFSS data is the county. Using the county-level data as building blocks, we created additional estimates for the region, state, and United States.

While the data allow for the tabulation of personal health characteristics, it is important to keep in mind that because such tabulations are based on samples, they are subject to a margin of error and should be regarded as estimates – particularly in smaller regions and for smaller demographic subgroups.

To increase statistical reliability, we combined five years of survey data, for the years 2008 through 2012. As an additional effort to avoid reporting potentially misleading estimates, we do not report any estimates that are based on a universe of fewer than 100 individual survey respondents. This is similar to, but more stringent than, a rule indicated in the documentation for the 2012 BRFSS data of not reporting (or interpreting) percentages based on a denominator of fewer than 50 respondents (see https://www.cdc.gov/brfss/annual_data/2012/pdf/Compare_2012.pdf). Even with this sample-size restriction, regional estimates for smaller demographic subgroups should be regarded with particular care.

For more information and access to the BRFSS database, see <http://www.cdc.gov/brfss/index.html>.

Data and methods

Analysis of access to healthy food

Analysis of access to healthy food is based on the 2014 Analysis of Limited Supermarket Access (LSA) from the Reinvestment Fund. LSA areas are defined as one or more contiguous census block groups (with a collective population of at least 5,000) where residents must travel significantly farther to reach a supermarket than the “comparatively acceptable” distance traveled by residents in well-served areas with similar population densities and car ownership rates.

The methodology’s key assumption is that block groups with a median household income greater than 120 percent of their respective metropolitan area’s median (or non-metro state median for non-metropolitan areas) are adequately served by supermarkets and thus travel an appropriate distance to access food. Thus, higher-income block groups establish the benchmark to which all block groups are compared controlling for population density and car ownership rates.

An LSA score is calculated as the percentage by which the distance to the nearest supermarket would have to be reduced to make a block group’s access equal to the access observed for adequately served areas. Block groups with an LSA score greater than 45 were subjected to a spatial connectivity analysis, with 45 chosen as the minimum threshold because it was roughly equal to the average LSA score for all LSA block groups in the 2011 Reinvestment Fund analysis.

Block groups with contiguous spatial connectivity of high LSA scores are referred to as LSA areas. They represent areas with the strongest need for increased access to supermarkets. Our analysis of the percent of people living in LSA areas by race/ethnicity and poverty level was done by merging data from the 2014 5-year ACS summary file with LSA areas at the block group level and aggregating up to the city, county, region, and higher levels of geography.

For more information on the 2014 LSA analysis, see https://www.reinvestment.com/wp-content/uploads/2015/12/2014_Limited_Supermarket_Access_Analysis-Brief_2015.pdf.

Data and methods

Air pollution data and analysis

The air pollution exposure index is derived from the 2011 National-Scale Air Toxics Assessment (NATA) developed by the U.S. Environmental Protection Agency. The NATA uses general information about emissions sources to develop risk estimates and *does not* incorporate more refined information about emissions sources, which suggests that the impacts of risks may be overestimated. Note, however, that because the analysis presented using this data is relative to the U.S. overall in the case of exposure index, the fact that the underlying risk estimates themselves may be overstated is far less problematic.

The NATA data include estimates of cancer risk and respiratory hazards (non-cancer risk) at the census-tract level based on exposure to outdoor sources. It is important to note that while diesel particulate matter exposure is included in the NATA non-cancer risk estimates, it is not included in the cancer risk estimates (even though particulate matter is a known carcinogen).

The index of exposure to air pollution

presented is based on a combination of separate indices for cancer risk and respiratory hazard at the census-tract level, using the 2011 NATA. We followed the approach used by the U.S. Department of Housing and Urban Development (HUD) in developing its Environmental Health Index. The cancer risk and respiratory hazard estimates were combined by calculating tract-level z-scores for each and adding them together as indicated in the formula below:

$$COMBINED_i = \left(\frac{c_i - \mu_c}{\sigma_c} \right) + \left(\frac{r_i - \mu_r}{\sigma_r} \right)$$

Where c indicates cancer risk, r indicates respiratory risk, i indexes census tracts, and μ and σ represent the means and standard deviations, respectively, of the risk estimates across all census tracts in the United States.

The combined tract-level index, $COMBINED_i$, was then ranked in ascending order across all tracts in the United States, from 1 to 100. Finally, the tract-level rankings were summarized to the city, county, region, and

higher levels of geography for various demographic groups (i.e., by race/ethnicity and poverty status) by taking a population-weighted average using the group population as weight, with group population data drawn from the 2014 5-year ACS summary file.

For more information on the NATA data, see <http://www.epa.gov/national-air-toxics-assessment>.

Data and methods

Estimated life expectancy at birth

To estimate life expectancy at birth, by race/ethnicity and geography, we used information on mortality and mid-year population estimates from the Centers for Disease Control and Prevention's Wide-ranging OnLine Data for Epidemiologic Research (WONDER) databases (the Compressed Mortality Data) and constructed abridged life tables. A life table is a table that includes the number of deaths, total population, probability of dying, and remaining life expectancy by single year of age. Abridged life tables are similar, but present the information for age groups rather than by single year of age. Remaining life expectancy for each age group is largely a function of the probability of dying for people in their own age group and in older age groups.

To prepare the data, we made a series of parallel extracts at the county, state, census region (Northeast, Midwest, South, and West), and national levels to derive data on the number of deaths and mid-year population counts by race/ethnicity and age

group, for the years 2011 through 2015 combined. Multiple years of data were pooled together to improve the accuracy of our estimates at the county level (and the same pooling was applied to the state and national extracts for reasons of comparability). We then used the data to construct abridged life tables following the methodology described in an article by Chin Long Chiang, "On Constructing Current Life Tables," published in the *Journal of the American Statistical Association* in September, 1972, Volume 67, Number 339.

In the publicly available information from the WONDER Compressed Mortality Data, the death counts are not disclosed if there are fewer than 10 deaths in a given age group. The age groups for which data was extracted include less than one year, one to four years, five to nine years, 10 to 14 years, 15 to 19 years, 20 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years, 65 to 74 years, 75 to 84 years, and 85 years or older. For larger counties and states, and the nation as a whole, all of the death counts for each

group by age and race/ethnicity were disclosed. For smaller counties and states, however, some of the death counts were not disclosed – particularly for the younger age groups and for smaller racial/ethnic groups.

In order to generate estimates for all groups by race/ethnicity and age, we made a series of substitutions. For age groups with undisclosed death counts, we substituted in the probability of dying from the state level (for the corresponding racial/ethnic group); if the state-level death counts were also undisclosed, we applied the probability of dying from the census region; if the census-region death count was also missing (which was very seldom the case), we applied the probability of dying from the nation overall.

Once all of the abridged life tables were complete, county-level information on mid-year population and death counts (imputed death counts for age groups where substitutions were made) was aggregated to the metro area and regional levels. To calculate estimated life expectancy at birth,

Data and methods

Estimated life expectancy at birth

(continued)

0.5 years was added to the life expectancy estimate for the less than one-year-old age group (since the midpoint of that estimate reflects the population age 0.5 years).

While applying death probabilities from higher levels of geography when they are missing in a local geography does amount to ecological fallacy, the approach finds some justification in the fact that estimated life expectancy does exhibit a high degree of spatial autocorrelation. It is also important to point out that remaining life expectancy for any particular age group is not only a function of the probability of dying for that age group, but also for all of the older age groups in the distribution. Also, given that younger age groups are far more likely to be nondisclosed than the older age groups, even when their death rates are drawn for higher levels of geography, their life expectancy estimates still tend to be based upon a lot of original, geographically specific information.

Still, to avoid reporting highly unreliable estimates – that is, those for which too many

substitutions were made – we only report estimates for which at least 90 percent of the total number of deaths for a population are from age groups that had disclosed death counts in the underlying data (and thus did not require substitution of death probabilities from higher levels of geography). We also only report estimates that are based on at least 100 total deaths (for all age groups combined).

Finally, because the WONDER Compressed Mortality Data does not provide data for individuals of mixed or other race, we cannot make estimates for that broad racial/ethnic group.

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Measures of diversity and segregation

In the profile, we refer to measures of residential segregation by race/ethnicity (the “multi-group entropy index” on page 97 and the “dissimilarity index” on page 98). While the common interpretation of these measures is included in the text of the profile, the data used to calculate them, and the sources of the specific formulas that were applied, are described below.

Both measures are based on census-tract-level data for 1980, 1990, and 2000 from Geolytics, and for 2014 (which reflects a 2010-2014 average) from the 2014 5-year ACS. While the data for 1980, 1990, and 2000 originate from the decennial censuses of each year, an advantage of the Geolytics data we use is that it has been “re-shaped” to be expressed in 2010 census tract boundaries, and so the underlying geography for our calculations is consistent over time; the census tract boundaries of the original decennial census data change with each release, which could potentially cause a change in the value of residential segregation indices even if no actual change in residential

segregation occurred. In addition, while most of the racial/ethnic categories for which indices are calculated are consistent with all other analyses presented in this profile, there is one exception. Given limitations of the tract-level data released in the 1980 Census, Native Americans are combined with Asians and Pacific Islanders in that year. For this reason, we set 1990 as the base year (rather than 1980) in the chart on page 98, but keep the 1980 data in the chart on page 97 as this minor inconsistency in the data is not likely to affect the analysis.

The formula for the multi-group entropy index was drawn from a 2004 report by John Iceland of the University of Maryland, *The Multigroup Entropy Index (Also Known as Theil’s H or the Information Theory Index)* available at <https://www.census.gov/topics/housing/housing-patterns/about/multi-group-entropy-index.html>. In that report, the formula used to calculate the multi-group entropy index (referred to as the “entropy index” in the report) appears on page 8.

The formula for the dissimilarity index is well established, and is made available by the U.S. Census Bureau at <https://www.census.gov/library/publications/2002/dec/censr-3.html>.

Data and methods

Estimates of GDP without racial gaps in income

Estimates of the gains in average annual income and GDP under a hypothetical scenario in which there is no income inequality by race/ethnicity are based on the 2014 5-Year IPUMS ACS microdata. We applied a methodology similar to that used by Robert Lynch and Patrick Oakford in chapter two of [*All-In Nation: An America that Works for All*](#), with some modification to include income gains from increased employment (rather than only those from increased wages). As in the Lynch and Oakford analysis, once the percentage increase in overall average annual income was estimated, 2014 GDP was assumed to rise by the same percentage.

We first organized individuals ages 16 or older in the IPUMS ACS into six mutually exclusive racial/ethnic groups: non-Hispanic White, non-Hispanic Black, Latino, non-Hispanic Asian/Pacific Islander, non-Hispanic Native American, and non-Hispanic Other or multiracial. Following the approach of Lynch and Oakford in *All-In Nation*, we excluded from the non-Hispanic Asian/Pacific Islander category subgroups whose average incomes

were higher than the average for non-Hispanic Whites. Also, to avoid excluding subgroups based on unreliable average income estimates due to small sample sizes, we added the restriction that a subgroup had to have at least 100 individual survey respondents in order to be included.

We then assumed that all racial/ethnic groups had the same average annual income and hours of work, by income percentile and age group, as non-Hispanic Whites, and took those values as the new “projected” income and hours of work for each individual. For example, a 54-year-old non-Hispanic Black person falling between the 85th and 86th percentiles of the non-Hispanic Black income distribution was assigned the average annual income and hours of work values found for non-Hispanic White persons in the corresponding age bracket (51 to 55 years old) and “slice” of the non-Hispanic White income distribution (between the 85th and 86th percentiles), regardless of whether that individual was working or not. The projected individual annual incomes and work hours

were then averaged for each racial/ethnic group (other than non-Hispanic Whites) to get projected average incomes and work hours for each group as a whole, and for all groups combined.

One difference between our approach and that of Lynch and Oakford is that we include all individuals ages 16 years and older, rather than just those with positive income. Those with income values of zero are largely non-working, and were included so that income gains attributable to increased average annual hours of work would reflect both expanded work hours for those currently working and an increased share of workers – an important factor to consider given sizeable differences in employment rates by race/ethnicity. One result of this choice is that the average annual income values we estimate are analogous to measures of per capita income for the age 16 and older population and are notably lower than those reported in Lynch and Oakford; another is that our estimated income gains are relatively larger as they presume increased employment rates.



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Cover photo courtesy of Edwin Valdez.

Advancing Health Equity and Inclusive Growth Profiles are products of a partnership between PolicyLink and PERE, the Program for Environmental and Regional Equity at the University of Southern California.

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