

Equitable Growth Profile of the **City of Long Beach**

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Summary

Demographic shifts are occurring within the city of Long Beach. The White population is now smaller, while the majority of the city's residents are now people of color from a variety of racial and ethnic backgrounds. An examination of the quality of life for people of color and immigrants in Long Beach reveals deep and persistent racial and economic inequities in employment, wages, education, health, housing, and transportation. The city's prosperity hinges upon the well-being of this growing, diverse population, and it will take deliberate and intentional action to expand opportunities in Long Beach.

In fact, closing racial gaps in income could have boosted the regional economy (of which Long Beach is a critical part) by nearly \$502 billion in 2015. Recent efforts indicate that local leaders are committed to equity. These efforts include the creation of an Office of Equity within the city and the Everyone In economic inclusion initiative. Through such efforts, local leaders can put all residents on the path toward reaching their full potential, and secure a bright economic future for all.

Indicators

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Indicators

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Indicators

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- Income Gains by Race/Ethnicity, 2015
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A Foreword from East Yard Communities for Environmental Justice

Long Beach is home to a rich tapestry of cultures and history that have been woven together out of opportunity and tragedy—the city is home to Tongva people who are the original inhabitants of this land and still go unrecognized, the Japanese community who inhabited Terminal Island until forced removal and internment during World War II, one of the largest Cambodian enclaves outside of Cambodia formed by refugees fleeing the Khmer Rouge, Filipinx immigrants and African Americans from the South who moved to find employment at the now-closed Naval Base, and the large Latinx community who makes up the backbone of our service industry. It is a vibrant and beautiful city that half a million people call home, thanks to these working-class and immigrant residents.

Long Beach has evolved over many decades to form what we see now, and though there exists a historic and continued practice of displacement of marginalized peoples, it is the power of the most disenfranchised that has fueled progress for change in this city.

From minimum-wage increases through Measure N, inclusion of the Community Stability Toolkit in the Lower LA River Revitalization Plan, the Values Act to protect all those living in Long Beach, and youth successfully moving the city to allocate \$200,000 for the development of a strategic plan to establish a Long Beach Children and Youth Fund, community leaders have never been afraid to take on the status quo to fight for better living and working conditions. We hope that this report serves as a reminder to those of us struggling for an equitable world that when we fight together we take the necessary steps to actualize a better society that functions for all.



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Acknowledgments

PolicyLink and the Program for Environmental and Regional Equity (PERE) at the University of Southern California are grateful to Citi Community Development for their generous support of this project. The equitable growth profile of Long Beach, California, explores the long-term demographic and economic trends of the city and dozens of equity indicators disaggregated by race and ethnicity as well as gender, nativity, education, and income, and focuses on barriers as well as opportunities to foster inclusion. The profile is designed to be a resource for all seeking to enhance prosperity for everyone in Long Beach, including advocacy groups, government agencies, elected officials, funders, business and civic leaders, and more. The summary report that accompanies this profile highlights leading indicators and offers policy recommendations.

The profile was written by Jamila Henderson at PolicyLink; the data, charts, and maps were prepared by Justin Scoggins at PERE, Jamila Henderson at PolicyLink, and Sabrina Kim at PERE; and Sarah Treuhaft at PolicyLink assisted with editing while Rosamaria Carrillo at PolicyLink

helped with formatting and design. The summary was written by Mary Lee at PolicyLink with editing assistance from Kim Tabari at PERE.

In addition to the data analysis contained in the profile, the summary report draws upon insights that were shared during more than 20 interviews conducted with local community leaders and residents. Their comments helped shape the policy recommendations included in the summary.

While the profile and summary do not exhaustively address every challenge facing Long Beach, nor every asset available in the region, our hope is that these products can help guide efforts to build an equitable and inclusive city. We would like to give a special thanks to the following groups that participated in interviews, attended meetings, or provided feedback on the profile and summary:

Advancement Project California
 Cal State Long Beach
 Early Childhood Education-City Health Department
 East Yard Communities for Environmental Justice
 Economic & Policy Impact Center
 Housing Long Beach

Human Relations Commission
 Khmer Girls in Action
 Latinos in Action
 Legal Aid Foundation of Los Angeles
 Local Initiatives Support Corporation, Los Angeles
 Long Beach City College
 Long Beach City Council, District 1
 Long Beach City Council, District 5
 Long Beach City Council, District 9
 Long Beach Community Action Partnership
 Long Beach Development Services Department
 Long Beach Forward
 Long Beach Gray Panthers
 Long Beach Grocery Co-op
 Long Beach Immigrant Rights Coalition
 Long Beach Office of Equity
 Long Beach Residents Empowered
 Peer Health Exchange
 Power 4 Youth
 Restore I.N.K.
 The California Endowment
 The LGBTQ Center Long Beach
 United Cambodian Community

Introduction



Introduction

Overview

Equity – ensuring full inclusion of the entire city’s residents in the economic, social, and political life of the city, regardless of race/ethnicity, nativity, age, gender, sexual orientation, neighborhood of residence, or other characteristics – is an essential element to achieving economic inclusion.

Knowing how a city stands in terms of equity is a critical first step in achieving economic inclusion. To assist communities with that process, PolicyLink and the Program for Environmental and Regional Equity (PERE) developed a framework to understand and track how cities perform on a series of indicators of equitable growth.

This profile was developed to help the city of Long Beach and community partners plan for equitable growth. In the course of drafting this profile, input was sought from a cross-section of Long Beach stakeholders who reflected on the city’s challenges and opportunities for overcoming them. Community residents, activists, advocates, elected officials, and civic leaders all shared

their insights and ideas. We hope that it is broadly used by advocacy groups, elected officials, planners, business leaders, funders, and others working to build a stronger and more equitable city.

Long-Standing Barriers to Opportunity in Long Beach

Ensuring that policies and systems serve to increase inclusion and remove barriers is particularly important given the history of city and regional development in the United States. Regions and cities are highly segregated by race and income. According to a 2009 analysis, this is particularly true in the Los Angeles metro area, which includes Long Beach. Out of the 100 largest U.S. metro areas, the Los Angeles metro area ranked in the top 15 on measures of segregation between Whites and Blacks and Whites and Latinx residents.¹ 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.

As a result of historical government policies and practices, some neighborhoods have physical conditions that promote positive health outcomes, while others may make residents sick. For example, exposure to toxic and environmental hazards is greater for people of color than their White counterparts. Long Beach has some of the worst air pollution in the nation, caused in large part by the very industries and land uses that spurred the city’s economy decades ago. Diesel exhaust from trucks, ships, and trains also pose extreme health hazards, and oil refining has compromised water quality. Exposure to toxins is compounded by the fact that housing for low-income residents and people of color is typically adjacent to these problematic usage areas.

These historic patterns of inequity and exclusion were often created and maintained by public policies at the federal, state,

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Overview

(continued)

regional, and local levels. From redlining to exclusionary zoning practices and more, government policies have fostered racial inequities in health, wealth, and opportunity. Reversing the trends and shifting to a more inclusive city requires dismantling barriers and enacting proactive policies that expand opportunity. Equity can be achieved through policy and systems changes that remove barriers and build opportunity. Equity addresses 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

About the Data

The data presented here are drawn from a regional equity database that covers the largest 100 cities and largest 150 regions in the United States. This 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). See the “Data and methods” section for a more detailed list of data sources.

Note that while we disaggregate most indicators by major racial/ethnic groups (i.e., White, Black, Latinx, Asian or Pacific Islander, and Mixed/other), figures for the Asian or Pacific Islander and Latinx populations as a whole often mask a wide variation in educational and economic indicators. Please note that we use *Latinx* as the gender-neutral alternative to Latino and Latina, and have used a similar approach for Filipino/a. There is often too little data to break out indicators for the Native American population. Each of the racial/ethnic groups mentioned above is mutually exclusive (unless noted otherwise). Mixed/other refers to all people (not of Hispanic origin) who identify as two or more races (“Mixed race”) or who identify as a single race *other* than those listed above (“Other”).

In some instances, we disaggregate the data by

race/ethnicity and gender (or another breakdown in addition to race/ethnicity). At times we report on *people of color* (POC), which includes all racial/ethnic groups who do not identify as non-Hispanic White. There is no perfect model for classifying individuals by race/ethnicity. Race is a social construct, not a biological one, and an equitable society would not have major differences across racial groups. See the “Data and methods” section for more details on racial /ethnic origin.

We recognize that inequities exist across many characteristics in addition to race/ethnicity and nativity, including income, gender, age, ability, sexual orientation, and neighborhood. Unfortunately, because we are working with survey data and seek to provide data for cities, we are limited in the extent to which we can disaggregate the data.

¹ Michigan Population Studies Center, Race Segregation for 100 Largest Metro Areas (2018), <https://www.psc.isr.umich.edu/dis/census/segregation.html>.

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/publications/moving-understanding-action-health-equity-social-determinants-health-frameworks-and>.

Introduction

What is an equitable city?

Cities are equitable when all residents – regardless of race/ethnicity, nativity, neighborhood, age, gender, sexual orientation, or other characteristics – can fully participate in the city’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 city 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 city (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.

Cities 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.

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

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Equity indicators framework

The indicators in this profile are presented in five sections. The first section describes the city's demographics. The next three sections present indicators of the city'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 city, 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 city 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 city'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 city'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 city'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?

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Geography

This profile describes demographic, economic, and health conditions in the city of Long Beach, California, portrayed in black on the adjacent map. Long Beach is located in the southern part of Los Angeles County, adjacent to Orange County. Long Beach is also situated in the Los Angeles metropolitan statistical area, which includes Los Angeles and Orange counties.

Unless otherwise noted, all data follow the city geography. Some exceptions, due to lack of data availability, will be noted. Information on data sources and methodology can be found in the “Data and methods” section.



Demographics



Demographics

Summary

Who lives in the city and how is this changing?

The city of Long Beach is diverse, with nearly three-quarters of the city's residents people of color. The Latinx population is driving growth, followed by Asians or Pacific Islanders, and those of Mixed race. Immigrants comprise about one-quarter of the city's population. Youth are largely people of color (86 percent) while only about half of seniors are people of color (47 percent). This difference in the proportion of youth and seniors of color is important, as a large gap (racial generation gap) corresponds with lower investments in educational systems and infrastructure to support youth.¹ This 39 percentage-point racial generation gap has improved however, declining 5 percentage points since 2000.

Share of the population made up of people of color:

72%

Growth in the Latinx population since 2000:

21%

Racial generation gap:

39 percentage points

¹Julien Lafortune, Jesse Rothstein, and Diane Whitmore Schanzenbach, "School Finance Reform and the Distribution of Student Achievement," IRLE Working Paper No. 100-16 (Berkeley, CA: Institute for Research on Labor and Employment, 2016), <http://irle.berkeley.edu/workingpapers/100-16.pdf>.

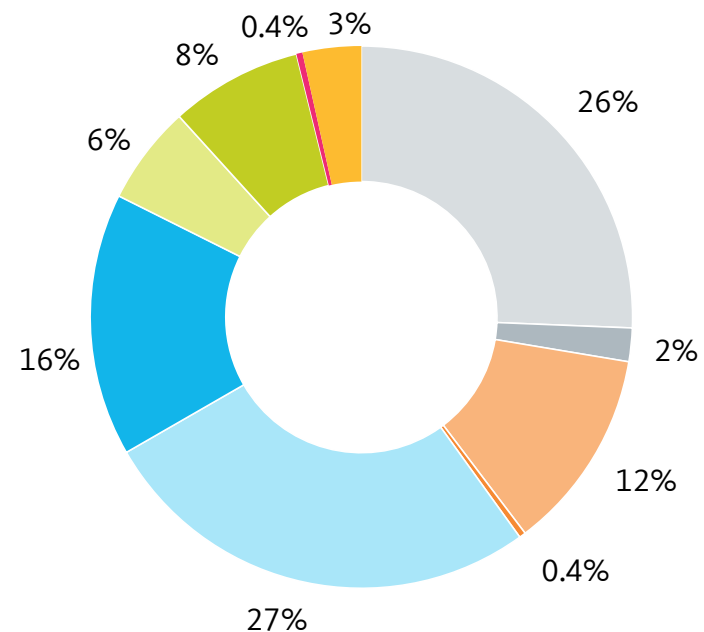
Demographics

Who lives in the city and how is it changing?

The city of Long Beach is diverse, with nearly three-quarters of the city’s residents people of color. The Latinx population is the largest racial/ethnic group (42 percent of the city’s population) followed by Whites (28 percent). Immigrants, largely Latinx and Asian or Pacific Islander, are about one-quarter of the city’s population.

Race/Ethnicity and Nativity, 2016

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



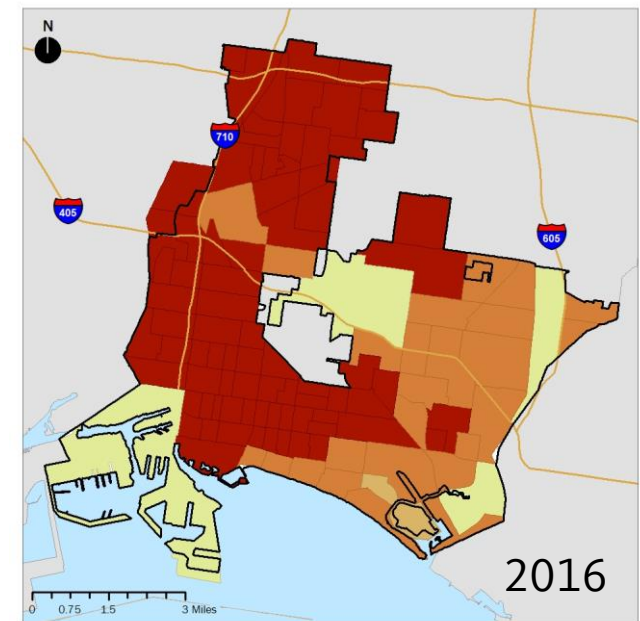
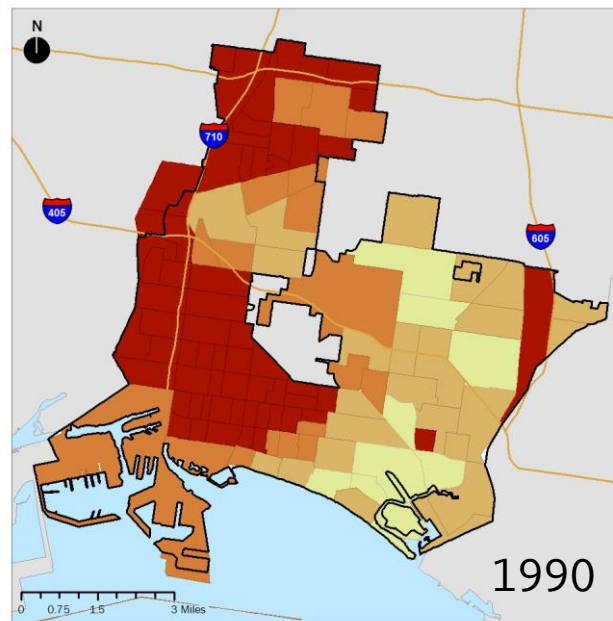
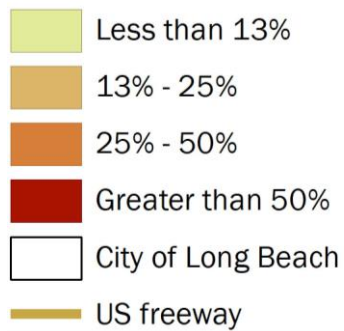
Source: Integrated Public Use Microdata Series.
 Note: Data represents a 2012 through 2016 average.

Demographics

Who lives in the city and how is it changing?

Most neighborhoods in Long Beach are majority people of color. This is a change since 1990, when there were far more neighborhoods where only about one in 10 residents were people of color.

People of Color by Census Tract, 1990 and 2016



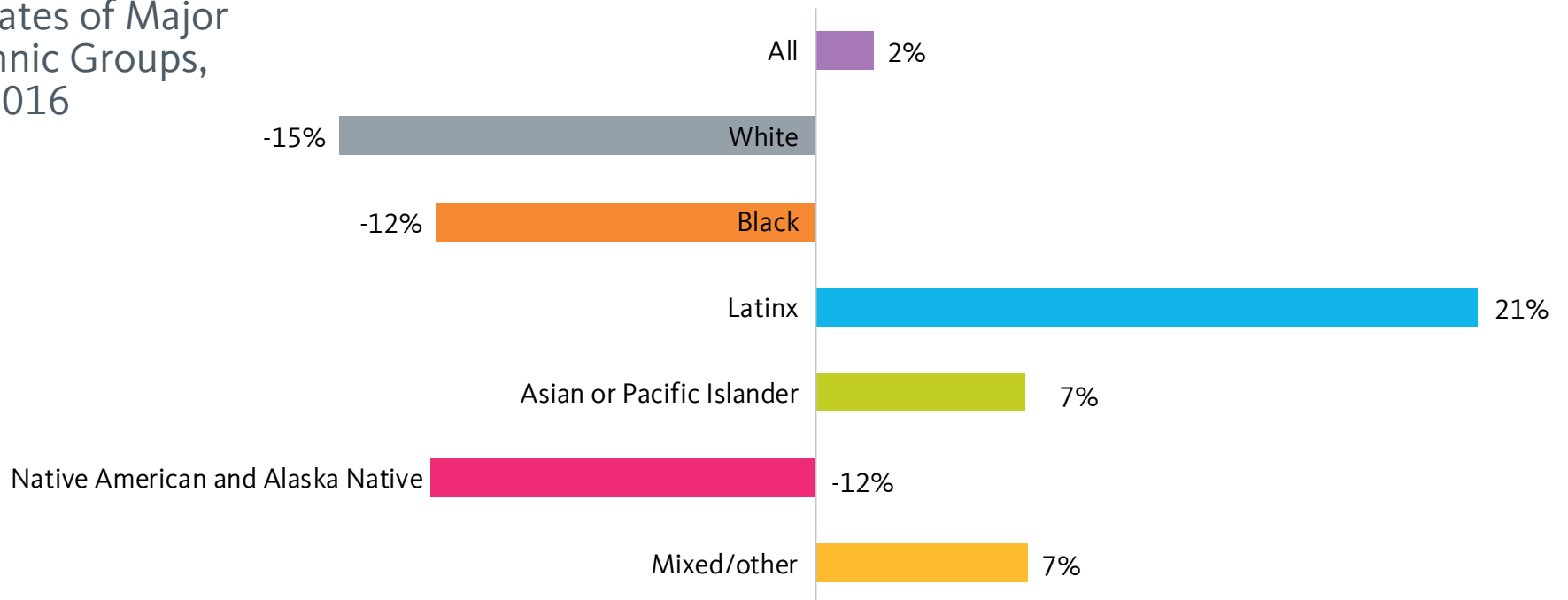
Sources: U.S. Census Bureau, GeoLytics, Inc.
 Note: Data for 2016 represents a 2012 through 2016 average. The gray area in the center of the map corresponds to the city of Signal Hill and is excluded from this analysis.

Demographics

Who lives in the city and how is it changing?

The Latinx population, Asians or Pacific Islanders, and those who identify as Mixed race had the fastest population growth since 2000. Whites, Blacks, and Native Americans and Alaska Natives experienced population decline between 2000 and 2016.

Growth Rates of Major Racial/Ethnic Groups, 2000 to 2016



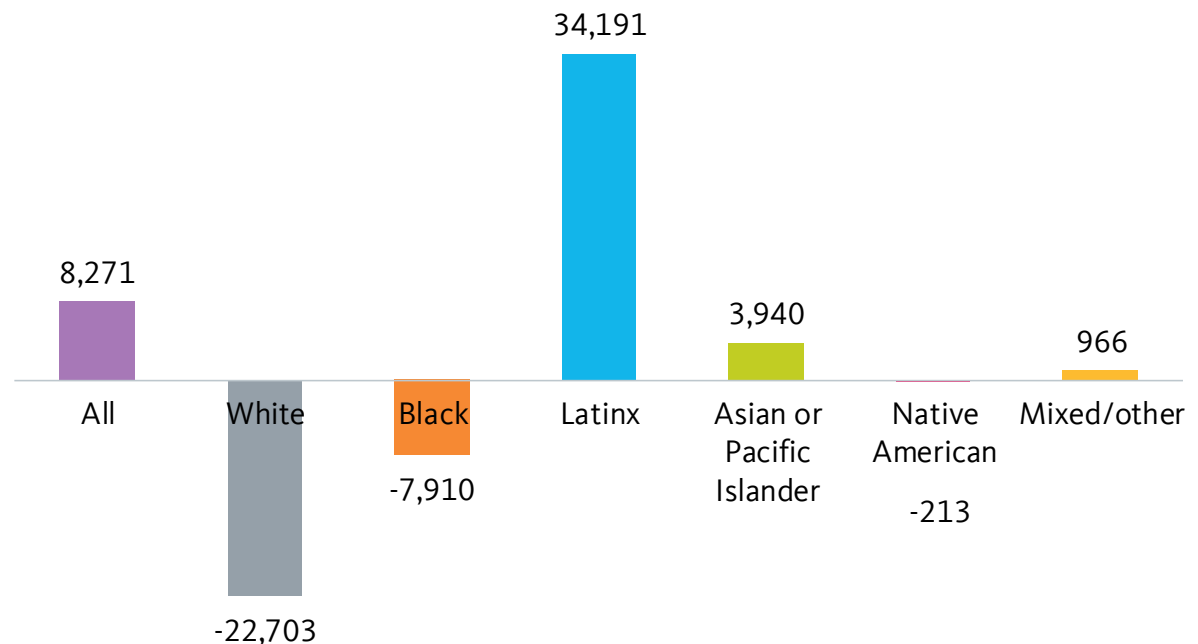
Source: U.S. Census Bureau.
 Note: Data for 2016 represents a 2012 through 2016 average.

Demographics

Who lives in the city and how is it changing?

The Latinx population grew by 34,000 since 2000, while the Asian or Pacific Islander and Mixed-race populations grew by 3,900 and 970, respectively. The White population experienced the largest decline, decreasing by 22,700 since 2000.

Change in Population for Major Racial/Ethnic Groups, 2000 to 2016



Source: U.S. Census Bureau.

Note: Data for 2016 represents a 2012 through 2016 average.

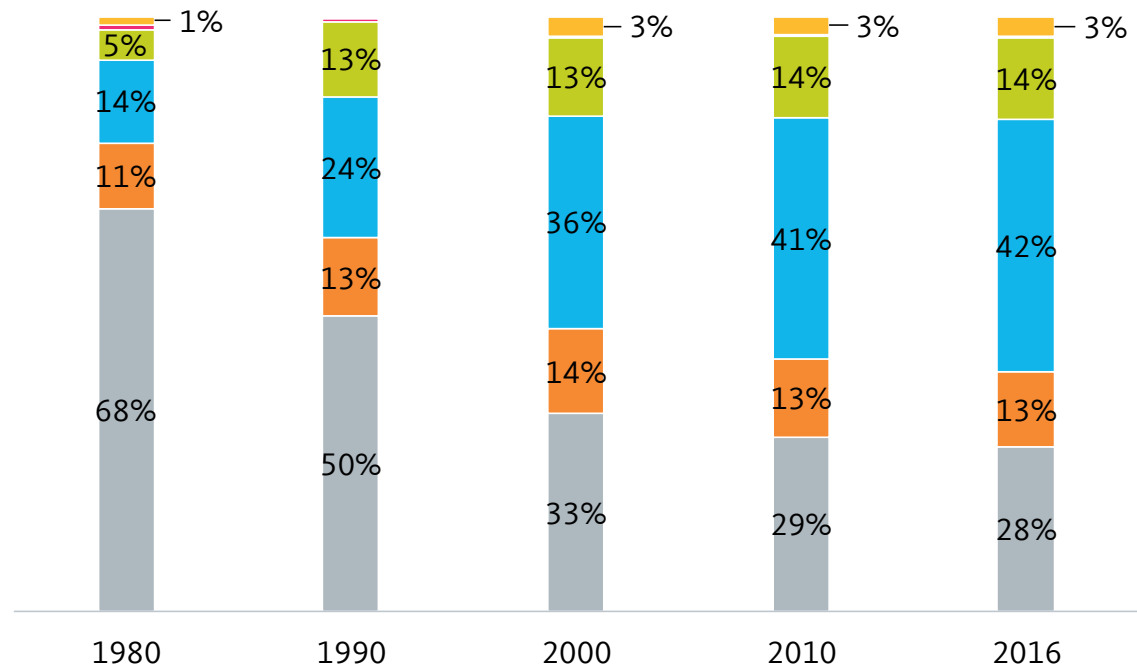
Demographics

Who lives in the city and how is it changing?

Long Beach became a majority people-of-color city several decades ago. While Whites declined as a share of the population since 1980, the Black population share remained relatively stable. The Latinx and Asian or Pacific Islander share grew substantially since 1980.

Racial/Ethnic Composition, 1980 to 2016

- Mixed/other
- Native American and Alaska Native
- Asian or Pacific Islander
- Latinx
- Black
- White



Source: U.S. Census Bureau.
 Note: Data for 2016 represents a 2012 through 2016 average.

Demographics

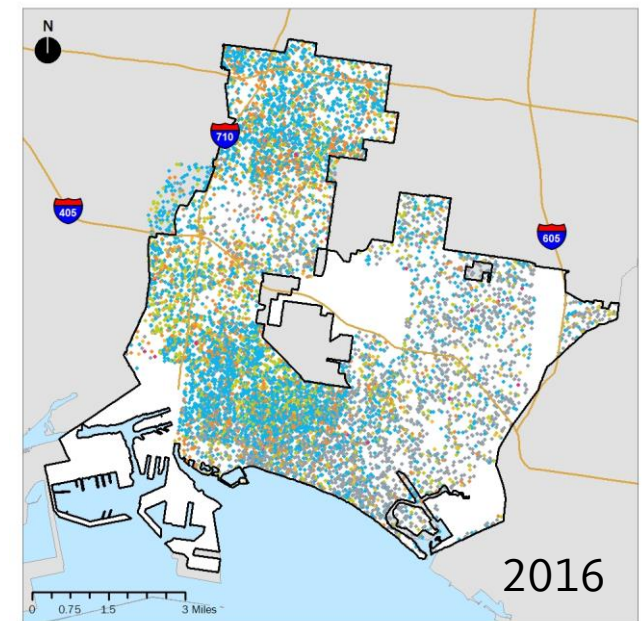
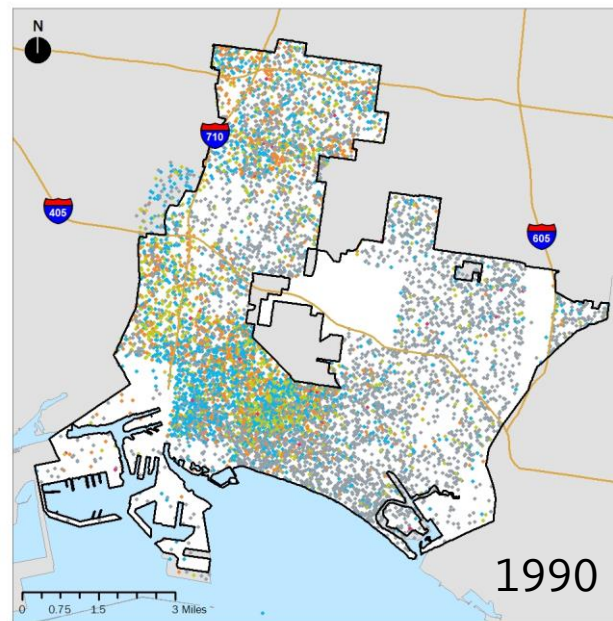
Who lives in the city and how is it changing?

People of color have fueled population growth over the last few decades. There are higher concentrations of the Latinx population in the north and southwest parts of the city compared to 1990.

Race/Ethnicity Dot Map by Census Tract, 1990 and 2016

1 dot = 50 people

- Non-Hispanic White
 - Black
 - Latinx
 - Asian/Pacific Islander
 - American Indian or Alaska Native
 - Other or Mixed Race
- City of Long Beach
- US freeway



Source: U.S. Census Bureau, Geolytics, Inc.
 Note: Data for 2016 represents a 2012 through 2016 average. The gray area in the center of the map corresponds to the city of Signal Hill and is excluded from this analysis.

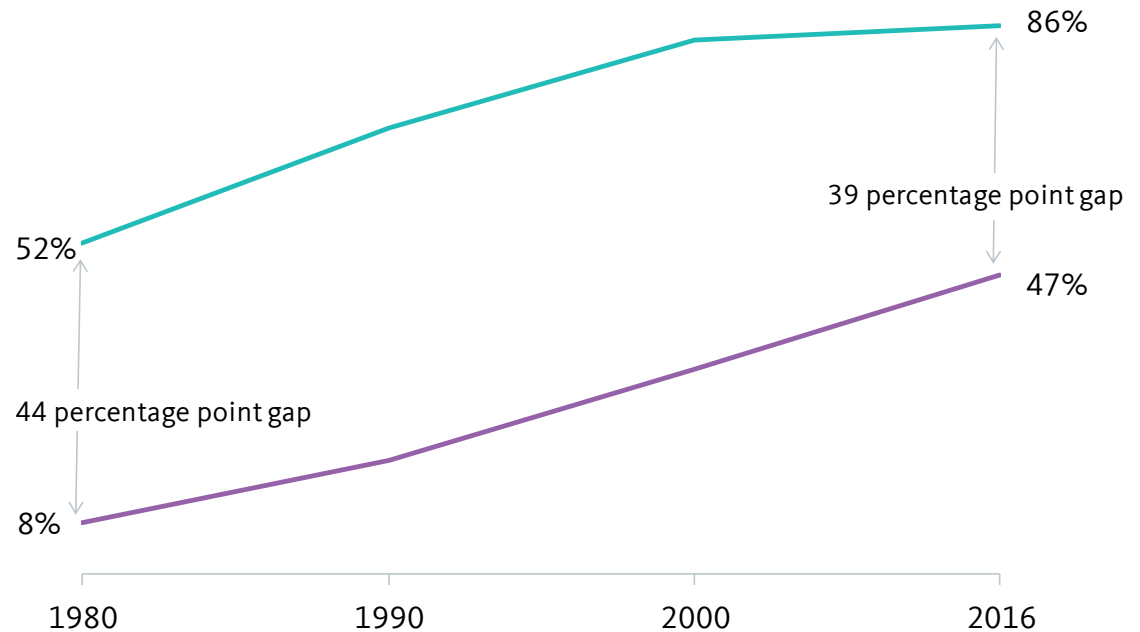
Demographics

Who lives in the city and how is it changing?

The racial generation gap in the city is shrinking. Today, 86 percent of the city's youth are people of color, compared with 47 percent of seniors. The share of people of color has grown for both groups since 1980. The 39 percentage-point gap dropped from 44 percentage points in 1980.

Racial Generation Gap: Percent People of Color (POC) by Age Group, 1980 to 2016

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



Source: U.S. Census Bureau.

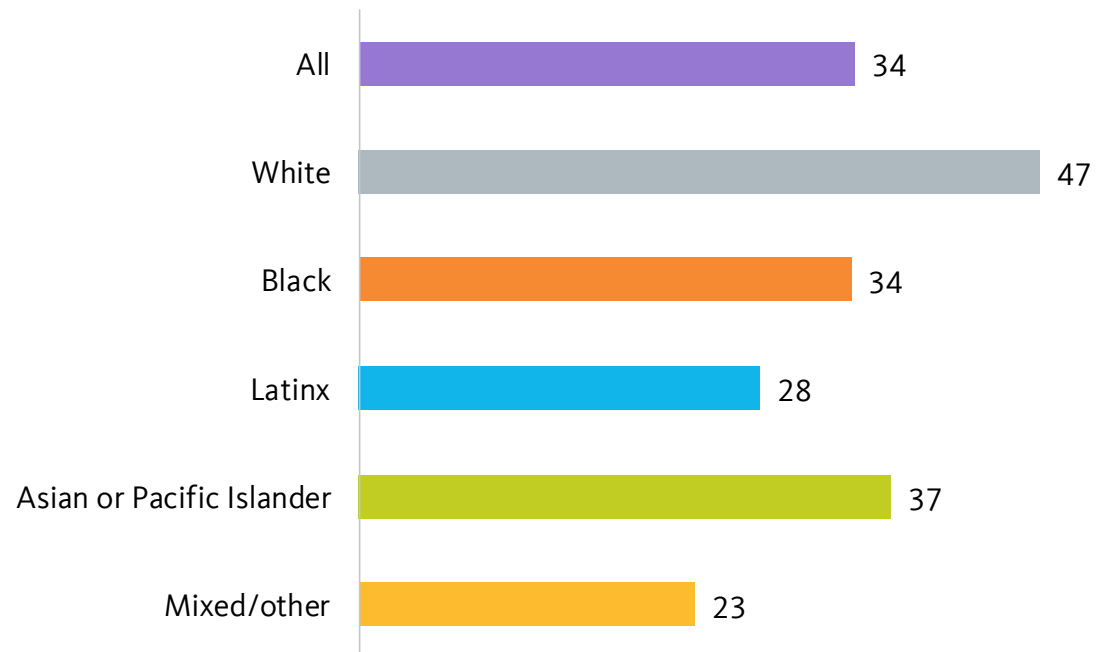
Note: Data for 2016 represents a 2012 through 2016 average. Youth include persons under age 18 and seniors include those ages 65 or older. Gap value may not equal the difference in percentages shown because of rounding.

Demographics

Who lives in the city and how is it changing?

The city's communities of color are more youthful than its White population. The Latinx and Mixed-race populations in particular have a median age (28 and 23 years, respectively) below that of the city overall (34 years).

Median Age (in Years) by Race/Ethnicity, 2016



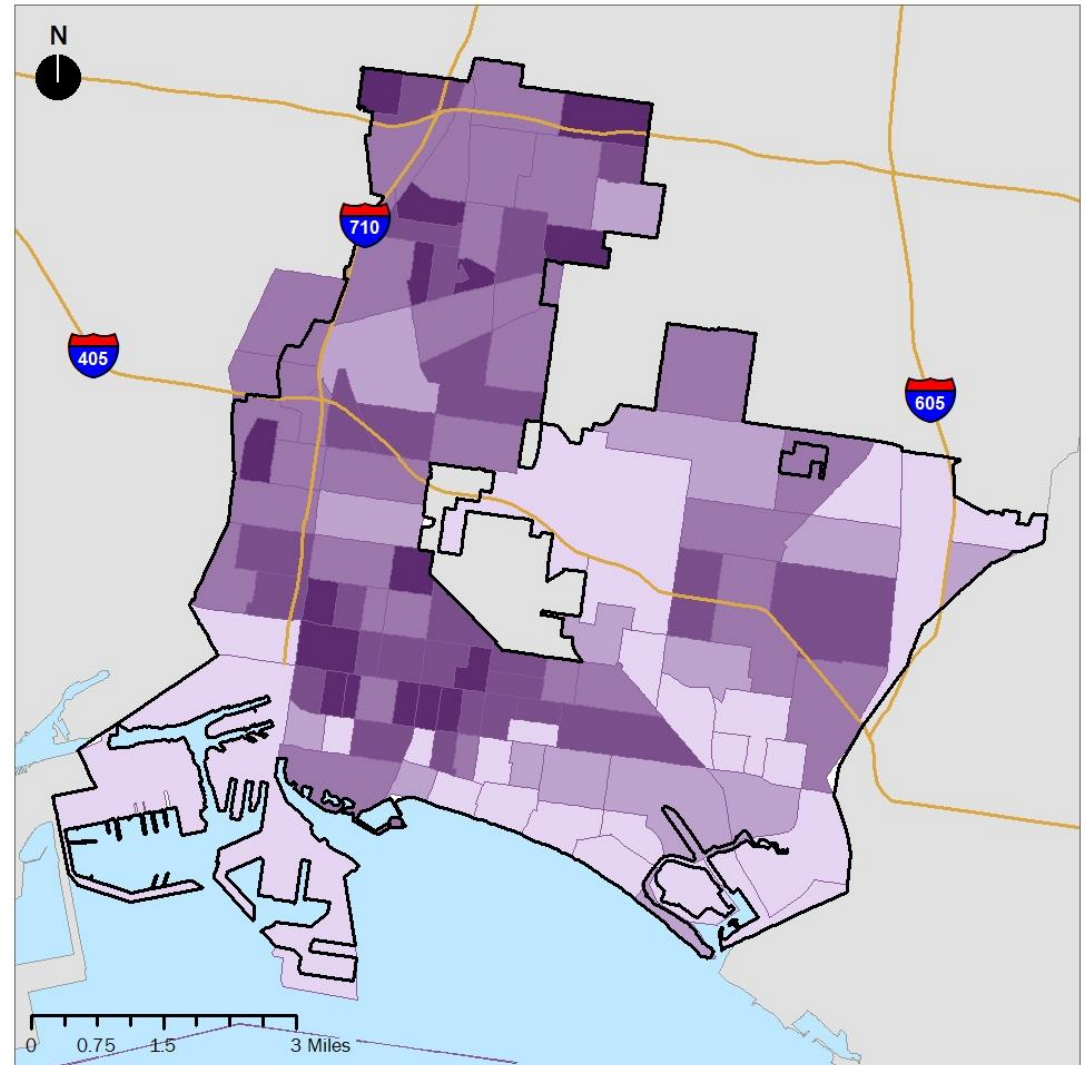
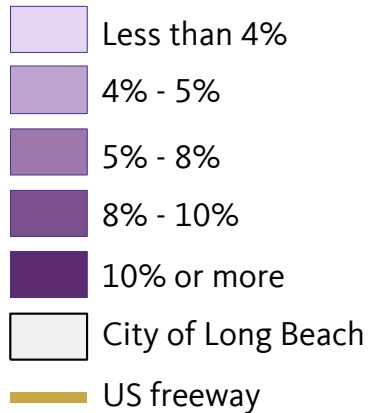
Demographics

Who lives in the city and how is it changing?

Young children are concentrated in the north and in southwest Long Beach.

These areas of the city have higher than average proportions of low-income households (slide 72) and a high concentration of pollutants (slide 63).

Population Under 5 Years, By Census Tract, 2016



Source: U.S. Census Bureau.

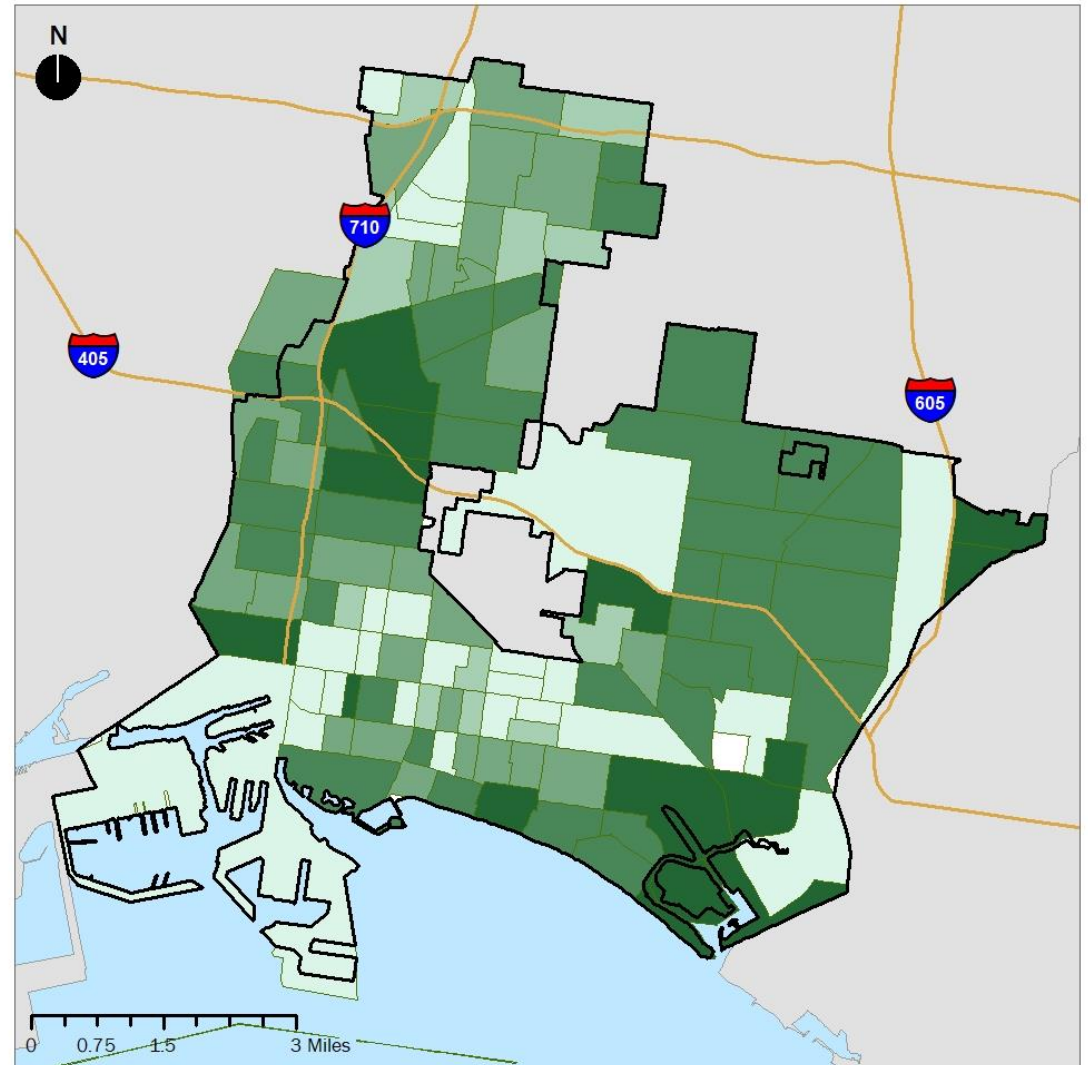
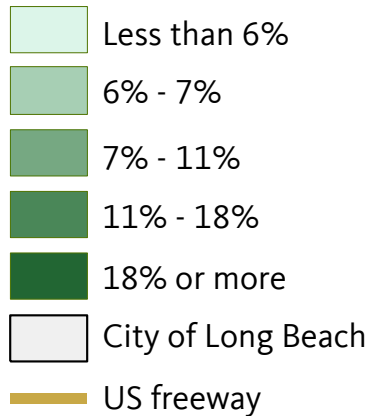
Note: Data represents a 2012 through 2016 average. The gray area in the center of the map corresponds to the city of Signal Hill and is excluded from this analysis.

Demographics

Who lives in the city and how is it changing?

There is a higher concentration of seniors in areas such as east Long Beach, which has a lower concentration of young children (slide 26).

Population 65 Years and Over, By Census Tract, 2016



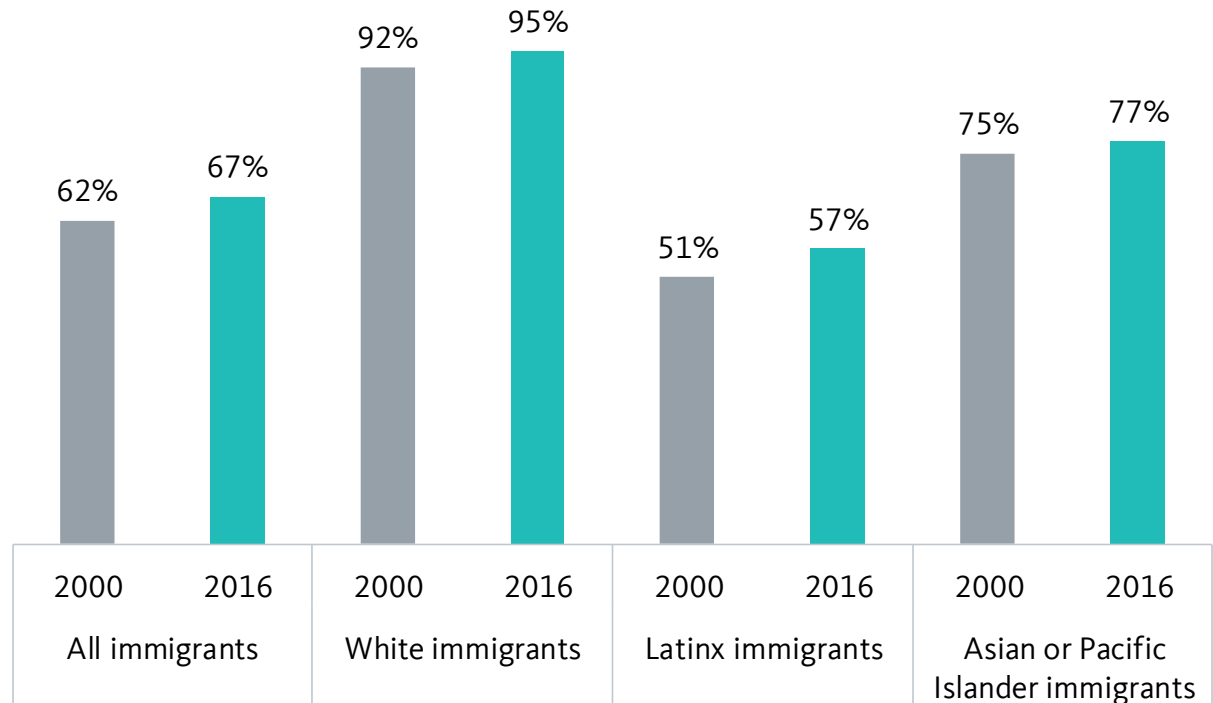
Source: U.S. Census Bureau.
 Note: Data represents a 2012 through 2016 average. The gray area in the center of the map corresponds to the city of Signal Hill and is excluded from this analysis.

Demographics

Who lives in the city and how is it changing?

Although English fluency varies across racial and ethnic immigrant groups, English language proficiency has improved since 2000. Latinx immigrants have the lowest levels, yet also experienced the largest gains in English proficiency since 2000 (6 percentage-point increase).

Immigrants 5 Years and Over: Speaks English Well/Very Well/Only, by Race/Ethnicity, 2000 and 2016



Source: Integrated Public Use Microdata Series. Universe includes all immigrants ages 5 or older.

Note: Data for some groups by race/ethnicity/nativity is excluded because of small sample size. Data for 2016 represents a 2012 through 2016 average.

Economic vitality



Economic vitality

Summary

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

Although Long Beach is situated in the dynamic Los Angeles metropolitan region, growth in jobs and economic output is not translating into improved living standards for many Long Beach workers. Since 2000, wages for the bottom half of Long Beach workers combined declined. The city's Black workers continue to face higher levels of unemployment at all levels of educational attainment – signaling persistent discrimination in the job market. On the bright side, as the city's population has become more diverse, so has its middle class: 26 percent of middle-class households were headed by people of color in 1979 compared with 62 percent in 2016.

Unemployment rate for Black workers with only a high school diploma:

18%

Unemployment rate for White workers with only a high school diploma:

11%

Share of middle-class households headed by people of color:

62%

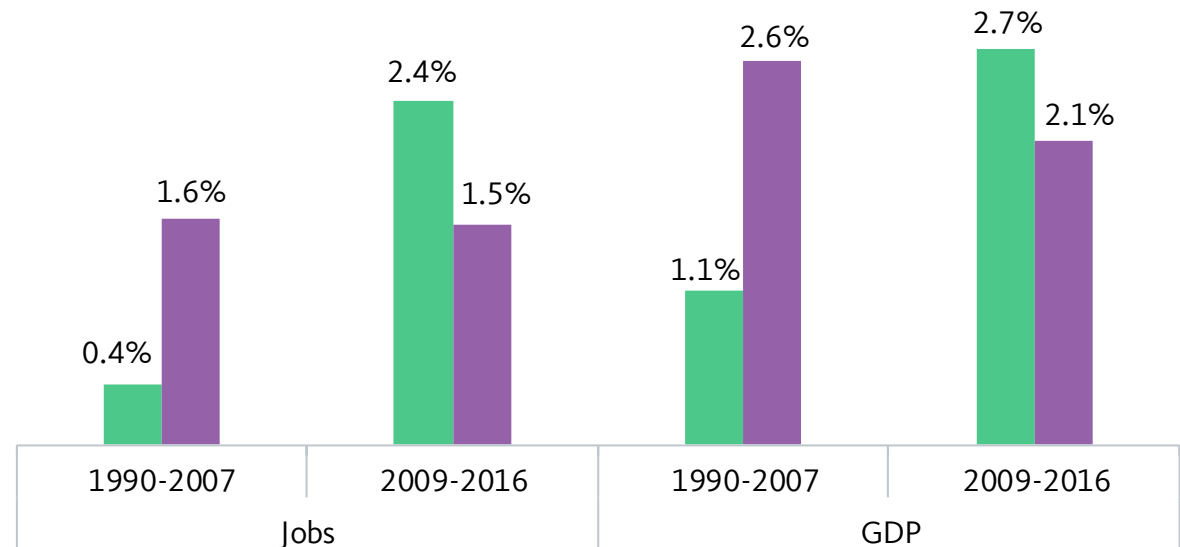
Economic vitality

Is economic growth creating more jobs?

Although economic growth in Los Angeles County outpaced growth in the U.S. following the Great Recession, the nation experienced stronger growth in jobs and GDP compared to LA County in the 1990s and 2000s.

Average Annual Growth in Jobs and GDP, 1990 to 2007 and 2009 to 2016

- Los Angeles County, CA
- All U.S.



Source: U.S. Bureau of Economic Analysis.

Note: Data is unavailable for the city of Long Beach; however, Long Beach is a part of the broader Los Angeles regional economy: 77 percent of workers living in Long Beach were employed in the greater Los Angeles metropolitan region in 2015, according to the U.S. Census Bureau Longitudinal Employer-Household Dynamics data.

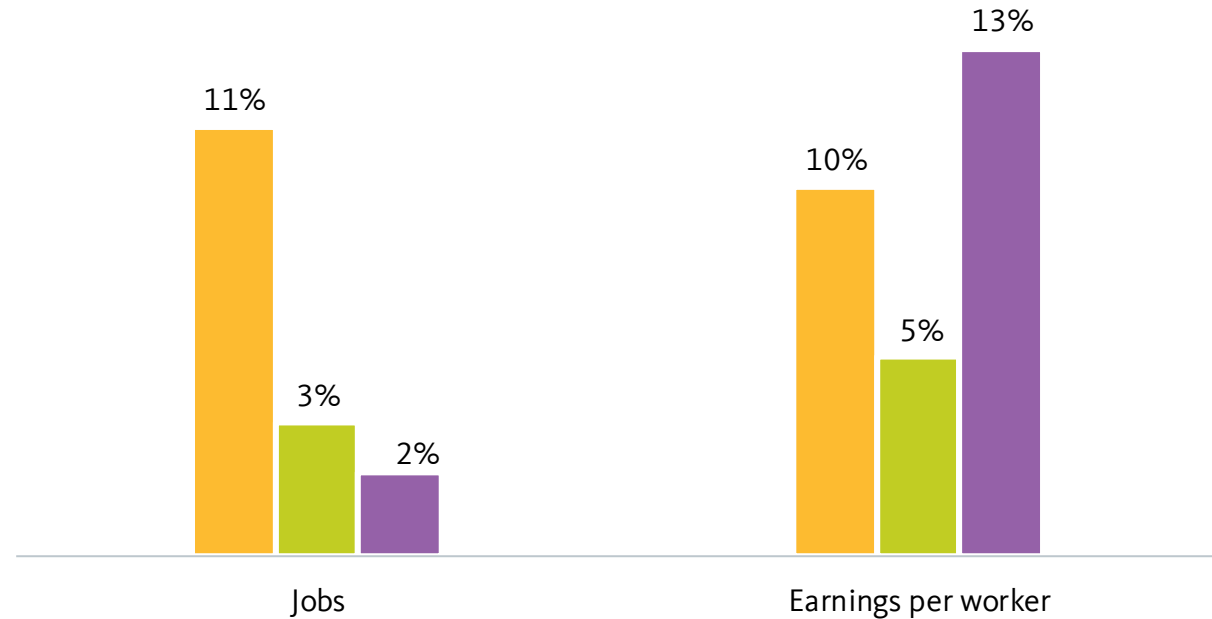
Economic vitality

Is economic growth creating more jobs?

Los Angeles County is growing low-wage jobs. Although high-wage jobs had the strongest wage growth since 2000, their numbers have grown slowest. Middle-wage jobs, which have traditionally provided pathways to the middle class, have grown at a slower rate (3 percent) than the nation overall (6 percent).

Growth in Jobs and Earnings by Wage Level, 2000 to 2016

- Low-wage
- Middle-wage
- High-wage



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

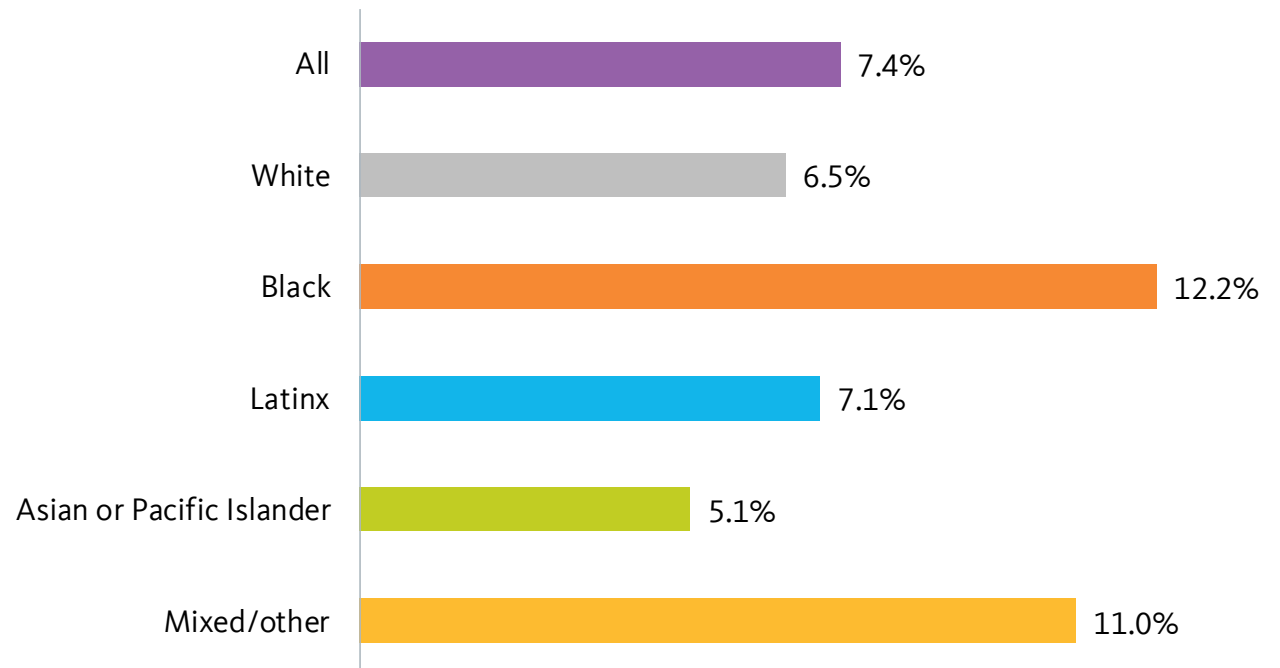
Note: Data is for Los Angeles County. In Los Angeles County, average annual wages for low-, middle-, and high-wage jobs are \$33,985, \$60,703, and \$103,258, respectively (in 2016 dollars). Data is unavailable for the city of Long Beach; however, Long Beach is a part of the broader Los Angeles regional economy: 77 percent of workers living in Long Beach were employed in the greater Los Angeles metropolitan region in 2015, according to the U.S. Census Bureau Longitudinal Employer-Household Dynamics data.

Economic vitality

Can everyone access good jobs?

Racial barriers to employment persist. Black residents and those who identify as Mixed race face greater barriers in finding employment and have higher-than-average unemployment rates (12 and 11 percent, respectively).

Unemployment Rate by Race/Ethnicity, 2016



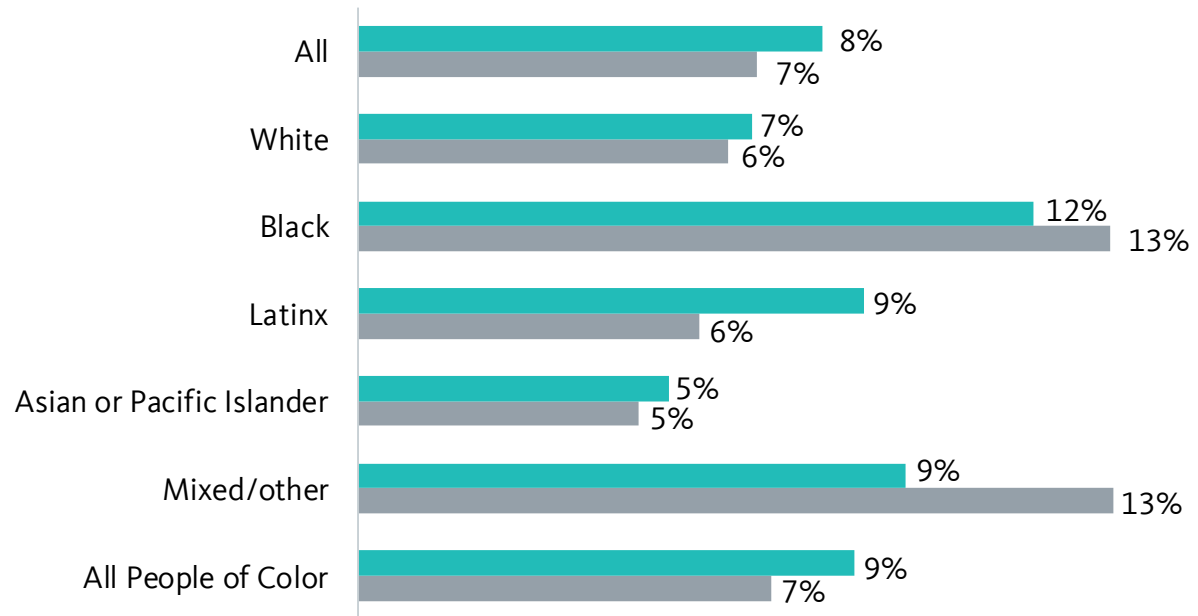
Economic vitality

Can everyone access good jobs?

The Latinx and Mixed-race populations experience the largest gaps in employment by gender. Mixed-race men have an unemployment rate of 13 percent while the unemployment rate for Mixed-race women is 9 percent. Latinas in the labor force have a higher unemployment rate (9 percent) than their male counterparts (6 percent).

Unemployment Rate by Race/Ethnicity and Gender, 2016

■ Female
■ Male



Source: Integrated Public Use Microdata Series. Universe includes the civilian noninstitutional labor force ages 25 through 64.
Note: Data represents a 2012 through 2016 average.

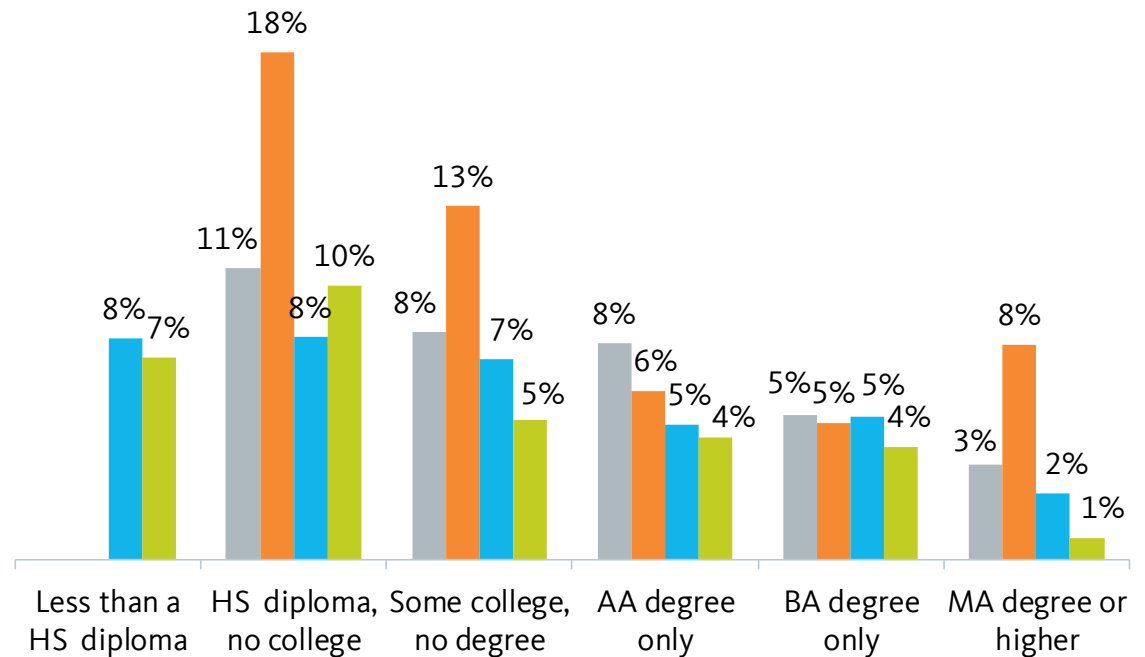
Economic vitality

Can everyone access good jobs?

Black workers tend to face high unemployment regardless of education level. This is especially true for Black workers with only a high school diploma: nearly one in five are unemployed. The gaps by race diminish for those with a BA only, but then increase with higher levels of education.

Unemployment Rate by Educational Attainment and Race/Ethnicity, 2016

- White
- Black
- Latinx
- Asian or Pacific Islander



Source: Integrated Public Use Microdata Series. Universe includes the civilian noninstitutional labor force ages 25 through 64.

Note: Unemployment for Whites and Blacks with less than a HS diploma and for Native Americans and Mixed/others at all education levels is excluded because of small sample size. Data represents a 2012 through 2016 average.

Economic vitality

Can all workers earn a living wage?

People of color have lower wages than Whites at every level of education. Among those with a bachelor’s degree, wages are over \$7 per hour lower for people of color compared to Whites. This gap diminishes to \$2.50 per hour for those with a master’s degree or higher.

Median Hourly Wage by Educational Attainment and Race/Ethnicity, 2016

- White
- All People of Color



Source: Integrated Public Use Microdata Series. Universe includes civilian noninstitutional full-time wage and salary workers ages 25 through 64.
 Note: Data represents a 2012 through 2016 average. Values are in 2016 dollars.

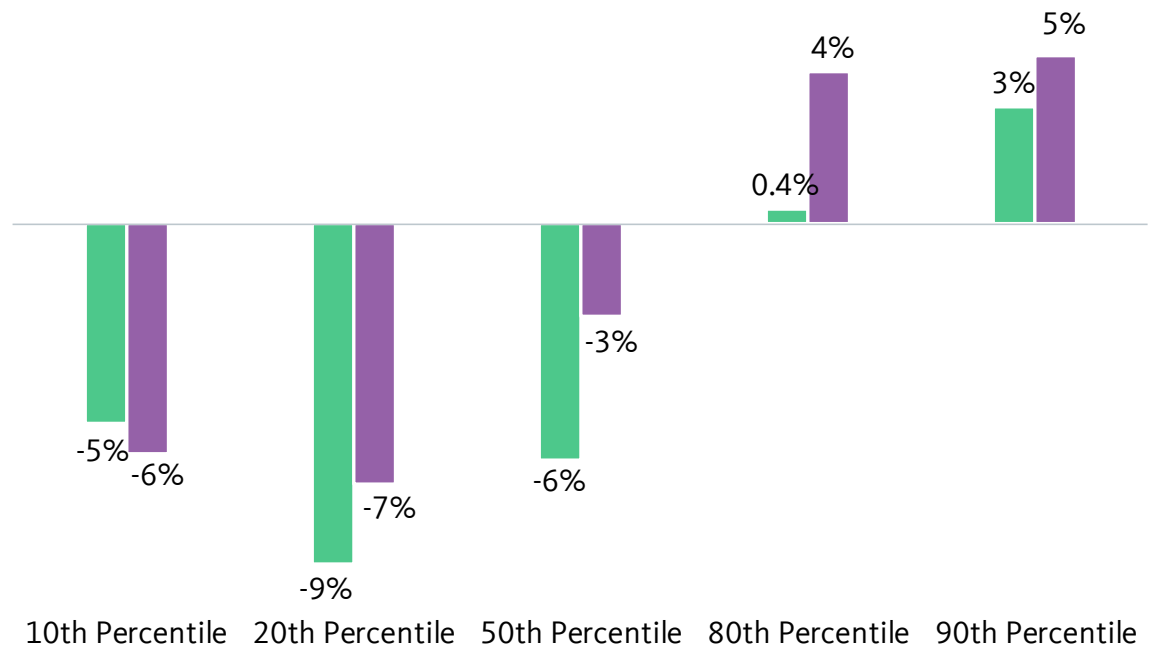
Economic vitality

Are incomes increasing for all workers?

Annual earnings have declined for many workers with incomes at the 50th percentile and below. Wages for the bottom half of workers declined, while wages increased for workers in the 80th percentile and above. Note: A worker at the 80th percentile earns more than 80 percent of all workers and less than 20 percent of all workers.

Real Earned Income Growth for Full-Time Wage and Salary Workers Ages 25-64, 2000 to 2016

- Long Beach City
- United States



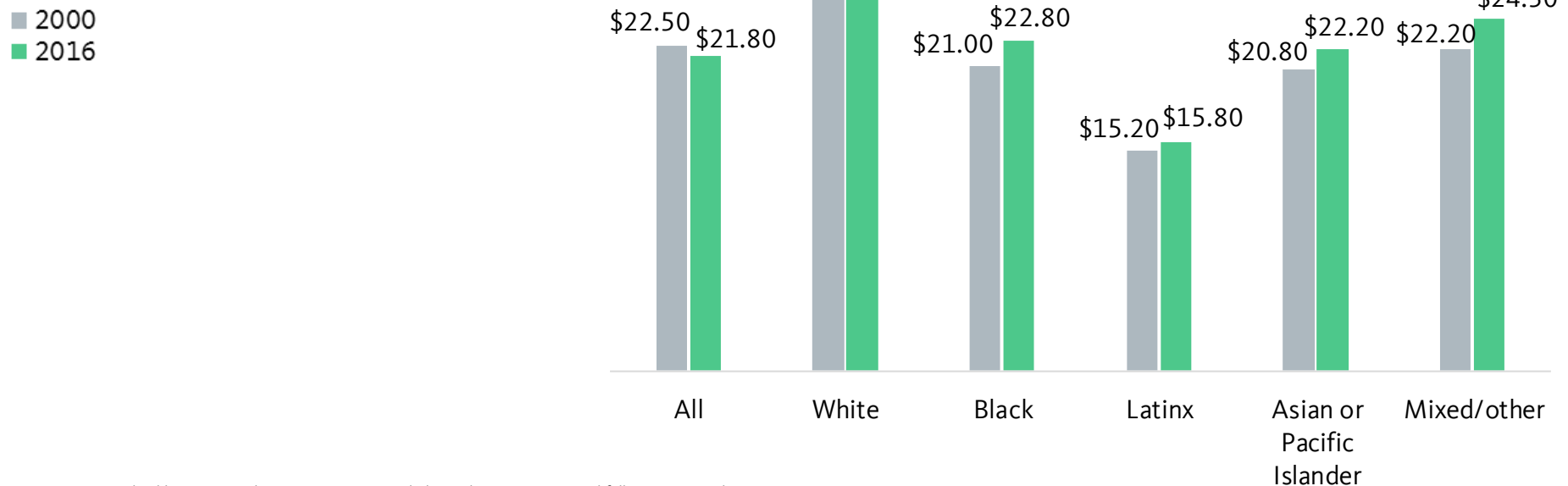
Source: Integrated Public Use Microdata Series. Universe includes civilian noninstitutional full-time wage and salary workers ages 25 through 64. Note: Data represents a 2012 through 2016 average. Values are in 2016 dollars.

Economic vitality

Are incomes increasing for all workers?

Hourly wages have increased since 2000 for all groups, although the increase was modest. White workers have the highest wages by far (\$29.50) compared with other groups. Latinx workers have the lowest wages (\$15.80), and their gain as a share of the workforce since 2000 caused the overall median wage to fall slightly.

Median Hourly Wage by Race/Ethnicity, 2000 and 2016



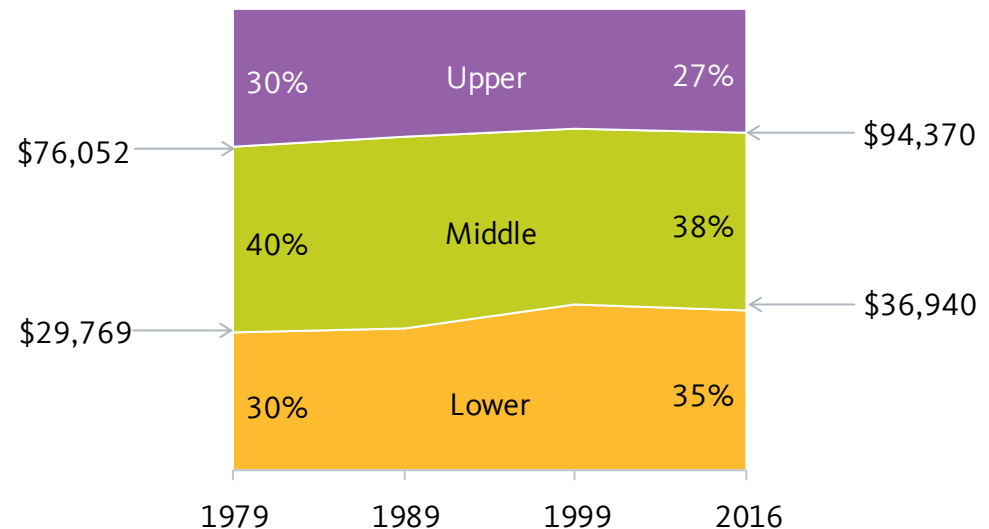
Source: Integrated Public Use Microdata Series. Universe includes civilian noninstitutional full-time wage and salary workers ages 25 through 64. Note: Wages for workers identifying as Native American are excluded because of small sample size. Data for 2016 represents a 2012 through 2016 average. Values are in 2016 dollars.

Economic vitality

Is the middle class expanding?

The city’s middle class is shrinking. Since 1980, the share of households with middle-class incomes dropped from 40 percent to 38 percent. Meanwhile the share of lower-income households grew from 30 to 35 percent.

Households by Income Level, 1979 and 2016



Source: Integrated Public Use Microdata Series. Universe includes all households (no group quarters).
 Note: Data for 2016 represents a 2012 through 2016 average. Dollar values are in 2016 dollars.

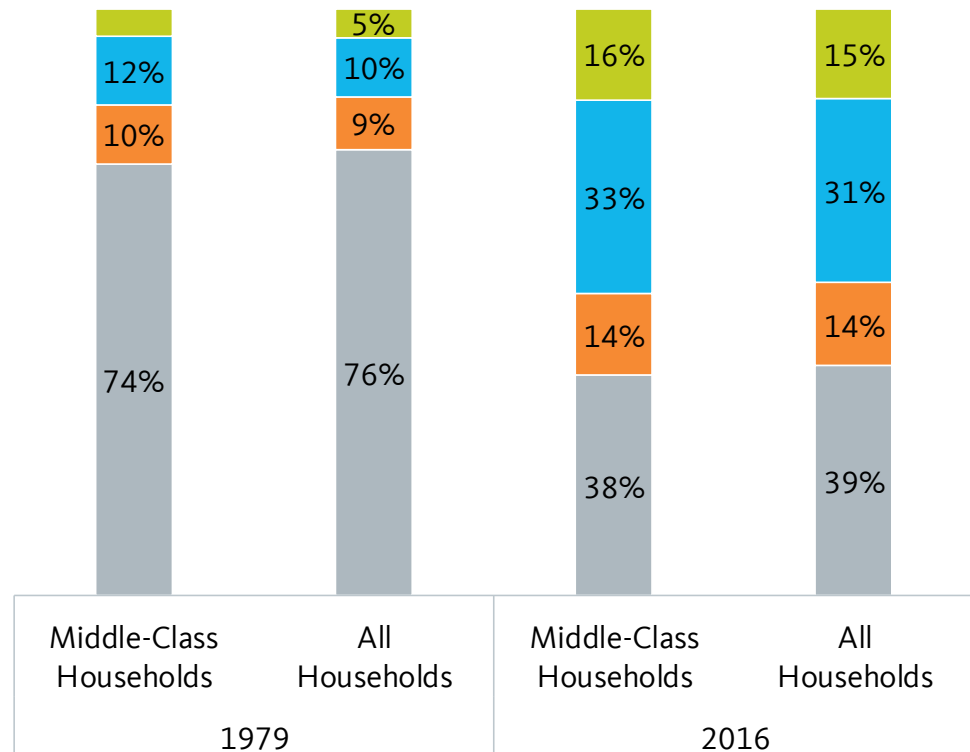
Economic vitality

Is the middle class becoming more inclusive?

As the city becomes more diverse, its middle class is also more racially diverse. The racial/ethnic make-up of middle-class households largely reflects the make-up of households overall. This was the case in 1979 and remains true today, even given large demographic shifts in the population.

Middle Class by Race/Ethnicity, 1979 and 2016

- Asian, Native American, or Mixed/other
- Latino
- Black
- White



Source: Integrated Public Use Microdata Series. Universe includes all households (no group quarters).
 Note: Data for 2016 represents a 2012 through 2016 average. Dollar values are in 2016 dollars.

Economic vitality

Is inequality low and decreasing?

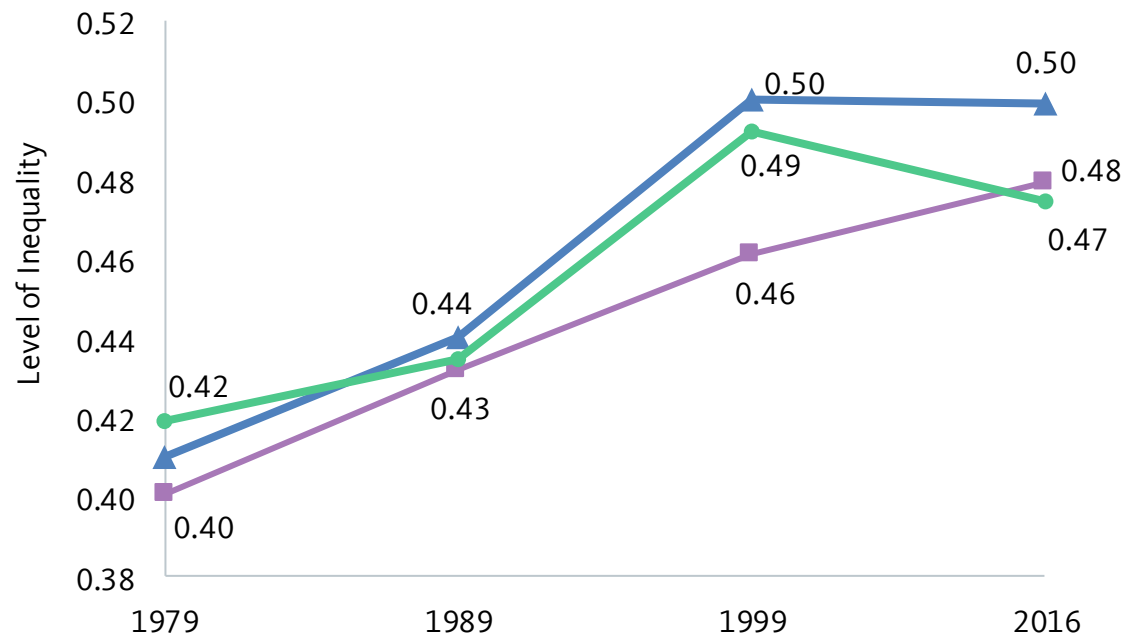
Income inequality has fallen in Long Beach since 1999.

Income inequality in the city is now below the national average, and remains below the level for Los Angeles County overall.

Gini Coefficient, 1979 to 2016

- City of Long Beach
- ▲— Los Angeles County, CA
- 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).



Source: Integrated Public Use Microdata Series. Universe includes all households (no group quarters).
 Note: Data for 2016 represents a 2012 through 2016 average.

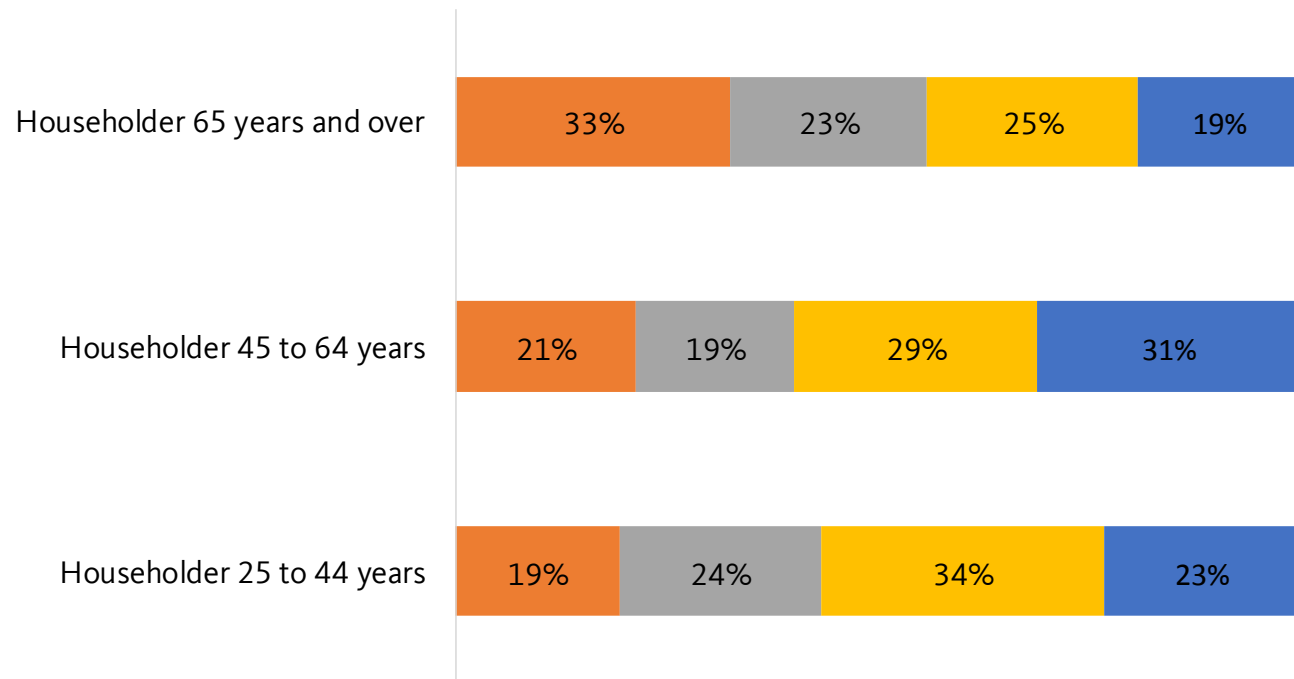
Economic vitality

How is income distributed across age groups?

One-third of households headed by seniors 65 years and older earn less than \$25,000 per year. Households headed by 45 to 64-year-olds were more likely to earn six figures or more (31 percent) compared with households headed by seniors (19 percent) or younger adults (23 percent).

Age of Householder by Income in the Past 12 Months

- Less than \$25,000
- \$25,000 to \$50,000
- \$50,000 to \$99,999
- \$100,000 or more



Sources: U.S. Census Bureau, 2016 American Community Survey 5-year Summary File. Universe includes all households (no group quarters).
 Note: Data for 2016 represents a 2012 through 2016 average. Values are in 2016 dollars.

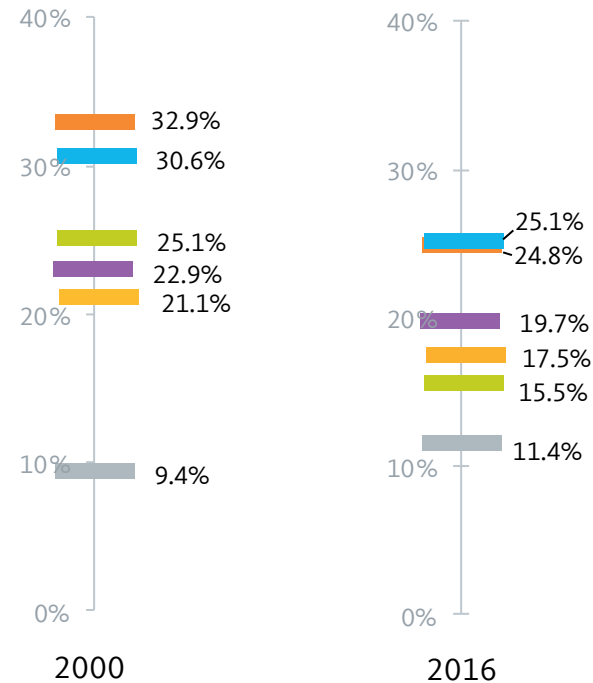
Economic vitality

Is poverty low and decreasing?

Poverty rates decreased for all groups except for White residents since 2000. Latinx and Black residents continue to have the highest poverty rates, with one out of every four living below the poverty line.

Poverty Rate by Race/Ethnicity, 2000 and 2016

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



Source: Integrated Public Use Microdata Series. Universe includes all persons not in group quarters.
 Note: Data for 2016 represents a 2012 through 2016 average. Poverty for Native Americans is excluded because of small sample size.

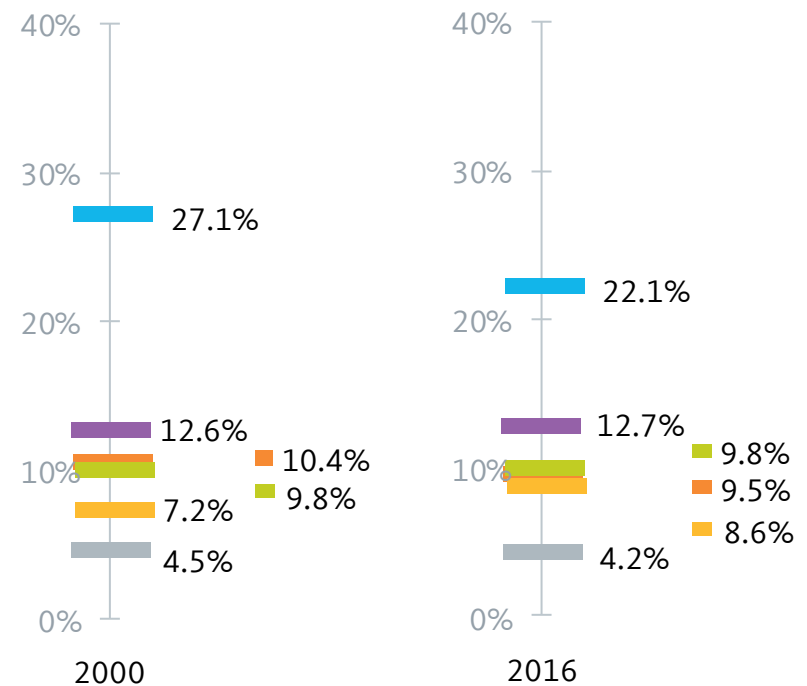
Economic vitality

Is working poverty low and decreasing?

Latinx workers are more likely to be working full time with family income below 200 percent of the poverty level, while White workers are less likely to be in this group. Although rates have declined for the Latinx population since 2000, the Latinx working-poverty rate is nearly double the average for all workers.

Working-Poverty Rate by Race/Ethnicity, 2000 and 2016

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



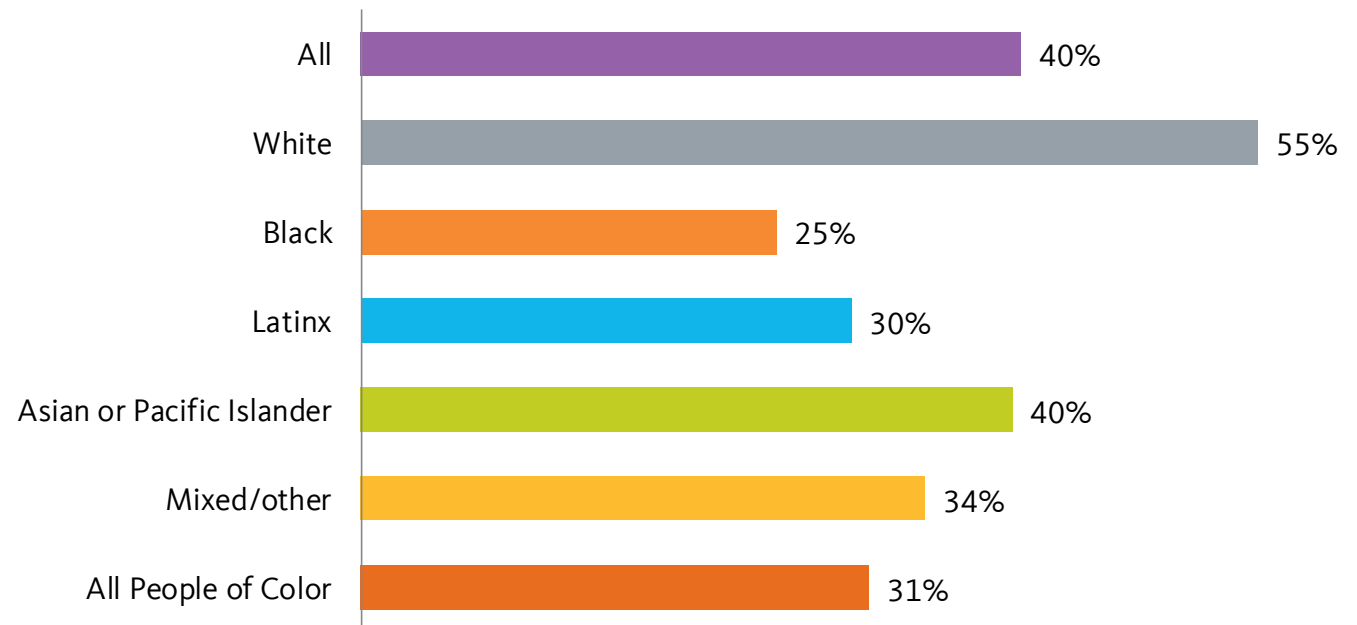
Source: Integrated Public Use Microdata Series. Universe includes civilian noninstitutional workers ages 25 through 64 not living in group quarters. Note: Data for 2016 represents a 2012 through 2016 average. Working poverty for Native Americans is excluded because of small sample size.

Economic vitality

Are all residents building wealth?

Over half of White residents are homeowners compared with one-quarter of Black residents. Homeownership rates for Asian or Pacific Islander residents are relatively high as well (40 percent).

Homeownership Rates by Race/Ethnicity, 2016



Source: Integrated Public Use Microdata Series. Universe includes all households (no group quarters).

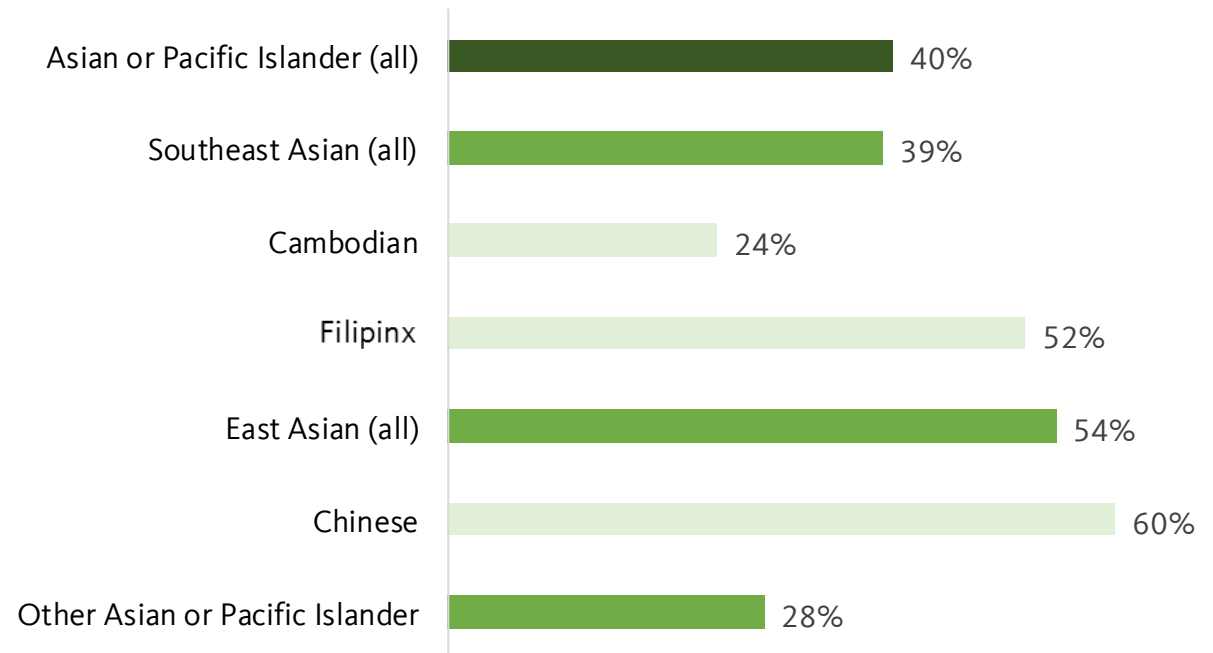
Note: Data represents a 2012 through 2016 average. Homeownership for Native Americans is excluded because of small sample size.

Economic vitality

Are all residents building wealth?

In the aggregate, the homeownership rate for the Asian or Pacific Islander population is fairly high (40 percent); however, rates vary by ancestry. Homeownership rates are much lower for Cambodian residents (24 percent) compared with Chinese residents (60 percent).

Homeownership Rates by Ancestry for Asians or Pacific Islanders, 2016



Economic vitality

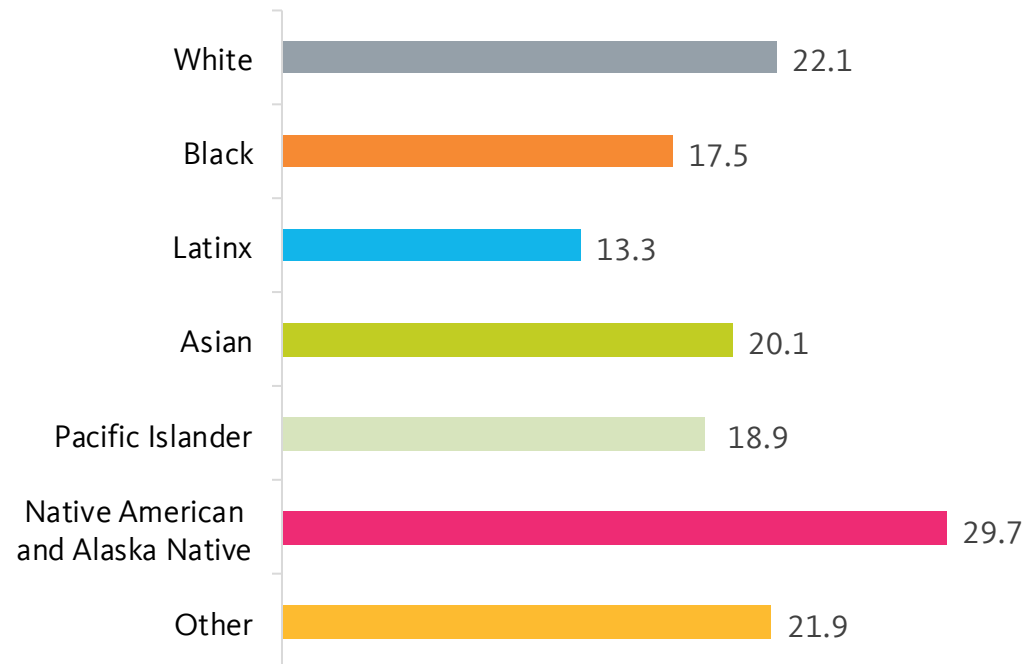
Do all residents have access to business opportunities?

Native Americans have the highest rates of business ownership (29.7 firms per 100 workers in the labor force), followed by Whites (22.1 firms). The Latinx population has the lowest levels of entrepreneurship (13.3 firms per 100 workers in the labor force). These figures include sole proprietorships as well as firms with paid employees.

Number of Firms per 100 Adults in the Labor Force, 2012

Source: 2012 Survey of Business Owners and the 2014 American Community Survey 5-year summary file.

Note: Data on firms and firm characteristics is from the 2012 Survey of Business Owners (SBO) and includes firms with paid employees and sole proprietorships/self-employed. A single firm may be tabulated in more than one racial/ethnic group. This can be because the sole owner was reported to be of more than one race, the majority owner was reported to be of more than one race, or a majority combination of owners was reported to be of more than one race. White is defined as non-Hispanic White. All other racial/ethnic groups may include Latinx individuals who identify with each particular group. Data for Asians does not include Pacific Islanders, and data for Other includes only those who identify as some other race alone (not Mixed race). Data on the number of adults in the labor force (ages 16 or older) by race/ethnicity is from the 2014 American Community Survey 5-year summary file, which has a central year of 2012, aligning with the firm data from the SBO.

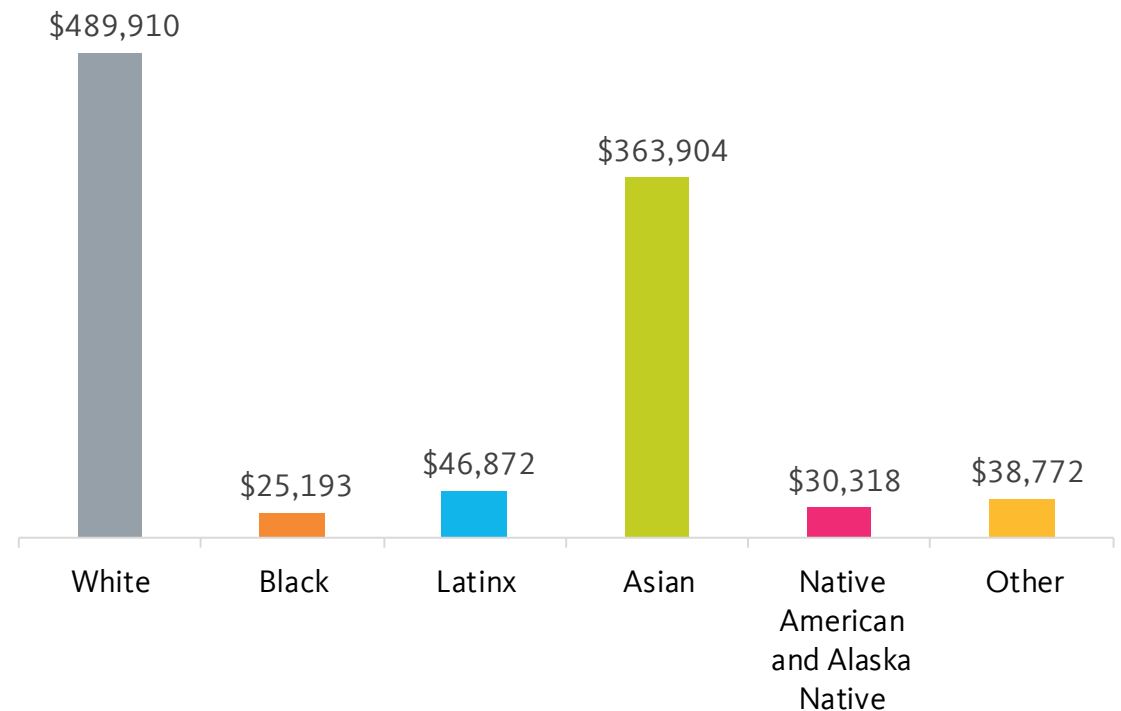


Economic vitality

Do all residents have access to business opportunities?

Large racial disparities are present in average annual receipts per firm for Long Beach entrepreneurs. Average receipts per firm for White and Asian entrepreneurs were over \$360,000 in 2012, but were below \$50,000 for all other groups.

Average Annual Receipts per Firm, 2012



Source: 2012 Survey of Business Owners.

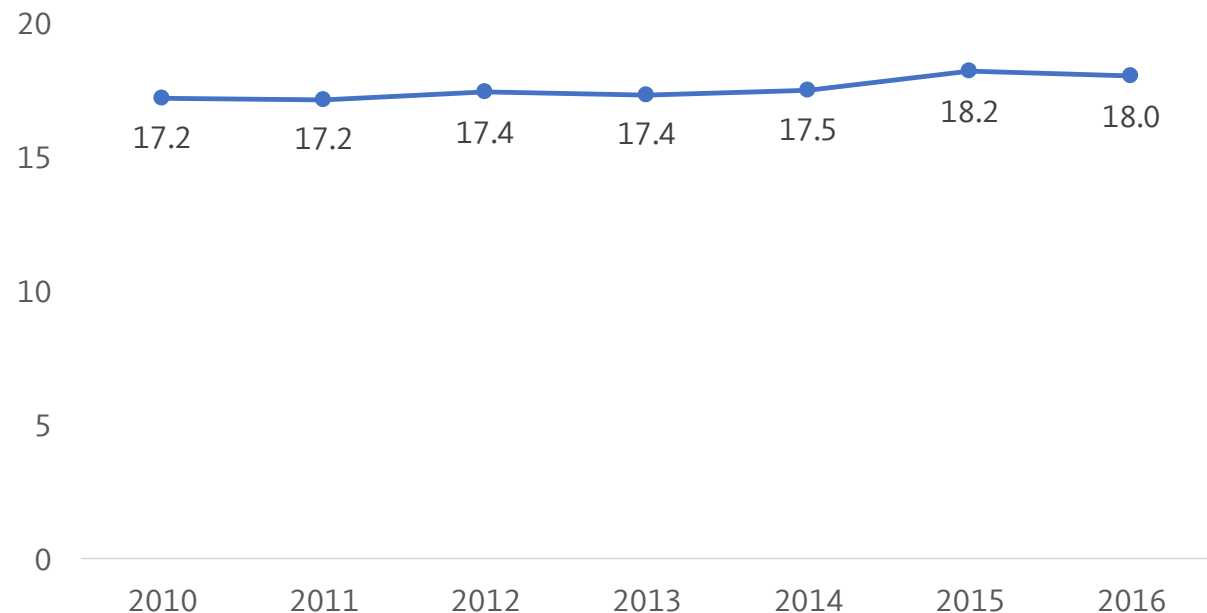
Note: Data on firms and firm characteristics is from the 2012 Survey of Business Owners (SBO) and includes firms with paid employees and sole proprietorships/self-employed. A single firm may be tabulated in in more than one racial/ethnic group. This can be because the sole owner was reported to be of more than one race, the majority owner was reported to be of more than one race, or a majority combination of owners was reported to be of more than one race. White is defined as non-Hispanic White. All other racial/ethnic groups may include Latinx individuals who identify with each particular group. Data for Asians does not include Pacific Islanders, and data for Other includes only those who identify as some other race alone (not Mixed race). Values are in 2012 dollars.

Economic vitality

Do all residents have access to business opportunities?

Small business ownership has increased slightly in the city. In 2010, there were 17.2 small businesses per 1,000 residents compared with 18 small businesses per 1,000 residents in 2016. Although the rate of small businesses in the city grew since 2010, it is lower than the rates in Los Angeles County (26.2 per 1,000 residents) and statewide (23.3 per 1,000 residents).

Number of Small Businesses per 1,000 Residents



Sources: U.S. Census Bureau, 2016 5-year ACS Summary File and ZIP Code Business Patterns, 2010-2016.

Note: Population data (denominator) for each year is from the ACS, and represents a five-year average (e.g., population data for 2016 represents a 2012 through 2016 average). Small businesses are defined as establishments with fewer than 100 employees.

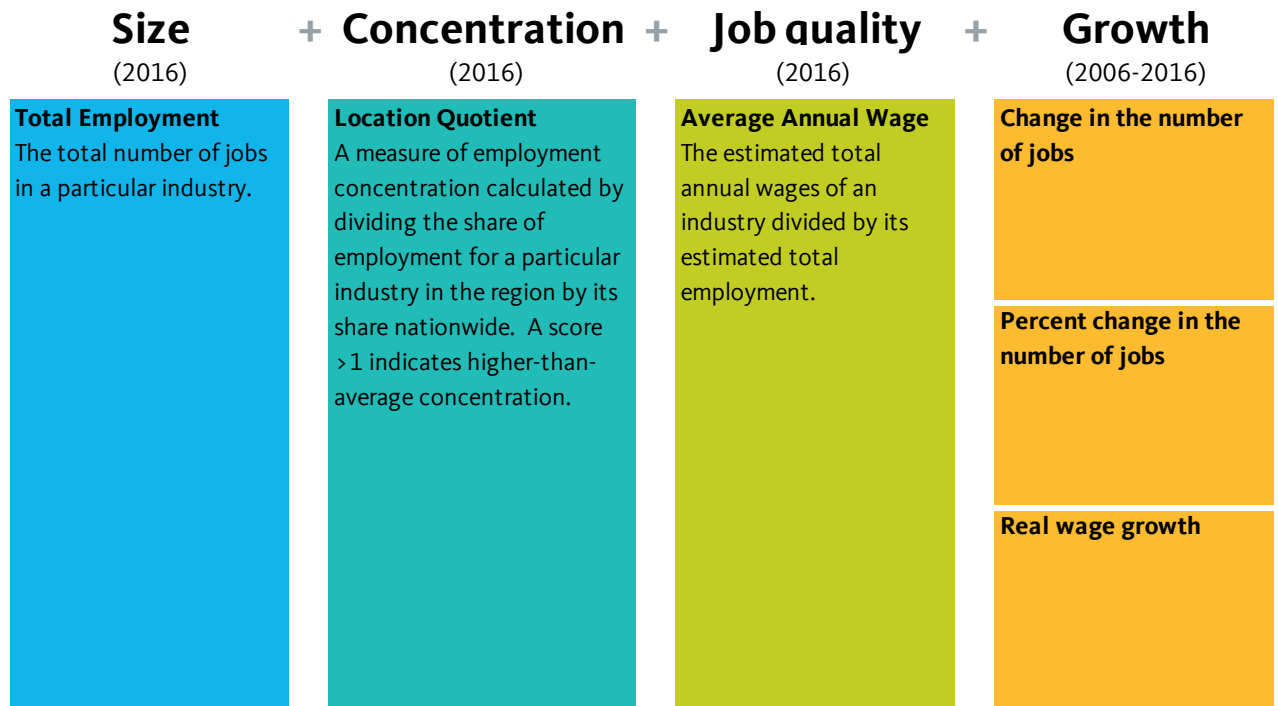
Economic vitality

Identifying the region's strong 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 several 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 =



Note: The individual metrics used in the calculation of the industry strength index 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.

Economic vitality

What are the region's strongest industries?

Information; health care and social assistance; and professional, scientific, and technical services are strong and expanding industries in the Los Angeles region. Although the health care industry ranks highly on industry strength, real wages declined 19 percent between 2006 and 2016.

Strong Industries Analysis, 2006 to 2016

Industry	Size	Concentration	Job Quality	Growth			Industry Strength Index
	Total employment (2016)	Location Quotient (2016)	Average annual wage (2016)	Change in employment (2006 to 2016)	% Change in employment (2006 to 2016)	Real wage growth (2006 to 2016)	
Information	227,712	2.7	\$106,113	20,114	10%	8%	119.1
Health Care and Social Assistance	650,840	1.1	\$43,614	272,341	72%	-19%	86.3
Professional, Scientific, and Technical Services	274,255	1.0	\$98,886	10,670	4%	11%	36.4
Arts, Entertainment, and Recreation	87,734	1.3	\$100,068	17,883	26%	-3%	24.0
Accommodation and Food Services	418,570	1.0	\$23,461	100,539	32%	10%	17.9
Finance and Insurance	136,775	0.8	\$119,098	-32,469	-19%	11%	7.1
Wholesale Trade	223,391	1.3	\$62,119	-3,396	-1%	0%	1.9
Manufacturing	355,370	0.9	\$68,221	-107,736	-23%	13%	-1.6
Management of Companies and Enterprises	56,295	0.8	\$113,275	-7,255	-11%	8%	-1.9
Education Services	97,934	1.2	\$56,800	8,455	9%	27%	-2.4
Transportation and Warehousing	162,045	1.1	\$58,801	19,289	14%	4%	-6.0
Real Estate and Rental and Leasing	81,016	1.2	\$65,841	1,324	2%	10%	-7.3
Utilities	11,745	0.7	\$117,990	-1,186	-9%	1%	-14.5
Retail Trade	416,610	0.9	\$34,555	-8,449	-2%	-3%	-14.6
Administrative and Support and Waste Management and Remediation	266,500	1.0	\$39,606	-5,077	-2%	11%	-16.7
Other Services (except Public Administration)	146,823	1.1	\$36,826	-93,746	-39%	43%	-32.6
Mining	3,591	0.2	\$128,786	-385	-10%	-16%	-43.6
Construction	132,586	0.7	\$61,003	-24,187	-15%	7%	-45.0
Agriculture, Forestry, Fishing and Hunting	5,360	0.1	\$37,486	-2,338	-30%	18%	-102.5

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

Note: Data reflects Los Angeles County. Data is unavailable for the city of Long Beach; however, Long Beach is a part of the broader Los Angeles regional economy: 77 percent of workers living in Long Beach were employed in the greater Los Angeles metropolitan region in 2015, according to the U.S. Census Bureau Longitudinal Employer-Household Dynamics data.

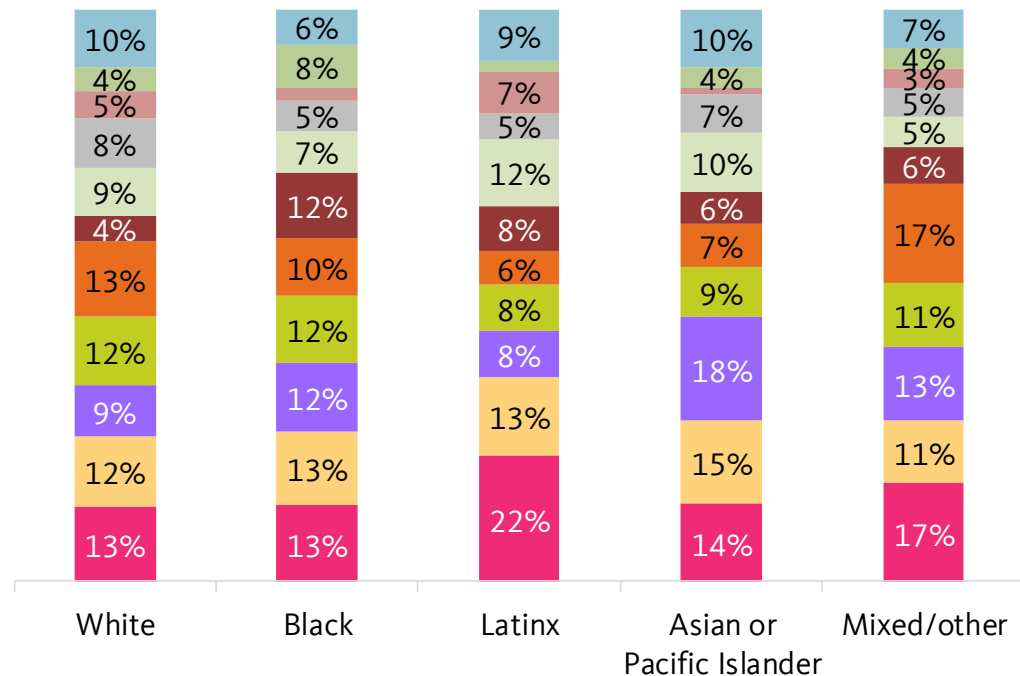
Economic vitality

Is economic growth creating more jobs?

Latinx workers are more likely to work in retail trade compared to other groups. Asian or Pacific Islander workers are concentrated in health services while Mixed-race workers are concentrated in both retail trade and education. The share of Black workers in transportation and public administration stands out, as does the share of White workers in finance.

Employment by Industry for Major Racial/Ethnic Groups, 2016

- Other Industries
- Public Administration
- Construction
- Finance and Insurance and Real Estate
- Manufacturing
- Transportation and Warehousing
- Education Services
- Professional, Scientific, and Technical Services
- Health Care and Social Assistance
- Other Services (except Public Administration)
- Retail Trade



Source: Integrated Public Use Microdata Series. Universe includes the employed civilian noninstitutional population ages 16 and older. Note: Data represents a 2012 through 2016 average. Only the top 10 industries in terms of total employment are broken out. Employment by industry data are not shown for Native Americans because of small sample size.

Economic vitality

What are the region's strongest occupations?

About 36 percent of the jobs projected to be added by 2024 will be in food and personal care service occupations, which pay very low wages. Occupations with better wages and some growth projected are in construction and community and social services.

Occupational Employment Projections, 2014 to 2024

Occupation	2014 Estimated Employment	2024 Projected Employment	Total 2014-2024 Employment Change	Total Percent Change	Annual Avg. Percent Change	Median Ann. Wage, Q1 2016
Office and Administrative Support Occupations	715,940	751,030	35,090	4.9%	0.5%	\$36,871
Sales and Related Occupations	443,350	479,990	36,640	8.3%	0.8%	\$28,102
Food Preparation and Serving Related Occupations	376,340	467,080	90,740	24.1%	2.4%	\$21,659
Personal Care and Service Occupations	300,230	413,730	113,500	37.8%	3.8%	\$24,056
Transportation and Material Moving Occupations	296,010	331,220	35,210	11.9%	1.2%	\$27,913
Production Occupations	269,880	257,240	-12,640	-4.7%	-0.5%	\$27,907
Management Occupations	264,500	294,680	30,180	11.4%	1.1%	\$109,826
Education, Training, and Library Occupations	262,220	292,850	30,630	11.7%	1.2%	\$55,635
Business and Financial Operations Occupations	241,020	271,990	30,970	12.8%	1.3%	\$73,425
Healthcare Practitioners and Technical Occupations	207,300	243,580	36,280	17.5%	1.8%	\$83,310
Arts, Design, Entertainment, Sports, and Media	203,020	221,900	18,880	9.3%	0.9%	\$63,832
Installation, Maintenance, and Repair Occupations	127,540	139,700	12,160	9.5%	1.0%	\$47,503
Building and Grounds Cleaning and Maintenance	126,640	140,880	14,240	11.2%	1.1%	\$27,033
Construction and Extraction Occupations	121,910	146,190	24,280	19.9%	2.0%	\$52,619
Protective Service Occupations	111,050	122,810	11,760	10.6%	1.1%	\$37,241
Healthcare Support Occupations	100,200	120,860	20,660	20.6%	2.1%	\$32,315
Computer and Mathematical Occupations	96,640	113,530	16,890	17.5%	1.7%	\$88,586
Community and Social Service Occupations	71,900	86,120	14,220	19.8%	2.0%	\$50,826
Architecture and Engineering Occupations	68,750	71,560	2,810	4.1%	0.4%	\$93,120
Legal Occupations	44,470	47,440	2,970	6.7%	0.7%	\$112,528
Life, Physical, and Social Science Occupations	36,960	43,310	6,350	17.2%	1.7%	\$71,258
Farming, Fishing, and Forestry Occupations	5,680	5,440	-240	-4.2%	-0.4%	\$23,977
Total, All Occupations	4,491,800	5,063,300	571,500	12.7%	1.3%	\$39,250

Source: Employment Development Department, Labor Market Information Division, 2014-2024 Occupational Employment Projections (published November 2016).

Note: Data is for Los Angeles County, and include self-employed, private household workers, farm, and nonfarm employment. Occupations with employment below 100 in 2014 are excluded. Occupation subtotals may not add up to the totals due to rounding and the suppression of data. Data is unavailable for the city of Long Beach; however, Long Beach is a part of the broader Los Angeles regional economy: 77 percent of workers living in Long Beach were employed in the greater Los Angeles metropolitan region in 2015, according to the U.S. Census Bureau Longitudinal Employer-Household Dynamics data.

Readiness



Readiness

Summary

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

By 2020, an estimated 44 percent of jobs in the state will require at least an associate's degree. Currently, the Black (32 percent) and Latinx populations (34 percent for U.S.-born and 10 percent for immigrants) are not meeting this threshold. While high school graduation rates average a relatively high 86 percent, with little variation across race, there are wide racial inequities on other education indicators including 3rd-grade proficiency rates in reading and math and school discipline. Black students in Long Beach Unified School District are twice as likely to be suspended compared with all students (8 percent and 4 percent, respectively).

Graduation rate in Long Beach Unified School District:

86%

Share of 2020 jobs in the state that will require at least an associate's degree:

44%

Share of Latinx immigrants with at least an associate's degree:

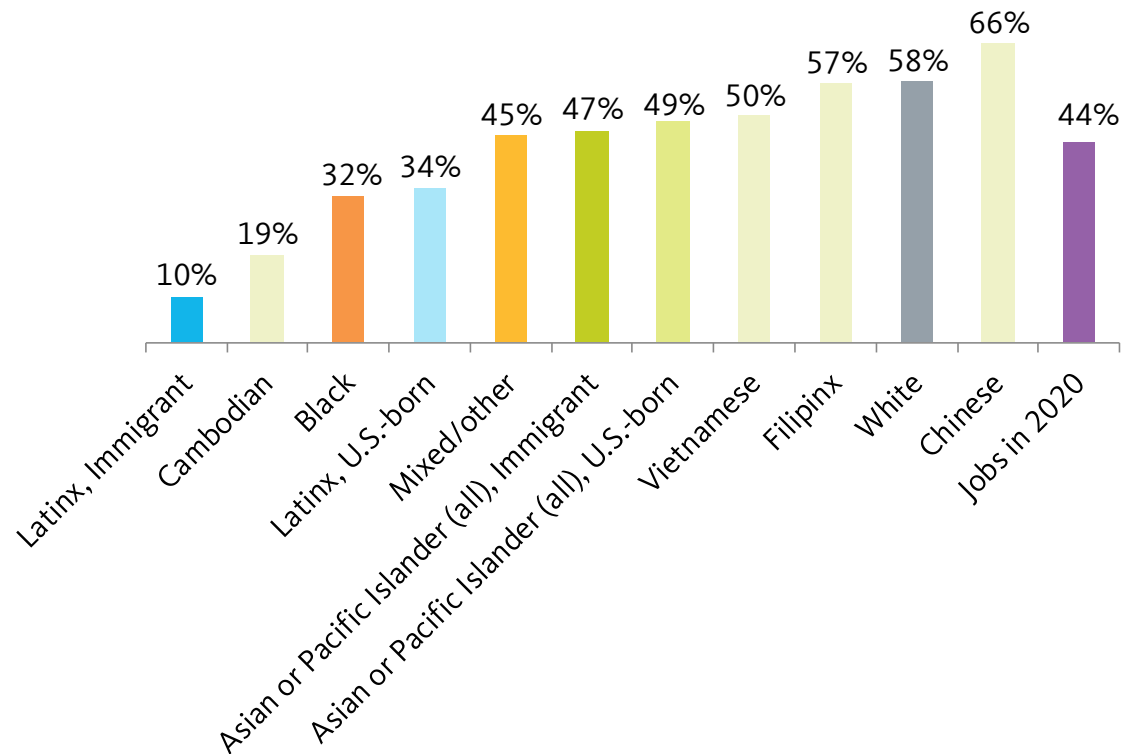
10%

Readiness

Do all workers have the education and skills needed for the jobs of the future?

By 2020, an estimated 44 percent of jobs will require at least an associate’s degree. Yet, only 34 percent of U.S.-born Latinx residents, 32 percent of Black residents, 19 percent of Cambodian residents, and 10 percent of Latinx immigrant residents have that level of education.

Share of Working-Age Population with an Associate’s Degree or Higher by Race/Ethnicity and Nativity, 2016, and Projected Share of Jobs that Require an Associate’s Degree or Higher, 2020



Sources: Georgetown Center for Education and the Workforce; Integrated Public Use Microdata Series. Universe for education levels of workers includes all persons ages 25 through 64. Note: Data for 2016 by race/ethnicity/nativity represents a 2012 through 2016 average and is at the city level; data on jobs in 2020 is at the state level. Data for some groups by race/ethnicity and nativity are not shown because of small sample size.

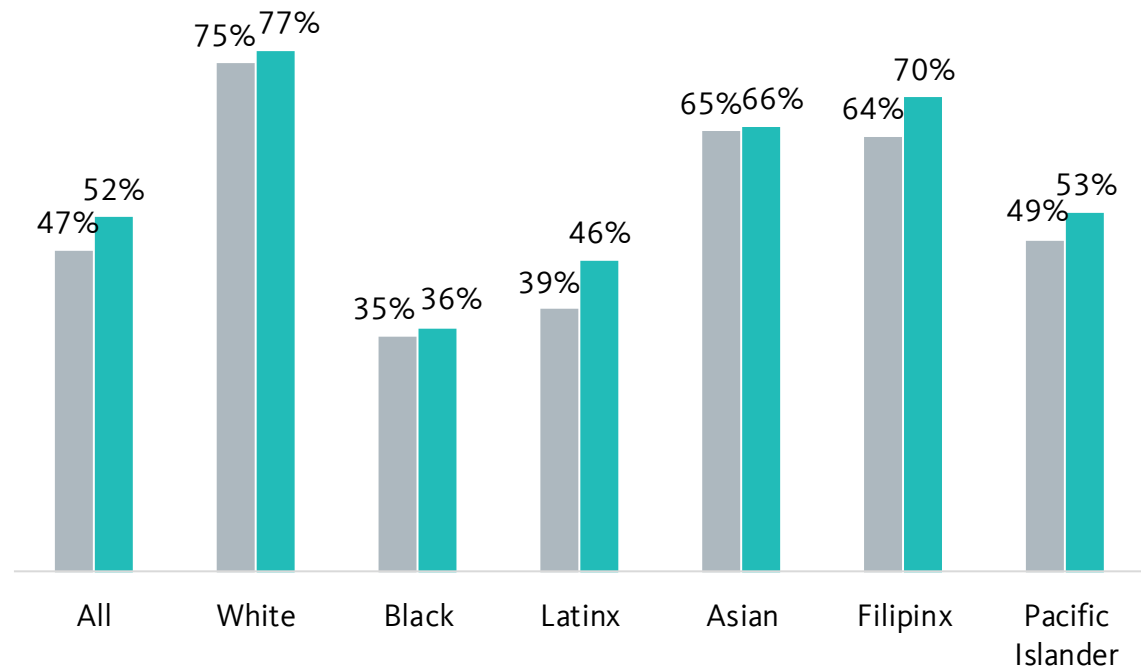
Readiness

Are all youth prepared for the future?

Early indicators of educational proficiency in reading and math show that Latinx and Black students are not being adequately prepared. White students on the other hand, who historically have had access to higher quality schools, have higher-than-average proficiency rates.

3rd Graders in Long Beach Unified School District Proficient or Above in English Language Arts and Math, 2016-17 School Year

■ Reading
■ Math



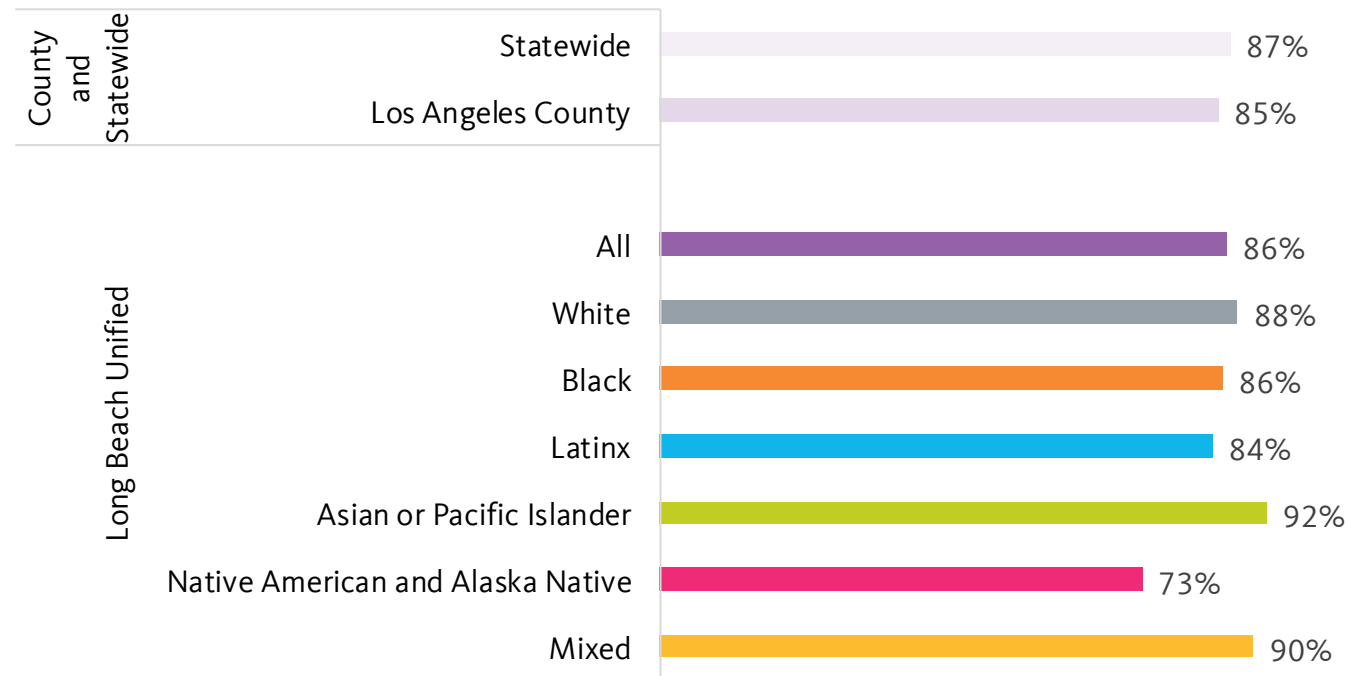
Source: California Assessment of Student Performance and Progress, 2016-17 school year.

Readiness

Are all youth prepared for the future?

The high school graduation rate in Long Beach Unified School District is similar to state and county rates, although rates vary across race. There are larger inequities across race in college readiness (slide 59); about half of students overall are college ready, compared with over two-thirds of Whites and Asians or Pacific Islanders.

Cohort Graduation Rate (4-Year Adjusted), 2016-17 School Year



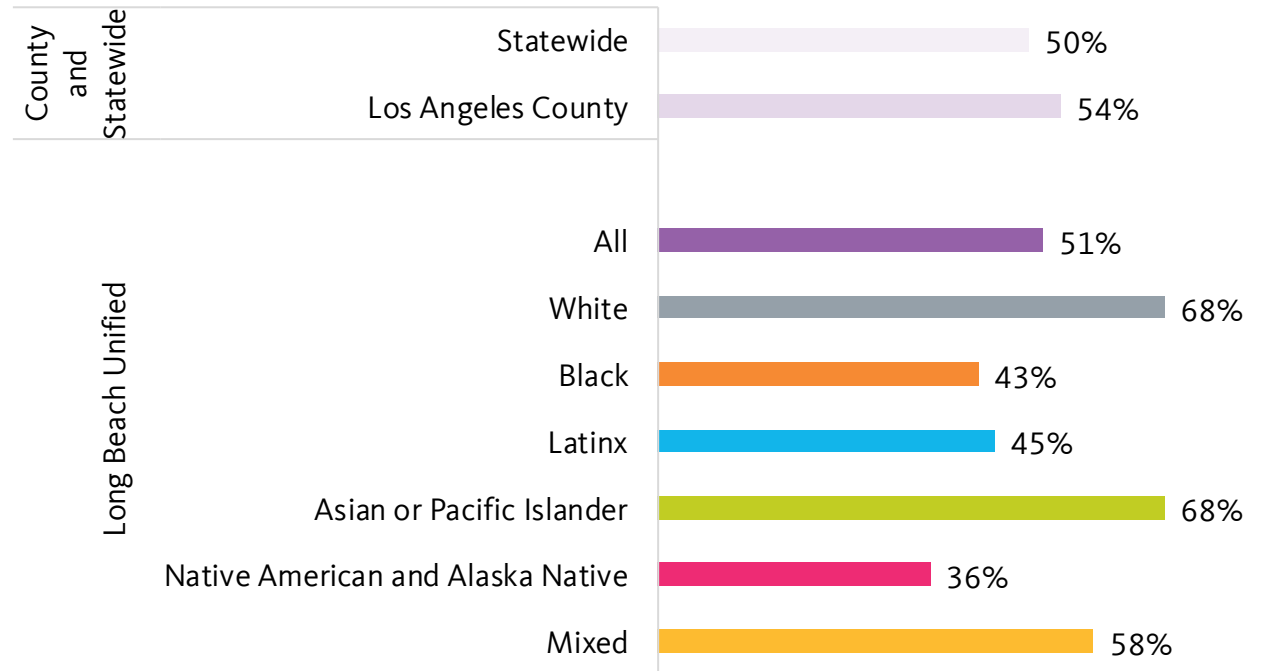
Source: California Department of Education, DataQuest, 2016-17 school year. Note: Long Beach Unified School District serves most of the city of Long Beach. Other school districts that serve parts of Long Beach include ABC Unified School District, Paramount Unified School District, and Los Angeles Unified School District (LAUSD).

Readiness

Are all youth prepared for the future?

There are large variations in preparedness for enrollment in the University of California and California State University system across race for recent high school graduates in Long Beach Unified School District.

Graduates Meeting UC/CSU Requirements, 2016-17 School Year



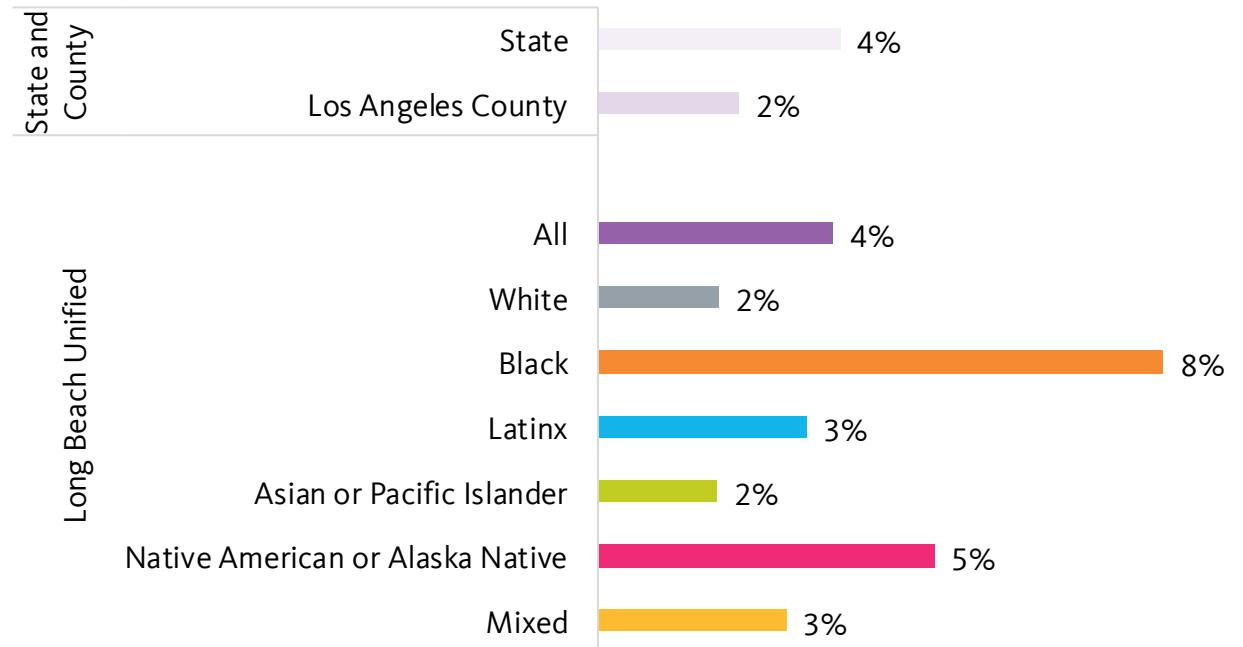
Source: California Department of Education, DataQuest. 2016-17 school year. Note: Long Beach Unified School District serves most of the city of Long Beach. Other school districts that serve parts of Long Beach include ABC Unified School District, Paramount Unified School District, and Los Angeles Unified School District (LAUSD).

Readiness

Are all youth prepared for the future?

Suspension rates for Black students in Long Beach Unified School District are disproportionately higher than rates for other groups.

Suspension Rates, 2016-17 School Year



Source: California Department of Education, DataQuest. 2016-17 school year. Note: Long Beach Unified School District serves most of the city of Long Beach. Other school districts that serve parts of Long Beach include ABC Unified School District, Paramount Unified School District, and Los Angeles Unified School District (LAUSD).

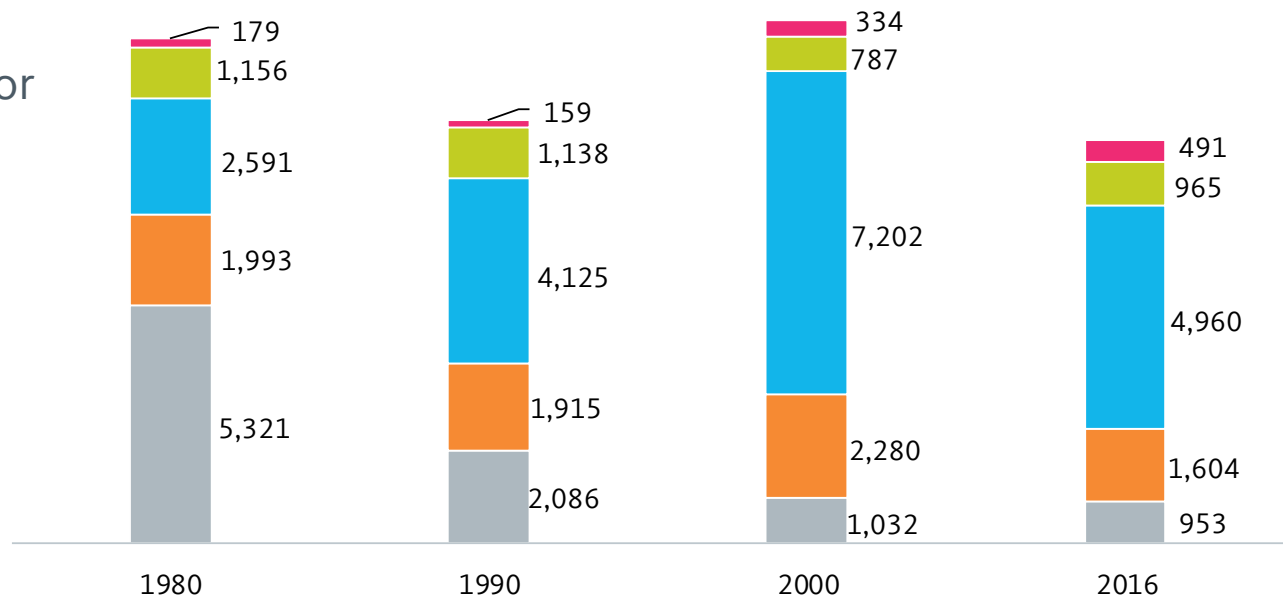
Readiness

Are all youth ready to enter the workforce?

Although the number of youth disconnected from school or work has fluctuated over the past few decades, there are fewer disconnected youth now than any time since 1980.

Disconnected Youth: 16- to 24-Year-Olds Not in School or Working, 1980 to 2016

- Native American or Other
- Asian or Pacific Islander
- Latinx
- Black
- White



Source: Integrated Public Use Microdata Series. Note: Data for 2016 represents a 2012 through 2016 average. Racial/ethnic groups in which the individual sample size is too small to report have been combined so that they can be included in the analysis.

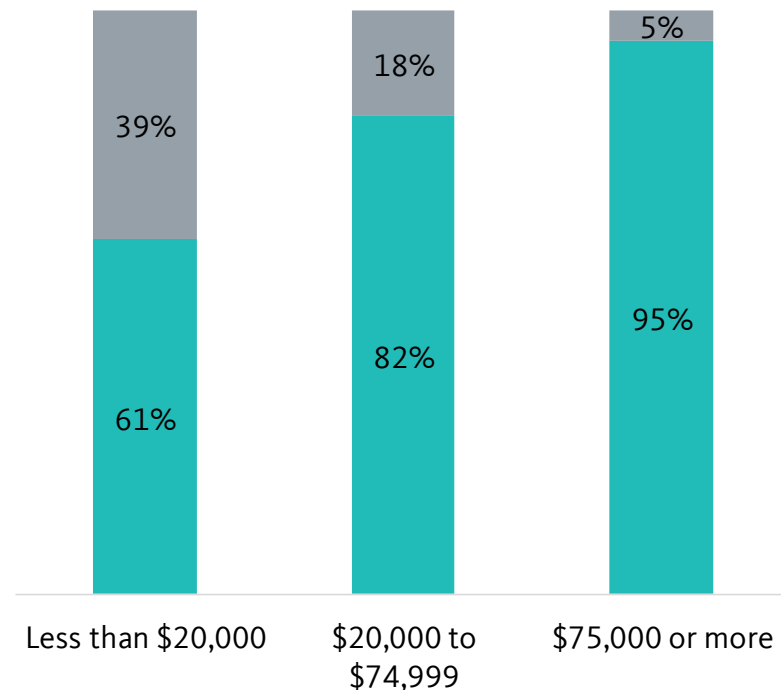
Readiness

Do all households have access to technology?

Households with very low incomes are far less likely to have access to the internet than households with moderate or high incomes. For households making less than \$20,000 per year, only 6 in 10 have access to the internet. In comparison, 8 in 10 households earning between \$20,000 and \$75,000 per year have internet access.

Household Internet Access by Income, 2017

- Households without access to the internet
- Households with access to the internet



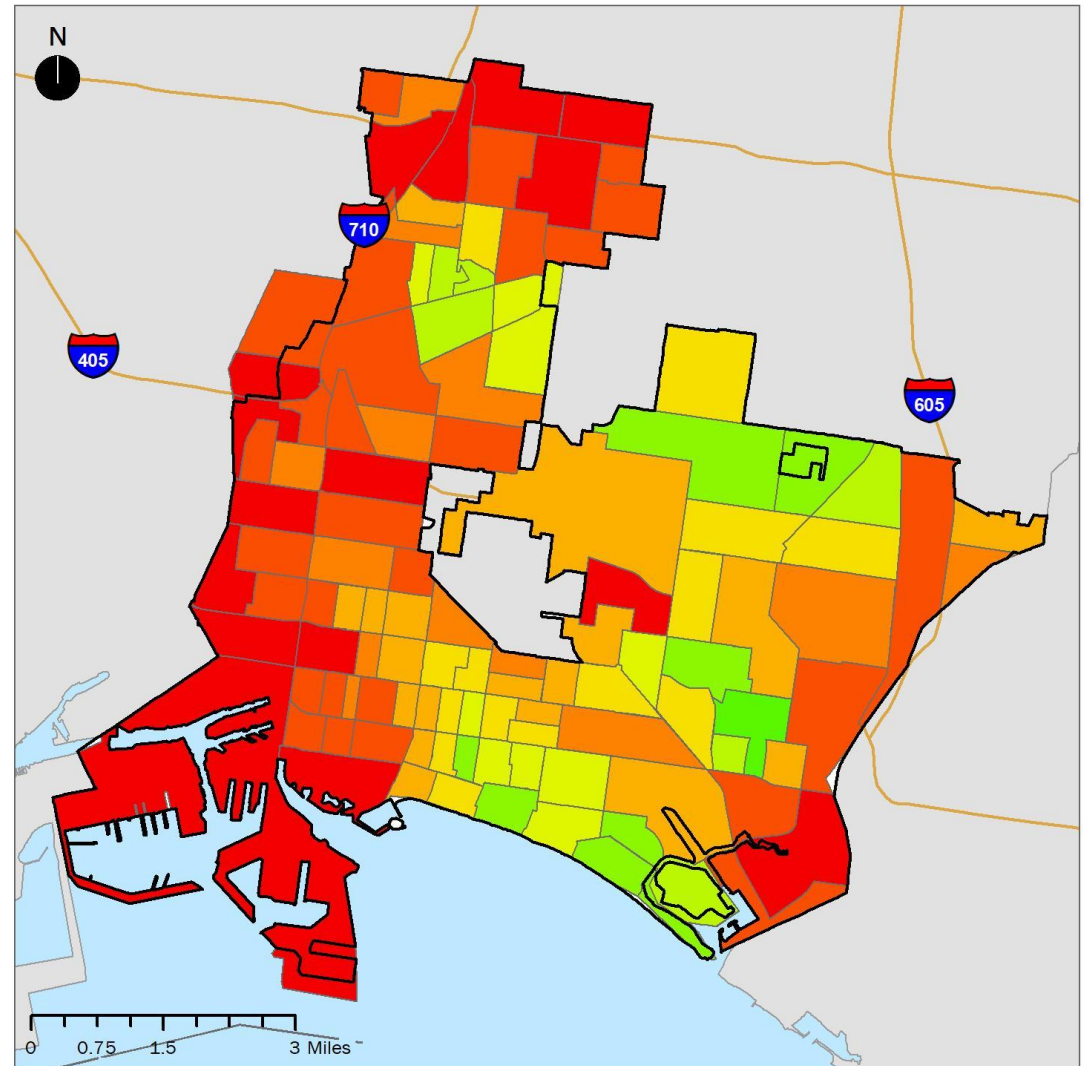
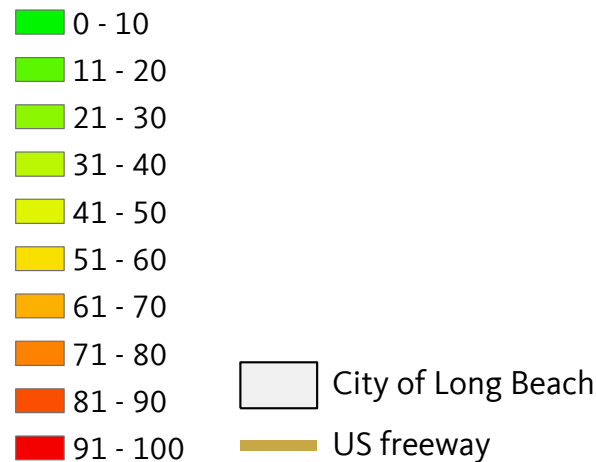
Source: 2017 American Community Survey 1-year Summary File. Dollar values are in 2017 dollars.

Readiness

Do all residents have positive health outcomes?

Long Beach communities in the north-western and southwestern portions of the city are burdened by a high concentration of pollutants.

CalEnviroScreen Pollution Burden Percentile by Census Tract, 2018



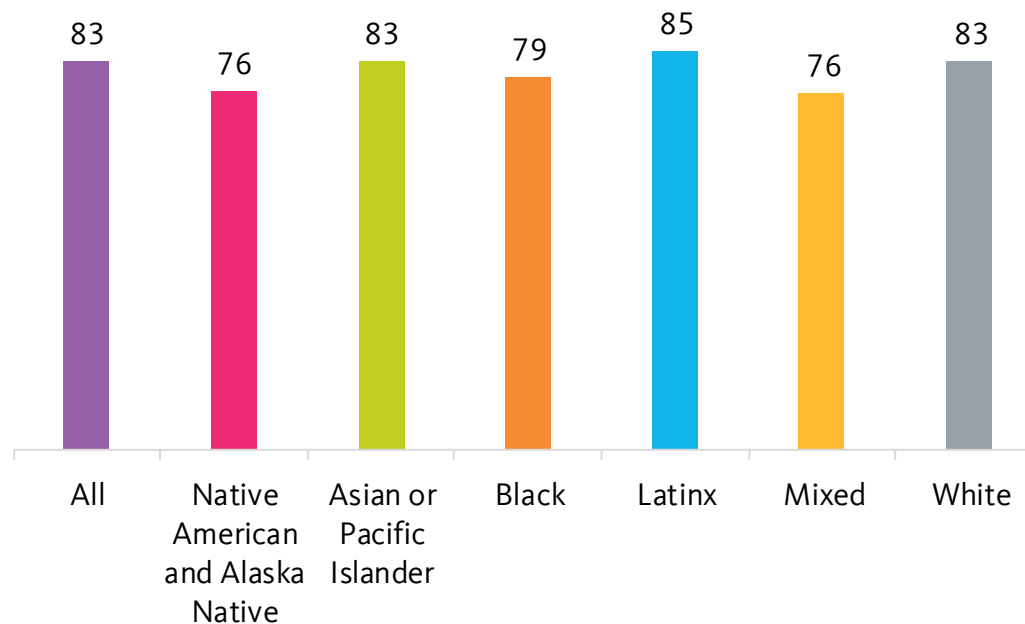
Source: California Office of Environmental Health Hazard Assessment, CalEnviroScreen 3.0, June 2018 update. Notes: The CalEnviroScreen 3.0 model is based on CalEPA's definition of cumulative impacts. The pollution burden score is made up of 12 pollution indicators related to exposure to contaminants (e.g., diesel emissions, drinking water contaminants, pesticide use) and environmental hazards (e.g., solid waste sites and facilities). The scores shown in the map reflect a statewide percentile ranking of pollution burden scores across all census tracts in California. A higher score indicates worse pollution outcomes. Methodology available here: <https://oehha.ca.gov/calenviroscreen/scoring-model>. The gray area in the center of the map corresponds to the city of Signal Hill and is excluded from this analysis.

Readiness

Do all residents have positive health outcomes?

Life expectancy rates vary across race and ethnicity. Average life expectancy at birth for Long Beach residents was 83 years in 2012. Latinx residents had the highest life expectancy at 85 years while Native American (76 years), Mixed-race (76 years), and Black residents (79 years) had the lowest rates.

Life Expectancy at Birth, 2012



Source: Big Cities Health Inventory Platform 2.0.

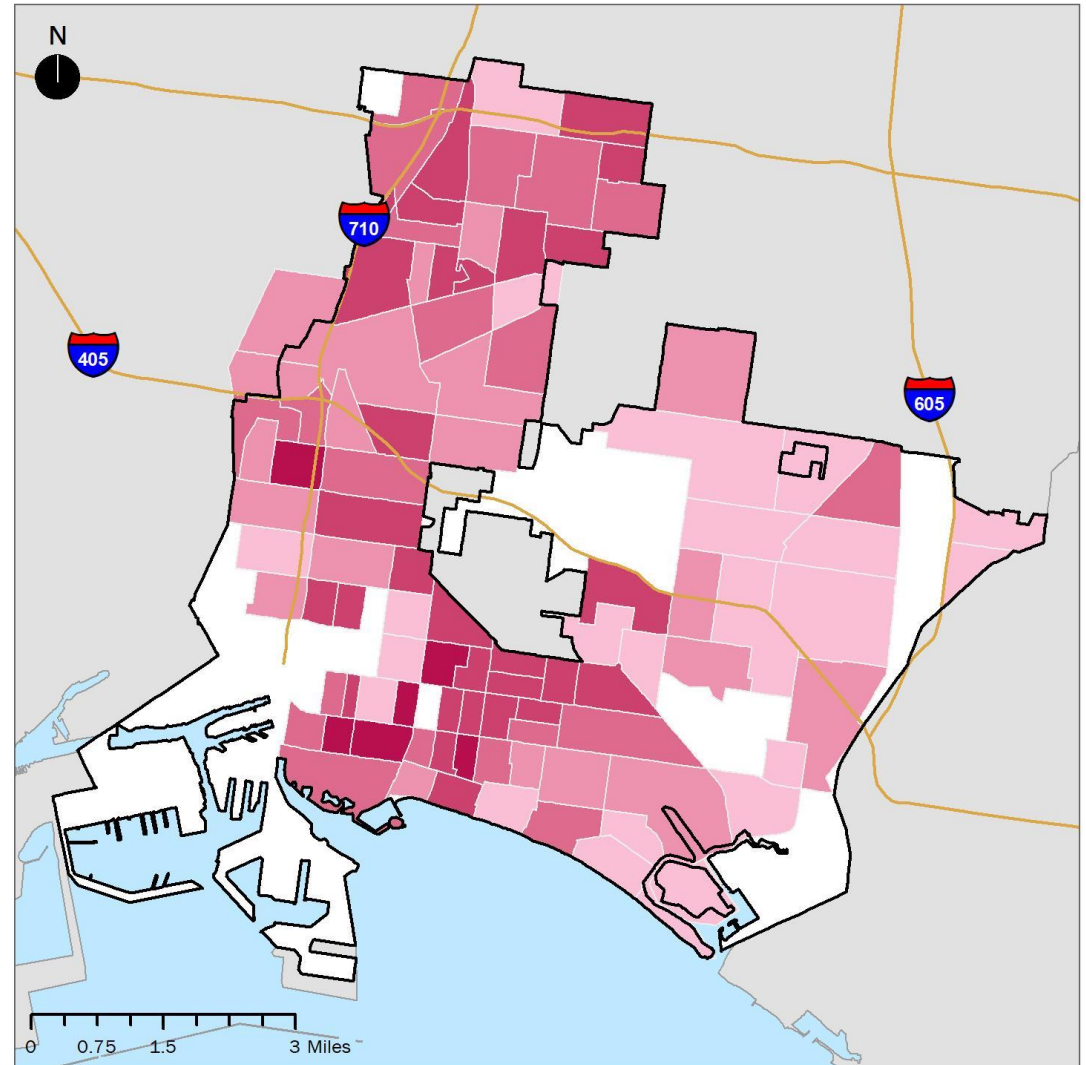
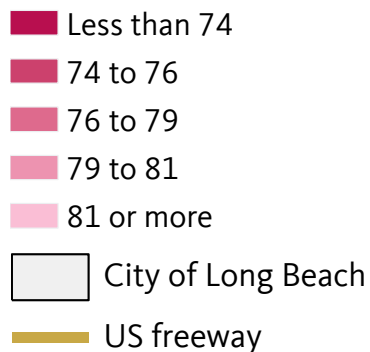
Note: Data for Native American and Alaska Natives has a reference year of 2011 (not 2012). Life expectancy estimates are based on several data sources, spanning the years 2010 through 2016.

Readiness

Do all residents have positive health outcomes?

Life expectancy at birth varies by several years across neighborhoods in the city. Higher life expectancies are found on the east side, where residents can expect to live at least seven years longer than residents in neighborhoods with the lowest life expectancies.

Life Expectancy at Birth by Census Tract, 2010-2015



Source: U.S. Small-area Life Expectancy Estimates Project (USALEEP).

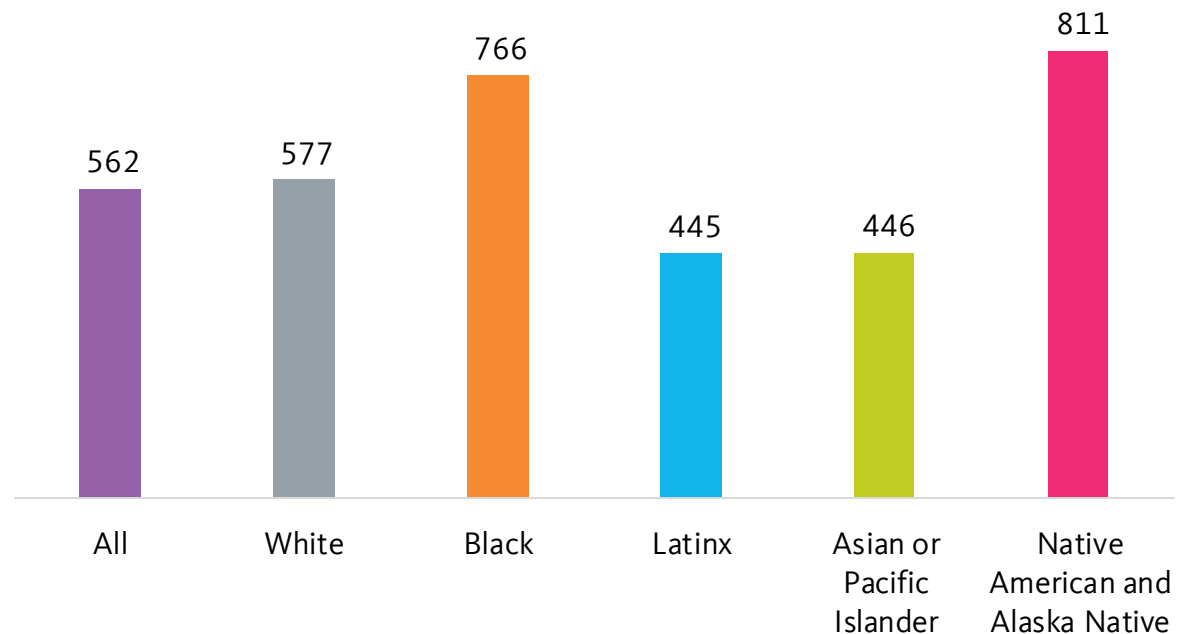
Note: Areas in white are missing data. The gray area in the center of the map corresponds to the city of Signal Hill and is excluded from this analysis.

Readiness

Do all residents have positive health outcomes?

Mortality rates vary across racial/ethnic groups. The mortality rate is a measure of the number of deaths in a particular population (scaled to the size of the population in a given year). Native American and Alaska Native and Black residents have particularly high rates compared with other groups. Asian or Pacific Islander and Latinx mortality rates are lower on average.

Mortality Rate (Age Adjusted)
per 100,000, 2014



Source: Big Cities Health Inventory Platform 2.0.

Note: Mortality rate, or death rate, is a measure of the number of all-cause deaths in a particular population, scaled to the size of that population, per unit of time (i.e. one year). Sample sizes were too small to report for the Mixed/other race population.

Connectedness



Connectedness

Summary

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

While Long Beach is growing many low-wage jobs, there is a lack of housing that is affordable to lower-income residents. One-quarter of jobs in the city are low-wage jobs, but only about one in 10 rental housing units are affordable to low-wage workers. Women heads of household, and Black women in particular struggle with affordability, as they are more likely than men to be rent burdened. One area of progress is homelessness: the chronic homeless population, which was over 1,000 individuals in 2013, dropped to under 700 in 2017. Owning a car is another expense out of reach for some households. Black households are twice as likely to be without a vehicle compared with households overall.

Renter households headed by Black women that are rent burdened:

63%

Chronically homeless population in 2017:

686

Black households without access to a vehicle:

21%

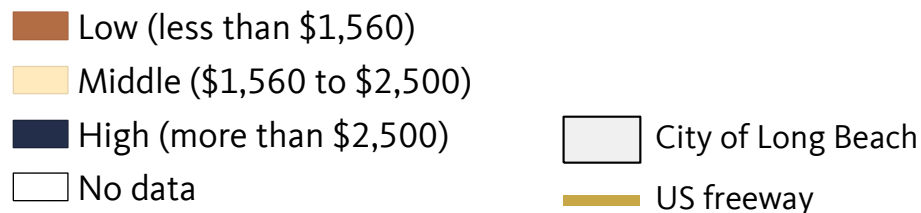
Connectedness

Can all residents access affordable housing?

Only eight census tracts in the city have a median market rent of less than \$1,560 per month, which is affordable for two full-time workers making \$15 per hour (an annual household income of \$62,400).

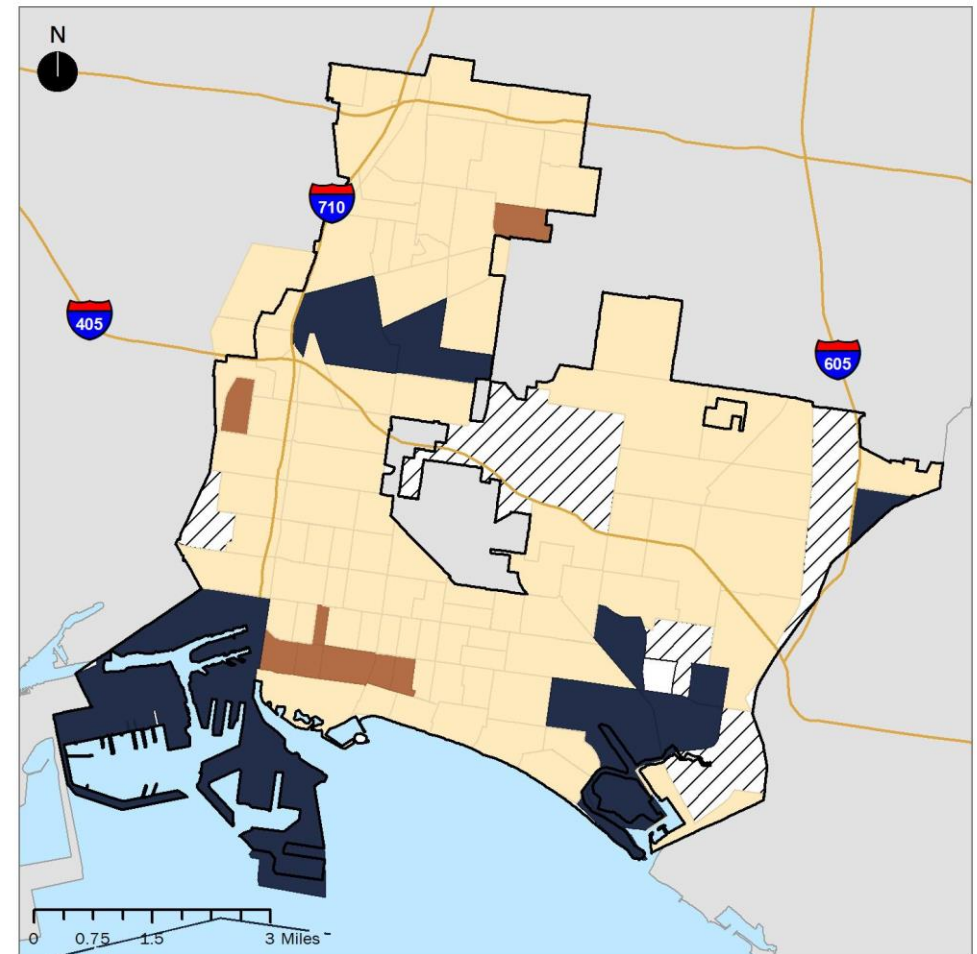
Households with an annual income of \$100,000 can afford to spend up to \$2,500 per month on rent, and most neighborhoods in the city are affordable for them.

Median Market Rent (MMR), 2011-2015 Average by Census Tract



Source: Zillow Group, Zillow Rent Index (ZRI) Time Series.

Notes: Median Market Rent is on a monthly basis and reflects a 2011 through 2015 average. Census tracts with “low” median market are affordable for a household with annual income of \$62,400, which equates to the earnings of two full-time workers making \$15 per hour each. Affordable rent is defined as no more than 30 percent of household income. The gray area in the center of the map corresponds to the city of Signal Hill and is excluded from this analysis.



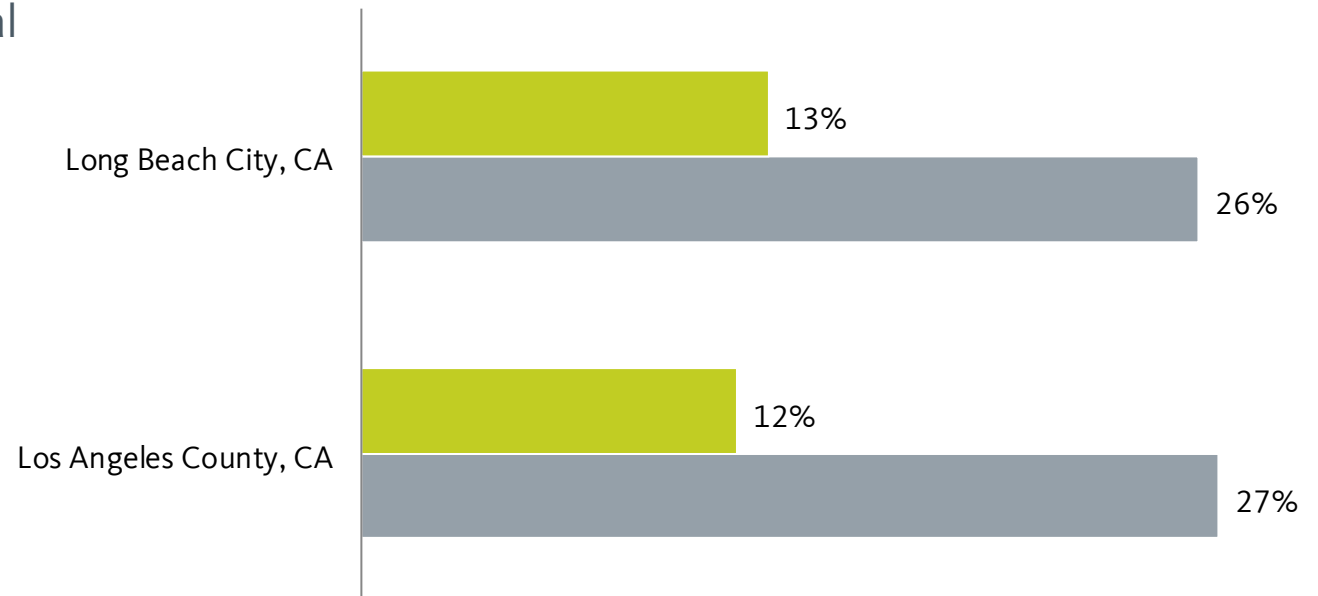
Connectedness

Can all residents access affordable housing?

One-quarter of jobs in the city are low-wage jobs, but only about one in 10 rental housing units are affordable to low-wage workers. The availability of affordable rental housing for low-wage workers is similar in the city as for Los Angeles County overall.

Share of Low-Wage Jobs and Share of Affordable Rental Housing, 2016

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



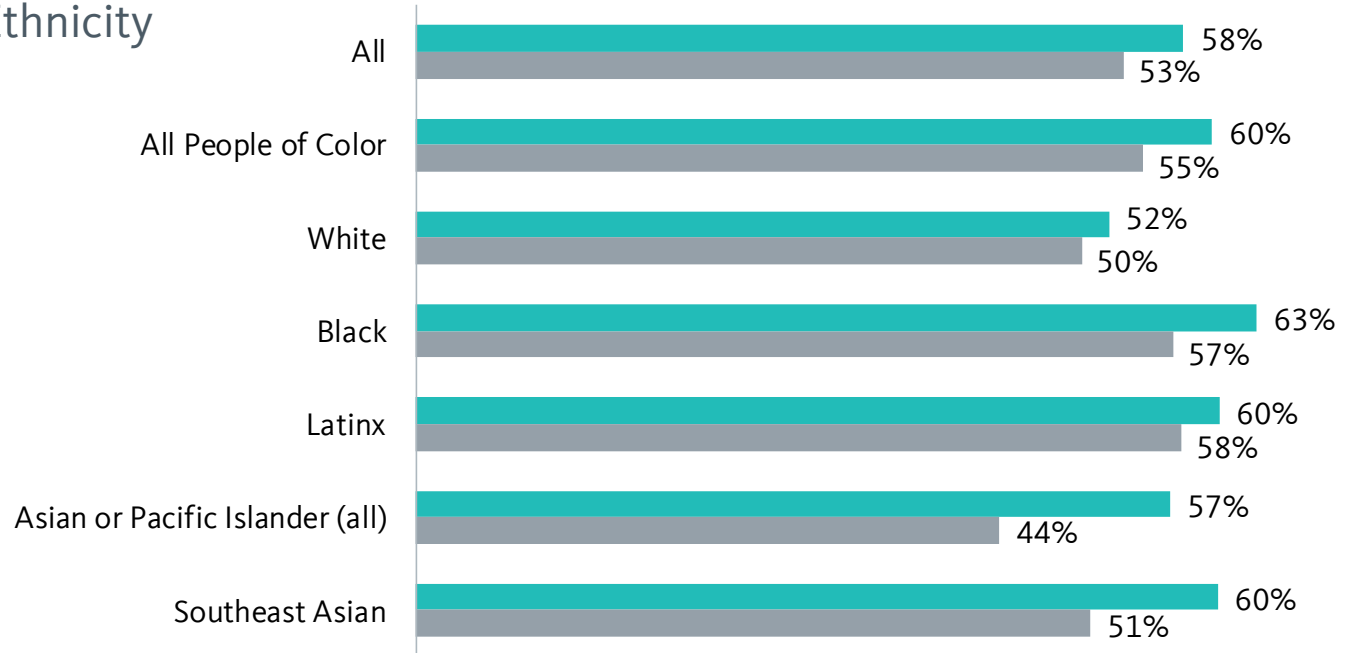
Connectedness

Can all residents access affordable housing?

Women heads of households are more likely to be rent burdened than men. This holds true across race/ethnicity. Black women have the highest rate of rent burden at 63 percent, while White women have the lowest among women heads of households at 52 percent.

Rent Burden by Race/Ethnicity and Gender, 2016

■ Female
■ Male



Source: Integrated Public Use Microdata Series. Universe includes all renter-occupied households with housing costs.

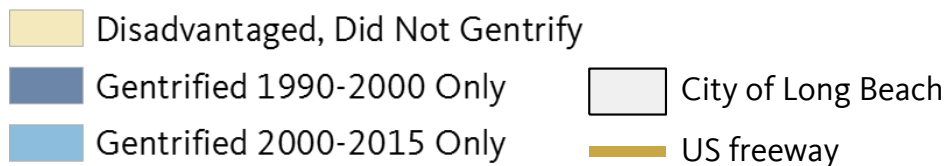
Note: Data represents a 2012 through 2016 average. Rent burden is a measure of housing affordability that looks at the proportion of renter households that are paying more than 30 percent of their income on housing costs (which include contract rent and utilities). No rent burden data by gender is shown for Native American or Mixed/other households because of small sample size.

Connectedness

Can all residents access affordable housing?

Few neighborhoods in the city experienced gentrification after 1990, but those that did mostly gentrified between 2000 and 2015. Many neighborhoods on the west side of the city are classified as disadvantaged, with higher proportions of low-income, renter, and people-of-color households, and smaller proportions of college-educated residents compared to the region as a whole.

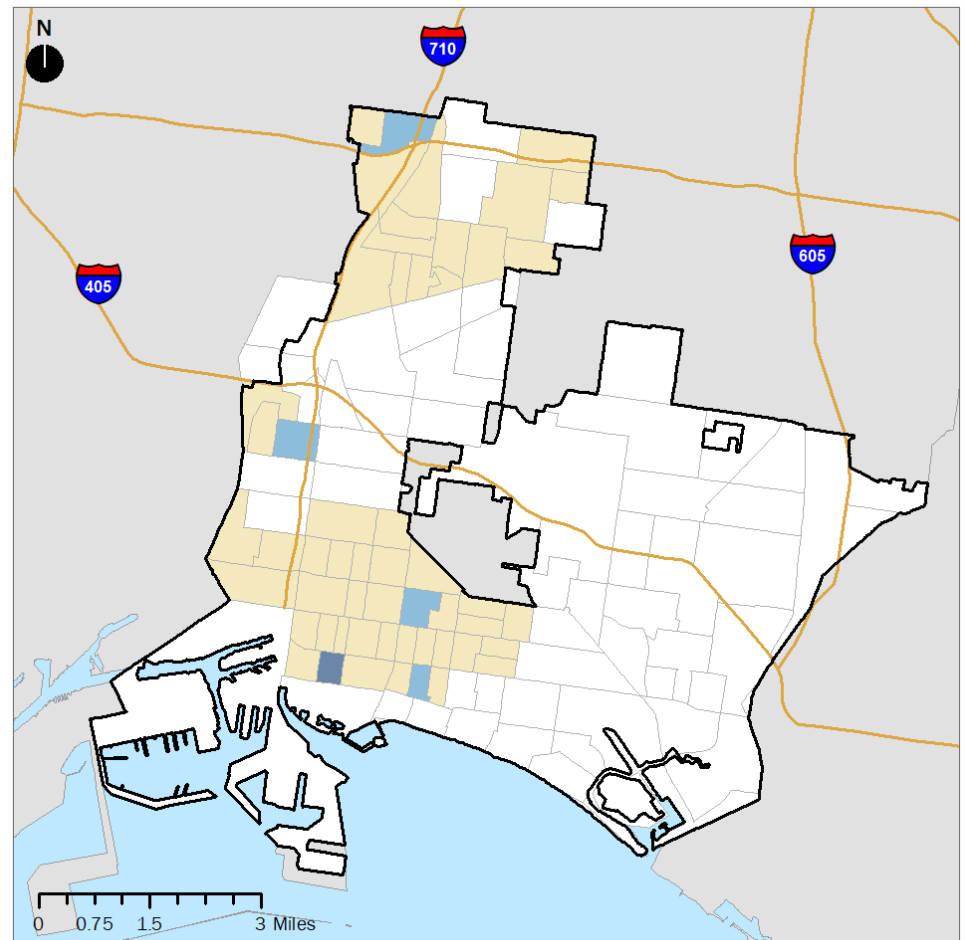
Gentrification by Census Tract, 1990 to 2000 and 2000 to 2015



Source: Urban Displacement Project, UC Berkeley. To learn more and to download the data please visit:

<http://www.urbandisplacement.org/map/socal>.

Notes: Disadvantaged neighborhoods are census tracts "eligible" or susceptible to gentrification (i.e., population of at least 500 people and all of the following indicators greater than the regional median: percent low-income households, percent renter, percent non-White population, and percent college-educated less than the regional median). Gentrified neighborhoods exhibited a larger percentage point increase or absolute dollar value increase than the county between the given time periods for the following indicators: percent college-educated, percent non-Hispanic White, median household income, and median gross rent. The gray area in the center of the map corresponds to the city of Signal Hill and is excluded from this analysis.



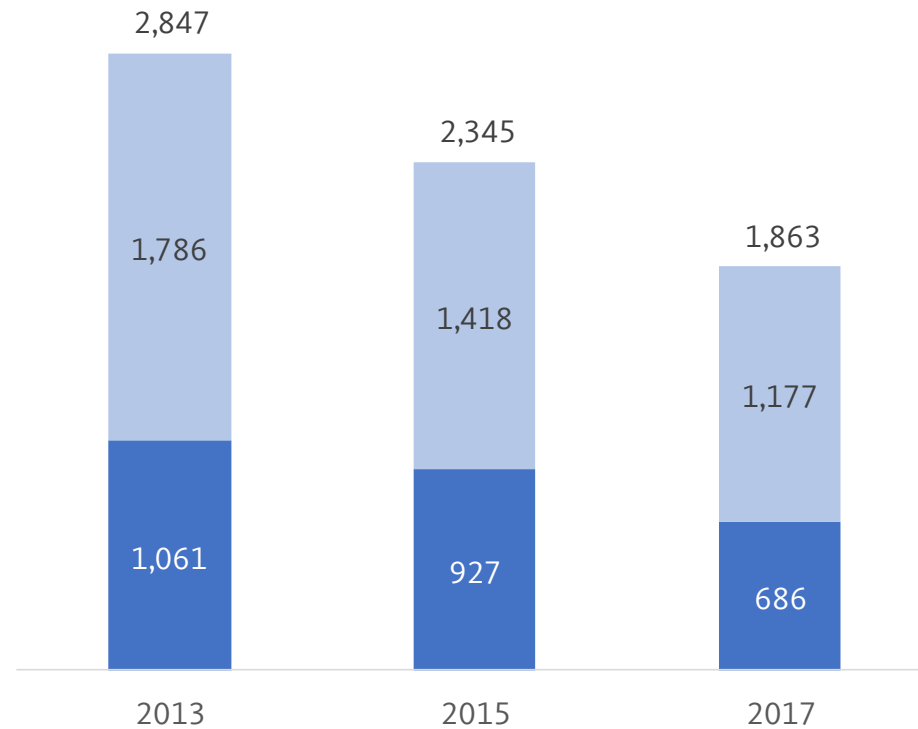
Connectedness

Can all residents access affordable housing?

The homeless population in the city has declined by one-third over the last few years. The chronic homeless population, which was over 1,000 individuals in 2013, dropped to under 700 in 2017.

Homeless Counts, 2013 to 2017

- Homeless Persons (not chronic)
- Homeless Persons (chronic)



Source: City of Long Beach Department of Health and Human Services Memorandum, April 25, 2017.

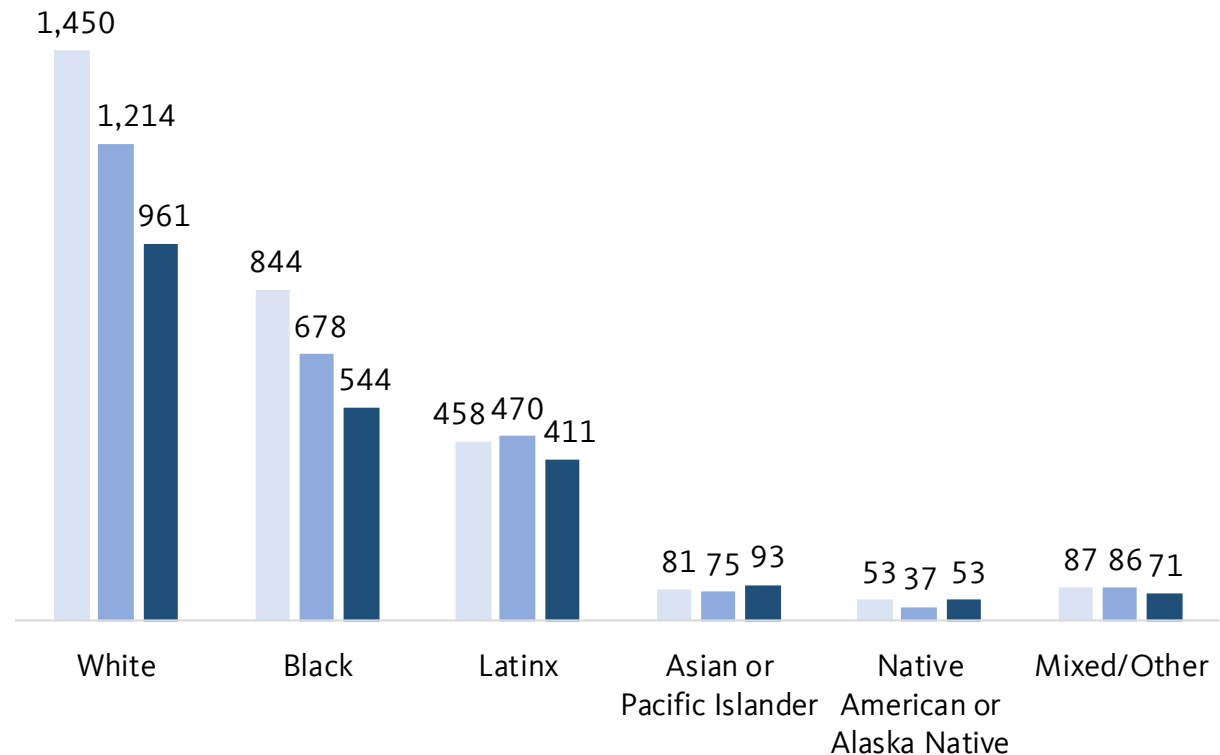
Connectedness

Can all residents access affordable housing?

White and Black residents experienced the largest declines in homelessness since 2013. Latinx residents and those identifying as Mixed race experienced modest declines. The homeless population increased slightly or remained stable for Asian or Pacific Islander and Native American and Alaska Native residents, respectively.

Homeless Counts by Race/Ethnicity, 2013 to 2017

- 2013
- 2015
- 2017



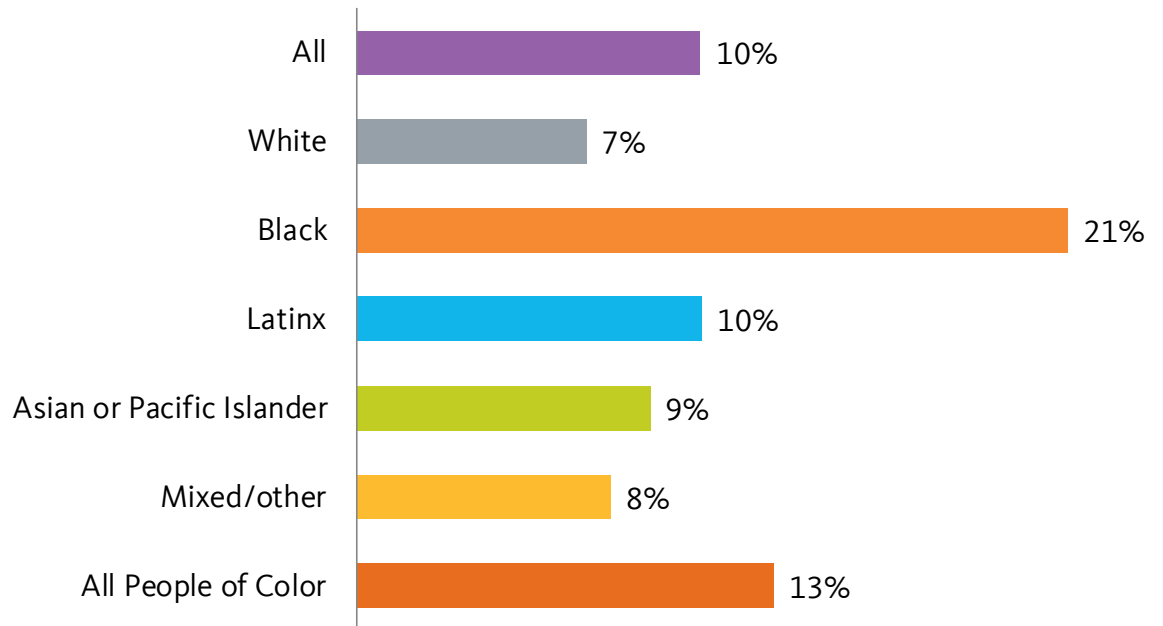
Source: City of Long Beach Department of Health and Human Services Memorandum, April 25, 2017. Note: All racial/ethnic groups may include Latinxs who identify with each particular group.

Connectedness

Can all residents access transportation?

Black households are twice as likely to be without a vehicle compared with all households combined.

Households Without a Vehicle by Race/Ethnicity, 2016



Source: Integrated Public Use Microdata Series. Universe includes all households (no group quarters).
Note: Data represents a 2012 through 2016 average.

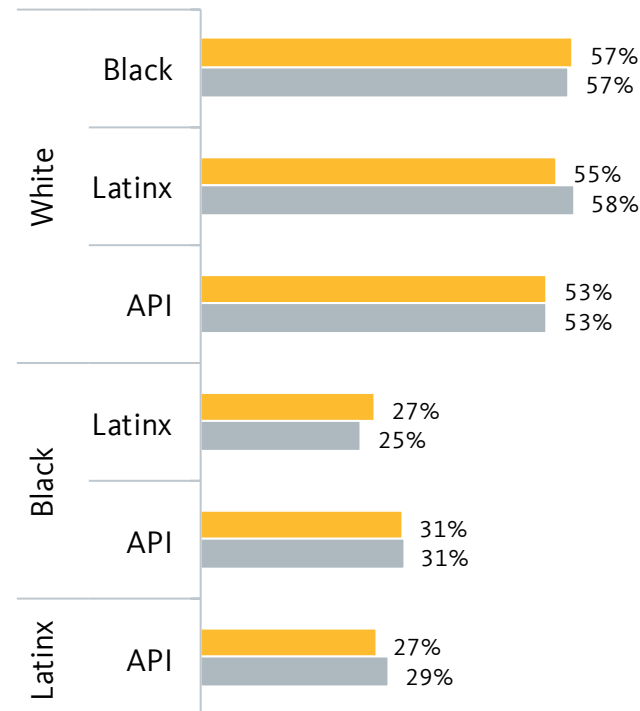
Connectedness

Do neighborhoods reflect the region's diversity?

Segregation between White and Latinx residents has increased since 1990, surpassing the degree of segregation observed between White and Black residents. Segregation is highest between White residents and the different major racial/ethnic groups of color. It is much lower between racial/ethnic groups of color.

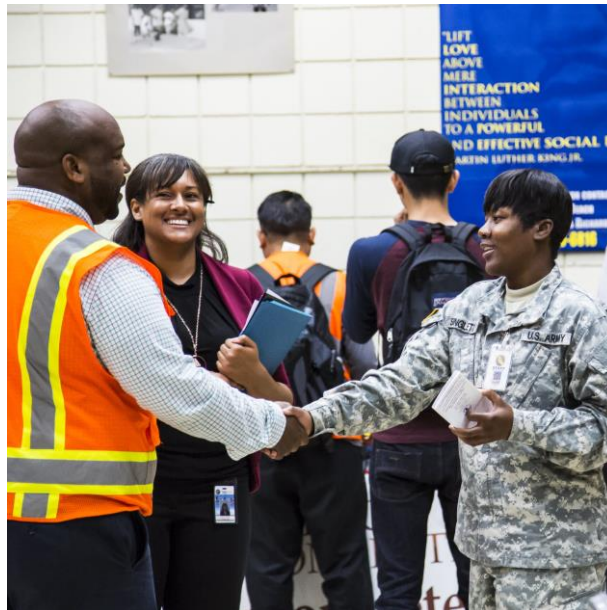
Residential Segregation, 1990 and 2016, Measured by the Dissimilarity Index

■ 1990
■ 2016



Source: Data for 1990 from GeoLytics, Inc. Data for 2016 from the 2016 American Community Survey 5-year Summary File.
 Note: The chart displays the dissimilarity index calculated between two racial/ethnic groups at a time, which estimates the share of either group that would need to move to a new neighborhood to achieve complete residential integration with the other group. Data for 2016 represents a 2012 through 2016 average.

Economic benefits of equity



Economic benefits of equity

Summary

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

Eliminating racial inequities in income and wealth would benefit families, communities, and the local and regional economy. Today, average incomes for White workers in the city of Long Beach are double those of Latinx workers and at least one and a half times those of Black, Asian or Pacific Islander, and Mixed-race workers. Closing those gaps would boost the entire Los Angeles regional economy (of which Long Beach is a critical part). If the racial gap in income was closed by raising incomes to the same level of Whites, the metro economy could have been \$502 billion stronger in 2015.

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

\$502

Boost to annual income for Latinx workers with racial equity in income:

\$27,922

Income gains for people of color with racial equity attributable to increased wages:

67%

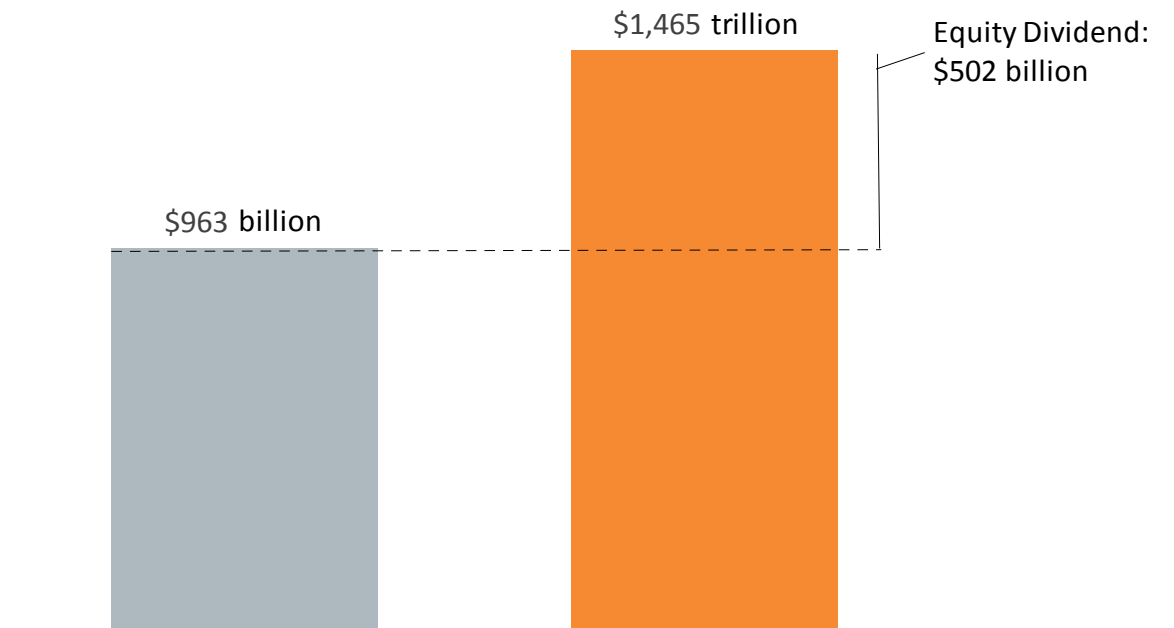
Economic benefits of equity

How much higher would GDP be without racial economic inequalities?

The Los Angeles region’s GDP would have been \$502 billion higher in 2015 if its racial gaps in income were closed.

Actual GDP and Estimated GDP Without Racial Gaps in Income, 2015

- GDP in 2015
- GDP if racial gaps in income were eliminated



Sources: Bureau of Economic Analysis; Integrated Public Use Microdata Series (IPUMS).

Note: Data is for the Los Angeles metro area, including Los Angeles and Orange counties. The “equity dividend” is calculated using data from IPUMS for 2011 through 2015 and is then applied to estimated GDP in 2015. See the “Data and methods” section for details. Data is unavailable for the city of Long Beach; however, Long Beach is a part of the broader Los Angeles regional economy: 77 percent of workers living in Long Beach were employed in the greater Los Angeles metropolitan region in 2015, according to the U.S. Census Bureau Longitudinal Employer-Household Dynamics data.

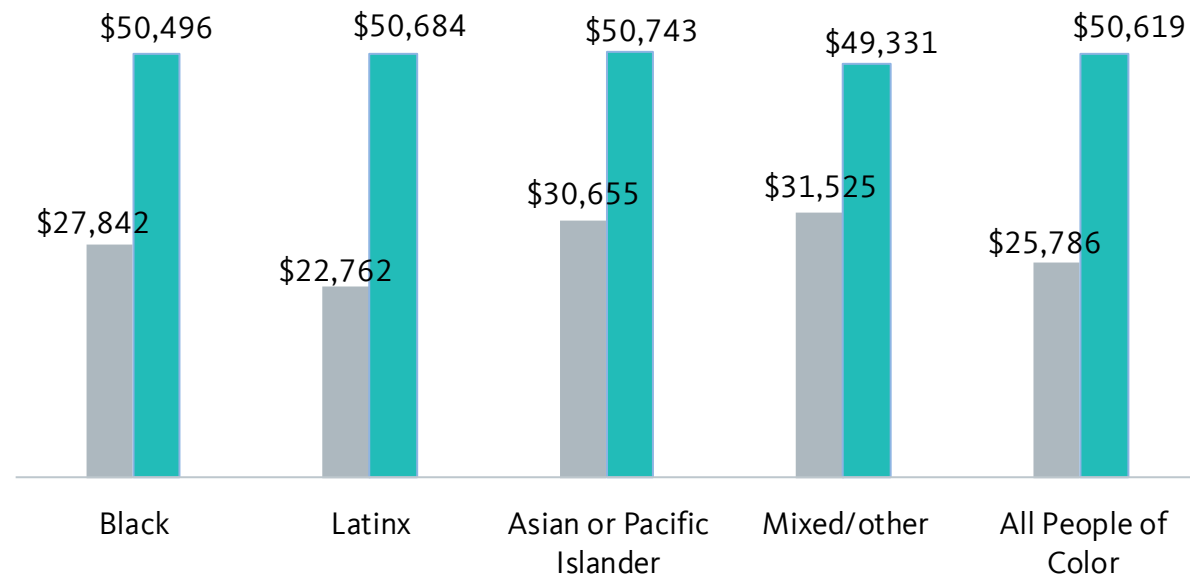
Economic benefits of equity

What are the economic benefits of inclusion?

With racial equity in income, Latinx workers in the city of Long Beach would earn more than double their current income. Black, Asian or Pacific Islander workers, and those identifying as Mixed race would earn at least one and a half times their current earnings.

Income Gains by Race/Ethnicity, 2015

■ Average income
 ■ Average income with racial equity



Source: Integrated Public Use Microdata Series.
 Note: Data represents a 2011 through 2015 average.

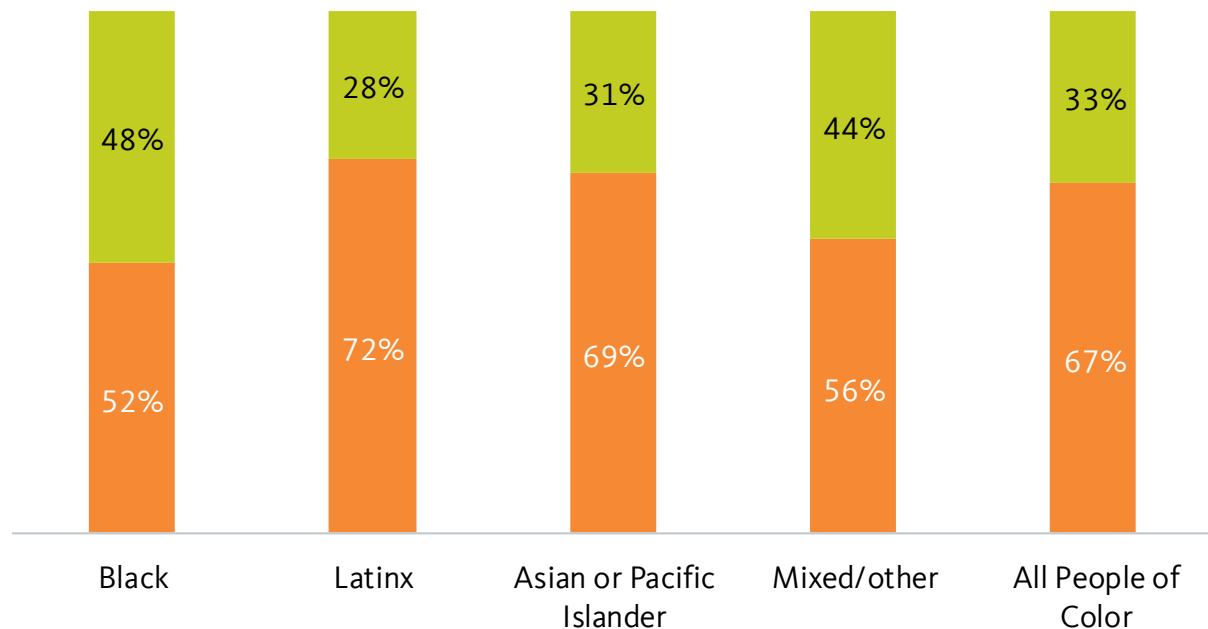
Economic benefits of equity

What are the economic benefits of inclusion?

For Latinx and Asian or Pacific Islander workers, the vast majority of income gains with racial equity would come from closing the racial wage gap with Whites. For Black workers and those identifying as Mixed race, gains would come from closing both the wage and employment gaps with White workers.

Source of Gains in Income with Racial Equity by Race/Ethnicity, 2015

- Employment
- Wages



Source: Integrated Public Use Microdata Series.
 Note: Data represents a 2011 through 2015 average.

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

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, 2000 to 2016

Measures of diversity and segregation

Estimates of GDP without racial gaps in income

Data and methods

Data source summary and regional geography

Unless otherwise noted, all of the data and analyses presented in this equity profile are the product of PolicyLink and the USC Program for Environmental and Regional Equity (PERE). The specific data sources are listed in the table on the right. Unless otherwise noted, all data presented is for the city of Long Beach. While much of the data and analysis presented in this profile are fairly intuitive, in the following pages we describe some of the estimation techniques and adjustments made in creating the underlying database, and provide more detail on terms and methodology used. Finally, the reader should bear in mind that while only a single city is profiled here, many of the analytical choices in generating the underlying data and analyses were made with an eye toward replicating the analyses in other cities and regions, and the ability to update them over time. While in some cases we draw on more city-specific data, the data presented is generally drawn from our regional equity indicators database that provides data that is comparable and replicable over time.

Source	Dataset
Integrated Public Use Microdata Series (IPUMS)	1980 5% State Sample 1990 5% Sample 2000 5% Sample 2016 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 American Community Survey 5-year Summary File 2016 American Community Survey 5-year Summary File 2017 American Community Survey 1-year Summary File 2014 Local Employment Dynamics, LODES 7 2012 Survey of Business Owners 2014 TIGER/Line Shapefiles, 2014 Census Tracts 2010 TIGER/Line Shapefiles, 2010 Counties
Geolytics	1990 Long Form in 2010 Boundaries
Woods & Poole Economics, Inc.	2017 Complete Economic and Demographic Data Source
U.S. Bureau of Economic Analysis (BEA)	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
Centers for Disease Control and Prevention	U.S. Small-area Life Expectancy Estimates Project (USALEEP), 2010-2015
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
California Employment Development Department, Labor Market Information Division	2014-2024 Occupational Employment Projections (published November 2016)
California Department of Education	California Assessment of Student Performance and Progress System, 2016-17 school year DataQuest, 2016-17 school year
California Office of Environmental Health Hazard Assessment	CalEnviroScreen 3.0, June 2018 update
Big Cities Health Inventory Platform 2.0	Life expectancy at birth, 2011 and 2012 All-Cause Mortality Rate (Age-Adjusted; Per 100,000 people), 2014
Zillow Group	Zillow Rent Index (ZRI) Time Series
UC Berkeley	Urban Displacement Project
City of Long Beach Department of Health and Human Services	Memorandum, April 25, 2017. Homeless Services Update: 2017 Point-in-Time Homeless Count Results

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 and other surveys. Unless otherwise noted, 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 as follows.

- “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.
- “Latinx” and “Latino” refers to all people who identify as being of Hispanic origin, regardless of racial identification.
- “Asian,” “Asian/Pacific Islander,” and “API” are used to refer to all people who identify as Asian 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 of American parents. The terms “immigrant” and “foreign born” are used interchangeably and refer to all people who identify as being born abroad, outside of the United States, to non-U.S. citizen parents.

Detailed racial/ethnic ancestry

Given the diversity of ethnic origin and large presence of immigrants among the Latino and Asian populations, we sometimes present data for more detailed racial/ethnic categories within these groups. In order 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 IPUMS variable “ANCESTR1.” For example, while country-of-origin information could have been used to identify the Filipinx population among the Asian population or Salvadorans among the Latinx population, it could only do so for immigrants, leaving only the broad “Asian” and “Latinx” racial/ethnic 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 equity profile.

- The terms “region,” “metropolitan area,” “metro area,” and “metro” are used interchangeably to refer to the geographic areas defined as Metropolitan Statistical Areas by the U.S. Office of Management and Budget, as well as to the region that is the subject of this profile as defined previously.
- Unless otherwise noted, 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 https://www.census.gov/content/dam/Census/library/working-papers/2007/acs/2007_Holder_02.pdf.

Unless otherwise noted, “working age” refers to persons ages 25 through 64, “children” and “youth” refer to persons under age 18, “adults” refers to persons ages 18 or older, and “seniors” and “elderly” refer to persons ages 65 or older.

General notes on analyses

Below we provide some general notes about the analyses conducted.

- In regard to monetary measures (income, earnings, wages, etc.) the term “real” indicates the data have been adjusted for inflation, and, unless otherwise noted, all dollar values are in 2016 dollars. 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://data.bls.gov/timeseries/CUUR0000SA0>.
- Note that income information in the decennial censuses for 1980, 1990, and 2000 is reported for the year prior to the survey.
- When reporting numbers in charts, they are often rounded and thus may not add up to the totals (if shown/reported).
- When reporting data on households by characteristics such as race/ethnicity, nativity, or gender, the characteristics are drawn from the householder.

Data and methods

Summary measures from IPUMS microdata

Although a variety of data sources were used, much of our analysis is based on a unique dataset created using microdata samples (i.e., “individual-level” data) from the Integrated Public Use Microdata Series (IPUMS), for four points in time: 1980, 1990, 2000, and 2012 through 2016 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 2012 through 2016 files are from the American Community Survey (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 2012 through 2016 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 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 neatly align with the boundaries of metropolitan areas, we created a geographic crosswalk between PUMAs and the region for the 1980, 1990, 2000, and 2012-2016 microdata. This involved estimating the share of each PUMA’s population that falls inside the region using population information for each year from Geolytics in 2010 census block group geographies (2012-2016 population information from the ACS summary file was used for the 2012-2016 geographic crosswalk). If the share was at least 50 percent, the PUMAs were assigned to the region and included in generating regional summary measures. For the remaining PUMAs, the share was somewhere between 50 and 100 percent, and this share was used as the “PUMA adjustment factor” to adjust downward the survey weights for individuals included in such PUMAs in the microdata when estimating regional summary measures.

Data and methods

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

For the racial generation gap indicator, we generated 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 2010, at the county and place (city) level, which was then aggregated to the regional level and higher. The racial/ethnic groups include non-Hispanic White, non-Hispanic Black, Hispanic/Latinx, non-Hispanic Asian and 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 and 2010 this information is readily available in SF1 of each year, 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 STF1, for race/ethnicity by age group we had to look to STF2, 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 Asian 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 Office of Management and Budget’s (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 that 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 race” or Multiracial people and applied this share to estimate the number of people by race/ethnicity and age group exclusive of the “Other race” and Multiracial, and finally the number of the “Other race” and Multiracial by age group.

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, because of 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 2016.

Adjustments at the state and national levels

While data on gross state product (GSP) are not reported directly in the equity 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 county. Next, we calculated the difference between our final estimate of gross product for each state and the sum of our second-

Data and methods

Estimates and adjustments made to BEA data on GDP

(continued)

iteration county-level gross-product estimates for metropolitan counties contained in the state (that is, counties contained in metropolitan areas). This difference, total nonmetropolitan gross product by state, was then allocated to the nonmetropolitan 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 iterative proportional fitting procedure.

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 2016 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 31 and 49-50 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). Because of some missing (or nondisclosed) 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 nondisclosed industries.

Therefore, our approach was to first calculate the number of jobs and total wages from nondisclosed industries in each county, and then distribute those amounts across the nondisclosed 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 Complete Economic and Demographic Data Source (CEDDS) 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, 2000 to 2016

The analysis on page 31 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. For this equity profile, we chose to show changes in jobs and earnings by industry wage level between 2000 and 2016 (even though the classifications of industries are based on 1990).

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_baltimore_economy_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

Measures of diversity and segregation

In the equity profile we refer to the “dissimilarity index” on page 75. While the common interpretation of this measure is included in the text of the profile, the data used to calculate it, and the sources of the specific formula that was applied, are described below. The dissimilarity index is based on census tract-level data for 1990 from GeoLytics, Inc., and for 2016 (which reflects a 2012 through 2016 average) from the 2016 5-year ACS. While the data for 1990 originates from the decennial census of that 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.

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

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 IPUMS 2015 five-year American Community Survey (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).

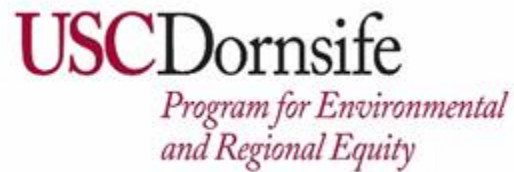
We first organized individuals ages 16 or older in the IPUMS ACS into six mutually exclusive racial/ethnic groups: non-Hispanic White, non-Hispanic Black, Latinx, non-Hispanic Asian/Pacific Islander, non-Hispanic Native American, and non-Hispanic Other or Multiracial. Following the approach of Lynch 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.

The key difference between our approach and that of Lynch and Oakford is that we include in our sample all individuals ages 16 years and older, rather than just those with positive income values. Those with income values of zero are largely non-working, and they were included so that income gains attributable to increases in average annual hours of work would reflect both an expansion of work hours for those currently working and an increase in the share of workers – an important factor to consider given measurable 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 by Lynch and Oakford; another is that our estimated income gains are relatively larger as they presume increased employment rates.



PolicyLink is a national research and action institute advancing racial and economic equity by Lifting Up What Works®.

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