PolicyLink

PERE
USC Program for Environmental & Regional Equity

An Equity Profile of

Biloxi

W.K. KELLOGG FOUNDATION®

Acknowledgments

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We also thank our local partners in Biloxi, including the East Biloxi Community Collaborative and the Mississippi Center for Justice, who have contributed their insight and expertise to help make the analyses presented in this profile as reflective of and valuable to equity initiatives underway in the county as possible.

Finally, we are grateful to our partners Dolores Acevedo-Garcia and Erin Hardy at The diversitydatakids.org Project for allowing us to include their unique data on child and family well-being in this series of profiles.

This profile was written by Jessica Pizarek at PolicyLink; the data, charts, and maps were prepared by Sheila Xiao, Pamela Stephens, and Justin Scoggins at PERE; and Heather Tamir and Jennifer Pinto of PolicyLink assisted with formatting, editing, and design.

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

The views expressed in this document are those of PolicyLink and PERE.

Summary

Biloxi, Mississippi is becoming increasingly diverse despite experiencing population decline. Looking forward, communities of color will continue to drive growth and change into the foreseeable future. The city's diversity can be a tremendous economic asset if people of color are fully included as workers, entrepreneurs, and innovators. Equitable growth is the path to sustained economic prosperity in Biloxi. The state of Mississippi's economy could have been $21 billion stronger in 2014 if its racial gaps in income had been closed: a 20 percent increase. By advancing policy strategies to grow good jobs, build healthy communities of opportunity, prevent displacement, and ensure just policing and court systems, Biloxi can put all residents on the path toward reaching their full potential, and secure a bright future for the city and region.

Introduction
Key Findings

- Population decline has increased since 1980. The majority of the county's population loss has occurred in the White population, which declined by 23 percent after 2000.

- Harrison County is diversifying. By 2050, 47 percent of all residents will be people of color.

- Income is concentrated among the city's wealthiest residents. The top 20 percent of earners take home 51 percent of all income.

- By 2020, 22 percent of jobs in Mississippi will require a bachelor's degree or higher. While some Biloxi residents are prepared to fill these jobs, there are significant disparities for Black, Latino, Native American, and female Asian or Pacific Islander residents.

- Poverty and unemployment tend to be most concentrated in neighborhoods that are home to majority residents of color.

Latino males with at least a bachelor's degree:

10%

Percent of state jobs that will require at least a bachelor's degree in 2020:

22%

Potential increase in state GDP with racial equity in income:

$21 billion

Introduction
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 estimates the economic benefits of racial 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 composition vary by age?

Economic vitality:
How is the city doing on measures of economic growth and well-being?
- Is the city 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?
- Are racial gaps in education and health decreasing?
- Can all residents access healthy food?

Connectedness:
Are the city's residents and neighborhoods connected to one another and to the city's assets and opportunities?
- Do residents have transportation choices?
- Can residents access jobs and opportunities located throughout the city?
- Can all residents access affordable, quality, and convenient housing?
- Do neighborhoods reflect the city's diversity? Is segregation decreasing?

Economic benefits:
How would addressing racial inequities affect the regional economy?
- How would the region's gross domestic product be affected?
- How much would residents benefit from closing racial gaps in income and employment?

Introduction

Introduction
Overview

Across the country, community organizations and residents, local governments, business leaders, funders, and policymakers are striving to put plans, policies, and programs in place that build healthier, more equitable communities and foster inclusive growth.

These efforts recognize that equity – just and fair inclusion into a society in which all can participate, prosper, and reach their full potential – is fundamental to a brighter future for their communities.

Knowing how a community stands in terms of equity is a critical first step in planning for greater equity. To assist with that process, PolicyLink and the Program for Environmental and Regional Equity (PERE) developed an equity indicators framework that communities can use to understand and track the state of equity and equitable growth locally.

This document presents an equity analysis of Biloxi, Mississippi. It was developed with the support of the W.K. Kellogg Foundation to support local community groups, elected officials, planners, business leaders, funders, and others working to build a stronger and more equitable city. The foundation is supporting the development of equity profiles in 10 of its priority communities across Louisiana, Michigan, Mississippi, and New Mexico.

The data in this profile are drawn from a regional equity database that includes data for the largest 100 cities and 150 regions in the United States, as well as all 50 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, and Woods and Poole Economics. It also includes unique data on child and family well-being from the W.K. Kellogg Foundation Priority Communities Dashboard Database, contributed by The diversitydatakids.org Project based at the Institute for Child, Youth and Family Policy at the Heller School for Social Policy and Management at Brandeis University. See the "Data and methods" section of this profile for a detailed list of data sources.

This profile uses a range of data sources to describe the state of equity in Biloxi as comprehensively as possible, but there are limitations. Not all data collected by public and private sources is disaggregated by race/ethnicity and other demographic characteristics. And in some cases, even when disaggregated data is available, the sample size for a given population is too small to report with confidence.

Communities facing deep challenges and barriers to inclusion may be absent from some of the analysis presented here due to small sample size. Local data sources and the lived experiences of diverse residents should supplement the data provided in this profile to more fully represent the state of equity in Biloxi.

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 income 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 building this new growth model.

Local communities are where strategies are being incubated that 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" (Federal Reserve Bank of Cleveland: April 2006), http://www.clevelandfed.org/Research/workpaper/2006/wp06-05.pdf.

[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." http://obs.rc.fas.harvard.edu/chetty/website/v2/Geography%20Executive%20Summary%20and%20Memo%20January%202014.pdf

[3] Darrell Gaskin, Thomas LaVeist, and Patrick Richard, "The State of Urban Health: Eliminating Health Disparities to Save Lives and Cut Costs." National Urban League Policy Institute, 2012.

[4] Cedric Herring. "Does Diversity Pay?: Race, Gender, and the Business Case for Diversity." *American Sociological Review*, 74, no. 2 (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, http://www.census.gov/econ/sbo/export07/index.html.

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

Introduction
What is an equitable city?

Cities are equitable when all residents – regardless of their race/ethnicity, and nativity, neighborhood of residence, or other characteristics – are fully able to participate in the county's economic vitality, contribute to the county's readiness for the future, and connect to the county's assets and resources.

Strong, equitable cities:

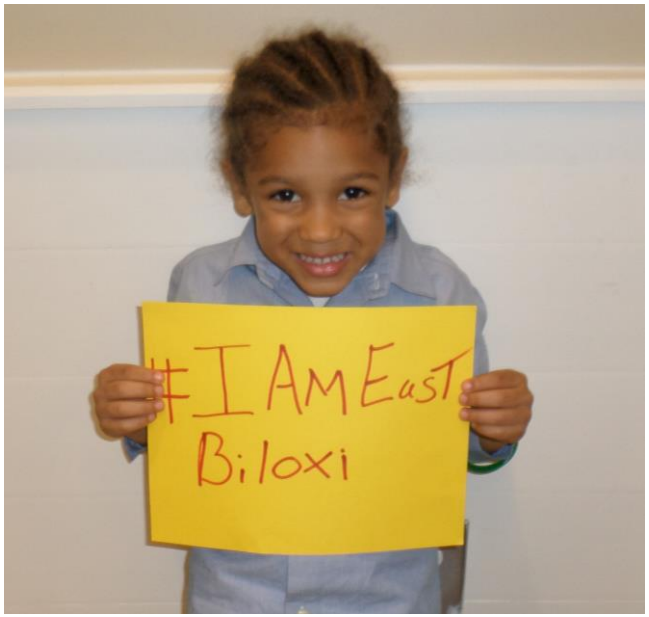
- Possess **economic vitality**, providing high-quality jobs to their residents and producing new ideas, products, businesses, and economic activity so the county remains sustainable and competitive.
- Are **ready for the future**, with a skilled, ready workforce, and a healthy population.
- Are **places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

Introduction
Geography

This profile describes demographic, economic, and health conditions in the city of Biloxi, portrayed in black on the map to the right. Biloxi is situated within Harrison County and the Gulfport-Biloxi, MS metropolitan statistical area, which includes Hancock, Harrison, and Stone counties.

Unless otherwise noted, all data follow the city geography, which is simply referred to as "Biloxi." Some exceptions due to lack of data availability are noted beneath the relevant figures. Information on data sources and methodology can be found in the "Data and methods" section beginning on page 79.

Demographics



Demographics
Highlights

Who lives in the city and how is it changing?

- The city has experienced overall population decline since 1980. The majority of the county's population loss has occurred in the White population, which has declined by 23 percent since 2000 alone.
- Biloxi is more diverse than surrounding Harrison County, the Gulfport-Biloxi metro region, and the state of Mississippi as a whole.
- Biloxi's 37 percentage point racial generation gap – the share of youth who are people of color as compared to the share of seniors who are people of color – is larger than that of both the state of Mississippi and the nation as a whole.
- By 2050, 47 percent of all residents in Harrison County will be people of color.

Share of residents who are people of color:

39%

Share of youth who are people of color:

53%

Decline in the White population 2000-2014

-23%

Demographics

Despite overall population decline, the city's people-of-color population continues to grow

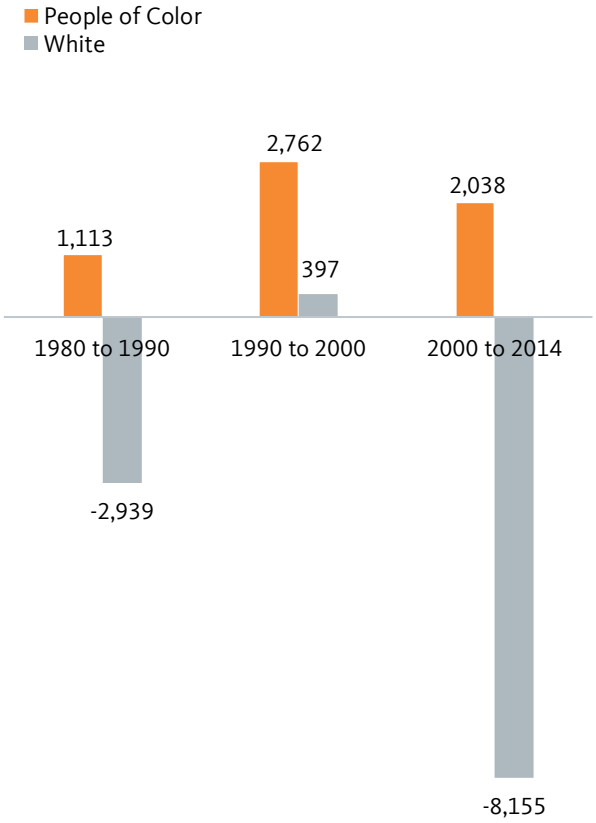
Between 2000 and 2014, the city's overall population declined by 12 percent, while the county, state, and nation grew.

The majority of the city's population loss has occurred in the White population, which has decreased by 28 percent since 1980 (from roughly 38,000 to 27,000 residents). White residents decreased by 23 percent from 2000 to 2014 alone.

Over the past four decades, the city's population has become more diverse. The number of people of color living in the county has continued to grow over the past few decades. Since 1980, the number of people living in the city who are people of color has grown by 52 percent from 11,500 to 17,400. Today, people of color account for 39 percent of all city residents.

The city has experienced a dramatic decrease in the White population

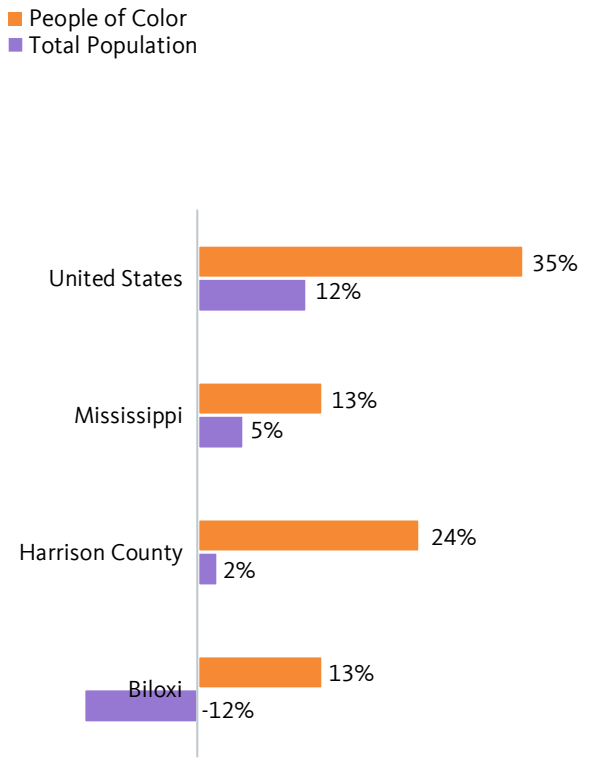
Composition of Net Population Growth by Decade, 1980 to 2014



Source: U.S. Census Bureau.
Note: Data for 2014 represents a 2010 through 2014 average.

People-of-color growth in the city is similar to that of the state

Percent Change in Population, 2000 to 2014



Source: U.S. Census Bureau.
Note: Data for 2014 represents a 2010 through 2014 average.

Demographics
The city is steadily diversifying

In 1980, only 23 percent of Biloxians were people of color. By 2014, that had risen to 39 percent. This shift can be attributed to both a decline in the White population and growth in communities of color.

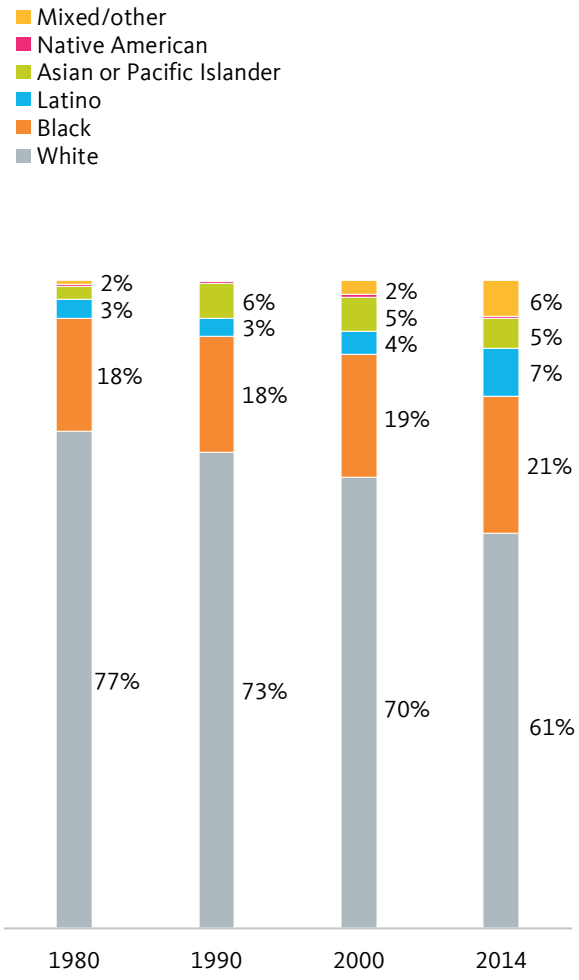
Residents identifying as multiracial have grown to represent 6 percent of the city's population. Between 2000 and 2014 alone, this community grew by 124 percent, increasing from 1,100 to 2,450 residents between 2000 an 2014.

Similarly, the Latino population has experienced notable population growth. Over the last decade, the number of Latino residents living in the city grew by 76 percent. Today, they represent 7 percent of the city's total population.

Since 1980 the share of residents who identify as White has decreased by 16 percentage points. Between 2000 and 2014 alone, the White population decreased by 23 percent.

The city's White population has declined

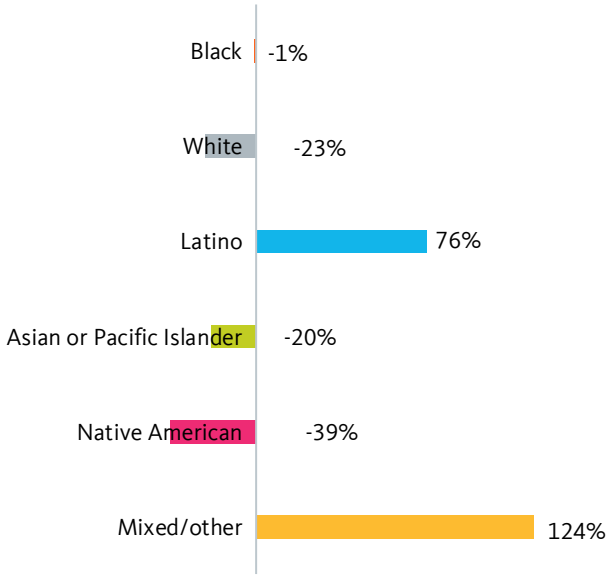
Racial/Ethnic Composition, 1980 to 2014



Source: U.S. Census Bureau.
Note: Data for 2014 represents a 2010 through 2014 average. Much of the increase in the Mixed/other population between 1990 and 2000 is due to a change in the survey question on race.

Residents who identify as <ixed/other race or Latino have experienced the most growth

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



Source: U.S. Census Bureau.
Note: Data for 2014 represents a 2010 through 2014 average.

Demographics

Significant portions of the city's Asian or Pacific Islander and Latino residents are foreign-born

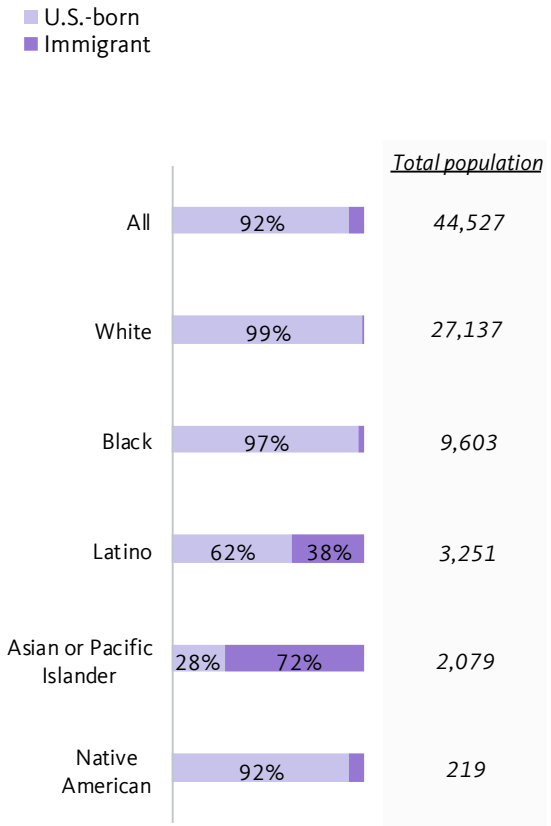
The majority of Biloxi residents are U.S.-born. However, a significant percent of Asian or Pacific Islander (API) residents and Latino residents are immigrants. Of all API residents in the city, 72 percent are immigrants.

While the majority of Latinos are U.S.-born, 38 percent are immigrants. Among Latinos, the largest ancestry group is Mexican, followed by Puerto Rican. More than half of all Latino residents are of Mexican ancestry.

Asian or Pacific Islanders tend to be of Vietnamese ancestry – nearly 54 percent, or 1,119 residents.

Most residents are U.S.-born

Race, Ethnicity, and Nativity, 2014



Source: U.S. Census Bureau.
Note: Data represent a 2010 through 2014 average.

Among Asians or Pacific Islanders, 47 percent are of Vietnamese ancestry

Latino and Asian or Pacific Islander Populations by Ancestry, 2014

Latino	Population
Mexican	1,655
Puerto Rican	686
Honduran	200
Guatemalan	115
Panamanian	89
Peruvian	83
All other Latinos	423
Total	**3,251**

Asian or Pacific Islander (API)	Population
Vietnamese	1,119
Filipino	408
Indian	166
Korean	128
Japanese	110
All other APIs	148
Total	**2,079**

Source: U.S. Census Bureau.
Note: Asian or Pacific Islander may include any Latinos who identify with that particular racial category.

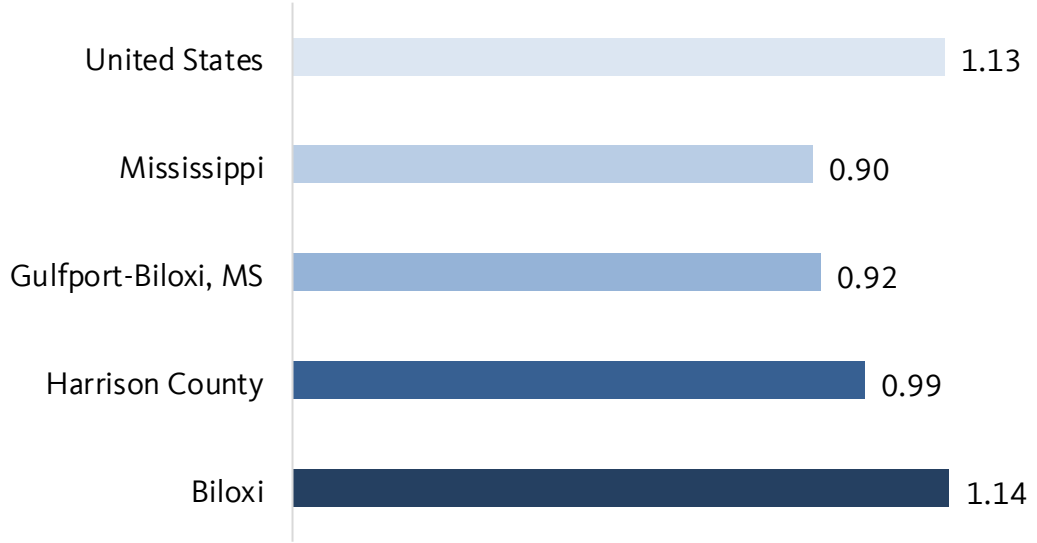
Demographics
Diversity in Biloxi is comparatively high

Biloxi is relatively diverse as compared to the rest of the county and region, as well as the state of Mississippi. It has the same level of diversity as the nation as a whole.

The diversity score is a measure of racial/ethnic diversity in a given area. It measures the representation of the six major racial/ethnic groups (White, Black, Latino, API, Native American, and Mixed/other race) in the population. The maximum possible diversity score (1.79) would occur if each group were evenly represented in the region – that is, if each group accounted for one-sixth of the total population.

Note that the diversity score describes the city as a whole and does not measure racial segregation, or the extent to which different racial/ethnic groups live in different neighborhoods. Segregation measures can be found on pages 60 and 61.

Biloxi's diversity score reflects changing demographics in the city
Diversity Score, 2014



Source: U.S. Census Bureau.
Note: Data represent a 2010 through 2014 average.

Demographics

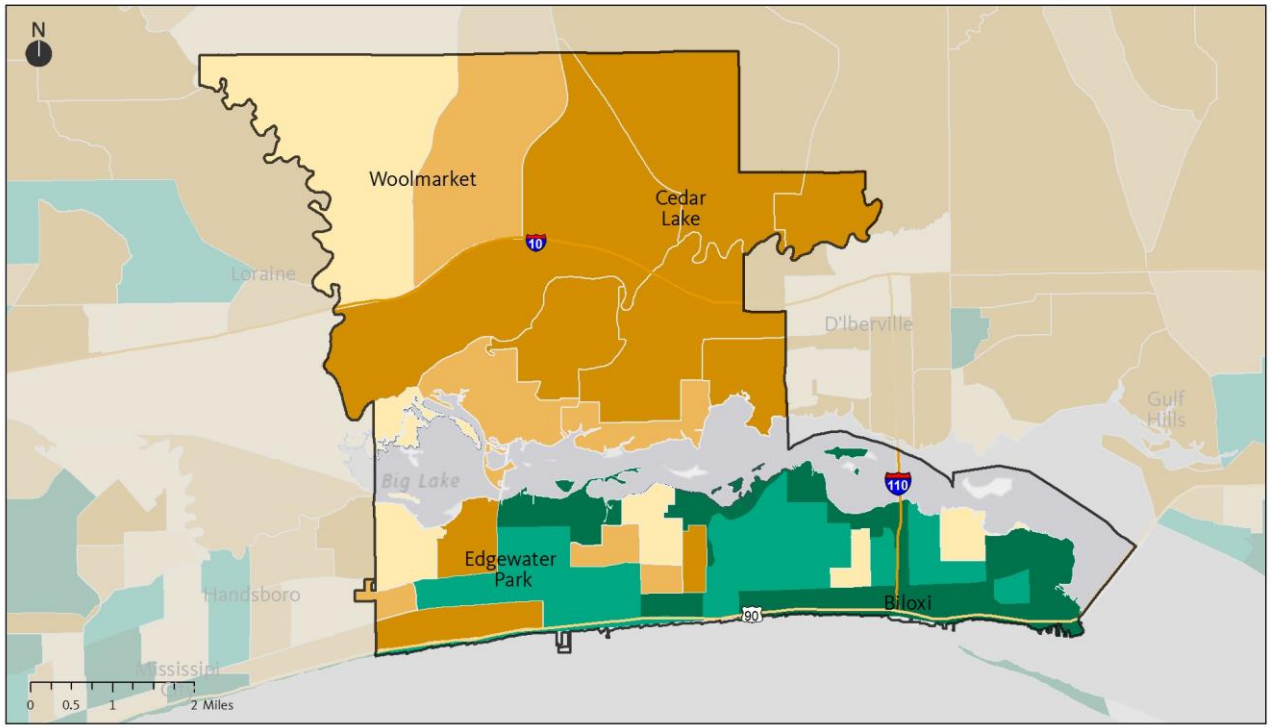
Demographic change varies by neighborhood

Mapping the growth in people of color by census block group illustrates variation in growth and decline in communities of color throughout the region. The map highlights how the population of color has increased throughout much of the city, especially in North Biloxi and Cedar Lake.

Areas highlighted in green on the map include neighborhoods in which the people-of-color population has declined over the last decade. These areas are most concentrated in East Biloxi.

Significant decline in the population of color in East Biloxi

Percent Change in People of Color by Census Block Group, 2000 to 2014



Source: U.S. Census Bureau, GeoLytics, Inc.; TomTom, ESRI, HERE, DeLorme, MaymyIndia, © OpenStreetMap contributors, and the GIS user community.
Note: One should keep in mind when viewing this map and others that display a share or rate that while there is wide variation in the size (land area) of the census block groups in the region, each has a roughly similar number of people. Thus, care should be taken not to assign unwarranted attention to large block groups just because they are large. Data for 2014 represents a 2010 through 2014 average.

Demographics

Demographic shifts throughout the city

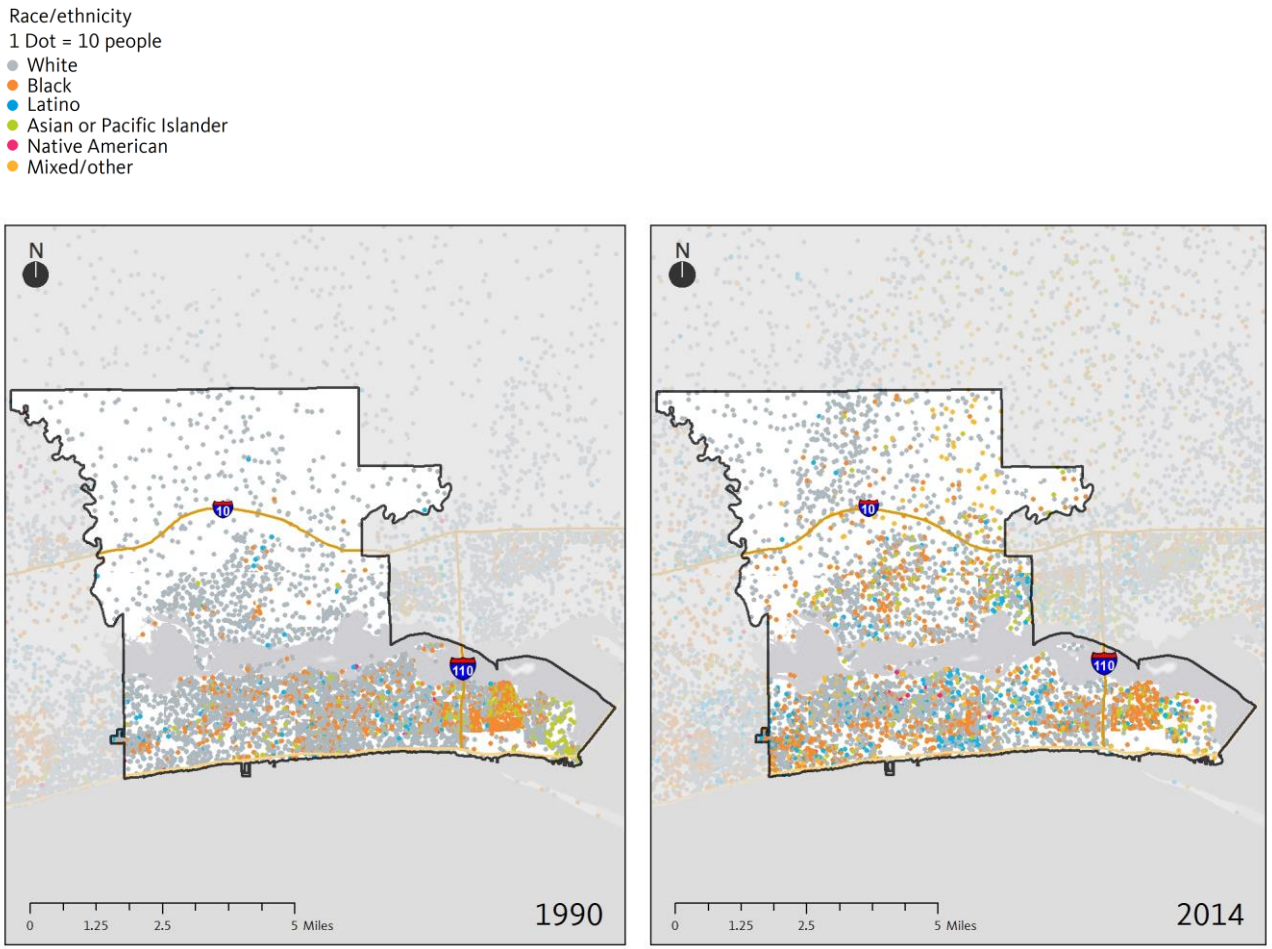
As the city's population size and demographic make up have shifted, where residents live in relation to one another has also changed.

Between 1990 and 2014, areas of the city located on the peninsula (south of Big and Mullet Lakes) became less densely populated and more diverse. Especially noticeable is the decrease in the number of White residents and the movement of Black, Latino, and API residents living through out the city.

As demonstrated in the previous slide, demographic change is also occurring in North Biloxi, where growth in Black, Latino, and API communities has led to increases in the percent of residents who are people of color.

White residents have moved out from the peninsula and are increasingly living north of Interstate 10

Racial/Ethnic Composition by Census Block Group, 1990 and 2014



Source: U.S. Census Bureau, GeoLytics, Inc.; TomTom, ESRI, HERE, DeLorme, MaymyIndia, © OpenStreetMap contributors, and the GIS user community.
Note: Data for 2014 represent a 2010 through 2014 average.

Demographics

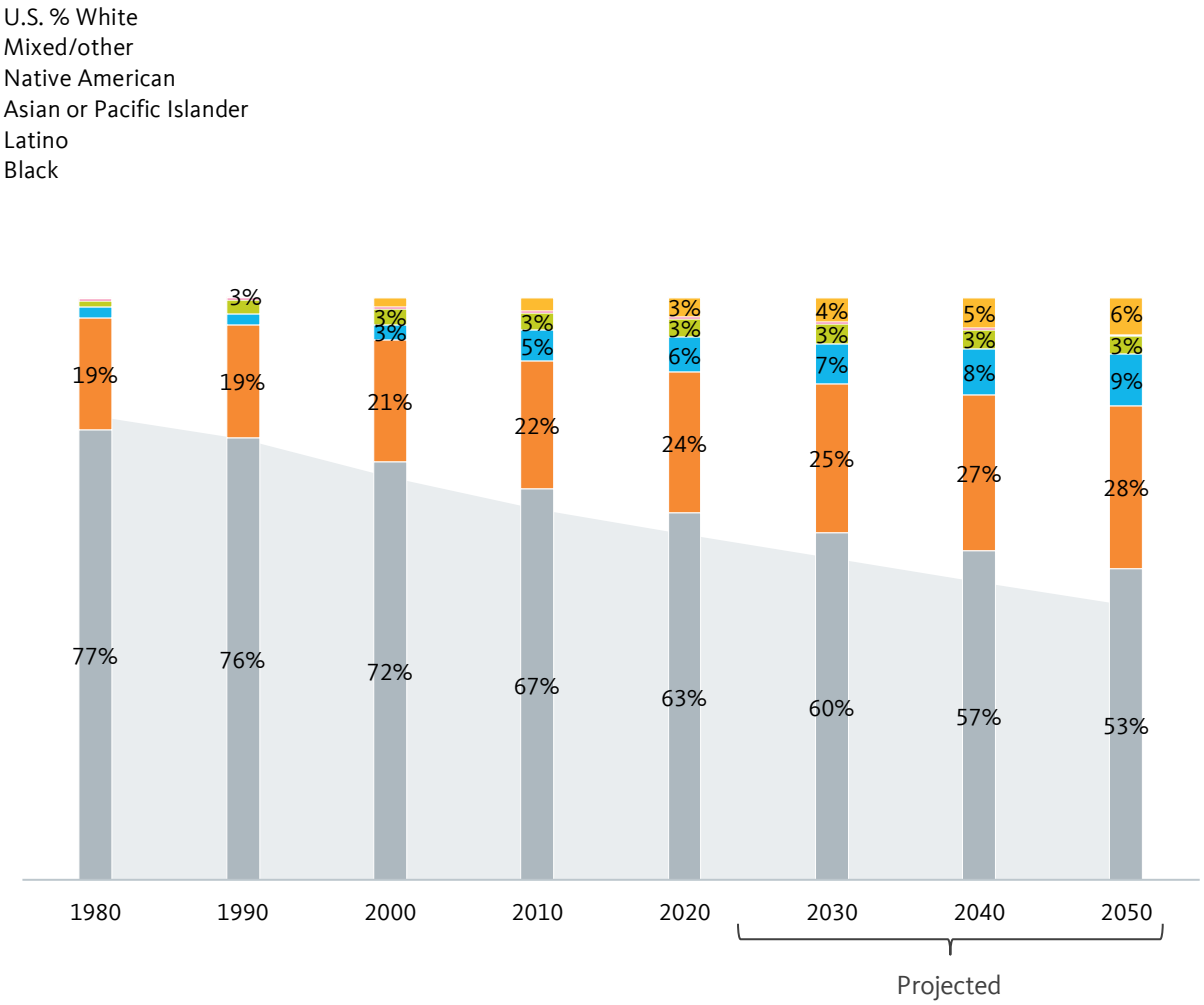
Although slow, demographic change in the county will continue

Looking to the future, all of Harrison County will continue to diversify. Although the county is more diverse than the nation as a whole, demographic change is occurring at a pace slightly slower in the county than that of the nation as a whole. However, the county is projected to continue diversifying into the future. In 1980, the city was 23 percent people of color—a slightly larger share than the U.S. overall. The county is projected to become majority people of color soon after 2050.

In the meantime, the majority of change will be driven by increases in populations of Black residents, Latino residents, and residents who identify as two or more races or another race. By 2050, Black residents will represent 28 percent of county residents (an increase of 6 percentage points from 2010) while the percentage of residents who are White will decrease by 14 percentage points (from 67 percent in 2010).

The White population will continue to decline while the population of color will continue to grow

Racial/Ethnic Composition, 1980 to 2050



Source: U.S. Census Bureau; Woods & Poole Economics, Inc.
Note: Data is for Harrison County, MS. Much of the increase in the Mixed/other population between 1990 and 2000 is due to a change in the survey question on race.

Demographics

The majority of the city's youth are people of color

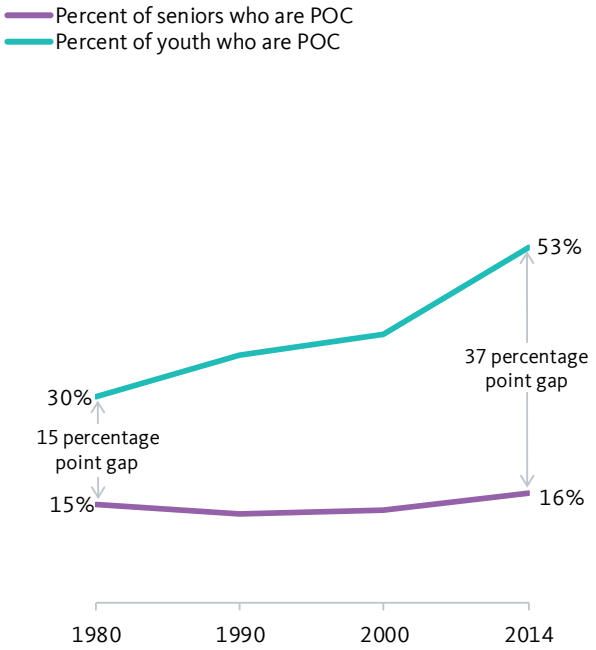
Youth are leading the demographic shift occurring in the city. Today, 53 percent of Biloxi's youth (under age 18) are people of color, compared with 16 percent of the city's seniors (over age 64). This 37 percentage point difference between the share of people of color among young and old can be measured as the racial generation gap.

The city's growing population of people of color is generally more youthful than its White population. The median age of residents who are Native American is 23, which is 17 years younger than the median age of 40 for the White population. Similarly the median ages of Black and Latino residents are about 10 years younger than that of White residents.

The racial generation gap may negatively affect the city if seniors do not invest in the educational systems and community infrastructure needed to support a youth population that is more racially diverse.

The city's generation gap has grown

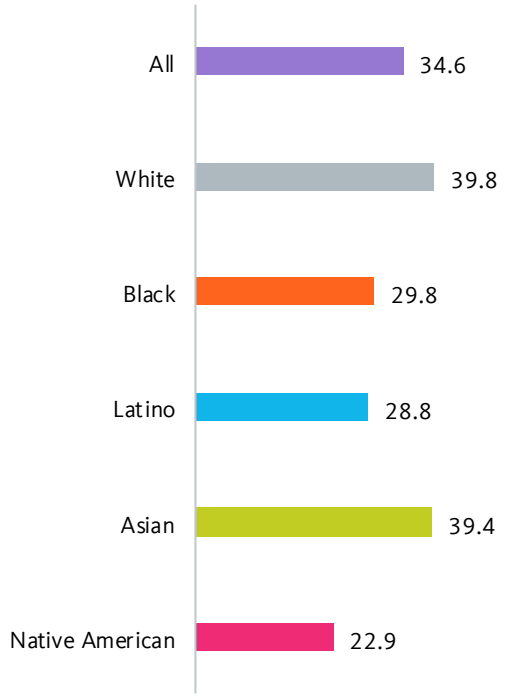
Percent People of Color (POC) by Age Group, 1980 to 2014



Source: U.S. Census Bureau.
Note: Data for 2014 represents a 2010 through 2014 average.

Aside from Asian or Pacific Islanders, residents of color tend to be significantly younger than their White peers

Median Age by Race/Ethnicity, 2014



Source: U.S. Census Bureau. Note: Data represent a 2010 through 2014 average. "White" is defined as non-Hispanic White and "Latino" includes all who identify as being of Hispanic origin. All other racial/ethnic groups include any Latinos who identify with that particular racial category.

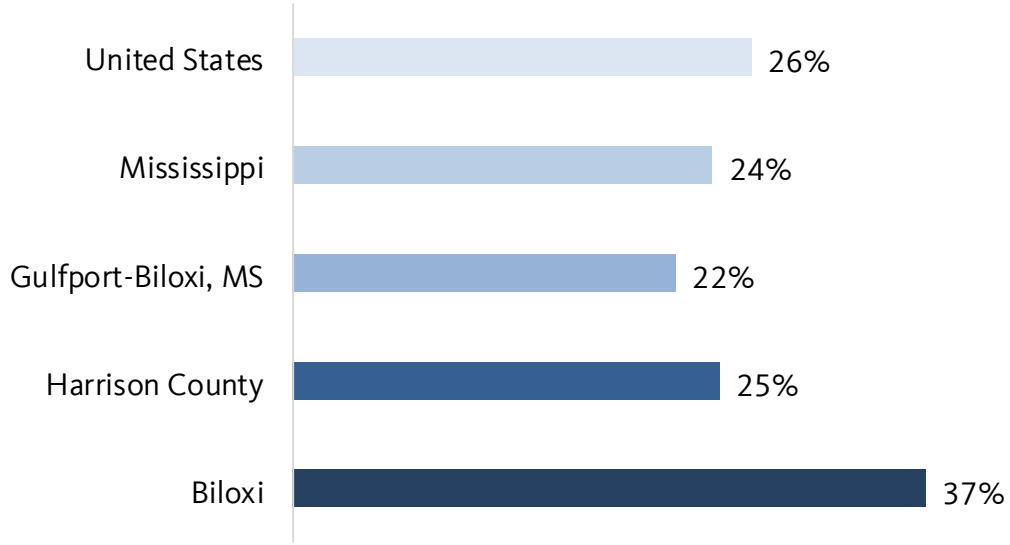
Demographics

The city's racial generation gap is relatively large

Biloxi's 37 percentage point racial generation gap is larger than that of the surrounding county and metro region, the state as a whole, and the nation.

Biloxi has a relatively large racial generation gap

The Racial Generation Gap, 2014



Source: U.S. Census Bureau.
Note: Data represent a 2010 through 2014 average.

Economic vitality

Economic vitality
Highlights

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

- For most of the 1990's and early 2000's, the county's economic growth was stronger than that of the nation as a whole. Today, the county's growth in gross regional product (GRP) has dropped below the national average.

- Although Black adults are slightly more likely to be engaged in the labor force – meaning they are employed or actively looking for work – than White residents, they are less likely to be employed.

- The top 20 percent of earners take home 51 percent of all income in the city.

- With the exception of Latino workers, men of every racial group consistently earn at least 10 percent more than their female counterparts.

Unemployment rate for Harrison County in 2015:

6.1%

Black unemployment rate in 2014:

15%

Percent of Latino children living in poverty:

66%

Economic vitality

Strong economy despite environmental disasters

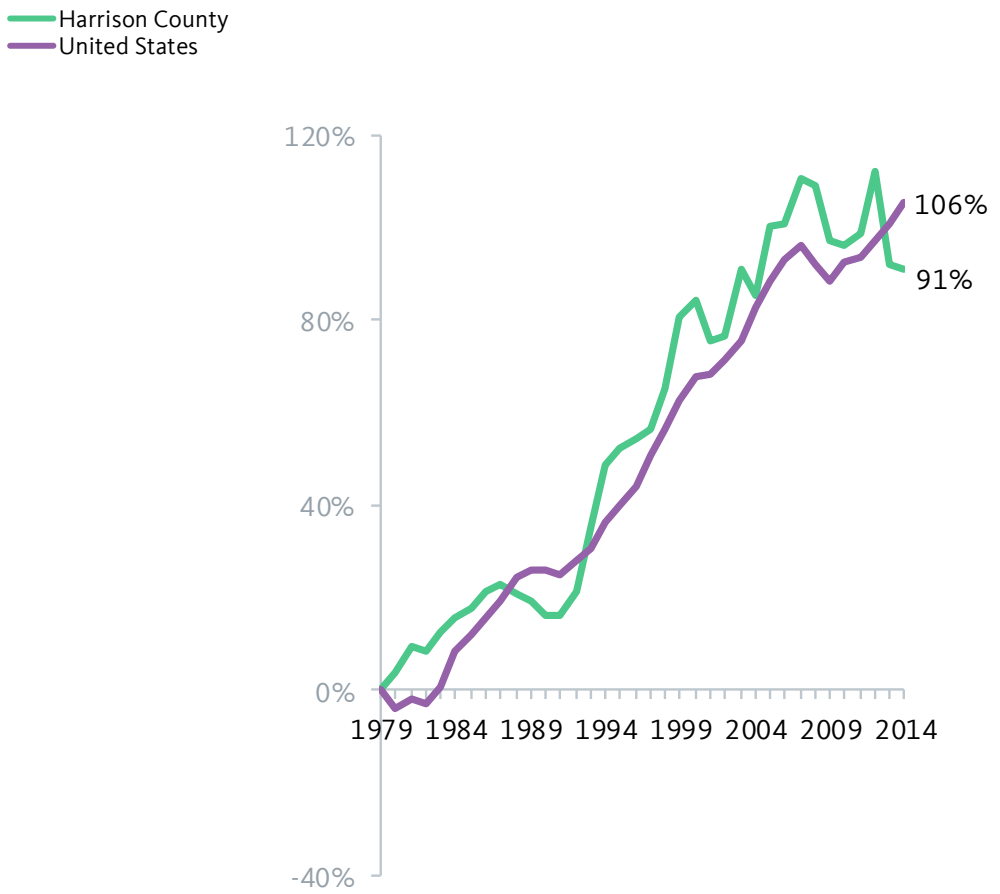
For most of the 1990's and early 2000's, Harrison County's cumulative economic growth, as measured by increases in jobs and gross regional product (GRP) – the value of all goods and services produced within the region – was stronger than the nation.

Despite the economic duress incurred by Hurricane Katrina in 2005 and the Deepwater Horizon oil spill in 2010, the county's GRP growth rate did not drop below the national rate until 2013. According to FEMA, the damage caused by Hurricane Katrina alone cost the region as much as $108 billion. While estimates of the damage incurred by the oil spill have not been confirmed, the region lost $700 million in fishing and tourism revenues as well as at least 3,000 jobs linked to deep-water drilling. This does not capture the long-term effects that damage to the environment, especially fisheries, will continue to have on the local economy.

Today, the county has a healthy, but slightly lower GRP growth rate at 91 percent, as compared to the nation's rate of 106 percent.

Dramatic decline in gross regional product

Cumulative Growth in Real GRP, 1979 to 2014



Source: U.S. Bureau of Economic Analysis.

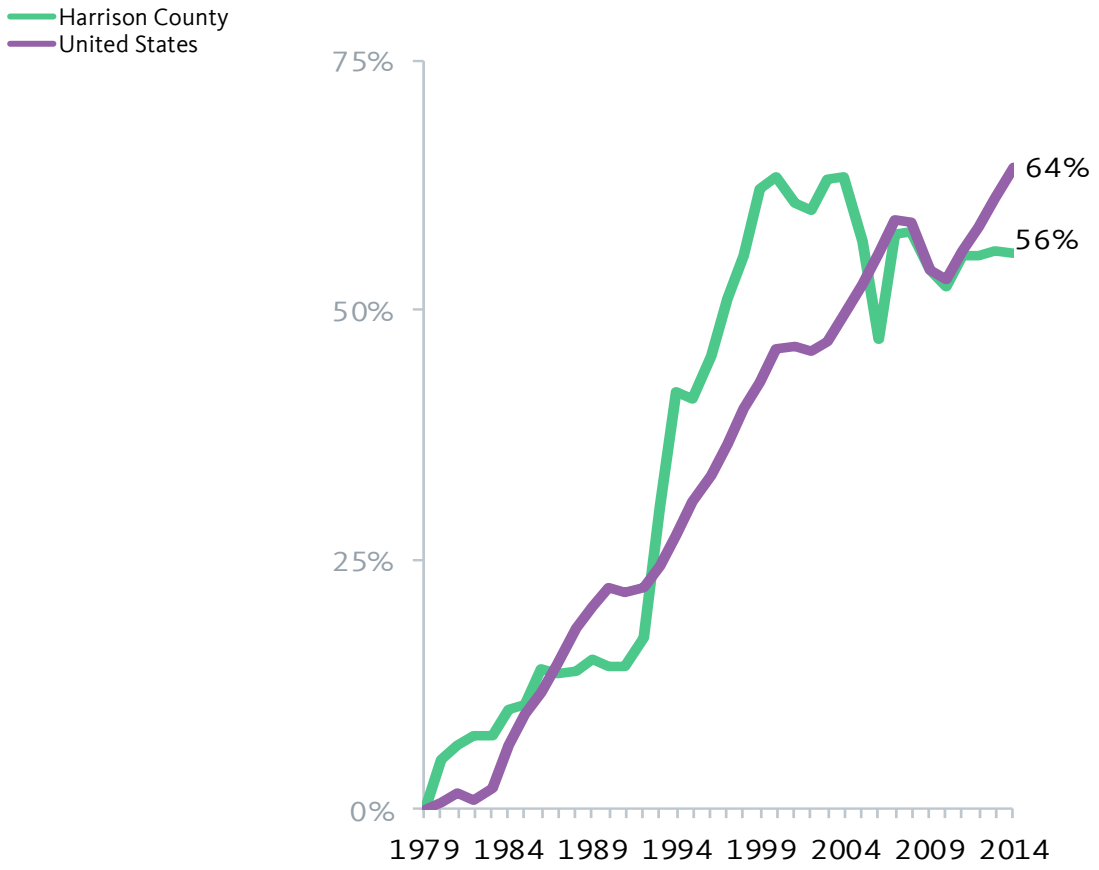
Economic vitality

Strong economy despite environmental disasters

The county has typically experienced better job growth than the rest of the nation. However, it did experienced notable declines in 2005 and 2010 in the wake of Hurricane Katrina and the Deepwater Horizon oil spill. Additionally, it experienced similar decline and recovery during the Great Recession as compared to the rest of the country. Today, the county's cumulative growth rate is 8 percentage points lower than the nation, but has not significantly dropped again.

Declining jobs despite national increases

Cumulative Job Growth, 1979 to 2014



Source: U.S. Bureau of Economic Analysis.

Economic vitality

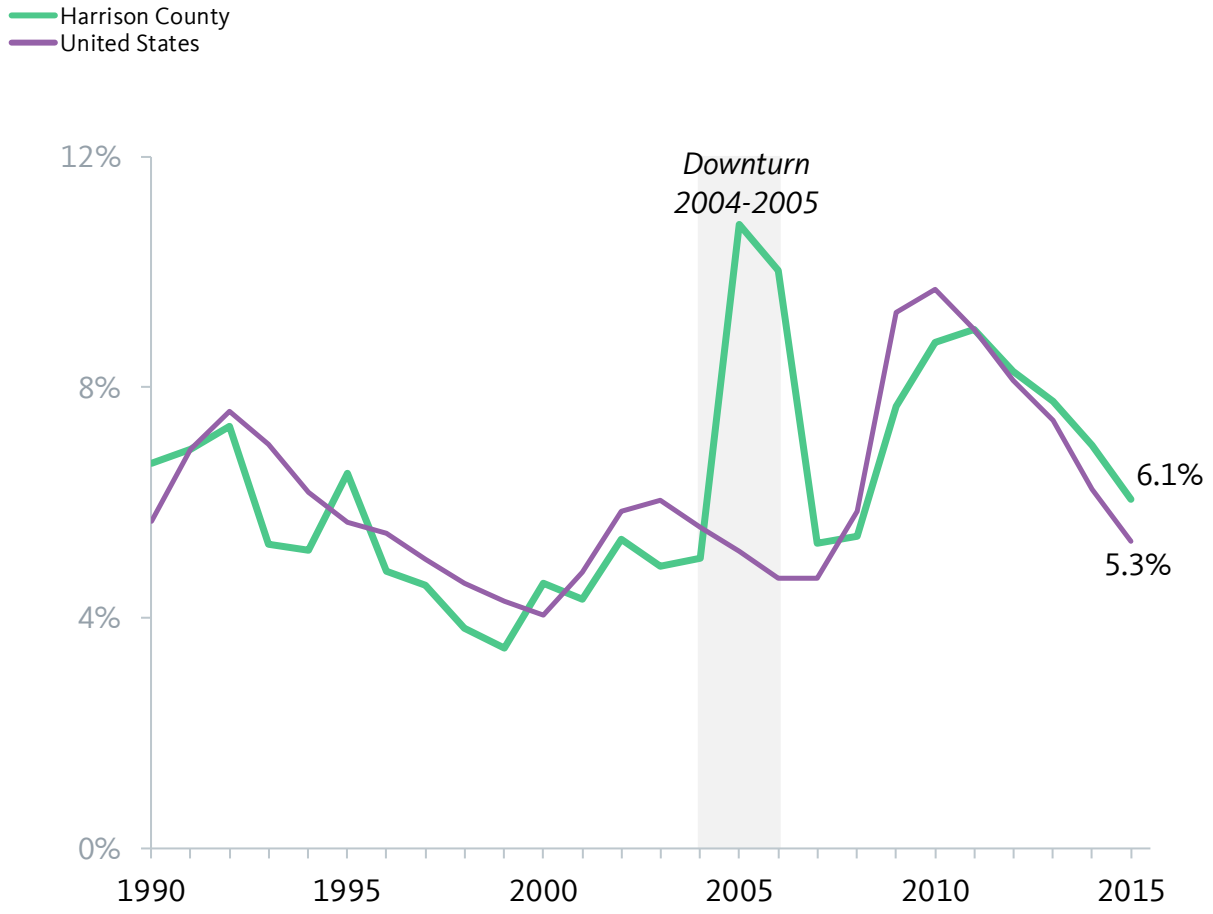
Unemployment remains higher than the national average

The county's experience of the economic recession in the 2000's was similar to that of the nation, however, the county experienced economic downturn a few years before the Great Recession affected the rest of the country. Harrison County experienced a considerable spike in unemployment between 2003 and 2005, while the rest of the nation would not see its biggest spike in unemployment until 2008. The percentage of residents unemployed in the county jumped from 4.9 percent in 2003 to almost 11 percent in 2005, at which point the national unemployment rate was only 5.2 percent. As mentioned earlier, the damage that Katrina alone was estimated to have cost the region as much as $108 billion.

The county experienced immense recovery in spite of these disasters. Between 2006 and 2007 the unemployment rate dropped down to 5.3 percent, but it followed national trends in 2011 when it jumped back up to 9 percent. Since then, it has steadily declined, but at a slightly slower rate than the national average.

Unemployment has improved but is still high

Unemployment Rate, 1990 to 2015



Source: U.S. Bureau of Labor Statistics. Universe includes the civilian noninstitutional population ages 16 and older.

Economic vitality

Job growth relative to population is higher than national average, but declining

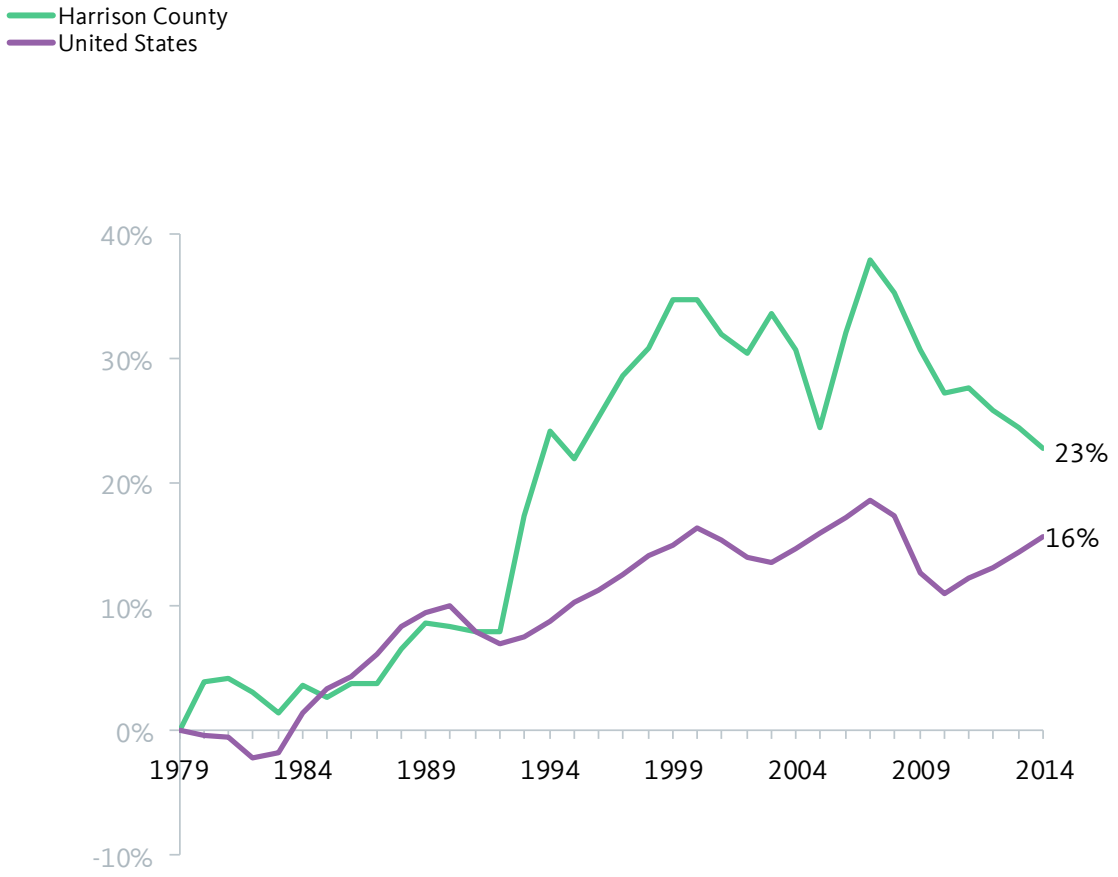
The rate of job creation as compared to the number of residents living in the county has been declining. Although the county has a higher jobs-to-population ratio than the national average (23 percent vs. 16 percent), this has significantly declined from its peak of 38 percent in 2008.

However, the county and the larger economy show signs of economic strength. According to the Mississippi Gulf Coast Chamber of Commerce, all Mississippi Coast tourism increased by 10 percent from the beginning of 2015 through the beginning of 2016, outpacing some regional counterparts. Similarly, the local gaming industry is strong. According to the City of Biloxi, gaming revenue in the city was reported to be more than $47 million higher during the first five months of 2017 (January-May) as compared to the same time period in 2016.

How residents access jobs created by this economic strength is key to understanding the state of equity in the region.

Job growth relative to population growth in the county is 7 percentage points higher than the national average

Cumulative Growth in Jobs-to-Population Ratio, 1979 to 2014



Source: U.S. Bureau of Economic Analysis.

Economic vitality

Low labor force participation and high unemployment rates

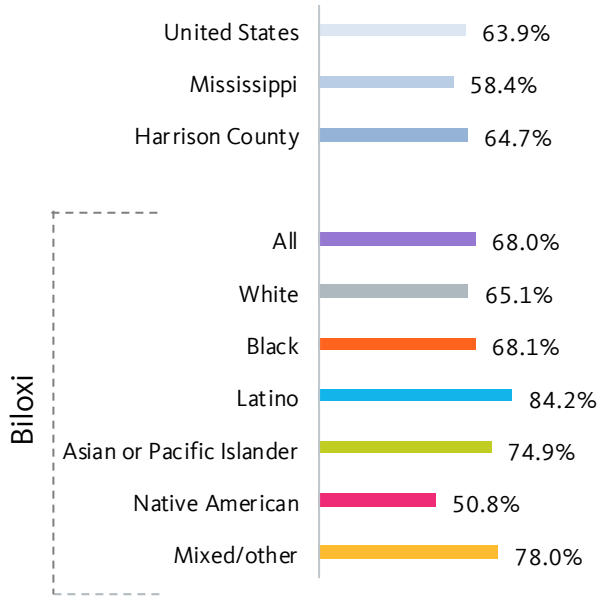
Generally, Biloxians' rates of labor force participation and unemployment in 2014 were similar and even better than those of workers nationally.

However, race plays a role in who accesses work in the city. Latino and API residents have the high rates of labor participation (84 and 75 percent) and low rates of unemployment (5 and 2 percent). However, although Black residents have a labor force participation rate equal to the city average, they experience the highest rate of unemployment (15 percent), as compared to White residents who are less likely to be in the labor force but are 6 percent more likely to be employed.

It's important to note that actual unemployment is likely even higher because only those who are *actively searching* for work are counted as unemployed, not those who have given up the search.

Latino residents have the highest rate of participation in the labor force

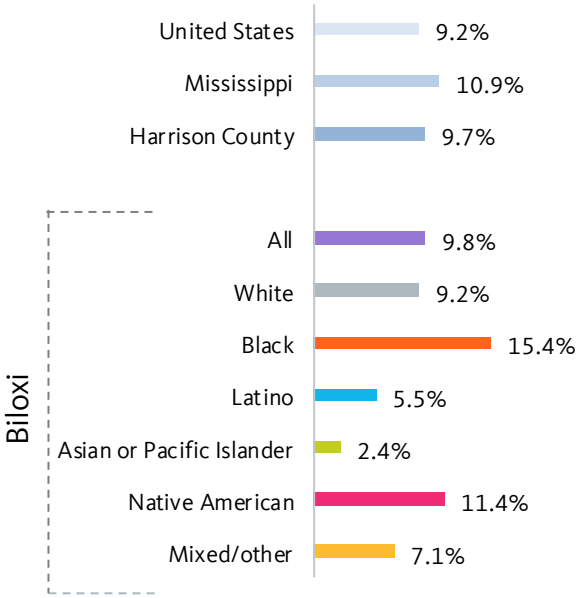
Labor Force Participation Rate by Race/Ethnicity, 2014



Source: U.S. Census Bureau. Universe includes the population age 16 or older.
Note: Note: Data represent a 2010 through 2014 average. "White" is defined as non-Hispanic white and "Latino" includes all who identify as being of Hispanic origin. All other racial/ethnic groups include any Latinos who identify with that particular racial category.

Black residents are most likely to be unemployed

Unemployment Rate by Race/Ethnicity, 2014



Source: U.S. Census Bureau. Universe includes the civilian labor force age 16 or older.
Note: Data represent a 2010 through 2014 average. "White" is defined as non-Hispanic white and "Latino" includes all who identify as being of Hispanic origin. All other racial/ethnic groups include any Latinos who identify with that particular racial category.

Economic vitality

Unemployment concentrated near the center and southern parts of the city

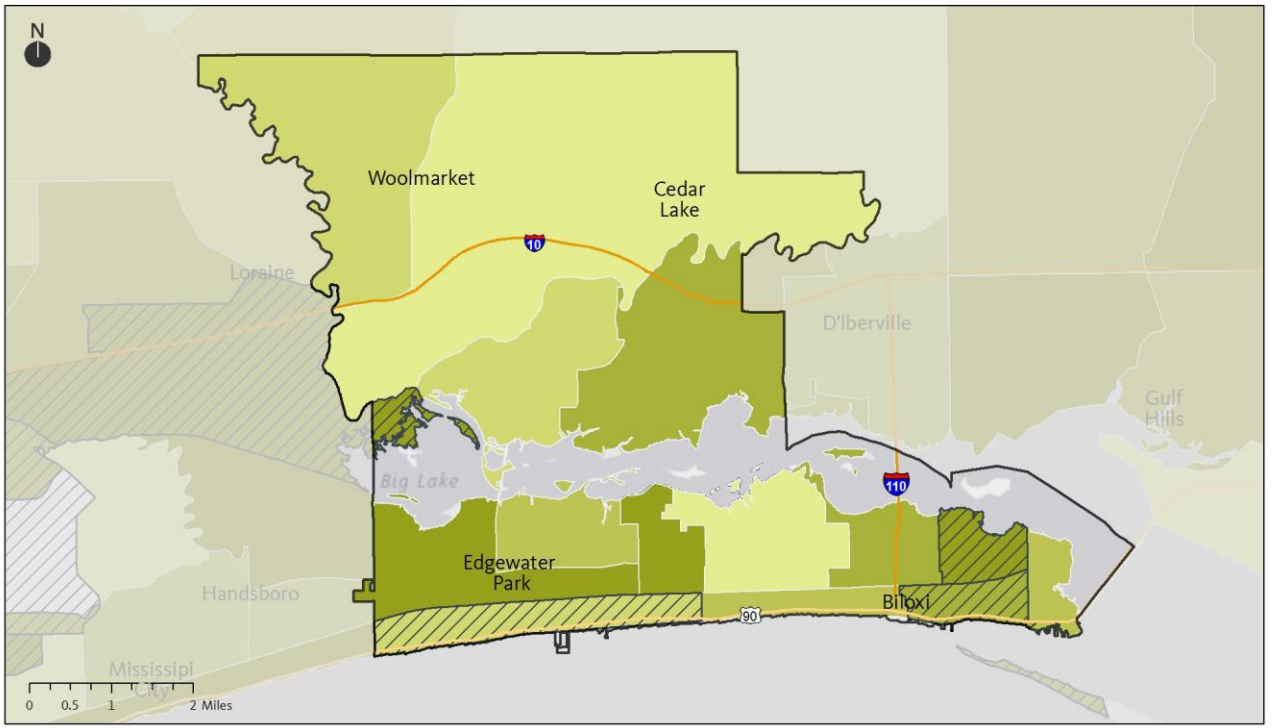
Unemployment is geographically concentrated throughout the city and appears to be impacted by race. Of the four census tracts in which at least 50 percent of residents are people of color, three have unemployment rates of at least 8 percent.

Census tracts at the far east and west ends of the city's peninsula where Black residents have become concentrated are also more likely to have higher rates of poverty. Similarly, the major census tract in the southeast corner of the city's mainland geography has an unemployment rate between 8 and 13 percent. This is also a census tract where Black, Latino, and API residents have increasingly settled.

Census tracts with the highest rates of unemployment also tend to be majority people of color

Unemployment Rate by Census Tract, 2014

- Less than 5%
- 5% to 7%
- 7% to 8%
- 8% to 13%
- 13% or more
- ☐ 50% or more people of color



Source: U.S. Census Bureau; TomTom, ESRI, HERE, DeLorme, MaymyIndia, © OpenStreetMap contributors, and the GIS user community. Universe includes the civilian noninstitutional labor force age 16 and older. Note: Data represent a 2010 through 2014 average.

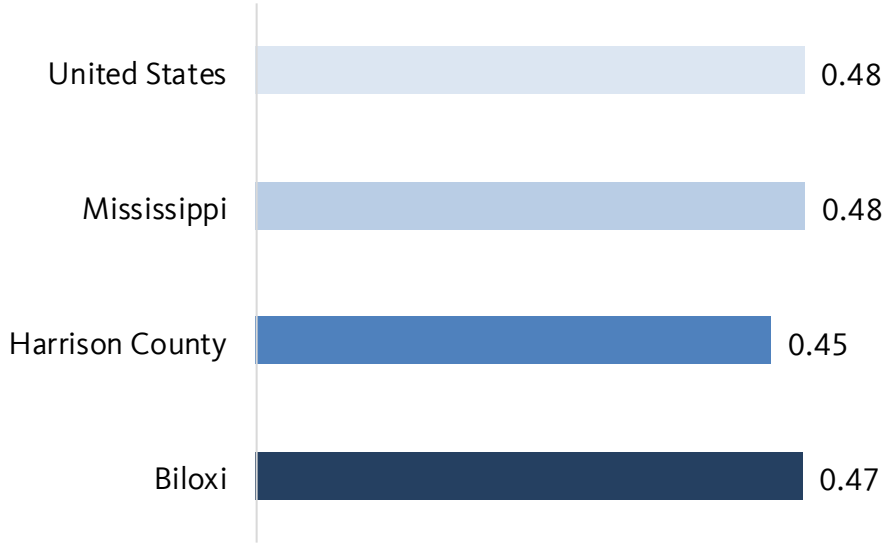
Economic vitality

Income inequality is comparable to the state and nation

The city's rate of inequality is comparable to the rest of the county, the state, and the nation as a whole.

Inequality here is measured by the Gini coefficient, which is the most commonly used measure of inequality. The Gini coefficient measures the extent to which the income distribution deviates from perfect equality, meaning that every household has the same income. The value of the Gini coefficient ranges from zero (perfect equality) to one (complete inequality, one household has all of the income).

Biloxi residents are slightly less likely to experience income inequality than state residents and other Americans
The Gini Coefficient, 2014



Source: U.S. Census Bureau. Universe includes all households (no group quarters).
Note: Data represents a 2010 through 2014 average.

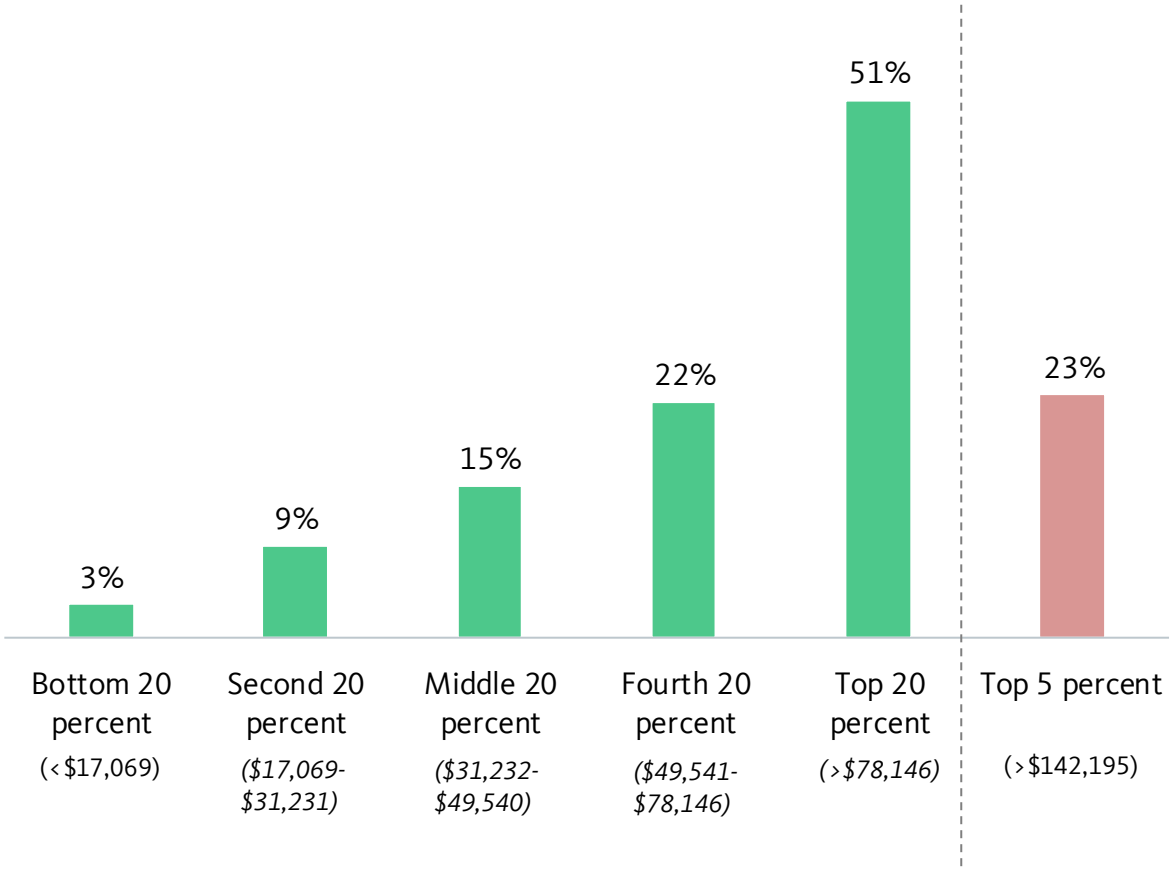
Economic vitality

More than half of household income is earned by the wealthiest residents

Income distribution is skewed in Biloxi, mirroring the nation almost exactly. The wealthiest 20 percent of county households take home more than 50 percent of all income earned in the city, earning more than $78,000 annually. The wealthiest 5 percent take home 23 percent of all income – these household incomes exceed $142, 195, which is nearly three times the upper bound of household incomes for the middle 20th percent of county residents ($49,540). The poorest 40 percent of households collectively earn 12 percent of the city's total income.

The top 20 percent of earners take home more than half of household income

Aggregate Household Income by Quantile, 2014



Source: U.S. Census Bureau. Universe includes all households (no group quarters).
Note: Data represent a 2010 through 2014 average. Dollar values are in 2014 dollars

Economic vitality

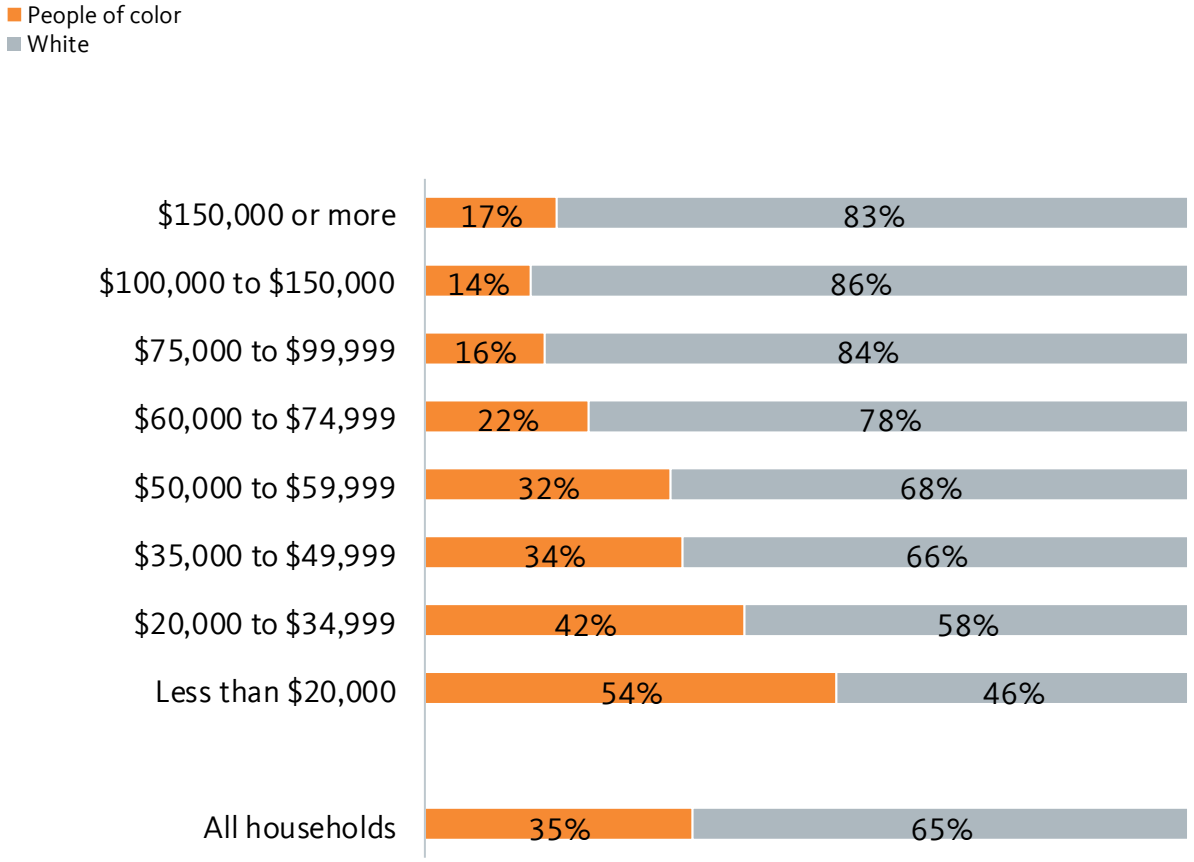
Households of color are over-represented at the lower end of distribution and under-represented at higher end

People of color are over-represented in the city's poorest group of households, and under-represented amongst the county's wealthiest households.

In 2014, residents of color constituted 35 percent of the city's total households. However, more than half of all households earning less than $20,000 annually are headed by a person of color. In fact, once household income surpasses $35,000 a year, people of color become consistently underrepresented. Fewer than 20 percent of households of top income earners are people of color.

The middle class reflects the city's racial/ethnic composition

Racial Composition of Households by Income Level, 2014



Source: U.S. Census Bureau. Universe includes all households (no group quarters).
Note: Data represent a 2010 through 2014 average. Dollar values are in 2014 dollars

Economic vitality

Racial and gender disparities in median earnings

Biloxians' earnings vary significantly by race and gender. Although gender disparity is present, White men and women earn higher median wages than any other group of residents.

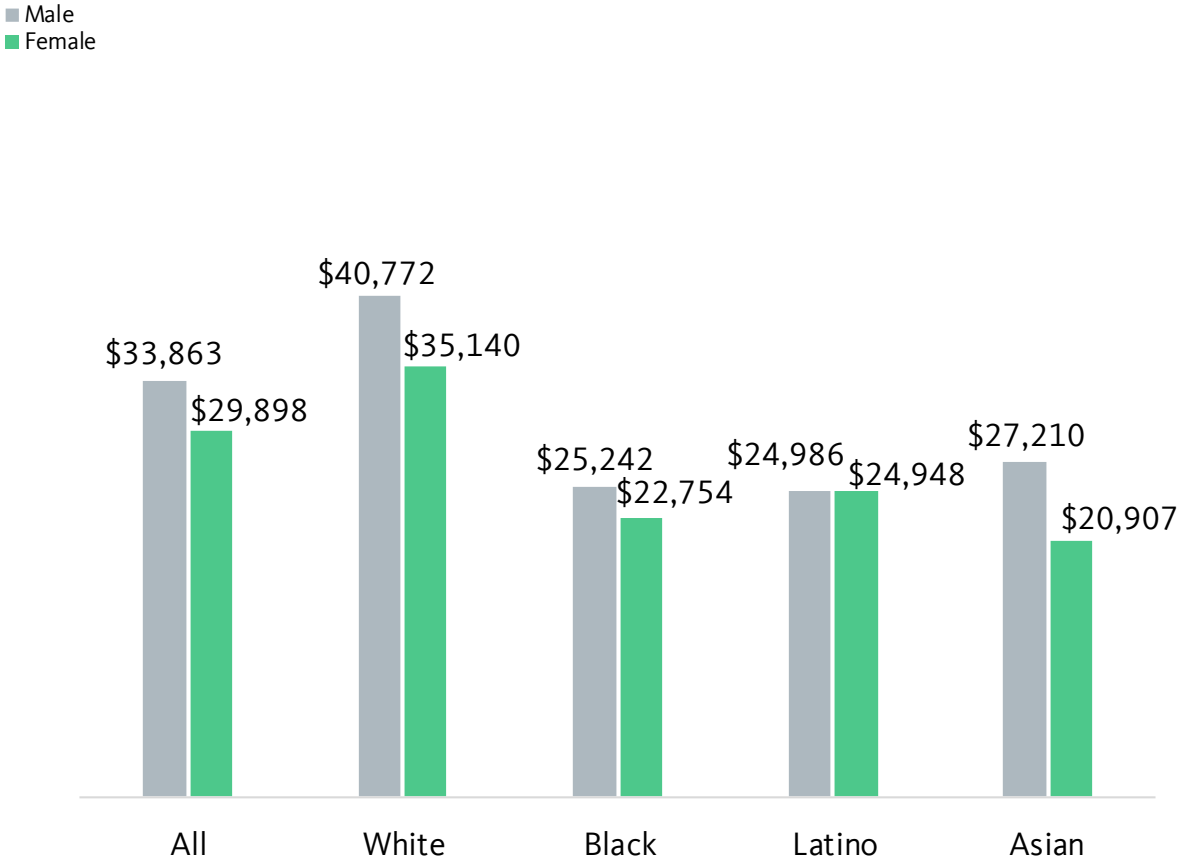
With the exception of Latino workers, men consistently earn at least 10 percent more than women.

Disparity exists between women workers as well. The median income for an Asian woman is more than $15,000 less per year than a White woman working in the city, while Black and Latino women earn between $10,000 and $12,000 less per year.

This trend is similar for men. Black, Latino, and Asian men conservatively earn between $13,000 and $15,000 less than White men.

Median earnings vary by both race and gender

Median Earnings by Race/Ethnicity and Gender, 2014



Source: U.S. Census Bureau. Universe includes full-time workers with earnings age 16 or older.
"Note: "White" is defined as non-Hispanic white and "Latino" includes all who identify as being of Hispanic origin. All other racial/ethnic groups include any Latinos who identify with that particular racial category. Values are in 2014 dollars"

Economic vitality
Notable disparities in poverty by race

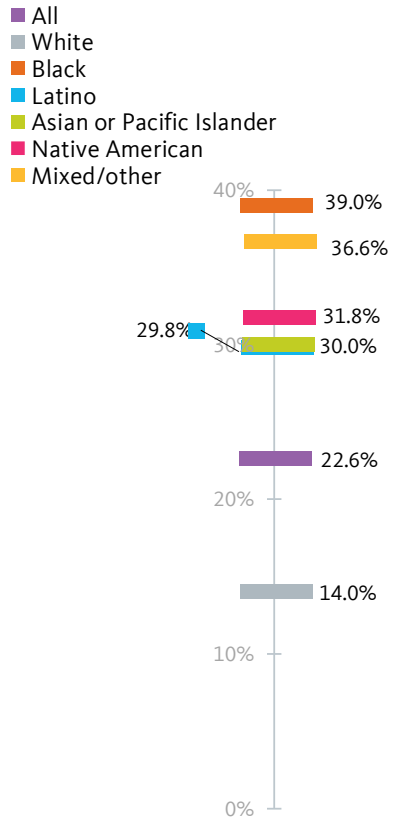
Poverty also varies tremendously by race in Biloxi. People of color are more likely to live in poverty than White residents, and the same is true for children of color.

In Biloxi, residents who are people of color, regardless of racial group, are more than twice as likely to live in poverty than their White peers. Thirty percent of Latino and API residents, 32 percent of Native American residents, and 39 percent of African American residents live in poverty, as compared to 14 percent of White residents.

Latino children have the highest probability of growing up in poverty. Two-thirds of Latino children live in impoverished households, as compared to less than one-third of White children. Rates are also high for API and Black children, who are about twice as likely to live in poverty as White children.

People of color are more than twice as likely to live in poverty as compared to White residents

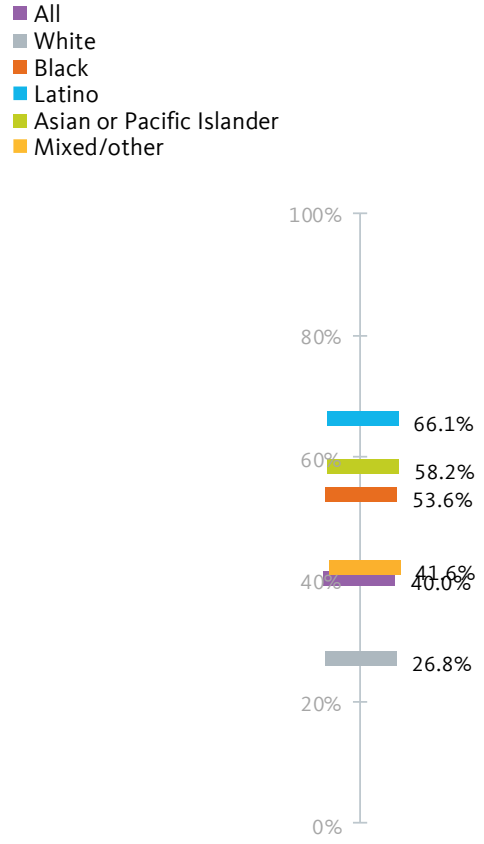
Poverty Rate by Race/Ethnicity, 2014



Source: U.S. Census Bureau. Universe includes all persons not in group quarters. Note: Data represent a 2010 through 2014 average.
Note: "White" is defined as non-Hispanic white and "Latino" includes all who identify as being of Hispanic origin. All other racial/ethnic groups include any Latinos who identify with that particular racial category. Data represent a 2010 through 2014 average

Forty percent of all children in Biloxi face poverty

Child Poverty Rate by Race/Ethnicity, 2014



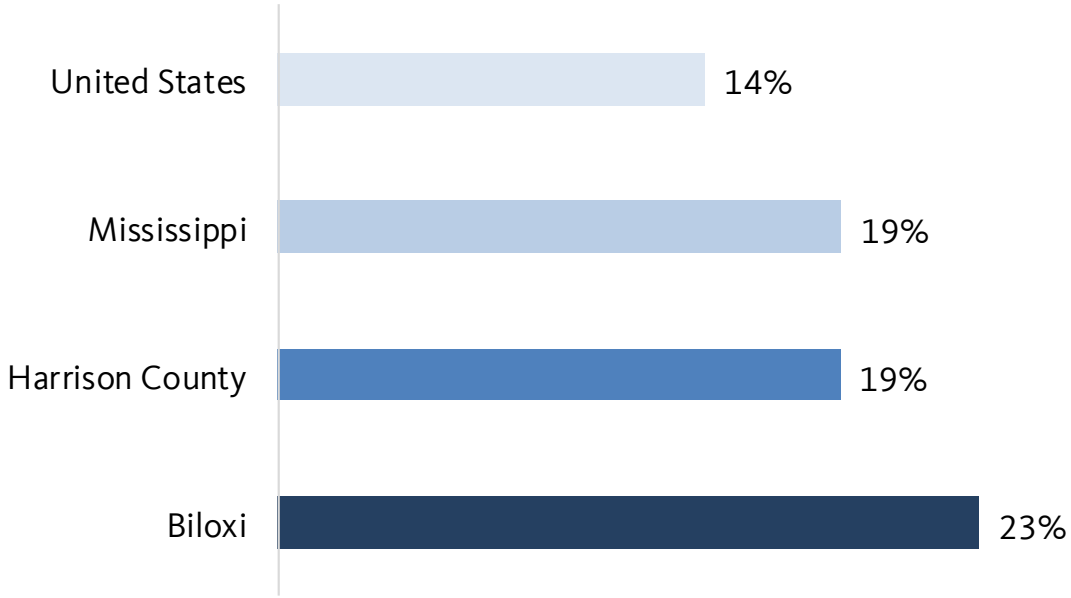
Source: U.S. Census Bureau. Universe includes the population age 17 or younger not in group quarters. Note: Data represent a 2010 through 2014 average. Data for some racial/ethnic groups are not reported due to small sample size.
Note: "White" is defined as non-Hispanic white and "Latino" includes all who identify as being of Hispanic origin. All other racial/ethnic groups include any Latinos who identify with that particular racial category. Data represent a 2010 through 2014 average

Economic vitality
High rates of working poverty

Despite working, nearly one in every four Biloxians lives in poverty. With a working poverty rate of 23%, Biloxians are more likely to live in poverty than workers in the surrounding county, in the state, and in the nation.

Working poor is defined here as full-time workers age 16 or older with a family income below 150 percent of the federal poverty level, or roughly $36,000 a year for a family of four.

Residents are more likely to be working and poor than other Americans
Working Poverty Rate, 2014



Source: U.S. Census Bureau. Universe includes workers age 16 or older not in group quarters.
Note: Data represent a 2010 through 2014 average.

Economic vitality

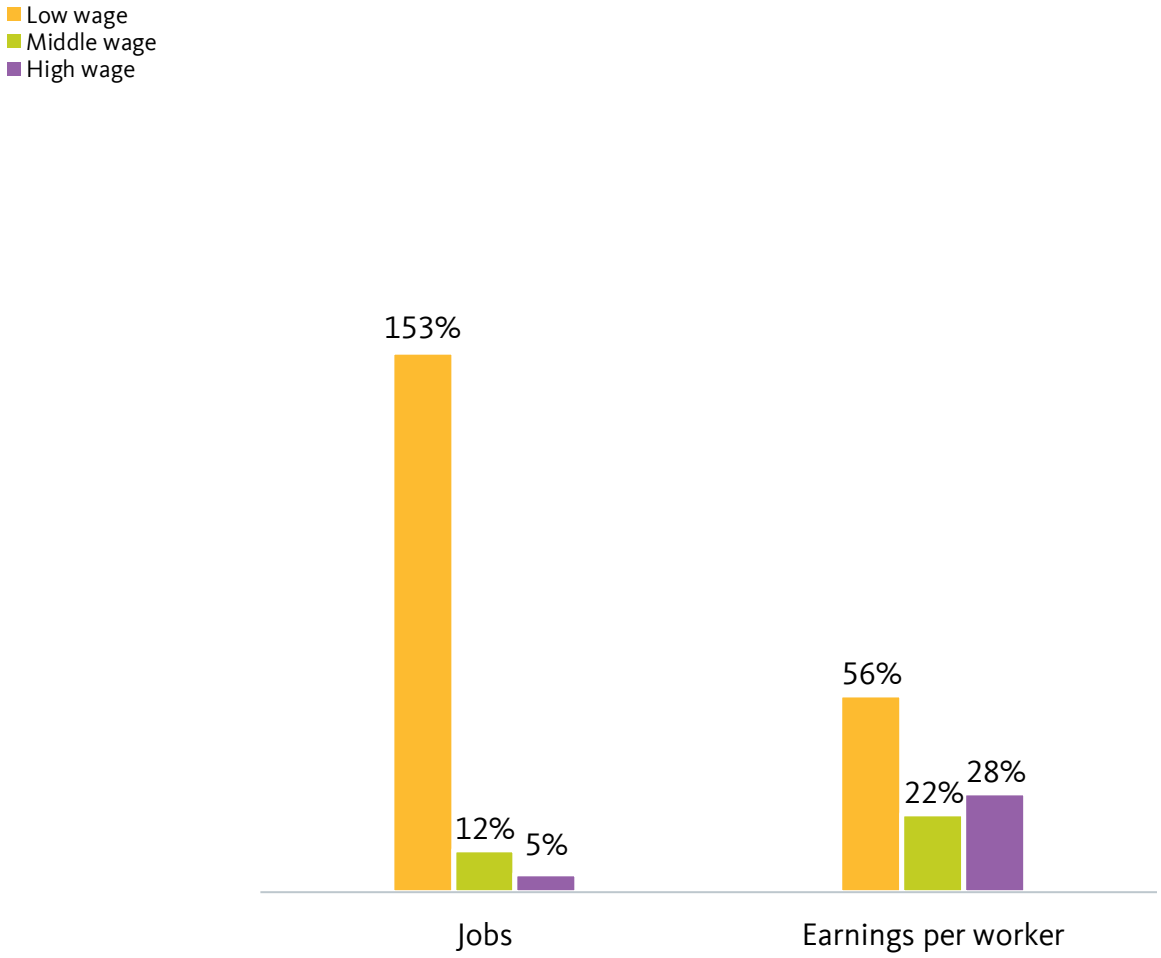
Earnings have increased across wage categories

While growth has occurred in jobs of all wage levels in Harrison County, the majority of job growth has occurred in low-wage jobs. Middle- and high-wage jobs increased slightly (12 and 5 percent respectively), and low-wage jobs increased by 153 percent.

Workers in low-wage jobs experienced notable increases in wage overall (56 percent). Workers in middle-and high-wage jobs also saw increased earnings of 22 and 28 percent respectively.

Low-wage jobs have increased dramatically

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



Source: U.S. Bureau of Labor Statistics; Woods & Poole Economics, Inc. Universe includes all private sector jobs covered by the federal Unemployment Insurance (UI) program. Note: Data is for Harrison County, MS.

Economic vitality

Wage growth for almost all industries except education services

Wage growth varied across industries in Harrison County between 1990 and 2015. Most industries experienced wage growth, with the exception of jobs in the education services industry, which declined by 32 percent.

Among low-wage industries, earnings growth has ranged from 19 percent (in mining) to 70 percent (in accommodation and food services). Among middle-wage jobs, those in manufacturing saw increases of about 56 percent, and the highest increases for high-wage jobs have been in management of companies and enterprises (62 percent).

Accommodation and food services, management of companies and enterprises and agriculture, forestry, fishing and hunting industries experienced highest wage growth

Industries by Wage-Level Category, 2015

Wage Category	Industry	Average Annual Earnings 1990	Average Annual Earnings 2015	Percent Change in Earnings 1990-2015	Share of Jobs 2015
High	Utilities	$64,787	$93,521	44%	11%
	Education Services	$50,418	$34,340	-32%	
	Information	$45,627	$45,957	1%	
	Management of Companies and Enterprises	$45,056	$73,155	62%	
	Finance and Insurance	$38,284	$49,147	28%	
	Professional, Scientific, and Technical Services	$36,667	$57,495	57%	
Middle	Health Care and Social Assistance	$35,656	$40,311	13%	47%
	Manufacturing	$35,207	$54,896	56%	
	Transportation and Warehousing	$35,187	$42,014	19%	
	Wholesale Trade	$34,404	$52,363	52%	
	Construction	$33,383	$43,187	29%	
	Other Services (except Public Administration)	$22,447	$29,634	32%	
	Retail Trade	$22,432	$25,428	13%	
Low	Real Estate and Rental and Leasing	$20,899	$32,892	57%	42%
	Administrative and Support and Waste Management and Remediation Services	$19,756	$24,982	26%	
	Agriculture, Forestry, Fishing and Hunting	$17,968	$29,152	62%	
	Arts, Entertainment, and Recreation	$16,011	$24,193	51%	
	Mining	$15,443	$18,438	19%	
	Accommodation and Food Services	$13,403	$22,736	70%	

Source: U.S. Bureau of Labor Statistics; Woods & Poole Economics, Inc. Universe includes all private sector jobs covered by the federal Unemployment Insurance (UI) program. Note: Data is for Harrison County, MS. Dollar values are in 2015 dollars.

Economic vitality

Which industries are projected to grow?

The broader Twin Districts region, which represents parts of central and southeast Mississippi, is projected to add over 24,000 jobs from 2012 to 2022.

Nearly 6,000 of these jobs will be in the health care and social assistance industry. About 4,200 jobs will be in public administration.

The overall number of jobs in the Twin Districts region is expected to grow by nearly seven percent

Industry Employment Projections, 2012-2022

Industry	2012 Estimated Employment	2022 Projected Employment	Total 2012 to 2022 Employment Change	Annual Avg. Percent Change	Total Percent Change
Public Administration	21,630	25,840	4,210	1.8%	20%
Professional, Scientific, and Technical Services	10,900	12,450	1,550	1.3%	14%
Administrative and Support and Waste Management and Remediation Services	17,650	19,990	2,340	1.3%	13%
Health Care and Social Assistance	54,780	60,760	5,980	1.0%	11%
Educational Services	35,800	38,450	2,650	0.7%	7%
Transportation and Warehousing	10,950	11,570	620	0.6%	6%
Arts, Entertainment, and Recreation	6,200	6,460	260	0.4%	4%
Construction	20,720	21,560	840	0.4%	4%
Real Estate and Rental and Leasing	4,170	4,340	170	0.4%	4%
Wholesale Trade	8,020	8,230	210	0.3%	3%
Finance and Insurance	10,150	10,370	220	0.2%	2%
Utilities	4,460	4,560	100	0.2%	2%
Management of Companies and Enterprises	2,840	2,900	60	0.2%	2%
Accommodation and Food Services	43,860	44,550	690	0.2%	2%
Agriculture, Forestry, Fishing and Hunting	3,910	3,970	60	0.2%	2%
Retail Trade	48,200	48,910	710	0.2%	2%
Manufacturing	50,090	50,790	700	0.1%	1%
Other Services (except Public Administration)	8,060	8,170	110	0.1%	1%
Information	3,810	3,840	30	0.1%	1%
Mining, Quarrying, and Oil and Gas Extraction	3,500	3,460	-40	-0.1%	-1%
Total, All Industries	**369,710**	**393,750**	**24,040**	**0.63%**	**6.50%**

Source: Mississippi Department of Employment Security , Industry and Employment Projections (Long Term).
Note: Data is for the Twin Districts Mississippi Workforce Investment Area which includes Leake, Neshoba, Kemper, Scott, Newton, Lauderdale, Smith, Jasper, Clarke, Jeff Davis, Covington, Jones, Wayne, Marion, Lamar, Forrest, Perry, Greene, Pearl River, Stone, George, Hancock, Harrison and Jackson Counties. Figures may not sum to total due to rounding and/or issues relating to the projection methodology.

Economic vitality

Which occupations are projected to grow?

Of the 24,040 jobs to be added throughout the central and southeastern areas of the state by 2022, health-care practitioners and technical occupations will contribute the most, adding 4,390 jobs. These jobs will also experience the greatest rate of growth at 17 percent, followed by education, training, and library occupations as well as health-care support occupations (each with growth rates of 14 percent).

Health-care Practitioner and Technical occupation are expected to experience the most growth

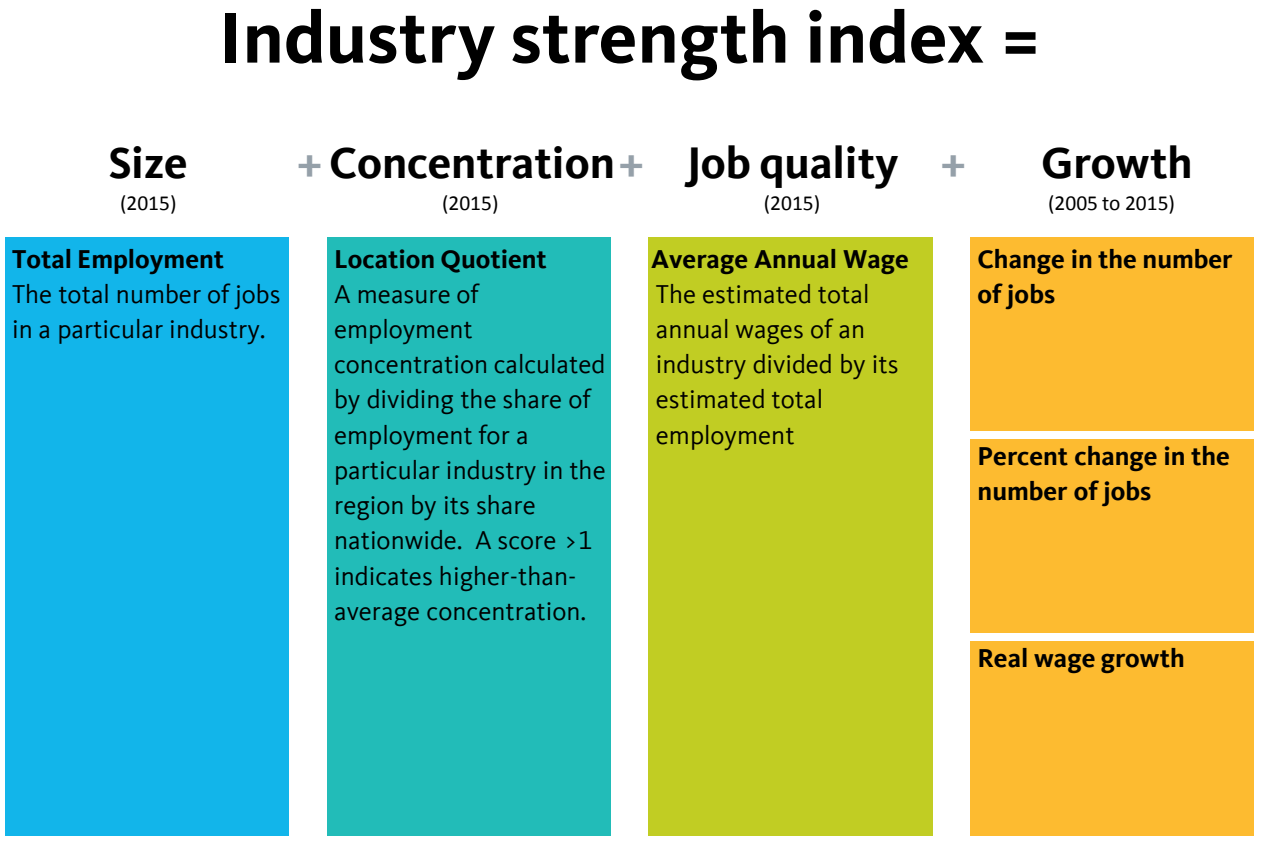
Occupational Employment Projections, 2012-2022

Occupation	2012 Estimated Employment	2022 Projected Employment	Total 2012 to 2022 Employment Change	Annual Avg. Percent Change	Total Percent Change
Healthcare Practitioners and Technical	25,270	29,660	4,390	1.6%	17%
Education, Training, and Library	25,540	29,230	3,690	1.4%	14%
Healthcare Support	12,420	14,210	1,790	1.4%	14%
Personal Care and Service	8,680	9,730	1,050	1.2%	12%
Computer and Mathematical	2,580	2,890	310	1.1%	12%
Community and Social Services	5,610	6,230	620	1.1%	11%
Protective Service	8,210	9,070	860	1.0%	11%
Business and Financial Operations	9,310	10,260	950	1.0%	10%
Building and Grounds Cleaning and Maintenance	12,060	13,220	1,160	0.9%	10%
Arts, Design, Entertainment, Sports, and Media	2,560	2,780	220	0.8%	9%
Life, Physical, and Social Science	2,610	2,760	150	0.6%	6%
Construction and Extraction	23,750	24,930	1,180	0.5%	5%
Installation, Maintenance, and Repair	17,900	18,770	870	0.5%	5%
Production	34,170	35,660	1,490	0.4%	4%
Sales and Related	37,970	39,550	1,580	0.4%	4%
Transportation and Material Moving	25,900	26,940	1,040	0.4%	4%
Architecture and Engineering	7,290	7,540	250	0.3%	3%
Management	15,950	16,450	500	0.3%	3%
Farming, Fishing, and Forestry	1,380	1,420	40	0.3%	3%
Food Preparation and Serving Related	35,180	36,000	820	0.2%	2%
Office and Administrative Support	54,340	55,420	1,080	0.2%	2%
Legal	1,040	1,000	-40	-0.4%	-4%
Total, All Occupations	**369,710**	**393,750**	**24,040**	**0.6%**	**7%**

Source: Mississippi Department of Employment Security, Occupation and Employment Projections (Long Term). Note: Data is for the Twin Districts Mississippi Workforce Investment Area which includes Leake, Neshoba, Kemper, Scott, Newton, Lauderdale, Smith, Jasper, Clarke, Jeff Davis, Covington, Jones, Wayne, Marion, Lamar, Forrest, Perry, Greene, Pearl River, Stone, George, Hancock, Harrison and Jackson Counties. Figures may not sum to total due to rounding and/or issues relating to the projection methodology.

Economic vitality
Identifying the regions'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 wage growth). These characteristics were examined over the last decade to provide a current picture of how the region's economy is changing.



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

Economic vitality

Industry strength varies between the county and the city

Harrison County's strongest industries includes utilities, due to a strong concentration of jobs in the county and high average annual wages; accommodation and food services, due to the large number of jobs and high concentration in the county; management of companies and enterprises, due to high wages; and retail trade, due to the large number of jobs, moderate concentration, and positive job growth. According to Longitudinal Employer-Household Dynamics analyses, in 2014 Biloxi was home to roughly 29,000 jobs, the majority of which existed in the accommodation and food services industry (41 percent). Health care and social assistance jobs were also prevalent (15 percent).

Strong industries are highly concentrated in the region, but have seen decreases in employment

Industry Strength Index

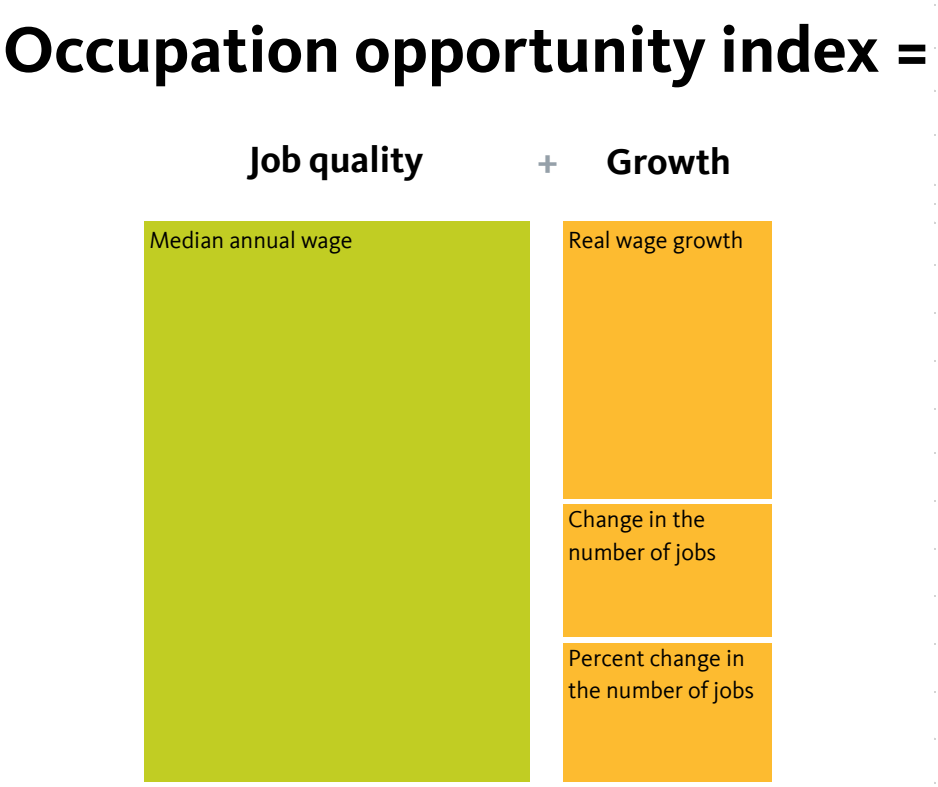
	Size	Concentration	Job Quality	Growth			Industry Strength Index
	Total employment	Location Quotient	Average annual wage	Change in employment	% Change in employment	Real wage growth	
Industry	(2015)	(2015)	(2015)	(2005 to 2015)	(2005 to 2015)	(2005 to 2015)	
Utilities	809	2.5	$93,521	-418	-34%	5%	82.3
Accommodation and Food Services	18,555	2.4	$22,736	-1,679	-8%	-11%	56.8
Management of Companies and Enterprises	754	0.6	$73,155	-238	-24%	51%	31.6
Retail Trade	11,292	1.2	$25,428	714	7%	-8%	29.5
Health Care and Social Assistance	7,105	0.6	$40,311	470	7%	-5%	10.7
Manufacturing	3,568	0.5	$54,896	-232	-6%	12%	2.8
Finance and Insurance	1,977	0.6	$49,147	-23	-1%	12%	-6.1
Education Services	636	0.4	$34,340	327	106%	6%	-6.7
Professional, Scientific, and Technical Services	1,966	0.4	$57,495	-311	-14%	12%	-8.3
Real Estate and Rental and Leasing	1,232	1.0	$32,892	138	13%	14%	-13.4
Wholesale Trade	1,350	0.4	$52,363	-183	-12%	12%	-15.6
Arts, Entertainment, and Recreation	2,801	2.2	$24,193	-169	-6%	-29%	-16.4
Administrative and Support and Waste Management and Remediation Services	4,459	0.9	$24,982	212	5%	0%	-20.0
Transportation and Warehousing	1,894	0.7	$42,014	-348	-16%	11%	-22.5
Construction	3,539	0.9	$43,187	-1,081	-23%	2%	-23.5
Other Services (except Public Administration)	1,628	0.6	$29,634	-148	-8%	14%	-35.9
Information	880	0.5	$45,957	-270	-23%	-13%	-40.6
Agriculture, Forestry, Fishing and Hunting	11	0.0	$29,152	-10	-48%	15%	-70.7
Mining	2	0.0	$18,438	-1	-33%	2%	-88.6

Source: U.S. Bureau of Labor Statistics; Woods & Poole Economic, Inc. Universe includes all private sector jobs covered by the federal Unemployment Insurance (UI) program;
Note: Data is for Harrison County, MS. Dollar values are in 2015 dollars.

Economic vitality
Identifying high-opportunity occupations

Understanding which occupations are strong and competitive in the region can help leaders develop strategies to connect and prepare workers for good jobs. To identify "high-opportunity" occupations in the region, we developed an **"occupation opportunity index"** based on measures of job quality and growth, including median annual wage, real wage growth, and job growth (in number of jobs and percentage growth).

Job quality, measured by the median annual wage, accounted for two-thirds of the occupation opportunity index, and growth accounted for the other one third. Within the growth category, half was determined by wage growth and the other half was divided equally among the change in number of jobs and the percent change in jobs.



Note: Each indicator was normalized as a cross-occupation z-score before taking a weighted average to derive the index.

Economic vitality

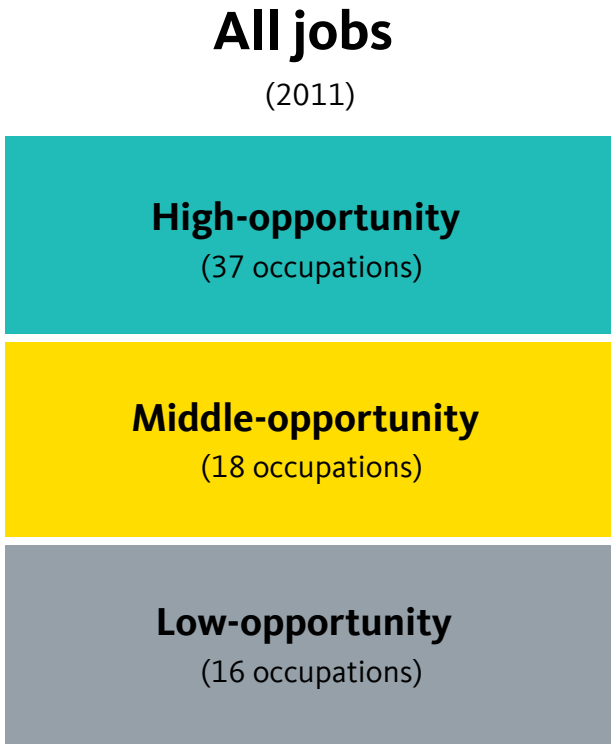
Identifying high-opportunity occupations

(continued)

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

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

Given that the regional economy has experienced widespread employment decline across many occupation groups, it is important to note that this index is only meant to provide general guidance on the strength of various occupations. Its interpretation should be informed by examining all metrics of job quality and growth.



Note: The occupation opportunity index and the three broad categories drawn from it are only meant to provide general guidance on the level of opportunity associated with various occupations in the region, and its interpretation should be informed by an examination of individual metrics used in its calculation, which are presented in the tables on the following pages.

Economic vitality

High-opportunity occupations for workers with a high school diploma or less

Supervisors of construction and extraction workers and supervisors of transportation workers are high-opportunity jobs for workers without postsecondary education

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

		Employment	Job Quality	Growth			Occupation Opportunity Index
			Median Annual Wage	Real Wage Growth	Change in Employment	% Change in Employment	
	Occupation	(2011)	(2011)	(2011)	(2005-11)	(2005-11)	
High-Opportunity	Supervisors of Construction and Extraction Workers	570	$50,060	6.0%	200	54.1%	0.61
	Supervisors of Transportation and Material Moving Workers	330	$45,358	6.8%	40	13.8%	0.37
	Metal Workers and Plastic Workers	590	$39,600	12.3%	200	51.3%	0.25
	Supervisors of Production Workers	220	$46,340	-7.3%	-140	-38.9%	0.18
	Other Installation, Maintenance, and Repair Occupations	1,810	$34,021	29.6%	40	2.3%	0.15
	Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	1,270	$38,939	8.1%	60	5.0%	0.12
	Other Construction and Related Workers	290	$33,094	19.0%	70	31.8%	0.03
	Assemblers and Fabricators	640	$29,475	36.6%	-30	-4.5%	0.02
Middle-Opportunity	Construction Trades Workers	4,060	$32,637	1.5%	600	17.3%	-0.11
	Food Processing Workers	190	$28,295	30.9%	-150	-44.1%	-0.14
	Helpers, Construction Trades	420	$26,267	3.3%	250	147.1%	-0.28
	Supervisors of Building and Grounds Cleaning and Maintenance Workers	280	$32,373	-1.1%	-270	-49.1%	-0.34
	Supervisors of Food Preparation and Serving Workers	1,050	$28,821	2.8%	-20	-1.9%	-0.36
	Motor Vehicle Operators	3,290	$27,176	4.8%	-10	-0.3%	-0.40
	Other Protective Service Workers	1,770	$25,129	13.2%	-140	-7.3%	-0.42
	Material Recording, Scheduling, Dispatching, and Distributing Workers	3,050	$27,055	-8.6%	590	24.0%	-0.44
	Other Personal Care and Service Workers	870	$21,616	19.9%	30	3.6%	-0.46
	Nursing, Psychiatric, and Home Health Aides	1,190	$23,409	11.5%	-230	-16.2%	-0.53
	Grounds Maintenance Workers	540	$22,140	18.1%	-270	-33.3%	-0.53
Low-Opportunity	Material Moving Workers	2,380	$23,440	5.6%	-290	-10.9%	-0.60
	Other Transportation Workers	400	$19,131	9.1%	10	2.6%	-0.68
	Baggage Porters, Bellhops, and Concierges	190	$17,619	13.9%	-100	-34.5%	-0.74
	Food and Beverage Serving Workers	5,140	$17,740	15.3%	-500	-8.9%	-0.75
	Building Cleaning and Pest Control Workers	3,710	$20,298	0.4%	-160	-4.1%	-0.76
	Other Production Occupations	680	$24,468	-30.9%	260	61.9%	-0.80
	Other Food Preparation and Serving Related Workers	1,350	$18,159	11.7%	-800	-37.2%	-0.85
	Cooks and Food Preparation Workers	4,250	$19,555	12.4%	-1,360	-24.2%	-0.86
	Textile, Apparel, and Furnishings Workers	160	$19,650	-3.7%	-350	-68.6%	-0.91
	Retail Sales Workers	7,940	$20,230	2.3%	-1,320	-14.3%	-0.93
	Personal Appearance Workers	130	$19,150	-27.7%	-120	-48.0%	-1.14

Source: U.S. Bureau of Labor Statistics; Integrated Public Use Microdata Series. Universe includes all nonfarm wage and salary jobs for which the typical worker is estimated to have a high school degree or less.
Note: Analysis reflects the Gulfport-Biloxi, MS Metropolitan Statistical Area as defined by the U.S. Office of Management and Budget. Dollar values are in 2011 dollars.

Economic vitality

High-opportunity occupations for workers with more than a high school diploma but less than a bachelor's degree

Supervisors of installation workers and electrical equipment mechanics and installers are high-opportunity jobs for workers with more than a high school diploma but less than a bachelor's degree

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

		Employment	Job Quality	Growth			Occupation Opportunity Index
			Median Annual Wage	Real Wage Growth	Change in Employment	% Change in Employment	
	Occupation	(2011)	(2011)	(2011)	(2005-11)	(2005-11)	
High-Opportunity	Supervisors of Installation, Maintenance, and Repair Workers	390	$59,050	19.9%	-90	-18.8%	1.01
	Electrical and Electronic Equipment Mechanics, Installers, and Repairers	310	$49,035	18.7%	170	121.4%	0.76
	Drafters, Engineering Technicians, and Mapping Technicians	570	$49,451	12.6%	-80	-12.3%	0.55
	Supervisors of Personal Care and Service Workers	600	$40,981	24.1%	-860	-58.9%	0.17
	Supervisors of Protective Service Workers	290	$44,543	-10.5%	50	20.8%	0.16
	Fire Fighting and Prevention Workers	410	$40,100	9.3%	-40	-8.9%	0.15
	Supervisors of Office and Administrative Support Workers	1,010	$41,700	3.3%	-170	-14.4%	0.12
	Legal Support Workers	130	$36,040	-15.7%	100	333.3%	0.05
	Supervisors of Sales Workers	1,510	$34,948	8.1%	160	11.9%	-0.02
	Health Technologists and Technicians	1,830	$35,642	5.0%	130	7.6%	-0.03
	Law Enforcement Workers	850	$37,088	12.6%	-510	-37.5%	-0.03
Middle-Opportunity	Secretaries and Administrative Assistants	2,910	$31,015	9.2%	370	14.6%	-0.13
	Other Education, Training, and Library Occupations	930	$28,968	21.5%	-280	-23.1%	-0.21
	Financial Clerks	2,930	$29,649	5.3%	140	5.0%	-0.27
	Information and Record Clerks	3,910	$26,715	5.5%	630	19.2%	-0.30
	Other Healthcare Support Occupations	530	$27,655	8.1%	-70	-11.7%	-0.37
Low-Opportunity	Other Office and Administrative Support Workers	1,570	$23,961	-1.9%	-550	-25.9%	-0.71
	Communications Equipment Operators	200	$19,860	-6.0%	-130	-39.4%	-0.87
	Entertainment Attendants and Related Workers	1,970	$18,444	15.2%	-1,350	-40.7%	-0.89

Source: U.S. Bureau of Labor Statistics; Integrated Public Use Microdata Series. Universe includes all nonfarm wage and salary jobs for which the typical worker is estimated to have more than a high school diploma but less than a BA.
Note: Analysis reflects the Gulfport-Biloxi, MS Metropolitan Statistical Area as defined by the U.S. Office of Management and Budget. Dollar values are in 2011 dollars.

Economic vitality

High-opportunity occupations for workers with a bachelor's degree or higher

Lawyers, physical scientists and engineers are high-opportunity occupations for workers with a bachelor's degree or higher

Occupation Opportunity Index: All Levels of Opportunity for Workers with a Bachelor's Degree or Higher

		Employment	Job Quality	Growth			Occupation Opportunity Index
			Median Annual Wage	Real Wage Growth	Change in Employment	% Change in Employment	
	Occupation	(2011)	(2011)	(2011)	(2005-11)	(2005-11)	
High-Opportunity	Lawyers, Judges, and Related Workers	260	$106,450	23.8%	10	4.0%	2.99
	Physical Scientists	360	$85,503	1.7%	-260	-41.9%	1.83
	Engineers	640	$81,135	2.0%	-60	-8.6%	1.72
	Top Executives	1,580	$79,625	6.5%	-270	-14.6%	1.67
	Health Diagnosing and Treating Practitioners	3,680	$71,447	9.4%	430	13.2%	1.50
	Operations Specialties Managers	920	$66,618	8.6%	160	21.1%	1.27
	Advertising, Marketing, Promotions, Public Relations, and Sales Managers	320	$66,578	5.7%	-40	-11.1%	1.17
	Other Management Occupations	1,650	$62,458	-4.6%	-210	-11.3%	0.87
	Computer Occupations	1,090	$56,229	5.1%	200	22.5%	0.82
	Business Operations Specialists	2,160	$54,063	3.0%	530	32.5%	0.77
	Financial Specialists	970	$50,728	17.2%	50	5.4%	0.69
	Architects, Surveyors, and Cartographers	220	$45,031	12.3%	40	22.2%	0.42
	Sales Representatives, Wholesale and Manufacturing	550	$47,560	0.6%	-160	-22.5%	0.32
	Media and Communication Workers	160	$41,180	15.7%	-130	-44.8%	0.22
	Social Scientists and Related Workers	200	$48,765	-33.6%	110	122.2%	0.18
	Specialists	700	$38,790	6.7%	20	2.9%	0.09
	Postsecondary Teachers	360	$38,200	-25.5%	260	260.0%	-0.01
	Preschool, Primary, Secondary, and Special Education School Teachers	2,930	$41,986	-7.2%	-650	-18.2%	-0.06
Middle-Opportunity	Librarians, Curators, and Archivists	160	$39,896	-22.4%	30	23.1%	-0.16
	Sales Representatives, Services	590	$33,115	-12.9%	330	126.9%	-0.19
Low-Opportunity	Other Sales and Related Workers	160	$25,783	-30.6%	6000.0%	60.0%	-0.78
	Other Teachers and Instructors	1,810	$20,712	N/A	N/A	N/A	-0.95

Source: U.S. Bureau of Labor Statistics; Integrated Public Use Microdata Series. Universe includes all nonfarm wage and salary jobs for which the typical worker is estimated to have a BA degree or higher.
Note: Analysis reflects the Gulfport-Biloxi, MS Metropolitan Statistical Area as defined by the U.S. Office of Management and Budget. Dollar values are in 2011 dollars. "N/A" indicates that no data is available.

Readiness

Readiness
Highlights

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

- By 2020, 22 percent of jobs in Mississippi will require a BA degree or higher. While some Biloxi residents are prepared to fill these jobs, Black, Latino, Native American, and female API residents do not have this level of education.
- The city's preschool enrollment rate for 3- and 4-year-olds is low compared the state and nation as a whole.
- Black and Latino children are significantly less likely to be proficient in reading in 3rd grade than their White and API peers.
- Latino residents are less likely than any other group to have health insurance.

Percent of residents with a bachelor's degree or higher:

24%

Youth who are disconnected from work and school:

10%

Latino residents who do not have health insurance:

63%

Readiness

Educational attainment varies by race and ethnicity

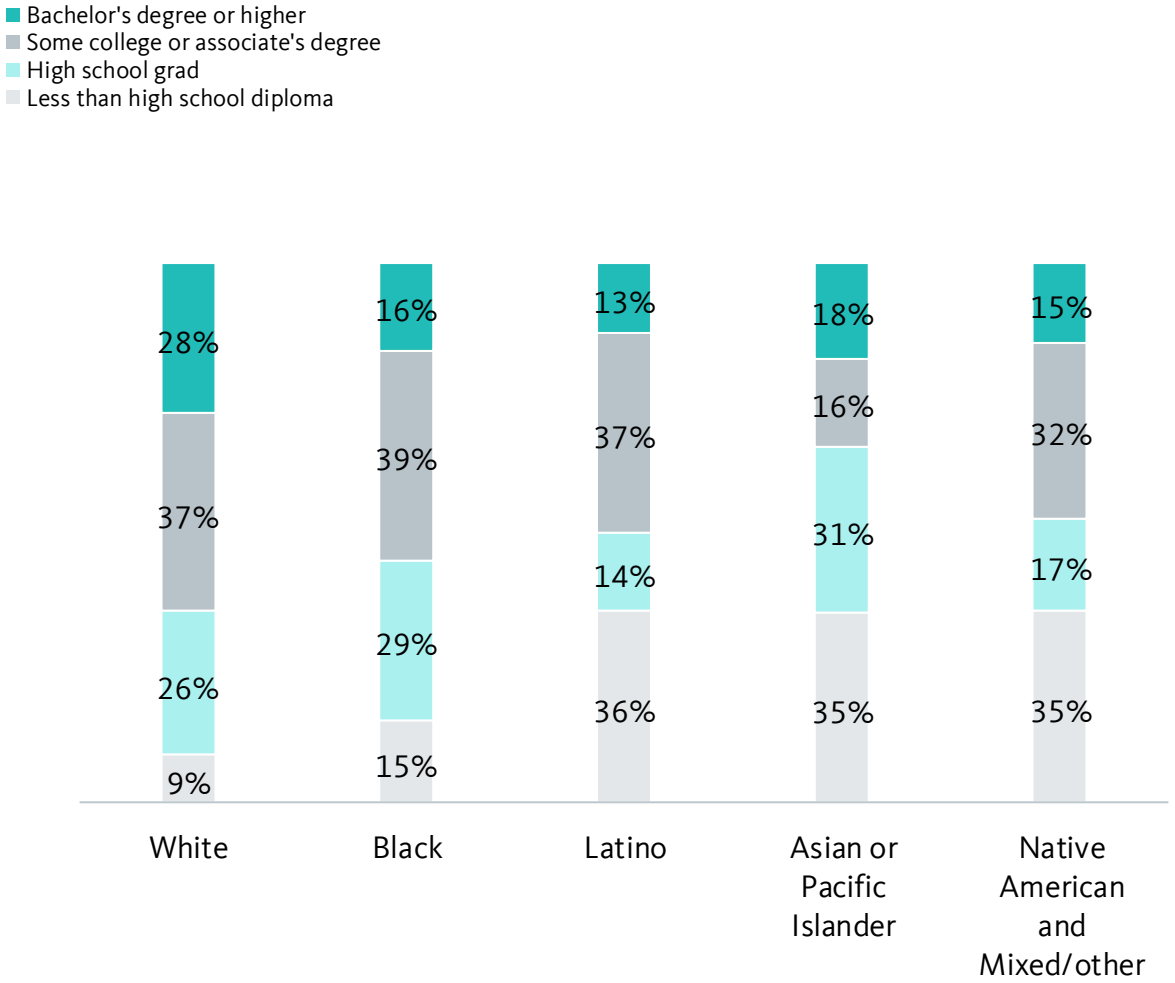
Generally, Biloxi has a strong public school system with a high overall graduation rate. According to 2016 District Graduation and Dropout Rates released by the Mississippi Department of Education, 85 percent of high school students in Biloxi Public School District graduate on time.

However, noticeable gaps exist in educational attainment among racial/ethnic groups in Biloxi. More than one-third of Latino, Asian or Pacific Islander, and Native American and mixed/other race residents have not graduated from high school, as compared to only 9 percent of White residents.

Only one-third of Asian or Pacific Islander residents have not completed any college credit, as opposed to roughly one-third of White residents. This is very low as compared to national trends; nationally, 63 percent of U.S.-born API residents and 59 percent of foreign-born API residents have an AA degree or higher degree.

There are wide gaps in educational attainment

Educational Attainment by Race/Ethnicity, 2014



Source: U.S. Census Bureau. Universe includes all persons age 25 or older.
Note: Data represent a 2010 through 2014 average. "White" is defined as non-Hispanic white and "Latino" includes all who identify as being of Hispanic origin. All other racial/ethnic groups include any Latinos who identify with that particular racial category.

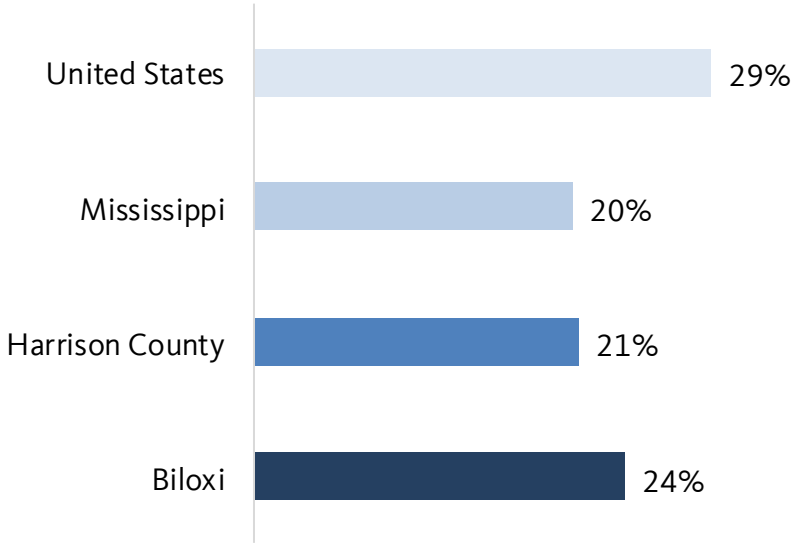
Readiness

More college graduates than the county or state average

Biloxi residents ages 25 and over are more likely to have a bachelor's degree or higher than residents living in Harrison County and in Mississippi broadly. Twenty-four percent of residents in the city have a bachelor's degree or higher. While this is a larger share than the Harrison County and the state of Mississippi, it is below the national average (29 percent).

Biloxi residents are more likely to have a bachelor's degree or higher than residents in the county and state

Percent of the Population with a Bachelor's Degree or Higher, 2014



Source: U.S. Census Bureau. Universe includes all persons age 25 or older.
Note: Data represent a 2010 through 2014 average.

Readiness

A potential education and skills gap

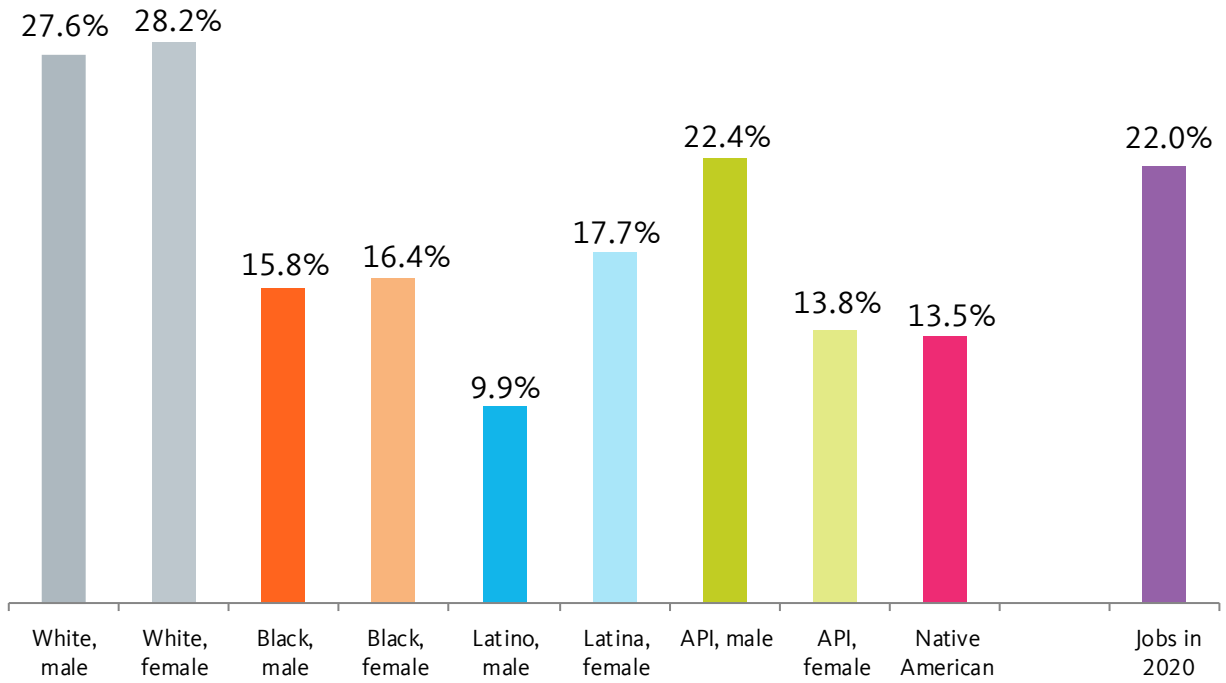
By 2020, 22 percent of jobs in Mississippi will require at least a bachelor's degree. Biloxians vary in their preparedness for these jobs depending upon their race.

Male residents who are Asian and Pacific Islander or who are White are most likely to have a bachelor's degree or higher level of education.

Preparedness drops significantly, though, for Black, Latino, Native American, and female API residents, with Latino males having particularly low rates of bachelor's degree attainment. African American men and women are each over 10 percentage points less likely to have completed a bachelor's degree as their White peers.

Black, Latino, Native American, and female API residents face a skills gap in the city

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



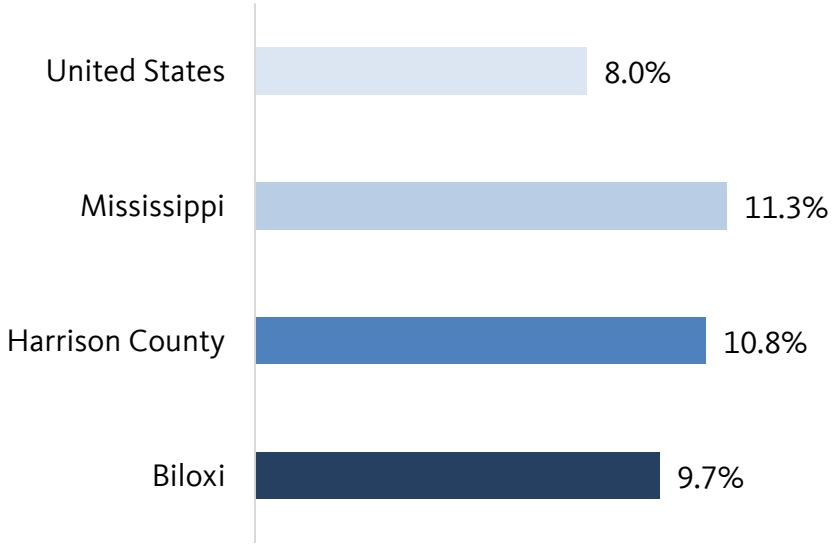
Source: Georgetown Center for Education and the Workforce; U.S. Census Bureau. Universe for education levels of workers includes all persons age 25 or older.
Note: "White" is defined as non-Hispanic White and "Latino" includes all who identify as being of Hispanic origin. All other racial/ethnic groups include any Latinos who identify with that particular racial category. Data on education levels by race/ethnicity represents a 2010 through 2014 average for Biloxi while data on educational requirements for jobs in 2020 are based on statewide projections for Mississippi.

Readiness

One in 10 youth are disconnected from work or school

The total number of "disconnected youth" who are neither in school nor working in Biloxi is similar to but slightly lower than Harrison County and to the rest of the state. However, it is slightly higher than the national rate. Nationally, only 8 percent of youth aged 16 to 19 are disconnected from school or employment; in Biloxi, 10 percent are.

Biloxi youth are slightly more likely to be disconnected than their peers nationally
Percent of 16 to 19-Year-Olds Not in Work or School, 2014



Source: U.S. Census Bureau.
Note: Data represent a 2010 through 2014 average.

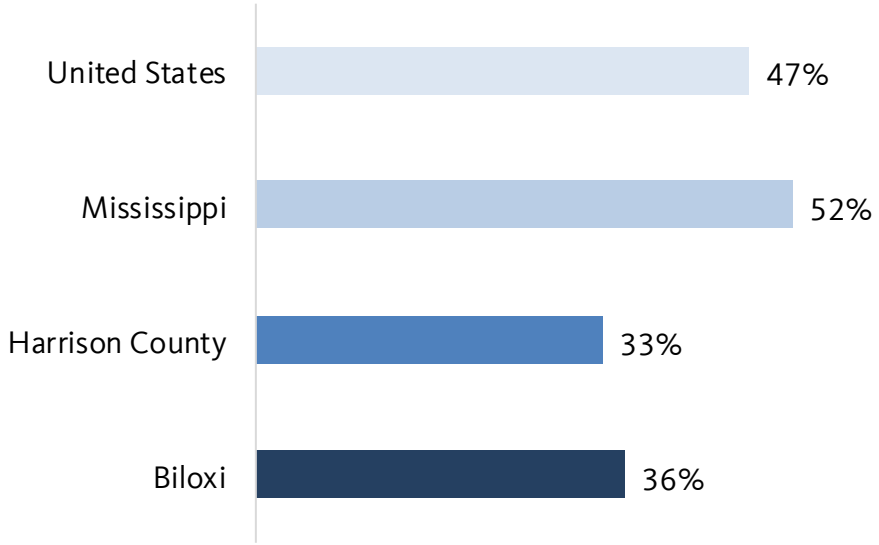
Readiness

Below average levels of preschool enrollment

Biloxi's 3- and 4-year-olds are much less likely to benefit from early childhood settings than children their age across the state of Mississippi and nationally. While 47 percent of all American 3- and 4-year-olds and 52 percent of 3- and 4-year-olds in Mississippi are enrolled in school, only 36 percent of all children in this age range living in Biloxi are enrolled in preschool. This is slightly higher than the rate of enrollment for all of Harrison County (33 percent).

Preschool enrollment is low in Biloxi

Percent of 3-to-4-Year-Olds Enrolled in School, 2014



Source: U.S. Census Bureau. Universe includes all persons ages 3 and 4.
Note: Data represent a 2010 through 2014 average.

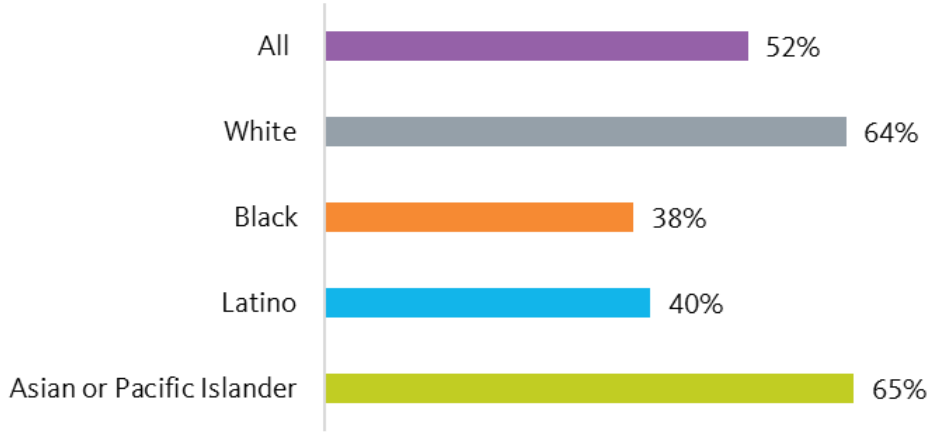
Readiness

Racial inequities in the early years of learning

As compared to the rest of the state of Mississippi, third graders who attend schools in Biloxi show notably high passing rates in language arts. In every elementary school in the district, at least 90 percent of students met literacy requirements for promotion to the fourth grade during the 2015-2016 school year. However, disparities become more evident as the level of difficulty in reading being assessed increases. According to state assessments that measure the highest levels of difficulty in language arts, White and API students have better outcomes than Black and Latino students. While roughly two-thirds of White and API students are able to read at the highest difficulty levels by the end of third grade, only 38 percent of Black students and 40 percent of Latino students are.

Educational outcomes can vary by race

Share Achieving Highest Difficulty in 3rd Grade Reading Proficiency, 2014



Source: diversitydatakids.org calculations of data from the Mississippi Department of Education.
Note: Data for some racial/ethnic groups are excluded due to data availability.

Readiness

Racial inequities less present in attendance

Elementary attendance – defined as children attending at least 95 percent of school days- is higher and more consistent across racial groups. API and Latino students are most likely to have consistent attendance (92 and 91 percent respectively). Rates fall slightly for Black and White students (83 and 82 percent respectively), but are still fairly high. Attendance drops significantly for students who identify as multiple races, however. Only 67 percent of mixed race students attend at least 95 percent of school days.

Attendance rates are high for most children living in Biloxi

Share of K-3 Children Attending At Least 90% of School Days, 2014-2015

Source: diversitydatakids.org calculations of data from the Mississippi Department of Education.
Note: Data for some racial/ethnic groups are excluded due to data availability.

Readiness

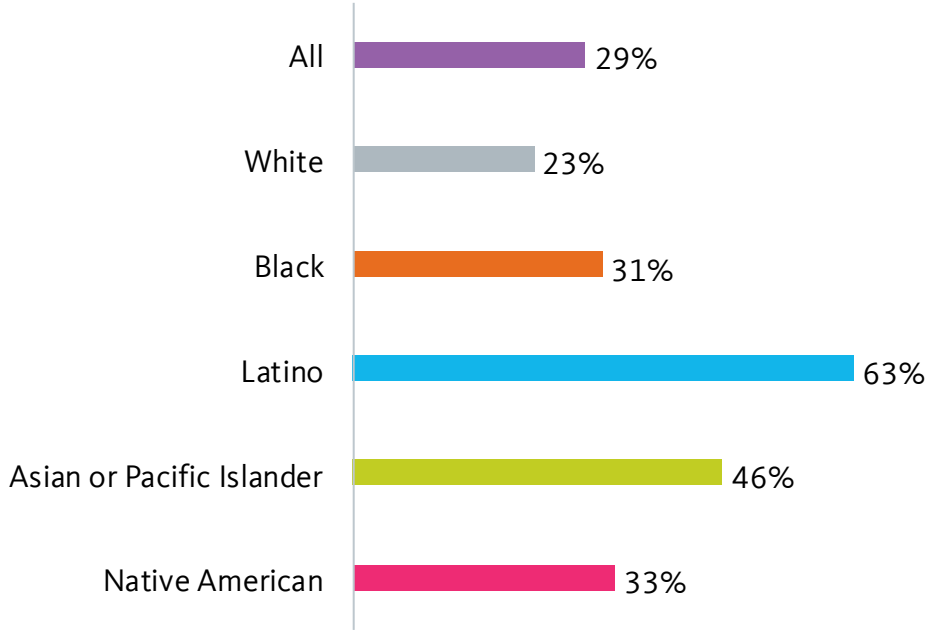
Latinos are almost three times as likely to not be insured compared to Whites

Overall, 29 percent of Biloxians do not have access to health insurance. Rates increase for people of color. While only 23 percent of White residents are uninsured, 31 percent of Black, 33 percent of Native American, and 46 percent of API residents are uninsured.

Latinos, though, have the most severe lack of access to health insurance. Sixty-three percent of Biloxians who are Latino are uninsured - nearly three times the rate of White residents.

People of color are less likely to have health insurance

Percent Without Health Insurance by Race/Ethnicity, 2014



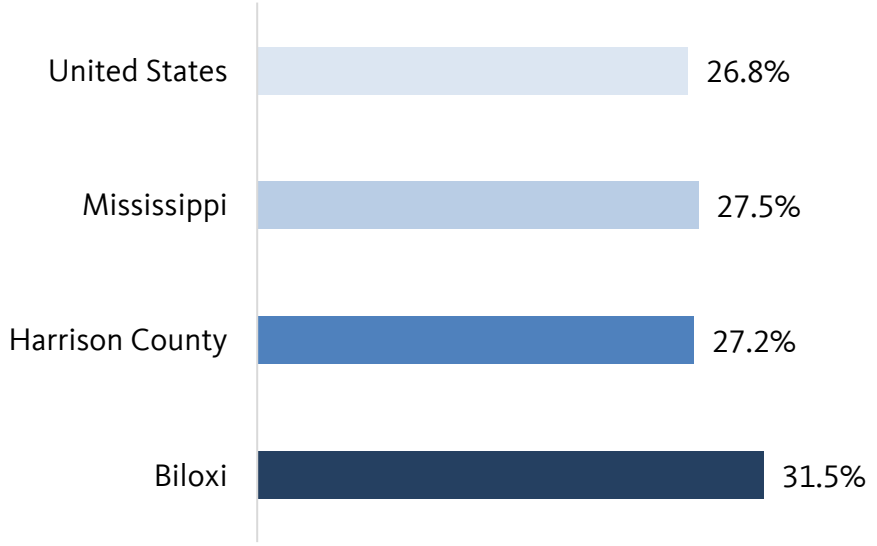
Source: U.S. Census Bureau. Universe includes the civilian noninstitutionalized population ages of 18 through 64.
Note: Data represent a 2010 through 2014 average. "White" is defined as non-Hispanic White and "Latino" includes all who identify as being of Hispanic origin. All other racial/ethnic groups include any Latinos who identify with that particular racial category.

Readiness

Slightly more frequent instances of elderly living alone

The percentage of elderly residents living alone in Biloxi is slightly high- 32 percent of elderly residents live alone in the city, as compared to 27 percent in the rest of the county, in the state, and across the nation.

Elderly residents are more likely to live alone in the city than county, state and the nation as a whole
Percent of Elderly Living Alone, 2014



Source: U.S. Census Bureau. Universe includes all persons age 65 or older.
Note: Data represent a 2010 through 2014 average.

Connectedness

Connectedness
Highlights

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

- The city has less residential segregation compared to the state and the nation as a whole.
- Residential segregation has decreased between most racial groups
- Poverty and unemployment are most concentrated in the same neighborhoods throughout the city, many of which are home to majority residents of color.
- More than half of the city's renters are burdened, meaning they spend more than 30 percent of household income on housing costs. One in every four renters are severely rent burdened and spend more than half of income on housing costs.

Percent of renters who are housing burdened:

53%

Renters who are severely housing burdened :

25%

Percent of Latinos who live in an area with limited supermarket access:

21%

Connectedness

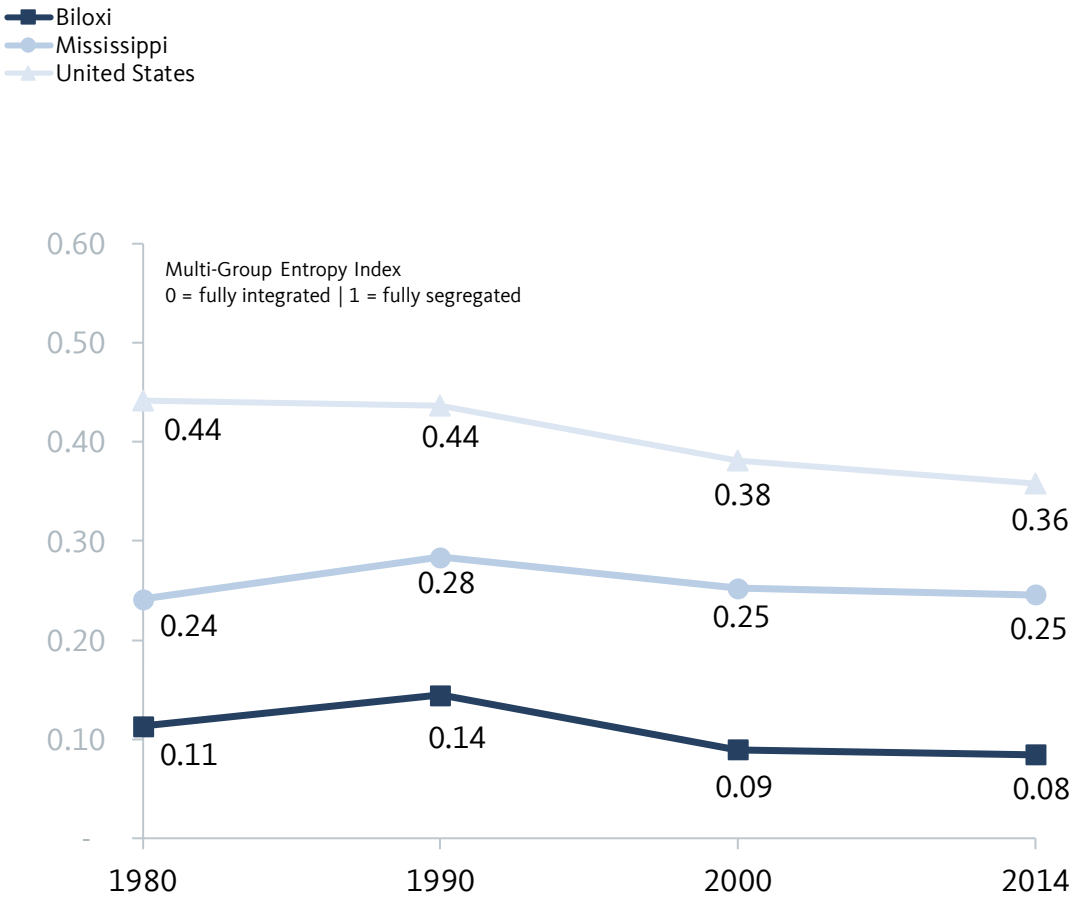
Residential segregation in Biloxi has historically been lower than the state and nation

After an increase between 1980 and 1990, overall residential segregation in the city decreased between 1990 and 2014, from .14 to .08.

While data indicates that the city has consistently had lower levels of residential segregation than both the state and the nation as a whole, residents report continuing to experience clear segregation between Black and White communities.

Overall residential segregation has declined since 1990

Residential Segregation, 1980 to 2014



Source: U.S. Census Bureau; Geolytics.
Note: Data for 2014 represents a 2010 through 2014 average.

Connectedness

Segregation has decreased among most racial and ethnic groups

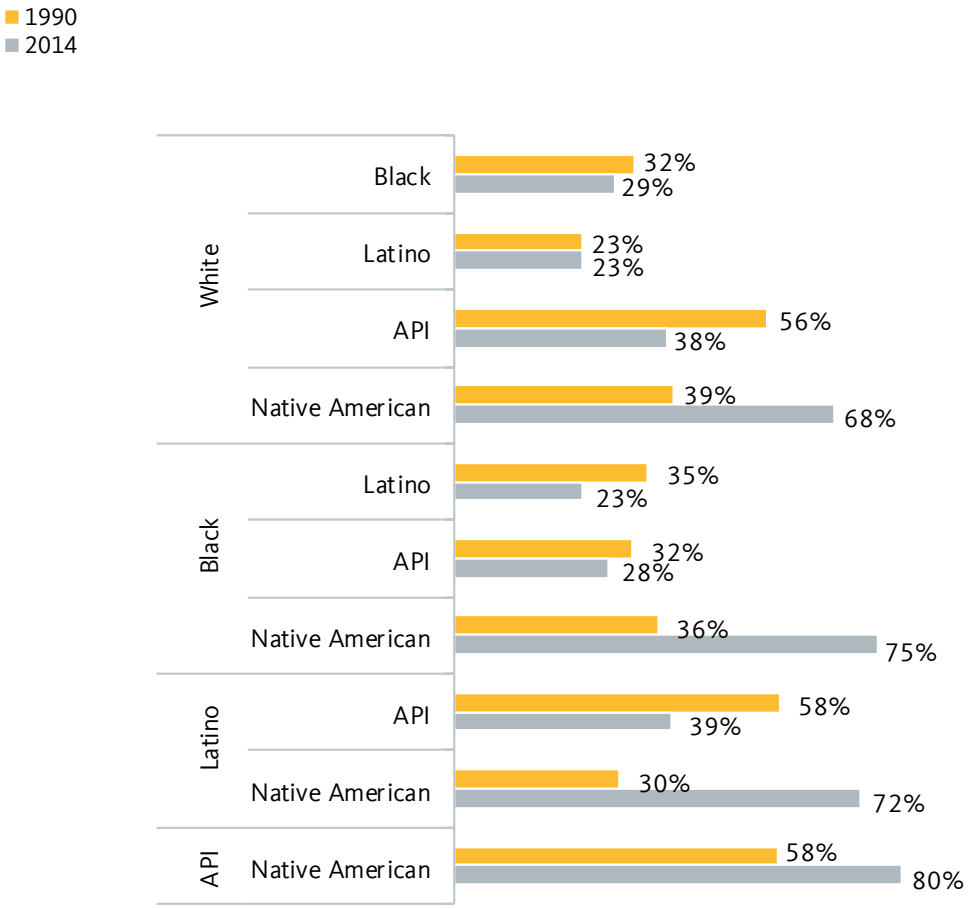
The dissimilarity index estimates the share of a given racial/ethnic group that would need to move to a new neighborhood to achieve complete residential integration. This measure shows that, with the exception of Native American residents, all residents have become more integrated since 1990.

Notably, the share of API or Latino residents who would have to move in order to achieve integration within both groups has decreased by 29 percentage points. Similarly, segregation between API and White Biloxians decreased by 19 percentage points. Black and Latino residents also became more integrated, experiencing a 12 percentage point decrease in segregation.

Segregation has increased, however, between Native American residents and every other racial/ethnic group since 1990 – more than doubling in some cases. For context, it is important to note that the severity of this segregation is in part due to the relatively very small proportion of residents living in the city who are Native American.

Integration has improved between most residents

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



Source: U.S. Census Bureau; Geolytics, Inc.
Note: Data for 2014 represents a 2010 through 2014 average.

Connectedness

Poverty is most concentrated in East Biloxi

Poverty is most concentrated in East Biloxi, around Keesler Air Force Base, and along the Biloxi River.

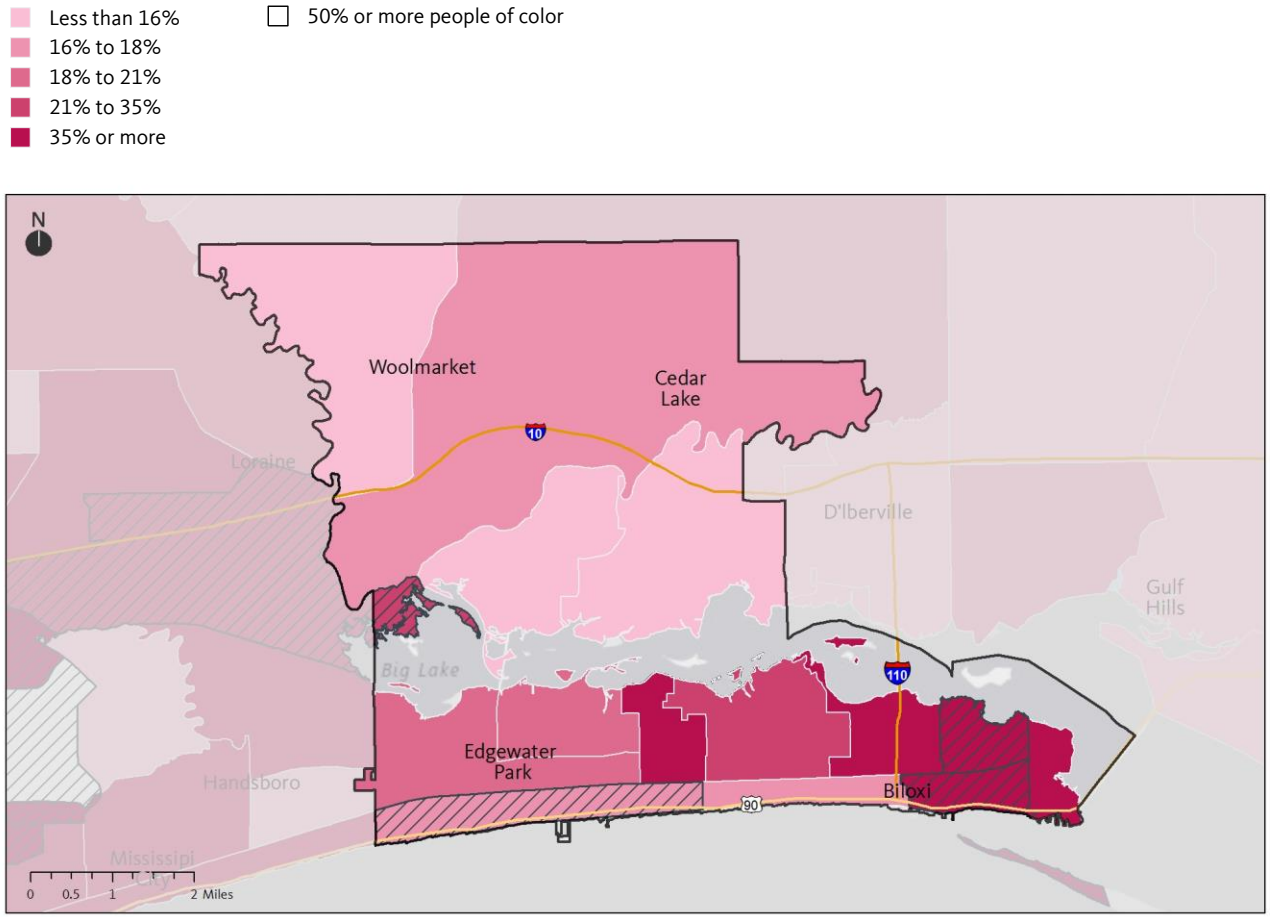
Several neighborhoods with the highest poverty rates are also those with larger communities of people of color. Biloxians living in nine census tracts in the city experience poverty rates exceeding 18 percent. At least half of Biloxians living in three of the census tracts are people of color.

A exception to this trend is the Edgewater Park/Beauvoir neighborhood. In Edgewater Park/Beauvoir, half of residents are people of color but experience a comparably low poverty rate of between 16-18 percent.

Residents of East Biloxi face the highest concentrations of poverty. In a 2012 community needs assessment, residents described distinct structural barriers created by local policy that perpetuate poverty, including lack of access to essential services otherwise available in the city and slow redevelopment of infrastructure.

Poverty is most concentrated in the southern strip of the city

Percent Population Below the Poverty Level by Census Tract, 2014



Source: U.S. Census Bureau; TomTom, ESRI, HERE, DeLorme, MaymyIndia, © OpenStreetMap contributors, and the GIS user community. Universe includes all persons not in group quarters. Note: Data for 2014 represents a 2010 through 2014 average.

Connectedness

How residents commute varies by income

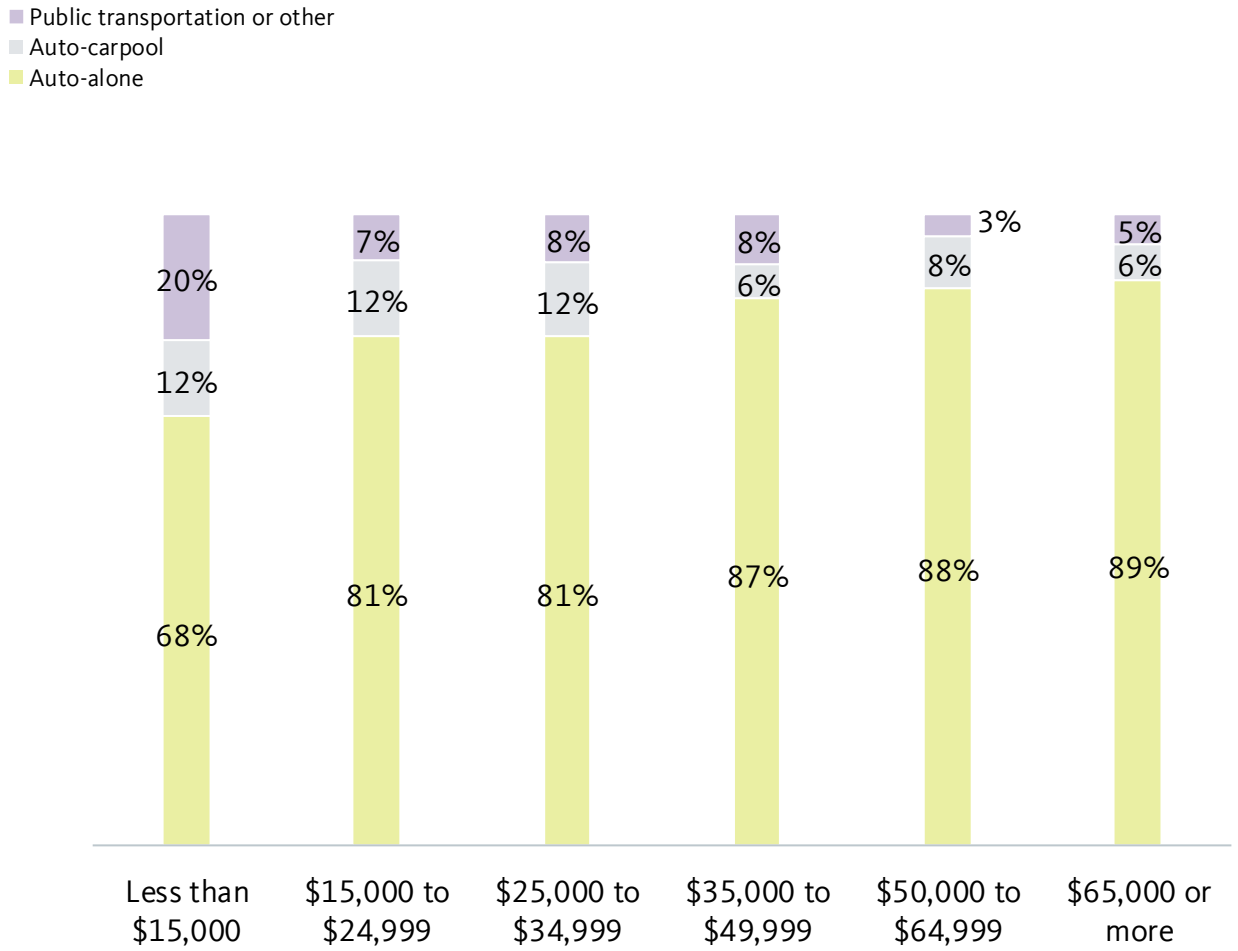
The vast majority of Biloxians drive alone to work. However, the likelihood of a worker in the city to drive, and to drive alone, varies by income.

Single-driver commuting increases with income. Sixty-eight percent of workers in the lowest income band (those earning less than $15,000 per year) drive alone to work, compared to 89 percent of workers who make $65,000 or more per year.

Lower-income residents are also more likely to use other transportation options such as carpooling, public transportation, and walking.

Lower-income residents are less likely to drive alone to work

Means of Transportation to Work by Annual Earnings, 2014



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

Note: Data represent a 2010 through 2014 average. Dollar values are in 2014 dollars.

Connectedness

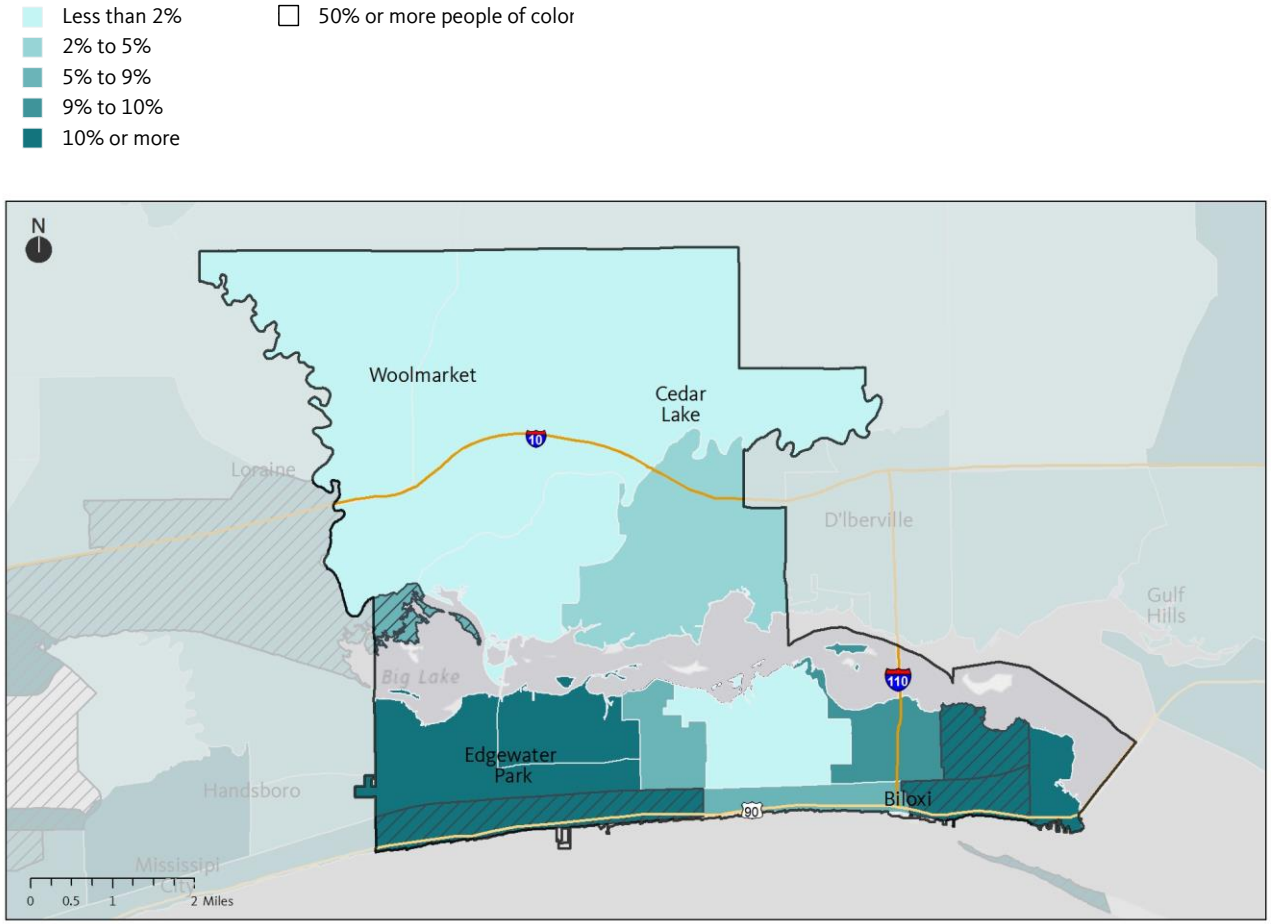
Low car access is more prevalent along the peninsula

While access to a vehicle is not a great challenge for many households in Biloxi, access does vary by race and geography. Census tracts with the least access tend to be majority people of color and concentrated in East Biloxi and Edgewater Park.

Census tracts with lower vehicle access also tend to have higher rates of unemployment and growth in poverty.

Households without access to vehicles are likely to be found in areas with higher concentrations of people of color

Percent of Households Without a Vehicle by Census Tract, 2014



Source: U.S. Census Bureau; TomTom, ESRI, HERE, DeLorme, MaymyIndia, © OpenStreetMap contributors, and the GIS user community. Universe includes all households (no group quarters). Note: Data represent a 2010 through 2014 average.

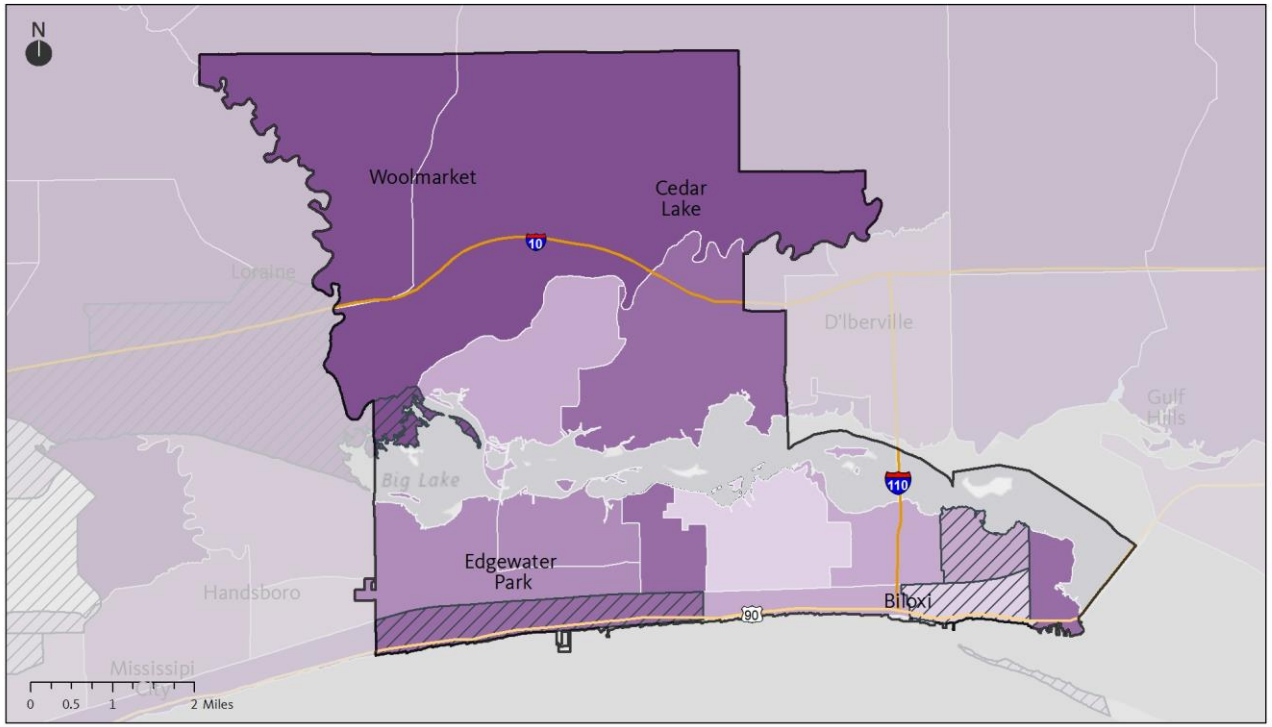
Connectedness

Commute times are longer for residents in areas with greater car access

Average commute times tend to be longest for residents living in areas of Old Biloxi that have become suburban, especially in recently annexed areas like Woolmarket and Cedar Lake. Residents also experience longer commute times in census tracts where car access is greater.

Most commuters travel at least 16 minutes to work

Average Travel Time to Work by Census Tract, 2014



Source: U.S. Census Bureau; TomTom, ESRI, HERE, DeLorme, MaymyIndia, © OpenStreetMap contributors, and the GIS user community. Universe includes all persons age 16 or older who work outside of home. Note: Data represent a 2010 through 2014 average.

Connectedness

Half of renters in the city are housing burdened

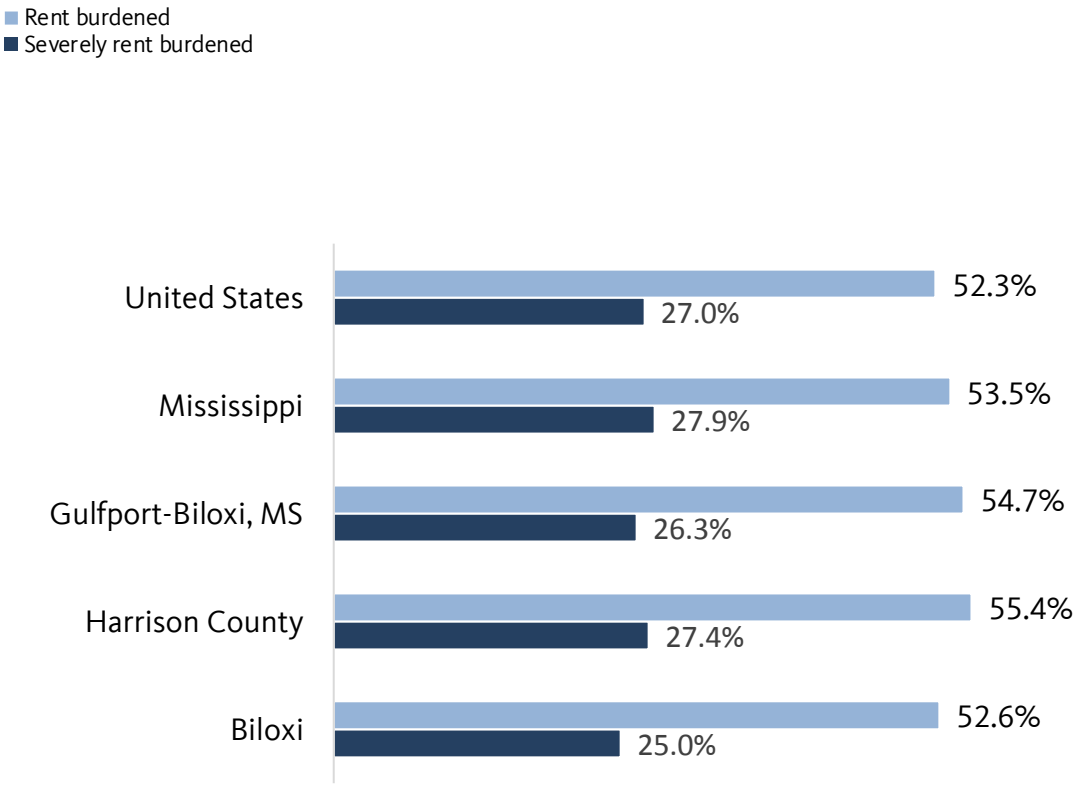
Biloxians are similarly but slightly less likely to experience rent burden and severe rent burden as residents living throughout the state of Mississippi and nationally.

More than half of the city's renters are burdened, meaning they spend more than 30 percent of household income on housing costs.

One in every four Biloxians is severely rent burdened and spend more than half of income on housing costs. This is slightly lower but consistent with the county, region, state, and nation as a whole.

Housing costs are slightly lower compared to the county, region, state and nation

Share of Households that are Rent Burdened, 2014



Source: U.S. Census Bureau. Universe includes renter-occupied households with cash rent (no group quarters).
Note: Data represent a 2010 through 2014 average.

Connectedness

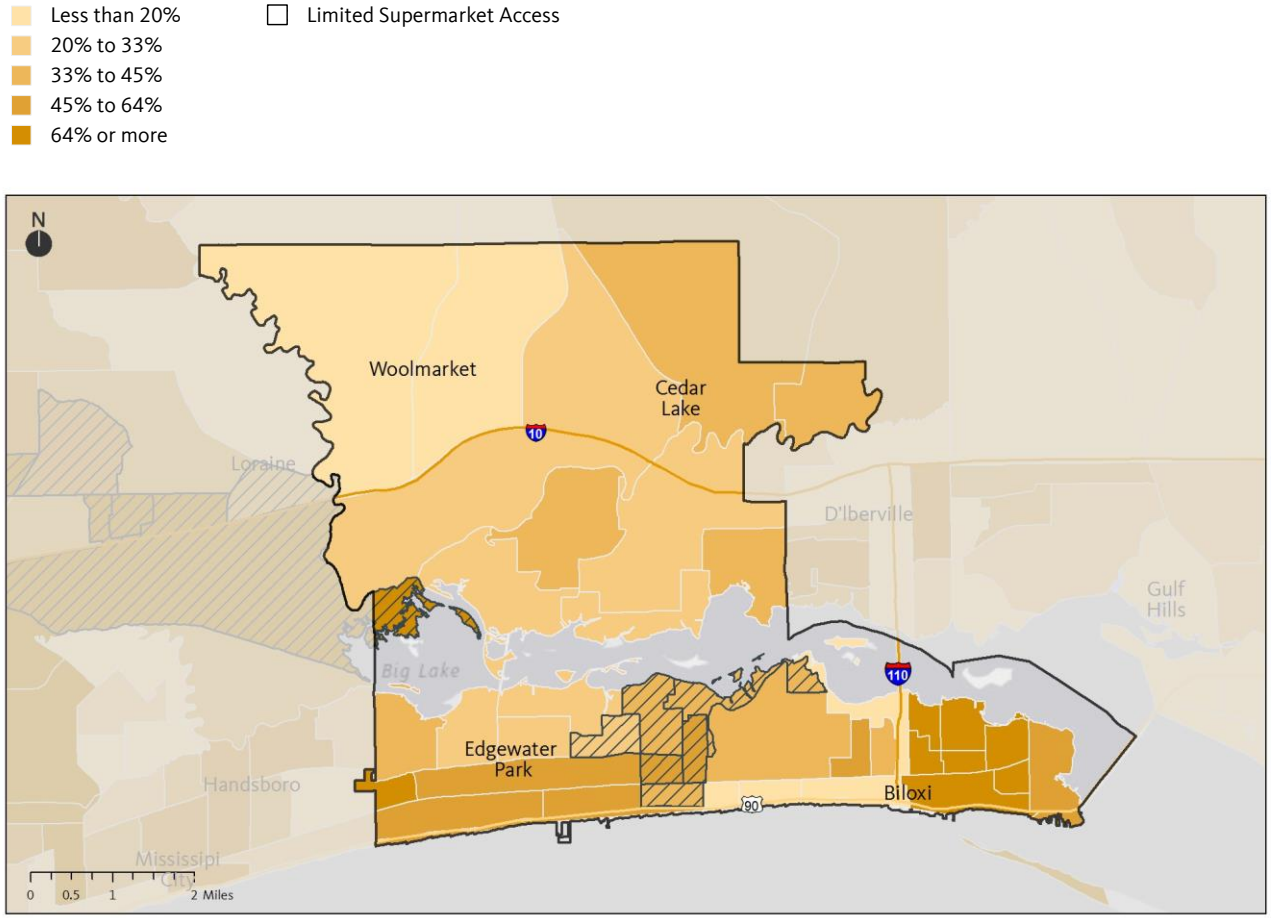
Low supermarket access areas tend to have larger concentrations of people of color

Limited Supermarket Access Areas, or LSAs, are defined as areas where residents must travel significantly farther to reach a supermarket than the "comparatively acceptable" distance traveled by residents in well-served areas with similar population densities and car ownership rates.

In Biloxi, LSAs tend to exist in communities where a large portion, if not the majority, of residents are people of color. Along the city's peninsula, the majority of LSAs exist in census tracts where at least one-third of residents are people of color.

Low supermarket access neighborhoods tend to be around the Big Lake and within the peninsula

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



Source: The Reinvestment Fund, 2014 LSA analysis; U.S. Census Bureau; TomTom, ESRI, HERE, DeLorme, MaymyIndia, © OpenStreetMap contributors, and the GIS user community. Note: Data on population by race/ethnicity reflects a 2010 through 2014 average.

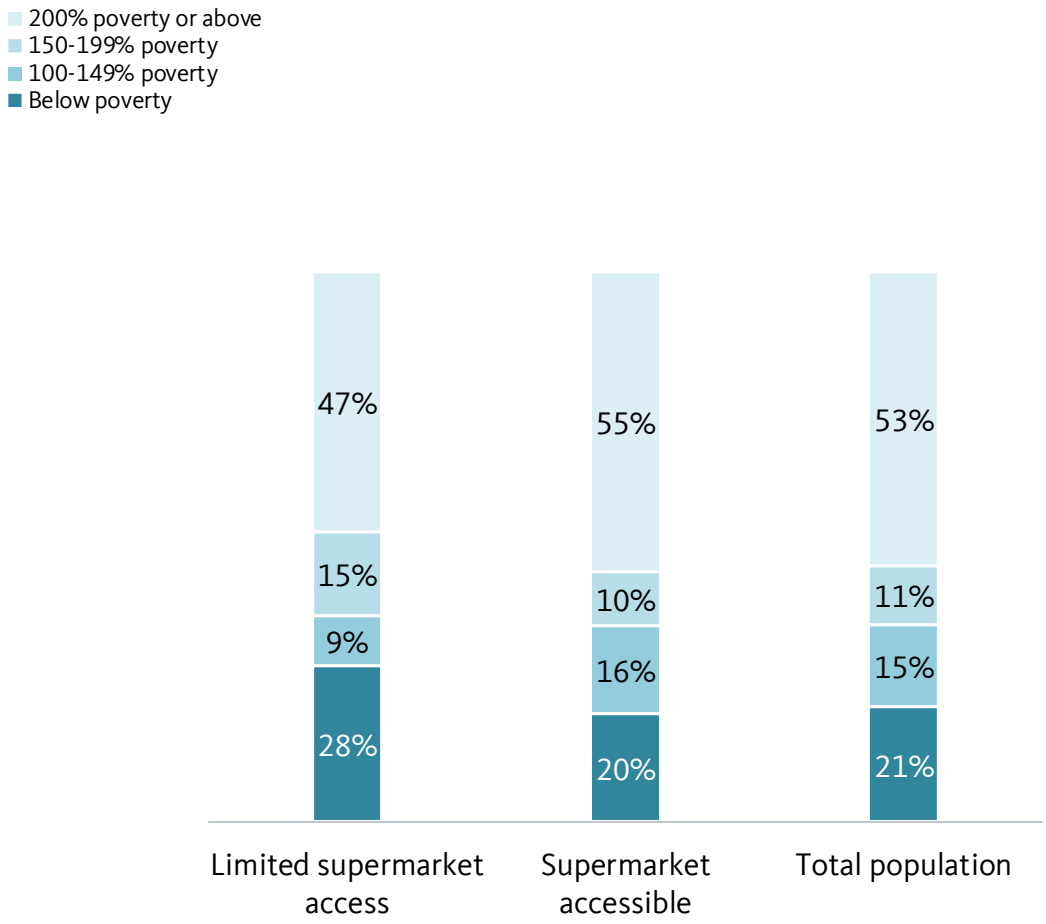
Connectedness

Healthy food access varies by income

A larger share of Biloxians who live in limited supermarket access areas live below the poverty line, than compared to residents who live in supermarket accessible areas. Of those residents who have limited access to supermarkets in the county, 28 percent live below the federal poverty line; 52 percent live below 200 percent of poverty.

The majority of individuals who live in LSAs live above the federal poverty line

Poverty Composition of Food Environments, 2014



Source: The Reinvestment Fund, 2014 LSA analysis; U.S. Census Bureau. Universe includes all persons not in groups quarters.
Note: Data on population by poverty status reflects a 2010 through 2014 average.

Connectedness

Healthy food access varies by race

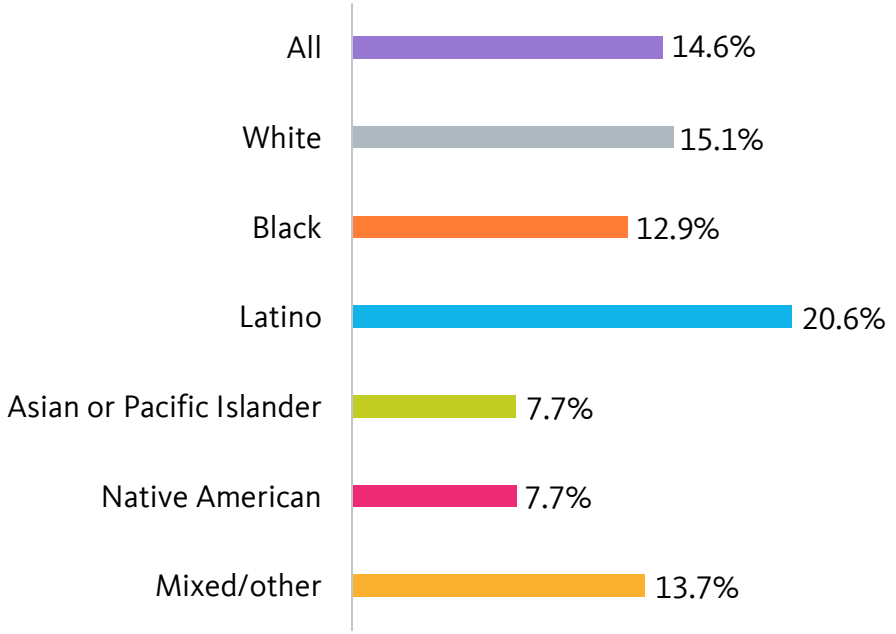
Certain racial groups are more likely to live in LSAs than others. Latino residents live in areas with limited supermarket access at the highest rate in the city: 21 percent.

White, Black, and Mixed/other race residents have similar rates of living in LSA areas, ranging from 15 percent to 13 percent.

Native American and API residents are the least likely to live in LSAs.

Latino residents are more likely to live in an LSA than any other group

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



Source: The Reinvestment Fund, 2014 LSA analysis; U.S. Census Bureau.
Note: Data on population by poverty status reflects a 2010 through 2014 average.

Economic benefits

Economic benefits
Highlights

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

- Mississippi's economy could have been $21 billion stronger in 2014 – a 20 percent increase – if its racial gaps in income had been closed.
- In Mississippi, 55 percent of the racial income gap between African Americans and Whites is due to differences in wages, while 45 percent is due to differences in employment.
- With racial equity in income in Biloxi, African Americans would see their average annual income grow by $14,700 while Latinos would see an average increase of $10,600.

Equity dividend for Mississippi:

$21billion

Average annual income gain with racial equity for people of color in Biloxi:

$13k

Economic benefits of inclusion

A potential $21 billion per year GDP boost from racial equity

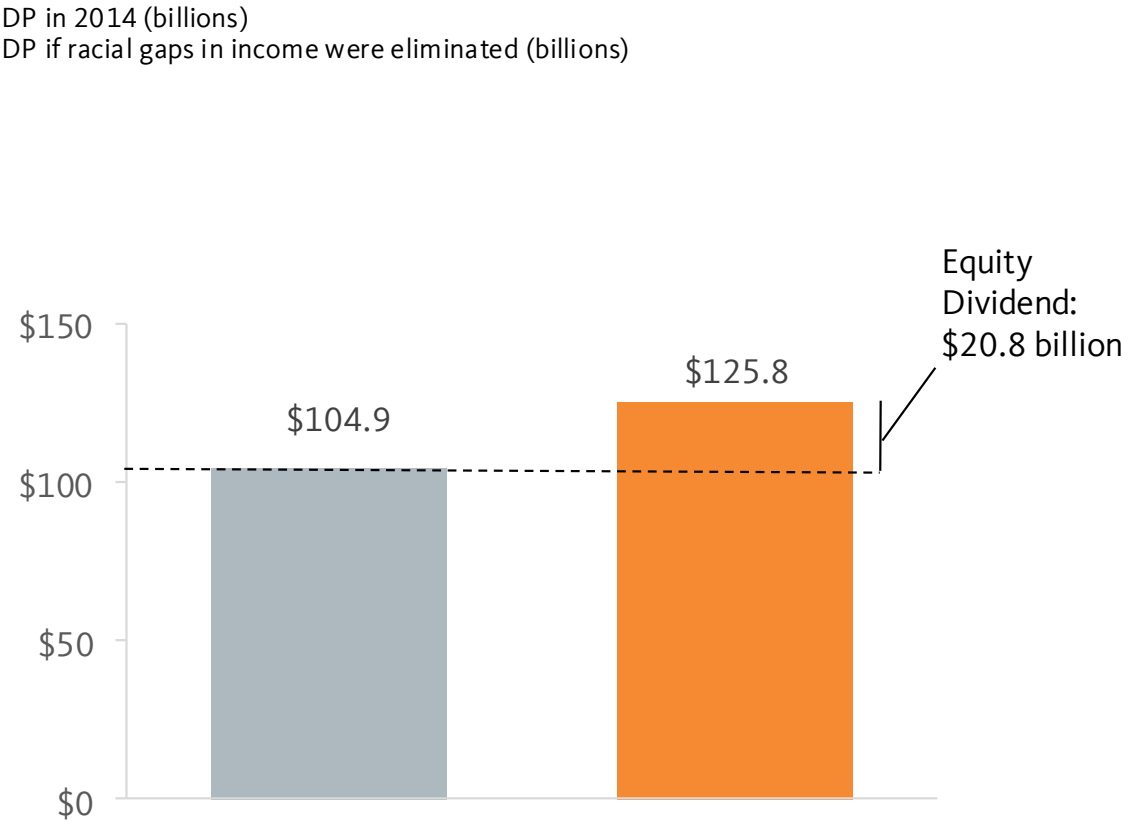
Mississippi stands to gain a great deal from addressing racial inequities. The state's economy could have been $21 billion stronger in 2014 if its racial gaps in income had been closed: a 20 percent increase.

Using data on income by race, we calculated how much higher total economic output would have been in 2014 if all racial groups who currently earn less than Whites had earned similar average incomes as their White counterparts, controlling for age.

We also examined how much of the state's racial income gap between people of color and Whites was due to differences in wages and how much was due to differences in employment (measured by hours worked). Nationally, 64 percent of the racial income gap between all people of color and Whites is due to wage differences. In Mississippi, the share of the gap attributable to wages is 55 percent.

Mississippi's GDP would have been nearly $21 billion higher if there were no racial gaps in income

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



Source: Integrated Public Use Microdata Series; Bureau of Economic Analysis.
Note: Data reflect the state of Mississippi and represent a 2010 through 2014 average. Values are in 2014 dollars.

Economic benefits of inclusion

Average income for people of color would increase by about 70 percent with racial equity

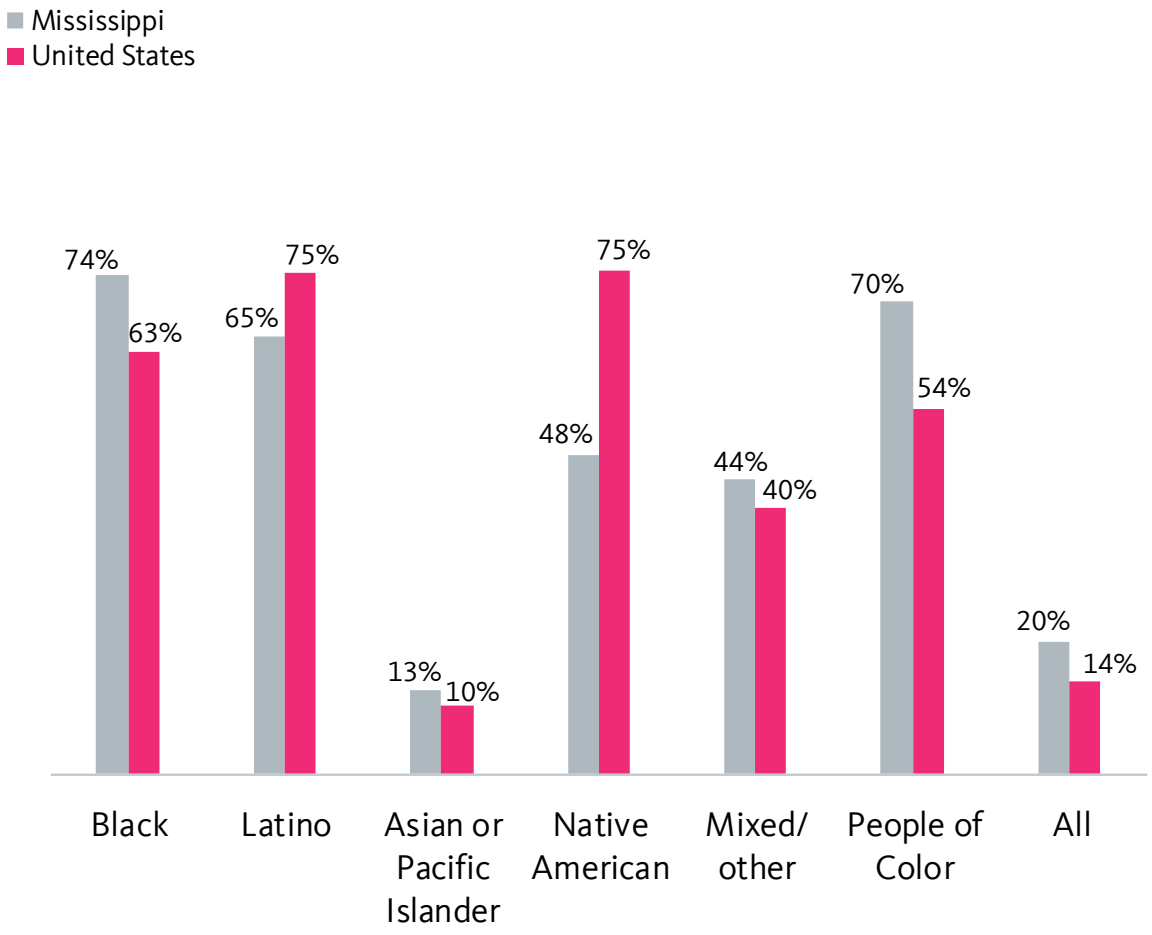
People of color in Mississippi as a whole are projected to see their incomes grow by 70 percent with racial equity compared with 54 percent nationwide.

African Americans would see the largest gain in average annual income at 74 percent, while Asians or Pacific Islanders would see only a 13 percent gain.

Income gains were estimated by calculating the percentage increase in income for each racial/ethnic group if they had the same average annual income (and income distribution) and hours of work as non-Hispanic Whites, controlling for age.

African Americans in Mississippi would experience the largest income increases with racial equity

Statewide Percentage Gain in Income with Racial Equity by Race/Ethnicity, 2014



Source: Integrated Public Use Microdata Series. Universe includes all persons ages 16 and older.
Note: Data reflect the state of Mississippi and represent a 2010 through 2014 average.

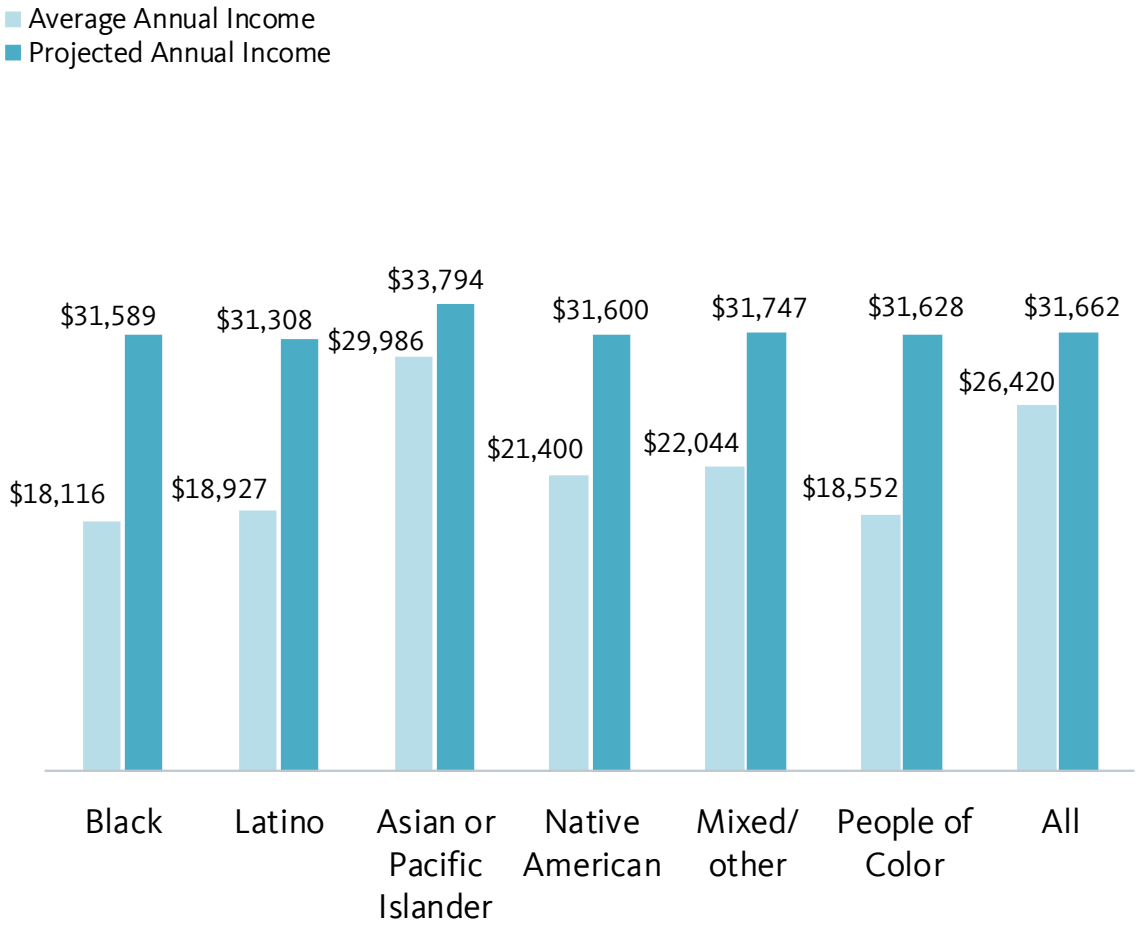
Economic benefits of inclusion

Average income for African Americans would increase by over $13,000 per year

On average, people of color in Mississippi are projected to see their incomes grow by $13,000 with racial equity. Latinos and African Americans would see slightly larger increases while other groups would see smaller, but still substantial increases.

People of color in Mississippi would see an average income gain of about $13,000 with racial equity

Statewide Gain in Average Income with Racial Equity by Race/Ethnicity, 2014



Source: Integrated Public Use Microdata Series. Universe includes all persons ages 16 and older.
Note: Data reflect the state of Mississippi and represent a 2010 through 2014 average. Values are in 2014 dollars.

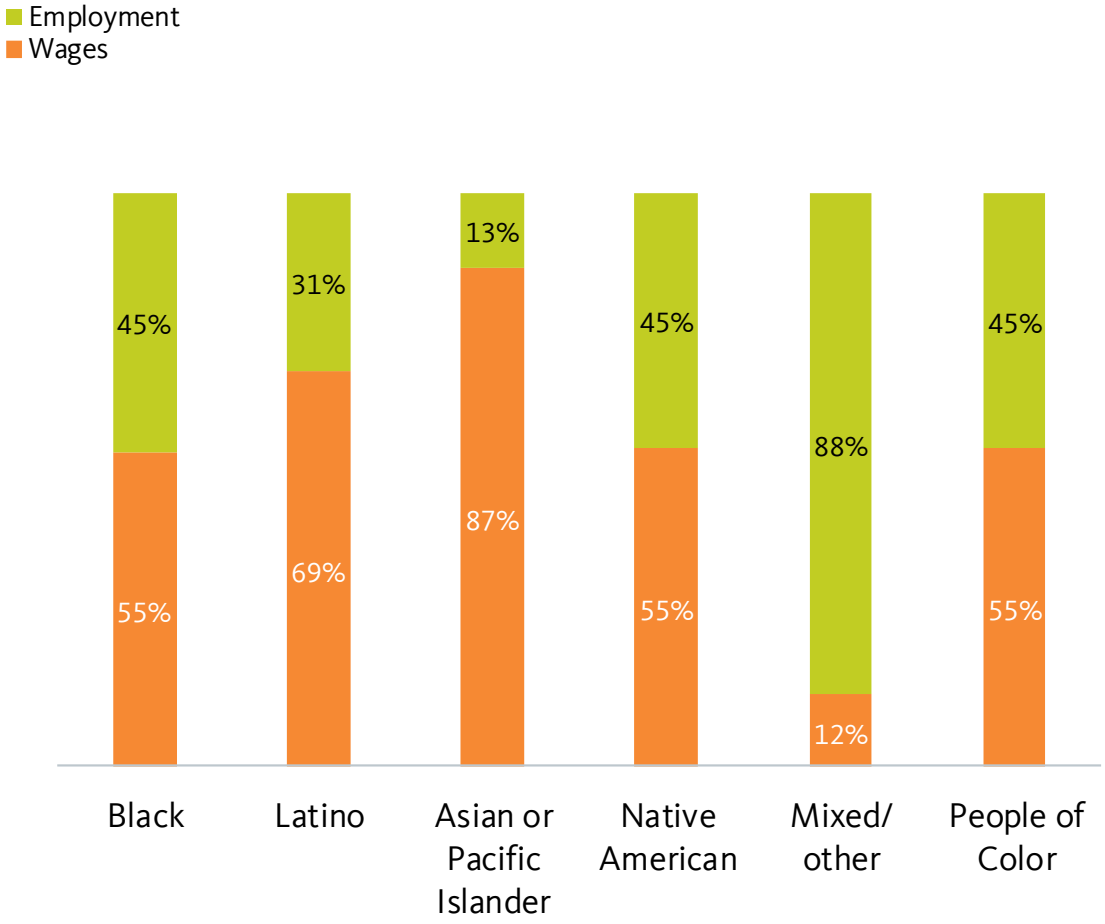
Economic benefits of inclusion

Most of the potential income gains would come from closing the racial wage gap, but employment differences matter too

We also examined how much of the state's racial income gap was due to differences in wages and how much was due to differences in employment (measured by hours worked). In Mississippi, 55 percent of the racial income gap is due to differences in wages, while 45 percent is due to differences in employment. For all groups except for people of Mixed or other racial backgrounds, wages account for the majority of the income gap.

Most of the racial income gap in Mississippi is due to differences in wages

Statewide Source of Gains in Income with Racial Equity By Race/Ethnicity, 2014



Source: Integrated Public Use Microdata Series. Universe includes all persons ages 16 and older.
Note: Data reflect the state of Mississippi and represent a 2010 through 2014 average.

Economic benefits of inclusion

Income gains with racial equity are likely to be similar in Biloxi as for the state overall

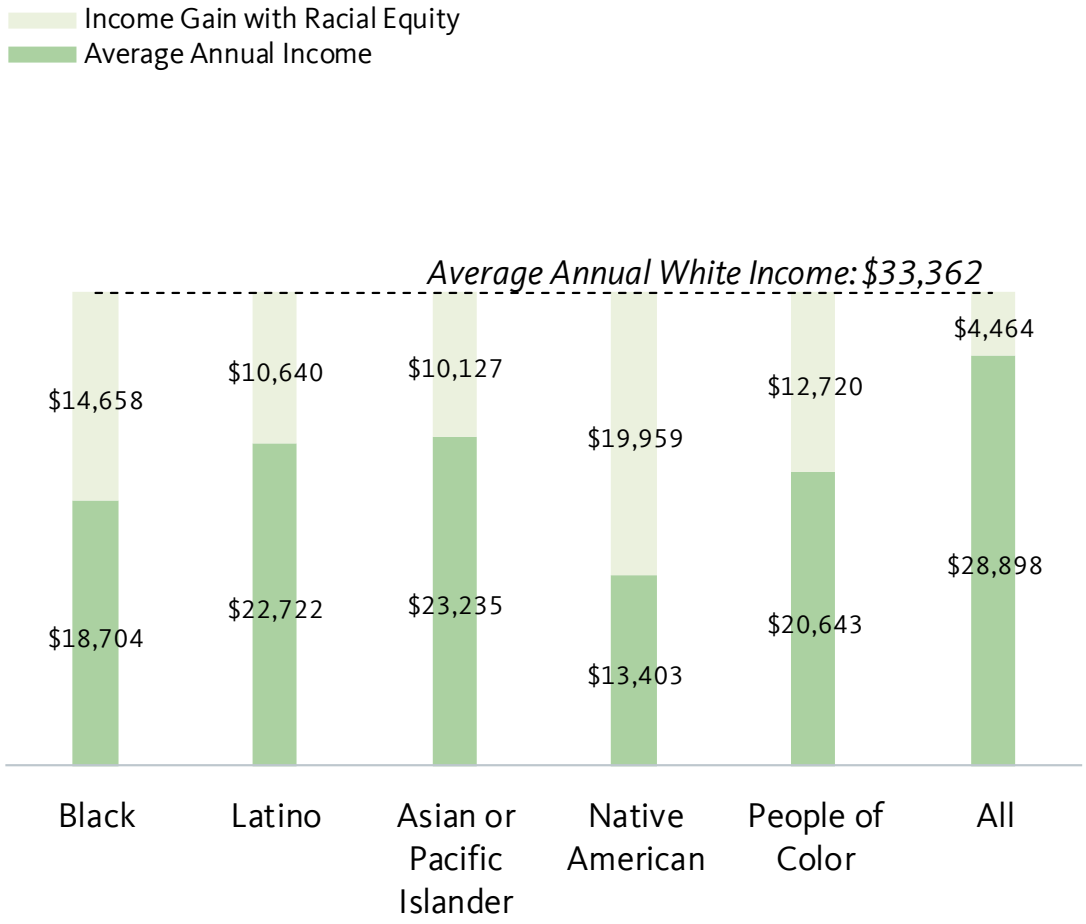
Although there is insufficient data to a conduct a full analysis of gains in income and GDP with racial equity in Biloxi, a comparison of average annual average income by race/ethnicity for the population 16 and older suggests that gains in the city would be similar to, but perhaps slightly smaller than for the state overall.

If average annual income for groups of color rose to the levels we observe for non-Hispanic Whites, we would anticipate that average annual income for all people of color combined would rise by nearly $13,000, from about $20,600 to $33,400.

Native Americans would see the largest gain of about $20,000, although their very small numbers in the city make this estimate less reliable. African Americans would see the next largest gain of about $14,700, while Latinos and Asian or Pacific Islanders would also see gains of over $10,000.

People of color in Biloxi would see an average income gain of about $12,700 with racial equity

Estimated Gain in Average Income with Racial Equity by Race/Ethnicity, 2014



Source: U.S. Census Bureau. Universe includes all persons ages 16 and older.
Note: Data represent a 2010 through 2014 average. "White" is defined as non-Hispanic white and "Latino" includes all who identify as being of Hispanic origin. All other racial/ethnic groups include any Latinos who identify with that particular racial category. Values are in 2014 dollars.

Implications

Implications
Advancing racial equity and inclusive growth

Biloxi's diverse population is an economic asset that can help the city and region compete in the global economy, if the city's leaders invest in ensuring all of its residents can contribute their talent and creativity to building a strong next economy.

Grow good, accessible jobs that provide pathways to the middle class

Good jobs that are accessible to workers of color and other marginalized workers who are likely to live in poor, isolated neighborhoods form the bedrock of equitable cities. A job that pays enough to support one's family and put some away for the future, provides health care and other benefits, and safe, dignified, family-friendly working conditions is a universal foundation for well-being and prosperity. Biloxi should target its economic development efforts to grow high-road, inclusive businesses in high-opportunity sectors; leverage public investments to help entrepreneurs of color and triple-bottom-line businesses grow more good jobs; and set high standards for wages and benefits for all workers.

Increase the economic security and mobility of vulnerable families and workers

Economic security—having enough money to cover basic needs and enough savings to weather setbacks and invest for the future—is critical to the health and well-being of families, neighborhoods, and local economies. In Biloxi, 39 percent of Black, 37 percent of multiracial, and roughly 30 percent of Native American, API, and Latino residents live in poverty – rates much higher than White residents, of whom 14 percent live in poverty. The city can make strides to reduce this insecurity and strengthen its economy by connecting vulnerable residents with jobs and opportunities to save and build assets, removing discriminatory barriers to employment, and protecting families from predatory financial practices.

Cultivate homegrown talent through a strong cradle-to-career pipeline

A skilled workforce is the key to city success in the global economy, so Biloxi and other cities must prioritize equipping youth of color with the skills to excel in the 21st century workforce. By 2020, 61 percent of jobs in Mississippi will require an associate's degree or higher, yet only 20 percent of all residents are prepared to enter those jobs. Biloxi can nurture homegrown talent by taking a cradle-to-career approach that includes a strong workforce system to connect adult workers – including those facing barriers to employment – with employment opportunities.

Create healthy, opportunity-rich neighborhoods for all

High-quality neighborhoods are fundamental building blocks for health and economic opportunity. People who live in resource-rich neighborhoods with good schools, safe streets, parks, transit, clean air and water, and places to buy healthy food and other services are much more likely to live long, healthy, secure lives. The city should work to improve services and quality of life in its poorest neighborhoods and make catalytic investments that reconnect disinvested neighborhoods to the regional economy and spur equitable development that builds community wealth.

Build resilient, connected infrastructure

Infrastructure—roads, transit, sidewalks, bridges, ports, broadband, parks, schools,

Implications

Advancing racial equity and inclusive growth (continued)

water lines, and more—is the skeletal support that allows cities and counties to function and connects their residents to each other and to the regional and global economy. Biloxi can leverage investments in existing and new infrastructure investments, targeting resources to high-need, underserved neighborhoods to foster equitable growth and economic opportunity.

Increase access to high-quality, affordable homes and prevent displacement

Housing is the lynchpin for opportunity: the location and quality of the home you can afford not only affects your living space and your household budget—it determines the quality of your schools, the safety of your streets, the length of your commute, your exposure to toxics, and more. Biloxi must take proactive steps to ensure that working-class families of color can live in healthy homes that connect them to opportunity – and that they can afford to stay in those homes. More than half of renters are housing burdened. A multi-strategy approach that includes funding sources, policy levers, code enforcement, and tenant protections and services can expand housing opportunity and protect low-income communities of color from displacement.

Data and methods

Data and methods

Data source summary and regional geography

Unless otherwise noted, all of the data and analyses presented in this profile are the product of PolicyLink and the USC Program for Environmental and Regional Equity (PERE), and reflect the City of Biloxi, Mississippi. The specific data sources are listed in the table shown here.

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. Thus, while more regionally specific data may be available for some indicators, the data in this profile draws from our regional equity indicators database that provides data that are comparable and replicable over time.

Source	Dataset
Integrated Public Use Microdata Series (IPUMS)	2010 American Community Survey, 5-year microdata sample
	2010 American Community Survey, 1-year microdata sample
U.S. Census Bureau	1980 Summary Tape File 1 (STF1)
	1980 Summary Tape File 2 (STF2)
	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
	2010 TIGER/Line Shapefiles, 2010 Census Block Groups
	2014 TIGER/Line Shapefiles, 2014 Census Tracts
	2010 TIGER/Line Shapefiles, 2010 Counties
Geolytics	1980 Long Form in 2010 Boundaries
	1990 Long Form in 2010 Boundaries
	2000 Long Form in 2010 Boundaries
Woods & Poole Economics, Inc.	2016 Complete Economic and Demographic Data Source
U.S. Bureau of Economic Analysis	Gross Domestic Product by State
	Gross Domestic Product by Metropolitan Area
	Local Area Personal Income Accounts, CA30: Regional Economic Profile
U.S. Bureau of Labor Statistics	Quarterly Census of Employment and Wages
	Local Area Unemployment Statistics
	Occupational Employment Statistics
The Reinvestment Fund	2014 Analysis of Limited Supermarket Access (LSA)
The diversitydatakids.org Project	W.K. Kellogg Foundation Priority Communities Dashboard Database
Mississippi Department of Employment Security	Industry and Employment Projections (Long Term)
	Occupation and Employment Projections (Long Term)
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

Data and methods

Selected terms and general notes

Broad racial/ethnic origin

Unless otherwise noted, the categorization of people by race/ethnicity is based on their response to two separate questions on race and Hispanic origin, and people are placed in six mutually exclusive categories 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.
- "Latino" refers to all people who identify as being of Hispanic origin, regardless of racial identification.
- "Asian American and Pacific Islander," "Asian or Pacific Islander," "Asian," and "API" are used to refer to all people who identify as Asian American or Pacific Islander alone and do not identify as being of Hispanic origin.
- "Native American" and "Native American and Alaska Native" are used to refer to all people who identify as Native American or Alaskan Native alone and do not identify as being of Hispanic origin.
- "Mixed/other," "other or mixed race," etc. 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.

However, much of the analysis by race/ethnicity presented in this profiles relies upon the 2014 5-year American Community Survey (ACS) summary file. In most of the ACS tables that provide socioeconomic data disaggregated by race/ethnicity, those who identify Hispanic or Latino can only be excluded from the White population. As indicated in the note beneath the relevant figures, this means that the data presented for the Black, Asian or Pacific Islander, Native American, and Mixed/other populations may include some number of people from the Latino category. The Mixed/other category is likely to have the largest share of Latinos included in the socioeconomic data reported for them, but this really depends on the geography being examined. To provide some context when reviewing data in this profile that is *not* presented by the six mutually exclusive racial/ethnic categories, it may be useful to know that in the city of Biloxi, Latinos account for 1 percent of the Black population, 0 percent of the Asian or Pacific Islander population, 35 percent of the Native American population, and 28 percent of the Mixed/other population.

Nativity

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

Detailed racial/ethnic ancestry

Given the diversity of ethnic origin and large presence of immigrants among the Latino and Asian populations, we present tables that

Data and methods

Selected terms and general notes

(continued)

provide detailed racial/ethnic categories within these groups. The categories, referred to as "ancestry," are based on tables in the ACS summary file that break down the Latino, Native American, and Asian or Pacific Islander populations by more detailed racial/ethnic or tribal categories. Such detailed tables are not available for the White, Black, and Mixed/other populations.

Other selected terms

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

- The term "region" may refer to a city but typically refers to metropolitan areas or other large urban areas (e.g. large cities and counties). The terms "metropolitan area," "metro area," and "metro" are used interchangeably to refer to the geographic areas defined as Metropolitan Statistical Areas under the December 2003 definitions of the Office of Management and Budget (OMB).
- The term "neighborhood" is used at various points throughout the profile. While in the introductory portion of the profile this term is meant to be interpreted in the colloquial sense, in relation to any data analysis it refers to census tracts.
- The term "communities of color" generally refers to distinct groups defined by race/ethnicity among people of color.
- The term "high school diploma" refers to both an actual high school diploma as well as high school equivalency or a General Educational Development (GED) certificate.
- The term "full-time" refers to all persons who reported working at least 50 weeks and usually worked at least 35 hours per week during the 12 months prior to the survey.

General notes on analyses

Below, we provide some general notes about the analysis conducted:

- In regard to monetary measures (income, earnings, wages, etc.) the term "real" indicates the data has been adjusted for inflation. All inflation adjustments are based on the Consumer Price Index for all Urban Consumers (CPI-U) from the U.S. Bureau of Labor Statistics.

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 2014 (which reflects a 2010-2014 average), at the city and county levels, which were then aggregated to the regional level and higher. The racial/ethnic groups include non-Hispanic White, non-Hispanic Black, Hispanic/Latino, non-Hispanic Asian and Pacific Islander, non-Hispanic Native American/Alaska Native, and non-Hispanic Other (including other single race alone and those identifying as multiracial, with the latter group only appearing in 2000 and later due to a change in the survey question). While for 2000 and later years, this information is readily available in SF1 and in the ACS, 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 city and county levels for all the requisite groups in STF2, for race/ethnicity by age group we had to look to STF1, 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/Pacific Islanders, non-Hispanic Native Americans, and non-Hispanic Others among the remainder for each age group, we applied the distribution of these three groups from the overall city and county populations (across all ages) to that remainder.

For 1990, the level of detail available in the underlying data differed at the city and county levels, calling for different estimation strategies. At the county level, data by race/ethnicity was taken from STF2A, while data by race/ethnicity and age was taken from the 1990 MARS file—a special tabulation of people by age, race, sex, and Hispanic origin. However, to be consistent with the way race is categorized by the OMB's Directive 15, the MARS file allocates all persons identifying as "other race alone" or multiracial to a specific race. After confirming that population totals by county (across all ages) were consistent between the MARS file and STF2A, we calculated the number of "other race alone" or multiracial people who had been added to each racial/ethnic group in each county by subtracting the number who were reported in STF2A for the corresponding group. We then derived the share of each racial/ethnic group in the MARS file (across all ages) that was made up of "other race alone" or multiracial people and applied it to estimate the number of people by race/ethnicity and age group exclusive of "other race alone" or multiracial people and the total number of "other race alone" or multiracial people in each age group.

For the 1990 city-level estimates, all data were from STF1, which provided counts of the total population for the six broad racial/ethnic groups required but not counts by age. Rather, age counts were only available for people by single race alone (including those of Hispanic origin) as well as for all people of Hispanic origin combined. To estimate the number of people by race/ethnicity and age for the six

Data and methods

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

(continued)

broad racial/ethnic groups that are detailed in the profile, we first calculated the share of each single-race alone group that was Hispanic based on the overall population (across all ages). We then applied it to the population counts by age and race alone to generate an initial estimate of the number of Hispanic and non-Hispanic people in each age/race alone category. This initial estimate was multiplied by an adjustment factor (specific to each age group) to ensure that the sum of the estimated number of Hispanic people across the race alone categories within each age group equated to the "actual" number of Hispanic origin by age as reported in STF1. Finally, an Iterative Proportional Fitting (IPF) procedure was applied to ensure that our final estimate of the number of people by race/ ethnicity and age was consistent with the total population by race/ethnicity (across all ages) and total population by age group (across all racial/ethnic categories) as reported in STF1.

Data and methods

Adjustments made to demographic projections

National projections

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

Specifically, we compared the percentage of the total population composed of each racial/ethnic group from the Census Bureau's Population Estimates program for 2015 (which follows the OMB 1997 guidelines) to the percentage reported in the 2015 ACS 1-year Summary File (which follows the 2000 Census classification). We subtracted the percentage derived using the 2015 Population Estimates program from the percentage derived using the 2015 ACS to obtain an adjustment factor for each group (all of which were negative, except that for the mixed/other group) and carried this adjustment factor forward by adding it to the projected percentage for each group in each projection year. Finally, we applied the resulting adjusted projected population distribution by race/ethnicity to the total projected population from the 2014 National Population Projections to get the projected number of people by race/ethnicity in each projection year.

County and regional projections

Similar adjustments were made in generating county and regional projections of the population by race/ethnicity. Initial county-level projections were taken from Woods & Poole Economics, Inc. Like the 1990 MARS file described above, the Woods & Poole projections follow the OMB Directive 15-race categorization, assigning all persons identifying as other or multiracial to one of five mutually exclusive race categories: White, Black, Latino, Asian/Pacific Islander, or Native American. Thus, we first generated an adjusted version of the county-level Woods & Poole projections that removed the other or multiracial group from each of these five categories. This was done by comparing the Woods & Poole projections for 2010 to the actual results from SF1 of the 2010 Census, figuring out the share of each racial/ethnic group in the Woods & Poole data that was composed of other or mixed-race persons in 2010, and applying it forward to later projection years. From these projections, we calculated the county-level distribution by race/ethnicity in each projection year for five groups (White, Black, Latino, Asian/Pacific Islander, and Native American), exclusive of other and mixed-race people.

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

Data and methods

Adjustments made to demographic projections

(continued)

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

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

Data and methods

Estimates and adjustments made to BEA data on GDP

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

Adjustments at the state and national levels

While data on gross state product (GSP) are not reported directly in the profile, they were used in making estimates of gross product at the county level for all years and at the regional level prior to 2001, so we applied the same adjustments to the data that were applied to the national GDP data. Given a change in BEA's estimation of gross product at the state and national levels from a standard industrial classification (SIC) basis to a North American Industry Classification System (NAICS) basis in 1997, data prior to 1997 were adjusted to prevent 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 until 2001, we made the same sort of adjustment to our estimates of gross product at the metropolitan-area level that was made to the state and national data – we figured the 2001 ratio of the official BEA estimate to our initial estimate, and multiplied it by our initial estimates for 2000 and earlier to get our final estimate of gross product at the metropolitan-area level.

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

Data and methods

Estimates and adjustments made to BEA data on GDP (continued)

county. Next, we calculated the difference between our final estimate of gross product for each state and the sum of our second-iteration county-level gross product estimates for metropolitan counties contained in the state (that is, counties contained in metropolitan areas). This difference, total 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 state agreed with our final estimate of gross product by state. This was done using a simple IPF procedure. The resulting county-level estimates were then aggregated to the regional and metro area levels.

We should note that BEA does not provide data for all counties in the United States, but rather groups some counties that have had boundary changes since 1969 into county groups to maintain consistency with historical data. Any such county groups were treated the same as other counties in the estimate techniques described above.

Data and methods

Assembling a complete dataset on employment and wages by industry

Analysis of jobs and wages by industry, reported on pages 36-37, and 40-41, is based on an industry-level dataset constructed using two-digit NAICS industries from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW). Due to some missing (or 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.)

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. Another adjustment made was to aggregate data for some Woods & Poole industry codes to match the NAICS codes used in the QCEW.

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

The same above procedure was applied at the county and state levels. To assemble data at for regions and metro areas, we aggregated the county-level results.

Data and methods

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

The analysis on pages 36-39 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 all broad private sector industries (at the two-digit NAICS level) into three wage categories: low-, middle-, and high-wage. An industry's wage category was based on its average annual wage, and each of the three categories contained approximately one-third of all private industries in the region.

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

This approach was adapted from a method used in a Brookings Institution report by Jennifer S. Vey, *Building From Strength: Creating Opportunity in Greater Baltimore's Next Economy* (Washington D.C.: Brookings Institution, 2012).

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

Data and methods

Analysis of occupations by opportunity level

The analysis of occupations on pages 42-46 seeks to classify occupations in the region by opportunity level. To identify "high-opportunity" occupations, we developed an "occupation opportunity index" based on measures of job quality and growth, including median annual wage, wage growth, and job growth (in terms of both numeric and percentage growth). Once the "occupation opportunity index" score was calculated for each occupation, they were sorted into three categories (high, middle, and low opportunity). Occupations were evenly distributed into the categories based on employment.

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

Second, while most of the data used in the analysis are regionally specific, information on the education level of "typical workers" in each occupation, which is used to divide occupations in the region into the three groups by education level (as presented on pages 44-46), was estimated using national 2010 IPUMS ACS microdata (for the employed civilian noninstitutional population ages 16 and older). Although regionally specific data would seem to be the better choice, given the level of occupational detail at which the analysis is conducted, the sample sizes for many occupations would be too small for statistical reliability. And, while using pooled 2006-2010 data would increase the sample size, it would still not be sufficient for many regions, so national 2010 data were chosen given the balance of currency and sample size for each occupation. The implicit assumption in using national data is that the occupations examined are of sufficient detail that there is not great variation in the typical educational level of workers in any given occupation from region to region. While this may not hold true in reality, it is not a terrible assumption, and a similar approach was used in a Brookings Institution report by Jonathan Rothwell and Alan Berube, *Education, Demand, and Unemployment in Metropolitan America* (Washington D.C.: Brookings Institution, September 2011).

We should also note that the BLS does publish national information on typical education needed for entry by occupation. However, in comparing these data with the typical education levels of actual workers by occupation that were estimated using ACS data, there were important differences, with the BLS levels notably lower (as expected). The levels estimated from the ACS were determined to be the appropriate choice for

Data and methods

Analysis of occupations by opportunity level (continued)

our analysis as they provide a more realistic measure of the level of educational attainment necessary to be a viable job candidate – even if the typical requirement for entry is lower.

Finally, the level of occupational detail at which the analysis was conducted, and at which the lists of occupations are reported, is the three-digit standard occupational classification (SOC) level. While considerably more detailed data is available in the OES, it was necessary to aggregate to the three-digit SOC level in order to align closely with the occupation codes reported for workers in the ACS microdata so that it could be used to estimate typical education levels of workers by occupation.

Data and methods

Analysis of access to healthy food

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

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

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

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

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

Data and methods

Measures of diversity and segregation

In the profile, we refer to measures of residential segregation by race/ethnicity (the "diversity score" on page 17, the "multi-group entropy index" on page 59 and the "dissimilarity index" on page 60). While the common interpretation of these measures is included in the text of the profile, the data used to calculate them, and the sources of the specific formulas that were applied, are described below.

All measures are based on census-tract-level data for 1980, 1990, and 2000 from Geolytics, and for 2014 (which reflects a 2010-2014 average) from the 2014 5-year ACS. While the data for 1980, 1990, and 2000 originate from the decennial censuses of each year, an advantage of the Geolytics data we use is that it has been "re-shaped" to be expressed in 2010 census tract boundaries, and so the underlying geography for our calculations is consistent over time; the census tract boundaries of the original decennial census data change with each release, which could potentially cause a change in the value of residential segregation indices even if no actual change in residential segregation occurred. In addition, while most of the racial/ethnic categories for which indices are calculated are consistent with all other analyses presented in this profile, there is one exception. Given limitations of the tract-level data released in the 1980 Census, Native Americans are combined with Asians and Pacific Islanders in that year. For this reason, we set 1990 as the base year (rather than 1980) in the chart on page 60, but keep the 1980 data in the chart on page 59 as this minor inconsistency in the data is not likely to affect the analysis.

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

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

Data and methods

Estimates of GDP without racial gaps in income

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

We first organized individuals aged 16 or older in the IPUMS ACS into six mutually exclusive racial/ethnic groups: White, Black, Latino, Asian or Pacific Islander, Native American, and Mixed/other (with all defined non-Hispanic except for Latinos, of course). Following the approach of Lynch and Oakford in *All-In Nation*, we excluded from the non-Hispanic Asian/Pacific Islander category subgroups whose average incomes were higher than the average for non- Hispanic Whites. Also, to avoid excluding subgroups based on unreliable average income estimates due to small sample sizes, we added the restriction that a subgroup had to have at least 100 individual survey respondents in order to be included.

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

One difference between our approach and that of Lynch and Oakford is that we include all individuals ages 16 years and older, rather than just those with positive income. Those with income values of zero are largely non-working, and were included so that income gains attributable to increased hours of work would reflect both more hours for the those currently working and an increased share of workers – an important factor to consider given 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 thus notably lower than those reported in Lynch and Oakford. Another is that our estimated income gains are relatively larger as they presume increased employment rates.

Data and methods

Estimates of GDP without racial gaps in income (continued)

Note that because no GDP data is available at the city level (partly because economies tend to operate at well beyond city boundaries), our estimates of gains in GDP with racial equity are only reported at the regional level. Estimates of income gains and the source of gains by race/ethnicity, however, are reported for the profiled geography.

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