LAEDC 2021 ECONOMIC FORECAST

A tale of two recoveries

LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION
INSTITUTE FOR APPLIED ECONOMICS

CONTENTS

This report was produced by
LAEDC Institute for Applied Economics

LAEDC Institute for Applied Economics provides objective economic and policy research for public agencies and private firms. The group focuses on economic impact studies, regional industry analyses, economic forecasts and issue studies, particularly in workforce development, transportation, infrastructure and environmental policy.

LOS ANGELES COUNTY
ECONOMIC DEVELOPMENT CORPORATION

Collaboratively Advancing Growth and Prosperity for All

Los Angeles County Economic Development Corporation
444 S. Flower Street, 37th Floor • Los Angeles, CA 90071
(888) 4-LAEDC-1 • www.LAEDC.org

FOREWORD

As Los Angeles County's primary economic development organization, the Los Angeles County Economic Development Corporation (LAEDC) produces an annual forecast to assess and predict key national, state, regional and local economic indicators, as well as to look beneath those "headline" indicators at deeper and more detailed trends.

We continue the precedent set by our previous LAEDC Forecasts by focusing on key issues, pressing economic concerns and longer-term systemic challenges at the local, state and national levels.

The Los Angeles region, like the rest of the United States, has experienced a dramatic economic decline over the last 11 months. Early 2020 proved to be the height of nearly ten years of strong economic growth for the County. Unemployment rates were consistently low, so-called "full employment" was achieved, wages were gaining ground, and the chance of a recession was low.

FOREWORD

The exogenous, single-event shock of a global pandemic caused by the highly contagious novel coronavirus (herein "COVID-19") initiated a rapid paradigm shift. Life came to a grinding halt as governments across the globe acted to reduce transmission of the deadly virus. As a result, the flow of economic activity was stanched seemingly overnight across many industries. Global supply chains were interrupted by factory closures and quarantines. Travel restrictions flatlined both international and domestic tourism, business travel, and related spending. Public gatherings were prohibited, suspending many forms of entertainment and recreation. Consumer spending rapidly fell in the United States as businesses were forced to close their doors to the public in order to limit infection. Almost instantaneously, we found ourselves entangled in the "shock and awe" of a COVID-19 recession induced by the global health crisis.

Last year, we looked beneath the surface at the "other" Los Angeles, illustrating then how the sustained top-line economic and GDP growth, full employment and stock market highs leading up to the pandemic were not translating into prosperity for all; there were deeper levels to the economic story that needed to be further unpacked, which were laid bare by the secondary effects of the COVID-19 pandemic in 2020. We highlighted the need for those engaged in economic development to construct more resilient, industrially diverse and inclusive economic systems to provide defense against uncertain futures, to offer economic security and assistance to those most vulnerable to economic shocks and to connect more of our region's residents to the industrial drivers of our economy.

COVID-19 has only increased the severity of pre-existing challenges and inequalities in Los Angeles County, and if left unchecked, it may continue to do so for years to come.

The economic impact of COVID-19 is highly variable depending on the segment of the population and economy involved. Low-income workers are experiencing job loss at disproportionately high rates, small businesses are closing at higher levels due to drastically decreased revenues and low levels of liquidity, and non-essential service industries that rely on person-to-person interaction are faring worse than essential industries and knowledge-based industries which were able to transition to remote work. Women are leaving the labor force at a higher rate, likely to care for and oversee the education of their children engaged in online learning at home. Meanwhile, minorities continue to be disproportionately impacted by the virus in terms of cases, deaths, jobs lost and business insolvencies, as many minority business owners have been forced into high-risk, low-margin sectors such as food service due to structural distortions that existed long before the pandemic, such as limited access to financial capital.

2021 ECONOMIC FORECAST:

A tale of two recoveries

Mass inoculation against the COVID-19 virus is a clear and viable solution to the current public health crisis. Solving the subsequent economic crisis will prove much more difficult,

especially as the pandemic has perhaps permanently changed the nature and place of work. But there are reasons for cautious economic optimism going into 2021. Post-holiday case numbers indicate that the second wave is over and restrictions are subsequently being lifted. If COVID-19 follows the same seasonality as other seasonal coronaviruses, the winter surge may be in our rearview mirror with warmer spring and summer months bringing lower case numbers.

As vaccines are being rolled out across the nation, the federal reserve has enacted expansionary monetary policy in light of the deep recessionary effects of the pandemic and interest rates are expected to remain low for the foreseeable future. A new administration in the White House portends upcoming changes that address climate change and systemic issues such as racial and socioeconomic disparities. The House of Representatives recently passed the Senate-amended budget resolution, and a reconciliation bill for the COVID-19 rescue package is being drafted which will provide much-needed support to businesses and households negatively impacted by COVID-19. The optimism related to a new stimulus bill and vaccine distribution has had a positive impact on the stock market as of late. Still, it will take years for the economy to fully recover, especially for those who have been hit the hardest, and there are potential clouds looming on the horizon, such as the prospect of inflation and overheating valuations in certain asset classes.

Before we proceed, we would like to note that nearly 10 years of exceptional wage and employment growth from 2011 to 2019 led many to believe that 2020 would follow suit. The shock of the COVID-19 pandemic is a reminder that economic forecasting cannot anticipate such unpredictable, exogenous events. Although ingrained in economic analysis, forecasting between major institutions, think tanks, and governments has diverged more in the past 12 months than any time over the last decade.

Forecasts rely on certain assumptions. Our economic forecast considers (1) the current speed of vaccination distribution and (2) assumes business will begin to return to normal for industries where person-to-person interaction is required in the third quarter of 2021. With this in mind, the LAEDC presents the 2021 Economic Forecast: A Tale of Two Recoveries.

Sincerely,

LAEDC Institute for Applied Economics

THE COVID-19 PANDEMIC

The Pre-Pandemic Economy

Los Angeles County produced strong economic fundamentals for nearly a decade through the end of 2019, with unemployment plateauing around 4.5 percent from mid-2017 through the beginning of 2020.

Steadily low unemployment led to stronger wages and in 2019, real household income in Los Angeles County was nearly 11 percent higher than in 1990 and about 18.5 percent higher than in 2010. Nonfarm employment reached over 4.6 million in the county by February 2020. Despite a number of socioeconomic challenges looming in Los Angeles and California in general, with housing affordability and accessibility at the forefront, the county and state were experiencing consistently positive, albeit slowing, GDP growth in the years leading up to the COVID-19 pandemic.

An Unexpected Shock

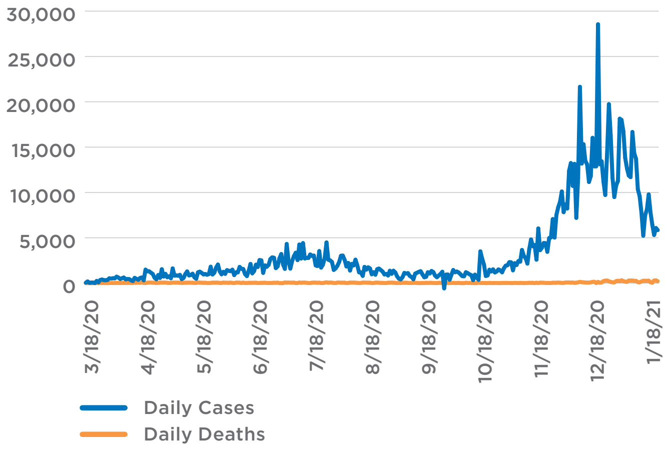
The economic strength of the last decade was rapidly reversed beginning in March of 2020.

The COVID-19 pandemic has dramatically altered lives across the United States. Mayor Eric Garcetti initiated the first emergency order for business closures across Los Angeles on March 15th, and Governor Gavin Newson issued a statewide Stay at Home order on March 19th.

As a result of the rising infection rate and the resulting business restrictions, the beginning of 2020 brought dramatic spikes in job losses. Institutional closures, fractured supply chains and widespread uncertainty compromised the flow of goods, services, and cash. **Los Angeles County alone lost 716,000 jobs during March and April, and the seasonally adjusted unemployment rate peaked at 21.1 percent in May 2020.**

Nearly 30 percent of the 716,000 jobs lost in in Los Angeles County in March and April were recovered by September and the seasonally adjusted unemployment rate fell to 10.9 percent in November. However, due to the surge in hospitalizations and new cases in at the onset of the winter, a modified health order reinstating restrictions was issued for Los Angeles County beginning November 25th which created additional economic hardship.

EXHIBIT 1:
Daily Cases and Deaths in LA County



The Disparate Effects of COVID-19

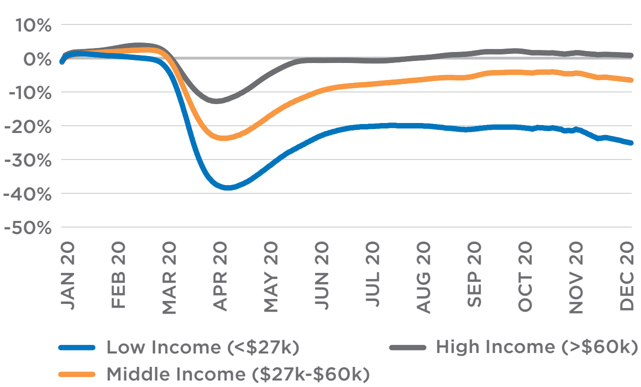
WORKFORCE

The pandemic has unequally affected high and low wage workers. At the worst point of the employment shock in April 2020, high wage workers across the United States had experienced a 12.9 percent decline in employment compared to January 2020 levels. By contrast, low wage employment had declined by 38.2 percent (Exhibit 2).

Racial and ethnic minorities have been heavily affected by the virus, as over 60 percent of cases where the infected individual's race was confirmed have been attributed to Hispanic residents, compared to just 14 percent for White and about 5 percent for Asian and Black residents. Women have also been dropping out of the labor force during the pandemic due to the lack of childcare options due to closures and the need for child supervision during online schooling, as well as the high number of women working in the heavily impacted service sector. According to the Bureau of labor Statistics, women comprised just over 47 percent of the labor force in January 2020 but accounted for 58 percent of 4.3 million people who have dropped out of the labor force between January of 2020 and January of 2021 (Exhibit 3).

EXHIBIT 2:

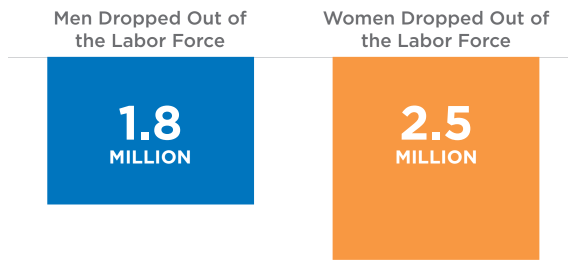
Percent Change in Employment Compared January 2020, United States



Source: Opportunity Insights Economic Tracker

EXHIBIT 3:

Change in U.S. Labor Force by Gender January 2020 to January 2021



Source: BLS

58 percent of the 4.3 million people who separated from the labor force between January 2020 and January 2021 were women.

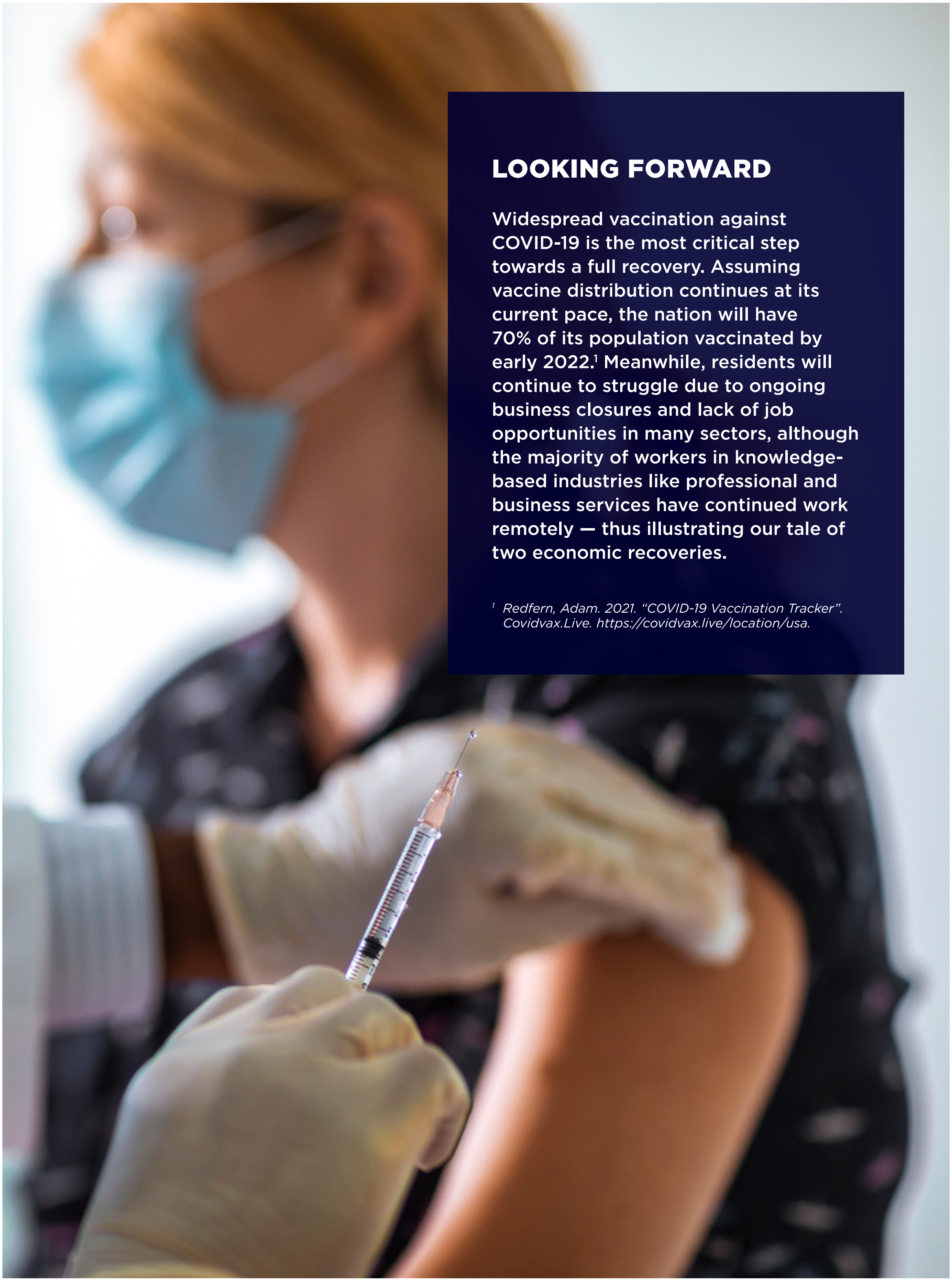
BUSINESSES

Small businesses generally provide in-person services at a local level; these include restaurants, bars, hair salons, nail salons, laundry services, and more. The public health crisis of COVID-19 prevented such services due to the risk of transmission associated with unnecessary person-to-person contact. These services that rely on personal interaction are often incompatible with remote substitution, leaving many businesses with few reliable streams of revenue, if any, during the pandemic and little cash on hand. Larger businesses, conversely, tend to have higher levels of liquidity and more channels for revenue through electronic commerce. Thus, smaller businesses have felt much greater financial distress than larger ones.

INDUSTRY

This recession is unique in that the highly contagious nature of the pandemic is the key determinant of the industries that have been most impacted. Non-essential service sectors with high levels of personal interaction have been the hardest hit, such as accommodation and food services, and arts, entertainment and recreation. Additionally, sectors like commercial aviation have experienced large reductions in revenue as a result of travel advisories, quarantines and the public's general fear of infection.

There are some positive industry effects; COVID-19 has stimulated demand for essential health care services. Additionally, as more people spend time in their homes due to stay-at-home orders, industries that support remote lifestyles, such as utilities and construction, have fared better than many sectors in terms of consumer spending.



LOOKING FORWARD

Widespread vaccination against COVID-19 is the most critical step towards a full recovery. Assuming vaccine distribution continues at its current pace, the nation will have 70% of its population vaccinated by early 2022.[1] Meanwhile, residents will continue to struggle due to ongoing business closures and lack of job opportunities in many sectors, although the majority of workers in knowledge-based industries like professional and business services have continued work remotely — thus illustrating our tale of two economic recoveries.

[1] *Redfern, Adam. 2021. "COVID-19 Vaccination Tracker". Covidvax.Live. https://covidvax.live/location/usa.*

THE UNITED STATES

The nation is in the midst of a severe recession with unique characteristics related to the COVID-19 pandemic. As outlined in the previous section, the severity of the economic crisis varies greatly across different cohorts, industries and sizes of business. Equity indicators based off large, publicly owned companies are doing well while gross domestic product, employment and consumer sentiment and spending are showing the strains of this major contraction.

Real gross domestic product dropped by approximately 4 percent in 2020, accompanied by a notable drop in year-over-year employment and a spike in the unemployment rate. However, real personal income and real per capita income actually grew year-over-year, driven by the $300 billion pumped into the national economy by the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

The next two years will be characterized by economic recovery, the speed of which remains tied to the public health crisis. Should the efficacy of the vaccines adhere to the initially published numbers, recovery should have a straightforward timeline, where it is estimated that the majority of industries will return to pre-pandemic employment levels by 2024.[2] The consumer price index is expected to rise in the coming years as injections of stimulus payments into the economy and anticipated pent-up demand for travel, live entertainment, and large events are projected to be major drivers of growth. Prices for inputs are rising as well, recovering in early 2021 to their pre-pandemic levels.[3] While all of this signifies a potential for inflation in the coming years, decreased competition in the labor market stemming from unemployment and uncertainty will likely hamper this effect.

The next two years will be characterized by economic recovery, the speed of which remains tied to the public health crisis.

---

[2] *Efficacy data can be found at: https://www.cdc.gov/coronavirus/2019-ncov/vaccines/effectiveness.html*

[3] *U.S. Bureau of Labor Statistics, Producer Price Index by Commodity: All Commodities [PPIACO], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PPIACO*

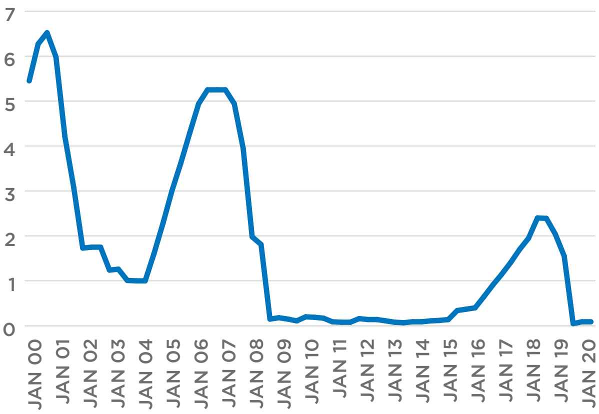
Major Economic Indicators

FEDERAL FUNDS RATE

The United States federal reserve enacts monetary policy via three tools: open market operations, the discount rate, and reserve requirements. These tools trigger a chain of events by first impacting the federal funds rate. Changes in the federal funds rate then affect short- and long-term interest rates, foreign exchange rates, the money supply and the level of credit available in the economy. These factors greatly influence key economic variables like employment, prices and output.[4]

As shown in Exhibit 4, the federal funds rate is intentionally lowered in the wake of recessions. When the federal funds rate declines, liquidity in the economy rises. The federal reserve has once again enacted expansionary monetary policy in light of the deep recessionary effects of the COVID-19 pandemic, with goals of heightened economic activity, full employment, and price stability.[5] The current window for the federal funds rate is 0.00 to 0.25, which has been calibrated to improve economic stimulation and employment. The Atlanta Federal Reserve estimates the probability of a rate hike by March 15th, 2021 at less than 1 percent.[6]

EXHIBIT 4:
Federal Funds Rate 2000-2020

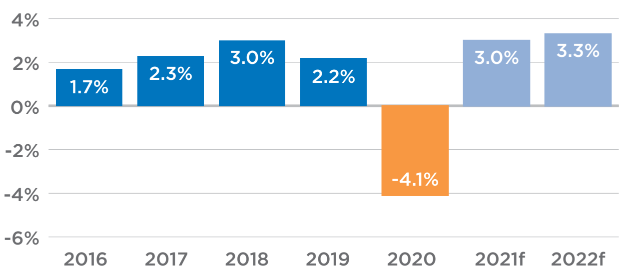


[4] *Board of Governors of the Federal Reserve System. https://www.federalreserve.gov/monetarypolicy/fomc.htm.*

[5] *Federal Reserve issues FOMC statement. Board of Governors of the Federal Reserve System. https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm.*

[6] *Federal Reserve Bank of Atlanta, EconomyNow App*

EXHIBIT 5:
United States Real Growth GDP by Year



REAL GROSS DOMESTIC PRODUCT

Gross domestic product (GDP) fell 9 percent in the second quarter of 2020 as businesses shut down per state and local mandates. The output of the accommodation and food services industry decreased by 88.4 percent nationally as domestic and international visitors remained at home.[7] As a hub for these tourism-related industries, Los Angeles County was among the heavily impacted in this category.

The third quarter of 2020 was driven by rapid gains in GDP as businesses reopened in large swaths across the country. Per the Bureau of Economic Analysis, the 7.5 percent growth in real GDP "reflected increases in personal consumption expenditures (PCE), private inventory investment, exports, nonresidential fixed investment, and residential fixed investment."[8] These positive fluctuations nationwide were led by service recoveries in the accommodation and food industries as well as goods recoveries in motor vehicle sales and portions of the clothing and footwear industry. Still, these gains were partially offset by decreased expenditures by government entities at the local and state level.[9]

However, the fourth quarter saw a resurgence in COVID-19 cases and many states reinstated restrictions on businesses, including mandated closures, to help mitigate the spread of infections. Spending on goods again decreased, driven by an expenditure drop in the food services industry.

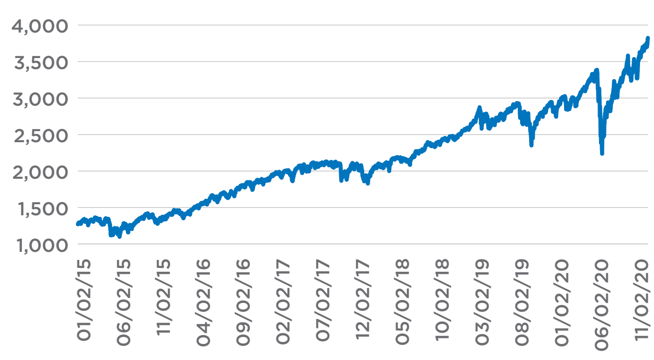
The 2020 contraction of GDP in the United States marks the largest contraction in recent economic history. Real GDP sits roughly $500 billion below last year, and the uncertainty of the virus poses a harrowing threat for businesses and employees.

THE STOCK MARKET

In a stark contrast to GDP, economic indicators such as the Dow Jones Industrial Average (DJIA) and the S&P 500 have performed well throughout the pandemic, reaching record highs. The DJIA fell by a massive 37 percent to 18,592 points on March 23rd, while the S&P 500 experienced similar losses in the first quarter of 2020. As of January 8th, 2021, both of these high-profile indices have surpassed their pre-pandemic peak as the DJIA rose by 5 percent and the S&P 500 by nearly 13 percent. These gains, incurred by large and publicly traded companies, underscore the diverging economic recoveries for different business cohorts in America.

The exceptional performance of equity indicators relative to other key metrics like employment could represent a few different key economic inferences. The stock market is inherently forward looking, and this trend might indicate strong investor confidence in an expedited recovery (at a minimum for large corporations) or the position of large, publicly listed, businesses relative to their smaller, private, counterparts. With two rounds of PPP loans nearly nine months apart, small businesses have been more likely to face larger liquidity issues resulting from the pandemic. The "tale of two recoveries" is quite applicable to the contrasting recoveries experienced by small and large businesses on Main Street versus Wall Street. Likewise, in the workforce low wage earners were less likely to have equity investments, while high wage earners saw gains in wealth as equity investments increased in value, thereby increasing the wealth gap.

EXHIBIT 6:
S&P 500 Index



[7] *Bureau of Economic Analysis. 2020. "Gross Domestic Product By State, 2nd Quarter 2020". https://www.bea.gov/news/2020/gross-domestic-product-state-2nd-quarter-2020.*

[8] *Bureau of Economic Analysis. 2021. "Gross Domestic Product, Third Quarter 2020". https://www.bea.gov/news/2020/gross-domestic-product-third-quarter-2020-advance-estimate.*

[9] *The Los Angeles Economic Development Corporation conducted a study identifying the fiscal exposure of city budgets in Los Angeles County during the COVID-19 crisis. Further information can be found at: https://laedc.org/download/51348/*

EXHIBIT 7:
Consumer Sentiment Index 2000 - 2020

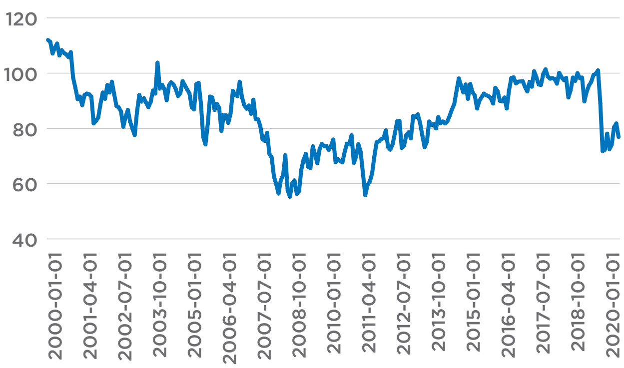
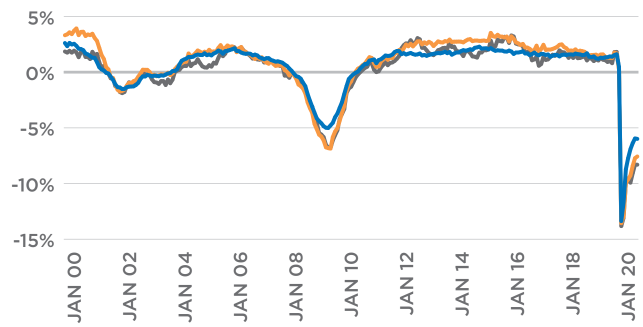


EXHIBIT 8:
Year-Over-Year Percent Change in Nonfarm Employment



CONSUMER SENTIMENT AND SPENDING

The drop in consumer sentiment following the COVID-19 pandemic, as measured by the University of Michigan Consumer Sentiment Index, was less steep than the drop following the 2008 financial crisis, as this recession was completely induced by the pandemic and did not result from any inherent economic weaknesses or instability. Thus, consumers might expect a faster recovery period and hold more faith in the economy at large.

Mandated businesses closures, stay-at-home orders and general fear surrounding the transmission of COVID-19 resulted in a 32.4 percent decline in total consumer spending from January to March 30th, 2020. Not all industries were affected evenly, for while spending in restaurants and hotels dropped by 66.6 percent, entertainment and recreation by 72.6 percent and retail by 24 percent, consumer spending on groceries rose by 7.8 percent as many individuals prepared for the worst.[10] The drop in consumer spending was also unevenly spread across income levels. From January to March 30th, 2020, high-income consumers reduced spending by 36 percent, middle-income by 31.2 percent, and low-income by 28.7 percent.[11] Total consumer spending was still down from January 2020 levels by 2.5 percent on January 3rd, 2021.

EMPLOYMENT

Exhibit 8 displays the year-over-year percent changes in nonfarm employment for the United States, California, and Los Angeles over the last two decades. From April 2019 to April 2020, nonfarm employment fell by 13.4 percent in the US. Employment loss in California was slightly higher over the same period at 13.6 percent, and Los Angeles even higher at 13.8 percent.

While no industry remained unscathed by COVID-19, the leisure and hospitality industries were among the hardest hit by employment loss. With restrictive public health orders directly affecting the industry, combined with restrictions in place for non-essential travel causing both international and domestic tourism to dry up, workers in hotels and restaurants quickly found themselves out of work. The trade, transportation and utilities sector also reported massive losses in employment, driven predominantly by the decline in retail trade employment as stores were mandated to close across the United States for months to control virus spread.

Nonfarm employment in the United States is expected to take approximately four years to recover fully. The path towards recovery is still uncertain as federal aid, or the lack thereof, will significantly affect its speed; with vaccine rollout currently underway and a new round of stimulus and PPP loans coming in early 2021, currently this timeline remains feasible.

---

[10] *"The Economic Tracker." Accessed February 1, 2021. https://tracktherecovery.org/*

[11] *Ibid.*

HOUSEHOLD DEBT PAYMENTS AND DISPOSABLE INCOME

Household debt payments represented around 9.8 percent of disposable income at the onset of 2020; this figure dropped to 8.8 percent in April 2020 as interest rates lowered in response to expansionary monetary policy. Additionally, the CARES Act granted the right to mortgage forbearance for many consumers. Debt payments were reduced by the decrease in interest owed and participation in forbearance programs. However, the ratio is once again climbing, reaching 9.1 percent as of July 2020.

Real disposable income per capita spiked in the months following the pandemic. This is due to the economic stimulus introduced in the CARES Act and the expansive unemployment benefits paid out in early months of the pandemic. The spike may have also been partially driven by the disproportionate loss of low-income jobs, skewing per capita income higher than it would have been otherwise.

The spike in real disposable income per capita after the initial shock period may have been partially driven by the disproportionate loss of low-income jobs, skewing per capita income higher.

EXHIBIT 9:
United States Headline Statistics and Forecast

	2016	2017	2018	2019	2020	2021f	2022f
Real GDP Growth	1.7%	2.3%	3.0%	2.2%	-4.1%	3.0%	3.3%
Real Personal Income Growth	1.7%	3.0%	3.1%	2.4%	5.3%	-5.3%	2.0%
Total Employment Growth	2,525,300	2,259,800	2,301,800	2,044,600	(8,674,700)	1,519,500	4,400,200
Unemployment Rate	4.88	4.35	3.89	3.68	8.11	7.69	6.57
Real Per Capita Income	1.0%	1.7%	2.4%	1.7%	2.2%	-5.2%	1.9%
CPI	1.3%	2.1%	2.4%	1.8%	1.2%	1.9%	2.0%

LOOKING FORWARD

The United States ushered in a new administration headed by President Joseph R. Biden and Vice President Kamala Harris on January 20th, 2021. The administration identified seven immediate priorities: COVID-19, climate, racial equity, economy, health care, immigration, and restoring America's standing.[12] President Biden's top priority is mitigating transmission of the virus by ramping up testing, increasing production and circulation of personal protective equipment (PPE), and effectively distributing vaccines. The new administration has proposed a $1.9 trillion stimulus package, which will help directly combat the pandemic through vaccination, boost local and state government budgets, and increase payments and benefits to individuals.[13]

The first step to recovery in the United States is achieving herd immunity against COVID-19. Administration of vaccines in the United States has seen a slow start at the beginning of the year but there is still a chance that the nation will reach this marker within the third or fourth quarter of 2021.[14] This could however be delayed until 2022 for a number of reasons, including safety issues with early vaccination efforts, manufacturing shortages, supply chain challenges, infectious variants and slow adoption of the vaccine.[15] A decline in the mortality of COVID-19 through community wide vaccination is a critical step toward returning to normalcy.

[12] *"Priorities." The White House. The United States Government, January 20, 2021. https://www.whitehouse.gov/priorities/.*

[13] *Tankersley, Jim, and Michael Crowley. "Biden Outlines $1.9 Trillion Spending Package to Combat Virus and Downturn." The New York Times. The New York Times, January 14, 2021. https://www.nytimes.com/2021/01/14/business/economy/biden-economy.html.*

[14] *Charumilind, Sarun, Matt Craven, Jessica Lamb, Adam Sabow, and Matt Wilson. "When Will the COVID-19 Pandemic End?" McKinsey & Company. McKinsey & Company, January 21, 2021. https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/when-will-the-covid-19-pandemic-end.*

[15] *Ibid.*

CALIFORNIA

Like the rest of the United States, California has been severely impacted by the COVID-19 pandemic. By the end of January 2021, the Golden State had well over 3 million total cases, more than any other state in the nation. The pandemic and subsequent crisis initiated immense shifts in the economic performance of California in 2020.

The first half of 2020 brought a sharp spike in unemployment due to a rapid decline in consumer spending and mandated business closures. Non-farm employment in California fell substantially, especially in industries that are considered non-essential or provide services that require a high degree of personal interaction. The loss of income stemming from unemployment further complicated an ongoing housing crisis. California remains significantly more expensive than much of the United States, with nearly double the median home price and a larger share of rent-burdened households. The state legislature provided protections for renters and homeowners who could not make housing payments, but these protections will soon expire barring renewal.

Major Economic Indicators

REAL GROSS STATE PRODUCT

Real gross state product (GSP) for California dropped less than one percent in 2020, indicating a significant level of economic resiliency in the state that now boasts the highest number of COVID-19 cases in the nation.

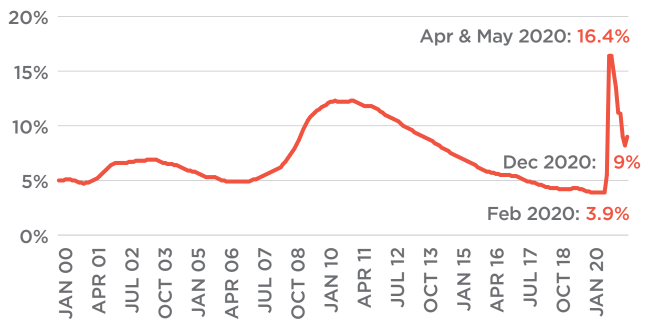
Real personal income and real per capita income rose by 6.2 percent and 4.1 percent year-over-year. Just as with the United States as a whole, the state's 39 million residents received increased unemployment benefits and economic stimulus payments. Our forecast does not account for these increased benefits in the 2021 year, and thus these metrics fall significantly. In the following years, these measures of income will rise once again as the California and United States economy at large recover.

UNEMPLOYMENT

The early stages of the COVID-19 pandemic can be characterized by immense financial uncertainty felt by businesses and thus workers.

California's unemployment rose sharply from 3.9 percent in February to a peak of 16.4 percent in April and May of 2020. Revenue losses stemming from COVID-19 were felt almost immediately as consumer spending in California between January and mid-April 2020 declined by 36 percent.[16] Job losses were immediate too, distinguishing the current COVID-19 recession from the 2001 dotcom recession and the Great Recession, where unemployment

EXHIBIT 10:
Unemployment Rate in California
U3, Seasonally adjusted

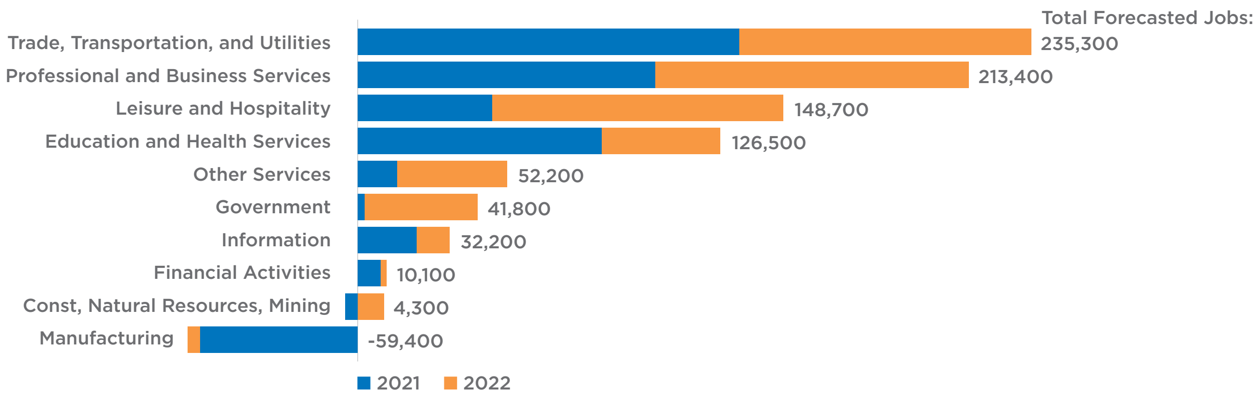


rose gradually over time. As daily case rates fell, businesses were able to open with restrictions and the unemployment rate declined from 16.4 percent in April to 8.2 percent in November 2020 before a second wave of cases and the resultant reinstated restrictions pushed the state's unemployment back up to 9.0 percent in December.

EMPLOYMENT

Mirroring the national experience, hospitality industries, accommodation and food services, experienced the greatest job losses. Industry earnings have recovered slightly in quarter three but remain 20 percent below their pre-pandemic levels. We expect most industry sectors to begin recovery starting the second half of 2021.

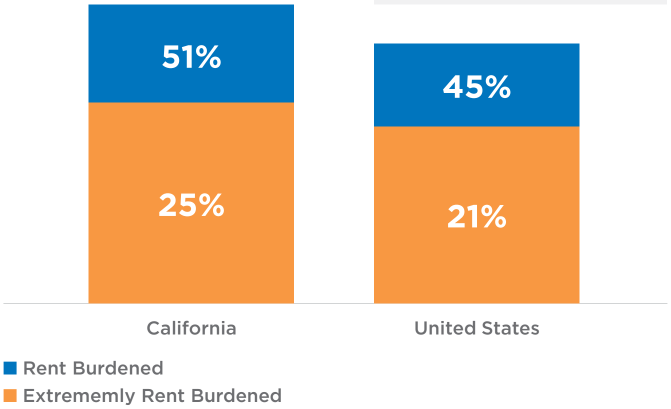
EXHIBIT 11:
2020 to 2022 Employment Growth by Industry



[16] *Chetty, Raj, John Friedman, Nathaniel Hendren, and Michael Stepner. 2020. "The Economic Impacts Of COVID-19: Evidence From A New Public Database Built Using Private Sector Data". https://opportunityinsights.org/wp-content/uploads/2020/05/tracker_paper.pdf.*

EXHIBIT 12:
Share of Rent Burdened Households

MEDIAN HOME PRICE
CA: $727,050
US: $340,050



HOUSING AND MIGRATION

The Golden State faces distinct challenges in housing affordability and accessibility.

California's median home listing price was $727,050 in December 2020, more than double the national median home price of $340,050.[17] In 2019, about 51 percent of California's population experienced rent burden, when a household spends a third or more of their income on housing; this was 6 percent higher than the nation as a whole. Just over 25 percent were severely rent burdened, having spent more than half of their income on housing; about 4 percent higher than the rest of the United States.[18] Issues with housing affordability and availability combined with the negative financial and cultural effects of COVID-19 may prove challenging, as residents look for alternative, more affordable places to call home. While COVID-19 poses the largest economic threat, incentivizing the building of housing should remain on the state's radar of pertinent economic legislation.

COVID-19 AND HOUSING

Low-income residents, who are at the highest risk of eviction, are facing disproportionate levels of employment loss compared to high- and middle-income residents.

The state of California has been taking steps to avoid a potential eviction crisis as hundreds of thousands of people have experienced job loss or reduced hours during the pandemic. A state law introduced on March 1, 2020 protects tenants experiencing financial distress from eviction for failure to pay rent. While recently extended, this law is set to expire on June 30th, 2021.[19]

EXHIBIT 13:
California Headline Statistics and Forecast

	2016	2017	2018	2019	2020	2021f	2022f
Real GDP Growth	3.3%	4.3%	3.1%	3.4%	-0.6%	2.0%	1.3%
Real Personal Income Growth	2.9%	2.0%	3.0%	3.0%	6.2%	-4.8%	3.9%
Total Employment Growth	428,600	346,400	345,700	252,700	(1,228,100)	353,900	451,200
Unemployment Rate	5.47	4.79	4.24	4.05	10.38	9.39	7.84
Real Per Capita Income	2.2%	2.3%	2.8%	2.9%	4.1%	-4.5%	2.7%

[17] *Realtor.com, Housing Inventory: Median Listing Price in California [MEDLISPRICA], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MEDLISPRICA*

[18] *Census Bureau, ACS 2019*

[19] *McGreevy, Patrick. 2021. "Gov. Gavin Newsom Signs Bill To Extend COVID-19 Eviction Protections Through June". Los Angeles Times. https://www.latimes.com/california/story/2021-01-29/newsom-extend-covid-eviction-moratorium-june.*

LOOKING FORWARD

California has faced a number of challenges over the past year, including unprecedented employment declines related to the current health crisis, a declining population, and falling homeownership. Achieving herd immunity through vaccination would likely ameliorate the employment contraction, but population growth and housing accessibility troubled the Golden State long before COVID-19. Resources and time have been used to manage the pandemic, which may result in further delay in addressing long-standing challenges in California.

LOS ANGELES

At the onset of 2020, the Los Angeles County economy was enjoying a long and unprecedented expansionary period where economic fundamentals were strong, and the chance of a recession was low. Circumstances changed rapidly by the end of the first quarter, overturning all forecasts of growth and stability.

As with other jurisdictions across the nation, Los Angeles County's "Safer At Home" order issued on March 19, 2020, required mandated closures and restrictions for businesses; bars, gyms, schools, and entertainment centers were forced to close, with restaurants limited to take-out and delivery services only. Restrictions began to relax towards the end of May 2020, authorizing businesses to reopen in phases or tiers, but two separate surges in the number of cases resulted in reinstated restrictions in July and November, which impacted the trajectory of the county's economic recovery.

Currently, Los Angeles County has reported over 1 million COVID-19 cases since the onset of the pandemic, with about 1 in every 10 Angelinos documented as having contracted the virus. Providentially, for businesses and individuals alike, the vaccination process has begun with nearly 800,000 individuals receiving the vaccine at the end of January 2021.[20]

Major Economic Indicators

REAL GROSS STATE PRODUCT

With a large share of its economic base in industries hardest hit by the pandemic, the Los Angeles County economy has been severely affected by the COVID-19 pandemic.

Hardest hit industries in the county include: hospitality and tourism; the motion picture and television industry; non-essential retail, such as furniture and clothing stores; personal care services; and arts, entertainment and recreation that includes performing arts, spectator sports, museums, and amusement parks. Mandated closures and business restrictions, unprecedented job loss and changes in consumption reversed economic growth in 2020; real gross county product (GCP) fell 3 percent year-over-year.

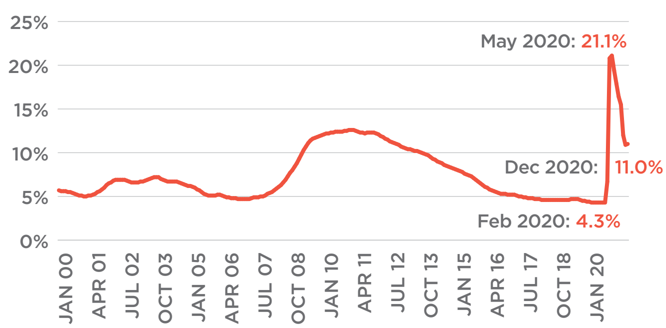
UNEMPLOYMENT

The effects of the COVID-19 pandemic on employment were seen most intensely in March and April. An estimated 716,100 nonfarm jobs were lost within those two months, and by May, the County's seasonally adjusted unemployment rate skyrocketed from 4.3 percent in February to a shocking 21.1 percent in May. Nearly 45 percent of those jobs lost in March and April have been recovered with 318,100 nonfarm job additions from May through December.

EXHIBIT 14:

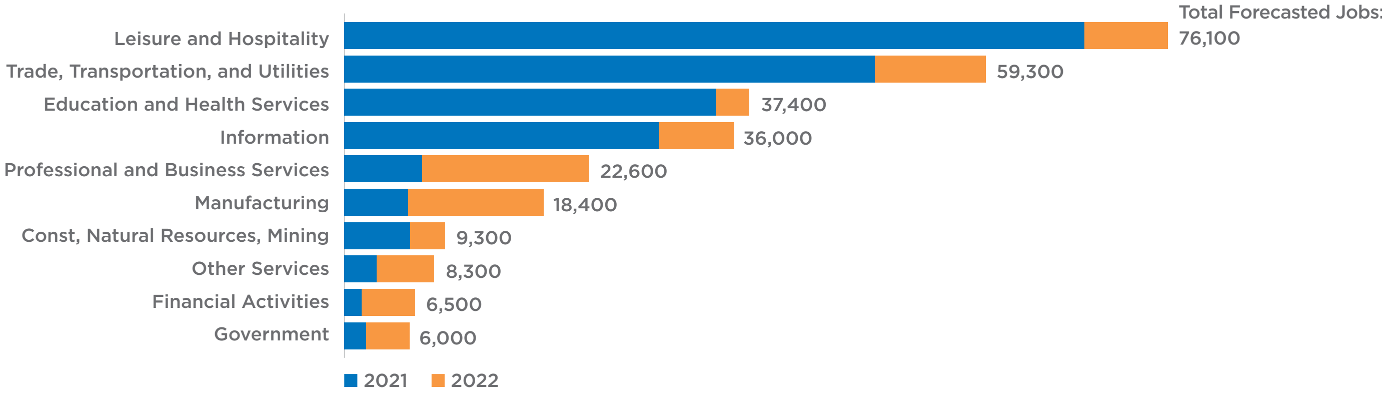
Unemployment Rate in LA County

U3, Seasonally adjusted



[20] *"LA County COVID-19 Vaccine Dashboard". 2021. Publichealth.Lacounty.Gov. http://publichealth.lacounty.gov/media/coronavirus/vaccine/vaccine-dashboard.htm.*

EXHIBIT 15:
2020 to 2022 Employment Growth by Industry in LA County



EMPLOYMENT

All major industry sectors saw a decline in employment as a result of the virus, with Leisure and Hospitality and Trade, Transportation and Utilities, which includes retail, experiencing the largest negative employment shocks. The region continues to recover jobs in the wake of the pandemic, however, many industries facing the most severe restrictions are still trailing behind in the recovery process including: arts, entertainment and recreation; food services and drinking places; information (with large declines in the motion picture and sound recording industry); and other services (which includes personal care services such as hair and nail salons).

Real income exhibited an unintuitive trend as it rose year over year. Just as with California and the rest of the United States, this trend was likely due to increased unemployment benefits and economic stimulus payments distributed by the federal government. As such, this figure is expected to fall in 2021 once these supplemental benefits expire.

EXHIBIT 16:
Los Angeles Headline Statistics and Forecast

	2016	2017	2018	2019	2020	2021f	2022f
Real GDP Growth	2.4%	3.1%	2.0%	3.2%	-3.0%	2.8%	4.2%
Real Personal Income Growth	3.0%	1.7%	2.3%	2.4%	1.1%	-1.7%	2.8%
Total Employment Growth	109,400	53,400	67,200	49,000	(332,800)	206,600	73,300
Unemployment Rate	5.25	4.76	4.62	4.44	13.59	9.27	8.14
Real Per Capita Income	2.8%	1.8%	2.6%	2.8%	5.3%	-3.2%	4.6%

LOOKING FORWARD

The disparate effects of the pandemic may increase preexisting inequalities, but the diversity and vibrancy of the people, cultural and historical amenities, entertainment options, and industry promises a rebound in economic growth.

Los Angeles County faces a number of difficulties that predate the COVID-19 pandemic, including housing accessibility and inequality; the effects of the pandemic have likely worsened both. A disproportionate share of low-income workers in Los Angeles County have lost jobs compared to high-income workers. Not only was the initial employment shock felt most intensely by low-income workers, job recovery has been slower for this cohort compared to high-income workers. By mid-November 2020, low-income employment (less than $27,000 annually) was still down by 26 percent compared to January levels, while high-income employment (over $60,000 annually) was only down by less than one percent (-0.6%).

By the end of September 2020, low-income employment was still down by about 29 percent compared to January levels, while high-income employment was only down by about 4 percent.[21] While longer-term impacts of increased inequalities between low- and high-income earners are certainly unpredictable right now, the sustained loss of income felt mainly by low-income workers may contribute to even worse housing accessibility in the future. A study from the UCLA Luskin Institute on Inequality and Democracy[22] found that as of May 9th, 2020, about 449,000 unemployed people with no income occupied about 365,000 units of rental housing in Los Angeles County.

The extent of unemployment, economic displacement and business failures will have ramifications beyond the end of the pandemic; and while our current projections suggest we should still be feeling the impacts of this economic shock well into the future, Los Angeles County will hopefully see an abundance of activity once public gatherings are safe again. The county is a hub for entertainment and live events, and households who have not been negatively impacted during the pandemic will likely have increased savings (reduced consumption) and pent-up demand for entertainment after nearly a year of quarantines and social distancing. Once herd immunity is reached at the national, state, and county level, Los Angeles is expected to once again be a vibrant center of food, culture, and economic activity.

[21] *"The Economic Tracker." Accessed February 1, 2021. https://tracktherecovery.org/.*

[22] *Blasi, Gary (2020). UD Day: Impending Evictions and Homelessness in Los Angeles. Los Angeles: UCLA Luskin Institute on Inequality and Democracy.*

APPENDIX

United States

QUICK FACTS

Population* **324.69 million**
Prime Age %* **39.45%**
Gross Domestic Product** **18.7 trillion**
Median Income* **31,133**
Poverty Rate* **17.85%**
Pre-Pandemic Unemployment Rate^ **3.68%**
Current Unemployment Rate^ **8.11%**

*Source: *ACS 2019, **Bureau of Economic Analysis, ^Bureau of Labor Statistics*

	2016	2017	2018	2019	2020	2021f	2022f
ECONOMIC METRICS							
Real GDP Growth	1.7%	2.3%	3.0%	2.2%	-4.1%	3.0%	3.3%
Real Personal Income Growth	1.7%	3.0%	3.1%	2.4%	5.3%	-5.3%	2.0%
Total Employment Growth	2,525,300	2,259,800	2,301,800	2,044,600	(8,674,700)	1,519,500	4,400,200
Unemployment Rate	4.88	4.35	3.89	3.68	8.11	7.69	6.57
Real Per Capita Income	1.0%	1.7%	2.4%	1.7%	2.2%	-5.2%	1.9%
Housing Permits	1,200,000	1,300,000	1,300,000	1,400,000	1,400,000	1,800,000	1,800,000
Median Listing Price	$256,000	272,200	293,600	311,600	334,100	310,200	328,200
CPI	1.3%	2.1%	2.4%	1.8%	1.2%	1.9%	2.0%
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	122,400	245,700	372,500	216,600	(302,800)	317,900	300,300
Manufacturing	17,800	86,200	248,800	151,200	(586,600)	142,300	155,200
Trade, Transportation, and Utilities	374,400	203,200	215,800	108,700	(1,166,800)	(162,500)	760,200
Information	43,100	19,000	25,000	22,000	(183,900)	60,800	124,300
Financial Activities	161,400	164,600	139,900	156,900	(46,800)	184,500	157,700
Professional and Business Services	416,900	398,200	445,200	365,200	(919,900)	351,800	434,100
Education and Health Services	615,100	549,300	446,800	539,200	(881,500)	343,400	515,800
Leisure and Hospitality	502,800	396,200	246,200	282,200	(3,379,400)	(80,400)	1,269,600
Other Services	68,800	78,700	61,800	62,200	(475,800)	(59,200)	178,200
Government	202,600	118,700	99,800	140,400	(731,200)	420,900	504,800

California

QUICK FACTS	
	Population* **39.28 million**
	Prime Age %* **41.43%**
	Gross Domestic Product** **2.78 trillion**
	Median Income* **31,960**
	Poverty Rate* **17.62%**
	Pre-Pandemic Unemployment Rate^ **4.05%**
	Current Unemployment Rate^ **10.36%**

*Source: *ACS 2019, **Bureau of Economic Analysis, ^Bureau of Labor Statistics*

	2016	2017	2018	2019	2020	2021f	2022f
ECONOMIC METRICS							
Real GDP Growth	3.3%	4.3%	3.1%	3.4%	-0.6%	2.0%	1.3%
Real Personal Income Growth	2.9%	2.0%	3.0%	3.0%	6.2%	-4.8%	3.9%
Total Employment Growth	428,600	346,400	345,700	252,700	(1,228,100)	353,900	451,200
Unemployment Rate	5.47	4.79	4.24	4.05	10.38	9.39	7.84
Real Per Capita Income	2.2%	2.3%	2.8%	2.9%	4.1%	-4.5%	2.7%
Housing Permits	84,000	92,000	96,000	91,000	86,000	81,000	104,000
Median Listing Price	$494,300	517,200	536,200	567,200	663,200	588,200	595,100
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	39,500	34,200	50,400	22,600	(33,300)	(4,800)	9,100
Manufacturing	6,700	2,600	11,400	(500)	(82,200)	(54,900)	(4,500)
Trade, Transportation, and Utilities	58,200	50,100	30,900	4,100	(182,200)	133,200	102,100
Information	37,800	2,900	13,800	19,400	(27,600)	20,500	11,700
Financial Activities	20,700	9,400	5,300	3,300	(800)	7,900	2,200
Professional and Business Services	40,900	50,600	87,100	51,700	(111,300)	103,800	109,600
Education and Health Services	88,300	97,400	71,900	81,200	(102,700)	85,200	41,300
Leisure and Hospitality	73,600	50,700	39,600	40,000	(486,400)	46,900	101,800
Other Services	10,100	10,000	7,900	4,500	(94,000)	13,700	38,500
Government	52,800	38,500	27,400	26,400	(107,600)	2,400	39,400

Southern California

QUICK FACTS

Population* **23.77 million**
Prime Age %* **41.59%**
Gross Domestic Product** **1.47 trillion**
Median Income* **30,894**
Poverty Rate* **18.27%**
Pre-Pandemic Unemployment Rate^ **4.13%**
Current Unemployment Rate^ **11.28%**

*Source: *ACS 2019, **Bureau of Economic Analysis, ^Bureau of Labor Statistics*

	2016	2017	2018	2019	2020	2021f	2022f
ECONOMIC METRICS							
Real GDP Growth	2%	3%	2%	3%	-3%	3%	3%
Real Personal Income Growth	3%	2%	3%	3%	4%	-3%	3%
Total Employment Growth	240,700	183,400	197,700	142,200	(755,400)	383,300	237,300
Unemployment Rate	5.47	4.80	4.35	4.13	11.28	8.15	7.02
Real Per Capita Income	2%	2%	2%	3%	5%	-4%	4%
Housing Permits	59,600	64,000	60,100	59,500	48,000	55,600	61,000
Median Listing Price	$611,746	644,658	655,178	687,703	726,822	718,521	733,502
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	21,500	18,700	28,100	5,600	(14,000)	3,600	10,000
Manufacturing	(2,600)	(8,100)	(2,400)	400	(49,200)	(2,700)	20,500
Trade, Transportation, and Utilities	30,100	36,400	22,700	5,500	(83,600)	82,800	35,200
Information	22,200	(14,000)	1,700	-	(27,200)	31,900	9,200
Financial Activities	8,000	3,500	1,200	(100)	(7,700)	10,300	13,500
Professional and Business Services	23,000	20,900	48,200	39,500	(92,000)	41,600	47,900
Education and Health Services	53,700	60,300	51,100	53,200	(66,600)	69,200	24,900
Leisure and Hospitality	50,500	34,900	26,700	23,500	(300,900)	128,200	46,400
Other Services	6,200	3,500	5,200	1,700	(60,500)	15,200	11,800
Government	28,100	27,300	15,200	12,900	(53,700)	3,200	17,900

Los Angeles County

QUICK FACTS

Population* **10.08 million**
Prime Age %* **43.20%**
Gross Domestic Product** **708.8 billion**
Median Income* **29,985**
Poverty Rate* **20.10%**
Pre-Pandemic Unemployment Rate^ **4.44%**
Current Unemployment Rate^ **13.59%**

*Source: *ACS 2019, **Bureau of Economic Analysis, ^Bureau of Labor Statistics*

	2016	2017	2018	2019	2020	2021f	2022f
ECONOMIC METRICS							
Real GDP Growth	2.4%	3.06%	2.0%	3.2%	-3.0%	2.8%	4.2%
Real Personal Income Growth	3.0%	1.72%	2.3%	2.4%	1.1%	-1.7%	2.8%
Total Employment Growth	109,400	53,400	67,200	49,000	(332,800)	206,600	73,300
Unemployment Rate	5.25	4.76	4.62	4.44	13.59	9.27	8.14
Real Per Capita Income	2.8%	1.78%	2.6%	2.8%	5.3%	-3.2%	4.6%
Housing Permits	20,600	21,600	22,000	21,600	19,600	22,700	22,400
Median Listing Price	$656,200	692,800	715,200	773,100	797,300	792,400	801,800
EMPLOYMENT GROWTH BY SECTOR							
Construction, Natural Resources, and Mining	7,400	4,300	7,500	3,000	(3,000)	6,100	3,200
Manufacturing	(7,400)	(11,800)	(7,800)	(1,900)	(22,900)	5,900	12,500
Trade, Transportation, and Utilities	13,400	10,200	5,900	(100)	(46,800)	49,000	10,300
Information	21,800	(14,400)	1,500	900	(19,500)	29,100	6,900
Financial Activities	4,200	1,800	1,600	800	(2,100)	1,600	4,900
Professional and Business Services	9,300	9,000	18,300	12,500	(37,800)	7,200	15,400
Education and Health Services	26,800	27,900	20,700	22,300	(25,100)	34,300	3,100
Leisure and Hospitality	23,400	14,600	11,900	8,200	(132,300)	68,400	7,700
Other Services	2,300	2,400	3,100	(300)	(27,000)	3,000	5,300
Government	8,200	9,400	4,500	3,600	(16,300)	2,000	4,000