



Braceros by Jeri Desrochers, Bone Creek Museum of Agrarian Art

Locked Out

Unemployment and Homelessness in the Covid Economy

January 2021



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The Bracero Program grew out of agreements between Mexico and the United States that allowed millions of Mexican workers to come to the United States for short-term agricultural labor. Workers received low wages and were tied to a single employer or recruiter. They could face deportation if they complained.

Locked Out

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January 2021

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Economic Roundtable

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1. Executive Summary

Overview

This report uses estimates from the Congressional Budget Office to project an unemployment scenario for the Pandemic Recession. We go on to use detailed unemployment and homeless data from the 2008 Great Recession to estimate the linkage between unemployment and homelessness and forecast the amount and type of pandemic-driven homelessness in Los Angeles, California and the United States. Then we assess the condition of the housing market and identify steps for preventing evictions and increasing the housing supply. We examine characteristics of workers who are most likely to fall through the cracks of the economy and identify the risk factors that make them vulnerable. Then we describe how employment programs can use their skills to meet public needs.

Pandemic Economy

One-fifth of American workers earn less than the poverty threshold. If they have other income or can pool earnings with other family members, they may escape poverty, but for many, homelessness is a continuing threat. The loss of jobs in the Pandemic Recession increases that threat.

Economy-driven homelessness emerges largely from jobs lost at the thin edge of the labor market rather than from unemployment in the middle and upper reaches of the wage ladder. The epicenter of job destruction and unemployment in the Pandemic Recession lies in restaurants, retail stores, restaurants and bars, clerical jobs, child care, and personal care. These are the largest employers of low-wage workers, who often are precariously housed even in a growing economy. Unemployment at the bottom of the wage ladder will cause lasting destitution for some of these workers.

Layoffs increased more than 10-fold in the United States and 15-fold in California after the onset of the pandemic. Layoffs have since declined and some workers have returned to their jobs, but layoffs are still three times as high as they were before the onset of the pandemic. California employers report that over half of workers in mass layoffs have been permanently separated from their jobs. This is resulting in long-term loss of income and weaker connections to the labor force for many low-wage workers.

Because of unemployment ripple effects, job loss and business closures have spilled over to every industry. One person's spending is another person's income. For example, one laid-off hotel worker is linked to an estimated 0.9 jobs in other industries, expanding the impact zone of workers who are unable to pay rent or other basic costs.

Unemployment and Homelessness

Monthly data for unemployment and homelessness of all types among working-age adults in Los Angeles County during and after the 2008 Great Recession provide a framework for estimating increases in homelessness as

a result of unemployment in the Pandemic Recession. Despite the uncertainties inherent in these projections, the timing of both growing unemployment and growing homelessness in the 2008 recession and the ratio between these two adverse trends provides an evidence-based framework for scenarios of unemployment-driven homelessness in the Pandemic Recession.

There is a direct connection between loss of employment income and loss of shelter, but these losses do not appear to occur simultaneously. Disconnection from work is a degenerative dynamic – less work, less earnings, less stable living conditions, and further disconnection from work. It is not total job loss but rather loss at the margins of the labor market that is the primary cause of economically-driven homelessness.

People are likely to fend off homelessness as long as possible by foregoing other expenses, relinquishing assets and going into debt in order to remain housed. However, without money to pay for rent or a supportive social network, it is likely that individuals will be evicted and lack a place of their own to sleep.

Homelessness grew at a slower rate than unemployment in the 2008 recession, but did not plateau until mid-2014. We estimate that 10.3 percent of recession-caused point-in-time unemployment in Los Angeles during and after the 2008 Great Recession was linked to subsequent point-in-time homelessness of some type among working-age adults.

Based on the link between unemployment and homelessness in the 2008 recession, and after adjusting Los Angeles data to account for lower propensities in California and the United States to produce homelessness, and differences in types of homelessness, we project that over the next four years the pandemic recession will cause *chronic homelessness* to increase 49 percent in the United States, 68 percent in California and 86 percent in Los Angeles County.

The increase in the point-in-time homeless population is projected to peak in 2023, with 603,000 additional working-age adults without a place of their own to sleep in the United States. California is projected to be home to 131,400 of those homeless adults, with 52,300 in Los Angeles County.

Most homelessness from the pandemic economy is projected to be in the form of *couch surfing* – 85 percent in the United States, 73 percent in California and 64 percent in Los Angeles County.

If projections of unemployment through 2022 are accurate, the Pandemic Recession is projected to cause roughly twice as much homelessness as the 2008 Great Recession. This homeless projection is directly scalable to unemployment and can be adjusted based on actual unemployment.

California Housing Market

Housing prices and rents have grown faster than incomes, so housing costs have consumed an increasing portion of the average Californian's budget,

leaving 5.3 million California residents and 91 million U.S. residents cost-burdened for housing. In California, this includes 53 percent of renters, 37 percent of owners with a mortgage, and 15 percent of owners without a mortgage. In the U.S. it includes 48 percent of renters, 25 percent of owners with a mortgage, and 11 percent of owners without a mortgage.

Most Americans want to meet their financial obligations. If public programs cover their income shortfall, they will continue to pay for housing. The most important determinant of pending eviction or foreclosure is recent household job loss. Half of Africans Americans and Latinos express no confidence or only slight confidence that they can pay for housing next month. One-third of African-American and Latino renters are behind on rent and expecting eviction.

Over half of poor families in the U.S., and almost three quarters in California, pay over half of their income for housing. Housing Choice Vouchers, also known as Section 8, which subsidize rent for low-income families, should be fully funded for all eligible households.

Many renters are behind on their rent, and some eviction moratoriums have ended. Federal and state budgets should allocate money to cities to provide tenants with counsel in eviction proceedings.

Unpaid rent could double by early 2021, straining landlord budgets and increasing pressure to evict delinquent tenants. Policymakers should give financial incentives to landlords and lenders to defer rental and mortgage payments and forgive payments that were missed during the pandemic.

To make rental housing more accessible, cities should require landlords to accept insurance in place of cash security deposits, allowing tenants to spread out the cost of security deposits in small monthly premia rather than one large unaffordable payment required at the beginning of the lease.

Business closures in the pandemic have emptied some commercial buildings, many of them former retail stores. Cities should create affordable housing trust funds and use some of this money to buy empty commercial buildings and convert them to affordable housing.

To increase the supply of affordable housing the federal government should expand programs that subsidize the construction of rent-restricted units, such as the Low-Income Housing Tax Credit. Local governments should reform land-use regulations to allow units to be constructed close to jobs.

Unemployment and Under-Employment

Under-employment is the seedbed of homelessness. Under-employment results in lack of earnings, which too often results in inability to afford housing. Under-employment is pervasive among homeless workers.

For every three officially unemployed workers who are out of a job and looking for work, there are another two under-employed workers.

The United States had over 18.8 million unemployed and under-employed workers in November 2020. This included 10,264,000 *unemployed* workers who were actively looking for work, 6,488,000 workers with *involuntary part-time employment* – workers whose hours have been cut back below what they want, 1,391,000 *conditional workers* who would seek employment if a problem such as lack of child care were solved, and 672,000 *discouraged workers* who want to work but have given up on looking for a job.

Workers who are unemployed or under-employed and are at risk of having insufficient income to pay for housing include those who:

- Have less than a four-year college degree, and especially those who have less than a high school diploma
- Are 24 years of age or younger
- Are African American or Latino
- Are female

The level of risk varies not only by demographic attributes but also by geography. Rates of under-employment are higher in California and Los Angeles County, which have severe income polarization, than in the United States.

Poverty Workers

Lower income, higher unemployment and greater housing insecurity are interlocking hazards. Lower-paid workers are more likely to be displaced from jobs and housing than higher-paid workers.

Thirty million American workers earn less than \$13,560 a year. This is the median earnings for workers in families with incomes under \$25,000. The poverty threshold for a single adult is comparable at \$13,300. These are poverty workers. The rate of poverty employment is highest in *restaurants, entertainment, retail, and social assistance*.

Part-time employment is the most important factor associated with poverty earnings.

Poverty workers have skills that can benefit the public through public employment programs. This includes public transit, community nutrition, education, childcare, and even construction – including affordable housing.

Homeless Workers

There is a thin line between low-earnings employment and homelessness. Roughly 46 percent of non-chronically homeless adults in the United States, 40 percent in California and 35 percent in Los Angeles County are working now or worked last year, but half had incomes in the past year that were less than half of the poverty threshold.

Most employed homeless individuals have only part-time work. This is similar to the pervasive part-time employment in the poverty labor force.

Poverty workers and homeless workers have similar demographics, wages and employers.

The largest employers of homeless workers are *restaurants, colleges and universities, construction, agriculture, temp agencies, churches, and social service organizations.*

The prominent role of colleges, universities and social service organizations as employers of homeless labor stands out. Most of these entities are either nonprofit and tax exempt or part of the public sector. Their role as homeless employers is evidence of willingness to perpetuate rather than ameliorate economic desperation.

The practical value of information about the industries that employ homeless workers, their hours of paid employment and their occupations is that it points to where these workers can be found and where employment interventions should be targeted.

The risk of homelessness increases as earnings decrease. The odds of becoming homeless are 23 times greater for a worker at the bottom of the wage ladder than for someone earning \$28,000 a year.

The odds of homelessness at any income level are about twice as high for Latinos as they are for European Americans, and about three times higher for African Americans. Because incomes skew lower for African Americans and Latinos than for European Americans, their risks are compounded. This reflects social hazards experienced by African Americans and Latinos including bias, discrimination and barriers in employment, housing, education, and the justice system.

The risks that lead from unemployment to homelessness are not stand-alone threats. They include all of the social and economic ingredients of a worker's life layered on top of each other, some as safeguards and others as vulnerabilities. Poverty employment, unemployment, ethnicity, isolation, personal crises, destitution, and homelessness are mutually reinforcing.

Predictive screening tools can integrate information about these risk factors to make accurate estimates of the likelihood that an unemployed worker or young adult will become persistently homeless. This type of preemptive screening should be used to prioritize vulnerable and homeless workers for early help, before individuals are severely harmed by prolonged homelessness.

The solution of employment costs less than the problem of homelessness. Individuals who become persistently homeless use more public services and have higher public costs than their peers who do not become homeless. These costs are ongoing and increase as individuals become older. Persistently homeless workers in Los Angeles typically have public costs of \$13,700 a year for benefits and services received from local government.

A pilot initiative called the *Realization Project* is underway to demonstrate the effectiveness of comprehensive employment intervention in preventing persistent homelessness. Homeless community college students in this pilot receive comprehensive, individually tailored support including housing,

counseling, team building, behavioral health services, mentoring, transportation, vocational assessment, job training, access to apprenticeship training for union jobs, academic courses, tutoring, and help in obtaining a living-wage job.

The costs for heavy-touch, comprehensive services are offset by avoiding ongoing high public costs that will be incurred if the participants are not helped and became persistently homeless. These net cost savings make the project scalable through linkages with public systems for employment services, public assistance, health care, and the justice system.

Providing Employment

Increasing the incomes of employable homeless adults through jobs that pay a living wage should be a primary strategy for preventing homelessness caused by the Pandemic Recession. Workers' motivation to support themselves through work and to obtain shelter with the income they earn is valuable both for them and for society. Work provides dignity and prevents the social costs that accompany destitution.

Swift and massive intervention is required to create jobs and provide earned income for unemployed workers who face the possibility of homelessness. This requires new program models. America's most recent fond memories of public employment date back the Works Progress Administration (WPA) in 1935. More recent programs were less successful.

The *Realization Project* is one such effort to build a new employment model.

Employment programs should prioritize helping workers who are at risk of losing their housing and those who have no place of their own to sleep. They should use workers' existing skills and also support permanent economic progress by providing education and training to upgrade skills.

Existing apprenticeship programs provide a good model for improving skills and wages by bringing together training, union representation and private employment. This model should be replicated in other industries including health care and transportation.

The federal government has the greatest capacity to fund employment programs, but to the extent that the programs are effective in providing needed services and building public assets they also should be supported by state and local government. Bond financing is a tool for funding projects that create valuable public improvements and infrastructure.

Educational institutions, social assistance organizations and churches that are employing homeless workers but not lifting them out of poverty should shoulder part of the load by providing sufficient wages and hours of work, and if needed training, to enable workers to earn enough to pay for their basic needs.

Three public policies are needed to augment employment initiatives recommended here. *First*, make efficient and judicious use of project labor agreements to require hiring local low-income workers not only in public sector construction projects but also in providing a broad range of publicly procured goods and services. *Second*, raise the minimum wage to a level that enables workers to afford basic necessities, including housing. And *third*, require employers to provide stable work schedules with adequate advance notice of schedule changes so that it will be feasible for part-time workers to hold down multiple part-time jobs.

This is an opportunity for long overdue investment in the environment, public infrastructure and social needs. The skills, energy and aspirations of at-risk workers can be employed for public benefit to:

1. Provide child care
2. Tutor students
3. Care for sick and incapacitated individuals
4. Provide community nutrition
5. Operate neighborhood shuttle programs
6. Build affordable housing
7. Repair and upgrade existing affordable housing
8. Repair and maintain parks and forests
9. Repair and build public transportation infrastructure
10. Build energy infrastructure for a green economy

Living-wage job creation will give workers the stability needed to prevent homelessness. In turn, communities will gain essential public projects to improve the environment, build infrastructure and provide essential social services. These investments will return to society much more than their basic costs.



2. Pandemic Economy

Overview

In a single month, from March to April 2020, when the Covid Pandemic compelled the economy to pause midstride, 2,415,000 California workers lost their jobs. Forty-three percent of the jobs that were lost were still missing in November 2020.¹ The March-to-April wave of unemployment impacted almost half of the front-line workers who enable us to dine, shop, find lodging, and enjoy entertainment. *(Table A-1 in the Data Appendix shows the California industries that lost the most jobs from March to April 2020.)*

Federal stimulus funds and gradual reopening of businesses supported a recovery but many of the front-line workers who returned to their jobs had involuntary part-time hours of work.

In November 2020, another more severe wave of corona virus infection emerged, leading to renewed restrictions on business activity. The economy is between acts. We don't know if it will snap back or stagger back from the worst unemployment since the Great Depression. No modern economy has experienced an economic downturn that was this sudden and large. We simply don't know how the economy and the labor market machine will respond to the damage that is occurring.

The chief concern is “longer-run damage to the productive capacity of the economy and to people’s lives who have been disrupted by the pandemic,” said Federal Reserve Chairman Jerome Powell. “It’s women who are not by choice out of the labor market. It’s kids who are not getting the education they should be getting. It’s small businesses with generations of intellectual capital that is being destroyed, and it’s just workers who have been out of work for a long period of time and losing their connection to the labor force and losing the life that they had.”²

Even in the best-case scenario the coronavirus pandemic is likely to cause increased unemployment for at least another three years. Long-term joblessness will be greatest among low-wage, young and less-educated workers. Many will be unable to pay rent and will be vulnerable to eviction and homelessness.

There is a strong connection between unemployment, poverty and homelessness. Fifty-nine percent of homeless adults say they are not housed because of economic hardship and loss of employment.³

It is certain that there will be workers at the margin of the labor market who will lose their connections to employment, earnings and housing as a result of unemployment in the Pandemic Recession. We can identify who these workers are likely to be, even though we are less certain about how many will be impacted.

Using estimates from the Congressional Budget Office, we project an unemployment scenario for this recession and use information from the 2008 Great Recession to estimate the growth of homelessness. Then we assess the condition of the housing market, examine characteristics of

workers most likely to fall through the cracks of the economy, and describe how employment programs can use their skills to meet public needs.

Unequal Income and Homelessness

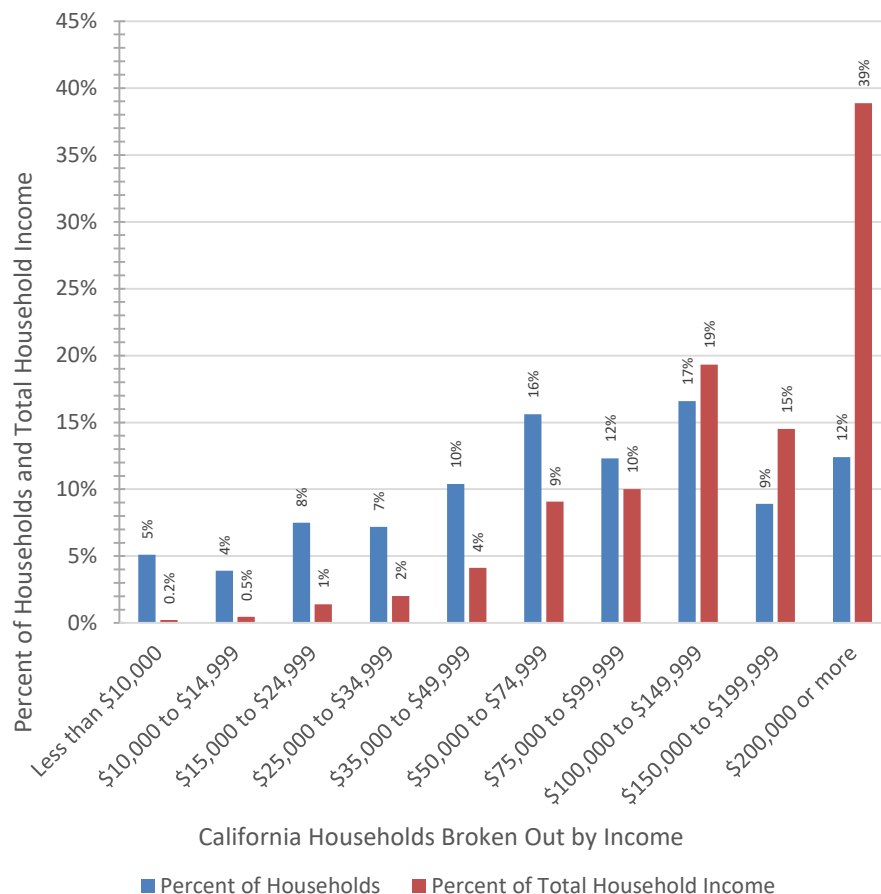
Economic inequality makes those less favored less favored with earnings more vulnerable to destitution in the Covid Pandemic. Seventeen percent of California households have incomes near or below the poverty threshold, with average incomes of \$13,591, as shown in *Figure 1*.

The poorest 50 percent of California households receive only 17 percent of total household income. The richest 12 percent of households receive 39 percent of income. If income were distributed evenly, every California household would have an income of \$107,384.

Recent research has found that income inequality is linked to homelessness through both an “income channel” – by leading to the crowding out of low-income households from the rental market – and a “price channel” through which inequality leads to rising home prices.

Income inequality
is linked to
homelessness.

Figure 1: California Household Income Distribution, 2018



Source: U.S. Census Bureau, American Community Survey, 2018, Table S1901.

In the first month of the pandemic, unemployment insurance claims of jobless workers grew 20 times larger than the previous month.

Income inequality within a metropolitan area has a positive and significant relationship with the total rate of homelessness per 10,000 people. A one-point increase in the Gini coefficient is associated with an increase in the total rate of homelessness of about 1.1 persons per 10,000 members of the general population.⁴

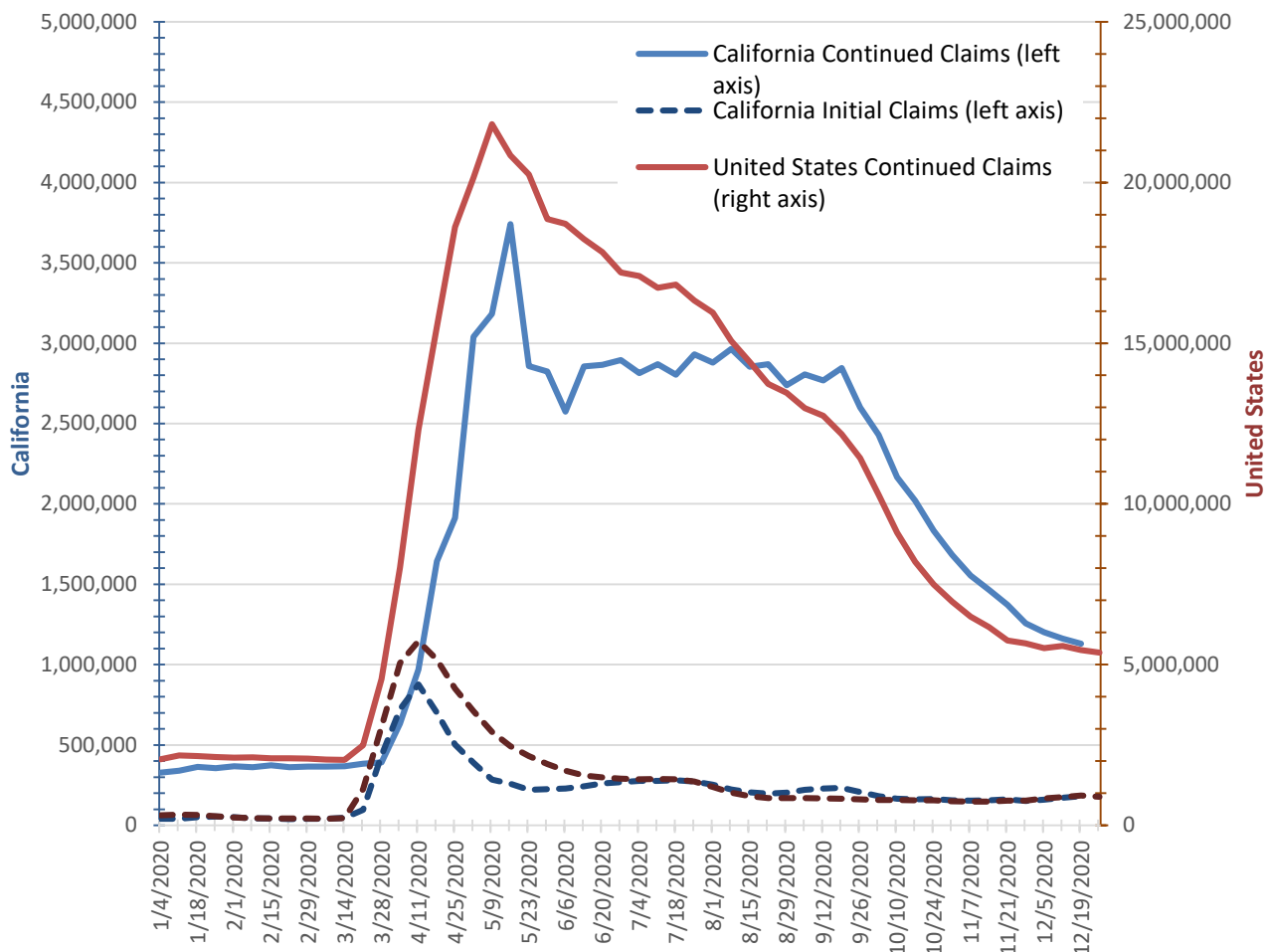
The Pandemic Recession is causing permanent job destruction and persistent disconnection from the labor market for workers on the bottom rungs of the wage ladder, increasing income inequality and homelessness.

Unprecedented Spike in Unemployment

There was an unprecedented spike in unemployed workers in March 2020 after coronavirus social distancing guidelines took effect, as shown in *Figure 2*. In the first month of the pandemic, unemployment insurance claims of jobless workers grew 20 times larger than the previous month.

By the end of April California had an unemployment insurance caseload of 4.8 million jobless workers, with a total of 18.7 million in the U.S.⁵

Figure 2: California (left axis) and United States (right axis) Weekly Unemployment Insurance Claims 2020



Source: U.S. Department of Labor, Table r539cy, State Weekly Claims for Unemployment Insurance, Data Not Seasonally Adjusted. January 1 to December 26, 2020, three-week moving average.

We show data for both California and the United States in this report. California accounts for one-eighth of U.S. workers covered by unemployment insurance, but one-fifth of workers collecting unemployment insurance payments. This reflects a higher unemployment rate in California, with an even higher rate in Los Angeles County.

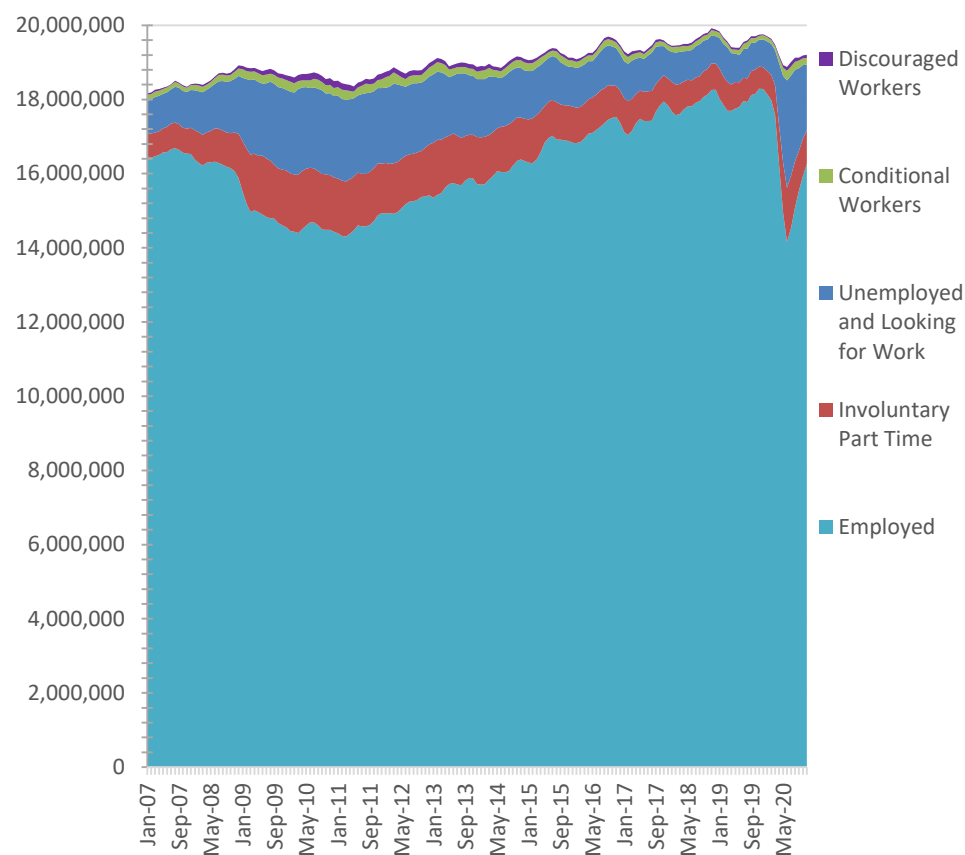
After the pandemic peak, weekly unemployment insurance claims declined in both California and the United States until the beginning of November, and are now inching back up. The number of weekly new claims is now three and one half times higher than before the pandemic. In the beginning of December, California still had 1.4 million new and continuing claims, and the United States had 6.4 million claims, with an apparent upward trajectory for both.

Under-Employed Workers

For every three officially unemployed workers who are out of a job and looking for work, there are another two under-employed workers:

For every 3
officially
unemployed
workers, there are
another 2 under-
employed workers.

Figure 3: Monthly Employment Status of California Labor Force



Source: U.S. Census Bureau and U.S. Bureau of Labor Statistics, Current Population Survey (CPS) basic monthly data for California, not seasonally adjusted. Three-month moving average of unemployed, involuntary part-time, conditional, and discouraged workers, January 2007 to November 2020.

Mass layoffs in California increased 56 fold in March 2020.

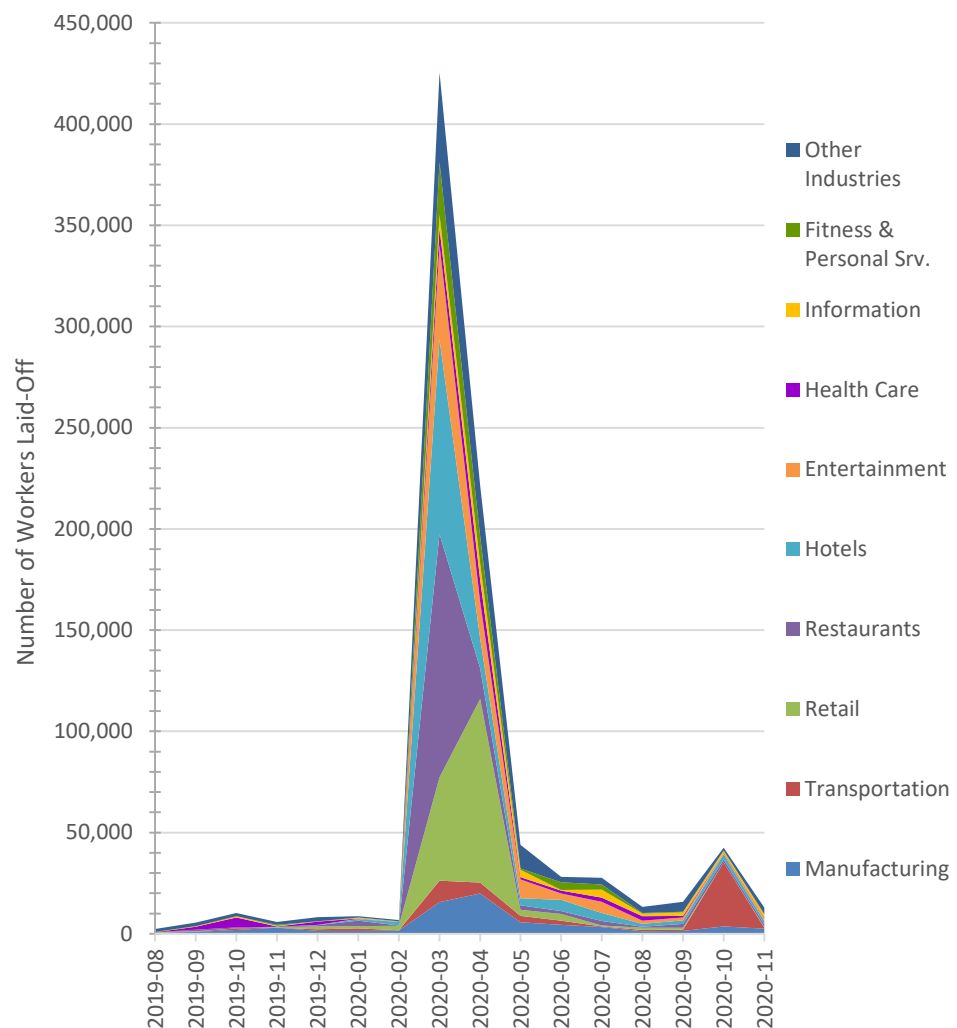
- *Involuntary part-time* –fewer hours of work than they want
- *Conditional* – want to work but have a barrier such as lack of child care
- *Discouraged* – want to work but have given up on looking

These three categories of under-employed workers along with employed and officially unemployed workers in California are shown in *Figure 3*. This graph also shows the precipitous onset of the 2020 Pandemic Recession compared to the 2008 Great Recession.

In November 2020, in addition to California's 1.5 million officially unemployed workers, there were also 1.2 million under-employed workers made up of:

- 905,000 involuntary part-time workers
- 213,000 conditional workers
- 98,000 discouraged workers

Figure 4: California Mass Layoffs by Industry and Month



Source: California Employment Development Department, Labor Market Information Division, Listing of Filed WARN Notices through December 21, 2020. Effective dates of mass layoffs are shown.

Recessions increase inequality, and inequality increases homelessness. Under-employed workers are at the fringe of the labor market and vulnerable to displacement from earned income and housing in the Pandemic Recession. These workers are described in a later chapter.

Mass Layoffs

Reports that California employers submit when they lay off workers or close facilities provide information about the industries and locations where business operations are shrinking and whether job losses are permanent or temporary.⁶

Mass layoffs in California increased 56-fold in March 2020 compared to the average for the preceding six months, as shown in *Figure 4*.

Restaurants dominated the massive spike of layoffs in the first month, accounting for 28 percent of total California layoffs, followed by 23 percent from *hotels*, in March 2020.

Retail dominated layoffs in April, accounting for 41 percent of layoffs in the second month of the pandemic.

Arts, Entertainment and Recreation dominated layoffs in May, accounting for 21 percent of layoffs in the third month of the pandemic.

Three industry sectors have accounted for over half (51 percent) of post-Covid mass layoffs in California:

- | | |
|---|------------|
| 1. <i>Retail Trade</i> | 18 percent |
| 2. <i>Food Services and Drinking Places</i> | 17 percent |
| 3. <i>Traveler Accommodation</i> | 16 percent |

The Pandemic Recession is led by industries that provide face-to-face services. These are the largest employers of low-wage workers, who often are precariously housed, even in a growing economy.

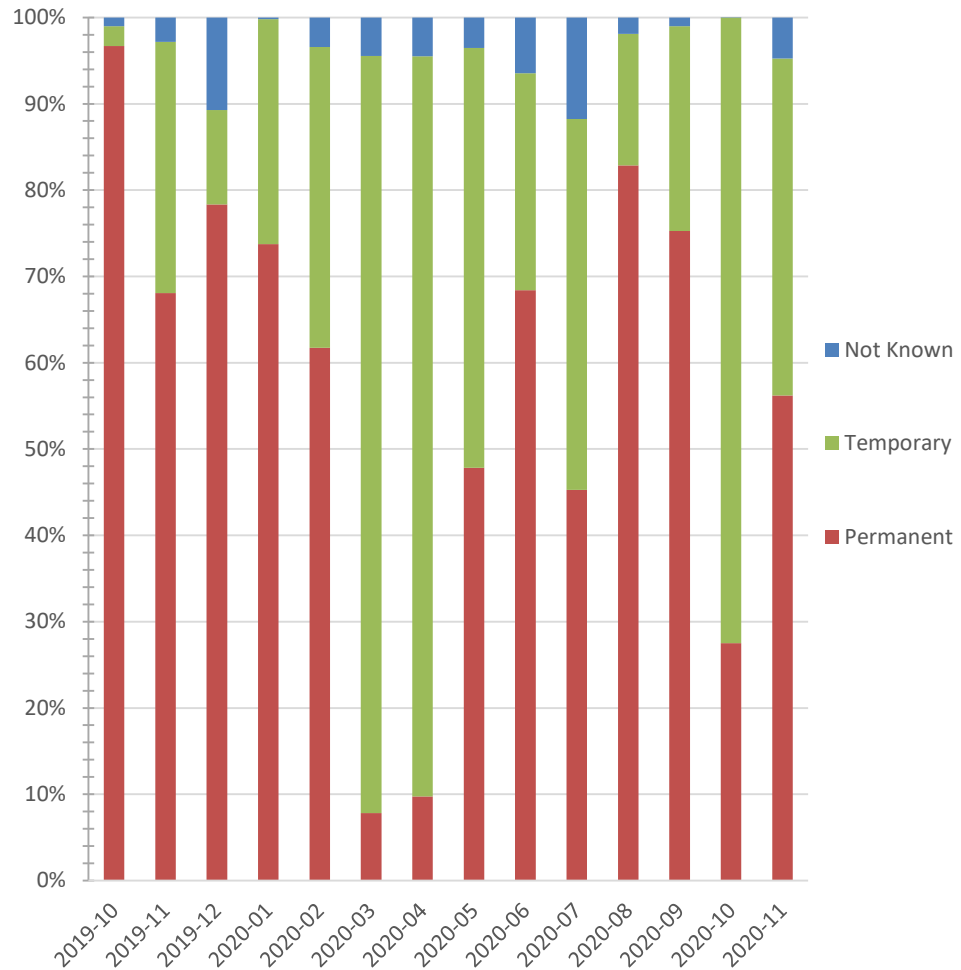
A majority of layoffs represent permanent job loss despite the early optimism at the onset of the pandemic that business closures would end quickly and normal business activity would resume after a short pause.

Most layoffs are viewed by employers as being permanent job reductions, as shown in *Figure 5*. In the five months preceding the pandemic, 78 percent of laid-off workers were categorized by their employers as being permanently separated from their jobs.

At the onset of the pandemic, in March and April 2020, this pessimism was reversed. Employers categorized 87 percent of laid-off workers as being temporarily separated from their jobs. However, as the pandemic wore on and restrictions on business activity became long-term constraints that reduced revenue, many businesses had to close or make long-term contractions.

Most layoffs are viewed by employers as permanent job reductions.

Figure 5: California Monthly Layoffs by Type



Source: California Employment Development Department, Labor Market Information Division, Listing of Filed WARN Notices through December 21, 2020. Effective dates of mass layoffs are shown.

In the five months of May through September 2020, following the onset of Covid, employers classified 59 percent of workers as being permanently separated from their jobs and only 36 percent of layoffs as being temporary. This indicates that the optimism in March and April that layoffs would be temporary did not survive the test of reality. Most of the March and April layoffs are likely to have become permanent.

Many restaurants, retail stores, gyms, and hair, nail and skin care services have been unable to survive and have closed.

October was an anomaly. Airlines accounted for about three-quarters of all layoffs and only 27 percent were classified as permanent. In November, the share of layoffs that were permanent was back up to 56 percent

Employer expectations about future workforce size are based on assumptions about the duration of restraints on business activity and the robustness of the post-Covid economy. A large wave of coronavirus infection during the winter may increase the number of businesses that close permanently and the number of workers without jobs awaiting them.

The post-Covid classification of over half of laid-off workers being permanently separated from their jobs represents long-term loss of income and weaker connections to the labor force for many low-wage workers.

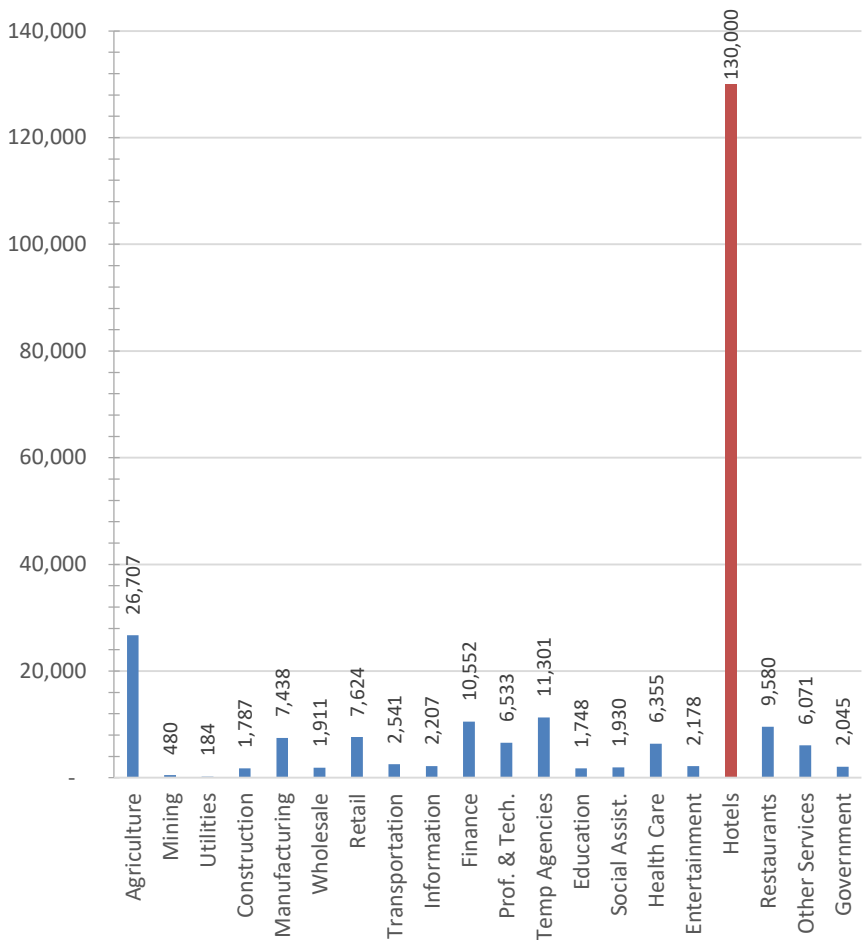
Unemployment Ripple Effects

One person’s spending is another person’s income. For example, layoffs of 130,000 hotel workers in California are likely to cause 109,000 layoffs in other industries that are suppliers to hotels or that are supported by purchases made with the wages of employees of hotels and their suppliers. The ripple effects of hotel employment are shown in *Figure 6*.

One laid-off hotel worker is linked to an estimated 0.9 layoffs in other California industries, increasing the number of people who are unable to pay rent or other basic costs. The biggest impact is the effect of reduced food services in hotels on the agricultural sector.

One person’s
spending is
another person’s
income.

Figure 6: Jobs in Other Industries Linked to Hotels



Sources: IMPLAN input-output econometric model and WARN layoff notices for California through November 10, 2020.

Job loss and
business closures
have spilled over
to every industry.

Examples of linked secondary layoffs at specific companies that were hurt when their primary customers were impacted by public health guidelines and social distancing by customers include:

- Reduced travel, particularly on airlines, led to *car rental layoffs* including 2,669 at Enterprise Rent-A-Car, 1,169 at Avis and 1,052 at Hertz
- Reduced airline flights led to layoffs by *aircraft parts manufacturing* companies including 3,445 by Safran, 1,052 by Howmet Aerospace, 487 by Collins Aerospace, 421 by Boeing, 395 by TA Aerospace, 338 by Unical Aviation, 285 by LMI Aerospace, and 194 by Parker Aerospace Group
- Reduced movie production led to layoffs in *movie post-production* and *production-support* companies, including 1,330 workers at Deluxe Creative/Entertainment Services and 401 at Foto-Kem Industries
- Closure of dentist offices led to layoffs by *dental supply* companies, including 2,001 workers at James R. Glidewell Dental Ceramics
- Reduced visits to doctors' offices led to layoffs in *health care technology* companies, including 1,307 workers at Cerner Corporation

Closure of restaurants, hotels, stores, and live entertainment led the initial surge of unemployment, but as these examples illustrate, secondary impacts of job loss and business closures have spilled over to every industry.

Summary

- In March 2020, almost half of California's front-line workers who enable us to dine, shop, find lodging, and enjoy entertainment lost their jobs.
- The Pandemic Recession is led by industries that provide face-to-face services. These are the largest employers of low-wage workers, who often are precariously housed, even in a growing economy.
- Even in the best-case scenario the coronavirus pandemic is likely to cause increased unemployment for at least another three years.
- For every three officially unemployed workers who are out of a job and looking for work, there are another two under-employed workers.
- Mass layoffs in California increased 56-fold in March 2020 compared to the average for the preceding six months.
- A majority of layoffs represent permanent job loss.
- Because of unemployment ripple effects, job loss and business closures have spilled over to every industry.



3. Unemployment and Homelessness

Projected Unemployment

Detailed monthly data about unemployment and homelessness among working-age adults in Los Angeles County during and after the 2008 Great Recession provide a framework for estimating increases in homelessness as a result of unemployment in the Pandemic Recession. Despite the uncertainties inherent in the projections, they provide evidence-based homeless scenarios for Los Angeles County, California and the United States that demonstrate the need for employment interventions to prevent the harm done by protracted unemployment and loss of earnings.

Our estimates of pandemic-driven homelessness rest, first, on estimates of future unemployment during the course of the Pandemic Recession and, second, on estimates of the link between unemployment and homelessness among working-age adults. Despite being grounded in detailed data from the 2008 recession, there is uncertainty in both estimates.

Reliable unemployment forecasts are difficult because of economic cross currents. Pessimistic expectations of high unemployment are supported by:

- Long-term job destruction and unemployment caused by public health limits on business activity in industries that employ large numbers of low-wage workers, including restaurants and bars, retail stores and personal services such as gyms and hair and nail salons.
- The cold winter months are now accompanied by the highest rates of coronavirus infection seen so far, making continued public health restrictions on business activity likely.
- Uncertainty about how fast vaccines will be administered and the share of the population that will choose to receive the vaccine.
- Household debt is rising at its fastest pace in at least two years.⁷
- Recent evidence of declines in household income and spending.⁸

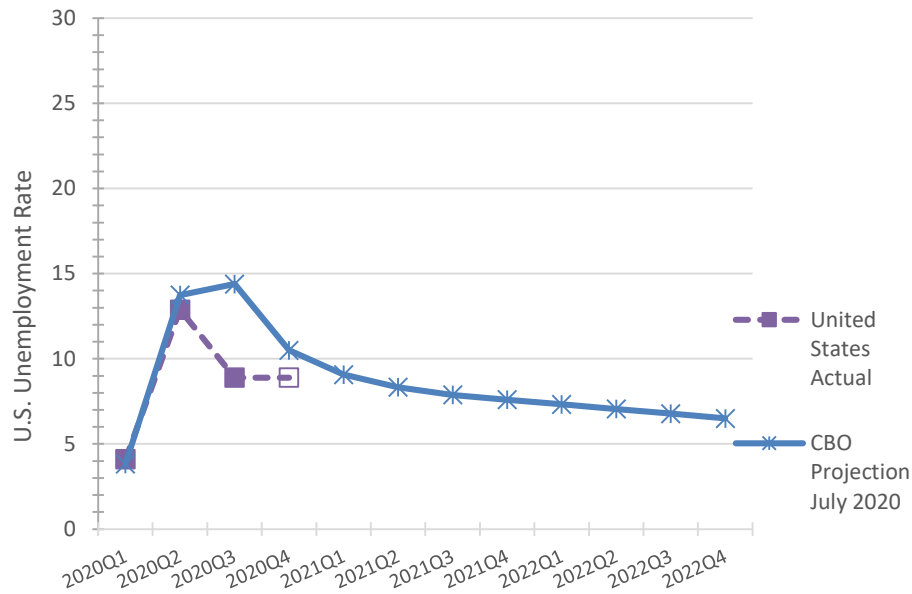
On the other hand, optimism about a quick recovery from the Pandemic Recession is supported by:

- The prospect of vaccines that will inoculate much of the U.S. population in 2021.
- The economic boost from consumer spending after the first stimulus package – the \$2 trillion Coronavirus Aid, Relief, and Economy Security (CARES) Act was signed into law.
- The economic boost from a second stimulus package.
- Low interest rates and borrowing costs for businesses.
- Consumer savings during the pandemic and pent-up demand for goods and services.
- U.S. household net worth rose 3.2% in the third quarter of 2020.⁹

Our unemployment projection builds on the Congressional Budget Office's lowest estimate of unemployment through 2022¹⁰ to provide a scenario of unemployment from the Pandemic Recession and the impact this will have on homelessness. The CBO has made three projections to

Re-employment
can prevent the
harm done by
protracted
unemployment
and loss of
earnings.

Figure 7: Congressional Budget Office of United States Unemployment Rate 2020-2022

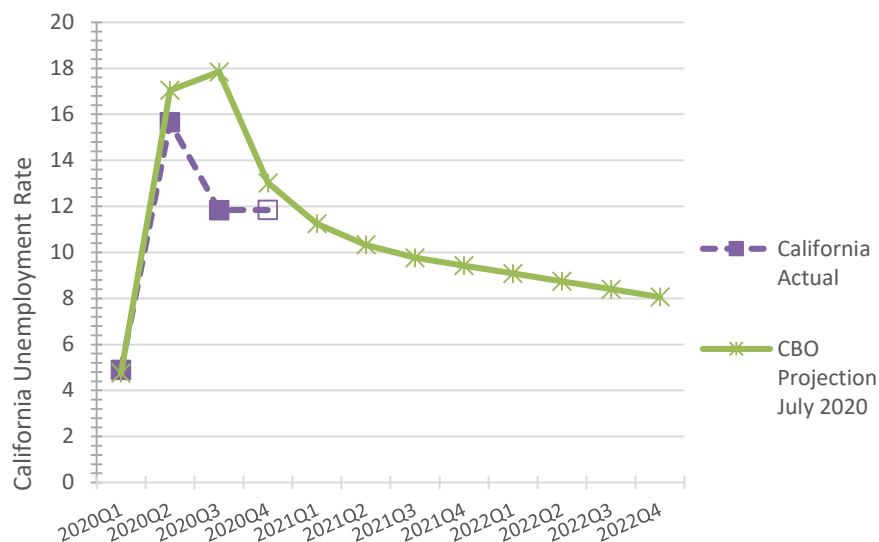


Source: Congressional Budget Office, *An Update to the Economic Outlook: 2020 to 2030*, July 2020.

date of unemployment in the pandemic economy. The projection with the lowest unemployment rate was made in July 2020, which is the one we use, correcting it downward to adjust for lower than estimated unemployment in the third quarter of 2020. To remain conservative, we have not adjusted next year's projected unemployment upward to reflect what the director of the Center for Disease Control said might be "the most difficult time in the public health history of this nation."¹¹

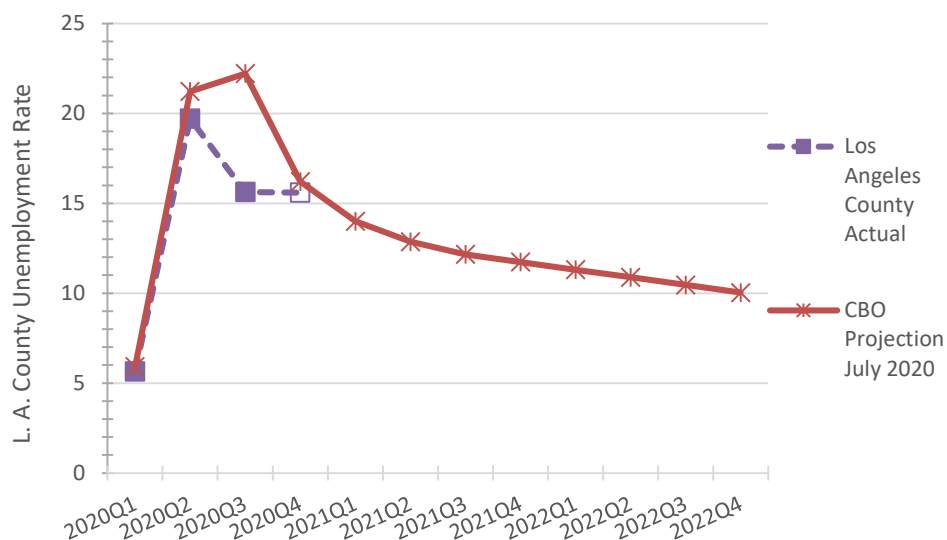
The projection for the United States is shown in *Figure 7*, the projection for California in *Figure 8*, and the projection for Los Angeles County in

Figure 8: California Unemployment Rate Based on CBO Projections for U.S.



Sources: Congressional Budget Office, *An Update to the Economic Outlook: 2020 to 2030*, July 2020, and *Current Population Survey* for extrapolating projection to California based on unemployment ratios in the past 12 months.

Figure 9: Los Angeles County Unemployment Rate Based on CBO Projections for U.S.



Sources: Congressional Budget Office, *An Update to the Economic Outlook: 2020 to 2030*, July 2020, and Current Population Survey for extrapolating projection to Los Angeles County based on unemployment ratios in the past 12 months.

Figure 9. (Supporting data for these three figures are shown in this endnote.¹²) The projections for California and Los Angeles are adjusted to reflect that in the past 12 months, state and county unemployment rates compared to the national rate have been:

- 24 percent higher in California
- 54 percent higher in Los Angeles County

Unemployment and Homelessness in the 2008 Recession

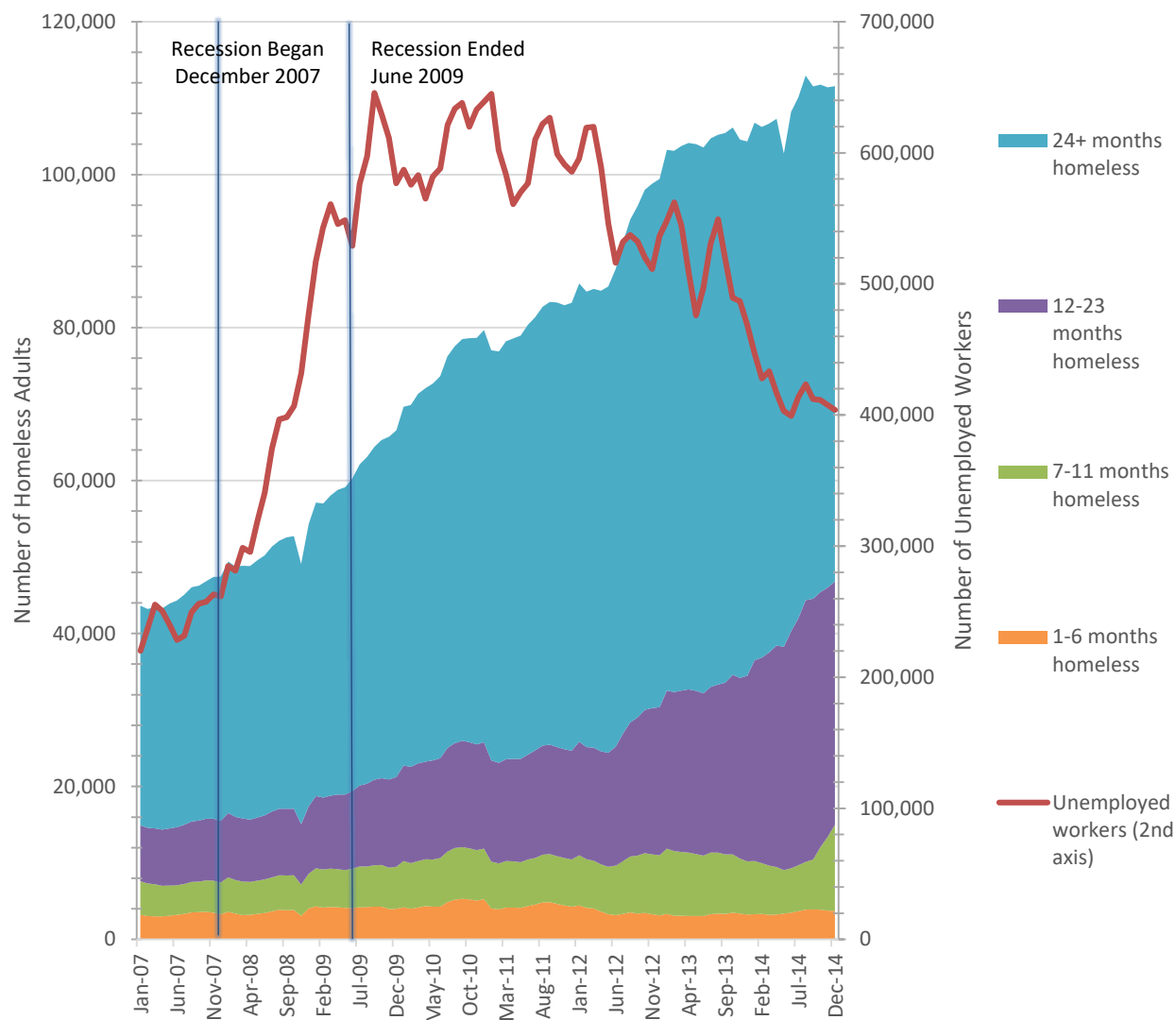
Homelessness grew after unemployment grew in the 2008 recession, but with a lag, as can be seen in Figure 10. Unemployment grew rapidly from 2008 to mid-2009 and plateaued through 2011. Homelessness of all types—chronic, episodic, transitional, and hidden—increased at a slower rate than unemployment but did not plateau until mid-2014.

There is a direct connection between loss of employment income and loss of shelter, but these losses do not appear to occur simultaneously. People are likely to fend off homelessness as long as possible by foregoing other expenses, relinquishing assets and going into debt in order to remain housed. However, without money to pay for rent or a supportive social network, it is likely that individuals will be evicted and lack a place of their own to sleep. As the New York Times noted, “It’s hard to pay the bills on nothing.”¹³

The timing of both growing unemployment and growing homelessness in the 2008 recession and the ratio between these two adverse trends provides an evidence-based framework for a scenario of unemployment-driven homelessness in the 2020 recession.

There is a direct connection between loss of employment income and loss of shelter.

Figure 10: Los Angeles County Unemployed Workers (right axis) and Working-age Homeless Public Assistance Recipients (left axis) in the 2008 Recession, with Homeless Adults broken out by Duration of Homelessness



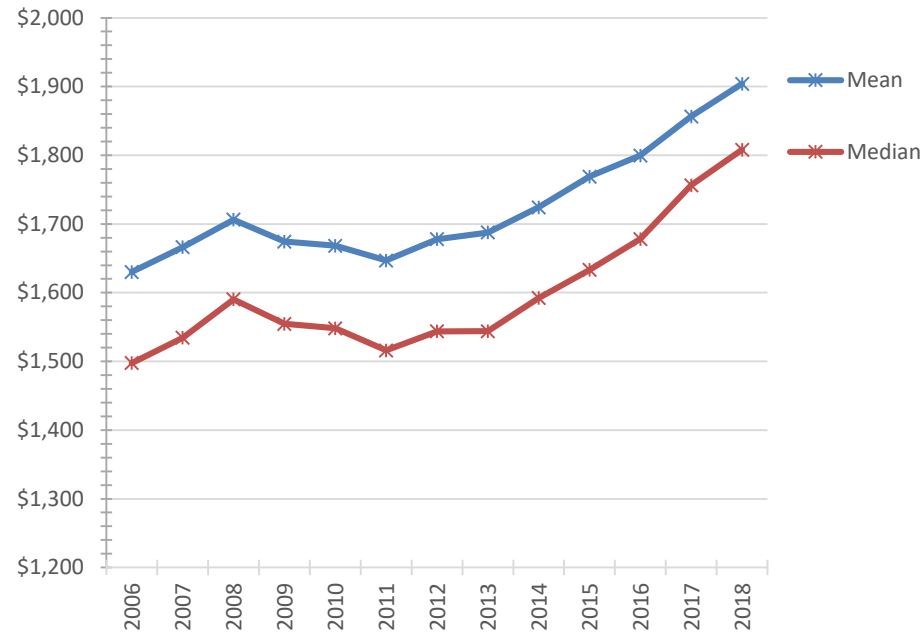
Source: Under-employment data is from U.S. Census Bureau and U.S. Bureau of Labor Statistics, Current Population Survey (CPS) basic monthly data, not seasonally adjusted. Three-month moving average of total Los Angeles County unemployed, involuntary part-time, conditional, and discouraged workers, 2007 to 2014. Homelessness data is from administrative records of Los Angeles County public assistance recipients, Economic Roundtable, “Early Intervention to Prevent Persistent Homelessness: Predictive Models for Identifying Unemployed Workers and Young Adults who become Persistently Homeless,” 2019. Homelessness is defined as not having a place of your own to sleep.

To build this scenario we used the average annual growth rate for both unemployment and homelessness in the two years before the 2008 recession as the baselines, and classified growth after the recession started that was above those baselines as being attributable to the recession.

Attributing homelessness among working-age adults during this period to loss of income rather than to increasing rent levels is reasonable because the median rent for new tenants decreased three percent from 2008 to 2013, as shown in *Figure 11*. Rent levels did not begin to increase until 2014.

The number of homeless residents in Los Angeles County comes from public assistance records for the roughly 2.5 million people who are typically receiving food stamps (now SNAP), Medi-Cal health insurance,

Figure 11: Rent in California for Renters in their Units 1 Year or Less in 2018 Dollars

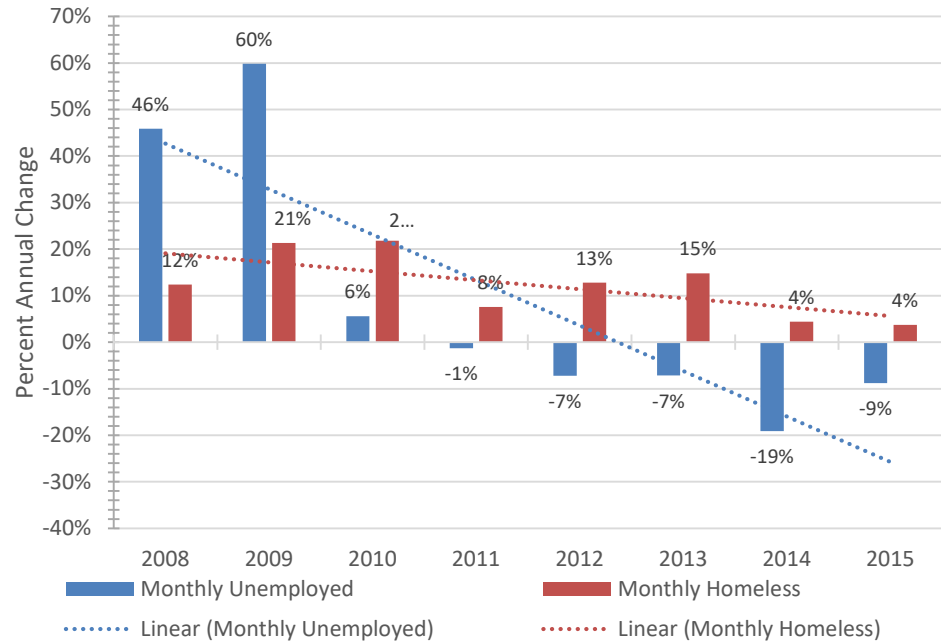


Source: U.S. Census Bureau, American Community Survey, Public Use Microdata Samples, 2006 to 2018.

or cash benefits at any point in time.¹⁴ This definition of homelessness encompasses people who do not have a place of their own to sleep and includes couch surfing. Unemployment numbers and rates for Los Angeles County come from the Current Population Survey.

Homelessness
lags
unemployment
because people
struggle to remain
housed as long as
possible.

Figure 12: Annual Change in Unemployed and Homeless Working-age Adults in Los Angeles County after the 2008 Recession



Sources: Unemployment data is from Current Population Survey basic monthly data. Homelessness data is from administrative records of Los Angeles County public assistance recipients, Economic Roundtable, "Early Intervention to Prevent Persistent Homelessness: Predictive Models for Identifying Unemployed Workers and Young Adults who become Persistently Homeless," 2019. Homelessness is defined as not having a place of your own to sleep.

Unemployment that was attributable to the 2008 recession continued to grow until 2010, but homelessness that was attributable to the recession continued to grow until at least 2011, as shown in *Figure 12*.

A total of 755,000 adults in Los Angeles County are estimated to have become unemployed because of the 2008 recession, rather than because of underlying pre-recession trends, and an estimated 78,000 working-age adults are estimated to have become homeless because of the recession, as shown in *Figure 13*. The ratio between unemployment and all types of homelessness shown by this data is:

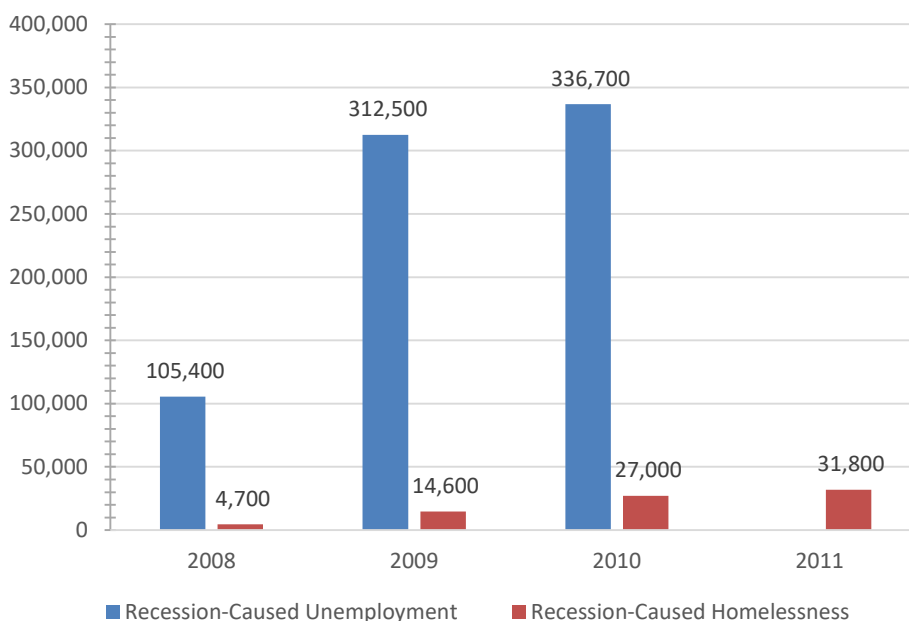
- 10.3 percent of recession-caused point-in-time unemployment in Los Angeles County during and after the 2008 recession is estimated to have been linked to subsequent point-in-time homelessness of some type among working-age adults – either chronic, episodic, transitional, or hidden.

Homelessness grew more slowly than unemployment and remained persistently high for longer, increasing in each of the four years following the onset of the 2008 recession. The share of total recession-caused homelessness that occurred in each year is as follows:

- 2008 6 percent
- 2009 19 percent
- 2010 34 percent
- 2011 41 percent

10.3% of unemployed workers in Los Angeles County are projected to experience some type of homelessness.

Figure 13: Estimated Annual Increase in Working-age Adults in Los Angeles County Who Did Not Have a Place of Their Own to Sleep because of Unemployment in the 2008 Recession



Sources: Unemployment data is from Current Population Survey basic monthly data. Homelessness data is from administrative records of Los Angeles County public assistance recipients, Economic Roundtable, "Early Intervention to Prevent Persistent Homelessness: Predictive Models for Identifying Unemployed Workers and Young Adults who become Persistently Homeless," 2019. Homelessness is defined as not having a place of your own to sleep.

Projected Unemployment from the Pandemic Recession

Monthly unemployment is estimated to have increased by over eight million U.S. workers in 2020 because of the Pandemic Recession, followed by over seven million in 2021 and over five million in 2022. These projections along with projections for California and Los Angeles County are shown in *Figure 14*. Unemployment is projected to have peaked in 2020 and to decline in 2021 and 2022.

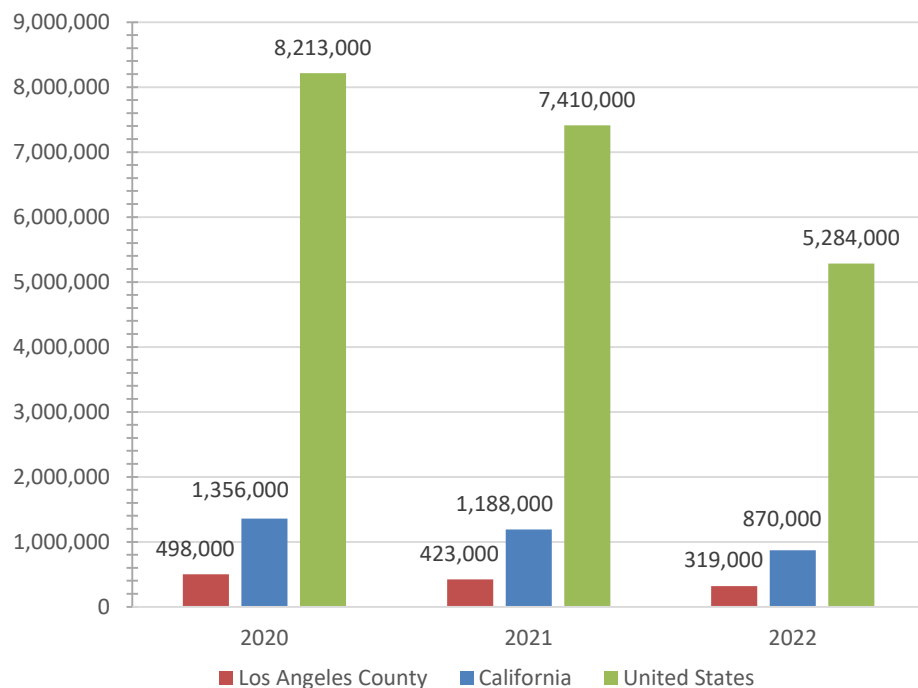
The projected monthly increase in the number of unemployed workers is in addition to the monthly unemployment level that preceded the onset of Covid-19 and is derived by applying the projected unemployment rates shown in *Figures 7 to 9* to the size of the labor force in 2019.

Sixteen percent of U.S. unemployment in the Pandemic Recession is projected to impact California workers and six percent is projected to impact Los Angeles County workers. However, this represents a larger share of state and local workers than of U.S. workers because of higher unemployment rates. As mentioned earlier, California's unemployment rate is 24 percent higher, and Los Angeles County's rate is 54 percent higher than the U.S. rate.

California's pandemic-caused monthly unemployment is projected to be over one million higher than pre-pandemic levels in 2020 and 2021, and

California is projected to have 16% of total U.S. unemployment.

Figure 14: Estimated Increase in Average Monthly Unemployment in the 2020 Pandemic Recession



Sources: Projected unemployment is from the Congressional Budget Office July 2020 estimates. Projected unemployment in California and Los Angeles County is adjusted based on the differential in unemployment compared to the United States over the past 12 months. Unemployment data for 2020 is from the Current Population Survey with unemployment in the fourth quarter estimated to be the same as in the third quarter.

almost 900,000 higher in 2022. Los Angeles County's monthly unemployment is projected to be nearly half a million higher in 2020 and 2021, and over 300,000 higher in 2022, as shown in *Figure 14*.

An estimated 346,000 working-age California adults are projected to experience homelessness because of the Pandemic Recession.

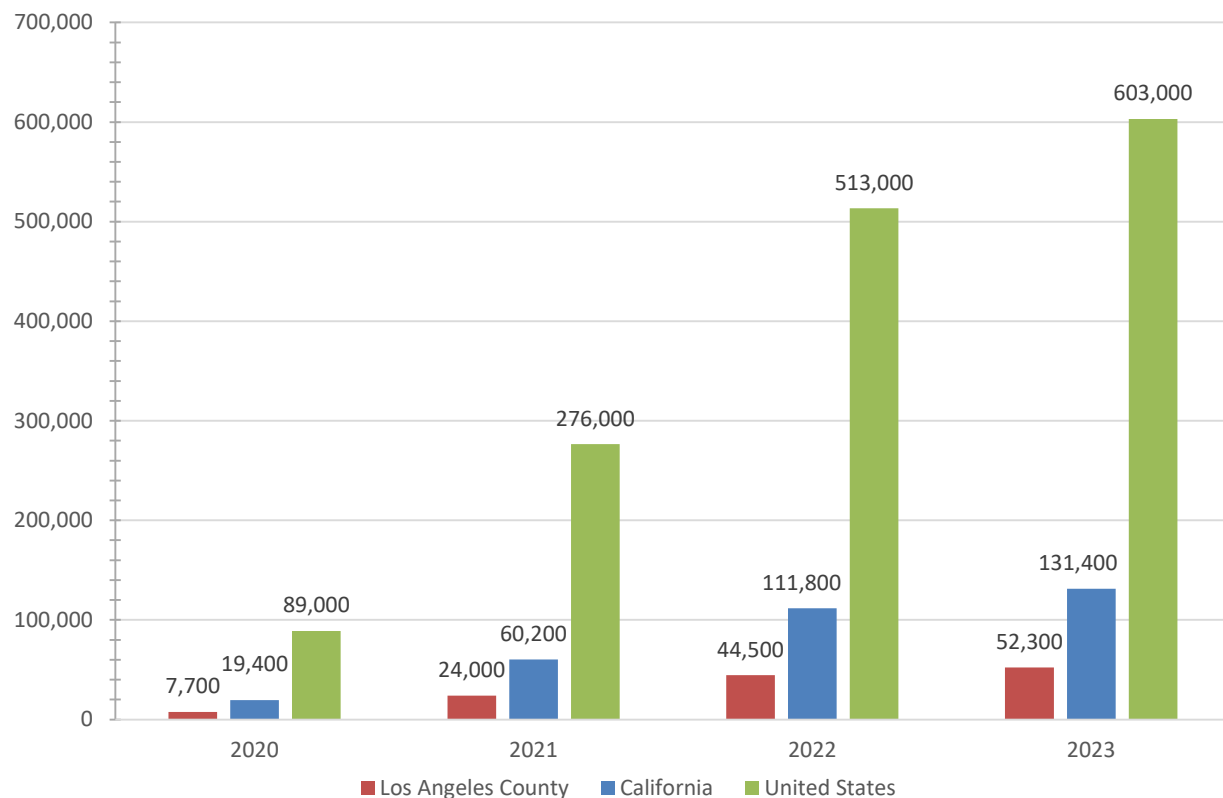
Projected Homelessness from the Pandemic Recession

We can estimate the number of unemployed workers who will become homeless as a result of the Pandemic Recession through two steps:

1. Apply the 10.3 percent ratio of unemployment to homelessness of all types found in Los Angeles County in the 2008 recession to the number of workers who are projected to be unemployed in the 2020 recession.
2. Adjust the unemployment-to-homeless ratio for California and United States downward based on their respective propensity to produce homelessness among the working-age population compared to Los Angeles County's propensity.

Total homelessness is broken out into type of homelessness (couch surfing, literally homeless, chronically homeless) in the following section, but a

Figure 15: Estimated Annual Increase in Working-age Adults who will Not Have a Place of Their Own to Sleep because of Unemployment in the Pandemic Recession



Sources: Unemployment data is from Current Population Survey basic monthly data. Homelessness data is from administrative records of Los Angeles County public assistance recipients, Economic Roundtable, "Early Intervention to Prevent Persistent Homelessness: Predictive Models for Identifying Unemployed Workers and Young Adults who become Persistently Homeless," 2019. Homelessness is defined as not having a place of your own to sleep. Unemployment estimates are from Congressional Budget Office projection, July 2020.

The Pandemic
Recession is
projected to cause
twice as much
homelessness as
the 2008 Great
Recession.

preview of this breakout shows the following comparative propensities for homelessness among the working-age population:

- Los Angeles County 100 percent
- California 91 percent
- United States 68 percent

The higher rate of homelessness among working-age adults in Los Angeles County reflects a less forgiving socio-economic ecosystem with extreme income polarization, a large low-wage labor force, high housing costs, and sizable populations of vulnerable minorities who are subject to discrimination.

Annual estimates of total homelessness of all types in the United States, California and Los Angeles County that are projected to result of the Pandemic Recession are shown in *Figure 15*.

The increase in the point-in-time homeless population is projected to peak in 2023, with 603,000 more working-age adults without a place of their own to sleep in the United States. California is projected to be home to 131,400 of those homeless adults, with 52,300 in Los Angeles County.

This is roughly twice as much growth in homelessness as we attribute to the 2008 recession. Part of the reason is that California's labor force has grown five percent since 2008. But the primary reason the homeless estimate is larger is that unemployment is projected to be higher in the 2020 Pandemic Recession.

Type of Homelessness in the Pandemic Recession

We made two separate analyses to produce a ratio between working-age homeless adults in two groups: those who were couch surfing versus those who met HUD's narrower definition of homelessness. People fit HUD's definition if they are sleeping in a place that is public or not meant for human habitation or a homeless shelter.¹⁵

We estimated of the number of *couch-homeless* adults by using the number of nonrelative household members 18 to 64 years of age reported by the Census Bureau. This data comes from Public Use Microdata Sample records of the American Community Survey for Los Angeles County and California.¹⁶ There are seventeen classifications of household members in census data. Nonrelative household members are distinct from other classifications for other people in the household who are related by blood or marriage as well individuals who are roomers, boarders, housemates or roommates, unmarried partners, or foster children. They are also distinct from people who are literally homeless and have no home whatsoever to live in. (*Table A-2 in the Data Appendix shows the number of nonrelative household members, broken out by gender and age, in each state and the largest 40 California counties.*)

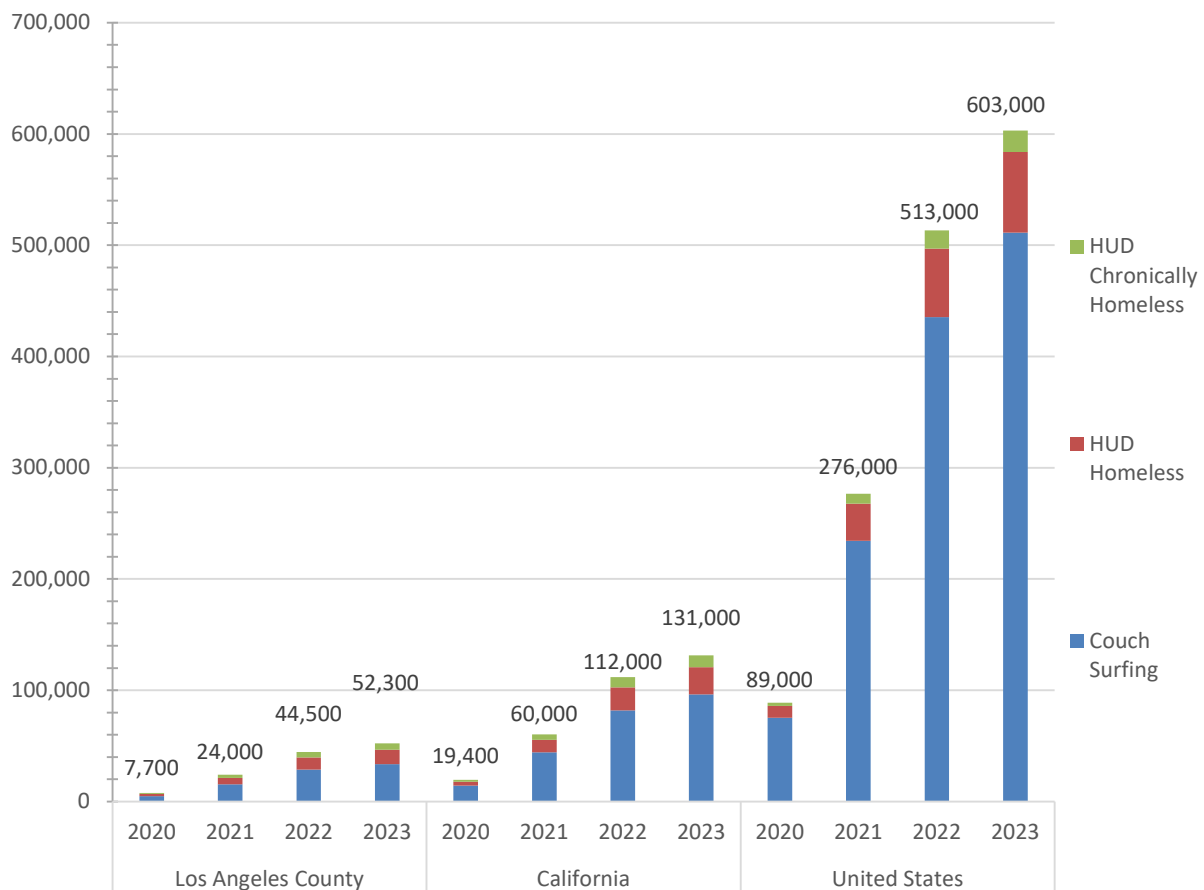
We used results from the homeless counts required by HUD to obtain the number of working-age adults (18 years of age and older) in Los Angeles County, California and the United States who fit HUD’s criteria for *literal homelessness* as well as the subgroup that fits the definition of chronic homelessness. Chronically homeless individuals have a disability and also have been homeless for 12 or more months.¹⁷ (Table A-3 in the Data Appendix shows the number of homeless and chronically homeless residents in 2019 in every U.S. jurisdiction with 1,000 or more homeless individuals.)

By applying the ratio of *couch-homeless* to *HUD-homeless* to the total population projected to be made homeless by the pandemic economy, we were able to forecast the type of homelessness that is likely to be experienced by the newly homeless population shown in Figure 15.¹⁸

Most homelessness from the pandemic economy is projected to be in the form of couch surfing, as shown in Figure 16. (Table A-4 in the Data Appendix provides detailed supporting data for Figure 16). This ratio varies between geographic areas based on differences in the ratio between

Most homelessness from the Pandemic Recession will be in the form of couch surfing.

Figure 16: Estimated Additional Homeless Working-age Adults Annually Caused by Unemployment in the Pandemic Recession broken out by Type of Homelessness



Sources: Homeless projections are derived from the Current Population Survey basic monthly data, administrative records of Los Angeles County public assistance recipients, Economic Roundtable, “Early Intervention to Prevent Persistent Homelessness: Predictive Models for Identifying Unemployed Workers and Young Adults who become Persistently Homeless,” 2019, and unemployment estimates from Congressional Budget Office projection, July 2020.

nonrelative household members reported by the Census Bureau to literally homeless individuals reported by HUD homeless counts.

We estimate that the types of homelessness experienced by working-age adults because of unemployment in the Pandemic Recession can be broken out as follows:

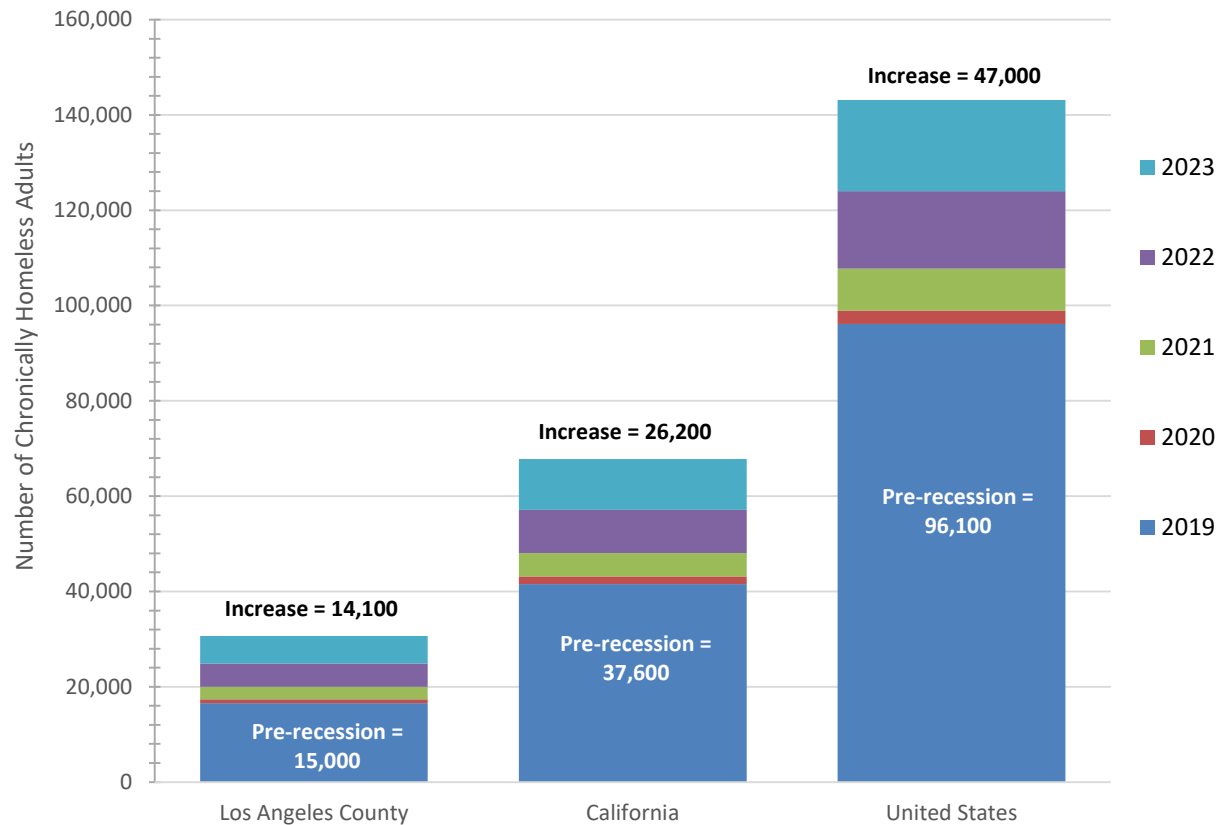
Region	Couch Surfing	Literally Homeless (HUD Criteria)	Chronically Homeless % of HUD Homeless
Los Angeles County	64%	36%	31%
California	73%	27%	30%
United States	85%	15%	21%

Chronic Homelessness

Chronically homeless individuals are projected to make up only three percent of projected pandemic-caused homelessness in the United States, seven percent in California and ten percent in Los Angeles County. However, these individuals become the public face of homelessness because they remain on sidewalks and in shelters month-after-month. The

The Pandemic Recession is projected to cause chronic homelessness to increase 68% in California.

Figure 17: Projected Annual Growth in Recession-Caused Chronic Homelessness



Sources: Homeless projections are derived from the Current Population Survey basic monthly data, administrative records of Los Angeles County public assistance recipients, Economic Roundtable, "Early Intervention to Prevent Persistent Homelessness: Predictive Models for Identifying Unemployed Workers and Young Adults who become Persistently Homeless," 2019, and unemployment estimates from Congressional Budget Office projection, July 2020.

projected annual growth in chronic homelessness, added onto the existing chronically homeless populations is shown in *Figure 17*.

Based on our scenario of unemployment and homelessness, we project that over the next four years the Pandemic Recession will cause chronic homelessness to increase 49 percent in the United States, 68 percent in California and 86 percent in Los Angeles County.

These homelessness estimates are driven by unemployment estimates and are directly scalable up or down, depending on new unemployment forecasts or actual levels of unemployment.

The underlying reality is that disconnection from work is a degenerative dynamic – less work, less earnings, less stable living conditions, and further disconnection from work. This dynamic has the greatest long-term costs for youth.

Youth enter adulthood with the energy and ambition of youth but also differing burdens and deficits. Those more heavily burdened may falter or lose ground in the job market as their peers gain ground, risk ongoing derailment in a shrinking job market, and slip into homelessness.

Disconnection from work is a degenerative dynamic - less work, less earnings, less stable living conditions, and further disconnection from work.

Summary

- Homelessness grew after unemployment grew in the 2008 recession, but with a lag.
- People are likely to fend off homelessness as long as possible by foregoing other expenses, relinquishing assets and going into debt in order to remain housed.
- The timing of both growing unemployment and growing homelessness in the 2008 recession and the ratio between these two adverse trends provides an evidence-based framework for a scenario of unemployment-driven homelessness in the 2020 recession when adjusted for geographic propensities for homelessness among working-age adults and differences in types of homelessness.
- The Pandemic Recession is projected to cause roughly twice as much homelessness as the 2008 Great Recession.
- Most homelessness from the pandemic economy will be in the form of couch surfing – 64 percent in Los Angeles County, 73 percent in California and 85 percent in the United States.
- Chronic homelessness is projected to increase 49 percent in the United States, 68 percent in California and 86 percent in Los Angeles County.
- These homelessness estimates are driven by unemployment estimates and are directly scalable up or down, depending on new unemployment forecasts or actual levels of unemployment.

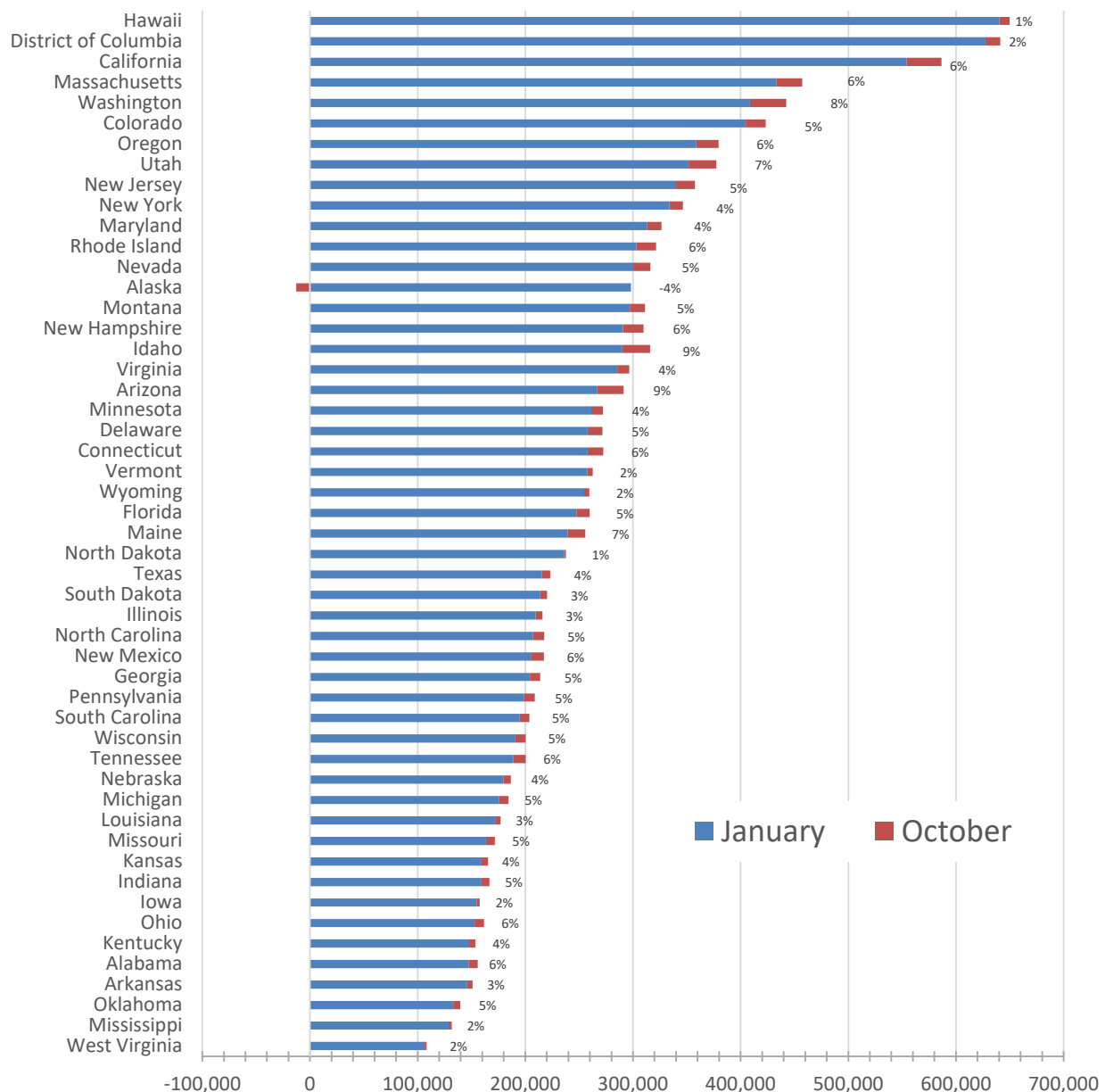


4. The California Housing Market in 2021

In many ways, the California housing market has been a bright spot in the midst of the Pandemic Recession. With interest rates dropping to record lows, mortgage activity has remained strong, home sales rebounded swiftly from the early lockdown days, and prices have actually increased. For many homeowners, this resilience has been rewarding, especially for the many borrowers who took advantage of low rates by refinancing their loans.

For the California economy overall, however, these silver linings mask severe affordability challenges that were already present before the pandemic and are becoming even worse with each passing month. In this section, we document and forecast this housing affordability crisis: before, during, and after the Pandemic Recession. We estimate the unpaid rental

Figure 18: Median House Price by State, 2020



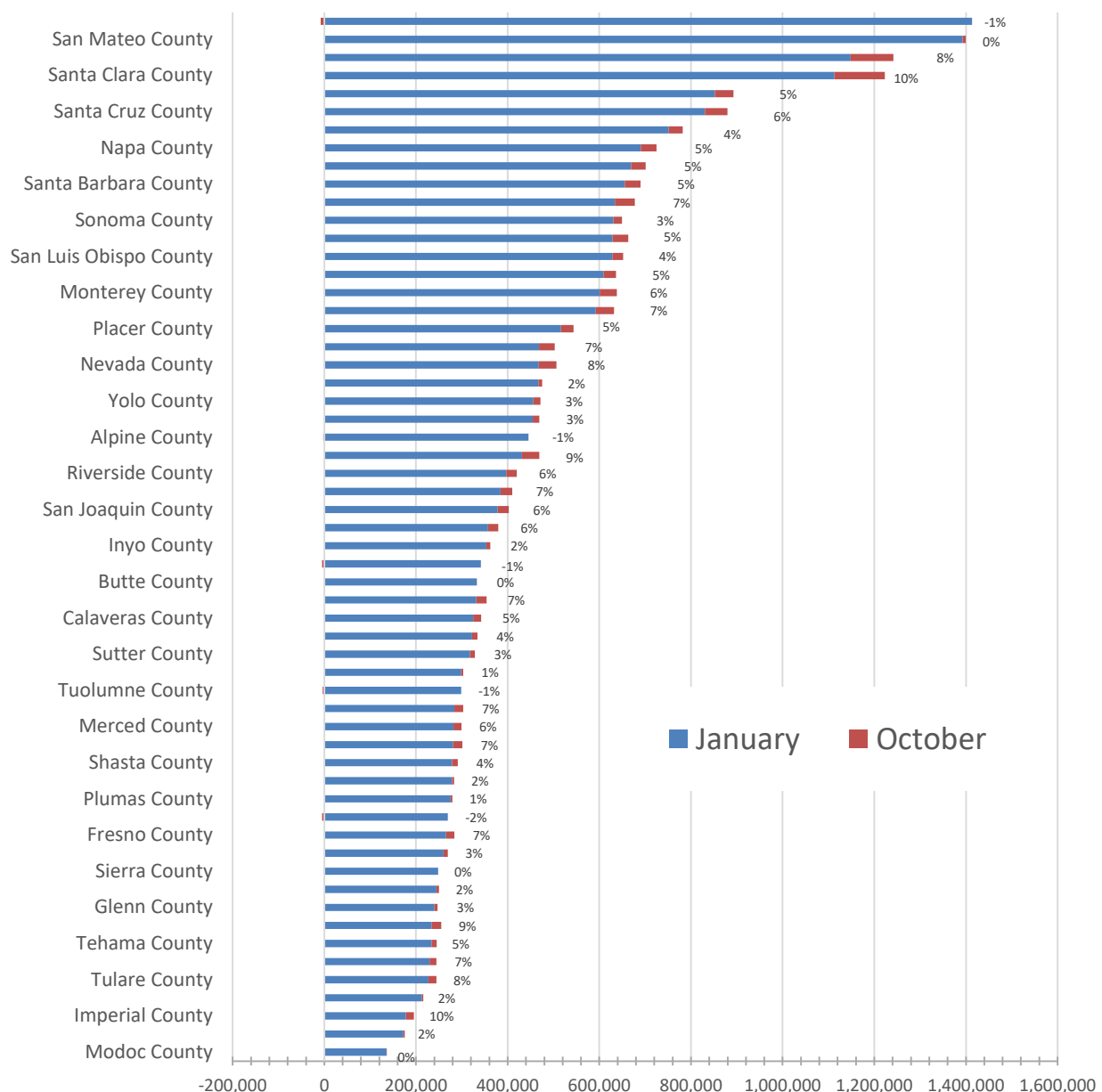
Source: Zillow.

and mortgage payments that have accumulated throughout the year, and we preview the uptick in evictions, foreclosures, and worsening cost burdens that are likely to befall Californians in the months and years ahead. We conclude with policy recommendations that can lessen these problems.

Housing Affordability Before Covid-19

California has some of the most expensive housing markets in the country. At the beginning of 2020, it had the second-highest median house price, \$554,229, of all the states, as shown in *Figure 18*, and the third-highest

Figure 19: Median House Price in California by County, 2020



Source: Zillow.

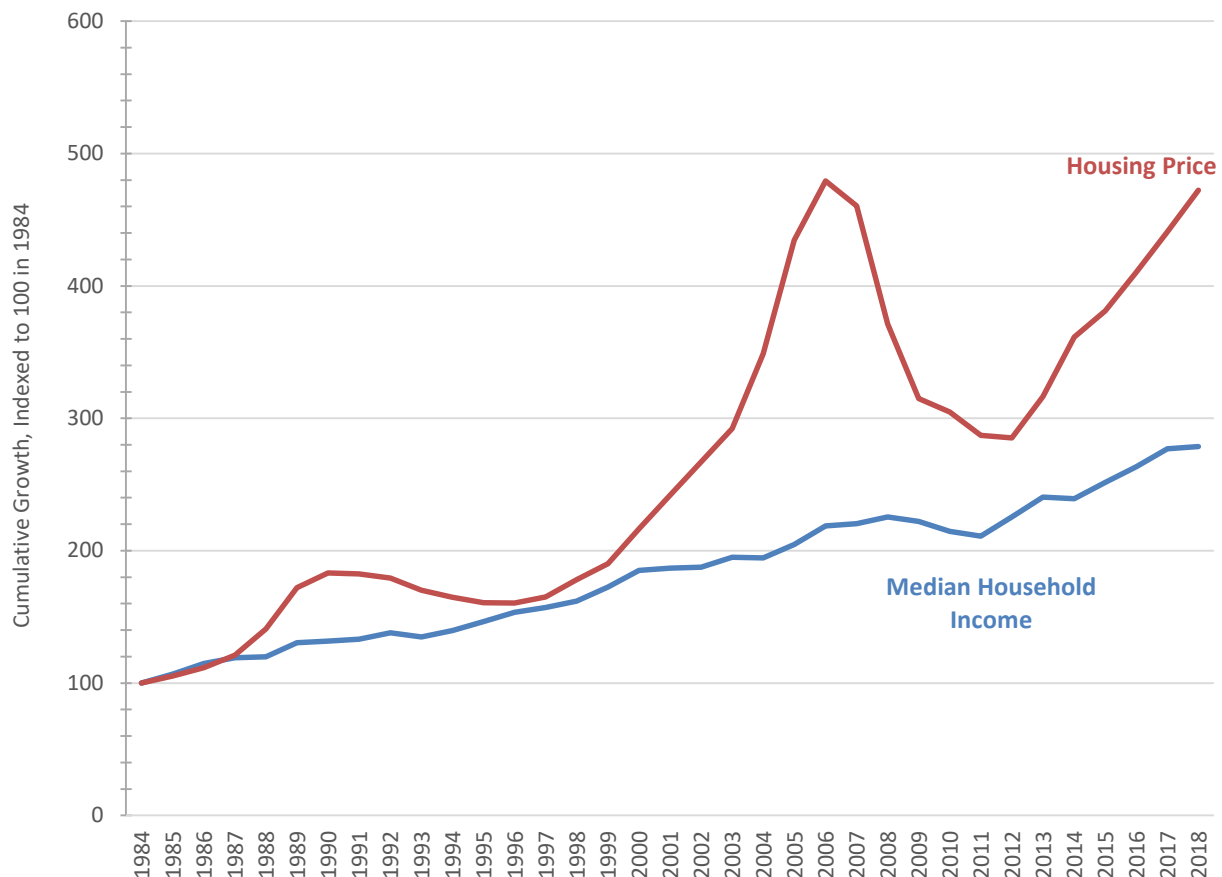
Four California counties have median housing prices over \$1,000,000.

when including the District of Columbia. The Pandemic Recession did not reduce this expense. On the contrary, house prices grew 6 percent from January to October, one of the highest growth rates in the country and faster than Hawaii and DC. Thus, California is catching up with the two most expensive regions and far outpacing the rest of the states, where median house prices range from 20 to 80 percent less expensive.

In many California counties, \$554,229 may seem like a bargain. The four most expensive counties, all located in the Bay Area, have median house prices over \$1 million, as shown in *Figure 19*. The 17 most expensive counties—located near the three largest cities, Los Angeles, San Diego, and San Francisco—all have median house prices over \$600,000. Of these counties, all but the top two experienced significant price growth from January to October. Prices grew particularly fast in Santa Clara County (10 percent), Marin County (8 percent), Los Angeles County (7 percent), and San Diego County (7 percent).

Even before the recession, incomes were not keeping pace with this rapid housing price growth. As *Figure 20* shows, the median house price in California appreciated 372 percent from 1984 to 2018, while the median household income only grew 179 percent. Even the Great Recession did not deter this long-term trend. From 2006 to 2012, the California housing

Figure 20: Median House Price vs. Median Household Income in California, 1984-2018



Sources: Federal Housing Finance Agency; Current Population Survey, U.S. Census Bureau.

market lost 40 percent of its value, but by 2018, it had regained it all. Given the additional appreciation during the current recession, it is clear that median housing prices now exceed their previous “bubble” peak.

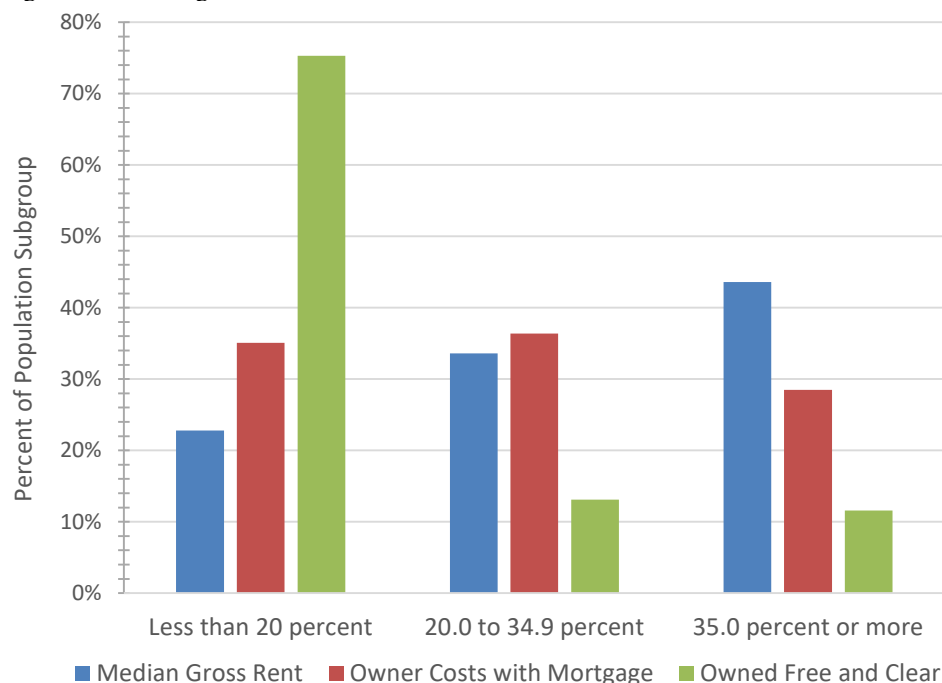
These prices have translated into rapidly growing rents for tenants as well. As discussed earlier, rents have been growing faster than inflation in California in recent years. By 2018, they were approximately 45 percent higher than they had been only seven years earlier, when the housing recovery began. Housing prices rose 64 percent over that same period. In contrast, median household income only increased 32 percent. Both homeownership and rental markets, therefore, became less affordable. It is important to remember that, although prices increased more than rents, renters tend to have lower incomes than homeowners, thus making each cost increase proportionally more burdensome.

Because prices and rents have grown faster than incomes for so long, housing costs have consumed an increasing portion of the average Californian’s budget. The U.S. Department of Housing and Urban Development considers a household to be “cost-burdened” if they pay more than 30 percent of their income on housing expenses. In California, over 5.3 million residents fall into this category: 53 percent of renters, 37 percent of owners with a mortgage, and 15 percent of owners without a mortgage. In the U.S. it includes 48 percent of renters, 25 percent of owners with a mortgage, and 11 percent of owners without a mortgage.

As *Figure 21* shows, this pattern holds across the distribution of housing cost burdens: Renters are significantly more cost-burdened than owners, and indebted owners are more cost-burdened than owners with no

5.3 California residents are cost-burdened for housing.

Figure 21: Housing Cost Burden as a Percent of Income in California, 2019



Source: 2019 1-Year American Community Survey, U.S. Census Bureau.

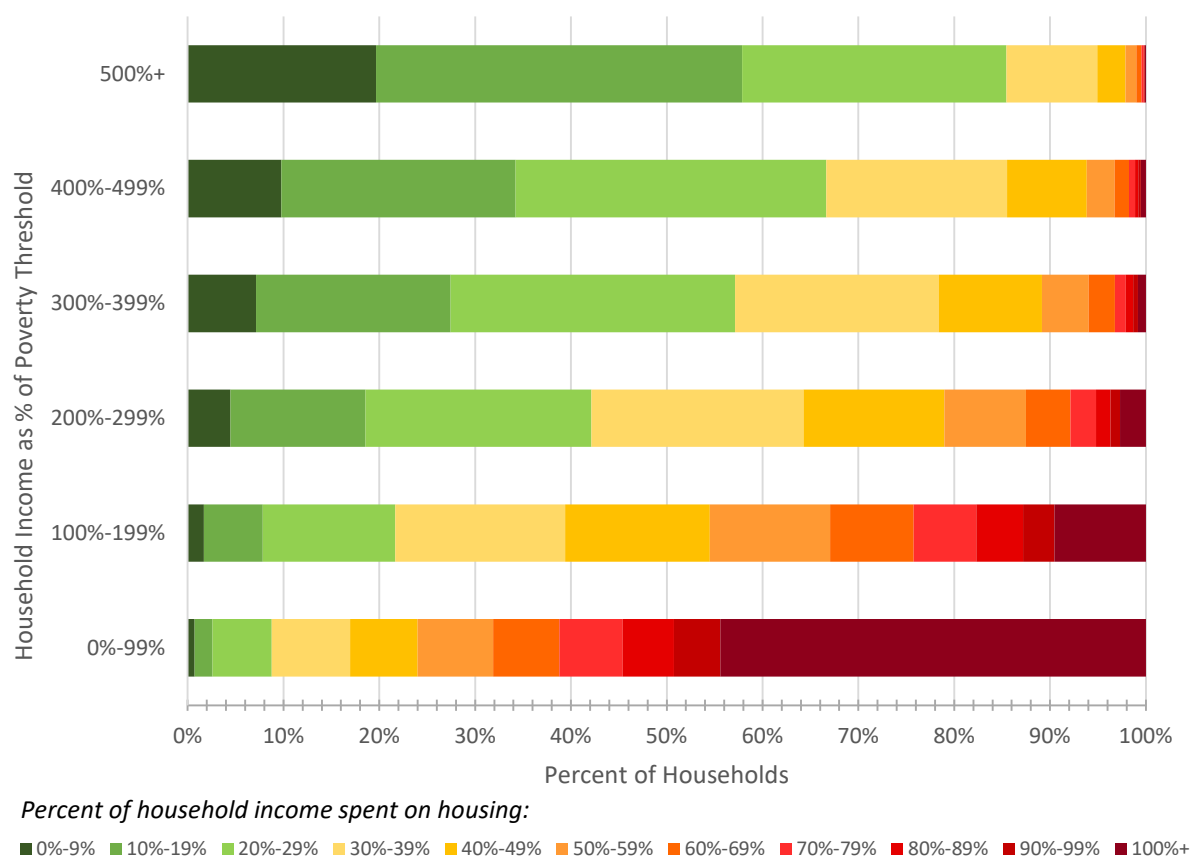
More than half of families in poverty spend over half of their income on housing.

mortgage debt. As a result, these residents have less disposable income to pay for child care, education, health care, transportation, and other necessities. They are more likely to experience poor mental and physical health, low housing quality, and lack of job access. When financial hardship hits, they are less likely to have enough savings to continue paying their rent or their mortgage, and therefore they are more likely to experience evictions and foreclosures, which impose even more strain on their fragile finances, health, and access to opportunity.

These cost burdens fall disproportionately on families with the lowest incomes. This problem is so severe that the poorest families are nowhere near HUD's definition of "cost-burdened." Of the families living below the poverty line, nearly 90 percent in California (shown in *Figure 22*) and 80 percent in the United States fall are cost-burdened, but most spend far more than 30 percent of their income on housing. Almost three-quarters of California families in poverty and over half of U.S. families spend over half of their income on housing, and over 40 percent of California families and 28 percent of U.S. families spend *all* of their income.

Public policies, such as Housing Choice Vouchers, exist to help these families, but they are a scarce resource and are not available to most low-income families. Income is still one of the primary determinants of a family's likelihood of being cost-burdened. For families with incomes

Figure 22: Percent of Income Spent on Housing by California Families, 2014-2018



Source: U.S. Census Bureau American Community Survey Public Use Microdata Sample 2014-2018

between 100 percent and 199 percent of the poverty threshold, over 70 percent are cost-burdened, and over 40 percent spend over half of their income on housing. For families with incomes that are two to three times greater than the poverty threshold, the cost-burdened share goes down to a little over 50 percent, and less than 20 percent spend over half of their income. For families earning at least five times the poverty threshold, less than 15 percent are cost-burdened, and very few spend more than half of their income on housing.

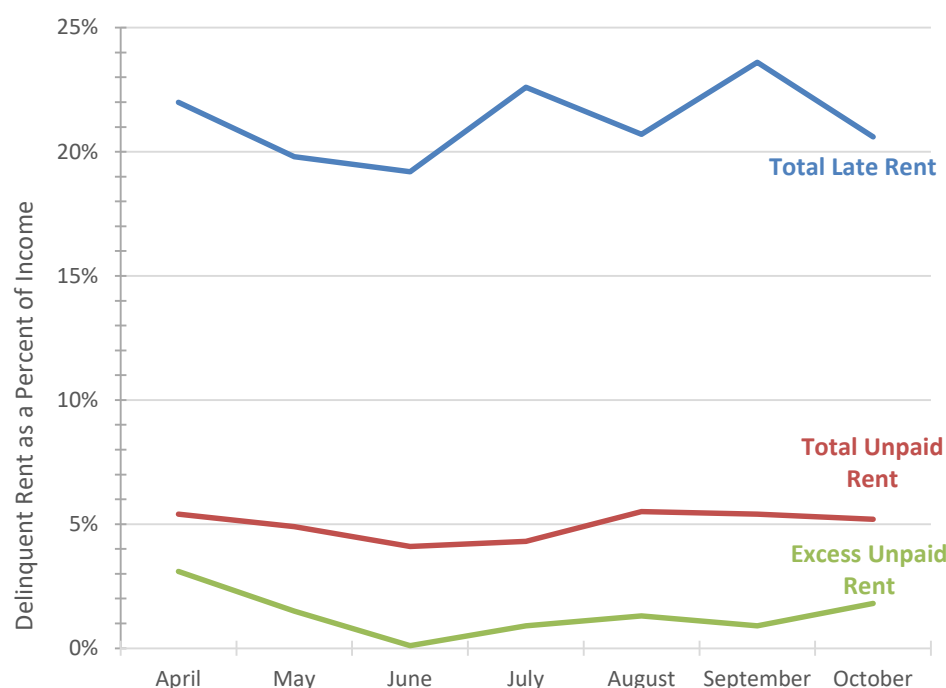
These patterns are similar in Los Angeles County. Here too, over half of poor families pay over half of their income for housing. Importantly, these statistics reveal the pre-Covid status quo, reflecting surveys from 2014 to 2018. If these families had such difficulty paying for housing in a growing economy, it is likely that they have even greater difficulty paying for housing in the severe recession that we are experiencing in 2020. These extraordinary cost burdens put them at high risk of defaulting on rent or mortgage payments, getting evicted, or losing their homes to foreclosure.

The collision of housing cost and severe economic weakness has raised the likelihood of tenants missing rent payments and being evicted.

Defaults, Evictions and Foreclosures

The collision of housing cost and severe economic weakness has raised the likelihood of tenants missing rent payments and potentially being evicted as a result. To mitigate this concern, many landlords and lenders have offered forbearance, deferring rental and mortgage payments for tenants and homeowners who are negatively impacted by the Pandemic Recession.

Figure 23: National Rent Delinquency in Large Institutional Properties During the Pandemic Recession



Source: National Multifamily Housing Council.

Unpaid rent could double by early 2021, straining landlord budgets and increasing pressure to evict delinquent tenants.

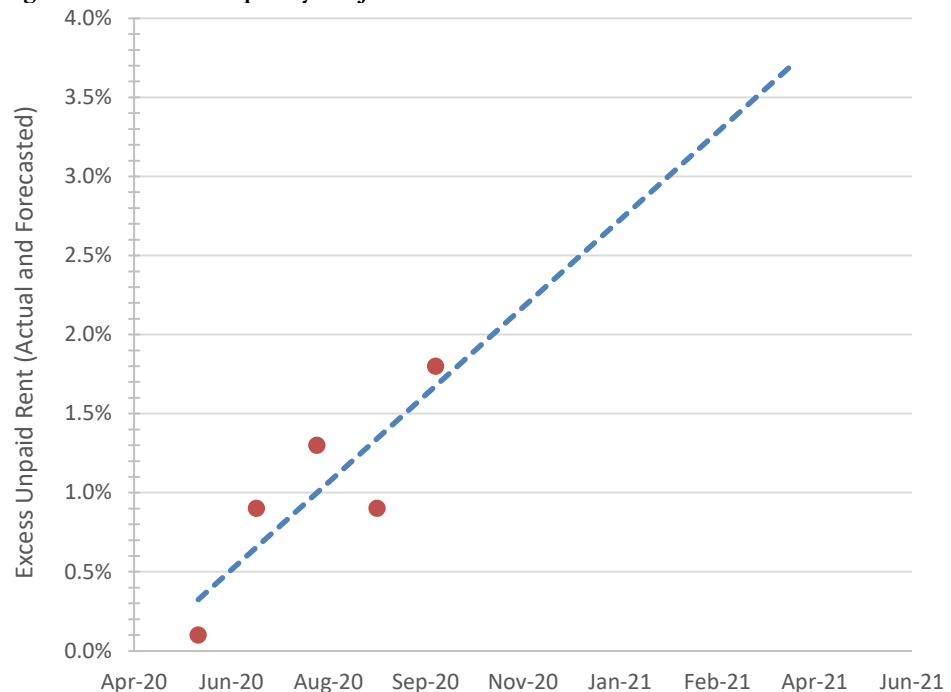
Despite this offer, it appears nationally that most tenants have been paying their rent. Since the beginning of the recession, the National Multifamily Housing Council has been surveying landlords to determine the percent of tenants who are not paying rent at the beginning and end of each month.

The NMHC tends to focus on large institutional properties, for which data is most easily available, and therefore these results may not reflect the vulnerability of lower-income tenants. (We focus more on this latter group in other calculations below.) As shown in *Figure 23*, these data suggest that 95 percent of tenants in these large institutional properties are paying their rent, on average, each month. This rate is only slightly lower than the same months in 2019.

Absent significant economic growth and/or fiscal stimulus, however, it is unlikely that this high payment rate will continue throughout 2021. Many of these tenants were able to rely on a combination of savings, unemployment insurance, tax rebate checks, and other aid to compensate for lost income throughout 2020, but those resources are waning.

In fact, there is already some evidence that delinquency rates are rising in the later months of *Figure 23*. Excess unpaid rent, relative to pre-recession levels, rose in the second half of the summer, dipped slightly in September, and now is higher in October than it has been since May. If this trend continues, the linear projection in *Figure 24* forecasts that the excess unpaid rent could double by early 2021, straining landlord budgets and increasing pressure to evict delinquent tenants.

Figure 24: Rent Delinquency Projection Based on Recent Trend



Sources: Red dots indicate actual unpaid rent from National Multifamily Housing Council. Dotted blue line is a linear projection created by Anthony W. Orlando.

This risk is not distributed equally across Californian families. Unfortunately, it is much higher for vulnerable minorities who already suffer from housing discrimination and large, persistent wealth gaps. A recent analysis by the Federal Reserve showed that families are significantly more likely to default on next month's rent or mortgage if they report lower "confidence" in their ability to pay in the month ahead.¹⁹

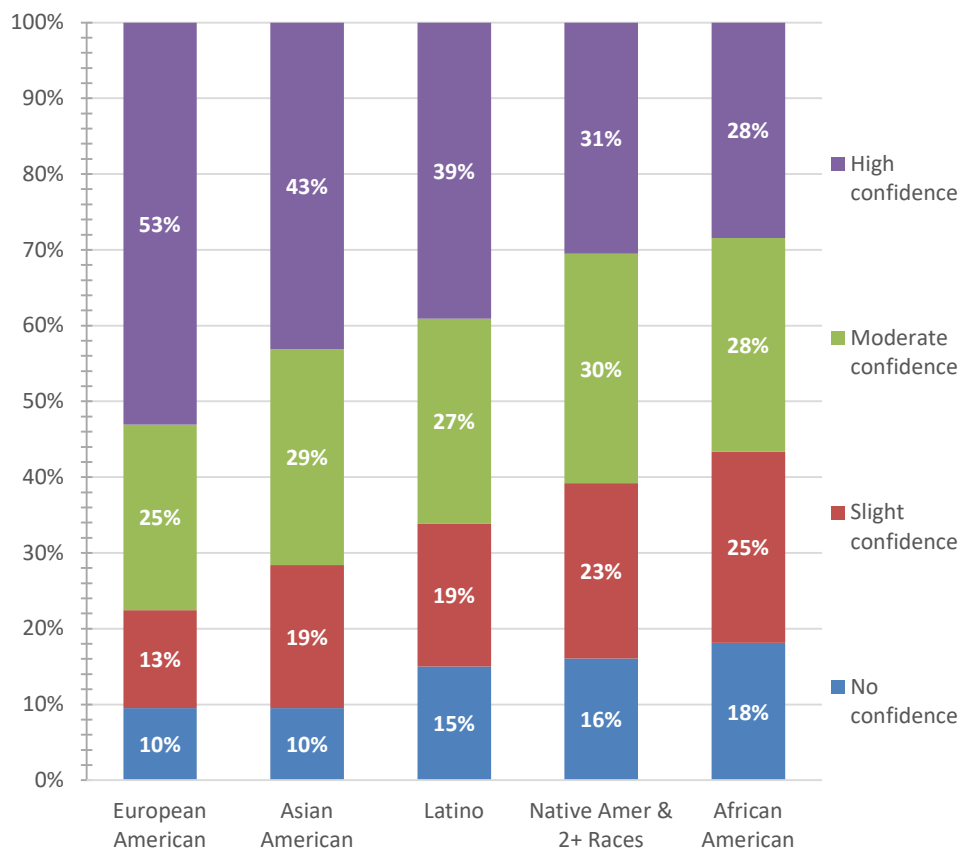
The U.S. Census Bureau has been asking Americans about this level of confidence throughout the pandemic in their new Weekly Household Pulse Survey, and as *Figure 25* shows, there are large, negative differences between European Americans and minority groups who tend to have fewer resources and experience greater discrimination.

Among households who have recently experienced job loss—the category most likely to increase during a recession and to persist in the absence of fiscal stimulus—European Americans are approximately twice as likely as African Americans or Latinos to report that they have “high confidence” in their ability to pay next month's rent or mortgage.

Whereas half of European Americans express high confidence, approximately half of Africans Americans and Latinos express “no confidence” or only “slight confidence.” Clearly, the risks of default,

Half of Africans Americans and Latinos express no confidence or only slight confidence that they can pay next month's rent.

Figure 25: Lack of Confidence in Ability to Pay Next Month's Rent or Mortgage Among United States Residents, 19-65 Years of Age, with Recent Household Job Loss



Source: Weekly Household Pulse Survey, August 19 to November 23, 2020, U.S. Census Bureau.

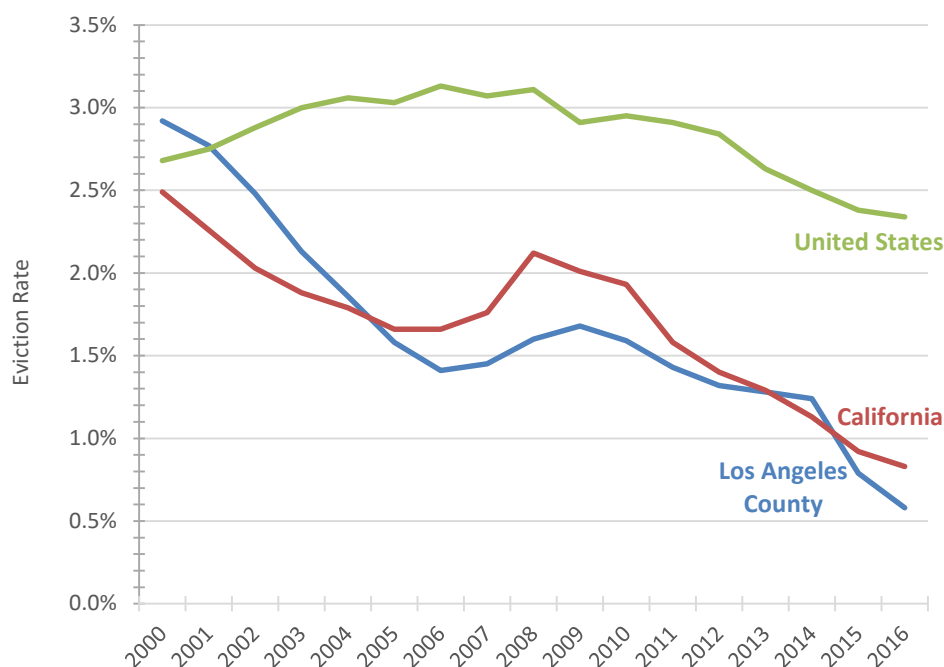
One-third of African-American and Latino renters are behind on rent and expecting eviction.

eviction, and foreclosure are significantly greater for these latter groups, exacerbating inequities that are already wide and growing in recent years.

Since 2000, there is little evidence that eviction rates have fluctuated as severely as the rest of the economy. Nationally, they rose in the early 2000s and peaked during the Great Recession, falling slowly from 2008 to 2016, when the latest data are available. In California, the experience has been very different. Although there was an uptick during the Great Recession, in general eviction rates have fallen significantly from 2000 to 2016. Experts have not conclusively determined the cause(s) of this trend, but it is probably a combination of increased legal aid for victims, new technology for landlords to screen tenants, gentrification filling neighborhoods with low-delinquency residents, and more evictions occurring outside the documented court system. As a result, *Figure 26* only tells part of the story. However, it does suggest that evictions are driven only partly by cyclical factors like unemployment. In the Great Recession, California's annual eviction rate increased by one-third above the pre-recession level. In the pandemic recession, the level of unemployment and public financial support that will be provided for unemployed workers remains to be determined.

Given the disproportionate housing cost burden across society, it is not surprising that this risk of eviction is unequally distributed as well. *Figure 27* shows how likely an American adult is to face eviction or foreclosure if they belong to different groups in society. Demographics are a significant factor, but the strongest determinants appear to be employment and finances. Approximately one-third of African-American and Latino renters, for instance, are behind on rent and expecting eviction. Since these are

Figure 26: Eviction Rate at National, State, and Local Levels, 2000-2016



Source: Eviction Lab, Princeton University.

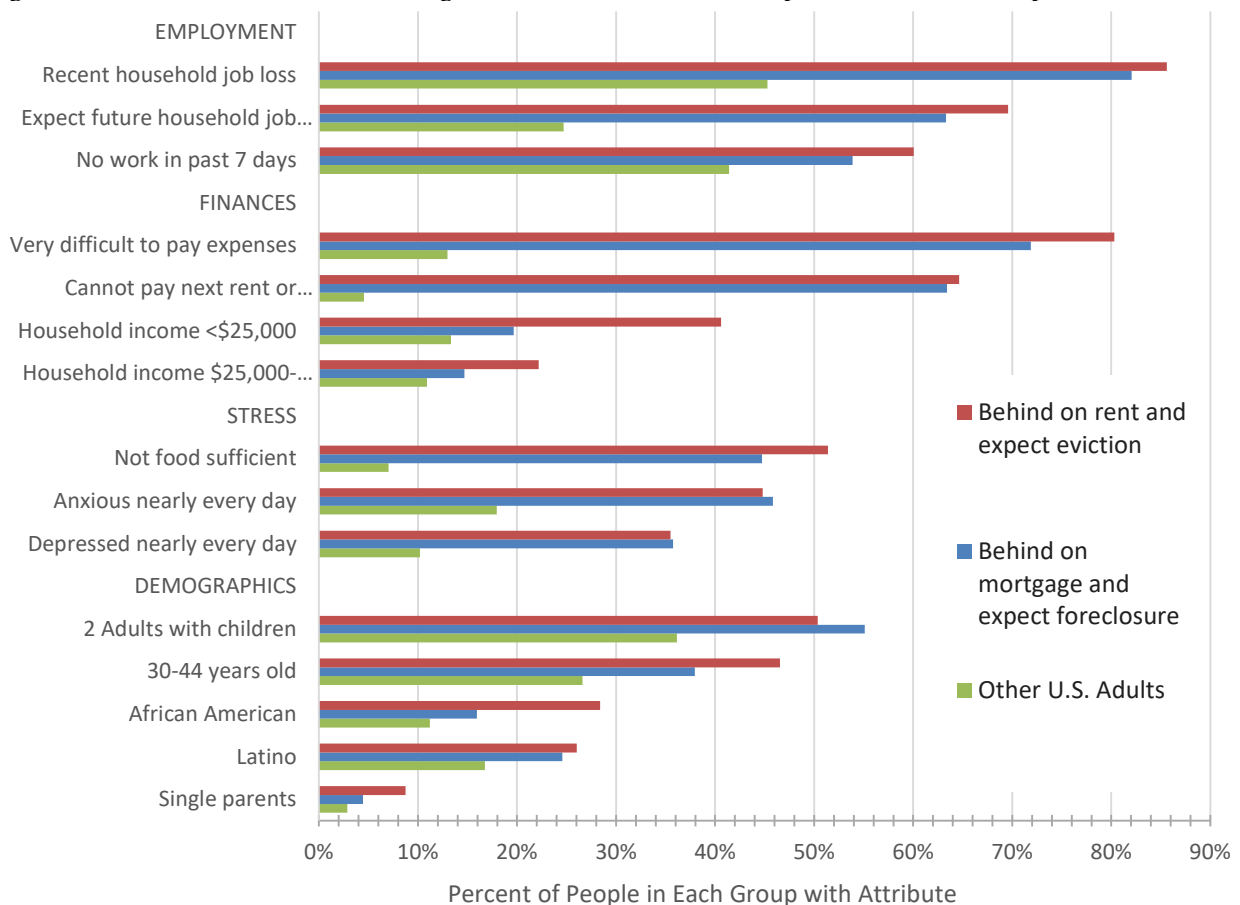
expectations rather than evictions, it is unlikely that all of these renters actually will be evicted. However, it is a useful measure of (a) the pressure these families are experiencing from housing cost burdens and (b) the likely distribution of evictions across different members of society.

The most important determinant of facing eviction or foreclosure, according to these Weekly Household Pulse Survey responses, is recent household job loss. This factor is significantly more important than the level of income, the demographics, or the mental health of the individuals. This is particularly important during this Pandemic Recession, when job loss has been rapid and severe. The longer the labor market remains weak, the greater the likelihood that Americans will face eviction or foreclosure. Based on these findings, public policies that help American workers will have a significant co-benefit of preventing loss of housing. Since eviction leads to many negative outcomes—material hardship, depression, physical illness, and stress, for example—this aid would minimize these catastrophic impacts as well.²⁰

The most important determinant of facing eviction or foreclosure is recent household job loss.

As with any financial loss, these risks threaten both parties in the contracts. When tenants default on their rent, landlords earn less revenue, which threatens their ability to meet their obligations to lenders and other expenses. If the buildings are owned by large institutional investors, the

Figure 27: Attributes of U.S. Adults Facing Eviction or Foreclosure, Compared to Balance of Population



Source: Weekly Household Pulse Survey, August 19 to November 23, 2020, U.S. Census Bureau.

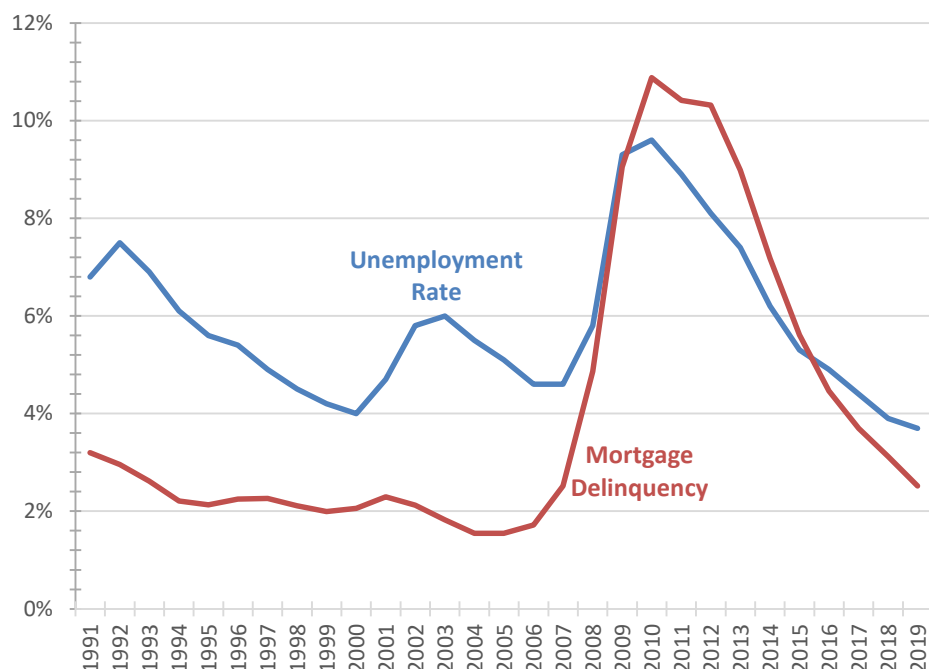
1 percentage point
increase in
unemployment is
associated with a
1.45 percentage
point increase in
mortgage
delinquency.

landlords may have access to capital markets and lines of credit to cover their shortfall during the pandemic. For smaller landlords, however, the risk of delinquency—and thus, foreclosure—is higher. New research shows that these smaller landlords, owning small-to-medium-sized multifamily properties with 2 to 49 units each, charge the lowest rents and therefore house the greatest proportion of lowest-income tenants in the country.²¹ Thus, they are (a) at the greatest risk of rental default and (b) essential to preserving housing affordability post-Covid. If they are forced to turn their properties over to lenders due to foreclosure, it is likely that many properties will disappear from the affordable housing stock, exacerbating the crisis.

It is possible to forecast the potential increase in landlord and homeowner distress by comparing mortgage delinquency to unemployment over the past three decades, as in *Figure 28*. Delinquency rates appear to be more cyclical than eviction rates, though the 2008–2014 episode should be viewed with caution due to the unusual nature of this housing boom and bust. The United States has not experienced such a severe uptick in homeowner distress since the Great Depression. We should not expect the same level of mortgage delinquency in the current recession.

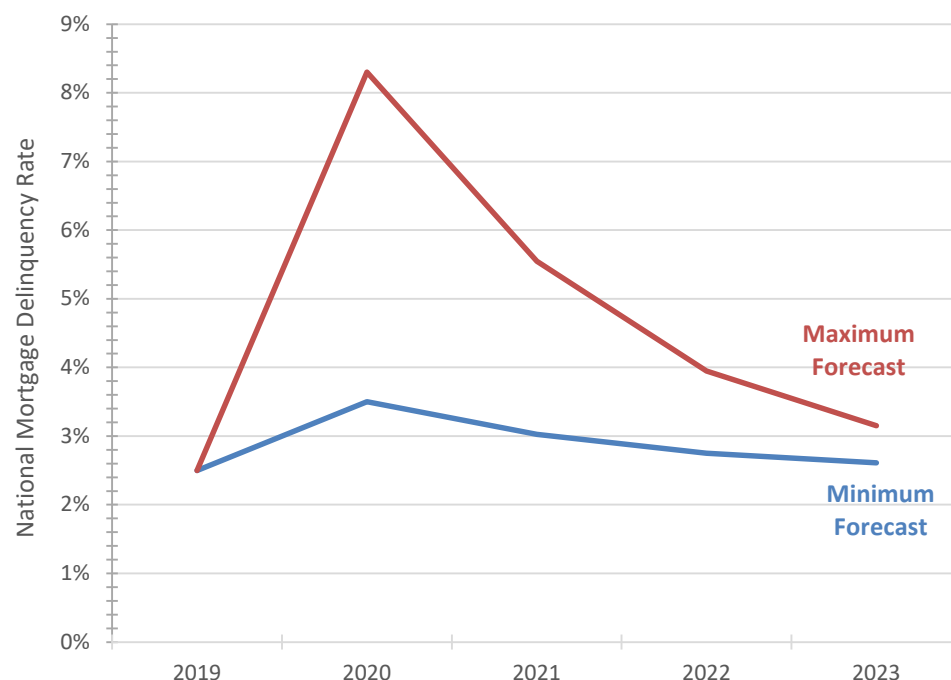
Averaging over the entire time period, we find that a 1 percentage point increase in unemployment is associated with a 1.45 percentage point increase in mortgage delinquency. If we confine our attention to the pre-2008 period, then a 1 percentage point increase in unemployment is associated with a 0.25 percentage point increase in mortgage delinquency.

Figure 28: Mortgage Delinquency vs. Unemployment in the United States, 1991–2019



Sources: National Bureau of Economic Research; U.S. Bureau of Labor Statistics.

Figure 29: Forecasted Mortgage Delinquency Rates, Based on Historical Trends



Sources: Anthony W. Orlando's forecasts based on linear regression models of mortgage delinquency rates from National Bureau of Economic Research, historical unemployment rates from U.S. Bureau of Labor Statistics, and projected unemployment rates from the Federal Reserve.

In *Figure 29*, we use these estimates as upper and lower bounds to forecast the potential change in mortgage delinquency rates if the unemployment rate follows the average projections of the Federal Reserve. Based on the high leniency of forbearance, the final delinquency rates for 2020 will probably veer closer to the minimum forecast. However, it is not guaranteed that delinquency rates will remain low in the following years.

If lenders are only delaying the distress, then borrowers may default at higher rates in 2021. Moreover, if policymakers do not enact fiscal stimulus to help borrowers in 2021, then it is unlikely that the housing market will be as forgiving as it has been in 2020. Therefore, the maximum forecast gives an indication of the foreclosures that may occur if the economy does not recover quickly and public policy does not prevent or alleviate financial distress. The high uncertainty in this picture reflects high uncertainty about how the country's leadership will choose to respond to the lingering weaknesses in the economy.

Policy Prescriptions

This evidence demonstrates that fiscal stimulus and forbearance earlier this year have been effective, so far, in averting a surge in evictions and foreclosures. Despite a severe housing affordability crisis pre-Covid, compounded by high job loss and income loss, negative housing market outcomes—namely, defaults, evictions, delinquency, and foreclosures—have remained lower than might have been expected based on historical

trends. However, these policies are reaching their end. Most households have spent their stimulus checks, unemployment insurance benefits are expiring, and landlords and lenders are reducing forbearance as their own financial distress is taking precedence. If the economy remains weak, millions of Californians are at risk of significant housing dislocation.

The most effective policy agenda is to meet the needs of all housing market participants who are suffering from this pandemic. Thus, while it should aid both borrowers and lenders, both tenants and landlords, it should concentrate more aid on lower-income tenants and smaller landlords, who have the least resources to weather the crisis and therefore are at the greatest risk of eviction and foreclosure.

Forbearance and Forgiveness

It is not surprising that forbearance has been positive for the economy. Previous research on the Great Recession showed that foreclosure prevention laws helped California's housing market—and as a result, its entire economy—recover faster than other comparable states because it short-circuited the spiraling havoc that foreclosures can reap on the surrounding local economies.²² However, forbearance is costly for lenders and landlords. They can only sustain such a revenue loss for a temporary period. If public policy can help to cover this shortfall, then forbearance can continue until the pandemic is concluded and the crisis is over.

At federal, state, and local levels, policymakers should give financial incentives to landlords and lenders not only to defer rental and mortgage payments but even to forgive payments that were missed during the pandemic. During the Great Recession, mortgage modifications tended to focus on reducing payments but not forgiving the principal of the loan. This compromise left borrowers with significant debt hanging over their financial futures, impinging on their willingness to keep making payments and their ability to fuel the recovery from the recession.²³ In contrast, recent research shows that a moderate amount of loan forgiveness can have a much greater stimulative effect on the economy and a much more positive effect on the stability of American families.²⁴

Applying this logic to rental markets, urban planner Nithya Raman, newly elected to the Los Angeles City Council, has proposed a four-part plan to forgive rents:²⁵

1. Create a “rental registry” to track all rental properties in the city;
2. Require proof of unpaid rent from landlords who wish to receive aid;
3. Reimburse landlords with affordable units and small properties up to the median rent in the city; and

Policymakers should give financial incentives to landlords and lenders to defer rental and mortgage payments and forgive payments that were missed during the pandemic.

4. Offer credits for future tax payments to larger landlords, thus delaying the full expense to the taxpayers until the city's finances improve.

This is only one example of how rent forgiveness could operate. On a larger scale, President-Elect Joe Biden has advocated both rent and mortgage forgiveness across the country, funded by “federal relief funds for landlords and lenders” who agree to a set of tenant protections.²⁶ Ideally, all three levels of government—federal, state, and local—can work together to share the cost and the administration of such a program.

Income and Payment Support

It is important to remember that most Americans *want* to meet their financial obligations. If public policy can cover the shortfall in their incomes, then they can continue making payments without the need for forbearance. As a result, researchers at the Federal Reserve Bank of Atlanta have found evidence that income support is even more effective than forbearance in supporting the mortgage market and improving the financial position of borrowers.²⁷ Since households often know best how to allocate their own money, it makes sense to give the support directly to them rather than to their landlords or lenders.

The largest and most well-known policy of directly aiding tenants is Housing Choice Vouchers, also known as Section 8. This program is federally funded and locally administered. It pays subsidies to landlords on behalf of low-income families. Unfortunately, it is woefully underfunded. Each year, there are far more eligible households than the program can afford to subsidize. In Los Angeles, families have to sit on the waiting list for over a decade before they can access a voucher—and even then, many recipients have difficulty finding an affordable unit owned by a landlord who is willing to accept vouchers. Across the country, there is widely documented discrimination against voucher recipients, even if landlords would receive the exact same payment from unsubsidized tenants.

During this recession, the program has become even more costly per recipient, as income losses have caused a greater shortfall that needs to be covered by subsidies. As a result, if Congress does not vote to increase funding in 2021, over 50,000 *current* recipients will lose their vouchers—and therefore, likely lose their homes. This unreliable allocation of funds is cruel and arbitrary, making it impossible for low-income families to find the stability and affordability that they need to manage their finances. Section 8 should be fully funded for all eligible households. It should respond to the needs of the market, increasing subsidies in dire times to avoid this additional loss that comes at the worst possible time.

For homeowners, the largest support comes in the form of stable long-term mortgages with affordable interest rates—unlike the risky products that drove the housing bubble in the early 2000s. Fortunately, these safer, more transparent loans have dominated the market during the Covid-19

Most Americans want to meet their financial obligations. If public programs cover their income shortfall, they will continue to pay for housing.

Federal and state budgets should allocate money to cities to provide tenants with counsel in eviction proceedings.

recession thanks to the government-owned companies Fannie Mae and Freddie Mac, which have continued to purchase these mortgage products from lenders throughout the year. Their private-label competitors on Wall Street, in contrast, disappeared after the Great Recession and have not returned to the market. The Trump administration has considered privatizing Fannie and Freddie as well, returning them to the hands of shareholders who may push them to abandon strict underwriting standards and safe product design in another race to the bottom.²⁸ Privatization would be extremely disruptive to the mortgage market in the short run—potentially denying many Americans the ability to borrow affordably—and potentially destabilizing to the entire financial system in the long run. Instead, policymakers should focus on locking in the reforms that Fannie and Freddie have adopted during their government conservatorship and consider only paths that require the entities to maintain their commitment to affordability and stability for borrowers, rather than solely shareholder value.

At the local level, county and municipal finances do not allow such ambitious approaches. That does not mean that local governments are powerless, however, to reduce the cost of housing and protect residents from abuse. Following cities like Atlanta and Cincinnati, for example, they can require landlords to accept insurance in place of cash security deposits, allowing tenants to spread out the cost of security deposits in small monthly premia rather than one large unaffordable payment required at the beginning of the lease.²⁹ Another example is a tenant's right to counsel in eviction proceedings. Currently, California does not require tenants to be represented, putting them at a significant disadvantage in pleading their case. The City of Los Angeles recently dedicated some funding to free counsel for renters at risk, but it falls far short of the amount required to help all tenants in need.³⁰ Federal and state budgets should allocate money to cities to be used for these programs.

Affordable Housing Production

Finally, the construction of new affordable housing should not take a backseat to the emergencies of the moment. Cities like Los Angeles are going to need more affordable housing than ever before in the wake of this recession. The federal government should expand programs that subsidize the construction of rent-restricted units, such as the Low-Income Housing Tax Credit ("LIHTC"). Recent research has demonstrated that LIHTC developments are a win-win, creating new affordable rental units while simultaneously increasing housing values for surrounding homeowners. Contrary to fears about concentrating poverty, the clustering of multiple LIHTC projects in a neighborhood has even *more* positive effects on the surrounding properties, especially in low-income and predominantly African-American communities.³¹

At the same time, local governments should reform land-use regulations to allow new units to be constructed close to jobs. In most California

municipalities, zoning laws prohibit the construction of apartment buildings on more than 75 percent of the land.³² The cities that *do* permit more housing tend to be located further away from jobs, creating a barrier to sustainable employment and economic growth.³³

Some cities, including Los Angeles, have tried to address this “spatial mismatch” by encouraging low-income units to be included in new market-rate buildings. While these “inclusionary zoning” policies have created thousands of new affordable units throughout the country, they have fallen far short of the millions of new units needed to fill the country’s current shortage of affordable housing.³⁴

In expensive cities like Los Angeles, affordable housing will not be constructed rapidly and on a sufficiently large scale without significant public support. California has an affordable housing trust for this purpose, as do a few cities including Los Angeles and Pasadena. Most cities, however, do not. They should. To do so properly, they will need help from the federal government and the private sector. The amount of current funding at both the state and local levels is clearly inadequate, as the crisis is not abating with this meager level of construction.

This is a costly undertaking. Given the high cost of land and construction in California, it is expensive to build new housing units. Often, it may be more cost-effective to purchase existing real estate and convert it into affordable housing. With commercial properties falling out of use during the pandemic and builders complaining that cities are running out of vacant land, affordable housing trusts and other programs may find that *redevelopment* is necessary to compensate for the dearth of *infill* development.³⁵ During the pandemic, the rapid housing of thousands of homeless Californians, dubbed “Project Roomkey,” demonstrated that it is possible—financially and logistically—to convert vacant and distressed hotel properties into affordable housing on a large scale in a crisis.³⁶ As the above evidence has demonstrated, housing affordability is, itself, a crisis, and therefore this urgency should not subside along with the virus.

Cities should create affordable housing trust funds and use some of this money to buy empty commercial buildings and convert them to affordable housing.



5. Unemployment and Under-Employment

Jobs are the solution to unemployment, under-employment and poverty employment caused by the Pandemic Recession. Information about who needs work can guide employment initiatives to meet this need. In this chapter and the following two chapters, we describe vulnerable workers with progressively more specificity, starting with the broad swath of the labor force that is under-employed, then looking more specifically at workers with poverty level wages, and finally looking at workers who are still employed but homeless.

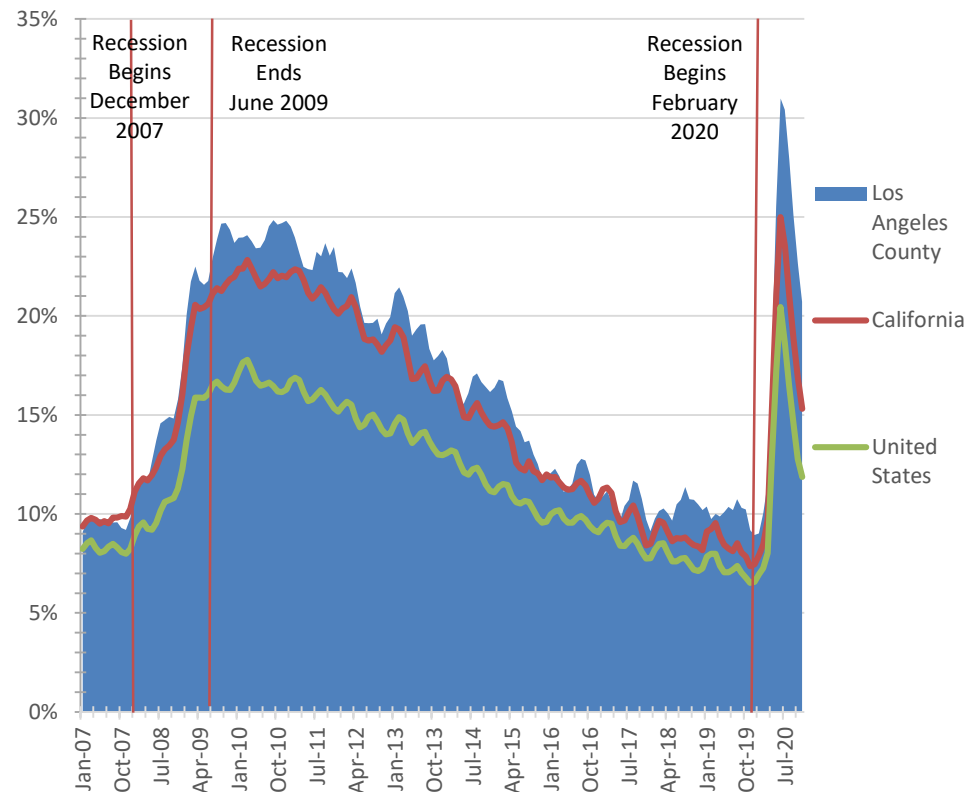
United States, California and Los Angeles

The United States has over 18.8 million unemployed and under-employed workers.

The United States had over 18.8 million unemployed and under-employed workers in November 2020.³⁷ This included:

- 10,264,000 *unemployed* workers who were actively looking for work
- 6,488,000 workers with *involuntary part-time* employment – workers whose hours have been cut back below what they want
- 1,391,000 *conditional* workers who would seek employment if a problem such as lack of child care were solved

Figure 30: Monthly Under-Employment Rate 2007-2020: Unemployed, Involuntary Part-time, Conditional and Discouraged workers, 3-Month Moving Average



Source: U.S. Census Bureau and U.S. Bureau of Labor Statistics, Current Population Survey (CPS) basic monthly data, not seasonally adjusted. Three-month moving average of total unemployed, involuntary part-time, conditional, and discouraged workers, January 2007 to November 2020.

- 672,000 *discouraged* workers who want to work but have given up on looking for a job.

The share of the labor force in the United States, California and Los Angeles County that is either unemployed or under-employed is shown in *Figure 30*. From September through November of 2020, this averaged 11.9 percent of U.S. workers, 15.3 percent of California workers and 20.7 percent of Los Angeles County workers.

The following sections describe who is most vulnerable to unemployment or under-employment based on education, age, ethnicity and gender. In this discussion, workers who are either unemployed or under-employed are both referred to as *under-employed*.

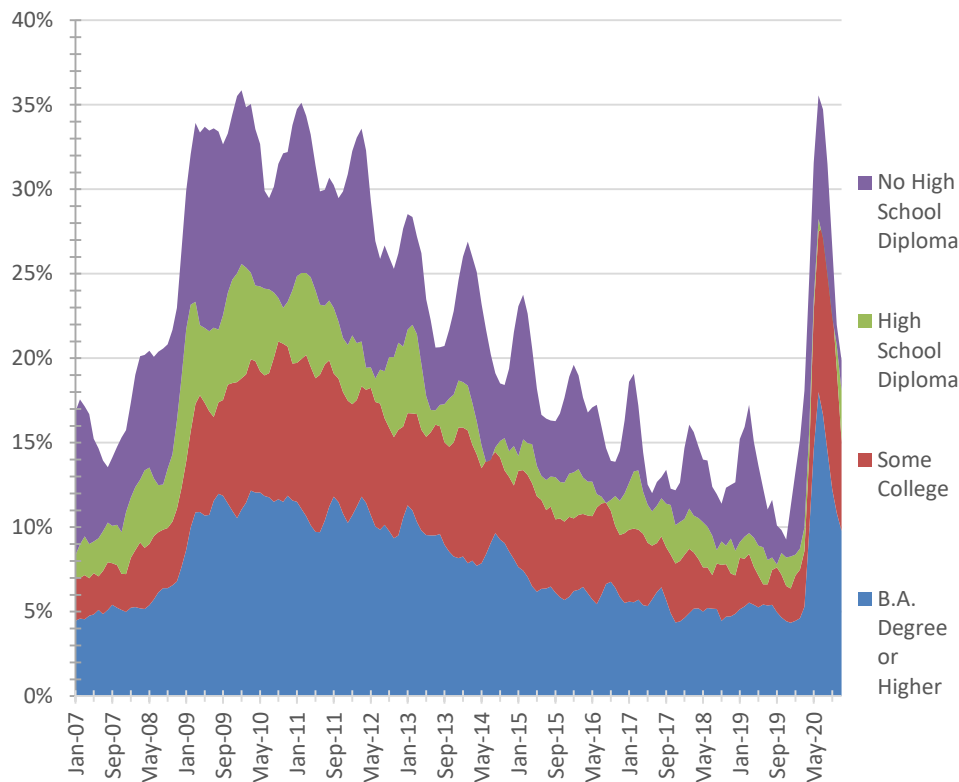
Under-employment is the seedbed of homelessness. Under-employment results in lack of earnings, which too often results in inability to afford housing. Under-employment is pervasive among homeless workers.

Education

The most defining characteristic of under-employed workers is lower levels of education, as shown for California in *Figure 31*. Workers without a high school diploma are roughly twice as likely to be under-employed as

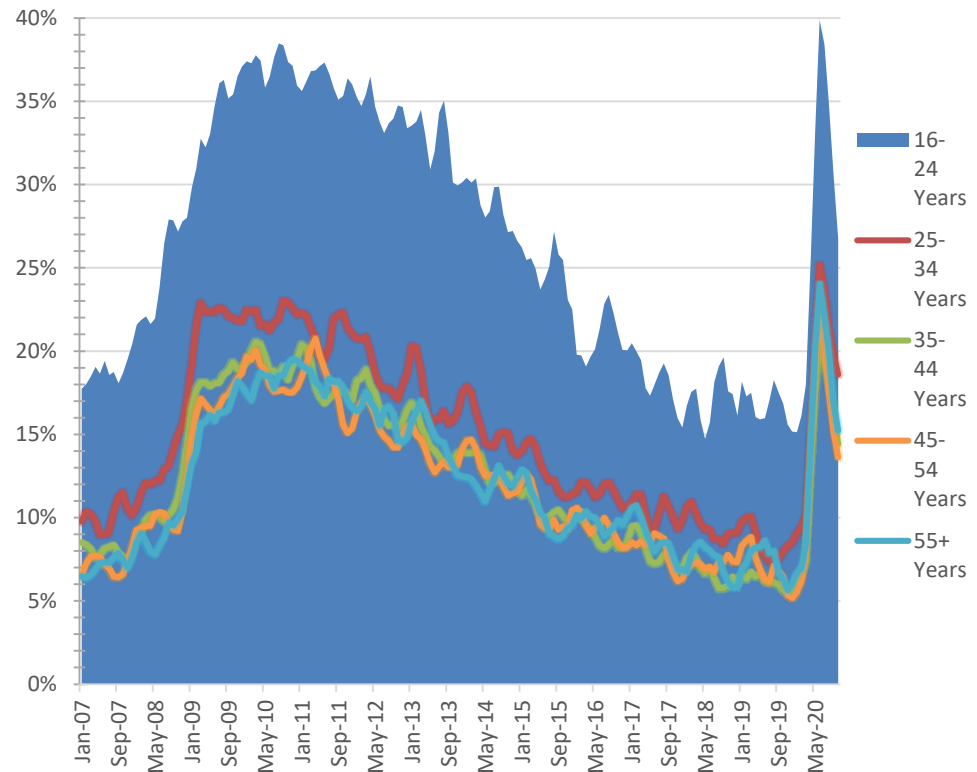
The most defining characteristic of under-employed workers is lower levels of education.

Figure 31: California Monthly Under-Employment Rate by Education Level 2007-2020



Source: Current Population Survey (CPS) basic monthly data. Three-month moving average of total unemployed, involuntary part-time, conditional, and discouraged workers, January 2007 to November 2020. Data is for California.

Figure 32: California Monthly Under-Employment Rate by Age 2007-2020



Source: Current Population Survey (CPS) basic monthly data. Three-month moving average of total unemployed, involuntary part-time, conditional, and discouraged workers, January 2007 to November 2020. Data is for California.

workers with a four-year college degree. This is true in the United States as well as California.³⁸ Workers with some college, but not a four year degree, have slightly greater job security than workers with just a high school diploma.

Age

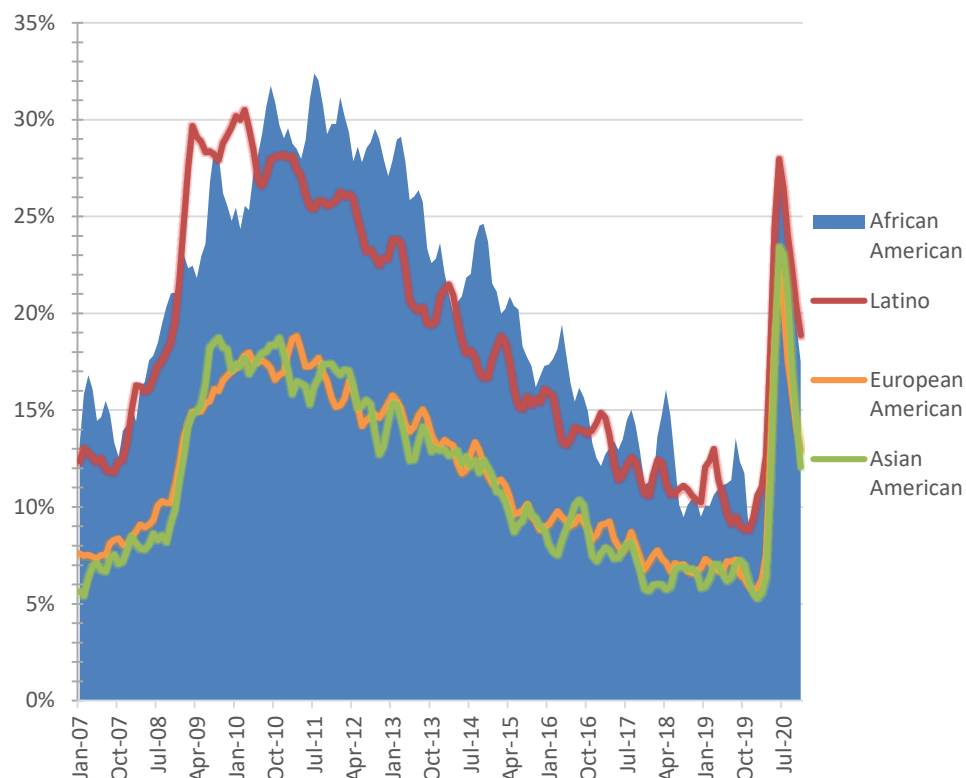
Workers less than 25 years of age are roughly twice as likely to be under-employed as any other age group, as shown in *Figure 32*. Workers 25 to 34 years of age have slightly less job security than older workers, but overall there is very little difference in under-employment rates for workers 25 years of age and older. This holds true for the United States as well as California.³⁹

Ethnicity

Compared to European Americans in California, the likelihood of under-employment is 1.7 times greater for African Americans, 1.6 time greater for Latinos, and similar for Asian Americans, as shown in *Figure 33*. The gap between African Americans and Latinos has diminished in the Pandemic Recession. This holds true for the United States as well as California⁴⁰

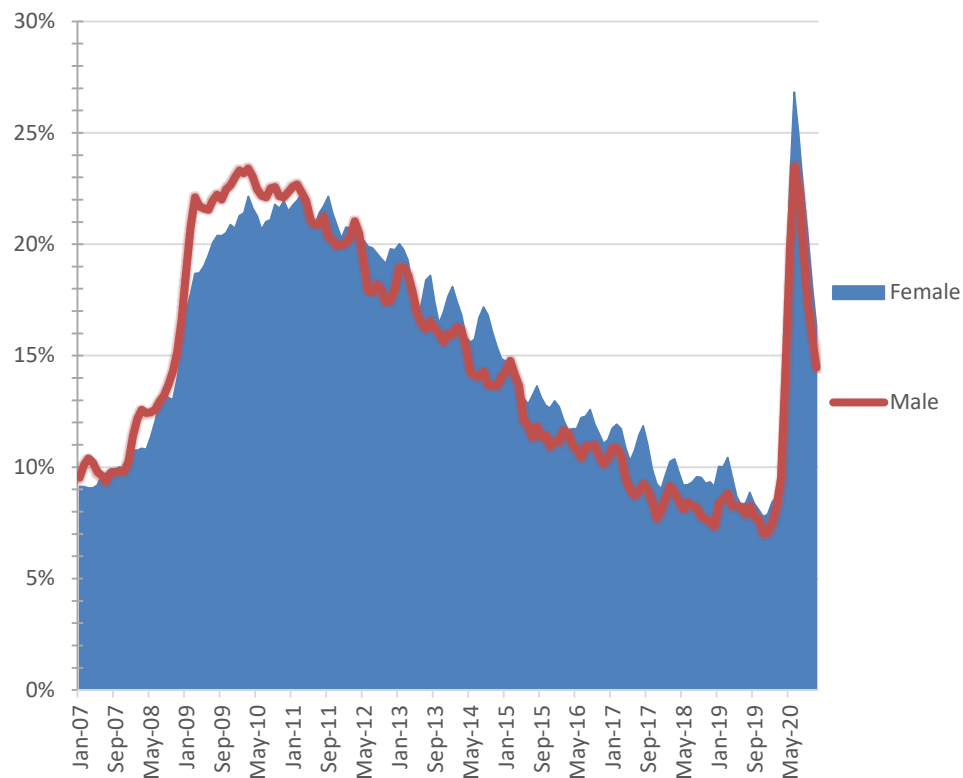
Workers less than 25 years of age are twice as likely to be under-employed as any other age group.

Figure 33: California Monthly Under-Employment Rate by Ethnicity 2007-2020



Source: Current Population Survey (CPS) basic monthly data. Three-month moving average of total unemployed, involuntary part-time, conditional, and discouraged workers, January 2007 to November 2020. Data is for California

Figure 34: California Monthly Under-Employment Rate by Gender 2007-2020



Source: Current Population Survey (CPS) basic monthly data. Three-month moving average of total unemployed, involuntary part-time, conditional, and discouraged workers, January 2007 to November 2020. Data is for California

Women are more likely than men to be under-employed.

Gender

Women are more likely than men to be under-employed, as shown in *Figure 21*. The under-employment rate for women has exceeded the rate for men since August 2011, and is now 1.1 times greater for women than for men. This holds true for the United States as well as California.⁴¹ This is different than previous recent recessions, where under-employment was likely to be higher for men. In this pandemic, many women have sacrificed work to compensate for the lack of child care, creating what labor experts are calling the “She-cession.”

Summary

Workers who have an elevated risk of being unemployed or under-employed, and having insufficient income to pay for basic necessities, including housing, include those who:

- Have less than a four-year college degree, and especially those who have less than a high school diploma
- Are 24 years of age or younger
- Are African American or Latino
- Are female

The level of risk varies not only by demographic attributes but also by geography. Rates of under-employment are higher in California and Los Angeles County, which have severe income polarization, than in the United States.



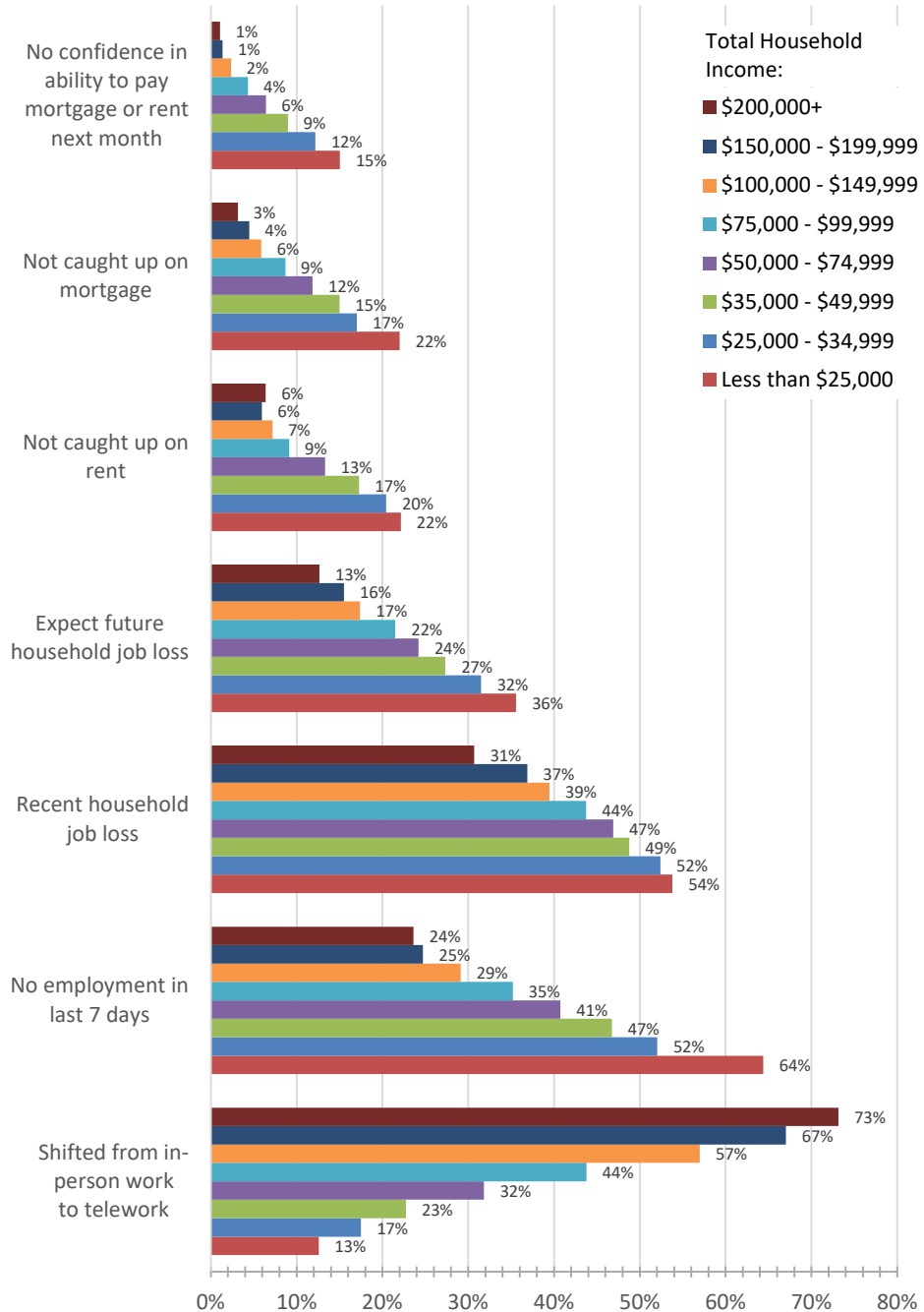
6. Workers in Poverty

Income and Risk

The Pandemic Recession is an economic calamity, especially for low-wage workers, many of whom will be unable to pay rent and vulnerable to homelessness. Lower-paid workers are more likely to be displaced from jobs and housing than higher-paid workers. Lower income, higher unemployment and greater housing insecurity are interlocking hazards, as shown in Figure 35.

Lower-paid workers are more likely to be displaced from jobs and housing than higher-paid workers.

Figure 35: Household Income, Employment and Housing Security



Source: U.S. Census Bureau, Weekly Household Pulse Survey, Public Use Files. Data shown is average of six surveys of United States residents from August 19 to November 9, 2020. Total household income is shown.

An annual income of \$25,000 is just under the poverty threshold for a family of four. The Census Bureau's bi-weekly Pulse Surveys⁴² over the past four months show that in comparison to households with incomes of \$200,000 or more, households with incomes under \$25,000 are:

- 14 times more likely to have no confidence that they can *pay rent or mortgage* next month
- 7 times more likely not to be caught up on *mortgage payments*
- 3 times more likely not to be caught up on *rent payments*
- 3 times more likely to expect *additional household job loss*
- 2 times more likely to have had *recent household job loss* due to Covid
- 3 times more likely to have had *no paid work* in the past 7 days
- 6 times less likely to have been able to *shift to remote telework*

This means that households whose financial situations are already precarious because of their low incomes are much more likely than higher-income households to lose jobs and then to lose housing.

Lower-paid workers are 14 times more likely to be unable to pay for housing than higher-paid workers.

Attributes of Poverty Workers

Thirty million American workers earn less than \$13,560 a year – the median earnings for California workers with family incomes under \$25,000. This is similar to the \$13,300 poverty threshold for a single adult.⁴³ These poverty workers make up one-fifth of the U.S. labor force. California is home to 6.8 million of these low-paid workers, and Los Angeles County is home to 1.8 million. (*Table A-5 in the Data Appendix breaks out U.S. workers earning under \$13,560 by state, age and ethnicity.*)

These workers have elevated risks of unemployment, eviction and homelessness. The public needs to be the employer of last resort for poverty workers who have lost their jobs or had involuntary reductions in work hours. Attributes that differentiate poverty workers are shown in *Figure 36*.

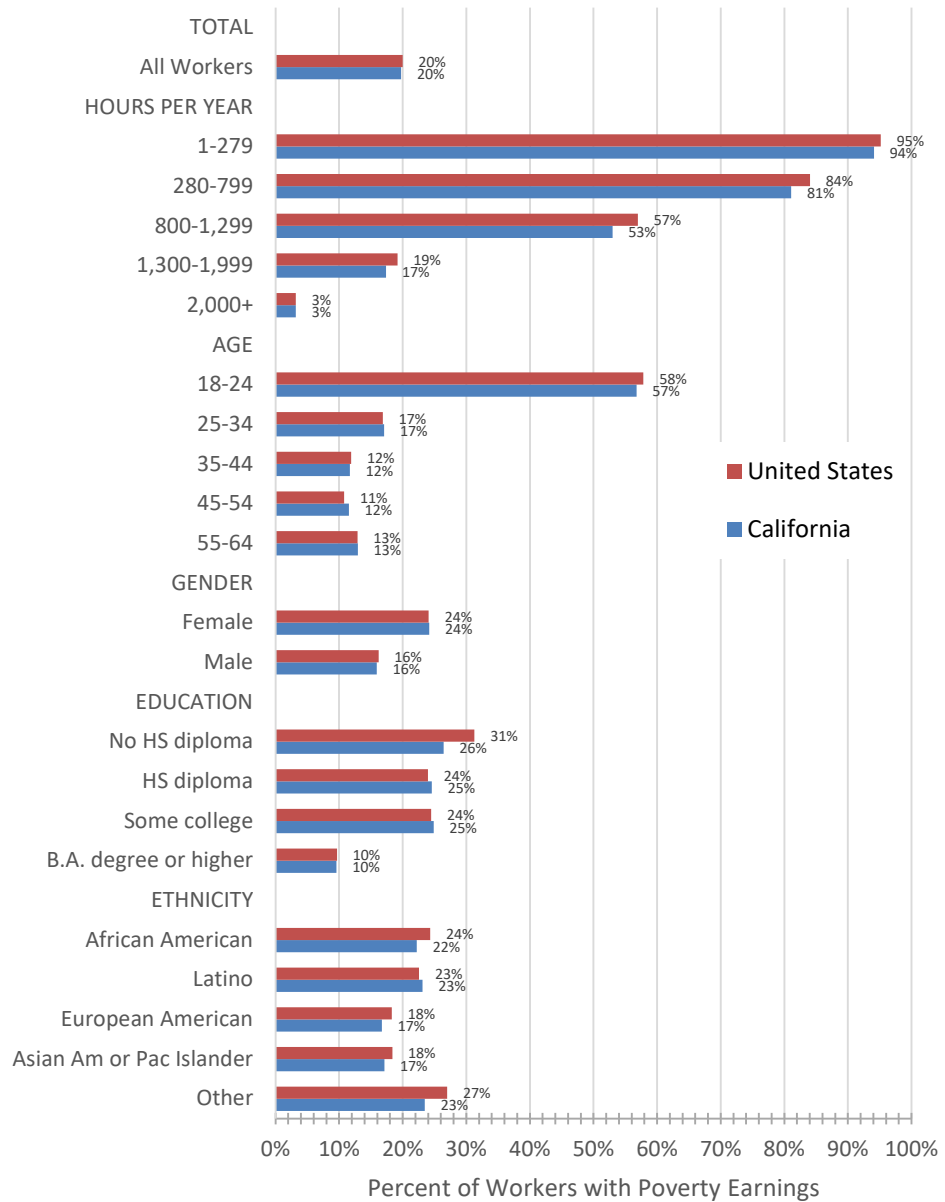
Part-time employment is the most defining factor associated with poverty earnings. Only three percent of full-time workers have poverty earnings. However, half of workers with half-time hours have poverty earnings and four-fifths of workers with quarter-time hours have poverty earnings.

Age is the second most defining factor. Over half of young adults 18 to 24 years old have poverty earnings versus under one-fifth of other workers.

Gender is the third most defining factor. The rate of poverty earnings is 50 percent higher for women than for men (24 vs. 16 percent)

Education is the fourth most defining factor. Poverty earnings are three times more frequent for workers with no high school diploma than those with a four-year college degree.

Figure 36: Attributes of Workers Below \$13,560 in Annual Pay



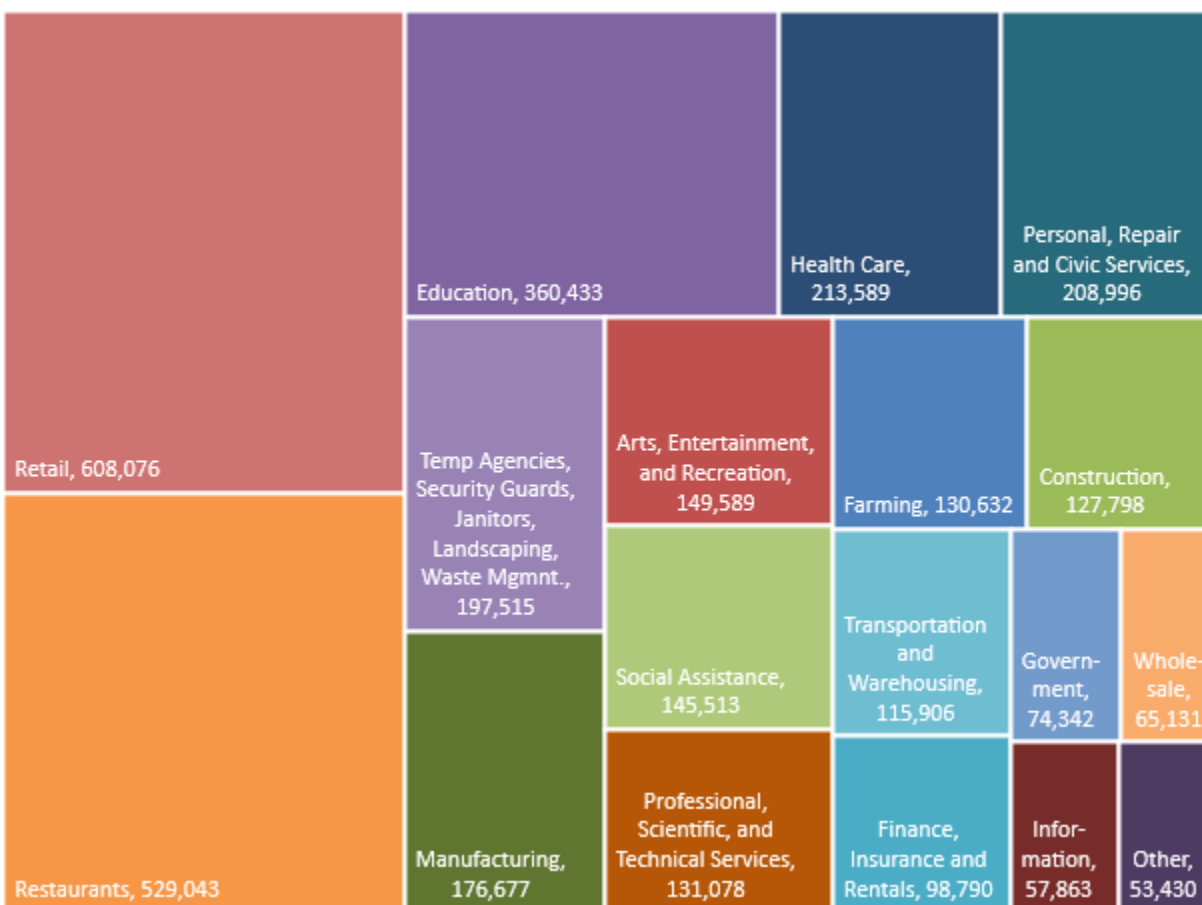
Source: U.S. Census Bureau American Community Survey Public Use Microdata Sample 2014-2018.

Ethnicity is the fifth most defining factor. The rate of poverty earnings for African Americans and Latinos is five percentage points higher than for European Americans or Asian Americans and Pacific Islanders.

Industries that Employ Poverty Workers

Each industry uses the skills of workers from multiple occupations to produce specific goods or services. Industries typically have a distinct labor market ecosystem, with differing needs for full- or part-time labor, differing competitive wage pressures and differing skill requirements.

Figure 37: Industry Distribution of 3,454,000 California Workers Paid Less than \$13,560 a Year



Source: U.S. Census Bureau American Community Survey Public Use Microdata Sample 2014-2018. Data is for workers who earned between \$290 and \$13,599 in the most recent year and are from 18 to 64 years of age.

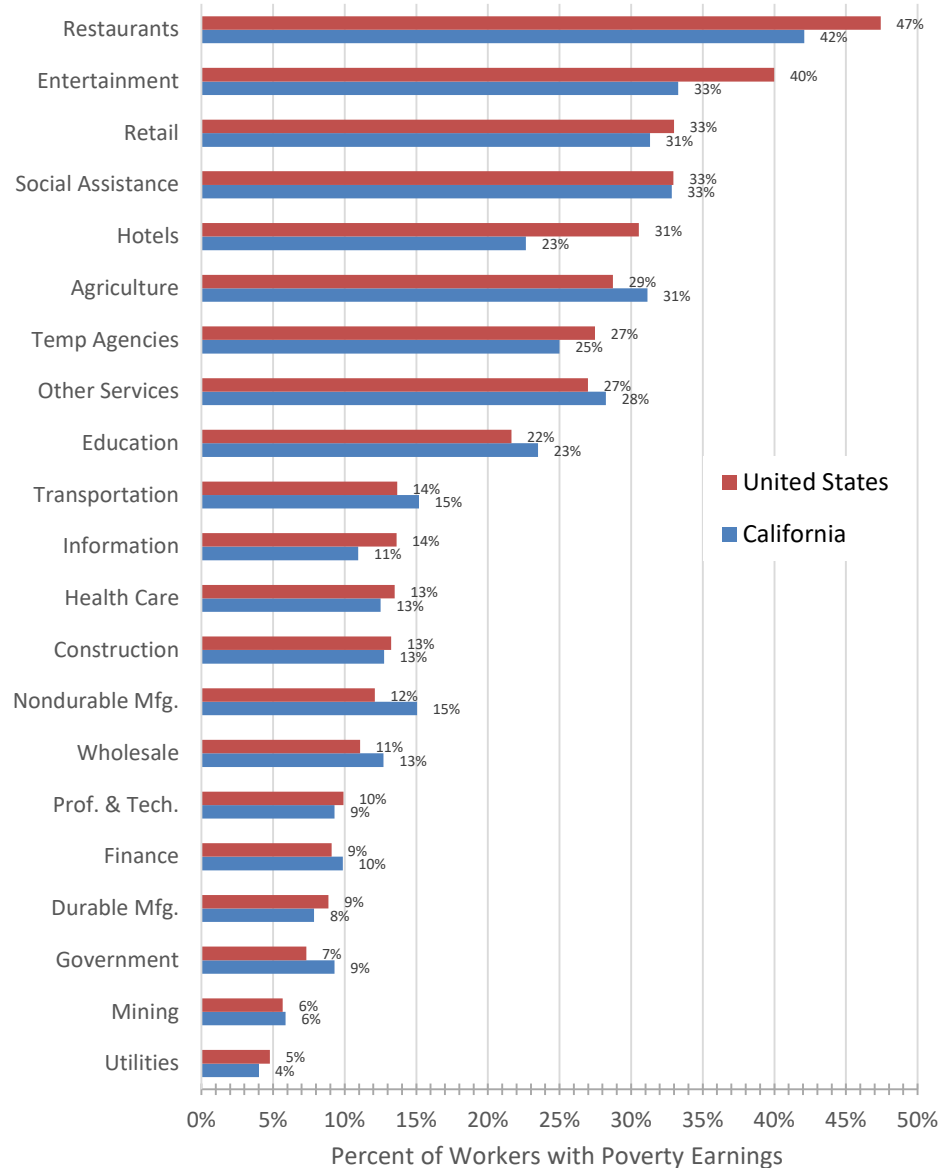
The three largest employers of poverty workers, *retail*, *restaurants* and *education*, account for almost half (46 percent) of poverty employment in California and 36 percent in the United States, as can be seen in *Figure 37*. (*Table A-6 in the Data Appendix breaks out poverty employment by industry sector in both California and the United States.*)

The two largest poverty employers, *retail* and *restaurants*, are labor intensive and operate on thin margins. Depressed wages are a widespread industry strategy that is difficult to reverse unless workers are represented by unions or there is government action to raise the wage floor.

Unlike retail and restaurants, educational institutions are often well funded, but even Ivy League universities with large endowments often pay poverty wages to front-line workers. A further embarrassment for the education sector is that a significant share of workers is represented by unions that have neglected to address the poverty conditions of co-workers.

The *rate of poverty employment* in industries is as important as the *number of poverty workers* that they employ. *Figure 37* shows the number of poverty workers whereas *Figure 38* shows their rate in each industry sector.

Figure 38: Percent of Workers in Each Industry with Poverty Earnings



Source: U.S. Census Bureau American Community Survey Public Use Microdata Sample 2014-2018.

Social assistance organizations don't pay taxes and in return must benefit the public, but 1/3 of their workers are in poverty.

The highest rate of poverty employment is in *restaurants and bars*. Almost half of the labor force has poverty earnings. This is also the industry with the second largest total number of poverty workers.

The second highest rate is in *arts, entertainment, and recreation*, with significantly higher rates nationally than in California.

The third highest rate is in *retail*. One-third of the labor force has poverty earnings. This is also the industry with the largest total number of poverty workers.

The fourth highest rate is in *social assistance*. One-third of the labor force has poverty earnings. These are mostly nonprofit, tax-exempt organizations. The bargain they have made with the public is that they will not have to pay taxes and in return they will dedicate their efforts to

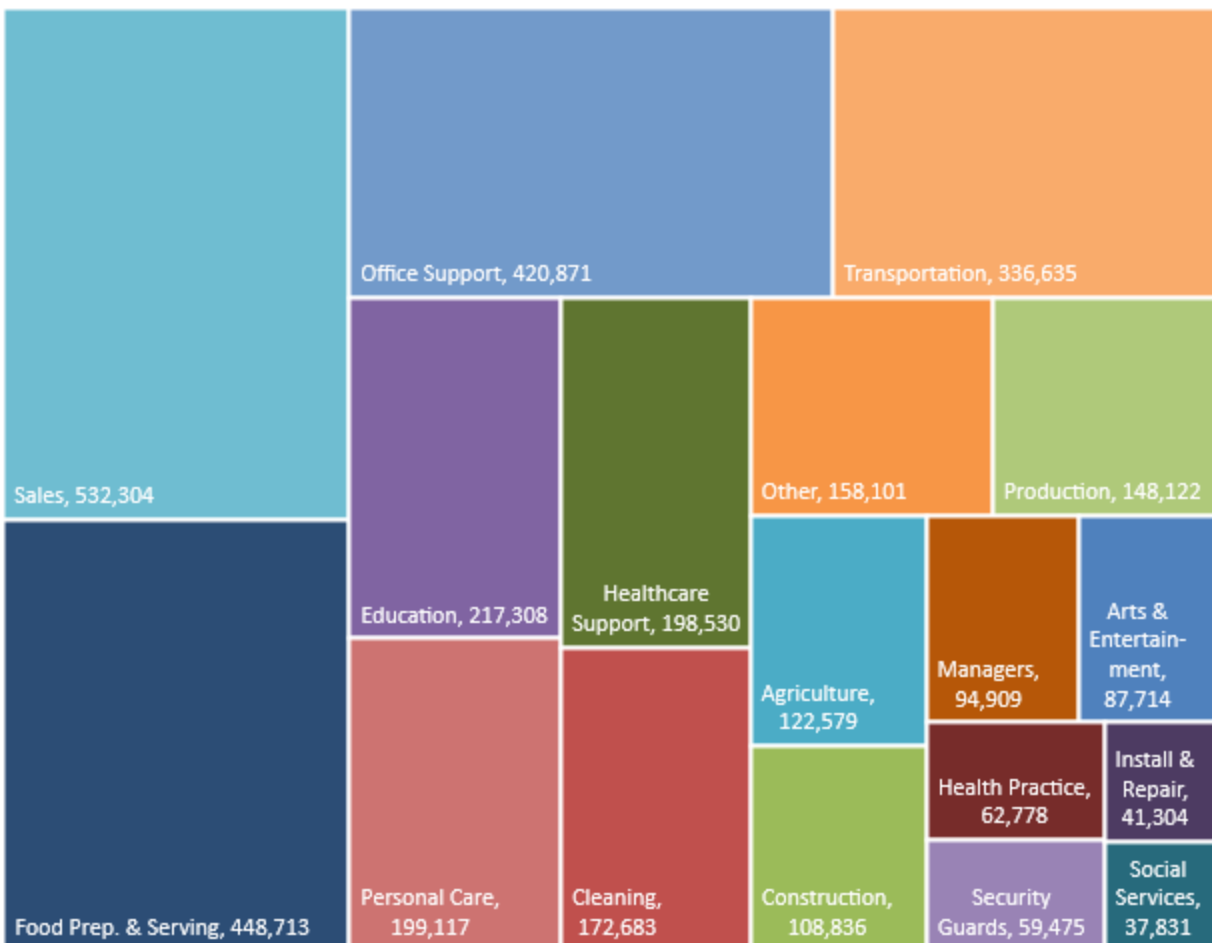
benefiting the public. The fact that one-third of their workers are in poverty raises serious questions about the public benefit provided by many of these organizations and the justification for their tax-exempt status.

Occupations of Poverty Workers

The four largest job families of poverty workers account for half of poverty employment, as shown in *Figure 39*. (*Table A-7 in this Data Appendix breaks out poverty employment by occupational group in both California and the United States.*) The largest job families, their share of poverty employment, and the largest occupations within those job families are:

- Sales 15%
 - Cashiers
 - Retail sales persons
- Food Preparation and Serving 13%
 - Waiters and Waitresses
 - Cooks

Figure 39: Occupational Distribution of 3,454,000 California Workers Paid Less than \$13,560 a Year

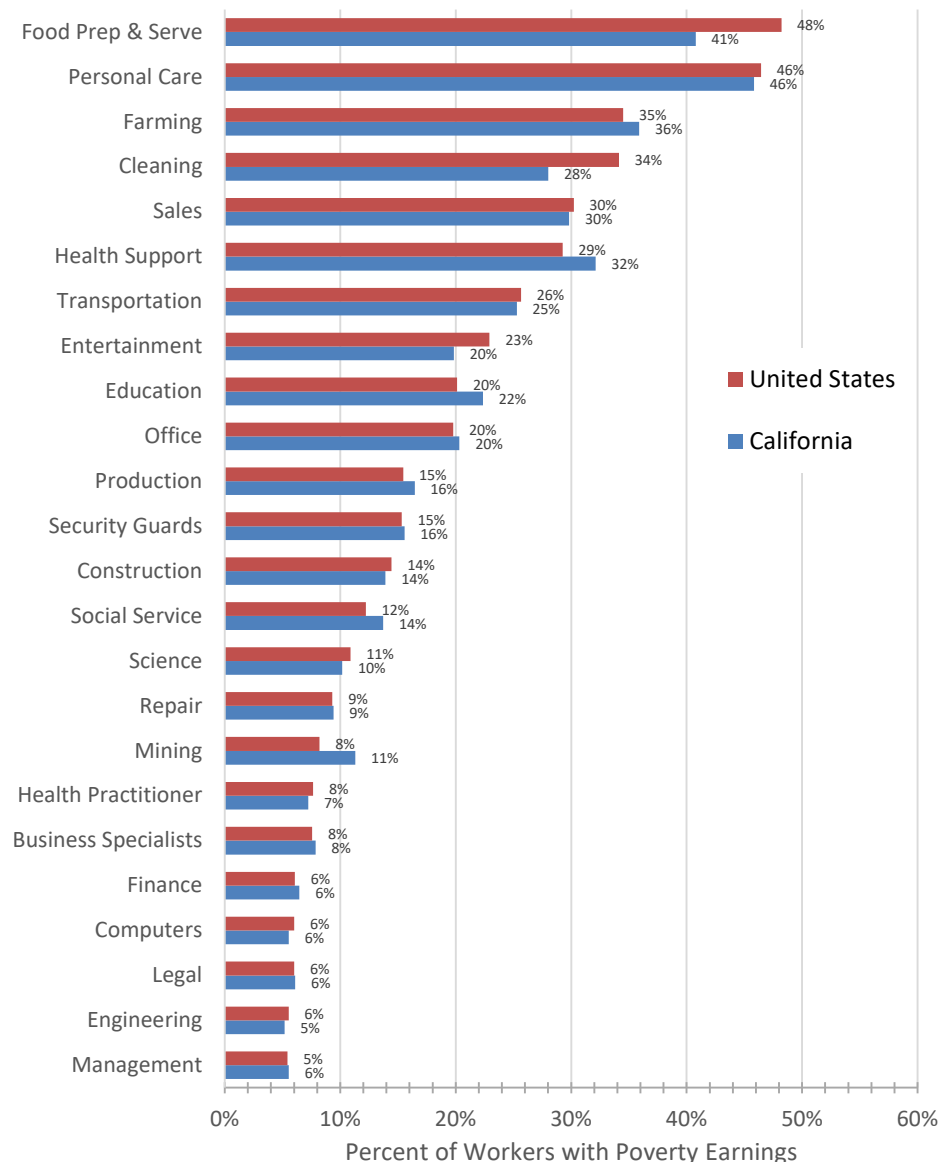


Source: U.S. Census Bureau American Community Survey Public Use Microdata Sample 2014-2018.

- Food Preparation Workers
- *Office and Administrative Support* 12%
 - Customer Service Representatives
 - Secretaries and Administrative
 - Receptionists and Information Clerks
 - General Office Clerks
- *Transportation and Material Moving* 10%
 - Hand Laborers and Freight, Stock, and Material Movers
 - Stockers and Order Fillers
 - Driver/Sales Workers and Truck Drivers

All of us have contact with these workers in the course of our daily lives – as co-workers or providers of basic services that we depend on. These workers do the direct-touch, heavy lifting work in our communities.

Figure 40: Percent of Workers in Each Occupation with Poverty Earnings



Source: U.S. Census Bureau American Community Survey Public Use Microdata Sample 2014-2018.

There are productive and socially beneficial uses for the services these workers can provide and the goods they can produce.

Workers who *prepare and serve food* in restaurants have the highest rate of poverty earnings of any occupation – close to half, as shown in *Figure 40*. Personal care workers such as *home health aides and nursing assistants* are a close second, also with nearly half of workers receiving poverty earnings.

Over a third of workers in *farming* occupations have poverty earnings. At a national level over one-third of workers in cleaning occupations such as *janitors* have poverty wages, with a lower rate for these workers in California.

Thirty percent of *sales* workers, such as *cashiers*, have poverty earnings.

Workers in professional and technical occupations fare better. Only about five percent of workers in *finance, computers, law, engineering, and management* occupations receive poverty earnings.

Economy-driven homelessness emerges largely from jobs lost at the thin edge of the labor market rather than from unemployment in the middle and upper reaches of the wage ladder. This is the epicenter of job destruction and unemployment in the Pandemic Recession – restaurants, retail stores, restaurants and bars, clerical jobs, child care, and personal care.

Economy-driven homelessness emerges from jobs lost at the thin edge of the labor market.

Employing Poverty Workers for the Public Good

Workers in every occupation have skills, abilities and knowledge that can be used for public benefit. (*Examples of skills for the 41 largest occupations that account for two-thirds of poverty workers are listed in Table A-8 in the Data Appendix.*) For example, *cashiers*, who account for five percent of all poverty workers in California and seven percent in the United States have the following strengths:⁴⁴

- *Knowledge*
 - Customer service
 - Administration and management
 - Mathematics
 - Clerical
- *Skills*
 - Service orientation
 - Active listening
 - Speaking
 - Social perceptiveness
- *Abilities*
 - Oral comprehension
 - Speech recognition
- *Work Style*
 - Written comprehension
 - Information Ordering
 - Number facility
 - Problems sensitivity
 - Cooperation
 - Dependability
 - Integrity
 - Self-control
 - Stress tolerance
 - Attention to detail
 - Adaptability
 - Concern for others
 - Social orientation

Figure 41: Largest Occupations of Workers Paid Less than \$13,560 a Year and Public Benefit Employment Options



Source: U.S. Census Bureau American Community Survey Public Use Microdata Sample 2014-2018. The ring graph represents 41 occupations, grouped by job family, that account for 66 percent of poverty workers in both California and the U.S. The size of each job family in the ring represents its share of poverty workers.

Workers with these skills or even a portion of these skills capabilities that can benefit the public. Examples of services poverty workers can provide that will benefit the public are shown in Figure 41. The services include public transit, community nutrition, education, childcare, and even construction – including affordable housing.

Summary

Thirty million American workers earn less than \$13,560 a year – the median earnings for California workers with family incomes under

\$25,000. These poverty workers make up one-fifth of the U.S. labor force. California is home to 6.8 million of these low-paid workers and Los Angeles County is home to 1.8 million.

There is a direct connection between lower income, higher unemployment and greater housing insecurity. Lower-paid workers are more likely to be displaced from jobs and housing than higher-paid workers.

Part-time employment is the most important factor associated with poverty earnings, followed by youth, being female, lacking a high school diploma, and being Latino or African American.

The three industries that employ the most poverty workers are retail, restaurants and education. The rate of poverty employment is highest in restaurants, entertainment, retail, and social assistance. The fact that one-third of workers in the social assistance sector receive poverty earnings raises serious questions about the public benefit provided by many of these organizations and the justification for their tax-exempt status.

The job family with the most poverty workers is sales, followed by food preparation and serving, office and administrative support, and transportation and material moving.

Economy-driven homelessness emerges largely from jobs lost at the thin edge of the labor market rather than from unemployment in the middle and upper reaches of the wage ladder. This is the epicenter of job destruction and unemployment in the Pandemic Recession.

Poverty workers have skills that can benefit the public through public employment programs. This includes public transit, community nutrition, education, childcare, and even construction – including affordable housing.



7. Homeless Workers

The working world that coexists with homelessness

1/3 of homeless adults in California are working or recently had a job.

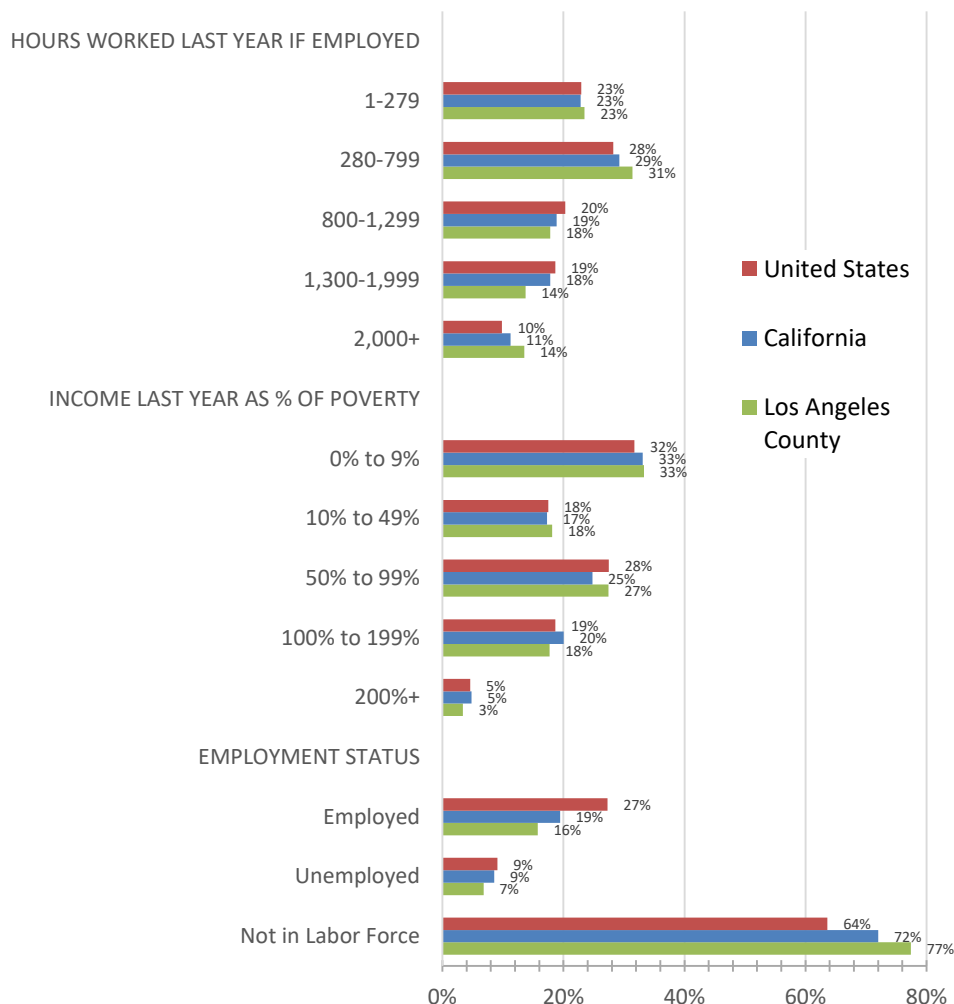
Profile of Homeless Workers

There is a thin line between sheltered and unsheltered workers in the poverty labor force. Using detailed person-level data from the American Community Survey, we are able to identify records of homeless adults and investigate their attributes and work histories. *(The filtering method used to identify records of individual who are likely to be homeless is explained in data note A-9 in the Data Appendix.)*

Over one-third (36 percent) of U.S. homeless adults are working or recently had a job, as shown in *Figure 42*. Labor force participation levels decline in California (28 percent) and Los Angeles County (23 percent), possibly because more homeless adults are chronically homeless. *(This information is shown for each state in Table A-10 in the Data Appendix.)*

The employment histories of many of many chronically homeless adults may be outside the one-year time horizon of this data. If chronically homeless individuals are excluded, the homeless employment rate is probably higher. Over the 2014 to 2018 time span covered by this data,

Figure 42: Employment and Income of Homeless Adults 18 to 64 Years Old



Source: U.S. Census Bureau American Community Survey, Public Use Microdata Sample 2014-2018. Data is from records of individuals flagged as homeless who were 18 to 64 years of age.

HUD's annual homeless counts identify 22 percent of homeless adults in the United States as being chronically homeless, including 31 percent in California and 33 percent in Los Angeles County.⁴⁵ If we assume that chronically homeless individuals are not in the labor force, this suggests that as many as 46 percent of non-chronically homeless adults in the United States, 40 percent in California and 35 percent in Los Angeles County are working now or worked last year.

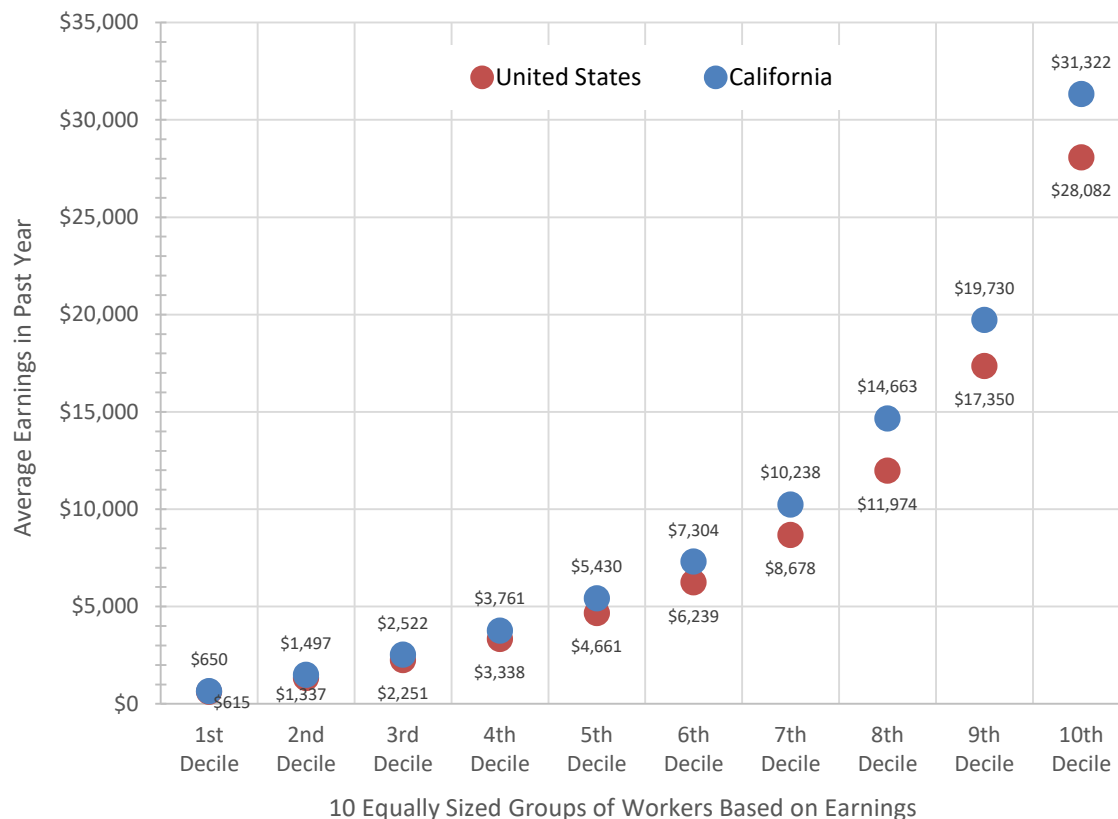
The thing that stands out most in this profile of homeless adults is that most, but not all, were very poor in the preceding year. Half had incomes that were less than half of the poverty threshold. But roughly one-quarter had incomes over the poverty threshold, indicating a recent loss of income that resulted in homelessness.

The second thing that stands out is that most employed homeless individuals had only part-time work. Nine-tenths of those who worked in the preceding year did not work full-time. This is similar to findings in the preceding chapter about pervasive part-time employment in the poverty labor force. For many, this is likely to be the involuntary part-time employment of under-employed workers that was shown earlier.

For both California and the United States, we divided homeless adults who had earned income in the previous year into ten equal size groups, or deciles, based on their earnings. The average annual earnings of workers in

Most employed homeless individuals have only part-time work.

Figure 43: Annual Earnings of Homeless Workers by Decile in California and the United States



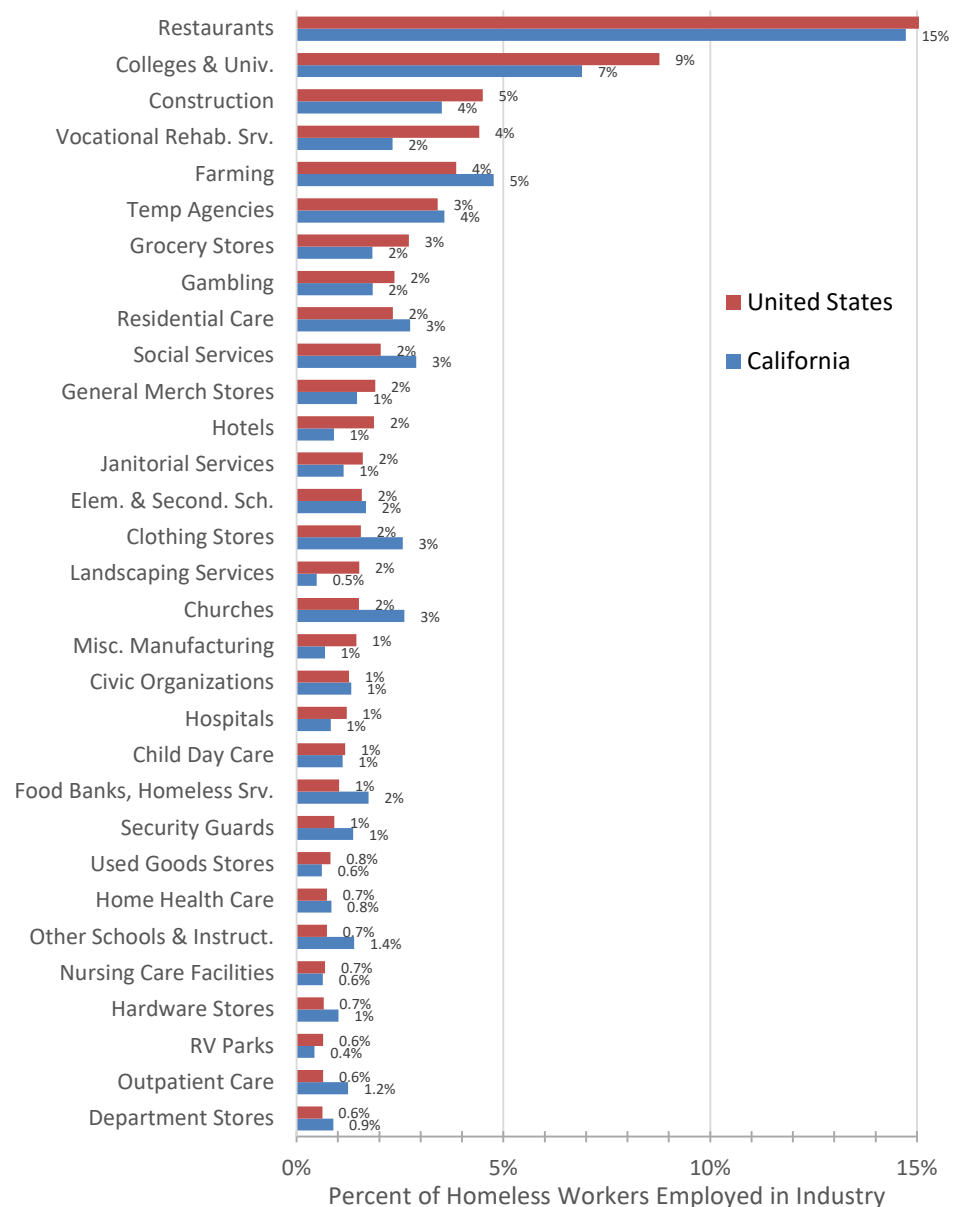
Source: U.S. Census Bureau American Community Survey, Public Use Microdata Sample 2014-2018. Dollars adjusted to 2018 value. Data is for records of individuals flagged as homeless who were 18 to 64 years of age and earned \$290 to \$49,999 in the past year.

each decile group are shown in *Figure 43*, with earnings for homeless workers in California rising slightly above the national average.

The earnings of homeless workers look very much like those of poverty workers in the previous chapter. The earnings shown here are for the entire previous year, and it is likely that the fortunes of many of workers declined over the year, given that they were homeless at the end of the year. However, even at the high-end of their earnings, the low amount of earning shows why shelter was unaffordable.

Homeless workers in the United States had average earnings of \$8,513, in California it was \$9,762, and in Los Angeles County it was \$9,058. Median

Figure 44: Industries Employing Homeless Workers in California and the United States



Source: U.S. Census Bureau American Community Survey, Public Use Microdata Sample 2014-2018. Data is for records of individuals flagged as homeless who were 18 to 64 years of age and earned \$290 to \$49,999 in the past year.

earnings, the amount received by the typical worker, were even lower. The median for the entire United States was \$5,306, for California it was \$6,317 and for Los Angeles County it was \$5,268.

Industries of Homeless Workers

Information about the industries that employ homeless workers, their hours of work and their occupations is that it points to where these workers can be found and where employment interventions should be targeted.

Thirty-one industries employing 70 percent of California's homeless workers and 74 percent nationwide are shown in *Figure 44*, which lists specific industries rather than the rolled-up industry sectors shown in the previous chapter. The list shows that homeless employers are similar to poverty employers.

The prominent role of colleges and universities, churches and social service organizations as employers of homeless labor stand out. Most of these entities are either nonprofit and tax exempt or part of the public sector. Their role as employers of workers who cannot afford shelter indicates willingness to perpetuate rather than ameliorate economic desperation.

The industry profile of California's homeless workers is largely similar to the national profile. California has a *smaller* share of homeless employment in colleges and universities and vocational rehabilitation services, which includes, for example, Goodwill Industries, and a *larger* share in farming, social services, clothing stores, and churches.

Data for Los Angeles County is too sparse to populate the smaller industries shown in *Figure 44*, but among the larger homeless employers, Los Angeles stands out for having an even *larger* share of workers employed by colleges and universities – 13 percent versus 9 and 7 percent, respectively, for the United States and California.

Restaurants are the leading homeless employer, followed by colleges and universities. Los Angeles County stands out for having the largest share of homeless workers employed by colleges and universities and also by churches and security guard agencies.

The conspicuous presence of homeless service providers among organizations whose employees are unable to afford shelter undercuts their credibility for either understanding or combatting homelessness. The largest employers of homeless workers include:

Industry	United States	California	Los Angeles County
Restaurants	15%	15%	13%
Colleges and Universities	9%	7%	11%
Construction	5%	4%	4%
Vocational Rehabilitation	4%	2%	2%
Farming	4%	5%	0.3%
Temp Agencies	3%	4%	3%
Churches	2%	3%	4%

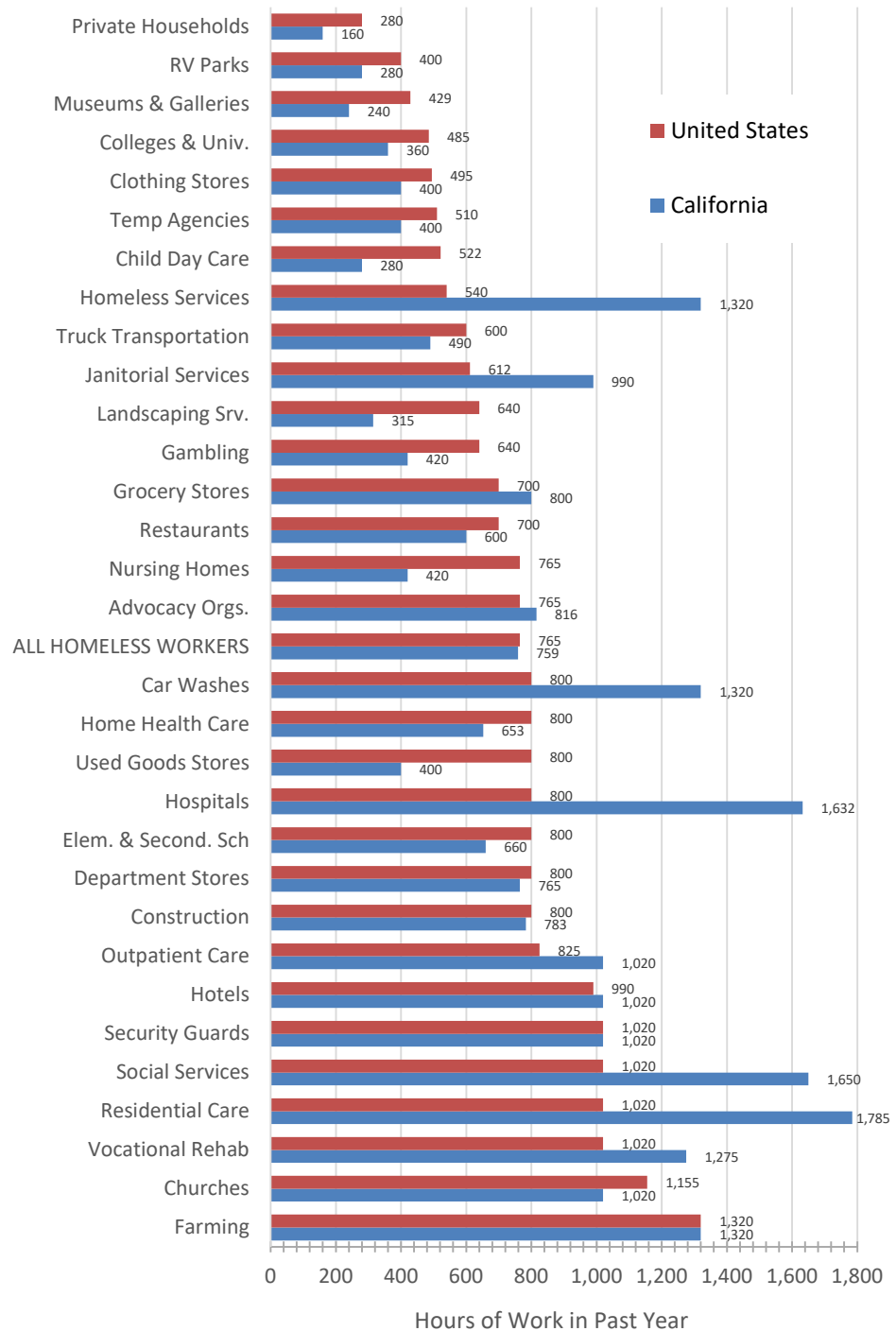
The prominent role of colleges, universities and social service organizations as employers of homeless labor is unworthy of their missions.

Security Guards	1%	1%	3%
Residential Care	2%	3%	3%
Social Services	2%	3%	2%

The typical homeless worker in the United States had 765 hours of paid employment over the past year.

The typical homeless worker in the United States had 765 hours of paid employment over the past year, as shown in *Figure 45*. This dropped to 759

Figure 45: Median Annual Hours of Employment for Homeless Workers



Source: U.S. Census Bureau American Community Survey, Public Use Microdata Sample 2014-2018. Data is for records of individuals flagged as homeless who were 18 to 64 years of age and earned \$290 to \$49,999 in the past year.

hours in California and 634 hours in Los Angeles County. The smaller number of paid hours of work in Los Angeles County suggests that its homeless workers have weaker labor market connections.

California stands out in five industries where employers provide more hours of work than is typical nationally, but workers still remain homeless. This suggests that these workers receive low and inadequate wages.

1. *Hospitals*: 832 more hours in California - 1,632 vs 800
2. *Homeless services and food banks*: 780 more hours in California - 1,320 vs 540 nationally
3. *Residential care*: 765 more hours in California 1,785 vs 1,020
4. *Social Assistance*: 630 more hours in California - 1,658 vs 1,020
5. *Car washes* - 520 more hours in California - 1,320 vs 800

In both California and the U.S., seven of the eight detailed industries that provide the most hours of employment but fail to pay enough for workers to escape homelessness and poverty are nonprofit and health care industries. They include *residential care*, *hospitals*, *social services*, *churches*, *food banks* and *homeless services*, *vocational rehabilitation*, and *civic organizations*.

Occupations of Homeless Workers

Thirty-two occupations that account for 60 percent of homeless workers in California and 63 percent in the United States are shown in *Figure 46*. These are specific occupations rather than rolled-up job families, as were shown in previous chapters. The outcome of homelessness for these workers indicates that both low wages and part-time hours are common in these occupations.

California stands out in three occupations with larger shares of homeless workers than is the case in the national labor market: *personal care aides* - 3 percent vs 1 percent, *security guards* - 2 percent vs 1 percent, *office clerks* - 2 percent vs 1 percent, and *retail sales persons* - 4 percent vs. 3 percent.

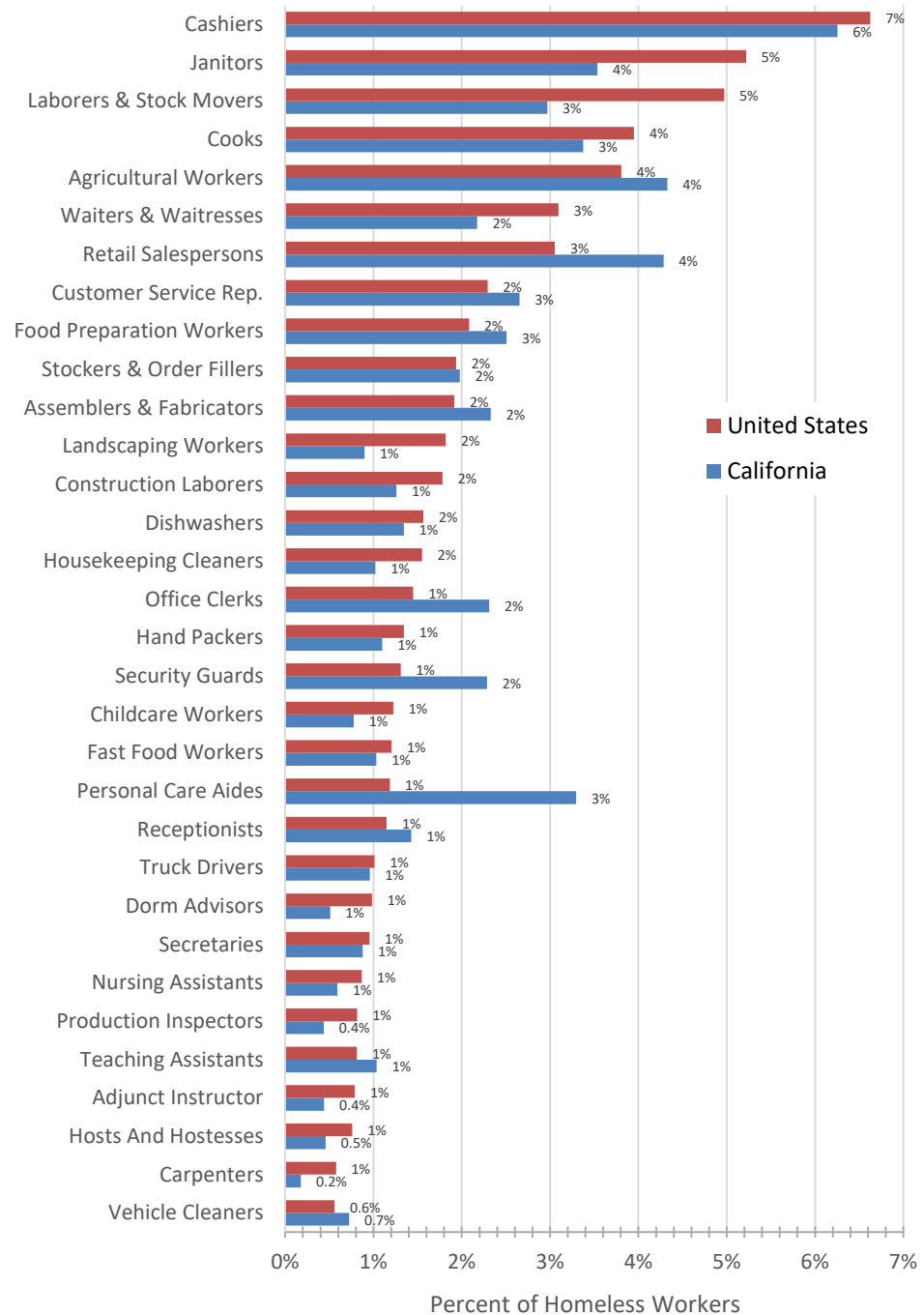
Los Angeles County stands out from both California and the nation for the large share of homeless workers employed as *security guards* - 6 percent vs 2 percent and 1 percent, respectively, in California and the United States.

The ten largest occupations account for one-third of homeless workers and align closely with the occupations of poverty workers, with the largest share of workers in restaurant and retail occupations.

Occupation	United States	California	Los Angeles County
Cashier	7%	6%	4%
Janitors	5%	4%	5%
Retail Salespersons	3%	4%	5%
Cooks	4%	3%	4%
Laborers & Stock Movers	5%	3%	2%
Security Guards	1%	2%	6%
Agricultural Workers	4%	4%	0.4%
Food Preparation Workers	2%	3%	3%

Customer Service Rep.	2%	3%	2%
Waiters & Waitresses	3%	2%	1%

Figure 46: Occupations of Homeless Workers

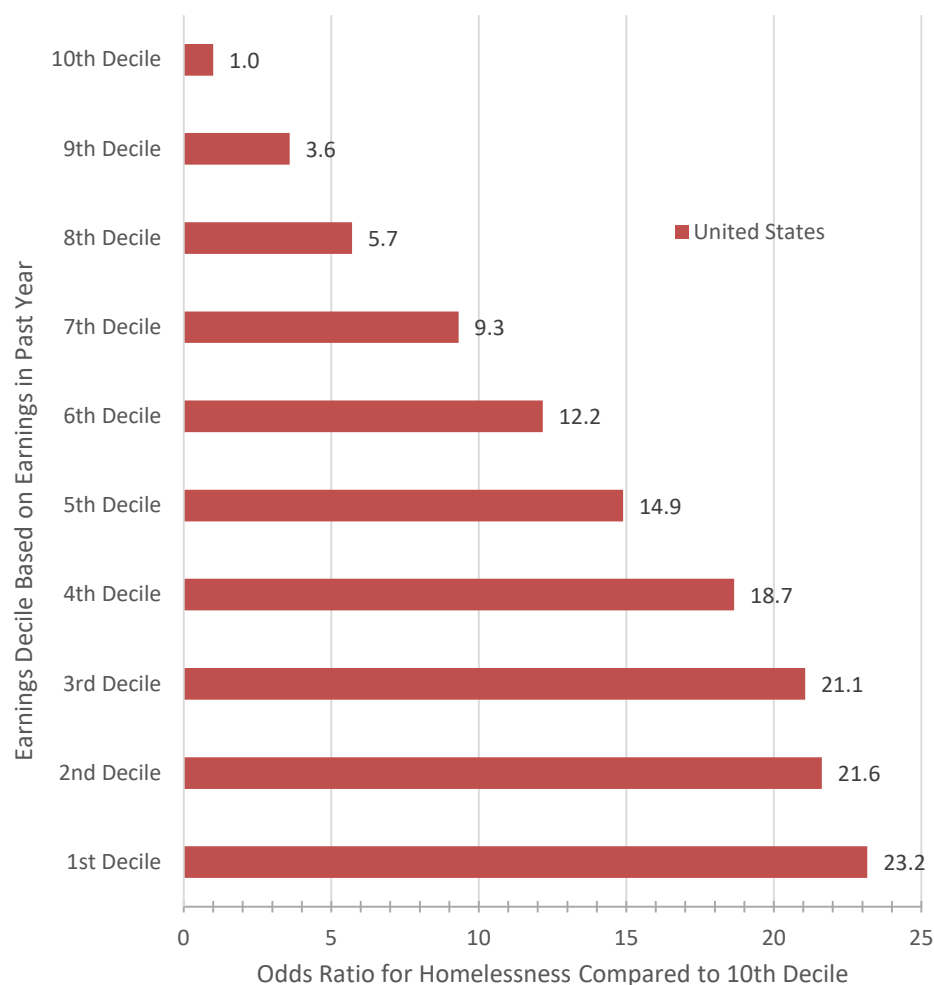


Source: U.S. Census Bureau American Community Survey, Public Use Microdata Sample 2014-2018. Data is for records of individuals flagged as homeless who were 18 to 64 years of age and earned \$290 to \$49,999 in the past year.

Odds of Homelessness

By comparing the frequency of homelessness in groups of workers with different earnings we can rank the comparative odds of homelessness based

Figure 47: Odds Ratio for United States Workers in Different Earnings Deciles Being Homeless Compared to the 10th Decile



Source: U.S. Census Bureau American Community Survey, Public Use Microdata Sample 2014-2018. Data is for records of individuals in the United States who were 18 to 64 years of age and earned \$290 to \$49,999 in the past year.

on how much workers are paid. In this case we compare the share of workers in each earnings decile who are homeless.

The *odds ratios* for homelessness based on *earnings* in the previous year are shown in *Figure 47*, using the same earnings deciles for U.S. homeless workers shown in *Figure 43*. Odds ratios are computed by using a specific group as the reference group and comparing other groups to it. In this case, the tenth decile, the group with the highest earning, is the reference group.

The odds of becoming homeless are 23 times greater for someone in the first earnings decile (average earnings \$615) than for someone in the tenth decile (average earnings \$28,082). The downward steps in earnings and corresponding increasing odds of homelessness shown in *Figure 47* make a fundamental point: the risk of homelessness increases as earnings decrease.

African American workers at every earnings level have the highest risk of homelessness, as can be seen in *Figure 48*, which shows odds ratios for workers being homeless by earnings decile and *ethnicity* compared to

The odds of homelessness are twice as high for Latinos and Native Americans as they are for European Americans, and three times higher for African Americans.

European American workers in the 10th earnings decile. (Supporting data for this graph are in this endnote.⁴⁶)

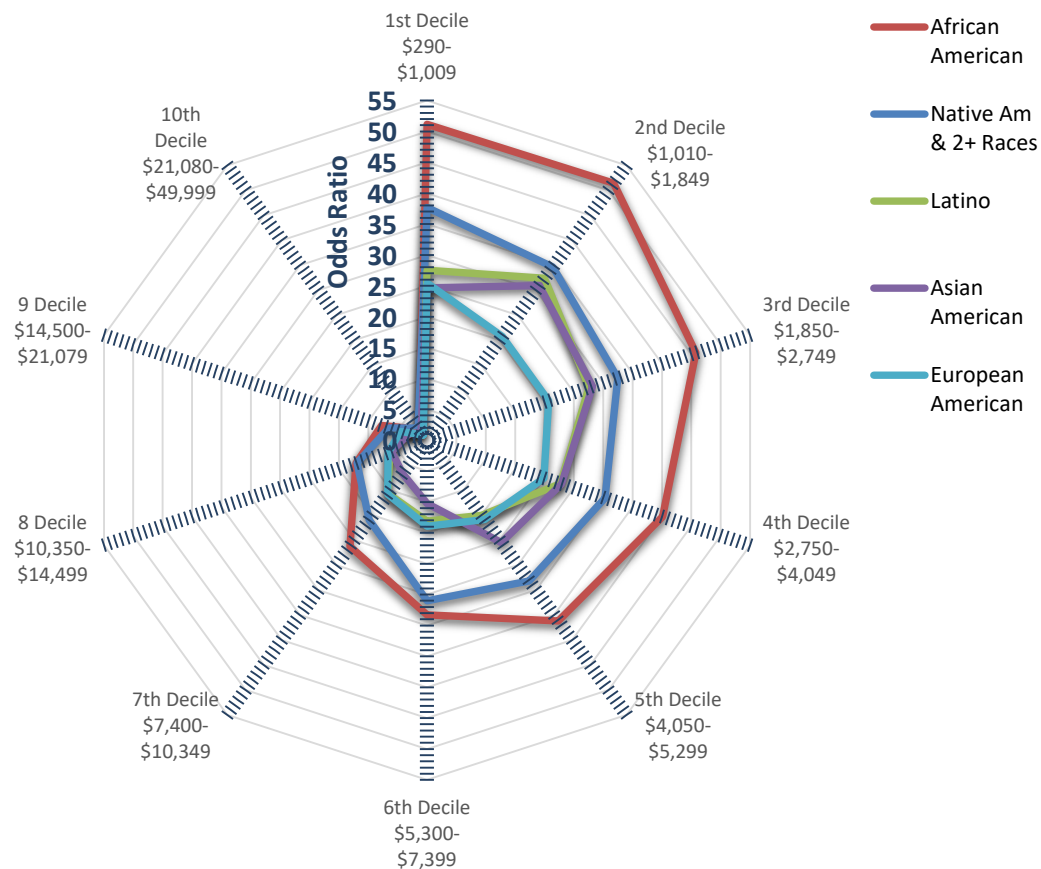
The outer ring of this radar graph represents the highest odds for homelessness. Every ethnic group shows the greatest risk of homelessness at the first decile, where earnings are lowest.

The odds that a European American worker in the first earnings decile will become homeless are 14 times greater than for a European American worker in the tenth decile, but the odds for an African American worker are 40 times greater. This reflects the social hazards experienced by African Americans, including bias, discrimination and barriers in employment, housing, education, and the justice system.

The odds of homelessness at any income level are about twice as high for Latinos as they are for European Americans, and about three times higher for African Americans. These risks are compounded because incomes skew lower for African Americans and Latinos than for European Americans.

Factors that Predict Homelessness

Figure 48: Odds Ratio for United States Workers Being Homeless by Earnings Decile and Ethnicity Compared to European American Workers in the 10th Earnings Decile

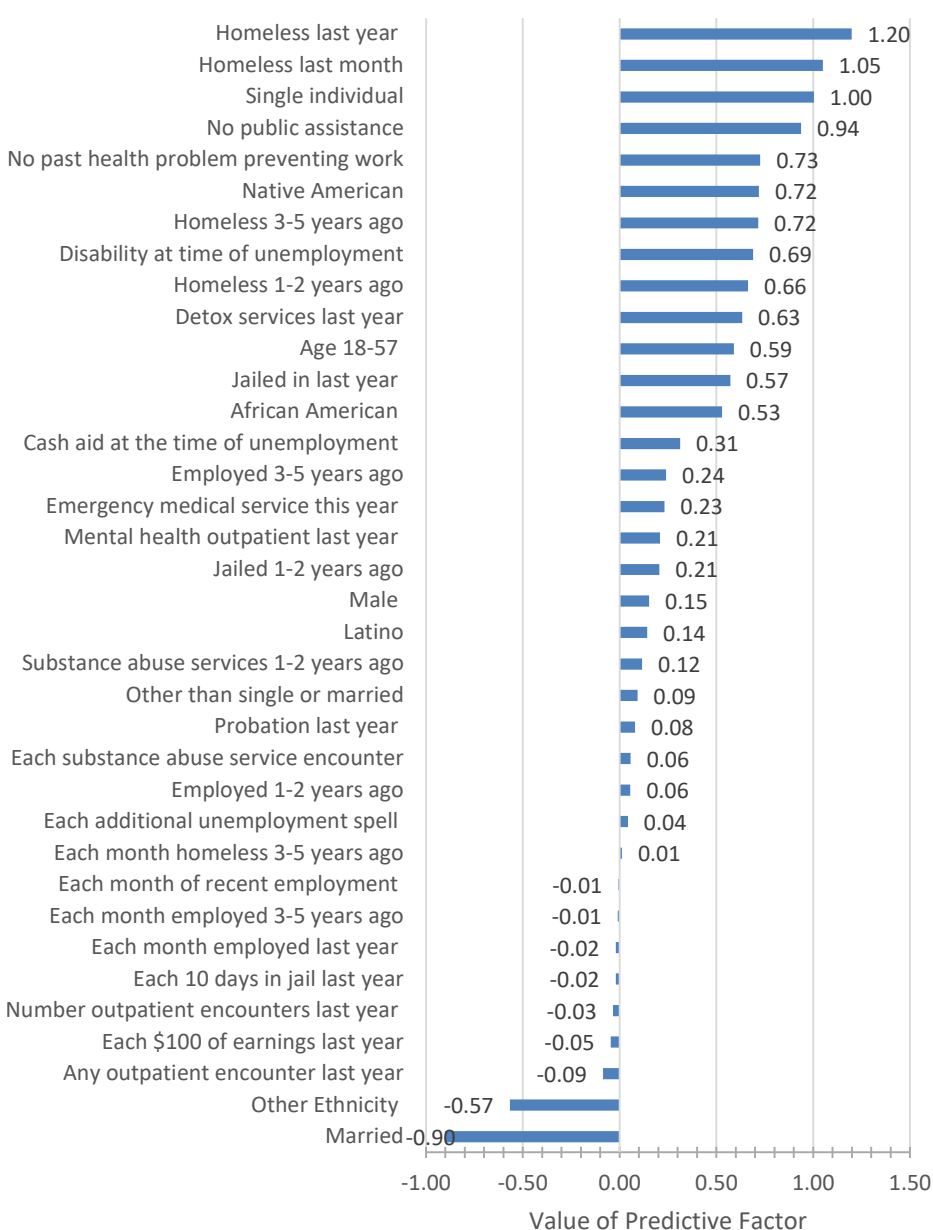


Source: U.S. Census Bureau American Community Survey, Public Use Microdata Sample 2014-2018. Data is for records of individuals in the United States who were 18 to 64 years of age and earned \$290 to \$49,999 in the past year.

The risks that lead from unemployment to homelessness are not stand-alone threats. They include all of the social and economic ingredients of a worker's life layered on top of each other, some as safeguards and others as vulnerabilities.

The Economic Roundtable used 15 years of data for over one-million residents of Los Angeles County who experienced homelessness to develop two predictive screening models for identifying individuals who are likely to become persistently homeless.⁴⁷ Both models have been tested and shown to be accurate.⁴⁸

Figure 49: Predictive Factors for Estimating whether Workers Will Be Homeless for One Year or Longer After Becoming Unemployed



Source: Economic Roundtable, "Early Intervention to Prevent Persistent Homelessness," Table A-4.

Past homelessness is the most powerful predictor of future homelessness.

The first predictive model identifies the eight percent of low-wage workers who become persistently homeless after losing their jobs. The second model identifies the eight percent of youth receiving public assistance who become persistently homeless in the first three years of adulthood.

Predictive factors that are combined to estimate the probability that an *unemployed worker* will become homeless for a year or longer are shown in *Figure 49*. Past homelessness is the most powerful predictor of future homelessness. Other risk factors include:

- No family to fall back on
- No social safety net support
- Substance abuse
- Jail history (except for long stints, which reduce unsheltered time)
- African American or Native American ethnicity
- Emergency medical encounters
- Mental health problems

Factors that reduce risk include:

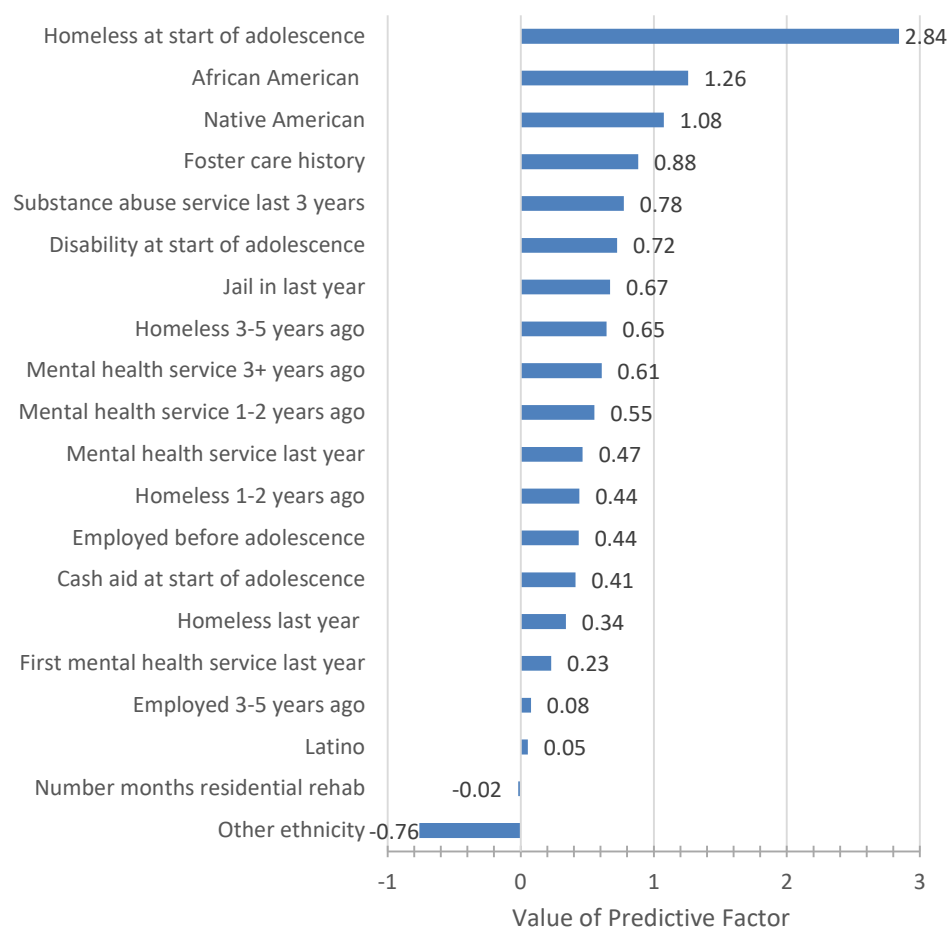
- A spouse
- Continuity of medical care
- Higher earnings
- Continuity of employment

Predictive factors that are combined to estimate the probability that a *young adult* will become homeless for a year or longer are shown in *Figure 50*. Young adults have less history to draw on for assessing risk, so the model draws more heavily on the immediate circumstances of the youth.

By far the most important factor is whether the youth was homeless when he or she became an adolescent, that is, when they were 18 years of age. Other risk factors include:

- African American, American Indian or Alaskan American ethnicity
- History of foster care
- Receiving alcohol or substance abuse services for the past 3 years
- Disability at start of adolescence
- Incarceration in the past year
- Prior homeless episodes
- Mental health problems
- Having to work before turning 18
- Dependence on cash public assistance
- Emergence of mental health problems in the past year
- Latino ethnicity

Figure 50: Predictive Factors for Estimating whether Young Adults Will Be Homeless for One Year or Longer



Source: Economic Roundtable, "Early Intervention to Prevent Persistent Homelessness," Table A-7.

Factors that reduce risk include:

- Receiving residential alcohol or substance abuse services in the past year
- European American or Asian American ethnicity

Poverty employment, unemployment, ethnicity, isolation, personal crises, destitution, and homelessness are intertwined.

Cost of Persistent Homelessness

The solution of employment costs less than the problem of homelessness.

Individuals who become persistently homeless use more public services and have higher public costs than their peers who do not become homeless.

These costs are ongoing and increase as individuals become older.⁴⁹

Health care costs were five times higher for persistently homeless workers and four times higher for persistently homeless youth than for their low-income counterparts who do not become homeless.

Persistently
homeless workers
have public costs
of \$13,700 a year
for benefits and
services received
from local
government.

Justice system costs are nine times higher for persistently homeless workers and seven times higher for persistently homeless youth than for their low-income counterparts who do not become homeless.

Persistently homeless workers in Los Angeles County typically have public costs of \$13,700 a year for benefits and services received from local government. Public underwriting is much greater if they are able to obtain affordable housing. The Los Angeles Times reported that the cost could top \$600,000 apiece for 1,000 units of housing for homeless residents that was approved through Proposition HHH, a bond approved by Los Angeles taxpayers.⁵⁰

Using predictive screening tools to identify high-risk individuals and intervene early before they become persistently homeless can help them avoid hardship and help the public avoid continuing high costs from ongoing, intensive and increasing use of local services.

Demonstration Employment Project for Preventing Homelessness

The Realization Project is a pilot initiative to prevent persistent homelessness through employment. It addresses chronic homelessness as a problem of racial injustice as well as a problem of inadequate income by providing comprehensive services and skill development that lead to jobs that will pay for rent and a decent life for community college students who are likely to be persistently homeless.

The project was convened by the Economic Roundtable, the California Labor and Workforce Development Agency and the Los Angeles County Federation of Labor. Thirty organizations that participated in planning the project came from organized labor, the nonprofit sector, and state and local government.

All 30 participating organization unanimously agreed to five core principles:

1. Homelessness is a problem of inadequate income as well as of unaffordable housing.
2. Employment is an important tool for providing income, dignity and housing for homeless individuals.
3. Employment interventions should be provided at the onset of homelessness, before individuals are severely harmed by prolonged homelessness.
4. Interventions should be targeted on employable individuals who want a job but will otherwise become persistently homeless.
5. Employment interventions should provide comprehensive help, including temporary housing, behavioral health services, job training, and access to high-road employment.

The Realization Project uses the two predictive screening tools described earlier to identify community college students who are likely to become persistently homeless.

Participants receive comprehensive, individually tailored support including housing, counseling, team building, behavioral health services, mentoring, transportation, vocational assessment, job training, access to apprenticeship training for union jobs, and academic courses, tutoring, and support services at Long Beach City College, and help in obtaining a living-wage job. Special Services for Groups is providing behavioral health services, half of the housing and collaborating in evaluating the project.

This approach jumpstarts the current model of giving progressively more help to individuals the longer they remain homeless. Re-employment opens a new line of attack by addressing homelessness as an issue of economic opportunity and human potential. Employment can provide income, dignity and housing for homeless individuals.

Participants demonstrate remarkable resilience, drive and possibilities for success but they struggle against formidable and unfair obstacles. There are solutions to each person's problems, but no single solution. The difficulties they are overcoming include poverty, lack of family support, foster care experiences, discouragement, anxiety, depression, gaps in educational knowledge, criminal justice records, and unfamiliarity with living wage occupations.

The project has been funded by the California Community Foundation, the Weingart Foundation, and the Long Beach City College Foundation.

The costs for heavy touch comprehensive services are offset by avoiding ongoing high public costs that would be incurred if the participants were not helped and became persistently homeless. These net cost savings make the project scalable through linkages with public systems for employment services, public assistance, health care, and the justice system.

Summary

Roughly 46 percent of non-chronically homeless adults in the United States, 40 percent in California and 35 percent in Los Angeles County are working now or worked last year, but half had incomes in the past year that were less than half of the poverty threshold.

Most employed homeless individuals had only part-time work. Nine-tenths of those who worked in the preceding year did not work full-time. This reflects the pervasive part-time employment in the poverty labor force. Poverty workers and homeless workers have similar demographic attributes, wages and employers.

The largest employers of homeless workers are restaurants, colleges and universities, construction, agriculture, temp agencies, churches, and social service organizations.

The prominent role of colleges, universities and social service organizations as employers of homeless labor stands out. Most of these entities are either nonprofit and tax exempt or part of the public sector. Their role as homeless employers is evidence of willingness to perpetuate rather than ameliorate economic desperation.

Economy-driven homelessness emerges largely from jobs lost at the thin edge of the labor market rather than from unemployment in the middle and upper reaches of the wage ladder. This is the epicenter of job destruction and unemployment in the Pandemic Recession – restaurants, retail stores, restaurants and bars, clerical jobs, child care, and personal care.

The risk of homelessness increases as earnings decrease. The odds of becoming homeless are 23 times greater for a worker at the bottom of the wage ladder than for someone earning \$28,082 a year.

The odds of homelessness at any income level are about twice as high for Latinos as they are for European Americans, and about three times higher for African Americans. These risks are compounded because incomes skew lower for African Americans and Latinos than for European Americans. This reflects the social hazards including bias, discrimination and barriers in employment, housing, education, and the justice system.

The risks that lead from unemployment to homelessness are not stand-alone threats. They include all of the social and economic ingredients of a worker's life layered on top of each other, some as safeguards and others as vulnerabilities. Poverty employment, unemployment, ethnicity, isolation, personal crises, destitution, and homelessness are intertwined.

Predictive screening tools can integrate information about these risk factors to make accurate estimates of the likelihood that an unemployed worker or young adult will become persistently homeless.

The solution of employment costs less than the problem of homelessness. Individuals who become persistently homeless use more public services and have far higher public costs than their peers who do not become homeless. These costs are ongoing and increase as individuals become older. Persistently homeless workers in Los Angeles County typically have public costs of \$13,700 a year for benefits and services from local government.

A pilot initiative is underway to prevent persistent homelessness by providing comprehensive services and skill development that lead to jobs that pay for rent and a decent life for homeless community college students.

Participants receive comprehensive, individually tailored support including housing, case management, behavioral health services, vocational assessment and counseling, job training, transportation, access to apprenticeship training for union jobs, and academic courses, tutoring, and support services.

The cost for heavy touch comprehensive services are offset by avoiding ongoing high public costs that would be incurred if the participants were not

helped and became persistently homeless. These net cost savings make the project scalable through linkages with public systems for employment services, public assistance, health care, and the justice system.

Policy Actions

Increasing the incomes of employable homeless adults through jobs that pay a living wage should be a primary strategy for preventing homelessness caused by the Pandemic Recession. Workers' motivation to support themselves through work and to obtain shelter with the income they earn is valuable both for them and for society. Work provides dignity and prevents the social costs that accompany destitution.

Swift and massive intervention is required to create jobs and provide earned income for unemployed workers who face the possibility of homelessness.

Employment programs should target those who are at risk of losing their housing and those who have no place of their own to sleep. They should use workers' existing skills and, if needed, support permanent economic progress by providing education and training to upgrade skills.

Workers who are homeless or at risk of homelessness have widely varying needs. To be effective, employment programs must differentiate among workers with different levels and types of need. Responsive interventions will range from simply providing a job to also providing housing, skill development and behavioral health services.

Targeting workers at risk of homelessness using predictive screening tools or other screening methods is the most effective way of using public funds. Given the government budget constraints in this recession, it makes more sense to spend \$10,000 on workers who really need it, and will otherwise have high public costs if they are homeless, than to give \$100 each to a larger population that includes people with less urgent needs.

America's most recent fond memories of public employment date back the Works Progress Administration (WPA) in 1935. The CETA Public Employment Program in 1976 was known for supplanting existing government activities.⁵¹ The American Recovery and Reinvestment Act (ARRA) of 2009 depended largely on trickledown economics for job benefits to reach the working poor.⁵²

New employment models are needed that avoid the shortcomings of CETA and the ARRA. The *Realization Project* described earlier is an effort to create a new program model. More broadly, employment programs should be publicly funded and carry out work that provides concrete public benefits, either through services or building public assets. Where possible private organizations should be the employers.

The federal government has the greatest capacity to fund employment programs, but programs that are effective in providing needed services and

building public assets they also should be supported by state and local government. Bond financing is a tool for funding employment projects that create valuable public improvements and infrastructure.

Educational institutions, social assistance organizations and churches that are employing homeless workers but not lifting them out of poverty should be held accountable for providing employment, and if needed training, that enables workers to earn enough to pay for their basic needs.

Existing apprenticeship programs provide a good model for improving skills and wages by bringing together training, union representation and private employment. This model should be replicated in other industries including health care and transportation.

Three public policies are needed to augment employment initiatives:

- *First*, make efficient and judicious use of project labor agreements to require hiring local low-income workers not only in public sector construction projects but also in procurement of a broader range of goods and services.
- *Second*, raise the minimum wage to a level that enables workers to afford basic necessities, including housing.
- *Third*, require employers to provide stable work schedules with adequate advance notice of schedule changes so that it will be feasible for part-time workers to hold multiple part-time jobs.

The need to provide jobs for workers displaced by the Pandemic Recession is an opportunity for long overdue investment in the environment, public infrastructure and social needs. The skills, energy and aspirations of at-risk workers can be employed for public benefit to:

1. Provide child care
2. Tutor students
3. Provide care for sick and incapacitated individuals
4. Provide community nutrition
5. Operate neighborhood shuttle programs
6. Build affordable housing
7. Repair and upgrade existing affordable housing
8. Repair and maintain parks and forests
9. Repair and build public transportation infrastructure
10. Build energy infrastructure for a green economy

Living-wage job creation will provide workers the stability to prevent homelessness. In turn, communities will gain essential public projects to improve the environment, build infrastructure and provide essential social services. These investments will return to society much more than their basic costs.

Author Biographies

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Data Appendix

A-1: California industries that lost the most jobs from March to April 2020

Industry	NAICS	March and April 2020			
		Mar-20	Apr-20	Change	% Change
Apparel Manufacturing	315	29,500	13,800	-15,700	-53%
Printing & Related Support Activities	323	34,900	28,000	-6,900	-20%
Transportation Equipment Manufacturing	336	131,900	106,200	-25,700	-19%
Apparel, Piece Goods & Notions Whsle.	4243	39,300	21,200	-18,100	-46%
Motor Vehicle & Parts Dealers	441	192,900	150,000	-42,900	-22%
Furniture & Home Furnishings Stores	442	52,500	25,700	-26,800	-51%
Clothing & Clothing Accessories Stores	448	180,100	76,500	-103,600	-58%
Department Stores	4522	100,100	61,800	-38,300	-38%
Miscellaneous Store Retailers	453	87,100	60,400	-26,700	-31%
Motion Picture & Sound Recording	512	170,900	102,200	-68,700	-40%
Auto Equipment Rental & Leasing	5321	25,800	18,400	-7,400	-29%
Specialized Design Services	5414	24,600	19,300	-5,300	-22%
Other Schools & Instruction	6116	75,500	57,600	-17,900	-24%
Offices of Dentists	6212	131,900	53,600	-78,300	-59%
Vocational Rehabilitation Services	6243	36,000	25,900	-10,100	-28%
Child Day Care Services	6244	76,000	43,900	-32,100	-42%
Arts, Entertainment & Recreation	70	303,100	176,900	-126,200	-42%
Hotels, Motels and Lodging Places	721	230,600	128,500	-102,100	-44%
Food Services & Drinking Places	722	1,406,500	771,600	-634,900	-45%
Personal & Laundry Services	812	167,000	80,800	-86,200	-52%
Civic & Social Organizations	8134	43,400	24,500	-18,900	-44%
TOTAL		3,496,200	2,022,300	-1,473,900	-42%

A-2: Number of nonrelative household members, by state, county, gender and age.

Source: American Community Survey Public Use Microdata Sample 2014-2018

Geography	Gender		Age					Total
	Male	Female	18-24	25-34	35-44	45-54	55-64	
U.S. TOTAL	1,359,824	1,209,967	695,515	727,931	406,085	403,315	336,945	5,139,582
Alabama	17,684	15,374	9,961	8,062	5,033	5,325	4,677	66,116
Alaska	4,657	2,947	2,918	1,962	1,384	751	589	15,208
Arizona	33,844	27,749	16,677	17,957	9,168	10,275	7,516	123,186
Arkansas	9,857	9,082	5,804	5,073	3,614	2,482	1,966	37,878
California	195,998	178,104	83,535	111,782	63,689	61,383	53,713	748,204
Colorado	24,954	21,807	13,735	15,892	6,429	6,378	4,327	93,522
Connecticut	13,484	13,387	7,568	8,122	3,427	4,158	3,596	53,742
Delaware	3,695	3,983	1,941	2,372	1,291	1,242	832	15,356
Dist. Columbia	3,967	4,280	1,023	2,550	1,862	1,673	1,139	16,494
Florida	112,200	98,262	44,712	55,770	33,987	40,315	35,678	420,924
Georgia	40,506	35,480	19,455	19,946	12,934	12,952	10,699	151,972
Hawaii	10,144	10,482	4,521	6,276	3,666	3,233	2,930	41,252
Idaho	7,736	5,291	4,380	4,071	1,560	1,535	1,481	26,054
Illinois	48,054	42,416	25,339	26,339	13,854	13,707	11,231	180,940
Indiana	26,072	22,081	17,893	11,227	6,891	7,071	5,071	96,306
Iowa	10,271	8,065	7,122	4,463	2,281	2,696	1,774	36,672
Kansas	8,531	7,448	6,664	3,228	2,169	2,090	1,828	31,958
Kentucky	18,164	16,407	11,188	8,773	5,228	5,145	4,237	69,142
Louisiana	18,097	17,415	9,788	10,648	5,784	4,683	4,609	71,024
Maine	5,302	5,216	3,556	2,245	2,165	1,372	1,180	21,036
Maryland	31,270	29,851	15,073	18,882	11,139	8,664	7,363	122,242
Massachusetts	25,937	24,065	13,259	16,366	6,948	7,157	6,272	100,004
Michigan	40,281	35,821	23,673	20,114	10,187	12,590	9,538	152,204
Minnesota	18,091	16,138	12,071	9,703	4,773	4,303	3,379	68,458
Mississippi	9,616	10,442	6,435	5,782	2,114	3,049	2,678	40,116
Missouri	22,351	22,486	15,291	11,945	6,281	6,598	4,722	89,674
Montana	3,509	3,175	2,527	1,491	890	882	894	13,368
Nebraska	5,246	4,901	3,791	2,962	1,450	1,264	680	20,294

Geography	Gender		Age					Total
	Male	Female	18-24	25-34	35-44	45-54	55-64	
Nevada	13,742	12,453	5,700	6,724	6,130	4,475	3,166	52,390
New Hampshire	6,093	4,873	3,707	2,977	934	1,558	1,790	21,932
New Jersey	40,161	32,205	15,531	21,980	12,733	13,191	8,931	144,732
New Mexico	8,046	7,646	4,508	3,629	2,772	2,109	2,674	31,384
New York	92,197	86,594	35,783	55,019	31,489	31,172	25,328	357,582
North Carolina	36,622	31,643	21,358	17,203	10,403	10,806	8,495	136,530
North Dakota	3,103	1,536	1,939	1,611	392	501	196	9,278
Ohio	41,401	35,166	26,170	19,647	11,011	10,926	8,813	153,134
Oklahoma	16,073	14,417	9,370	7,948	4,899	5,037	3,236	60,980
Oregon	19,601	19,601	10,243	11,405	5,901	5,958	5,695	78,404
Pennsylvania	47,396	40,787	28,950	24,533	11,814	12,663	10,223	176,366
Rhode Island	4,870	2,815	2,099	2,338	1,229	1,036	983	15,370
South Carolina	16,967	15,335	8,753	9,435	5,443	4,037	4,634	64,604
South Dakota	2,893	1,712	1,809	975	721	489	611	9,210
Tennessee	24,787	23,341	13,452	13,281	7,022	7,898	6,475	96,256
Texas	106,699	93,396	52,108	57,407	34,141	30,093	26,346	400,190
Utah	10,376	9,153	7,311	6,163	2,536	2,402	1,117	39,058
Vermont	2,164	2,125	1,487	1,546	370	382	504	8,578
Virginia	34,692	31,677	19,068	19,158	9,669	10,610	7,864	132,738
Washington	31,825	25,426	16,872	16,944	8,449	7,496	7,490	114,502
West Virginia	7,898	7,462	5,242	3,572	2,021	2,303	2,222	30,720
Wisconsin	20,554	16,404	12,916	9,265	5,113	4,557	5,107	73,916
Wyoming	2,146	2,045	1,239	1,168	695	643	446	8,382
California Counties								
Alameda	8,266	7,637	3,832	4,944	2,779	2,282	2,066	15,903
Butte	988	1,011	768	265	248	367	351	1,999
Contra Costa	5,640	5,845	2,379	3,668	2,139	1,882	1,417	11,485
El Dorado	868	780	576	305	49	282	436	1,648
Fresno	4,910	3,248	1,936	2,633	1,312	1,205	1,072	8,158
Humboldt	1,271	912	666	453	256	514	294	2,183
Imperial	867	972	319	407	418	311	384	1,839
Kern	3,596	3,363	1,832	2,298	1,093	955	781	6,959
Kings	602	429	206	260	197	194	174	1,031
Los Angeles	51,567	44,788	16,376	29,356	18,964	17,389	14,270	96,355
Madera	560	1,195	459	371	423	346	156	1,755
Marin	1,038	1,371	589	829	290	353	348	2,409
Mendocino	1,221	1,023	807	341	351	238	507	2,244
Merced	679	936	661	424	137	278	115	1,615
Monterey	3,710	2,557	1,194	1,743	1,242	1,281	807	6,267
Napa	899	765	319	535	245	326	239	1,664
Nevada	996	688	369	355	232	194	534	1,684
Orange	15,134	13,768	6,561	8,933	4,421	4,674	4,313	28,902
Placer	1,389	1,091	731	595	308	507	339	2,480
Riverside	11,771	11,572	6,057	6,393	3,685	3,572	3,636	23,343
Sacramento	6,884	6,551	2,874	4,302	1,875	2,312	2,072	13,435
San Bernardino	12,138	10,987	6,443	6,387	4,354	3,356	2,585	23,125
San Diego	17,718	14,624	7,252	10,626	4,950	4,756	4,758	32,342
San Francisco	5,988	5,520	1,590	4,419	2,270	1,900	1,329	11,508
San Joaquin	2,753	2,481	1,744	1,325	611	722	832	5,234
San Luis Obispo	1,315	984	695	519	271	438	376	2,299
San Mateo	5,338	4,849	1,914	3,522	1,700	1,609	1,442	10,187
Santa Barbara	2,338	2,193	1,358	878	824	714	757	4,531
Santa Clara	8,869	9,142	3,675	5,966	3,306	2,801	2,263	18,011
Santa Cruz	1,608	1,690	820	819	629	558	472	3,298
Shasta	903	640	376	207	420	306	234	1,543
Solano	1,949	1,853	1,044	842	567	688	661	3,802
Sonoma	2,399	2,809	1,130	1,643	776	908	751	5,208
Stanislaus	1,949	1,481	1,100	958	333	687	352	3,430
Sutter	636	581	462	308	120	180	147	1,217
Tehama	277	392	300	5	37	147	180	669
Tulare	1,558	1,633	961	1,112	164	475	479	3,191
Ventura	2,848	3,614	1,428	1,908	1,123	941	1,062	6,462
Yolo	955	1,117	1,096	345	218	163	250	2,072

A-3: Number of homeless residents in HUD Continuums of Care (CoC) with 1,000 or more homeless individuals in 2019, and all four CoC in Los Angeles County.

Source: HUD 2019 Annual Homeless Assessment Report (AHAR) to Congress, (2020)

State	Continuum of Care	Homeless	Under 18	18 to 24	Over 24	Chronically Homeless
	United States Total	567,715	107,069	45,629	415,017	105,583
AK	Anchorage	1,111	193	132	786	91
AR	Little Rock/Central Arkansas	1,066	109	64	893	296
AZ	Tucson/Pima	1,372	208	113	1,051	356
AZ	Phoenix, Mesa/Maricopa	6,614	1,103	471	5,040	962
CA	San Jose/Santa Clara	9,706	801	1,691	7,214	2,471
CA	San Francisco	8,035	384	1,157	6,494	3,030
CA	Oakland, Berkeley/Alameda	8,022	329	753	6,940	2,236
CA	Sacramento	5,561	711	414	4,436	1,641
CA	Santa Rosa, Petaluma/Sonoma	2,951	277	554	2,120	675
CA	Richmond/Contra Costa	2,295	191	134	1,970	504
CA	Marin	1,034	94	102	838	257
CA	Watsonville/Santa Cruz	2,167	300	594	1,273	403
CA	Turlock, Modesto/Stanslaus	1,923	250	137	1,536	285
CA	Stockton/San Joaquin	2,631	342	148	2,141	742
CA	Daly/San Mateo	1,512	238	59	1,215	321
CA	Visalia/Kings, Tulare	1,064	87	79	898	315
CA	Fresno/Madera	2,508	160	138	2,210	698
CA	Vallejo/Solano	1,151	52	210	889	179
CA	Los Angeles	56,257	5,061	3,527	47,669	15,538
CA	San Diego City and	8,102	1,050	499	6,553	1,712
CA	Santa Ana, Anaheim/Orange	6,860	980	271	5,609	2,562
CA	Santa Maria/Santa Barbara	1,803	237	96	1,470	423
CA	Bakersfield/Kern	1,330	141	100	1,089	73
CA	Long Beach	1,894	120	67	1,707	645
CA	Pasadena	542	50	32	460	269
CA	Riverside	2,811	214	276	2,321	804
CA	San Bernardino	2,607	300	178	2,129	767
CA	Oxnard, San Buenaventura/Ventura	1,669	116	93	1,460	324
CA	Glendale	243	49	9	185	76
CA	Imperial	1,413	128	91	1,194	490
CA	San Luis Obispo	1,483	142	165	1,176	298
CO	Metropolitan Denver	5,755	858	364	4,533	1,158
CO	Colorado Springs/El Paso	1,562	283	135	1,144	336
CT	Connecticut Balance of State	2,262	403	195	1,664	158
DC	District of Columbia	6,521	1,606	546	4,369	1,688
FL	Sarasota, Bradenton/Manatee, Sarasota	1,135	104	89	942	246
FL	Tampa/Hillsborough	1,650	310	74	1,266	264
FL	St. Petersburg, Clearwater, Largo/Pinellas	2,415	271	89	2,055	722
FL	Orlando/Orange, Osceola, Seminole	2,010	461	125	1,424	478
FL	Fort Pierce/St. Lucie, Indian River, Martin	1,499	457	58	984	51
FL	Jacksonville-Duval, Clay	1,654	228	109	1,317	301
FL	Miami-Dade	3,472	801	227	2,444	378
FL	Ft Lauderdale/Broward	2,803	305	131	2,367	914
FL	West Palm Beach/Palm Beach	1,397	173	108	1,116	215
GA	Atlanta	3,217	318	187	2,712	376
HI	Honolulu City and	4,417	794	230	3,393	1,140
IL	Chicago	5,290	1,263	457	3,570	1,189
IN	Indianapolis	1,567	275	77	1,215	125
KY	Louisville/Jefferson	1,071	175	70	826	220
LA	New Orleans/Jefferson Parish	1,179	86	84	1,009	146
MA	Boston	6,242	2,311	483	3,448	825
MA	Lynn	1,035	565	102	368	78
MA	Springfield/Hampden	2,443	1,292	203	948	200
MA	Worcester	1,593	579	168	846	84
MA	Quincy, Brockton, Weymouth, Plymouth	1,088	404	75	609	212
MA	Massachusetts Balance of State	1,918	840	219	859	212
MD	Baltimore	2,294	236	134	1,924	619
MI	Detroit	1,965	373	158	1,434	279
MN	Minneapolis/Hennepin	3,400	838	307	2,255	758
MN	Saint Paul/Ramsey	1,579	397	131	1,051	456
MO	St. Louis City	1,031	179	78	774	191

State	Continuum of Care	Homeless	Under 18	18 to 24	Over 24	Chronically Homeless
MO	Kansas City, Independence, Lee's Summit/Jackson, Wyandotte, MO & KS	1,979	448	89	1,442	337
NC	Charlotte/Mecklenberg	1,742	342	85	1,315	247
NE	Omaha, Council Bluffs	1,410	182	86	1,142	343
NJ	Newark/Essex	2,235	525	209	1,501	271
NM	Albuquerque	1,524	207	99	1,218	590
NV	Las Vegas/Clark	5,530	516	916	4,098	622
NV	Reno, Sparks/Washoe	1,256	110	91	1,055	76
NY	New York City	78,604	24,725	7,316	46,563	6,226
NY	Nassau, Suffolk	3,843	1,656	240	1,947	109
NY	Yonkers, Mount Vernon/Westchester	1,812	732	130	950	130
OH	Cincinnati/Hamilton	1,082	208	89	785	69
OH	Cleveland/Cuyahoga	1,618	269	121	1,228	226
OH	Columbus/Franklin	1,907	354	191	1,362	97
OK	Tulsa	1,188	154	126	908	236
OK	Oklahoma City	1,273	131	90	1,052	275
OR	Eugene, Springfield/Lane	2,165	166	131	1,868	841
OR	Portland, Gresham/Multnomah	4,015	195	285	3,535	1,781
PA	Philadelphia	5,735	1,286	448	4,001	1,304
PR	Puerto Rico Balance of Commonwealth	1,345	84	54	1,207	363
PR	South-Southeast Puerto Rico	1,190	26	31	1,133	323
RI	Rhode Island Statewide	1,055	197	39	819	198
SC	Greenville, Anderson, Spartanburg	1,401	192	74	1,135	321
SC	Columbia/Midlands	1,215	142	95	978	277
TN	Memphis/Shelby	1,325	365	63	897	74
TN	Nashville-Davidson	1,986	124	86	1,776	466
TX	San Antonio/Bexar	2,872	523	128	2,221	343
TX	Austin/Travis	2,255	376	107	1,772	602
TX	Dallas, Irving	4,538	732	232	3,574	533
TX	Fort Worth, Arlington/Tarrant	2,028	286	83	1,659	320
TX	Houston, Pasadena, Conroe/Harris, Ft. Bend, Montgomery	3,938	634	280	3,024	661
UT	Salt Lake	1,844	327	132	1,385	383
VA	Fairfax	1,034	330	88	616	235
WA	Seattle/King	11,199	1,550	1,229	8,420	2,213
WA	Spokane	1,309	192	105	1,012	257
WA	Tacoma, Lakewood/Pierce	1,486	242	150	1,094	364
WA	Everett/Snohomish	1,116	234	91	791	476

A-4: Projected Annual Increase in Working-Age Homeless Adults, Broken Out by Type, in Los Angeles County, California and the United States – Supporting Data for Figure 16

The projected growth in working-age homelessness is for the point-in-time population, that is, the number of individuals homeless on a single day of the year rather than the total who are homeless throughout the year. This is the estimated pandemic-caused increase in the homeless population in addition to the number who were homeless in 2019. Chronically homeless individuals are part of the HUD homeless individuals shown in the table, but are also broken out separately. The increase in working-age chronic homelessness is cumulative rather than point-in-time because chronic homelessness persists beyond a single year. The growth from 2020 through 2023 is totaled to show the estimated overall increase in chronic homelessness as a result of the Pandemic Recession.

DATA FOR UNITED STATES WORKING AGE ADULTS

Baseline Point-In-Time Data for the United States from 2019

Year	Total Homeless of All Types	Couch Surfing	HUD Homeless	HUD Chronically Homeless
2019	3,030,437	2,569,791	460,646	96,141

Projected Growth in the Point-In-Time Homeless Population - Addition to 2019 Size

Year	Number				Percent			
	Total Annual Additional Homeless	Couch Surfing	HUD Homeless	HUD Chronically Homeless	Total Annual Additional Homeless	Couch Surfing	HUD Homeless	HUD Chronically Homeless
2020	88,851	75,345	13,506	2,819	3%	3%	3%	3%
2021	276,499	234,469	42,030	8,772	9%	9%	9%	9%
2022	513,267	435,247	78,020	16,283	17%	17%	17%	17%
2023	603,051	511,383	91,668	19,132	20%	20%	20%	20%
Cumulative Growth in Chronic Homelessness				47,006				49%

DATA FOR CALIFORNIA WORKING-AGE ADULTS

Baseline Point-In-Time Data for California from 2019

Year	Total Homeless of All Types	Couch Surfing	HUD Homeless	HUD Chronically Homeless
2019	511,075	374,102	136,973	41,557

Projected Growth in the Point-In-Time Homeless Population - Addition to 2019 Size

Year	Number				Percent			
	Total Annual Additional Homeless	Couch Surfing	HUD Homeless	HUD Chronically Homeless	Total Annual Additional Homeless	Couch Surfing	HUD Homeless	HUD Chronically Homeless
2020	19,357	14,169	5,188	1,574	4%	4%	4%	4%
2021	60,238	44,094	16,144	4,898	12%	12%	12%	12%
2022	111,821	81,852	29,969	9,092	22%	22%	22%	22%
2023	131,381	96,170	35,211	10,683	26%	26%	26%	26%
Cumulative Growth in Chronic Homelessness				26,248				63%

DATA FOR LOS ANGELES COUNTY WORKING-AGE ADULTS

Baseline Point-In-Time Data for Los Angeles County from 2019

Year	Total Homeless of All Types	Couch Surfing	HUD Homeless	HUD Chronically Homeless
2019	150,011	96,355	53,656	16,528

Projected Growth in the Point-In-Time Homeless Population - Addition to 2019 Size

Year	Number				Percent			
	Total Annual Additional Homeless	Couch Surfing	HUD Homeless	HUD Chronically Homeless	Total Annual Additional Homeless	Couch Surfing	HUD Homeless	HUD Chronically Homeless
2020	7,699	4,945	2,754	848	5%	5%	5%	5%
2021	23,960	15,390	8,570	2,640	16%	16%	16%	16%
2022	44,476	28,568	15,908	4,900	30%	30%	30%	30%
2023	52,257	33,565	18,691	5,758	35%	35%	35%	35%
Cumulative Growth in Chronic Homelessness				14,146				86%

A-5: Number of workers 18 to 64 years of age with annual wage and salary earnings in the most recent year, adjusted to 2018 dollars, under \$13,560. Workers with annual earnings less than \$290, which represents 40 hours of work at the federal minimum wage of \$7.25, are excluded. Source: American Community Survey Public Use Microdata Sample, 2014-2018.

	AGE					ETHNICITY					
	Total	% of All	18-24	25-34	35-54	55+	Latino	Euro.	African	Asian	Other
	<\$13,560	Workers						Amer.	Amer.	Amer/PI	
U.S. Total	29,529,960	20%	12,900,439	6,057,336	7,286,343	3,285,842	5,711,267	16,809,481	4,304,535	1,632,456	1,072,221
Alabama	448,999	22%	191,464	102,526	109,336	45,673	18,920	266,210	146,464	6,648	10,757
Alaska	68,303	19%	28,549	16,000	16,789	6,965	5,007	33,540	2,489	6,515	20,752
Arizona	612,585	21%	263,854	128,142	153,236	67,353	221,652	297,058	31,358	22,091	40,426
Arkansas	261,436	21%	109,427	58,200	66,708	27,101	19,880	179,716	48,982	4,706	8,152
California	3,454,484	20%	1,426,169	789,695	884,795	353,825	1,534,140	1,109,048	208,079	471,102	132,115
Colorado	509,361	18%	227,102	104,719	119,735	57,805	111,732	336,171	23,296	19,325	18,837
Connecticut	314,810	18%	156,728	55,438	71,557	31,087	57,439	194,404	39,470	13,778	9,719
Delaware	84,072	19%	38,648	15,938	18,870	10,616	7,063	48,797	22,111	3,171	2,930

	AGE					ETHNICITY					
	Total	% of All	18-24	25-34	35-54	55+	Latino	Euro.	African	Asian	Other
	<\$13,560	Workers						Amer.	Amer.	Amer/PI	
Wash. D.C.	61,477	16%	31,740	14,777	10,667	4,293	6,601	20,725	29,310	3,175	1,666
Florida	1,728,368	20%	647,453	377,853	485,398	217,664	491,243	814,637	322,133	53,558	46,797
Georgia	955,506	21%	400,931	211,329	250,422	92,824	88,226	454,919	352,247	37,019	23,095
Hawaii	107,190	16%	44,491	24,105	25,618	12,976	12,844	21,102	2,070	47,359	23,815
Idaho	185,043	25%	78,547	38,062	47,013	21,421	25,024	146,818	2,159	3,143	7,899
Illinois	1,166,713	19%	519,682	228,372	284,544	134,115	207,246	678,852	188,828	63,943	27,844
Indiana	661,348	21%	305,041	125,842	157,344	73,121	45,222	510,770	72,489	16,215	16,652
Iowa	306,171	20%	156,003	46,249	65,348	38,571	20,138	253,185	14,663	10,001	8,184
Kansas	292,302	21%	140,604	51,828	66,631	33,239	38,199	209,850	21,003	10,421	12,829
Kentucky	427,843	22%	184,534	89,932	107,079	46,298	17,269	344,927	47,608	7,740	10,299
Louisiana	431,919	22%	173,455	100,641	110,094	47,729	22,657	220,429	170,028	8,290	10,515
Maine	124,881	20%	55,545	22,346	29,068	17,922	2,901	112,677	3,047	1,737	4,519
Maryland	492,829	17%	228,453	100,428	112,733	51,215	54,126	234,776	154,392	32,963	16,572
Mass.	631,084	19%	332,829	107,069	126,930	64,256	87,645	421,679	51,634	47,897	22,229
Michigan	1,037,139	23%	472,653	193,308	247,400	123,778	60,970	741,468	166,918	32,740	35,043
Minnesota	508,722	18%	243,860	87,480	111,967	65,415	33,892	383,160	43,984	26,495	21,191
Mississippi	271,495	22%	111,896	62,854	69,374	27,371	7,827	139,791	116,348	2,958	4,571
Missouri	586,163	21%	263,258	118,409	136,709	67,787	26,249	445,665	82,210	13,324	18,715
Montana	110,530	23%	45,577	19,986	28,194	16,773	5,052	92,176	1,291	1,502	10,509
Nebraska	187,035	20%	93,158	31,200	41,064	21,613	21,839	142,251	10,882	4,875	7,188
Nevada	241,022	18%	91,345	55,705	66,432	27,540	75,047	105,276	27,253	21,229	12,217
New Hamp.	122,674	18%	63,338	19,085	24,892	15,359	5,175	107,685	2,598	4,145	3,071
New Jersey	719,580	17%	306,851	135,274	190,377	87,078	166,089	372,426	108,624	54,918	17,523
New Mex.	205,762	24%	78,797	47,468	55,762	23,735	106,267	66,527	5,282	4,388	23,298
New York	1,683,635	19%	733,208	341,304	414,368	194,755	338,461	879,196	252,762	162,351	50,865
N. Carolina	947,365	21%	399,383	196,922	245,783	105,277	99,865	536,716	250,352	26,013	34,419
N. Dakota	70,699	18%	36,581	12,472	13,216	8,430	3,563	55,853	2,886	2,473	5,924
Ohio	1,171,427	22%	523,674	232,286	276,657	138,810	50,077	874,205	181,331	30,127	35,687
Oklahoma	363,766	21%	159,494	77,350	90,059	36,863	42,449	219,806	35,115	11,286	55,110
Oregon	400,585	21%	163,698	86,439	103,324	47,124	62,599	284,585	10,459	20,331	22,611
Penn.	1,229,982	21%	564,175	226,347	287,377	152,083	106,540	898,143	147,843	48,390	29,066
Rhode Is.	105,666	21%	57,005	17,701	21,701	9,259	19,868	70,077	7,124	3,948	4,649
S. Carolina	481,341	22%	211,191	99,282	118,084	52,784	29,141	271,861	158,419	9,066	12,854
S. Dakota	85,068	21%	39,656	15,244	18,585	11,583	3,045	65,304	2,132	2,303	12,284
Tennessee	622,861	21%	268,301	129,957	160,109	64,494	35,057	431,782	128,860	11,510	15,652
Texas	2,462,354	20%	1,042,219	540,231	634,090	245,814	1,046,501	911,104	341,583	109,293	53,873
Utah	327,884	23%	159,266	66,429	75,633	26,556	44,378	256,711	4,501	10,848	11,446
Vermont	64,809	21%	33,963	9,738	12,720	8,388	1,866	57,948	1,257	2,199	1,539
Virginia	772,738	19%	361,036	148,170	180,708	82,824	76,857	443,493	177,182	46,980	28,226
Washington	627,976	18%	263,276	135,973	161,576	67,151	93,414	406,845	28,509	55,786	43,422
W. Virginia	165,624	22%	69,347	35,565	42,050	18,662	3,773	146,339	10,109	1,969	3,434
Wisconsin	570,426	20%	278,089	92,923	124,464	74,950	43,069	445,124	44,281	19,366	18,586
Wyoming	58,908	21%	24,895	12,743	13,753	7,517	7,163	47,674	580	846	2,645

A-6: Industry distribution of workers 18 to 64 years of age in California and the United States with wage and salary earnings of \$290 (40 hours – i.e., 1 week x \$7.25, i.e., federal minimum wage) to \$13,599 in 2018 dollars. Source: U.S. Census Bureau American Community Survey Public Use Microdata Sample for 2014 to 2018.

Major NAICS Group	California			United States		
	<\$13,560	\$13,560+	% <\$13,560	<\$13,560	\$13,560+	% <\$13,560
Administrative and Support and Waste Management and Remediation Services	197,515	592,482	6%	1,730,202	4,568,948	6%
Agriculture, Forestry, Fishing, and Hunting	130,632	288,993	4%	479,199	1,189,012	2%
Arts, Entertainment, and Recreation	149,589	299,846	4%	1,278,472	1,918,836	4%
Construction	127,798	874,344	4%	1,197,152	7,837,887	4%
Durable Manufacturing	85,069	996,619	2%	884,297	9,081,427	3%
Educational Services	360,433	1,173,508	10%	3,010,764	10,904,542	10%
Finance and Insurance	98,790	902,549	3%	843,916	8,435,246	3%
Food Services and Drinking Places	529,043	728,183	15%	4,828,991	5,353,173	16%
Health Care	213,589	1,494,678	6%	2,312,251	14,833,470	8%
Information	57,863	470,345	2%	417,513	2,649,239	1%
Mining, Quarrying, and Oil and Gas Extraction	1,818	29,153	0%	47,953	796,241	0%

Nondurable Manufacturing	91,608	517,059	3%	684,816	4,977,344	2%
Other Services	208,996	531,199	6%	1,618,250	4,377,553	6%
Professional, Scientific, and Technical Services	131,078	1,281,092	4%	985,942	8,958,500	3%
Public Administration	74,342	726,192	2%	514,993	6,518,337	2%
Retail Trade	608,076	1,334,110	18%	5,624,915	11,422,258	19%
Social Assistance	145,513	297,718	4%	1,060,864	2,157,949	4%
Transportation and Warehousing	115,906	647,597	3%	873,418	5,519,983	3%
Traveler Accommodation	46,209	157,804	1%	532,204	121,037	2%
Utilities	5,403	128,729	0%	59,980	1,196,161	0%
Wholesale Trade	65,131	447,301	2%	429,950	3,451,451	1%

A-7: Occupational distribution of workers 18 to 64 years of age in California and the United States with wage and salary earnings of \$290 (40 hours – i.e., 1 week x \$7.25, i.e., federal minimum wage) to \$13,599 in 2018 dollars. Source: U.S. Census Bureau American Community Survey Public Use Microdata Sample for 2014 to 2018.

Major SOC Group	California			United States		
	<\$13,560	\$13,560+	% <\$13,560	<\$13,560	\$13,560+	% <\$13,560
Architecture and Engineering	19,495	357,502	1%	152,249	2,598,258	1%
Arts, Design, Entertainment, Sports, and Media	87,714	354,350	3%	596,634	2,005,533	2%
Building and Grounds Cleaning and Maintenance	172,683	443,524	5%	1,821,412	3,512,129	6%
Business Operations Specialists	43,460	509,498	1%	339,801	4,154,068	1%
Community and Social Service	37,831	237,883	1%	303,436	2,177,906	1%
Computer and Mathematical	35,465	604,668	1%	276,445	4,318,195	1%
Construction	108,836	673,140	3%	1,019,914	6,039,953	3%
Educational Instruction and Library	217,308	755,018	6%	1,831,765	7,270,312	6%
Extraction	5,155	40,414	0%	19,470	218,166	0%
Farming, Fishing, and Forestry	122,579	219,007	4%	388,575	737,294	1%
Financial Specialists	24,539	355,341	1%	193,033	2,982,036	1%
Food Preparation and Serving	448,713	651,536	13%	4,451,796	4,782,719	15%
Healthcare Practitioners and Technical	62,778	805,932	2%	669,549	8,082,574	2%
Healthcare Support	198,530	419,378	6%	1,432,770	3,461,954	5%
Installation, Maintenance, and Repair	41,304	397,658	1%	428,393	4,168,452	1%
Legal	10,971	169,232	0%	87,575	1,371,611	0%
Life, Physical, and Social Science	19,016	167,813	1%	149,328	1,220,970	1%
Management	94,909	1,614,139	3%	760,460	13,225,539	3%
Office and Administrative Support	420,871	1,649,905	12%	3,491,124	14,143,220	12%
Personal Care and Service	199,117	235,390	6%	1,647,504	1,900,271	6%
Production	148,122	752,283	4%	1,398,349	7,645,739	5%
Protective Service	59,475	322,270	2%	509,115	2,811,682	2%
Sales	532,304	1,252,437	15%	4,546,394	10,497,312	15%
Transportation and Material Moving	336,635	994,604	10%	2,939,710	8,521,493	10%
Architecture and Engineering	19,495	357,502	1%	152,249	2,598,258	1%

A-8: Examples of occupational skills of poverty workers. Source: *O*Net OnLine*, <https://www.onetonline.org/find/>

SOC Code	Occupational Title	California		United States		Examples of Skills
		Number	%	Number	%	
251000	Postsecondary Teachers	24,596	1%	247,952	1%	Analytic thinking, teaching
252010	Preschool And Kindergarten Teachers	14,212	0%	184,902	1%	Problem sensitivity, instructing
252020	Elementary And Middle School Teachers	43,848	1%	430,620	1%	Active listening, coaching
253041	Tutors	18,693	1%	100,921	0%	Learning strategies, dependability
2530XX	Other Teachers And Instructors	37,904	1%	240,296	1%	Oral expression and comprehension
259040	Teaching Assistants	54,178	2%	444,794	2%	Developing instructional materials
311122	Personal Care Aides	126,139	4%	540,997	2%	Social perceptiveness, monitoring
311131	Nursing Assistants	24,519	1%	428,593	1%	Building relationships, team work
339030	Security Guards And Gaming Surveillance Officers	36,327	1%	226,028	1%	Getting information, speech clarity
33909X	Other Protective Service Workers	11,138	0%	161,502	1%	Investigation, documentation
352010	Cooks	95,457	3%	1,088,882	4%	Food production, speech recognition
352021	Food Preparation Workers	78,232	2%	620,242	2%	Manual dexterity, active listening
353023	Fast Food And Counter Workers	35,890	1%	383,320	1%	Service orientation, food production
353031	Waiters And Waitresses	116,106	3%	1,227,004	4%	Speech recognition, resolving conflicts
359011	Dining Room And Cafeteria Attendants And Bartender Helpers	26,587	1%	205,212	1%	Working with the public, coordination
359021	Dishwashers	23,864	1%	228,237	1%	Control precision, communicating
359031	Hosts And Hostesses, Restaurant, Lounge, And Coffee Shop	26,305	1%	235,070	1%	Establishing interpersonal relationships
372012	Maids And Housekeeping Cleaners	55,992	2%	507,601	2%	Dynamic strength, selective attention
37201X	Janitors And Building Cleaners	76,542	2%	842,105	3%	Inspecting equipment and structures
373011	Landscaping And Groundskeeping Workers	31,871	1%	380,849	1%	Using tools and equipment, attention to detail
3930XX	Other Entertainment Attendants And Related Workers	19,321	1%	150,029	1%	Customer and personal service, communication
395012	Hairdressers, Hairstylists, And Cosmetologists	21,462	1%	186,677	1%	Using and demonstrating personal care products, originality
399011	Childcare Workers	74,486	2%	594,908	2%	Facilitate and monitor children's activities
411011	Line Supervisors Of Retail Sales Workers	28,655	1%	301,956	1%	Working with the public, coaching, resolving conflicts
412010	Cashiers	245,255	7%	2,200,178	7%	Using mathematics to solve problems, listening, speaking
412031	Retail Salespersons	180,794	5%	1,416,879	5%	Ascertain needs, provide information, communication
433031	Bookkeeping, Accounting, And Auditing Clerks	18,862	1%	161,679	1%	Accounting software, mathematical accuracy
434051	Customer Service Representatives	101,798	3%	823,722	3%	Reading and oral comprehension, critical thinking
434171	Receptionists And Information Clerks	50,770	1%	402,213	1%	Maintain records, get and transmit information
436014	Secretaries And Administrative, Except Legal, Medical, And Executive	43,465	1%	448,364	2%	Create, maintain, and enter information into databases
439061	Office Clerks, General	52,578	2%	368,654	1%	Operate office equipment, coordinate work activities
4520XX	Other Agricultural Workers	105,477	3%	327,948	1%	Propagate plants, identify plants, pests, and weeds
472031	Carpenters	15,422	0%	156,748	1%	Knowledge of construction materials, methods and tools

SOC Code	Occupational Title	California		United States		Examples of Skills
		Number	%	Number	%	
472061	Construction Laborers	45,472	1%	383,299	1%	Trunk strength, static strength, manual dexterity
5120XX	Other Assemblers and Fabricators	17,442	1%	216,004	1%	Determining product specifications and materials requirements
5191XX	Miscellaneous Production Workers, Including Equipment Operators and Tenders	18,816	1%	228,045	1%	Verifying conformance to standards, monitoring machine operations
533030	Driver/Sales Workers And Truck Drivers	49,701	1%	496,548	2%	Inspecting and safely operate motor vehicles, record transactions
537061	Cleaners Of Vehicles And Equipment	17,630	1%	149,531	1%	Disassemble and reassemble machines and equipment
537062	Laborers And Freight, Stock, And Material Movers, Hand	95,091	3%	852,902	3%	Identify and sort cargo, move materials and equipment
537064	Packers And Packagers, Hand	41,026	1%	223,120	1%	Measure, weigh, and count products and materials
537065	Stockers And Order Fillers	76,561	2%	700,771	2%	Examine and inspect items for wear or defects, store items

A-9: Method for identifying records of individual who are likely to be homeless s in the American Community Survey Public Use Microdata Sample 2014-2018

The U.S. Census Bureau's American Community Survey (ACS) classifies residents of homeless shelters and missions, as well as unsheltered homeless individuals as residents of *non-institutional group quarters* (<https://www.ofm.wa.gov/washington-data-research/population-demographics/decennial-census/2020-census-everyone-counts/2020-census-what-you-need-know/hard-count-population-2020-census/counting-people-experiencing-homelessness-during-2020-census>). This category also includes people residing in college dormitories, military barracks, group homes, and religious group quarters (<https://www.census.gov/topics/income-poverty/poverty/guidance/group-quarters.html>). We used a series of filtering steps to separate residents of homeless shelters and missions and unsheltered homeless individuals from residents of other types of non-institutional group quarters in the 2014-2018 Public Use Microdata Sample (PUMS) records from the ACS. Among individuals in non-institutional group quarters, the following types of records were excluded:

1. Individuals on active military duty or employed by the armed forces.
2. Individuals 16 to 24 years of age who were attending college or graduate school unless they were receiving cash public assistance, food stamps or Medicaid.
3. Individuals with M.A., Ph.D. or professional degrees unless they were receiving cash public assistance, food stamps or Medicaid.
4. Individuals who worked full-time last year (50+ weeks and 40+ hours per week) and also were employed in the most recent week unless they were receiving cash public assistance, food stamps or Medicaid.
5. Individuals who earned \$30,000 or more in the past year unless they were receiving cash public assistance, food stamps or Medicaid.
6. Individuals with incomes of \$50,000 or more in the past year, even if they were receiving some type of public assistance – this represents one percent of records filtered to identify employed homeless individuals.

These filtering steps identified 15,539 weighted ACS PUMS records of California residents 18 to 64 years of age in non-institutional group quarters who can reasonably be described as homeless, based on having excluded other groups also included in non-institutional group quarters. The sum of weights assigned to these records show that they represent 156,496 California residents. When applied to records for the United States, these filters identified 111,755 records representing 997,657 individuals who were likely to be homeless. The HUD homeless counts from 2014 to 2018 identified an average of 107,930 homeless individuals 18 years of age and older in California and 436,897

individuals in the United States. These are the years that correspond with the ACS PUMS data.

There are several possible explanations for this discrepancy:

1. ACS PUMS records that were filtered to identify homeless individuals may include some individuals who do not meet HUD's definition of homelessness, for example, low-income individuals in substance abuse rehabilitation facilities.
2. The point-in-time homeless counts that are carried out throughout the United States in accordance with HUD guidelines are widely reported to under-count unsheltered individuals (see the 2017 report by the Economic Roundtable, *Who Counts*, <https://economicrt.org/publication/who-counts/>). This may also be a factor in PUMS records of individuals flagged as homeless. PUMS records may also over-represent individuals in homeless shelters and under-represent unsheltered individuals, although we do not know whether this skewing is greater or less than what occurs in HUD's homeless counts.
3. There is wide variation among jurisdictions in the level of effort and technical skill that is applied to homeless counts. Nationwide, lack of resources in smaller jurisdictions and sparsely populated rural areas may result in a greater HUD undercount than occurs in metropolitan areas and more urbanized states.
4. The filters used to identify records of likely homeless individuals in ACS PUMS data combine a mix of point-in-time identifiers and others that are annual identifiers. Since most individuals who experience homelessness are not homeless for a year, the annual identifiers contribute to an enumeration that is larger than the point-in-time count. For example, the filter for any public assistance benefits in the past year is an annual enumeration.

Despite the imperfect match between the homeless population identified by HUD and the homeless population identified by the American Community Survey, the records of likely homeless individuals from ACS PUMS are valuable because they enable us to use the same data frame – ACS PUMS - to describe the demographic, employment and income attributes of both homeless and housed individual, and to compare individuals who likely to be homeless to the overall U.S. population.

A-10: State breakout of attributes of adult workers 18 to 64 years of age in ACS PUMS 2014-2018 records with earnings of \$290 to \$49,999 in the preceding year who were flagged as homeless.

	Total	Estimated Hours Worked Last Year				Income as Percent of Poverty Threshold				Current Employment Status		
		1-279	280-799	800-1,999	2,000+	0% to 9%	10% to 49%	50% to 99%	100%+	Employed Now	Unemployed Now	Not in Labor Force
U.S. TOTAL	415,111	21%	29%	40%	9%	8%	28%	24%	39%	63%	10%	26%
Alabama	5,702	19%	26%	49%	6%	8%	31%	33%	28%	45%	9%	46%
Alaska	2,797	12%	25%	32%	32%	2%	22%	21%	55%	76%	8%	16%
Arizona	8,203	18%	35%	36%	11%	9%	35%	21%	34%	65%	10%	25%
Arkansas	2,784	34%	28%	37%	1%	2%	19%	24%	55%	59%	2%	39%
California	48,973	21%	31%	38%	11%	6%	26%	23%	45%	59%	12%	28%
Colorado	5,303	16%	28%	50%	7%	7%	25%	26%	42%	66%	10%	24%
Connecticut	4,197	25%	28%	39%	8%	4%	35%	15%	46%	67%	12%	22%
Delaware	935	24%	24%	46%	7%	7%	33%	10%	49%	42%	7%	51%
Florida	19,330	18%	32%	40%	10%	12%	36%	29%	23%	66%	10%	23%
Georgia	8,714	20%	26%	46%	8%	17%	28%	23%	33%	62%	11%	26%
Hawaii	3,265	13%	29%	47%	11%	6%	31%	42%	21%	76%	13%	11%
Idaho	1,991	24%	32%	39%	5%	11%	44%	20%	25%	51%	12%	37%
Illinois	15,088	18%	29%	47%	7%	7%	32%	16%	45%	67%	14%	20%
Indiana	7,313	20%	26%	45%	9%	18%	25%	25%	32%	61%	13%	26%
Iowa	5,092	22%	33%	42%	4%	14%	25%	27%	34%	71%	11%	18%
Kansas	2,817	35%	31%	27%	8%	10%	17%	31%	42%	69%	14%	17%
Kentucky	7,567	21%	31%	44%	3%	6%	39%	24%	31%	59%	14%	27%
Louisiana	5,607	15%	28%	45%	12%	7%	27%	30%	35%	57%	10%	33%
Maine	2,674	27%	37%	32%	4%	8%	22%	48%	22%	71%	13%	16%
Maryland	5,641	23%	37%	33%	7%	5%	27%	34%	33%	59%	7%	34%
Mass.	15,482	25%	31%	35%	9%	6%	26%	26%	42%	56%	7%	37%
Michigan	15,174	20%	31%	41%	8%	6%	27%	24%	43%	66%	9%	25%
Minnesota	13,055	19%	24%	53%	5%	4%	22%	21%	53%	75%	8%	17%

	Estimated Hours Worked					Income as Percent of				Current Employment Status		
	Last Year					Poverty Threshold						
	Total	1-279	280-799	800-1,999	2,000+	0% to 9%	10% to 49%	50% to 99%	100%+	Employed Now	Unemployed Now	Not in Labor Force
Mississippi	2,306	39%	16%	45%	0%	14%	22%	19%	44%	55%	12%	32%
Missouri	5,614	25%	22%	44%	9%	19%	31%	13%	37%	62%	11%	27%
Montana	3,823	11%	38%	44%	7%		28%	28%	43%	77%	1%	22%
Nebraska	2,471	19%	32%	40%	9%	3%	11%	28%	57%	75%	5%	20%
Nevada	1,605	30%	11%	36%	24%	11%	38%	15%	37%	61%	12%	27%
New Hamp.	1,896	15%	39%	42%	4%	8%	33%	25%	35%	63%	8%	29%
New Jersey	7,424	21%	21%	42%	16%	5%	16%	29%	49%	74%	11%	15%
New Mexico	2,082	14%	37%	33%	17%	10%	21%	30%	39%	67%	6%	27%
New York	40,153	26%	27%	32%	14%	7%	21%	24%	48%	65%	9%	26%
N. Carolina	13,763	23%	25%	42%	10%	7%	26%	24%	43%	67%	6%	27%
North Dakota	1,578	24%	30%	35%	11%	7%	20%	39%	34%	75%	6%	20%
Ohio	15,245	24%	28%	43%	5%	14%	29%	20%	37%	60%	10%	30%
Oklahoma	5,347	20%	18%	50%	12%	15%	23%	21%	41%	66%	13%	20%
Oregon	7,541	21%	24%	39%	17%	9%	24%	26%	40%	59%	12%	29%
Pennsylvania	19,132	22%	32%	39%	7%	11%	27%	26%	35%	62%	10%	28%
Rhode Island	2,518	24%	35%	32%	9%	8%	16%	21%	54%	70%	6%	24%
S. Carolina	10,346	20%	28%	40%	12%	17%	33%	23%	27%	69%	10%	22%
South Dakota	4,305	23%	31%	34%	13%	6%	46%	28%	19%	64%	18%	18%
Tennessee	6,168	21%	34%	40%	5%	7%	46%	21%	26%	63%	7%	29%
Texas	20,076	19%	33%	39%	9%	11%	32%	25%	33%	61%	8%	31%
Utah	3,896	12%	25%	55%	7%	9%	39%	24%	28%	54%	8%	38%
Vermont	1,830	23%	31%	34%	11%	14%	10%	13%	63%	75%	4%	21%
Virginia	6,457	25%	33%	35%	6%	9%	33%	21%	37%	67%	6%	27%
Washington	9,730	15%	33%	39%	13%	5%	23%	29%	43%	55%	17%	27%
West Virginia	1,896	19%	32%	45%	3%	4%	28%	30%	38%	47%	6%	48%
Wash, DC	2,492	29%	32%	30%	9%	10%	41%	19%	30%	51%	20%	29%
Wisconsin	6,649	21%	27%	46%	6%	9%	29%	20%	42%	71%	6%	23%
Wyoming	1,064	21%	14%	56%	9%	2%	23%	18%	57%	81%	3%	16%

End Notes

¹ California Employment Development Department, Labor Market Information Division, Current Employment Statistics, <https://data.edd.ca.gov/Industry-Information-/Current-Employment-Statistics-CES-/r4zm-kdcg>

California Labor Market	March 2020	April 2020	November 2020
Total Nonfarm Employment	17,394,000	14,979,000	16,357,700
Total Wage and Salary Employment	17,692,500	15,324,300	16,697,700
Total Nonfarm Jobs Lost		2,415,000	1,036,300
Total Wage and Salary Jobs Lost		2,368,200	994,800
Percent of Lost Nonfarm Jobs Still Missing			43%
Percent of Lost Wage and Salary Jobs Still Missing			42%

² Remarks by Federal Reserve Chairman Jerome Powell at a European Central Bank forum on November 12, 2020. Reported by Jeff Cox, CNBC News (November 12, 2020), <https://www.cnbc.com/2020/11/12/here-are-the-things-that-scare-jerome-powell-the-most-about-the-economy-right-now.html>

³ Los Angeles Homeless Services Authority, “2020 Homeless Count Results,” <https://www.lahsa.org/documents?id=4561-2020-homeless-count-key-messages>

⁴ Thomas Hugh Byrne, Benjamin F. Henwood, and Anthony W. Orlando, “A Rising Tide Drowns Unstable Boats: How Inequality Creates Homelessness” (2020), publication forthcoming.

⁵ U.S. Department of Labor, Unemployment Insurance Weekly Claims Data - Report r539cy, State Weekly Claims for Unemployment Insurance Not Seasonally Adjusted, https://oui.doleta.gov/unemploy/claims_arch.asp.

⁶ Per Chapter 4, Part 4, Sections 1400-1408 of the Labor Code, the Worker Adjustment and Retraining Notification (WARN) Act requires that employers give a 60-day notice to the affected employees and both state and local representatives prior to a plant closing or mass layoff. Since the onset of Covid-19 the 60-day requirement has been suspended. The Act requires employers with 75 or more employees employed in the preceding 12 months to provide notice when laying off 50 or more employees in a 30-day period. (https://www.edd.ca.gov/Jobs_and_Training/Layoff_Services_WARN.htm).

The benefit of advance notice is that it allows time for workforce training agencies to offer retraining and job placement services for workers being laid off. This is important because after layoffs occur, employers’ personnel offices often close as well and there is no way to identify, locate or help laid-off workers. Before the pandemic, California employers typically provided 50 days of advance notice, however since March 15, 2020, employers are typically providing layoff information 21 days after layoffs occur. The value of WARN data is that it can be coded to show the industries laying off workers as well as the cities and counties where layoffs occur.

⁷ Federal Reserve, Z.1 Financial Accounts of the United States (December 10, 2020), <https://www.federalreserve.gov/releases/z1/20201210/z1.pdf>

⁸ U.S. Bureau of Economic Analysis (BEA), Personal Income and Outlays, November 2020, <https://www.bea.gov/news/2020/personal-income-and-outlays-november-2020>.

⁹ Federal Reserve, Z.1 Financial Accounts of the United States (December 10, 2020), <https://www.federalreserve.gov/releases/z1/20201210/z1.pdf>

¹⁰ Congressional Budget Office, An Update to the Economic Outlook: 2020 to 2030 (July 2020), <https://www.cbo.gov/publication/56442#:~:text=CBO%20projects%20that%20from%202020,projected%20to%20average%206.1%20percent>.

¹¹ New York Times, “Redfield warns this winter may be ‘the most difficult time in the public health history’ of the U.S.” (December 3, 2020), <https://www.nytimes.com/live/2020/12/02/world/covid-19-coronavirus>.

¹² Actual Current Population Survey (CPS) unemployment rates were used for the first three quarters of 2020 and unemployment was projected to be the same in the fourth quarter as in the third quarter. Annual unemployment projections for 2021 and 2022 made by the Congressional Budget Office in July 2020 were extrapolated into quarterly estimates and used to project unemployment in 2021 and 2022. In the 12 months from October 2019 through September 2020, the average unemployment rates shown by CPS data were 7.3 percent in the United States, 9.1 percent in California and 11.3 percent in Los Angeles County. Based on these recent trends, California’s unemployment rate is projected to be 124 percent of the U.S. rate and Los Angeles County’s rate is projected to be 154 percent of the U.S. rate. Quarterly unemployment rates shown below in bold font are the supporting data for Figures 7 to 9.

Geographic Area	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2022Q3	2022Q4
<i>United States</i>												
Actual unemployment rate from CPS	4.1	12.9	8.9									
Economic Roundtable (ERT) Projection				8.9								
CBO Projection - extrapolated by ERT	3.8	13.7	14.4	10.5	9.1	8.3	7.9	7.6	7.3	7.1	6.8	6.5
<i>California</i>												
Actual unemployment rate from CPS	4.9	15.7	11.8									
Economic Roundtable (ERT) Projection				11.8								
CBO Projection - extrapolated by ERT	4.8	17.0	17.8	13.0	11.2	10.3	9.8	9.4	9.1	8.7	8.4	8.1
<i>Los Angeles County</i>												
Actual unemployment rate from CPS	5.7	19.7	15.6									
Economic Roundtable (ERT) Projection				15.6								
CBO Projection - extrapolated by ERT	5.9	21.2	22.2	16.2	14.0	12.9	12.2	11.7	11.3	10.9	10.5	10.0

¹³ Binyamin Appelbaum, New York Times “The Coming Eviction Crisis: ‘It’s Hard to Pay the Bills on Nothing,’” (August 9, 2020), <https://www.nytimes.com/2020/08/09/opinion/evictions-foreclosures-covid-economy.html>

¹⁴ This time series data about the number of homeless adult public assistance recipients (18 to 64 years of age) provided the foundation for predictive analytic models for identifying unemployed homeless public assistance recipients who will become persistently homeless. These models are explained in the Economic Roundtable report, *Early Intervention to Prevent Persistent Homelessness: Predictive Models for Identifying Unemployed Workers and Young Adults who become Persistently Homeless* (2019), <https://economicrt.org/publication/early-intervention-to-prevent-persistent-homelessness/>

¹⁵ U.S. Department of Housing and Urban Development, “Homeless Definition,” https://files.hudexchange.info/resources/documents/HomelessDefinition_RecordkeepingRequirementsandCriteria.pdf

¹⁶ The *relationship* variable in 2014-2018 Public Use Microdata Sample records from the American Community Survey was used to identify adults 18 to 64 years of age within households identified as “other nonrelative.” This is one of 17 relationship classifications and is distinct from individuals related by blood or marriage as well individuals who are roomers, boarders, housemates or roommates, unmarried partners, or foster children. This approach for identifying the point-in-time number of homeless couch surfers was suggested by Alan Hoback and Scott Anderson of University of Detroit Mercy in a paper

titled “Proposed Method for Estimating Local Population of Precariously Housed,” (2006), and has been adopted by the National Coalition for the Homeless: <http://nationalhomeless.org/publications/precariouslyhoused/Hobackreport.pdf>. This approach differentiates people who are couch surfing from people who are literally homeless and have no home whatsoever to live in. A limitation is that it leaves out relatives who are couch surfing, contributing to an under-count, on the other hand, it includes nonrelative guests who have housing of their own, contributing to an over-count.

¹⁷ U.S. Department of Housing and Urban Development, “Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH): Defining Chronically Homeless Final Rule,” (2015), <https://www.hudexchange.info/resource/4847/hearth-defining-chronically-homeless-final-rule/>

¹⁸ The number of HUD homeless and chronically homeless used to break out the type of homelessness is from the 2019 Annual Homeless Assessment Report (AHAR) to Congress, (2020), <https://www.huduser.gov/portal/sites/default/files/pdf/2019-AHAR-Part-1.pdf>

¹⁹ See “Improving Housing Payment Projections during the COVID-19 Pandemic” by Jeff Larrimore and Erin Troland (October 20, 2020), *available at* <https://www.federalreserve.gov/econres/notes/feds-notes/improving-housing-payment-projections-during-the-covid-19-pandemic-20201020.htm>.

²⁰ See “Eviction’s Fallout: Housing, Hardship, and Health” by Matthew Desmond and Rachel Tolbert Kimbro (2015), *available at* <https://scholar.harvard.edu/files/mdesmond/files/desmondkimbro.socialforces.2015.pdf>

²¹ See “Small and Medium Multifamily Housing: Affordability and Availability” by Brian Y. An, Raphael W. Bostic, Andrew Jakabovics, Anthony W. Orlando, and Seva Rodnyansky (2020), *forthcoming in Housing Studies*.

²² See “A Crisis of Missed Opportunities? Foreclosure Costs and Mortgage Modifications During the Great Recession” by Stuart Gabriel, Matteo Iacoviello, and Chandler Lutz (2020), *available at* <https://academic.oup.com/rfs/advance-article-abstract/doi/10.1093/rfs/hhaa059/5842150>.

²³ See “Mortgage Debt Overhang: Reduced Investment by Homeowners at Risk of Default” by Brian T. Melzer (2017), *available at* <https://onlinelibrary.wiley.com/doi/abs/10.1111/jofi.12482>.

²⁴ See “The Effect of Principal Reduction on Household Distress: Evidence from Mortgage Cramdown” by Jacelly Cespedes, Carlos Parra, and Clemens Sialm (October 20, 2020), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3700190.

²⁵ See “A Plan to Forgive Rents in Los Angeles” by Nithya for the City (2020), *available at* <https://www.nithyaforthecity.com/platform/rent-forgiveness>.

²⁶ See “Biden Backs Rent, Mortgage Forgiveness During Coronavirus Pandemic” by Sylvan Lane (May 13, 2020), *available at* <https://thehill.com/homenews/campaign/497581-biden-backs-rent-mortgage-forgiveness-during-coronavirus-pandemic>.

²⁷ See “COVID-19 Mortgage Relief—The Role of Income Support” by Chris Cunningham and Kris Gerardi (May 27, 2020), *available at* <https://www.frbatlanta.org/blogs/macroblog/2020/05/27/covid-19-mortgage-relief-the-role-of-income-support>.

- ²⁸ See “The Trump Administration May Privatize Fannie and Freddie Mac – and It Could Disrupt the Nation’s Housing-Finance System” by Jacob Passy (November 24, 2020), available at <https://www.marketwatch.com/story/the-trump-administration-may-privatize-fannie-mae-and-freddie-mac-and-it-could-disrupt-the-nations-housing-finance-system-11606208076>.
- ²⁹ See “Security Deposits Can Be a High-Cost Hurdle to Affordable Housing” by Karen Weese (May 21, 2020), available at https://www.washingtonpost.com/realestate/clearing-a-housing-access-hurdle-options-for-a-security-deposit/2020/05/20/4508d4e6-5263-11ea-b119-4faabac6674f_story.html.
- ³⁰ See “Free Legal Help for Tenants Who Get Eviction Notices? LA Poised to Budget \$3M for It” by Nadra Nittle (May 16, 2019), available at <https://la.curbed.com/2019/5/16/18623160/right-to-counsel-los-angeles-evictions-free-attorney>.
- ³¹ See “Is More Affordable Housing Better? The Housing Price Effects of Concentrating LIHTC Developments in Los Angeles” by Richard Voith, Jing Liu, Sean Zielenbach, Andrew Jakabovics, Brian An, Seva Rodnyansky, Anthony W. Orlando, and Raphael W. Bostic (November 2020), available at <https://econsultsolutions.com/wp-content/uploads/2020/11/Rodnyansky-et-al.-LIHTC-APPAM-2020.pdf>.
- ³² See “Is California’s Apartment Market Broken? The Relationship Between Zoning, Rents, and Multifamily Development” by Cecile Murray and Jenny Schuetz (July 2019), available at https://www.brookings.edu/wp-content/uploads/2019/07/20190711_metro_Is-California-Apartment-Market-Broken-Schuetz-Murray.pdf.
- ³³ See “Built-Out Cities? How California Cities Restrict Housing Production Through Prohibition and Process” by Paavo Monkkonen, Michael Lens, and Michael Manville (February 2020), available at <http://californialanduse.org/download/MLM%20Built-Out%20Cities%202020.pdf>.
- ³⁴ See “The Effects of Inclusionary Zoning on Local Housing Markets: Lessons from the San Francisco, Washington DC and Suburban Boston Areas” by Jenny Schuetz, Rachel Meltzer, and Vicki Been (January 2013), available at http://www.wellesleyinstitute.com/wp-content/uploads/2013/01/ResourceUS_Furman.pdf.
- ³⁵ See “Housing Boom Brings a Shortage of Land to Build New Homes” by Nicole Friedman (December 25, 2020), available at <https://www.wsj.com/articles/housing-boom-brings-a-shortage-of-land-to-build-new-homes-11608904980>.
- ³⁶ See “What the Pandemic Taught Us About the Homeless—and What We Shouldn’t Forget” by Thomas Hugh Byrne, Benjamin F. Henwood, and Anthony W. Orlando (August 2, 2020), available at <https://thehill.com/opinion/finance/509666-what-the-pandemic-taught-us-about-the-homeless-and-what-we-shouldnt-forget>.
- ³⁷ U.S. Census Bureau and U.S. Bureau of Labor Statistics, Current Population Survey (CPS) basic monthly data (December 10, 2020), <https://www.census.gov/data/datasets/time-series/demo/cps/cps-basic.html>.
- ³⁸ The annual average rate of under-employment (total of unemployed, involuntary part-time, conditional, and discouraged workers) in 2019 by level of education based on CPS basic monthly data was:

	United States	California	Los Angeles County
Less than HS Diploma	11.0%	12.2%	13.0%

HS Graduate	7.9%	8.7%	10.2%
Some College or AA Degree	6.2%	7.5%	9.3%
BA Degree or higher	4.2%	5.2%	6.7%

³⁹ The annual average rate of under-employment (total of unemployed, involuntary part-time, conditional, and discouraged workers) in 2019 by age based on CPS basic monthly data was:

	United States	California	Los Angeles County
Under 25 Years	14.9%	16.5%	17.5%
25 to 34	7.3%	8.5%	10.4%
35 to 44	5.5%	6.1%	8.1%
45 to 54	5.4%	6.8%	8.6%
55 and over	5.7%	7.4%	8.4%

⁴⁰ The annual average rate of under-employment (total of unemployed, involuntary part-time, conditional, and discouraged workers) in 2019 by ethnicity based on CPS basic monthly data was:

	United States	California	Los Angeles County
European American	5.9%	6.6%	8.2%
African American	10.9%	11.1%	11.1%
Asian American	5.3%	6.5%	8.0%
Latino	9.2%	10.3%	11.2%

⁴¹ The annual average rate of under-employment (total of unemployed, involuntary part-time, conditional, and discouraged workers) in 2019 by gender based on CPS basic monthly data was:

	United States	California	Los Angeles County
Male	7.1%	8.0%	9.8%
Female	7.3%	8.7%	10.0%

⁴² The U.S. Census Bureau's 2020 Household Pulse Survey is valuable because it provides information about the impacts of the Covid Pandemic with a time lag of only about one month in releasing the detailed Public Use Files. However a limitation is that the survey, which is conducted by telephone and email, has a low response rate and uneven representativeness among respondents. The response rates for the six most recent surveys ranged from 5.3 percent to 10.3 percent. As a result, there is very wide variation in the weights assigned to responses. In the six surveys that were aggregated here, the median response weight was 1,223 (meaning that the typical survey response represented 1,223 people) and the average weight was 2,663. However, the weights assigned to responses ranged from a low of 9 to a high of 396,208. These extremely high outlier weights mean that even for a large state such as California, outliers can skew data at the state level, and even more so at the metropolitan level. Additionally, survey results have been largely flat, except for what appears to be data noise, since the first survey was conducted from April 23 to May 5, 2020. Our assessment is that the Pulse Survey provides the most reliable information when multiple surveys representing national responses are aggregated. The Census Bureau provides technical documentation for the Pulse Survey at: https://www2.census.gov/programs-surveys/demo/technical-documentation/hhp/Phase3_Source_and_Accuracy_Week_18.pdf

⁴³ U.S. Census Bureau, Poverty Thresholds for 2019, <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html>.

⁴⁴ O*Net report for cashiers, <https://www.onetonline.org/link/summary/41-2011.00>

⁴⁵ The number of HUD homeless and chronically homeless used to break out the type of homelessness is from the 2019 Annual Homeless Assessment Report (AHAR) to Congress, (2020), <https://www.huduser.gov/portal/sites/default/files/pdf/2019-AHAR-Part-1.pdf>. The AHAR includes data from 2007 through 2019.

⁴⁶ The reference group for odds ratios based on ethnicity and earnings decile is European American workers in the tenth earnings decile. Data was interpolated for some cells with small samples of homeless workers. The odds ratios for homelessness based on ethnicity and earnings deciles are shown below.

	1st Decile	2nd Decile	3rd Decile	4th Decile	5th Decile	6th Decile	7th Decile	8th Decile	9th Decile	10th Decile
	\$290- \$1,009	\$1,010- \$1,849	\$1,850- \$2,749	\$2,750- \$4,049	\$4,050- \$5,299	\$5,300- \$7,399	\$7,400- \$10,349	\$10,350- \$14,499	\$14,500- \$21,079	\$21,080- \$49,999
African American	51.1	51.4	45.8	40.1	36.2	28.3	21.2	12.1	7.7	2.2
Native Am & 2+ Races	37.7	34.6	32.5	30.3	28.2	26.0	16.0	11.9	6.5	2.5
Latino	27.5	32.4	27.6	22.7	15.0	13.1	10.7	6.4	3.6	1.4
Asian American & PI	24.7	31.0	28.2	22.9	20.5	10.2	6.7	6.0	3.2	1.6
European American	25.4	20.7	20.7	19.9	15.9	13.9	10.8	6.6	4.5	1.0

⁴⁷ Halil Toros. Daniel Flaming and Patrick Burns, Economic Roundtable, Early Intervention to Prevent Persistent Homelessness: Predictive Models for Identifying Unemployed Workers and Young Adults who become Persistently Homeless (2019), <https://economicrt.org/publication/early-intervention-to-prevent-persistent-homelessness/>

⁴⁸ Data for over one million individuals who had experienced homelessness were partitioned into training and validation sets, each with three years of post-prediction data. Training and validation results were almost identical for both samples, verifying the absence of overfitting. The employment model achieved a strong C-statistic, .894, which is the probability that the predicted outcome is better than chance. The Brier score, which is an indicator for the difference between the predicted probability and the actual outcome is 0.057 (0 is a perfect score). The results confirm that local public costs for unemployed workers identified by the predictive screening tool are likely to be high and to increase over time unless there is an intervention that minimizes the duration of homelessness.

⁴⁹ Halil Toros. Daniel Flaming and Patrick Burns, Economic Roundtable, Early Intervention to Prevent Persistent Homelessness: Predictive Models for Identifying Unemployed Workers and Young Adults who become Persistently Homeless (2019), <https://economicrt.org/publication/early-intervention-to-prevent-persistent-homelessness/>

⁵⁰ Doug Smith, Los Angeles Times, “\$600,000 for homeless housing? Audit suggests spending money on shelters instead” (October 7, 2019), <https://www.latimes.com/california/story/2019-10-07/homeless-housing-bond-measure-audit-shelters-galperin>

⁵¹ William Mirengoff, National Academy of Sciences, “CETA: Assessment of Public Service Employment Programs (1980), <https://files.eric.ed.gov/fulltext/ED228423.pdf>.

⁵² Council of Economic Advisors, Executive Office of the President, “Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009” (2009), <https://obamawhitehouse.archives.gov/administration/eop/cea/Estimate-of-Job-Creation>