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ESSENTIAL BUT DISPOSABLE: UNDOCUMENTED WORKERS AND THEIR MIXED-STATUS FAMILIES

MODELING COVID-19 ECONOMIC IMPACTS AND GOVERNMENT RELIEF POLICIES BY
RACE AND IMMIGRATION STATUS IN LOS ANGELES COUNTY, CALIFORNIA, AND THE UNITED STATES



AUGUST 10, 2020

**Essential but Disposable:
Undocumented Workers and Their Mixed-Status Families**

**Modeling COVID-19 Economic Impacts and Government Relief Policies by Race
and Immigration Status in Los Angeles County, California, and the United States**

Report prepared by the UCLA North American Integration and Development (NAID) Center
and the Mexican Instituto Nacional de Estadística y Geografía (INEGI)

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Executive Summary

Natural disasters uncover deep inequities and vulnerabilities in societies, but they also create possibilities for important change. The COVID-19 pandemic has unleashed a triple crisis of a public health catastrophe, an economic shutdown, and a racial inequality backlash, an acute confluence of challenges for Los Angeles County, California, and the United States. This multicrisis has revealed not only that racial health inequities are widespread but also that Brown and Black workers are especially vulnerable to income and job loss. In addition, discriminatory federal government policies deny COVID-19 relief and resources to undocumented workers and their family members, which include US citizens and legal permanent residents. The federal government treats these workers as disposable while considering most of them essential to economic recovery. In this report, we show that the COVID-19 crisis exposes not only deep underlying health and social inequities but also government responses to the pandemic that are worsening these inequities and undercutting economic recovery. Modeling the economic impact of the COVID-19 crisis reveals how this vicious cycle of systemic discrimination can be reversed by policies that lead to a more racially equitable and economically sustainable recovery.

No group has been affected more by the COVID-19 pandemic and economic crisis than undocumented workers and their mixed-status families. This report finds that despite being the demographic group most concentrated in employment sectors determined by the US Department of Homeland Security (DHS) to be “essential and critical” to the economy, undocumented immigrants receive the lowest wages, are most concentrated in jobs with high risk of exposure to the virus, and face the highest unemployment rates in the country. Although undocumented workers and their mixed-status families are disproportionately vulnerable, the Trump administration, Congress, and state legislatures have systemically excluded them from most government relief packages.

As a new wave of the coronavirus hits most of the United States, forcing governments to pause or reverse reopening plans, this report advocates for broad benefits that include undocumented workers and their families in any future relief and stimulus packages. First, we establish that undocumented immigrants are fundamental to the economy by providing estimates of the economic contributions of undocumented workers and their families to gross domestic product (GDP), employment, and taxes in the United States, California, and Los Angeles. Second, we show how the COVID-19 recession has disproportionately affected the employment and earnings of undocumented workers while denying them access to unemployment and pandemic relief, exacerbating Latinx vulnerability while slowing down economic recovery. Third, we provide estimates of the likely positive economic spillovers that would result from making undocumented workers eligible for relief policies at the federal and state levels.

Key Findings of this Report

1. Undocumented immigrants disproportionately work in essential sectors and earn lower total wages compared to their US-born counterparts.
 - a. The employment of undocumented workers is most concentrated in DHS essential and critical sectors (78.32%). Comparatively, Black workers are slightly less concentrated in these sectors (72.03%), while US-born White workers are the least concentrated (69.66%).
 - b. California and Los Angeles County contain the largest concentrations of immigrant workers in essential and critical sectors, as well as the most workers in lowest-wage occupations.
2. Undocumented workers are key contributors to the US, California, and Los Angeles County economies.
 - a. California and Los Angeles County lead the nation in having the highest share of undocumented residents and their mixed-status families.
 - b. Undocumented workers and their mixed-status families contribute more than \$425 billion in California and \$141 billion in Los Angeles.
 - c. Undocumented workers and their mixed-status families pay significant personal, business, and sales taxes—about \$63.3 billion, in total—toward the California economy. In Los Angeles County, undocumented immigrants pay \$23.6 billion in total taxes.
 - d. Undocumented immigrants directly and indirectly sustain more than 3.2 million jobs in California and nearly 940,000 in Los Angeles.
 - e. Immigrants in California and Los Angeles are the main sources of remittances to Mexico (\$13.4 billion), which supports millions of families in migrant-sending countries.²
3. The pandemic has brought on high unemployment levels and financial hardship for immigrants, especially undocumented workers and their mixed-status families.
 - a. Despite being most concentrated in essential sectors mandated to stay open during the shutdown, undocumented workers suffer the highest rates of unemployment due to the collapse in demand for many construction and service sectors, where these workers are also highly concentrated.
 - b. California has one of the highest unemployment rates (over 30%) among the poorest and most vulnerable undocumented workers and their mixed-status family members (more than 5.3 million).
 - c. COVID-19 infection rates for Latinxs are the highest of all ethnoracial groups in California and Los Angeles.
 - d. Remittances to Mexico are falling at nearly the same rate—nearly 30%—as immigrant and undocumented worker unemployment is rising in the United States.
4. Immigrants will play an essential role in our economic recovery.
 - a. Despite facing high unemployment rates, immigrant workers will remain critical to meeting consumer demand for national, state, and local economic recovery.

5. The increased unemployment levels and lack of government support programs will devastate not only undocumented workers and their mixed-status families but also the economies of Los Angeles County, California, and the United States.
 - a. Neglecting undocumented workers and their families will cost \$30 billion for the United States, \$6 billion for California, and \$1.5 billion for Los Angeles per month in lost total wages, consumption, and tax revenue.
6. Removing undocumented immigrants from the workforce would be detrimental to the economy.
 - a. Excluding immigrants and their mixed-status families from the labor force is expected to reduce GDP by \$425 billion in California and \$141 billion in Los Angeles County.
7. Extending state and local economic support programs to undocumented immigrants and their mixed-status families will induce positive multiplier effects on the Los Angeles County and California economy.
 - a. Offering the statewide Unemployment Insurance, California Earned Income Tax Credit, and the local Angeleno Card to some of the poorest households in the county and state will generate positive effects through direct, indirect, and induced GDP, employment, and taxes.
8. Including undocumented workers in federal government pandemic relief programs will boost their economic impact and ultimately the economy.
 - a. Allowing undocumented workers access to the benefits of the Coronavirus Aid, Relief, and Economic Security (CARES) Act or the Health and Economic Recovery Omnibus Emergency Solutions (HEROES) Act will generate greater direct consumption demand, bring in taxes and boost employment, and have positive indirect and induced impacts on consumption.
 - b. Deferred action protections and legal work authorization should be immediately granted to all essential workers³. The important role of undocumented workers in the economy provides a strong argument for a policy of legalization and a pathway to citizenship within a broader program of immigration reform.

Introduction

Undocumented Immigrants Are Essential Workers

Our research finds that undocumented workers and their mixed-status families⁴ are disproportionately concentrated in “essential and critical” sectors as defined by the US Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA).⁵ Their contributions generate huge economic value. At the same time, undocumented workers are disproportionately living below the poverty line. They are concentrated in the lowest-paid industries with the highest exposure to COVID-19, yet can least afford to comply with stay-at-home or work-at-home mandates.^{6,7} Other marginalized groups such as Latinx and Black populations are also disproportionately exposed to the virus compared to their White counterparts.⁸ Undocumented workers, however, are undervalued with comparatively low wages due to their immigration status, despite being massive contributors in production (\$1 trillion of gross domestic product [GDP] nationwide, \$263 billion in California, and \$87 billion in Los Angeles County), consumption, and tax revenue. The COVID-19 crisis also reveals systemic dependence on undocumented laborers through their high complementarity with many suppliers of essential labor services. Despite their need, these workers are treated as disposable because they have the highest unemployment rate during the shutdown.

In the meantime, the Trump administration and other government leaders are attempting to use the crisis as an opportunity to reduce immigrants’ access to government relief and further restrict immigration to “protect the jobs of our GREAT American Citizens!”⁹ The federal Coronavirus Aid, Relief, and Economic Security (CARES) Act excluded undocumented workers and their household members from receiving financial assistance, even those who are US citizens and legal residents (see appendix C).¹⁰ These mixed-status families have high employment rates and contribute greatly to GDP and taxes. The proposed federal Health and Economic Recovery Omnibus Emergency Solutions (HEROES) Act seeks to reinstate such aid for the next round of relief but is unlikely to pass the Senate or be signed by President Trump, thus sustaining this discriminatory ban (see appendix C).¹¹ Our report finds that extending HEROES Act benefits to undocumented workers would generate significant direct and indirect contributions to damaged local economies.

State and local nonprofits have attempted to address the government’s lack of assistance by proposing inclusive assistance programs for undocumented workers and their families. In California, advocates have proposed expanding the California Earned Income Tax Credit (CalEITC) to all undocumented workers who file taxes using an Individual Taxpayer Identification Number (ITIN) (see appendix D). Based on current CalEITC structure, the proposed program would provide \$79 million to \$113 million (with an estimated 50% uptake rate) to undocumented households, benefiting 505,000 to 722,000 newly eligible people in those tax units, 171,000 to 244,000 newly eligible children in those tax units, and 48,000 to 69,000 newly eligible children under age 6 in those tax units.¹²

Undocumented workers are also excluded from Unemployment Insurance (UI) benefits, which are critical to the well-being of vulnerable communities during this financial crisis. At the beginning of the pandemic, immigrant workers experienced quicker job loss compared to US-

born workers.¹³ Latinx immigrants, in particular, experienced the sharpest increase in unemployment (24.95%) in April 2020.¹⁴ Despite the enormous impact of unemployment on the immigrant workforce, undocumented workers do not qualify for UI due to their immigration status.¹⁵ In fact, undocumented immigrants represent almost half of individuals who do not qualify for UI.¹⁶ The lack of UI exacerbates the economic devastation hitting these workers and their families.

This report shows how the COVID-19 crisis is causing the highest rates of unemployment (over 29%) among the poorest and most vulnerable undocumented workers and their mixed-status family members (who total more than 18.1 million, including legal residents and US citizens as well as those undocumented).¹⁷ Despite undocumented immigrants being overrepresented in essential sectors, our research shows that they are the most vulnerable to the drastic reductions in demand and the mandated shutdowns and declining investments in key sectors such as construction, food, and other services. The COVID-19 crisis is producing disproportionately negative impacts in the highest concentration of undocumented populations and vulnerable sectors that happen to be in the largest state (California) and the largest county (Los Angeles), thus posing a threat to national economic recovery.

Unequal Impacts of COVID-19 Shock and Relief: Disposable Families

High levels of poverty and unemployment among undocumented workers, combined with a discriminatory denial of benefits to their families, have created an unprecedented poverty emergency with national and international implications. This disparate shock is also inflicting a massive direct and indirect loss of income, consumption, and employment on California and Los Angeles County, the largest state and county in the nation. The estimated 1.6 million undocumented workers and 1.5 million mixed-status families in California are not only large GDP contributors in essential sectors of the economy but also contributing total wage earners and consumers. The systemic combination of higher unemployment and exclusion from pandemic relief is generating a decline of \$2 billion per month in total wage loss as well as cuts in demand, employment, and tax revenue.

This vicious cycle, created by self-inflicted policy, can be quickly reversed by mandating direct pandemic relief through a new HEROES Act, in combination with unemployment benefits for the families of undocumented workers. This policy act would have the virtue of generating GDP and tax multiplier gains of nearly 150% pumped into the regional and national economy, and will also allow working families to rapidly reenter the labor force as needed. Despite high levels of unemployment and underconsumption during the shock, immigrants are crucial for maintaining supply chains during the current crisis and the future economic recovery. In the recovery phase, undocumented and mixed-status families remain essential to maintaining open sectors, generating vital contributions to GDP. Going forward, this crisis provides an opportunity to reverse the vicious cycle of policies that are economically self-destructive and systematically generate racial economic inequality. It offers a chance to establish a virtuous cycle of inclusionary policy toward undocumented workers and their families, who are critical for reactivating essential supply-and-demand chains for a sustainable and more equitable economic recovery.

Organization of the Report and Findings

Part 1 focuses on relative inequalities and contributions at the national, state, and county levels, indicating profound inequities in exposure to economic risks.

In Part 2, we use a social accounting matrix (SAM) modeling approach to determine the pattern of GDP decline, unemployment, and wage loss, as well as unequal access to forms of government relief.

Part 3 presents alternative scenarios of recovery or deportation and recommends policies that will be essential for economic recovery.

Part 1: Inequalities and Contributions: California as Ground Zero

In this section, we present two findings: (1) Undocumented immigrants, although essential workers, are poorer and paid less than naturalized immigrants and US-born workers; and (2) undocumented immigrants contribute massively to the US, California, and Los Angeles County economies.

Finding 1: Undocumented Immigrants Are the Most Essential But the Lowest Paid

Beginning in March 2020, the COVID-19 pandemic provoked a massive US government-mandated shutdown of economic activity at the national, state, and local levels, quickly generating the most catastrophic economic shock in US history. Government action included an order to close down all economic establishments except for those deemed essential and critical (see **figure 1**), generating a dramatic supply-side shock to nonessential sectors. The mandatory stay-at-home orders also resulted in drastic demand-side shock and reduced investment shock, hitting both essential and nonessential activities in different ways. The combination of these economic shocks was unevenly felt by different types of workers depending on sectoral employment, income level, race, ethnicity, and immigration status.

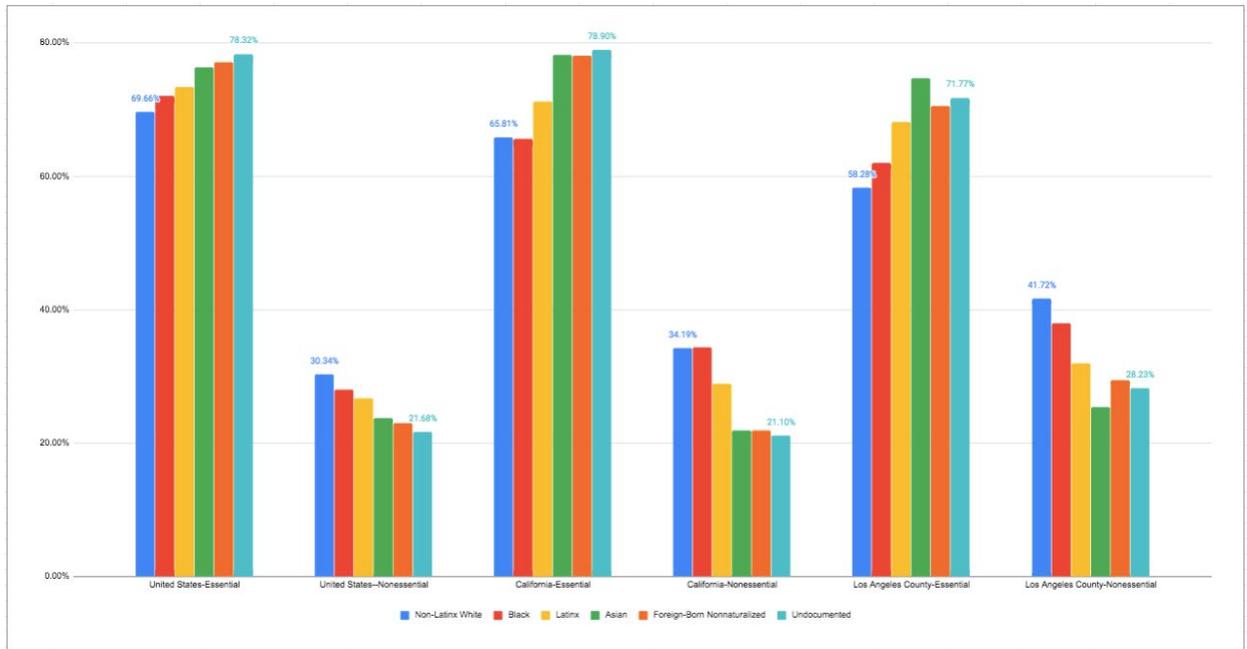
Figure 1: Essential Critical Infrastructure Workers According to DHS



Source: Reprinted from CISA website, “Identifying Critical Infrastructure during COVID-19,” revised May 28, 2020, <https://www.cisa.gov/identifying-critical-infrastructure-during-covid-19>.

On April 17, 2020, the DHS identified essential worker industries during the pandemic.¹⁸ Employees in these sectors are crucial to the nation’s economy and are expected to continue working so long as they comply with social distancing and state government policy. Our analysis finds that undocumented workers are the most disproportionately concentrated in what the DHS classifies as essential and critical sectors (see **figure 2, table 1**).¹⁹ In addition, workers in mixed-status households—that is, a household composed of at least one undocumented immigrant and legal resident or US citizen—are highly concentrated in essential sectoral employment. Undocumented workers are particularly vulnerable to the effects of the pandemic, as they are disproportionately concentrated in essential jobs with wages under the poverty line and where working from home is not possible, with very little access to health care.

Figure 2: Employment Composition of COVID-19 Essential and Nonessential Sectors



Source: DHS/CISA, IMPLAN sectoral data, labor composition by authors.

In the current pandemic, most workers in the United States are in essential sectors, with undocumented workers the highest share in those sectors. About 78.3% of undocumented immigrants are considered essential workers. About 77.1% of foreign-born nonnaturalized workers are employed in an essential sector, followed by 76.3% of Asian workers, 73.3% of Latinx workers, 72% of Black workers, and 69.7% of non-Latinx White workers. More White workers than other racial and ethnic groups are employed in nonessential industries.

California is ground zero for the concentrated employment of undocumented workers in essential sectors, reaching 78.9%, higher than the national average. Meanwhile, the concentration of non-Latinx Whites in essential sectors is the lowest in the state. California also has higher shares of nonnaturalized immigrants and Asians employed in essential industries compared to the country as a whole and these two groups' share of the population; 78.1% of nonnaturalized immigrants and 78.2% of Asians work in an essential industry. In general, a large percentage of immigrants, compared to their share of the population, are frontline workers during the pandemic.

In Los Angeles County, Asians make up the largest proportion of essential sector workers. Undocumented and nonnaturalized immigrants are the next most concentrated groups working in essential industries at 71.77% and 70.56%, respectively, while 68.09% of Latinx, 62.03% of Black, and 58.28% of non-Latinx White workers are employed in essential jobs. Non-Latinx Whites make up the largest share of workers in nonessential sectors, followed by Black, Latinx, nonnaturalized immigrant, and Asian workers.

Table 1: Breakdown of Employment Shares for Essential and Nonessential Sectors by Racial Category and Immigration Status in the United States, California, and Los Angeles County.

#*		Total population	Undocumented	Foreign-born nonnaturalized	Asian	Latinx	Black	Non-Latinx White
	Total share for essential sectors							
	United States	70.98%	78.32%	77.07%	76.27%	73.31%	72.03%	69.66%
	California	70.00%	78.90%	78.08%	78.16%	71.15%	65.63%	65.81%
	Los Angeles	65.76%	71.77%	70.56%	75.63%	68.09%	62.03%	58.28%
	Total share for nonessential sectors							
	United States	29.02%	21.68%	22.93%	23.73%	26.69%	27.97%	30.34%
	California	30.00%	21.10%	21.92%	21.84%	28.85%	34.37%	34.19%
	Los Angeles	34.24%	28.23%	29.44%	25.37%	31.91%	37.97%	41.72%
1	Residential/Shelter Facilities and Services							
	United States	8.88%	25.55%	20.20%	2.94%	17.36%	5.18%	7.97%
	California	9.09%	23.68%	18.56%	0.55%	14.67%	3.77%	7.41%
	Los Angeles	9.18%	22.62%	18.46%	3.90%	14.60%	1.99%	5.04%
2	Food and Agriculture							
	United States	11.26%	24.38%	17.54%	10.90%	16.47%	10.67%	9.81%
	California	11.66%	26.66%	18.82%	12.28%	17.05%	7.30%	7.93%
	Los Angeles	10.84%	21.53%	16.33%	11.45%	13.65%	11.04%	6.65%
3	Commercial Facilities							
	United States	4.80%	6.86%	5.20%	6.86%	5.14%	3.97%	4.67%
	California	5.30%	7.44%	5.77%	4.16%	6.40%	2.45%	4.62%
	Los Angeles	5.02%	7.52%	6.09%	5.15%	5.28%	1.67%	5.20%
4	Critical Manufacturing							
	United States	5.34%	5.24%	4.26%	6.14%	3.82%	3.88%	5.95%
	California	4.26%	5.64%	4.60%	6.19%	3.66%	2.50%	4.05%
	Los Angeles	3.89%	4.94%	4.14%	5.07%	3.48%	1.12%	4.45%
5	Transportation and Logistics							
	United States	4.62%	4.79%	5.36%	4.01%	5.55%	7.02%	4.03%
	California	4.46%	4.51%	4.79%	4.57%	5.71%	5.35%	3.28%
	Los Angeles	4.71%	5.48%	6.05%	3.44%	6.50%	7.09%	2.89%
6	Healthcare/Public Health							
	United States	12.97%	2.31%	7.62%	14.39%	9.46%	18.83%	12.66%
	California	11.61%	2.17%	7.18%	17.31%	9.08%	19.37%	10.79%
	Los Angeles	10.47%	1.99%	6.78%	17.96%	8.20%	16.70%	8.31%
7	Chemical							
	United States	1.90%	2.12%	1.73%	1.70%	1.39%	1.73%	2.10%
	California	1.12%	1.69%	1.38%	1.11%	1.39%	0.64%	0.90%
	Los Angeles	1.24%	2.90%	2.43%	0.86%	1.92%	0.00%	0.68%

##*		Total population	Undocumented	Foreign-born nonnaturalized	Asian	Latinx	Black	Non-Latinx White
8	Other Community or Government-Based Operations and Essential Functions							
	United States	7.22%	1.80%	4.14%	7.67%	4.66%	6.77%	8.06%
	California	8.29%	1.99%	4.19%	17.23%	4.80%	10.28%	11.42%
	Los Angeles	9.12%	1.83%	3.62%	8.94%	5.77%	12.80%	13.56%
9	Financial Services							
	United States	6.08%	1.79%	3.82%	7.84%	4.22%	5.68%	6.51%
	California	5.01%	1.31%	2.83%	6.67%	3.63%	4.22%	5.56%
	Los Angeles	5.31%	1.03%	2.69%	8.30%	3.77%	3.71%	6.13%
10	Communications and Information Technology							
	United States	3.17%	1.54%	5.07%	10.12%	1.41%	2.29%	3.12%
	California	5.14%	2.47%	8.19%	2.28%	1.54%	3.79%	5.40%
	Los Angeles	2.73%	0.56%	1.89%	6.61%	1.87%	0.65%	3.20%
11	Hygiene Products and Services							
	United States	0.20%	0.83%	0.53%	0.56%	0.41%	0.23%	0.13%
	California	0.29%	0.91%	0.58%	1.87%	0.34%	0.00%	0.18%
	Los Angeles	0.21%	0.95%	0.63%	0.00%	0.31%	0.00%	0.20%
12	Hazardous Materials							
	United States	0.38%	0.67%	0.41%	0.21%	0.47%	0.14%	0.41%
	California	0.12%	0.09%	0.06%	0.00%	0.09%	0.00%	0.22%
	Los Angeles	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
13	Public Works and Infrastructure Support Services							
	United States	0.84%	0.11%	0.36%	0.81%	0.78%	1.28%	0.73%
	California	0.91%	0.17%	0.57%	1.15%	0.99%	2.02%	0.53%
	Los Angeles	1.18%	0.26%	0.90%	1.79%	1.26%	1.49%	0.64%
14	Defense Industrial Base							
	United States	1.00%	0.11%	0.35%	0.91%	0.57%	1.29%	1.03%
	California	0.82%	0.07%	0.23%	0.90%	0.39%	1.67%	0.91%
	Los Angeles	0.70%	0.05%	0.18%	0.90%	0.55%	2.21%	0.00%
15	Energy							
	United States	0.22%	0.10%	0.07%	0.19%	0.17%	0.13%	0.25%
	California	0.08%	0.00%	0.00%	0.43%	0.05%	0.00%	0.14%
	Los Angeles	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
16	Law Enforcement and Public Safety and Other First Responders							
	United States	1.67%	0.07%	0.22%	0.65%	1.16%	2.07%	1.84%
	California	1.53%	0.06%	0.20%	0.72%	1.23%	1.46%	2.17%
	Los Angeles	0.89%	0.05%	0.18%	0.48%	0.84%	0.66%	1.21%
17	Water and Wastewater							
	United States	0.43%	0.06%	0.19%	0.38%	0.26%	0.88%	0.39%
	California	0.31%	0.04%	0.13%	0.74%	0.13%	0.80%	0.32%

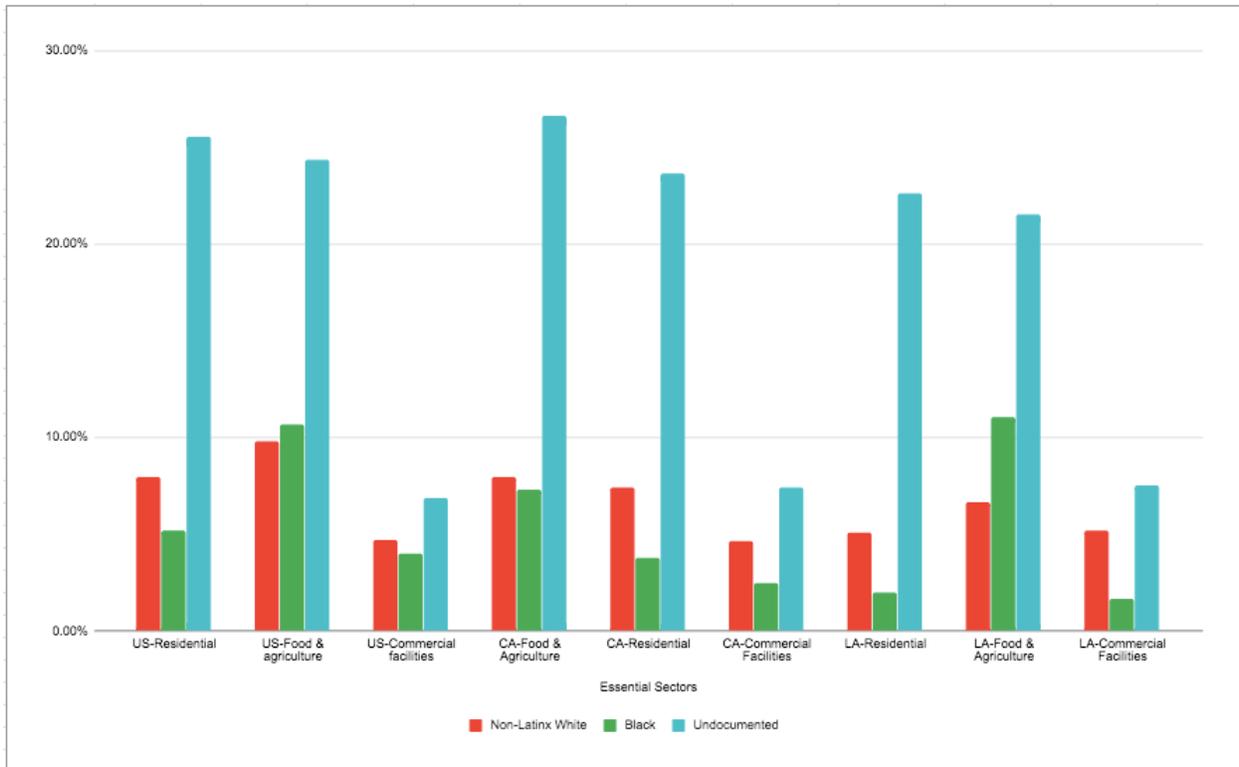
#*		Total population	Undocumented	Foreign-born nonnaturalized	Asian	Latinx	Black	Non-Latinx White
	Los Angeles	0.27%	0.05%	0.18%	0.78%	0.09%	0.92%	0.12%

Source: Estimates based on 2018 IPUMS (<https://doi.org/10.18128/D010.V10.0>) and CPS ASEC; Census Bureau (<https://cps.ipums.org/cps/index.shtml>).

*# indicates sector ranking by percentage of undocumented workers in the United States

Table 1 displays the employment shares of the 16 essential and nonessential sectors by racial category and immigration status in the United States, California, and Los Angeles County. Undocumented workers are mostly employed in Food and Agriculture and Residential/Shelter Facilities and Services sectors (see **figure 3**) at rates much higher than any other group and are also concentrated in Critical Manufacturing and Commercial Facilities.

Figure 3: Sectoral Employment Composition of Select COVID-19 Essential Sectors in the United States, California, and Los Angeles County

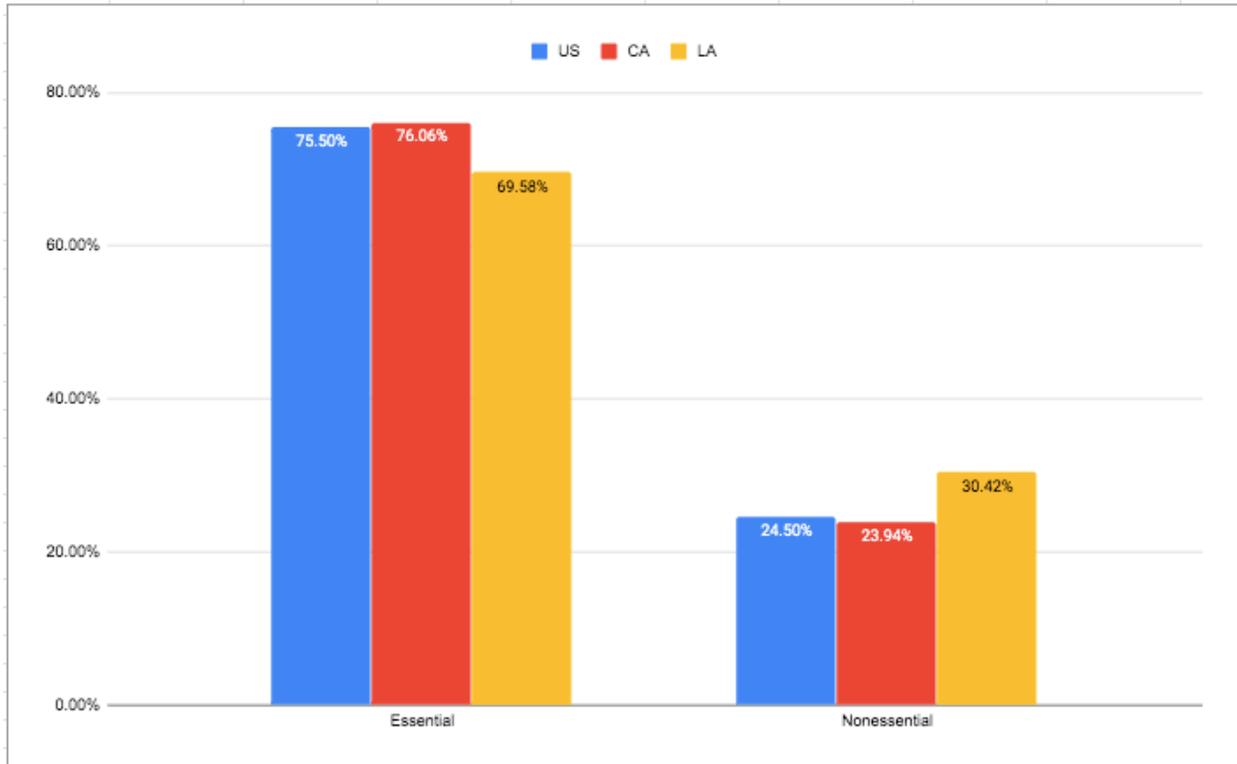


Source: DHS/CISA, IMPLAN sectoral data, labor composition by authors.

Similar trends in employment are found among mixed-status families. These workers are primarily employed in essential sectors across the United States, California, and Los Angeles County (see **figure 4**). We determined that 75.5% of mixed-status family members work in essential sectors nationwide compared to 76.06% in California and 69.58% in the county. By contrast, 24.5% of mixed-status family members work in nonessential industries in the United

States, 24.20% in California, and 30.83% in the county. These statistics show that mixed-status families are critical to keeping our economy afloat during this crisis.

Figure 4: Employment Composition of COVID-19 Essential and Nonessential Sectors for Mixed-Status Family Members in the United States, California, and Los Angeles County

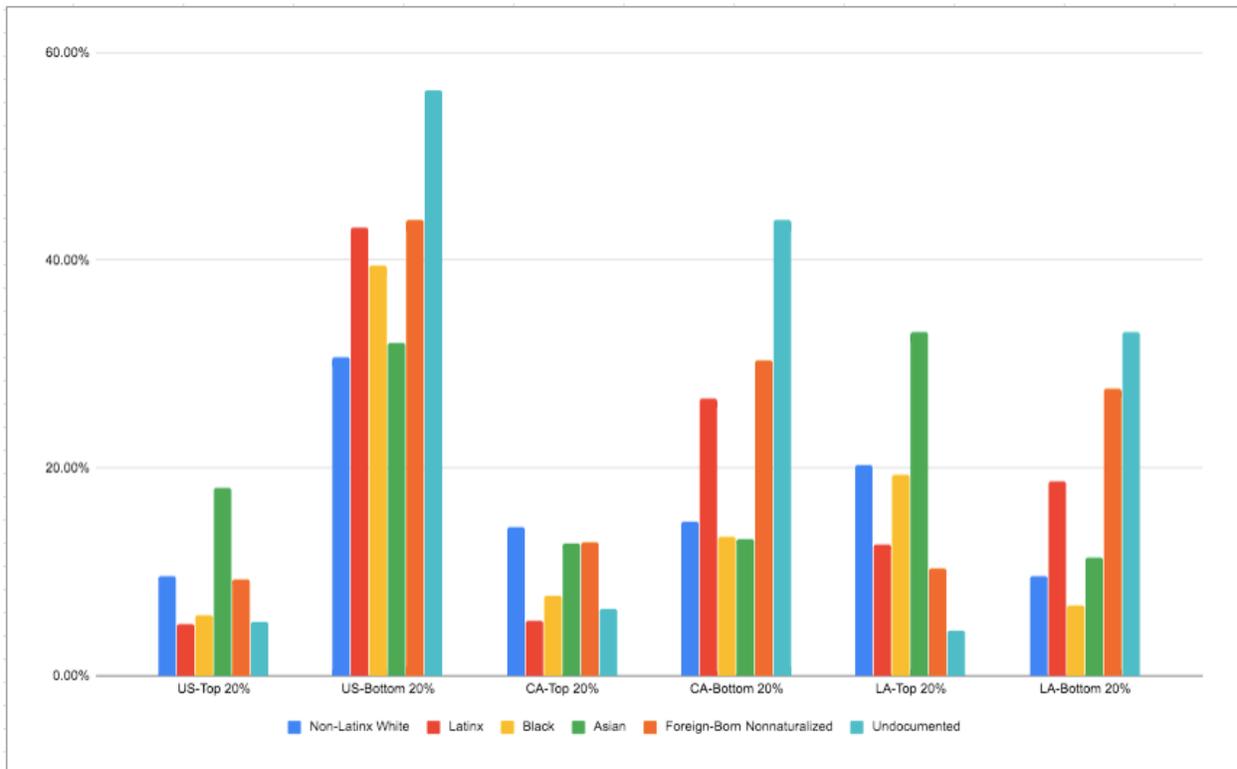


Source: DHS/CISA, IMPLAN sectoral data, labor composition by authors.

Undocumented Workers Most Likely Earn Poverty Wages

In the United States, immigrants, especially undocumented immigrants, earn lower wages compared to other demographic groups (see **figure 5**). Nationwide, 56.3% of undocumented immigrants work in jobs with the lowest wages, and 25.4% are in the next-to-lowest quintile of wage earners. Nonnaturalized immigrants with legal status, however, generally earn more than undocumented immigrants. Within higher-wage categories, 8.5% of undocumented workers are in the midrange quintile, 4.6% in the next highest quintile, and 5.2% are in the highest-wage quintile.

Figure 5: Employment Composition by Top and Bottom Wage Quintiles in the United States, California, and Los Angeles County



Source: DHS/CISA, IMPLAN sectoral data, labor composition by authors.

Statewide, undocumented workers are in the lowest-paying jobs. In particular, 44% of undocumented workers are in the lowest-paying jobs, while less than 30% of other demographic groups are in this category (see **figure 5**). Overall, the majority of undocumented and other nonnaturalized workers have a higher employment concentration in lower-wage jobs compared to US citizen workers. The majority of Latinx workers are also employed in lower-paying jobs compared to other racial and ethnic groups. Non-Latinx White workers generally have higher concentrations of employment in higher-paying jobs.

In Los Angeles County, undocumented and foreign-born nonnaturalized workers are also highly concentrated in the lowest-wage jobs (see **figure 5**). Undocumented and foreign-born nonnaturalized workers are least likely to be employed in higher-paying categories. Non-Latinx White workers are more likely to be in higher-paying jobs.

Table 2 shows the distribution of the undocumented population by poverty level. In California, 46% of the undocumented population live with a family income below 150% of the poverty level. Given the high labor market participation rate of undocumented workers, it is likely that at least 25% are employed with earnings below poverty level. Rising unemployment among the undocumented will considerably increase these poverty rates. Furthermore, impoverished Latinx families in California and Los Angeles County have been increasingly impacted by COVID-19. Latinxs are the ethnic group with the most cases reported in the state

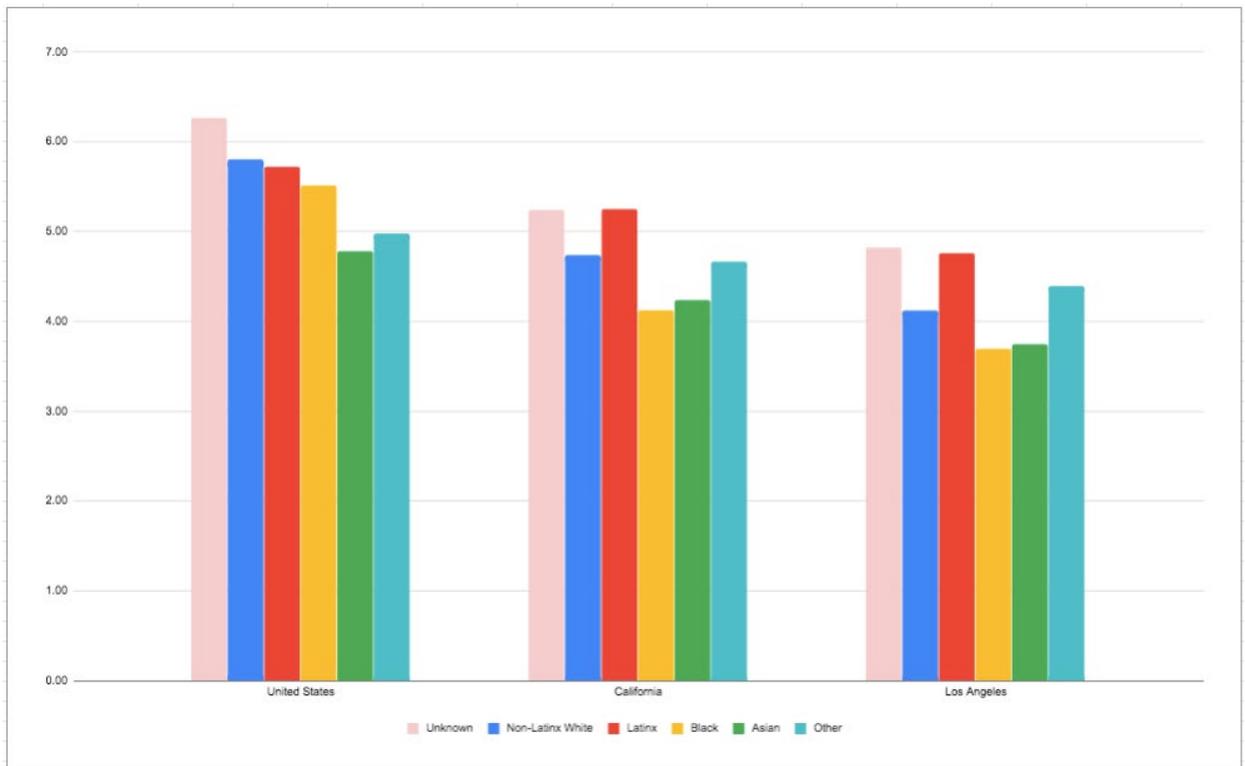
and county, more than three times the number of those reported for non-Latinx Whites (see figure 6).

Table 2: Undocumented Poverty in the United States and California

	United States		California	
	Estimate	% of total	Estimate	% of total
Undocumented population	11,300,000	100%	3,059,000	100%
Family income				
Below 50% of the poverty level	1,351,000	12%	344,000	11%
50–99% of the poverty level	1,828,000	16%	525,000	17%
100–149% of the poverty level	1,868,000	17%	555,000	18%
150–199% of the poverty level	1,682,000	15%	480,000	16%
At or above 200% of the poverty level	4,570,000	40%	1,155,000	38%

Source: Migration Policy Institute. Retrieved May 26, 2020, from <https://www.migrationpolicy.org/data/authorized-immigrant-population/state/US>; <https://www.migrationpolicy.org/data/authorized-immigrant-population/state/CA>.

Figure 6: COVID-19 Case Numbers (Logged) by Race and Ethnicity in the United States, California, and Los Angeles County



Source: Compiled by Covidracetracker from public health departments by state and territory, incorporating more than 50 different sources, <https://www.cdc.gov/covid-data-tracker/#cases>, <https://covidtracking.com/race/>. UCLA Center for Health Policy Research, California Health Interview

Finding 2: Undocumented Workers Are Massive Contributors to the Economy, and California’s Undocumented Workers Lead the Nation in Contributions to GDP, Employment, and Taxes

Despite the fact that undocumented workers and their mixed-status families are concentrated in essential jobs that pay the lowest wages, they are not by any means disposable from a socioeconomic or macroeconomic perspective. California and Los Angeles County represent the largest concentrations of undocumented immigrants and mixed-status families in the United States. Though undervalued by US society because of their immigration status, members of this segment of the population are nevertheless massive contributors to value added and produce high rates of consumption, direct and indirect employment, and net taxes.

Table 3 shows that California and Los Angeles have a higher proportion of undocumented residents and mixed-status families than the United States. In California, immigrants make up 26.7% of the population. Legalized foreign-born workers represent 18.95% of the population, and 7.75% are undocumented. In Los Angeles County, immigrants represent more than one-fourth of the population (34.16%); of these, 19.17% are documented and 14.99% are undocumented.

Table 3: Proportion of Immigrants in the United States, California, and Los Angeles County (Estimated 2018)

	United States		California		Los Angeles County	
	Total	Proportion of total population	Total	Proportion of total population	Total	Proportion of total population
Total population	327,200,000	100%	39,460,000	100%	10,070,000	100%
Legal foreign-born*	32,939,499	10.07%	7,478,529	18.95%	1,930,011	19.17%
Undocumented	10,600,000	3.24%	3,059,000	7.75%	1,051,000	14.99%
Total foreign-born	43,539,499	13.31%	10,537,529	26.70%	3,440,011	34.16%

Source: Total population and Total foreign-born population data from US Census Bureau.

Note: Number of US Undocumented is estimated based on Pew Research Center

(<https://www.pewresearch.org/hispanic/interactives/u-s-unauthorized-immigrants-by-state/>); Undocumented for California and Los Angeles are estimated based on Migration Policy Institute

(<https://www.migrationpolicy.org/data/unauthorized-immigrant-population/state/CA>).

*These figures are the difference between “Total foreign-born” and “Undocumented.”

Table 4 provides data on two types of mixed-status households across the United States, California, and Los Angeles County. The first consists of households that include at least

one foreign-born non-naturalized worker, while the second specifically includes at least one undocumented worker (using estimation techniques based on US Census data, as explained in appendix A). We estimate that, in the United States, there are 5 million undocumented or mixed-status households with at least one undocumented worker, comprising 4.9 million US-born citizens, 1.2 million naturalized US citizens, and 10.6 million undocumented immigrants. California also has a large number of mixed-status families: 1.5 million households, comprised of 1.4 million US-born citizens, 0.4 million naturalized citizens, and 3.1 million undocumented immigrants. In Los Angeles County, the number of mixed-status households is 0.5 million, with 0.5 million US-born citizens, 0.1 million naturalized citizens, and 1 million undocumented immigrants.

Table 4: Demographic Data of Mixed-Status Households in the United States, California, and Los Angeles County (In Millions)

	United States			California			Los Angeles County		
		Mixed-status households			Mixed-status households			Mixed-status households	
	Total	Type 1	Type 2	Total	Type 1	Type 2	Total	Type 1	Type 2
# Households	127.4	10.0	5.0	13.9	2.0	1.5	3.6	0.7	0.5
Population	328.2	36.1	18.1	39.5	8.0	5.3	10.0	2.6	1.9
Total US citizens	305.0	16.6	4.9	34.5	3.9	1.4	8.5	1.2	0.5
US-born citizens	276.0	13.7	--	28.4	3.2	--	6.6	1.0	--
Naturalized US citizens	22.6	2.7	1.2	5.6	0.7	0.4	1.8	0.2	0.1
Civilian workers who are US citizens	142.4	5.1	1.0	15.6	1.2	0.3	3.9	0.4	0.1
Children who are US citizens	71.7	9.4	3.7	8.7	2.0	1.1	2.1	0.6	0.4
Total foreign-born nonnaturalized persons	23.5	19.5	13.2	5.1	4.2	3.9	1.7	1.4	1.4
Foreign-born nonnaturalized civilian workers	14.2	14.2	1.4--	3.0	3.0	.5--	1.0	1.0	.2--
Foreign-born nonnaturalized children	2.1	1.7	0.2	0.3	0.3	0.1	0.1	0.1	0.0
Foreign-born nonnaturalized	12.9	8.9	2.6	2.0	1.1	0.8	0.6	0.3	0.3

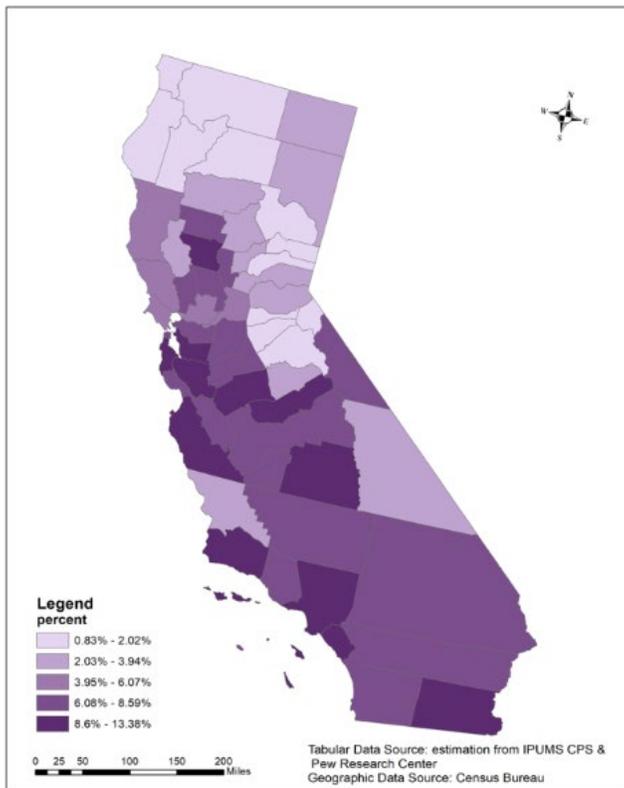
	United States			California			Los Angeles County		
persons (documented)									
Foreign-born nonnaturalized workers (documented)	6.4	6.4	--	1.4	1.4	--	0.4	0.4	--
Undocumented persons	10.6	10.6	10.6	3.1	3.1	3.1	1.1	1.1	1.1
Undocumented workers	7.8	7.8	7.8	1.6	1.6	1.6	0.6	0.6	0.6
Undocumented children	1.0	1.0	1.0	0.3	0.3	0.3	0.1	0.1	0.1

Source: Estimates based on 2018 IPUMS (<https://doi.org/10.18128/D010.V10.0>) and CPS ASEC; Census Bureau (<https://cps.ipums.org/cps/index.shtml>).

Note: Type 1 population of all households with at least one foreign-born nonnaturalized civilian worker is based on data reported in IPUMS and CPS ASEC. Type 2 population of all households with at least one undocumented worker is based on estimates from MPI, CAP, and Pew. (See appendix A).

Figure 7 maps the concentration of undocumented immigrants across counties in California. Although the undocumented population resides throughout the state, its members are primarily located in Central and Southern California. A larger percentage are found in Imperial, Orange, Los Angeles, Santa Barbara, Monterey, Tulare, Santa Clara, Madera, Merced, San Mateo, Alameda, and Shasta Counties. Los Angeles County, specifically, has the highest share of undocumented immigrants and mixed-status families.

Figure 7: Percentage of Undocumented Population in California Counties



Source: Estimates based on US Census Bureau data, https://data.census.gov/cedsci/table?g=0400000US06.050000&tid=ACSDT5Y2018.B05002&t=Citizenship%3AForeign%20Born&vintage=2018&hidePreview=false&layer=VT_2018_050_00_PY_D1&cid=B05002_0_01E.

Our research indicates that the undocumented population in California and Los Angeles County contributes tremendously to the economy and pays substantial local, state, and federal taxes. Without the continued contributions of immigrants, the state and local economies can be expected to fall into a deeper downturn with a slower recovery.

Table 5 shows the immense productive and financial contributions of immigrants to the national, state, and local economies. Nationally, 23 million immigrant workers contribute over \$3 trillion in GDP and nearly \$6 trillion in total economic output. Immigrant workers make up 26% of California’s labor force and generate \$774 billion toward the state’s gross state product (GSP) and more than \$1.4 trillion in total economic output. Undocumented workers, who represent 9% of the state’s labor force, contribute \$263 billion to GSP and \$482 billion in economic output. Immigrant workers represent 33% of Los Angeles County’s total labor force and produce \$251 billion GSP and \$452 billion in economic output. These figures indicate the economic strength of immigrant communities statewide and their particular importance to LA County.

Table 5: Estimated Economic Contributions of Immigrants in the United States, California, and Los Angeles County (2018)

United States	Employment (thousands)	Percent of total labor force by immigration status	GDP (billions)	Output (billions)	Labor income (billions)	Other income (billions)
Total workers	155,260	100%	\$20,580	\$39,308	\$11,792	\$7,862
Legal workers	15,582	10%	\$2,065	\$3,945	\$1,184	\$789
Undocumented workers	7,800	5%	\$1,034	\$1,975	\$504	\$336
Total foreign-born workers	23,382	15%	\$3,099	\$5,920	\$1,687	\$1,125
California	Employment (thousands)	Percent of total labor force by immigration status	GSP (billions)	Output (billions)	Labor income (billions)	Other income (billions)
Total workers	18,470	100%	\$2,949	\$5,397	\$1,643	\$1,083
Legal workers	3,197	17%	\$510	\$934	\$284	\$187
Undocumented workers	1,648	9%	\$263	\$482	\$125	\$82
Total foreign-born workers	4,845	26%	\$774	\$1,416	\$409	\$270
Los Angeles County						
Total workers	4,918	100%	\$753	\$1,356	\$411	\$285
Legal workers	1,069	22%	\$163	\$294	\$89	\$62
Undocumented workers	570	12%	\$87	\$157	\$41	\$28
Total foreign-born workers	1,639	33%	\$251	\$452	\$130	\$90

Source: Estimates based on IMPLAN data for GDP, GSP, Output, Labor income, and Other income. Total workers, Undocumented workers, and Total foreign-born workers estimates based on IPUMS calculation (<https://doi.org/10.18128/D010.V10.0>), and undocumented employment estimated by Pew Research Center (<https://www.pewresearch.org/hispanic/2016/11/03/appendix-d-detailed-tables/>).

Moreover, as shown in **table 6**, the undocumented workforce generates about \$1.03 trillion in value in the United States, \$263 billion in California, and \$87 billion in Los Angeles County. Undocumented workers collectively earn \$504 billion in the United States, \$125 billion

in California, and \$41 billion in Los Angeles County. These numbers increase when considering mixed-status households, which produce about \$1.67 trillion in GDP in the United States, \$425 billion in California, and \$141 billion in Los Angeles County. Mixed-status households earn a combined income of \$868 billion in the United States, \$215 billion in California, and \$70 billion in Los Angeles County. Undocumented workers and their mixed-status families together contribute significantly to GDP—8.1% in the United States, 14.6% in California and 18.7% in Los Angeles County—and are thus crucial to the health of the economy and its recovery.

Table 6: Estimated Economic Contribution of Mixed-Status Households in the United States, California, and Los Angeles County (2018, in Billions)

	United States		California		Los Angeles	
	Labor Income	GDP	Labor Income	GDP	Labor Income	GDP
Undocumented workers	\$504	\$1,034	\$125	\$263	\$41	\$87
Foreign-born nonnaturalized workers in mixed-status households	\$175	\$305	\$43	\$78	\$14	\$26
Other workers in mixed-status households	\$189	\$331	\$47	\$84	\$15	\$28
Total	\$868	\$1,670	\$215	\$425	\$70	\$141

Source: Estimates based on IMPLAN data for GDP, GSP, and Labor income. Total workers, Undocumented workers, and Foreign-born nonnaturalized workers estimates based on IPUMS calculation (<https://doi.org/10.18128/D010.V10.0>).

Note: “Foreign-born nonnaturalized workers” are legal nonnaturalized workers. “Other workers” refers to US-born workers living in mixed-status households.

Immigrants and their families, including those with and without legal status, also pay significant personal, business, and sales taxes (see **table 7**). In 2018, legal residents and undocumented immigrants paid \$447.6 billion and \$190.4 billion, respectively, in total direct and indirect taxes. In California, these same two groups paid \$144.4 billion and \$63.3 billion, respectively. In Los Angeles County, immigrants contributed \$75.8 billion in total taxes, including undocumented immigrants (\$23.6 billion) and legal residents (\$52.2 billion).

Table 7: Estimated Tax Contributions of Immigrant Workers in the United States, California, and Los Angeles County (2018, in Millions)

	GDP	Personal tax	Business tax	Sales tax	Total tax
United States	\$20,580,223				
Legal residents		\$189,374	\$77,104	\$181,156	\$447,634
Undocumented workers		\$80,577	\$32,807	\$77,080	\$190,464
Total foreign-born workers		\$269,950	\$109,911	\$258,237	\$638,098

	GDP	Personal tax	Business tax	Sales tax	Total tax
California	\$2,949,032				
Legal residents		\$68,560	\$25,993	\$49,871	\$144,424
Undocumented workers		\$30,040	\$11,389	\$21,852	\$63,281
Total foreign-born workers		\$98,600	\$37,382	\$71,723	\$207,704
Los Angeles County	\$753,044				
Legal residents		\$21,820	\$8,247	\$22,085	\$52,152
Undocumented workers		\$9,886	\$3,736	\$10,006	\$23,628
Total foreign-born workers		\$31,706	\$11,984	\$32,090	\$75,780

Source: Estimates based on IMPLAN data for GDP, Personal, Business, Sales, and Total taxes. Legal residents, Undocumented workers, and Total foreign-born workers estimates based on IPUMS calculation (<https://doi.org/10.18128/D010.V10.0>).

In addition to contributions to GDP, we calculated the amount of job growth supported by immigrants through direct and indirect employment channels. **Table 8** provides data for the direct, indirect, induced, and total employment-supporting effects of foreign-born workers in the United States, California, and Los Angeles County. We estimate that in 2018, the total foreign-born population supported about 9.56 million jobs in the state and 2.8 million in the county.²⁰ These findings reflect the consumer and entrepreneurial impact of foreign-born workers who support jobs for the economy—especially critical during the current pandemic when of US workers remain unemployed. As we see below, this data also provides insight into the direct and indirect employment impacts of the COVID-19 shock due to the efforts of undocumented and other workers, as well as on their relative importance for the postpandemic recovery.

Table 8: Estimated Impacts in Employment Supported by Immigrant Workers in the United States, California, and Los Angeles County (2018)

	Employment (thousands)	Percent of total labor force by immigration status	Indirect employment impact	Induced employment impact	Total employment impact
United States					
Total workers	155,260	100			
Legal workers	15,582	10	10,587	13,926	40,095

	Employment (thousands)	Percent of total labor force by immigration status	Indirect employment impact	Induced employment impact	Total employment impact
Undocumented workers	7,800	5	5,316	6,564	19,680
Total foreign-born workers	23,382	15	15,903	20,490	59,775
California					
Total workers	18,470	100			
Legal workers	3,197	17	1,400	1,780	6,377
Undocumented workers	1,648	9	690	850	3,188
Total foreign-born workers	4,845	26	2,090	2,630	9,565
Los Angeles County					
Total workers	4,918	100			
Legal workers	1,069	21	355	393	1,817
Undocumented workers	570	12	177	193	940
Total foreign-born workers	1,639	33	532	586	2,757

Source: Estimates based on IMPLAN data for Indirect, Induced, and Total employment. Total workers, Undocumented workers, and Total foreign-born workers estimates based on IPUMS calculation (<https://doi.org/10.18128/D010.V10.0>).

Part 2: Unequal and Unequalizing COVID-19 Crisis Impacts

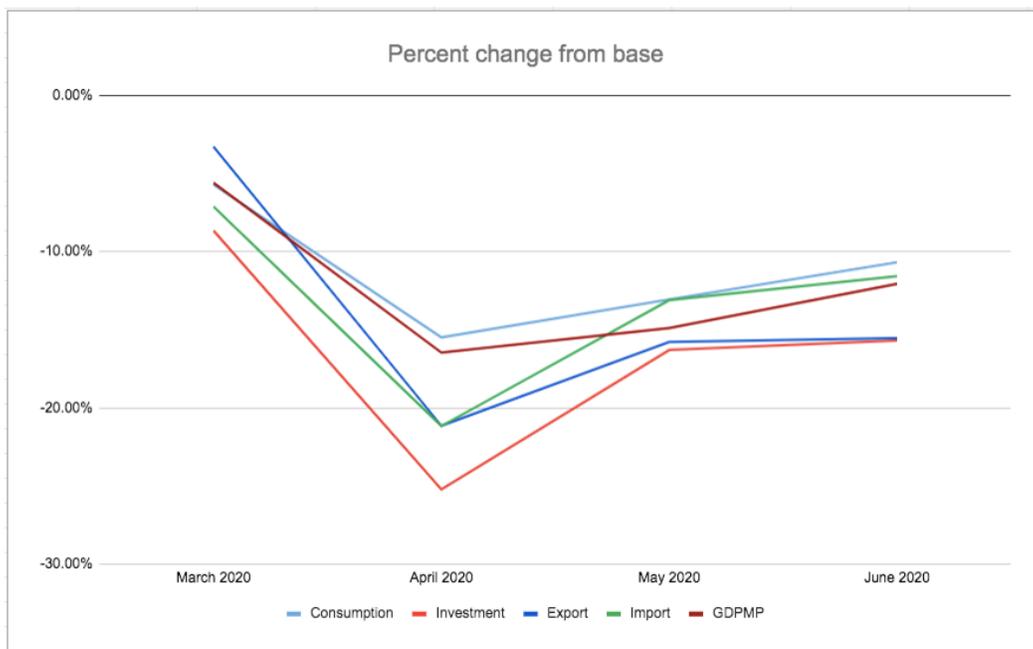
In Part 2, we discuss our findings on the COVID-19 economic shock and how it is revealing profound inequities in exposure to economic risks, including unequal impacts on income, job loss, and access to government relief and other resources deemed critical for economic recovery. In addition to revealing stark socioeconomic inequities, the COVID-19 pandemic is unveiling and exacerbating profound contradictions and injustices in our policy response to the essential and critical role of undocumented workers and mixed-status families.

Continuing from Part 1, we present the next set of findings: (3) the highly unequal impacts of COVID-19 shock on unemployment rates among undocumented and mixed-status families, revealing profound inequities in exposure to economic risks; (4) the important role of undocumented workers in the economic recovery; and (5) the huge additional economic

burden placed on the recovery by the combination of high unemployment rates and discriminatory denial of pandemic benefits to undocumented workers and their families.

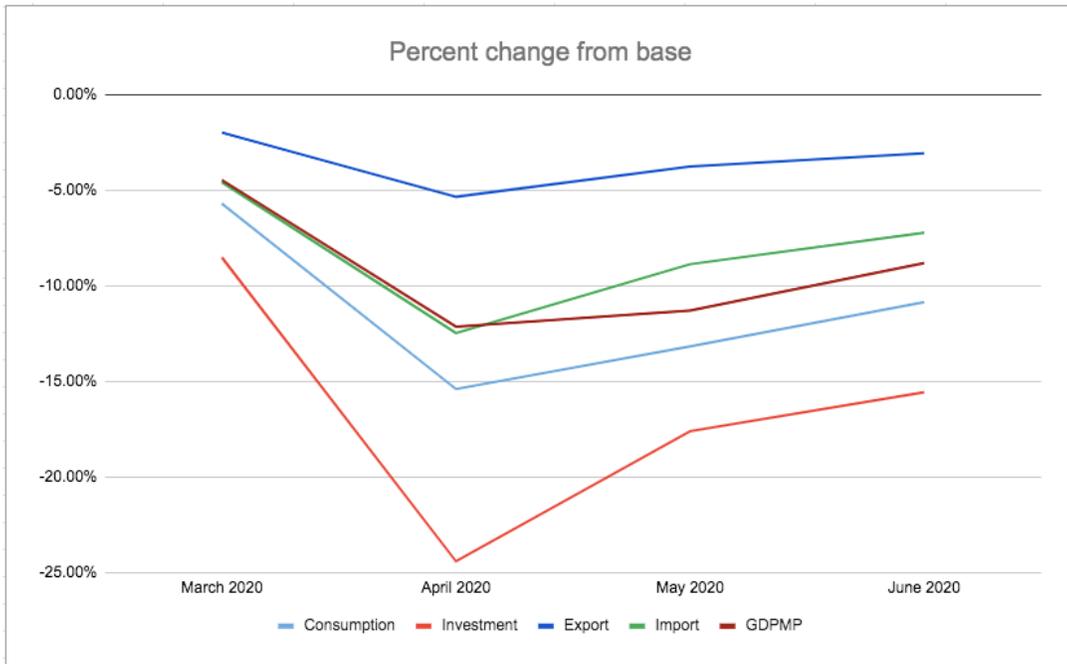
The pandemic has impacted multiple components of GDP, including investments, exports, and consumption (see **figures 8a–c**). Consumption, investments, exports, imports, and GDP plunged in March 2020 but began a steady rise after April. These figures illustrate the overall impact of the pandemic on the national, state, and local economies. The economy in general began to experience slight negative impacts in March and further plunged in April and May. Certain components of the economy, such as investment, exports, imports, trade, and government revenue, have been hit the hardest at all three geographic levels. Some components, including trade balances and exports, have experienced steeper declines than others at the national level.²¹

Figure 8a: COVID-19 Impacts on GDP, Investments, Exports, and Consumption in the United States



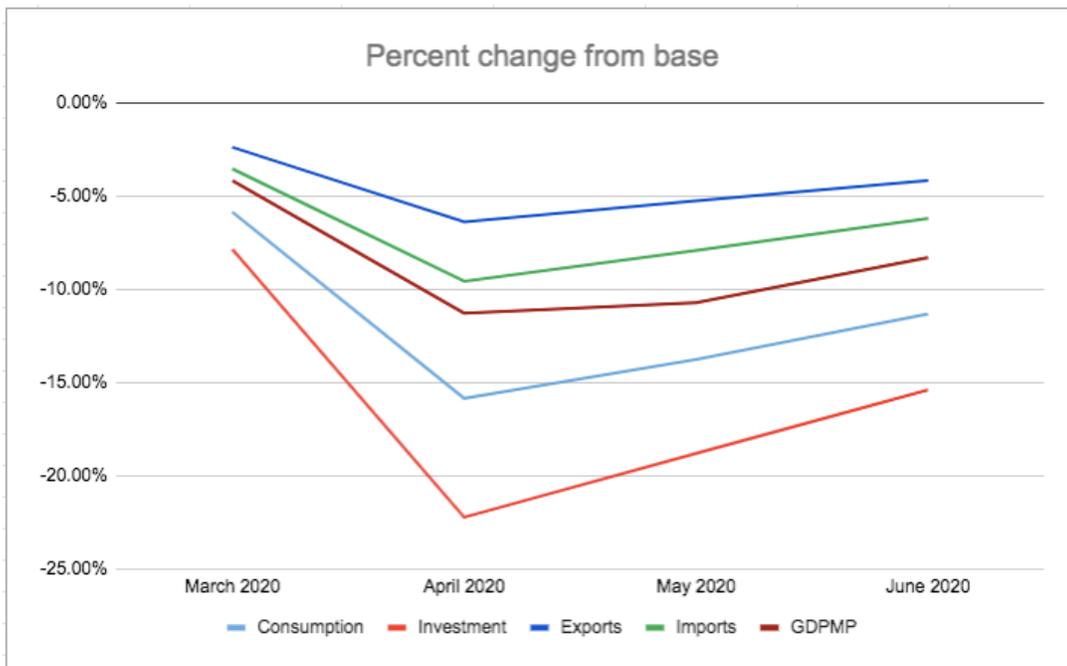
Source: Results derived from SAM modeling analysis.

Figure 8b: COVID-19 Impacts on GDP, Investments, Exports, and Consumption in California



Source: Results derived from SAM modeling analysis.

Figure 8c: COVID-19 Impacts on GDP, Investments, Exports, and Consumption in Los Angeles County

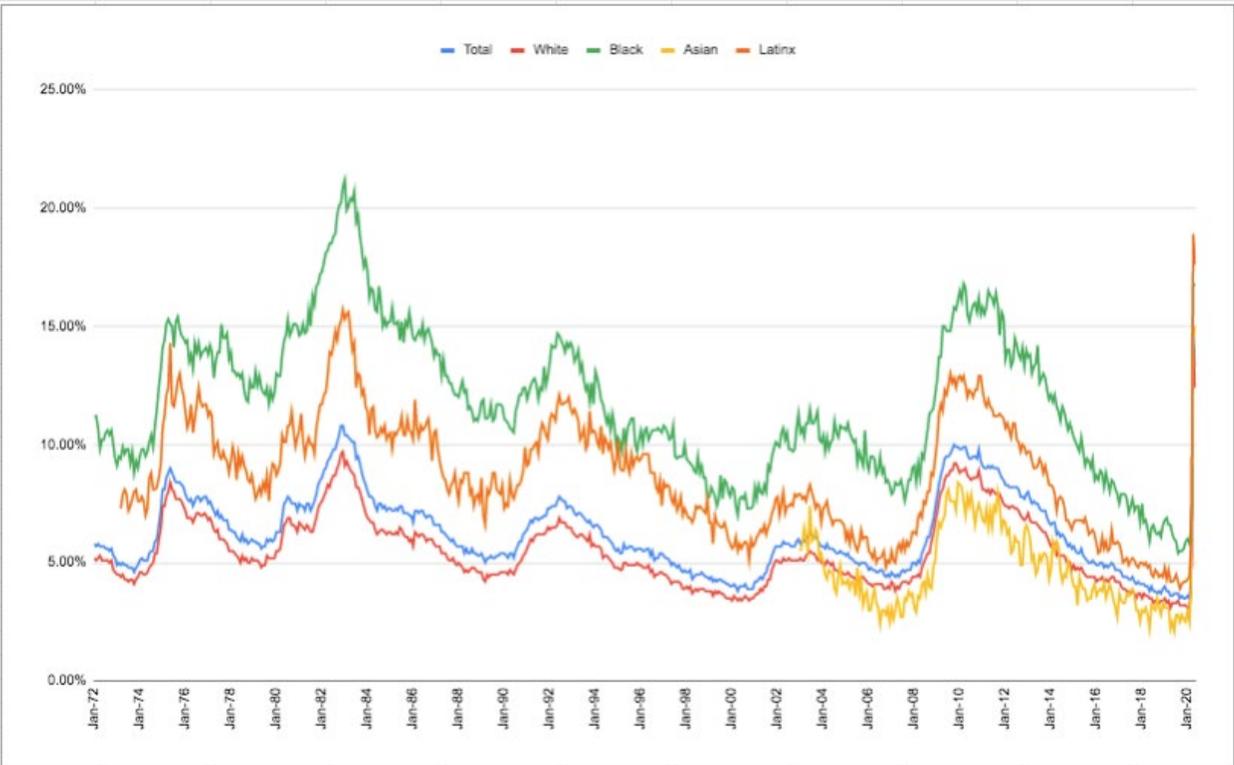


Source: Results derived from SAM modeling analysis.

Finding 3: The COVID-19 Crisis Has Produced Massive, Unequal Impacts on Unemployment

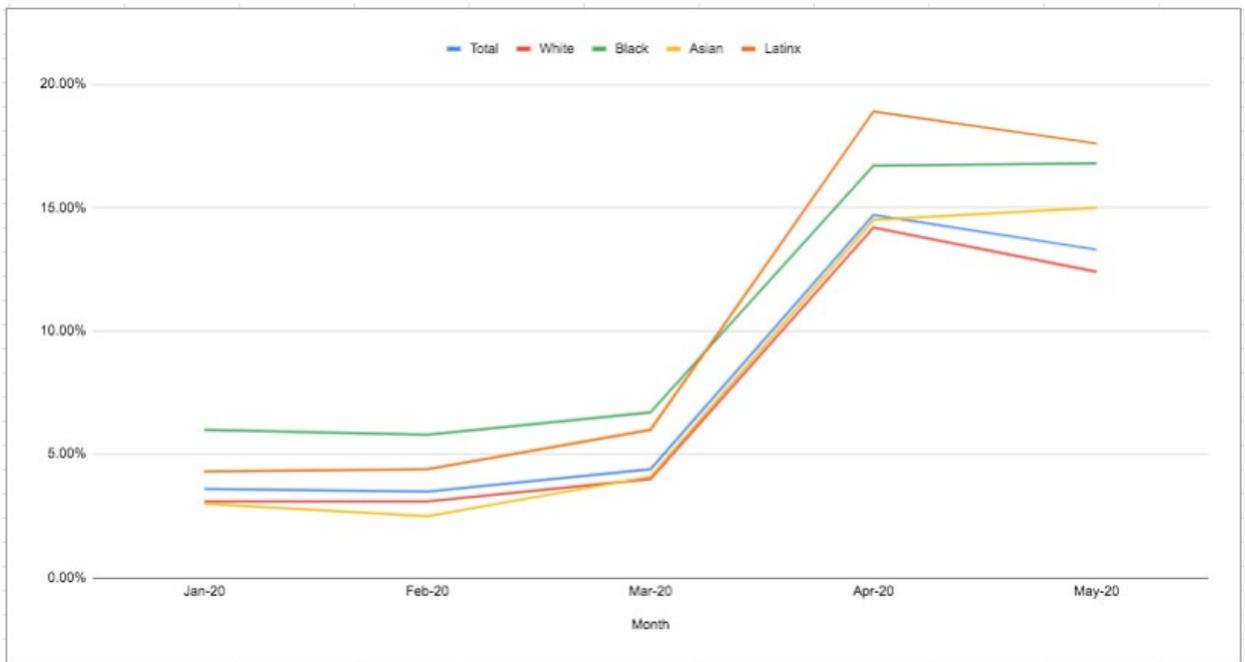
Our analysis finds that the COVID-19 economic shock generated extraordinarily high unemployment and great financial hardship among the most vulnerable societal members: Black, Latinx, immigrant, and especially undocumented workers and their families. The COVID-19 employment crisis exacerbated uneven rates of unemployment and unequal employment structures across groups, particularly Black and Latinx workers (see **figures 9a–b**). Black workers have suffered higher unemployment rates than Latinxs throughout all the recessions since the 1980s. However, we found that the current crisis has had a much greater and more immediate unemployment impact on Latinxs and undocumented immigrants than on Black workers. Although Latinx and undocumented immigrant employment levels are recovering faster than Black unemployment levels, the crisis has resulted in continued higher unemployment for Latinx and undocumented workers. The high and very volatile level of undocumented unemployment thus functions as a “shock absorber” for the level of unemployment of other groups in the economy as a whole.

Figure 9a: Unemployment Composition before COVID-19 in the United States (1972–2020)



Source: Bureau of Labor Statistics (BLS).

Figure 9b: Unemployment Composition before COVID-19 in the United States (January–May 2020)

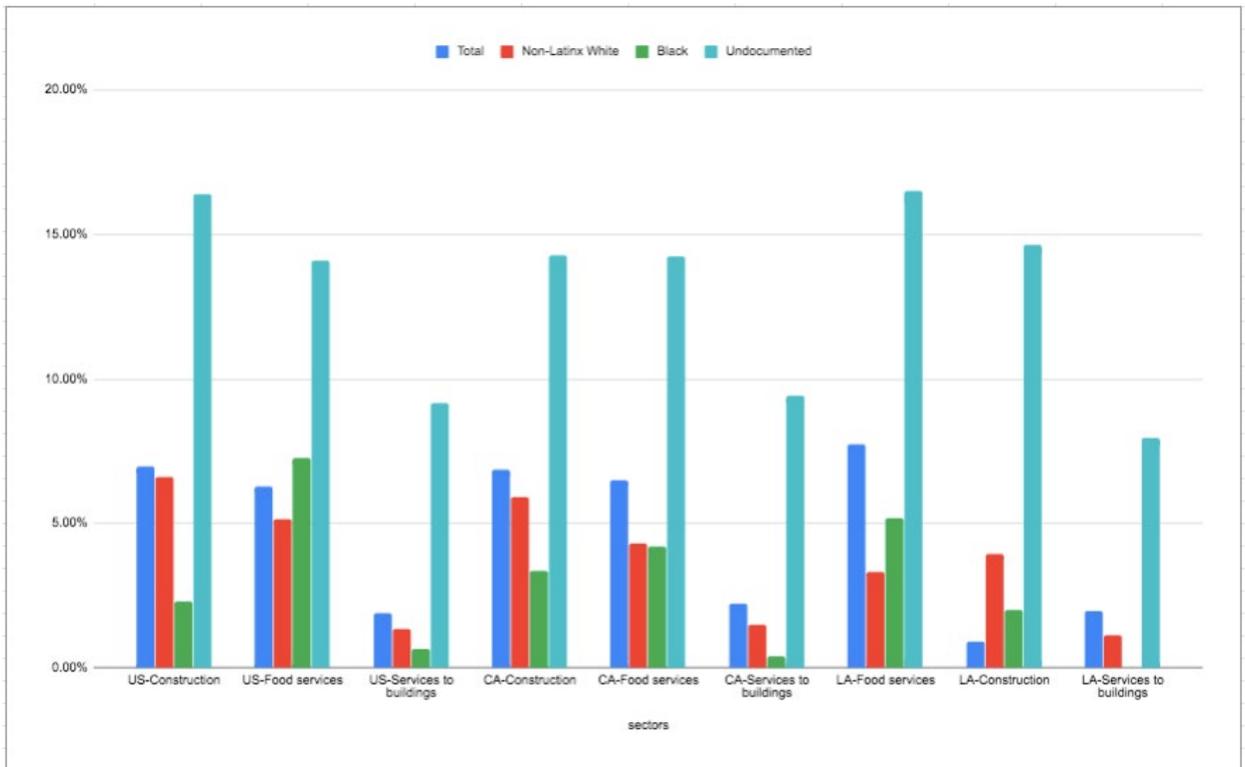


Source: BLS.

The unique sectoral employment structures of undocumented workers explain the seemingly paradoxical combination of being the most concentrated in essential and critical sectors while producing the highest rates of unemployment compared to those of any other worker groups. The differential structure of employment also serves to explain why undocumented individuals and Latinxs have lost jobs at a higher rate than Black workers but are recovering at a faster rate while still maintaining higher unemployment levels.

Undocumented workers are most concentrated in essential and critical industries that are mandated to supply goods and services during the COVID-19 shutdown. At the same time, they are also concentrated in traditionally cyclical sectors that provide direct services for which demand has been drastically reduced. These sectors (construction, food services, and building and domestic services; see **figure 10**) must be fully functional both during and after the crisis to reduce the damage of the crisis and support recovery. Although the undocumented can least afford not to work and comply with stay-at-home and work-at-home mandates, those who are unemployed will be required to quickly return to work to facilitate the economic reopening. These two labor market characteristics—essential and cyclical—reflect the dual characteristics of undocumented workers: available when necessary but disposable when convenient.

Figure 10: Employment Composition before COVID-19 in the United States, California, and Los Angeles County



Source: IMPLAN sectoral data, labor composition by authors.

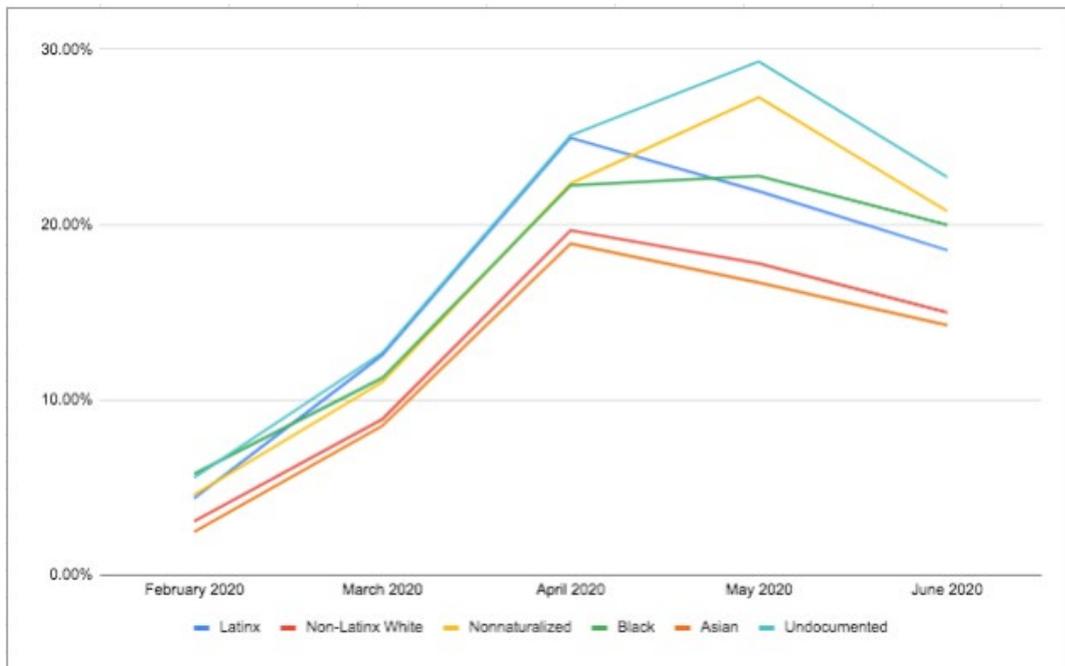
We also estimate the pandemic’s impacts on employment by legal status and by racial and ethnic group. **Tables 9a–c** and **figures 11a–c** present our SAM simulation model results for monthly (February being the base month) evolution of unemployment for the United States, California, and Los Angeles County. We find that undocumented workers experienced the highest employment impact compared to other legal statuses (see **table 9a**). Undocumented workers experienced the greatest surge in unemployment levels during the pandemic with 12.7% unemployment in March, rising to 25.1% in April, 29.3% in May, and recovering to 22.7% in June. This surge in undocumented unemployment was more severe than non-Latinx White workers experienced, with 8.9% unemployment in March, 19.7% in April, and recovering to 17.8% in May and 15% in June.

Table 9a: Estimated Unemployment Impacts by Demographic Groups in the United States

Labor categories	February 2020	March 2020	April 2020	May 2020	June 2020
Latinx	4.40%	12.57%	24.95%	21.91%	18.55%
Non-Latinx White	3.10%	8.92%	19.67%	17.79%	15.01%
Nonnaturalized	4.60%	11.04%	22.35%	27.27%	20.77%
Black	5.80%	11.27%	22.25%	22.78%	19.99%
Asian	2.50%	8.55%	18.92%	16.69%	14.27%
Undocumented	5.60%	12.71%	25.10%	29.31%	22.71%

Source: Data derived from SAM modeling analysis. Changes from the base additive to February unemployment rates from the BLS.

Figure 11a: Estimated Unemployment Impacts by Demographic Groups in the United States



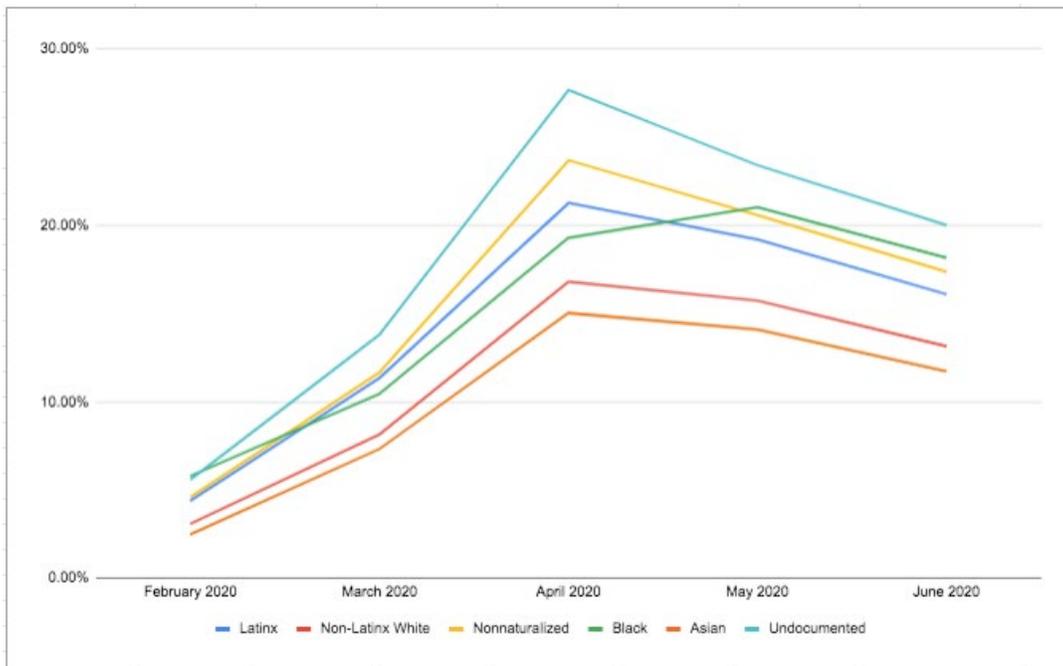
Source: Data derived from SAM modeling analysis.

Table 9b: Estimated Unemployment Impacts by Demographic Groups in California

Labor categories	February 2020	March 2020	April 2020	May 2020	June 2020
Latinx	4.40%	11.35%	21.26%	19.19%	16.09%
Non-Latinx White	3.10%	8.15%	16.79%	15.73%	13.14%
Nonnaturalized	4.60%	11.67%	23.67%	20.57%	17.37%
Black	5.80%	10.45%	19.29%	21.02%	18.15%
Asian	2.50%	7.34%	15.03%	14.10%	11.73%
Undocumented	5.60%	13.81%	27.66%	23.40%	20.00%

Source: Data derived from SAM modeling analysis. Changes from the base additive to February unemployment rates from BLS.

Figure 11b: Estimated Unemployment Impacts by Demographic Groups in California



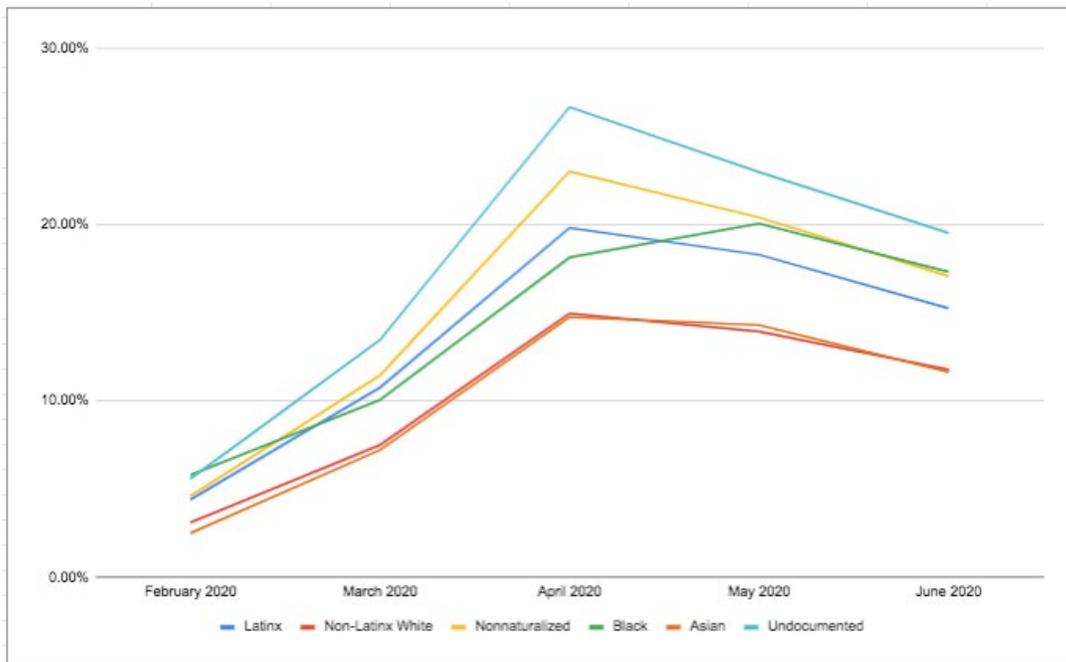
Source: Data derived from SAM modeling analysis.

Table 9c: Estimated Unemployment Impacts by Demographic Groups in Los Angeles County

Labor categories	February 2020	March 2020	April 2020	May 2020	June 2020
Latinx	4.40%	10.76%	19.83%	18.30%	15.26%
Non-Latinx White	3.10%	7.50%	14.97%	13.95%	11.77%
Nonnaturalized	4.60%	11.45%	23.04%	20.42%	17.08%
Black	5.80%	10.06%	18.15%	20.07%	17.34%
Asian	2.50%	7.22%	14.77%	14.31%	11.65%
Undocumented	5.60%	13.47%	26.69%	22.99%	19.54%

Source: Data derived from SAM modeling analysis. Changes from the base additive to February unemployment rates from BLS.

Figure 11c: Estimated Unemployment Impacts by Demographic Groups in Los Angeles County



Source: Data derived from SAM modeling analysis.

Undocumented workers are concentrated in low-wage sectors that have been particularly hard hit during the shutdown, such as agriculture, construction, services, and manufacturing. Because undocumented workers are prevalent in the most essential and the most cyclically hard-hit sectors, we estimate that the net effect will result in higher rates of overall unemployment.

The COVID-19 crisis is producing the highest state unemployment rates (nearly 30%) among the poorest and most vulnerable undocumented workers and their mixed-status family members. While this large working-poor population is suffering the highest rate of unemployment shock, they are also suffering a discriminatory denial of benefits, thereby creating an unprecedented poverty emergency.

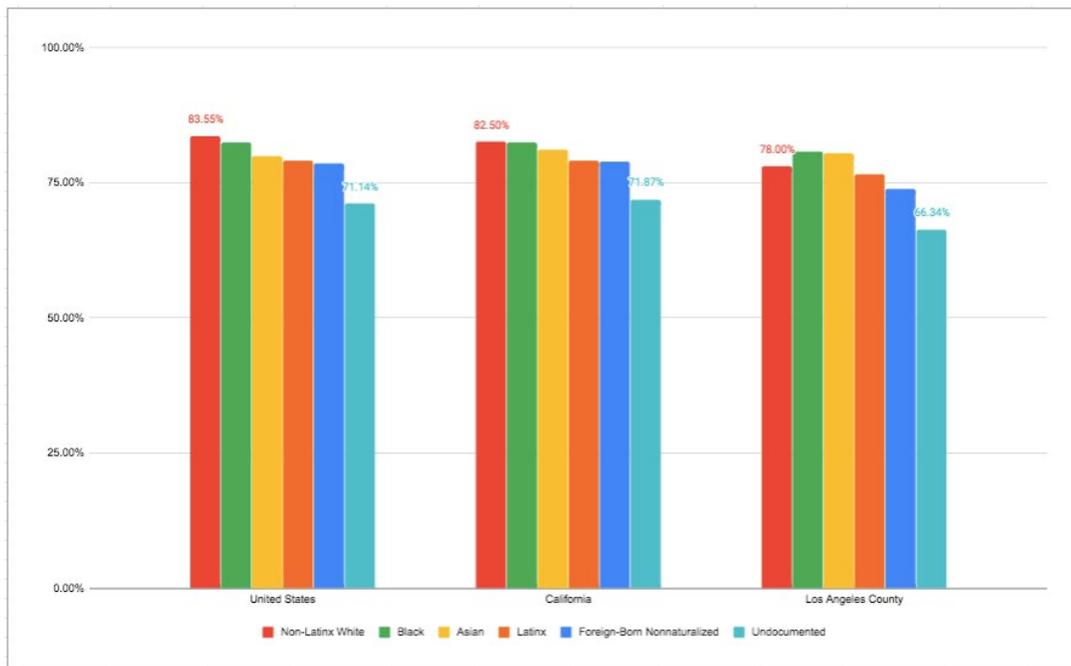
Finding 4: During Recovery, Immigrants Will Play an Even More Essential Role

According to our SAM-based analysis, undocumented workers and their mixed-status family members are highly concentrated in industries that provided critical goods and services during the initial closing of the economy (see **figure 4**). In the anticipated recovery phase, these workers will remain essential to maintaining the open sectors, generating vital contributions to GDP. An estimated 7.8 million undocumented workers (10.6 million persons) make up a majority of the 5 million mixed-status families, totaling 18.1 million people (see **table 4**). These mixed-status households are not only large contributors to GDP (\$1.67 trillion) but also large consumers who generate \$868 billion in wage income and \$328.4 billion in tax revenue (see **table 6**).

While undocumented and mixed-status family workers are critical to the pandemic economy, our analysis shows that they suffer disproportionately high unemployment rates due to the closing of services as a result of the shutdown and the corresponding decline in demand. **Figure 12** shows that undocumented workers have faced greater direct structural impacts on employment than US-born workers and non-Latinx White workers. Nationwide, the vast majority of undocumented workers in the sector were impacted by the shutdown, with 83% in March and April, 81% in May, and 82% in June. In contrast, 68% of non-Latinx White workers were impacted in March, 69% in April, 68% in May, and 69% in June.

In the United States, the majority of non-Latinx Whites (84%) are working in open (essential) sectors, and 16% in closed (cyclical) sectors (see **figure 12**). The findings are similar in California where 83% of non-Latinx Whites are in open sectors, and 18% are in closed sectors. Comparatively, 72% of undocumented workers are in open sectors, while 28% are in closed sectors. The employment composition slightly differs in Los Angeles County, where 66% of the undocumented workforce are in open sectors and 34% are in closed sectors. Of non-Latinx Whites, 78% are employed in open sectors, while 22% are in closed sectors. These findings demonstrate the dual concentration of undocumented workers in both open and closed sectors across the nation, state, and county.

Figure 12: Employment Composition of Open and Closed Sectors during COVID-19 in the United States, California, and Los Angeles County



Source: Labor composition derived from IMPLAN sectoral data.

These simulation model results show the immediate effect in March and April 2020 of closure shocks on demand by sectors due to stay-at-home mandates as well as the shock effects of direct closure of industries. Despite being concentrated in designated essential

sectors, undocumented immigrants and their mixed-status families are also in the closed sectors of the economy, even with economic hardships and an inability to work from home.

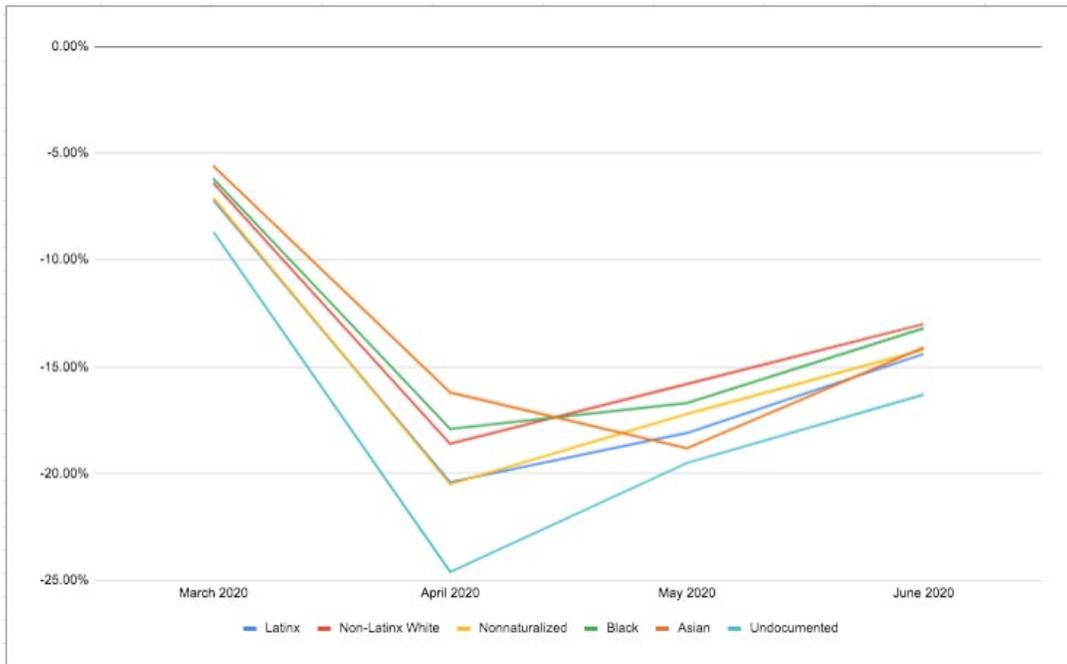
Finding 5: Dual Effect Produces Massive Impacts and Exclusion, Exacerbating the Crisis

With unemployment rates projected to be the highest among undocumented and mixed-status family members, the current crisis will also reduce their total wages and buying power by \$2.5 billion a month, statewide. In Los Angeles County alone, there will be uncompensated wage losses of more than \$1 billion per month. Current policies of discriminatory exclusion of undocumented workers and their mixed-status families is resulting in massive reductions in economy-wide activity and loss of direct and indirect employment in communities across the country.

The pandemic has affected the total wages of marginalized groups more than others (see **figures 13 a–c**). For instance, Latinx, immigrant, and undocumented workers experienced the greatest reduction in total wages compared to Asian, Black, and non-Latinx White workers. Using February as a base month, Latinx, immigrant, and undocumented workers faced the biggest reduction in total wages during April and May. However, the undocumented workforce experienced a more significant wage impact in June compared to other immigrant and US-born groups.

Figure 13a illustrates the impacts of the pandemic on total wages from March to June 2020 for the United States. The worst impact was in April, followed by May and June. Undocumented workers bore the greatest impact on total wages through March, April, May, and June. Undocumented workers experienced a 25% reduction in total wages in April, 20% in May, and 16% in June. Latinx workers' total wages were most impacted compared to other racial and ethnic groups in April through June. Latinx workers experienced a negative 20% impact in April, a negative 18% impact in May, and a negative 14% impact in June.

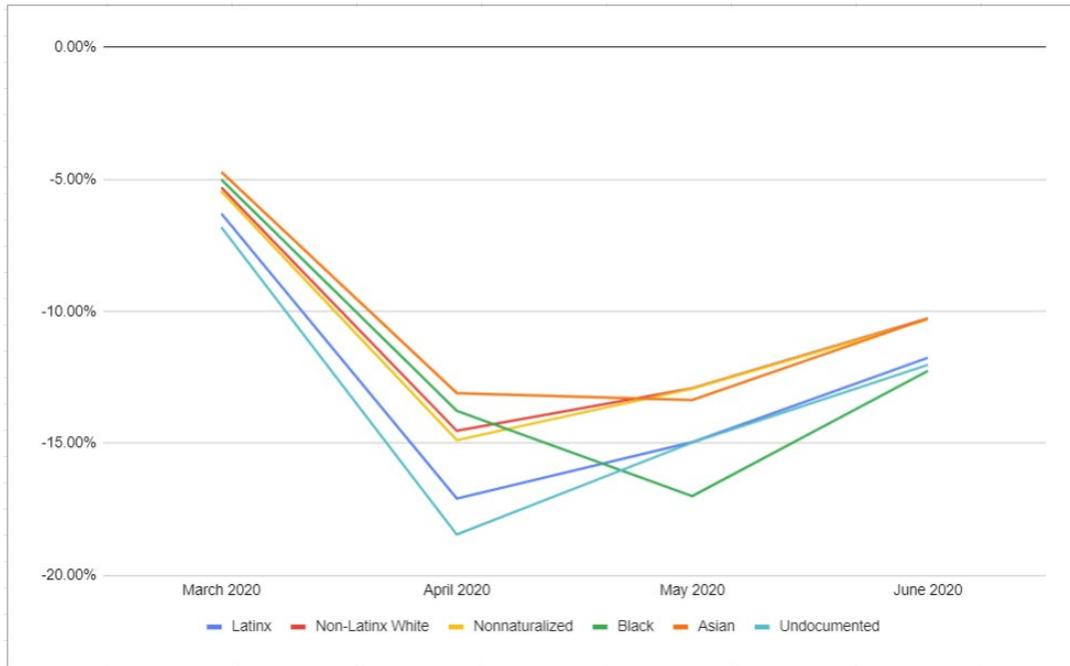
Figure 13a: Estimated COVID-19 Impacts on Total Wages per Month in the United States



Source: Data derived from SAM modeling analysis.

Our findings show similar impacts on total wages for undocumented workers from March to June 2020 for California (see **figure 13b**). Undocumented workers experienced an 18% reduction in total wages in April, 15% in May, and 12% in June. Latinx workers experienced a 17% reduction in total wages in April, 15% in May, and 12% in June.

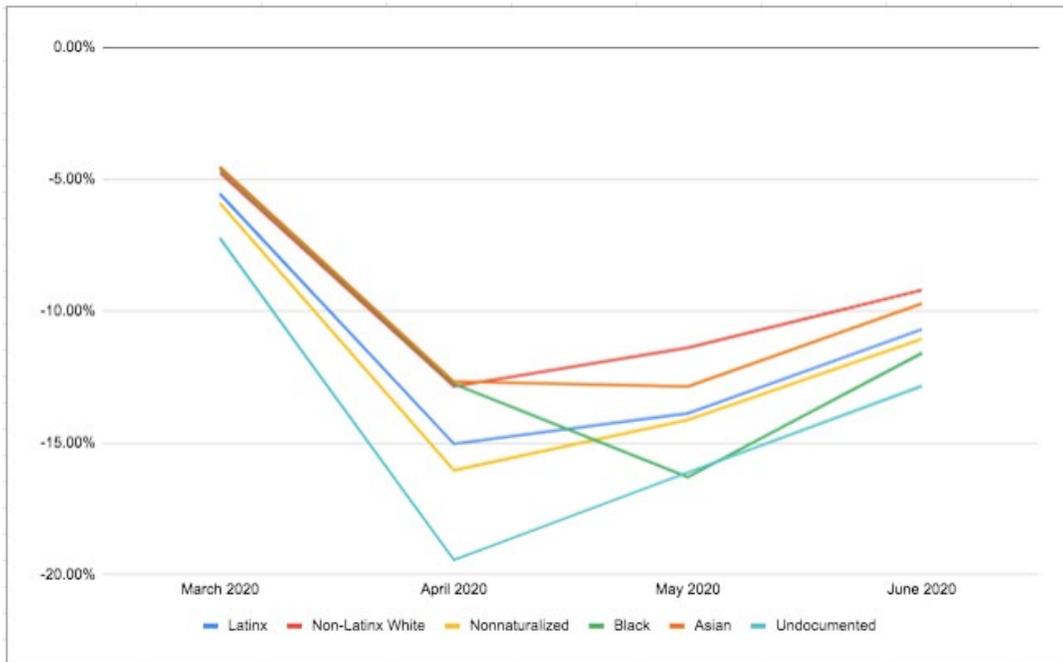
Figure 13b: Estimated COVID-19 Impacts on Total Wages per Month in California



Source: Data derived from SAM modeling analysis.

These effects are also evident in Los Angeles County, where Latinx workers and undocumented workers faced a greater reduction in total wages than other ethnic groups and nonnaturalized documented immigrants (see **figure 13c**). Undocumented workers faced a 19% reduction in total wages in April, 16% in May, and 13% in June. Latinxs experienced a 15% reduction in total wages in April, 14% in May, and 11% in June.

Figure 13c: Estimated COVID-19 Impacts on Total Wages per Month in Los Angeles County



Source: Data derived from SAM modeling analysis.

In addition to massive unemployment and loss of GDP, the COVID-19 crisis is inflicting a significant direct and indirect loss of income and employment in California and Los Angeles County, the largest state and the second largest city in the nation. Going into the crisis, the estimated 1.6 million undocumented workers and 1.5 million mixed-status families are not only large value-added contributors to the Californian economy but are also important as wage earners and consumers, generating \$425 billion in direct, indirect, and induced demand, employment, and tax revenue (see **table 6**).

A Worker Poverty Emergency

The dual effect of high unemployment and lack of access to financial relief will result in condemning these essential workers and their mixed-status families to a financial wasteland, costing Los Angeles, California, and the United States billions of dollars per month in lost wages, consumption, tax revenues, and indirect employment. This contradiction between essential workers and disposable families is also highlighted by the critical role undocumented workers play in the future survival of key agriculture, food processing, and basic services supply chains.

Rising unemployment rates, combined with the exclusion from federal benefits and state UI among undocumented workers, will considerably swell the number of unemployed persons living in poverty and extreme poverty in California and Los Angeles County. As noted earlier, in California prior to the pandemic, 46% of the undocumented population were already living with a family income below 150% of the poverty level (see **table 2**). Given the high labor market participation rate of undocumented workers, it is likely that at least 875,000 were employed and earning below the poverty level. Our research finds that the unemployment rate

of the undocumented rose in April to 25.1%, representing nearly 400,000 workers and resulting in a 45% increase of undocumented workers living in poverty. Given a total of 5.3 million persons living in mixed-status households who are prohibited from receiving pandemic relief funds, the collapse of employment among undocumented workers will affect another 1.9 million living near or below the poverty level.

Part 3: Alternative Recovery and Stagnation Scenarios

In Part 3, we examine the impacts of alternative policy scenarios for post-COVID-19 shock recovery or extended stagnation at the national, state, and local levels. We assess two fundamentally different approaches: the exclusion of immigrants from employment and relief funding versus the inclusion of immigrants in recovery and relief funding.

We find that policies inclusive of undocumented workers and mixed-status families are beneficial to all worker categories because these workers and families contribute greatly to the US aggregate economy and employment and as consumers, they generate \$1.67 trillion in value added, including wages and tax revenues (see **table 6**).

Finding 6: Removing Undocumented Immigrants from the Labor Market Would Worsen the Economic Crisis

We also use our SAM modeling to generate alternative scenarios of postshock recovery versus the stagnation and potential catastrophe of a policy of exclusion. Scenarios that reduce immigrant workers in the labor force, including those calling for mass deportations,²² have severe negative consequences on the economy. We show that the result of barring undocumented immigrants from the labor force reduces GDP by \$263 billion in California and \$87 billion in Los Angeles County.

Our research also shows that policies that reduce or eliminate immigrants in the labor market, such as the “Great Repatriation” in the 1930s in California during the Depression, would result in a more profound economic downturn and unequal stagnation, inhibiting not only California’s recovery but that of the nation. Using a computable general equilibrium (CGE) model of the United States, our results indicate that deporting 5% of the labor force would decrease GDP by almost 6% (\$2.1 trillion), depending on how labor and capital markets adjust.²³

The mass deportation scenario amounts to a policy-induced severe recession for the United States, with negative GDP impacts in Mexico and Central America due to the collapse of remittances. Alternatively, we use the CGE model to analyze comprehensive immigration reform (CIR).²⁴ Instituting CIR would increase GDP by \$1.5 trillion over 10 years, and would generate income and productivity growth by allowing undocumented immigrants to participate in more productive employment opportunities. CIR also has a positive impact on trade with Mexico, further reducing migration pressures. Most interestingly, US imports and exports would see a steeper decrease in a migration collapse scenario than in a trade war scenario. In addition, it has been proposed that legalization, if implemented, would significantly reduce the number of unauthorized border crossings, as occurred after the Immigration Reform and

Control Act of 1986 legalized most undocumented immigrants in the United States. As calculated by the UCLA NAID Center in 2009 and corroborated by the Congressional Budget Office in 2013, subsequent immigration numbers continued to decline after legalization of the undocumented population.²⁵

Finding 7: The Lack of Economic Support for Undocumented Immigrants Has Severe Consequences for the Economies of Los Angeles County and California

Scenarios that reduce and eliminate the financial support and potential contributions of immigrants in the labor force have severe negative economy-wide consequences. Our research finds, however, that policies of inclusion—designed to empower immigrant economic potential through financial support and continued engagement in the labor force—are critical for a robust and durable economic recovery. In one positive outcome, the COVID-19 pandemic has accelerated unprecedented action at the state and local levels to address highly visible economic and social justice inequities. Our SAM multiplier model allows us to measure the potential impact of these policy innovations for supporting and not supporting undocumented workers and their mixed-status families. While the size of funds pledged by state and county projects represents only a fraction of the need and potential benefit, it nevertheless indicates the strength of this policy approach during the crisis and in building a strong recovery.

One innovation that has been proposed and implemented is the Los Angeles County Angeleno Card program,²⁶ which is expected to generate millions of dollars toward labor, household income, taxes, and value added (see appendix B and **table 10**). Twenty thousand individuals have thus far benefited from the program and are expected to generate an increase of \$36 million in household income. More specifically, the Angeleno Card would result in an increase of \$21 million in total value added and \$7 million in total tax revenue, including direct and indirect tax revenues, as a result of a program for only 20,000 recipients. These expected financial contributions far outweigh the program’s net cost of \$15 million.

Table 10: SAM Multiplier Impacts of Angeleno Card in Los Angeles County for Actual and Potential Recipients

	Actual recipients 20,000		Potential recipients 450,000	
	Benefits (in millions)	Multiplier	Benefits (in millions)	Multiplier
Employment (number of jobs)			1,100	
Household income	\$36	1.63	\$808	1.63
Total value added	\$21	0.96	\$476	0.96
Total cost of the program	\$22	N/A	\$496	N/A
Total tax revenue	\$7	0.33	\$164	0.33
Indirect tax revenue	\$2	0.1	\$50	0.1
Net cost of the program	\$15	N/A	\$332	N/A

Source: Data derived from SAM modeling analysis.

However, if policy makers expanded the Angeleno Card program to 450,000 recipients, the benefits would be increasingly significant (see **table 10**). The program would generate an estimated 1,100 jobs, \$808 million in household income, \$476 million in total value added, and \$164 million in total tax revenue including direct and indirect tax revenues. These benefits exceed the program's net cost of \$332 million.

California has also enacted a couple of initiatives to extend economic relief to undocumented immigrants. One is the Disaster Relief Fund, which has benefited more than 150,000 (see appendix D).²⁷ Another innovation being proposed is the expansion of the CalEITC, which would extend eligibility to undocumented workers who file taxes using an ITIN. Although California has recently extended the CalEITC to ITIN filers with children age 5 or younger (see appendix D), this initiative is not enough. The expansion of the CalEITC to all ITIN filers would provide \$79 million to \$113 million (with an estimated 50% uptake rate) to undocumented households, benefiting 505,000 to 722,000 newly eligible people in those tax units, 171,000 to 244,000 newly eligible children in those tax units, and 48,000 to 69,000 newly eligible children under age 6 in those tax units.²⁸ Our modeling shows that providing resources directly to some of the poorest households in California and Los Angeles, given their high propensity to generate immediate demand in consumer goods, will generate high multiplier effects through direct, indirect, and induced GDP, employment, and taxes. These programs would also help maintain essential segments of the labor market in order to quickly revitalize the supply of low-cost goods and services as the recovery proceeds, as opposed to having workers drop out of the labor force or leave the country.

Our estimates show that extending benefits under the CalEITC program to undocumented immigrants would generate important spillover benefits to the state and county economies. Data in **tables 11a** and **11b** supports the benefits of including undocumented immigrants in the CalEITC program. In California, expanding the program would bring about 170 jobs, \$129 million in household income, \$76 million in value added, and \$26 million in total direct and indirect tax revenues (see **table 11a**). These benefits are much higher than the net cost of program expansion at \$2 million. Los Angeles County would see similar economic benefits. The expansion would generate nearly 60 jobs, \$41 million in household income, \$24 million in total value added, \$14 million in government revenue, and \$11 million in direct and indirect tax revenues. These contributions reduce the program's net cost to \$11 million.

Table 11a: Estimated Economic Impacts of Extending CalEITC Benefits to Undocumented Workers and Families (SAM Multiplier) (Investment \$79 million)

	California		Los Angeles County	
	Benefits (in millions)	Multiplier	Benefits (in millions)	Multiplier
Employment (total number of jobs)	170		60	
Household income	\$129	1.63	\$41	1.63
Total value added	\$76	0.96	\$24	0.96
Total cost of the program	\$79	N/A	\$25	N/A
Total tax revenue	\$26	0.33	\$14	0.55
Indirect tax revenue	\$8	0.10	\$3	0.10
Net cost of the program	\$2	N/A	\$11	N/A

Source: Data derived from SAM modeling analysis.

Table 11b: Estimated Economic Impacts of Extending CalEITC Benefits to Undocumented Workers and Families (SAM Multiplier) (Investment \$113 million)

	California		Los Angeles County	
	Benefits (in millions)	Multiplier	Benefits (in millions)	Multiplier
Employment (total number of jobs)	250		80	
Household income	\$184	1.63	\$59	1.63
Total value added	\$108	0.96	\$35	0.96
Total cost of the program	\$113	N/A	\$36	N/A
Total tax revenue	\$37	0.33	\$12	0.55
Indirect tax revenue	\$11	0.10	\$3.6	0.33
Net cost of the program	\$76	N/A	\$24	N/A

Source: Data derived from SAM modeling analysis.

The figures in **table 11a** consider an initial program investment of only \$79 million. Should the proposal invest \$113 million in the expansion, the outcome would be even greater (see **table 11b**). In California, it would produce nearly 250 jobs, \$184 million in household income, \$108 million in total value added, \$62 million in government revenue, and \$48 million in direct and indirect tax revenues. The net cost would amount to \$76 million. For Los Angeles County, there would be 80 new jobs, \$59 million in household income, \$35 million in total value added, \$12 million in direct and indirect tax revenues. The net cost would be only \$24 million.

Finally, we find that including undocumented workers in the UI program will have a substantial positive economic impact (see **table 12**). For the state, this action will have an impact of \$455 million in household income, \$268 million in total value added, \$92 million in total direct and indirect tax revenues. The same positive impact is estimated for the county,

with \$126 million in household income, \$74 million in total value added, and \$25 million in direct and indirect tax revenues.

Table 12: Estimated Economic Impacts of Extending UI to Undocumented Workers and Families (SAM Multiplier)

	California		Los Angeles County	
	Benefits (in millions)	Multiplier	Benefits (in millions)	Multiplier
Employment (number of jobs)	600		50	
Household income	\$455	1.63	\$126	1.63
Total value added	\$268	0.96	\$74	0.96
Total cost of the program	\$279	N/A	\$77	N/A
Total tax revenue	\$92	0.33	\$25	0.55
Indirect tax revenue	\$28	0.1	\$8	0.33
Net cost of the program	\$187	N/A	\$52	N/A

Source: Data derived from SAM modeling analysis.

Finding 8: Alternative Scenarios—Federal Programs Should Financially Empower Immigrants

Our findings also evaluate the benefits of restoring access to federal relief programs such as the CARES Act and HEROES Act compared to the estimated costs stemming from denying this type of support to families and communities. The SAM multiplier analysis at the state and county levels shows significant economy-wide benefits from this policy approach, including increases in direct and indirect consumption demand, taxes, and employment, clearly reducing poverty levels and income and racial disparities.

Our results show that providing the CARES and HEROES legislations to undocumented and mixed-status families would yield substantive improvements in these families and communities throughout California and Los Angeles County. The SAM multiplier model determines positive economic impacts if CARES Act benefits are extended to undocumented workers (see **table 13**). Nationwide, these impacts would generate 82,000 jobs, \$13.5 billion in household income, \$10.1 billion in total value added, and \$2.8 billion in direct and indirect tax revenues. For California, expanding the CARES Act would yield 17,000 new jobs, \$3.4 billion in household income, \$2 billion in total value added, and \$0.7 billion in direct and indirect tax revenues. We find similar benefits in Los Angeles County, where CARES inclusion would create 1,600 jobs, \$1.1 billion in household income, \$0.7 billion in total value added, and \$0.2 billion in direct and indirect tax revenues.

Table 13: Estimated Economic Impacts of Extending CARES Act Benefits to Undocumented Workers and Families (SAM Multiplier)

	United States		California		Los Angeles County	
	Benefits (in billions)	Multiplier	Benefits (in billions)	Multiplier	Benefits (in billions)	Multiplier
Employment (number of jobs)	82,000		17,000		1,600	
Household income	\$13.5	1.96	\$3.4	1.63	\$1.1	1.63
Total value added	\$10.1	1.47	\$2.0	0.96	\$0.7	0.96
Total cost of the program	\$6.9	N/A	\$2.1	N/A	\$0.7	N/A
Total tax revenue	\$2.8	0.41	\$0.7	0.33	\$0.2	0.55
Indirect tax revenue	\$0.9	0.13	\$0.2	0.10	\$0.07	0.33
Net cost of the program	\$4.1	N/A	\$1.4	N/A	\$0.37	N/A

Source: Data derived from SAM modeling analysis.

We also find positive economic impacts of including undocumented workers in the HEROES Act (see **table 14**). For the United States, the impacts include 112,000 new jobs, \$18.6 billion in household income, \$14 billion in total value added, and \$3.9 billion in direct and indirect tax revenues. The HEROES Act would have promising effects in California as well by inducing 22,000 jobs, \$4.4 billion in household income, and \$0.9 billion in direct and indirect tax revenues. There would be similar impacts in Los Angeles, with 2,000 jobs, \$1.5 billion in household income, \$0.87 billion in total value added, and \$0.3 billion in direct and indirect tax revenues.

Table 14: Estimated Economic Impacts of Extending HEROES Act Benefits to Undocumented Workers and Families (SAM Multiplier)

	United States		California		Los Angeles County	
	Benefits (in billions)	Multiplier	Benefits (in billions)	Multiplier	Benefits (in billions)	Multiplier
Employment (number of jobs)	112,000		22,000		2,000	
Household income	\$18.6	1.96	\$4.4	1.63	\$1.5	1.63
Total value added	\$14.0	1.47	\$2.6	0.96	\$0.87	0.96
Total cost of the program	\$9.5	N/A	\$2.7	N/A	\$0.91	N/A
Total tax revenue	\$3.9	0.41	\$0.9	0.33	\$0.3	0.55
Indirect tax revenue	\$1.2	0.13	\$0.3	0.10	\$0.09	0.33
Net cost of the program	\$5.6	N/A	\$1.8	N/A	\$0.61	N/A

Source: Data derived from SAM modeling analysis.

These findings show the dramatic multiplier benefits of providing undocumented workers and their families with access to economic relief. Offering such support for the lowest-paid workers has the highest multiplier impacts compared to offering the same support to higher-income families. At the same time, the results reveal that providing relief to these essential workers and their families is critical to reinvigorating the workforce and the economy. The inclusion of these neglected essential workers will significantly improve recovery, reduce inequality, and empower families to move out of poverty.

Conclusion

Our findings serve as a basis for evaluating the much greater benefits of restoring full access to federal relief programs such as the CARES Act and HEROES Act, in comparison to the cost of denying this type of support to families and communities. California is ground zero with 2.2 million adults and children in ITIN-filer households (representing 28% of the total US population). Retroactive inclusion of ITIN filers in the CARES Act (\$1,200/adult, \$500/child) for California would cost \$2.01 billion (\$6.9 billion nationally), and inclusion of ITIN filers in the HEROES Act for California would cost \$2.67 billion (\$9.5 billion nationally).

Despite the considerable economic and tax contributions of undocumented families, this very population is highly concentrated in essential and critical sectors while working at the lowest wages, often at poverty levels, and suffering from the highest unemployment shock due to COVID-19. While our economy needs their labor for a rapid recovery, established policies reveal an astonishing hypocrisy and self-destruction that excludes undocumented workers from federal and state relief.

As we proceed deeper into what is looking to be the worst economic crisis since the Great Depression, California and Los Angeles can once again provide leadership on policy options for the nation as a whole. At the start of the Depression, California led the nation in advancing a radical anti-immigrant policy called the “Great Repatriation”²⁹. Today, California is in a position to play an innovative role by rejecting mass deportations and embracing the emerging movement known as EPIC (End Poverty in California). The state and county can serve as a model for future analysis of immigration reform, minimum wage increase, and various methods of providing income support. This period of deep crisis can lead to a new appreciation of how to construct a future of economic security, sustainability, and equity.

This report is part of a larger collaboration between the UCLA NAID Center and the Mexican Instituto Nacional de Estadística y Geografía. The project is designed to measure transnational impacts and policy options in a variety of areas, including the economic impacts of the global COVID-19 crisis in Mexico, Canada, and the United States and on diaspora populations in the United States. Our next report will examine what an optimal transnational policy set of scenarios would look like in conjunction with the following:

- the expansion of rights to immigrants as a strategy for economic stimulus,
- strategies on the Mexican side for direct transfers to populations,
- the impacts of financial inclusion and technologically driven financial intermediation, and
- the creation of a cross-border transnational migration savings bond.

We will show that the above policies, in conjunction with a strategy of full legalization in the United States, will be the best way forward for the United States, Mexico, California, and Los Angeles County.

Policy Recommendations

Undocumented workers are and continue to be the economical backbone of Los Angeles County, California, and the nation during the COVID-19 pandemic. Most undocumented workers are employed on the front lines, earning less than their legalized counterparts despite sharing equal labor responsibilities and risks. They are also excluded from receiving financial assistance from federal, state, and local governments, even though they boost the economy through tax contributions and consumer spending and stimulate employment and local investment. The pandemic has revealed the important role undocumented workers play in keeping the economy afloat. This report urges policy makers to protect undocumented workers from pandemic-induced devastation and boost the livelihoods of these workers. The following policy recommendations seek to bolster the economic security of undocumented workers and their families during the pandemic.

Offer Economic Relief to Undocumented Workers and Their Families

1. Expand the federal Earned Income Tax Credit (EITC), the CalEITC, and the Young Children Tax Credit (YCTC) to include ITIN filers and their mixed-status families.
2. Support the HEROES Act to ensure that all ITIN filers and their mixed-status families are eligible for pandemic relief.
3. Fund relief programs for undocumented workers, such as Los Angeles's Angeleno Campaign and California's Disaster Relief Fund.
 - a. Work closely with nonprofits and foundations to provide outreach and educational resources to undocumented immigrants and their families.
 - b. Ensure that all undocumented workers and their families are able to access economic relief funding by developing culturally and financially inclusive technologies.
 - c. Invest in the program's technological capacity so that it can withstand high applicant volume.
4. Issue UI benefits to undocumented workers who suffered job loss due to the pandemic.
 - a. Ensure technical assistance to undocumented applicants by providing culturally and linguistically competent resources.
5. Extend public assistance program benefits to undocumented workers.
 - a. Include undocumented workers in housing, health, and nutrition programs.
 - b. Eliminate public-charge rule so that all immigrants can participate in government assistance programs without fear of jeopardizing their immigration status.³⁰
6. Design universal basic income programs that include undocumented immigrants.

Provide Labor Rights to Undocumented Workers

7. Provide deferred action protection for all essential workers³¹ who are undocumented and employed in essential sectors.
 - a. Ensure that all undocumented workers in essential sectors are eligible for employment authorization during the pandemic, including access to UI and healthcare.
 - b. Offer free assistance and waive application fees for undocumented workers during the pandemic.
 - c. Include legalization and a pathway to citizenship for all undocumented workers as part of a program of full immigration reform.
8. Halt raids and deportations.
 - a. Immigration and Customs Enforcement (ICE) continues to detain and deport undocumented immigrants during the pandemic. Although ICE announced that it would not enforce operations near medical facilities,³² current enforcement authorities are still detaining immigrants, thereby inflicting emotional and economic devastation on families during the COVID-19 crisis.

Appendix A: Methodology for SAM Economy-Wide Multisector Multiplier Model

This report was part of a larger collaboration between the UCLA NAID Center and the Mexican Instituto Nacional de Estadística y Geografía. The project was designed to measure the transnational impacts and policy options in a variety of areas, including the impact of the global COVID-19 pandemic and economic response in Mexico and the United States and on diaspora populations in the United States. The project utilized economy-wide simulation models based on data from social accounting matrices (SAMs) that integrate the national income and product accounts with multisector data that capture intermediate input flows as well as macro aggregates. These simulation models include SAM multiplier models, used in this report, and computable general equilibrium (CGE) models. SAM multiplier models are appropriate and useful tools for analysis of the sharp and short-term COVID-19 economic shutdown and macro shocks and of subsequent potential recovery paths, where markets clear by short-term quantity adjustments. The model is designed to trace direct and indirect employment and economy-wide effects across linked industries, sectoral employment, and feedbacks to household incomes. This analysis provides insight into which sectors will be affected and the nature of the direct and indirect impacts that might be expected. Direct impacts on specific industries will have knock-on effects that spread across other industries and through the entire economy. Reduced activity in one sector has consequences both for suppliers of intermediate inputs to that sector, who face lower demand, and for the users of the output of the sector, who face supply disruptions.

We used the SAM multiplier model at different levels of regional aggregation: national (US), state (California) and country (Los Angeles). We generated empirical results for plausible scenarios of the direct impact of shocks to the economy arising from the COVID-19 pandemic. The model provides “what-if” projections for a variety of economic indicators given the specified scenario. The results of scenario analysis are not forecasts of the future but possible outcomes given the assumed shocks. Using a consistent empirical model in this way provides a framework for analysts and supports coherence in policy debates.

Social Accounting Matrix Multiplier Model

A SAM is an accounting framework: a matrix (spreadsheet) showing the receipt/expenditure accounts of industries, households, savings/investments, governments, and global exports and imports. The SAM integrates the input-output accounts with the national income and product accounts or, in UN terms, the system of national accounts (SNA). The SAM shows the flows of goods and services throughout the economy and the corresponding income and expenditures of all economic actors. We use data for the United States, California, and Los Angeles County from IMPLAN, a company that produces SAMs based on US government data.

SAMs show the full circular flow of income in the economy, including the generation of income in production value chains (value added), and also how that income is distributed to households and government (through taxes), providing households with income to buy the

goods and services produced in the economy.³³ The SAM provides a highly disaggregated picture of the economy. In the SAMs for this study, there are 184 production sectors (industries), employing four different types of labor and capital to produce 102 different commodities. The income generated in the production sectors is distributed to 10 different household types (differentiated by income level). The income they receive is used for private consumption expenditure (disaggregated by commodity), savings, transfers, and taxes. Governments receive taxes and make expenditures, including transfers to households. There are also indirect taxes on commodities. Finally, the economy is open, with imports of goods and services adding to domestic supplies and exports and other international transfers adding to demand.

In standard multiplier analysis there are two key assumptions:

- Industries demand inputs in fixed proportions to output; technology and preferences are linear.
- Prices are fixed. Adjustments to shocks work through changes in quantities, not prices.

These assumptions, while strong, are reasonable for analyzing the impact of the COVID-19 pandemic. The shocks we are observing are occurring in weeks or months, not years. In such a short period, it is unlikely that production technologies will change significantly because of the pandemic, nor do we see significant changes in relative prices or wages of employed labor. An alternative modeling approach, CGE, simulates the operation of markets where adjustment works through changes in prices and wages operating smoothly in commodity and factor markets. While CGE models are very useful for considering shocks that work through market mechanisms, that is not what is driving adjustment to shutdown shocks that characterize the policy response to the COVID-19 pandemic. As economies recover, CGE models will be useful to consider how economies and markets will operate in the postcrisis environment.

Methodology for Part 1: Contextualizing Undocumented Worker Contributions to the Local, State, and National Economies

In Part 1, we examined the impacts of COVID-19 on undocumented workers and mixed-status families in Los Angeles County, California, and the United States. We analyzed the pandemic's impacts on employment, income, and taxes by examining undocumented workers in a variety of race and gender categories at the national, state, and county levels.³⁴ California and Los Angeles are ideal state- and county-level case studies not only because they are home to the largest numbers of undocumented immigrants but also because they exemplify the positive contributions of undocumented workers as well as the disproportionate impacts of the COVID-19 crisis on undocumented families and their local economies.

For this study, we used SAM data for Los Angeles County, California, and the United States from IMPLAN 546 and 184 sector aggregation and employment data by race (non-Hispanic White, non-Hispanic Black and non-Hispanic Asian, and Hispanic) and immigration status (foreign-born naturalized and nonnaturalized, including all race categories). Employment and income data by race and immigration status were obtained from the US Census 2018 IPUMS CPS³⁵ data for individuals and households. Undocumented population estimates were

based on nonnaturalized foreign-born counts, expanded from the 15 sector estimates of undocumented individuals provided by the Pew Research Center.³⁶ Undocumented and nonnaturalized classifications included all race categories. Employment and income data for mixed-status households were generated from the IPUMS CPS for 2018 and constructed from the combined presence of all undocumented and documented members from all race categories within households.

Methodology for Estimating Undocumented Employment and Mixed-Status Households

We obtained employment data for foreign-born nonnaturalized civilian workers by industry from IPUMS CPS, ASEC 2019 at the national, state, and county level. We also obtained data from IPUMS CPS, ASEC 2019 for households at the national, state and county level. Our estimates are based on 2019 IPUMS (<https://doi.org/10.18128/D010.V10.0>) and CPS ASEC; Census Bureau (<https://cps.ipums.org/cps/index.shtml>).

We first created a bridge between the Pew Research Center's industry classification and IPUMS's industry classification and aggregated up the employment of foreign-born nonnaturalized civilian workers to Pew's industries. We then assumed a total of 7.8 million undocumented civilian workers and distributed them into our 184-industry SAM database using Pew Research Center's data showing share of unauthorized workers by industries (see item (c) below). We then calculated the ratio of undocumented civilian workers to foreign-born nonnaturalized civilian workers based on Pew's industry structure and used the ratio and the bridge mentioned above to estimate the number of undocumented civilian workers in 184 sectors.

Table 4 Methodology: Estimating Type 1 and 2 Mixed-Status Households

Type 1: Population of all households with at least one foreign-born nonnaturalized civilian worker, based on data reported in IPUMS and CPS ASEC.

Type 2: Population of all households with at least one undocumented worker, based on estimates from:

- a) MPI, <https://www.migrationpolicy.org/content/mixed-status-families-ineligible-pandemic-stimulus-checks#:~:text=Mixed%2DStatus%20Families%20Ineligible%20for%20CARES%20Act%20Federal%20Pandemic%20Stimulus%20Checks,-As%20part%20of&text=The%20CARES%20Act%20also%20makes,the%20entire%20family%20is%20ineligible>
- b) CAP, <https://cdn.americanprogress.org/content/uploads/2017/03/15112450/KeepFamiliesTogether-brief.pdf>; and
- c) Pew, <https://www.pewresearch.org/fact-tank/2019/06/12/5-facts-about-illegal-immigration-in-the-u-s/>.

Methodology for Part 2: Estimating the Impacts of COVID-19 on Employment and Wages for Undocumented Workers and Mixed-Status Families

Part 2 utilized a multisectoral SAM simulation model to analyze the unequal impacts of the COVID-19 shock and conduct a comparative racial and immigrant status analysis.³⁷ Specifically, we analyzed the sectoral and regional differences between the total population, the non-Latinx population, US-born Latinxs, foreign-born Latinxs, and nonnaturalized foreign-born Latinxs. We estimated such data of the undocumented population at the national, state, and county levels.

We applied a SAM simulation model³⁸ methodology in this report because it is the most appropriate for analyzing a “shock” type of economic crisis. Unlike recessions that emerge from macroeconomic imbalances, the COVID-19 crisis is a bottom-up recession characterized by rapid policy and societal behavior changes at the level of households and enterprises. These changes include household stay-at-home regulations, physical distancing to keep at-risk individuals isolated and discourage group activities, and the mandated closing of nonessential businesses to prevent the spread of the disease in contact-intensive workplaces. Modeling a bottom-up recession requires disaggregated data on supply and demand for goods and services, since that is the level at which the shock operates. We considered complex links across sectors, including the demand for intermediate inputs by producers, which can cause any shock to demand and production to reverberate across the economy. For example, a cut in auto demand affects producers of machinery, metals, plastics, electronics, chemicals, and services. The shock is national in scope and impact, therefore requiring economy-wide sectoral analysis.

We developed three SAMs—one for the United States, one for California, and one for Los Angeles County—using detailed input-output tables and separate accounts for the macro actors, aggregating their demand for commodities. This data set supports a SAM multiplier model that traces the impact of any change in commodity demand to resulting changes in industry production, employment, wages, and household income. The model is well suited to analyzing the effects of industry shutdown and household stay-at-home orders.

We modeled three types of shock:

1. Household stay-at-home shock, which produces changes in demand for various commodities by households only
2. Industry shutdown shock, which produces changes in supply for various industries (e.g., nonessential, contact-intensive, and medical) and affects all demand categories (Consumption, Investment, Government spending, and Exports)
3. Macro shock, which produces changes in commodity demand across broad macro aggregates (Consumption, Investment, Government spending, and Exports)

Methodology for Part 3: Estimating the Economic Impacts of Implementing Alternative Recovery and Stagnation Scenarios

In this section, we modeled the economic growth trajectories that would result from implementing policy proposals that either extend benefits to undocumented workers or exclude them. We identified the societal costs of excluding undocumented and mixed-status

families (that include both US citizens and foreign-born nonnaturalized members) compared to policies that include them. We used a SAM multiplier analysis to measure the GDP and net fiscal impacts of various local, state, and federal government programs on California and Los Angeles County. We also used our SAM model to estimate the structure of the economy at the bottom of the GDP and employment crisis (assumed to be in May 2020) as the baseline to analyze alternative scenarios of postshock trajectories.

The SAM model generated alternative scenarios of postshock stagnation and the potential catastrophe of an exclusive policy, such as widespread deportation policies like those that were carried out during the Great Depression. We compared these results to scenarios of economic recovery based on various policies of inclusion regarding access to COVID-19 relief and stimulus programs.

In addition, our SAM multiplier modeling for Los Angeles County and California provided a laboratory for measuring the potential impact of localized policy innovations by allowing us to compare the effects of policies that support undocumented workers and their mixed-status families versus those that do not. Although the funds pledged by Los Angeles County and California are a fraction of the actual need, and hence the potential benefit, they demonstrate how providing support during the crisis can reduce poverty and income and racial disparities while building a foundation for a strong recovery.

Appendix B: Local COVID-19 Relief and Stimulus Packages

On April 14, 2020, Los Angeles mayor Eric Garcetti launched the Angeleno Campaign to provide economic assistance to constituents facing extreme financial hardship.³⁹ The program is supported by donations obtained by the Mayor's Fund for Los Angeles. Qualified applicants receive a prepaid debit card, called the Angeleno Card, that allows families to purchase their most basic needs. Households experiencing deeper economic hardship from the pandemic and fall below the federal income poverty level are eligible to receive Angeleno Cards with amounts ranging from \$700 to \$1,500.⁴⁰ All Los Angeles residents, including undocumented immigrants, are eligible to apply. Although 450,000 individuals applied to the program, only 20,000 Angeleno Cards will be issued.⁴¹

Appendix C: Federal EITC and COVID-19 Stimulus Packages

The federal EITC is a tax rebate offered to filers who have a Social Security number and meet income guidelines. Single, head of household, or widowed status filers must have earned less than \$15,570 or less than \$41,094 with one qualifying child, among other restrictions.⁴² Individuals who qualify can earn up to \$529 without any qualifying children and \$3,526 with one qualifying child.⁴³ The EITC has proven to be effective in lifting families out of poverty by encouraging employment and education, strengthening economic security, and improving child health.⁴⁴

On March 27, 2020, Congress implemented the CARES Act, a \$2 trillion stimulus package that provides financial relief to US workers, businesses, educational institutions, public health facilities, and governments.⁴⁵ However, this stimulus package is offered only to tax filers who have a Social Security number; undocumented workers who file using an ITIN are excluded. Mixed-status families with a member who is an undocumented tax filer, even those including US citizen children and spouses, are also excluded.⁴⁶

On May 15, 2020, the House of Representatives passed the HEROES Act, a \$3 trillion stimulus bill that issues one \$1,200 disbursement to each adult and child, including those in ITIN tax unit households. In addition, the legislation issues payments to ITIN filers retroactively—and these filers also receive the CARES Act first payment. The Institute on Taxation and Economic Policy (ITEP) suggests that about 4.3 million adults and 3.5 million children will benefit from such legislation. The financial impact of extending ITIN filers through the HEROES Act is estimated to be \$9,441,634,000 nationwide. **Table C1** is a condensed version of ITEP’s findings on the economic impact of including ITIN filers in the HEROES Act.⁴⁷

Table C1: Snapshot of ITEP, “Adult and Children in ITIN Households to Benefit from Inclusion in CARES Act (Retroactive) and HEROES Act, by State”

	Adults in ITIN-filer households	Children in ITIN-filer households	Adults and children in ITIN-filer households	Economic impact from retroactive inclusion of ITIN filers in the CARES Act (\$1,200/adult, \$500/child)	Economic impact from inclusion of ITIN filers in the HEROES Act (\$1,200/adult and child)
California	1,286,160	942,190	2,228,350	\$2,014,479,000	\$2,674,010,000
Nationwide	4,352,950	3,515,080	7,868,030	\$6,981,079,000	\$9,441,634,000

Source: Institute on Taxation and Economic Policy analysis, March 2020, using Standard Performance Evaluation Corporation (SPEC) Returns Database for the ITIN market segment for the 2015 tax year and ITEP’s Microsimulation Tax Model. The 2015 data was provided upon special request and represents the most recent year of data available at the time of analysis.

Appendix D: State COVID-19 Relief and Stimulus Packages and CalEITC

On April 15, 2020, California governor Gavin Newsom announced the Disaster Relief Fund, a \$75 million relief package for workers ineligible for UI and the CARES Act.⁴⁸ The legislation aimed to give \$500 to each adult with a cap of \$1,000 per household—benefiting about 150,000 undocumented workers statewide who were impacted by COVID-19.⁴⁹ However, when the program was implemented on May 18, 2020, many families were unable to claim their relief package due to technical difficulties on the application website.⁵⁰

CalEITC is a cashback tax credit that supplements low-income household earnings.⁵¹ Individuals who are 18 years or older, have a qualifying child, earned taxable income, hold a Social Security number, have lived in California for more than 6 months, and earn less than \$30,000 a year are eligible. Families who qualify for CalEITC can also receive the YCTC, another cashback tax credit for families with at least one child under 6 years old.⁵²

In the state budget for 2020–21, Governor Newsom announced the expansion of CalEITC to undocumented filers with a child 5 years old or younger.⁵³ Despite this promising outcome, most undocumented workers who file taxes using an ITIN are still ineligible. These limitations also impact US citizen partners and children in mixed-status families who do not qualify for EITC. In addition, immigrants who may have had a Social Security number but were deprived of DACA (Deferred Action for Childhood Arrivals) or TPS (Temporary Protected Status) do not qualify for CalEITC.⁵⁴

According to the California Budget and Policy Center, the cost-benefit of expanding CalEITC and YCTC is estimated to be \$79 million to \$113 million, considering an estimated 50% uptake rate, and would ultimately benefit 505,000 to 722,000 individuals and 171,000 to 244,000 children.⁵⁵

Further, California assembly member Eloise Reyes proposed a tax incentives bill, AB 1593, in an effort to extend CalEITC to all individuals who file using an ITIN.⁵⁶ The passage of AB 1593 is crucial to ensuring the well-being of families who contribute billions to the California economy.

Appendix E: State Unemployment Insurance Benefits

California has expanded its UI benefits but has failed to include undocumented workers. Officials launched the federal Pandemic Unemployment Assistance (PUA) program to offer financial aid to workers excluded from the CARES Act, such as independent contractors, self-employed workers, and gig economy workers.⁵⁷ PUA still excludes workers⁵⁸ who may not qualify for UI and who are arguably the most vulnerable to economic hardship.

Undocumented workers are not eligible for UI. The California Employment Development Department (EDD) has declared that because these individuals legally cannot work, they do not fit the EDD's criteria for being "available for work."⁵⁹ As a result, undocumented workers are less likely to recover economically as quickly as those who qualify for UI.

Notes

¹ Raul Hinojosa-Ojeda (UCLA North American Integration and Development [NAID] Center), Sherman Robinson (Peterson Institute for International Economics), Jiahui Zhang (NAID), Marcelo Pleitez (NAID), Julie Aguilar (Latino Policy and Politics Initiative), Valentin Solis (Instituto Nacional de Estadística y Geografía), Edward Telles (University of California, Irvine), and Abel Valenzuela (University of California, Los Angeles, Institute for Research on Labor and Employment).

² Remittances to Mexico fell by nearly 30% in April and May of 2020 following the rise in immigrant unemployment in the United States. Banco de Mexico reports the following amount of remittances: \$4.007 million for March, \$2.861 million for April, and \$3.379 million for May. See “Revenues by Workers’ Remittances—(CE81),” Banco de Mexico, accessed July 13, 2020, <https://www.banxico.org.mx/SielInternet/consultarDirectorioInternetAction.do?accion=consultarCuadro&idCuadro=CE81&locale=en>.

³ Section 191203 of the HEROES Act, introduced by House Democrats, grants deferred action and employment authorization to undocumented immigrants who are removable from the United States and who were working on January 27, 2020 (and continue to work) in “essential critical infrastructure labor or services.” Italy has already implemented a version of this policy approach. See Chris Livesay, “Coronavirus Crisis Sees Italy Plan to Grant 500,000 Undocumented Migrants Work Permits,” *CBS News*, May 14, 2020, <https://www.cbsnews.com/news/coronavirus-italy-giving-work-permits-undocumented-migrant-farm-care-workers/>. Senator Marco Rubio of Florida is considering a similar initiative. See Joseph Zelballos-Roig, “A New GOP Bill Unveiled by Marco Rubio Would Give Stimulus Checks to Families with Unauthorized Immigrants That Were Left Out of the Initial Wave,” *Business Insider*, June 26, 2020, <https://www.businessinsider.com/gop-bill-marco-rubio-stimulus-checks-families-unauthorized-immigrants-2020-6>.

⁴ The term *mixed-status families* refers to households that include US citizens or Lawful Permanent Residents and at least one undocumented individual.

⁵ See <https://www.cisa.gov/identifying-critical-infrastructure-during-covid-19>.

⁶ Lissandra Villa, “We’re Ignored Completely.’ Amid the Pandemic, Undocumented Immigrants Are Essential but Exposed,” *Time*, April 17, 2020, <https://time.com/5823491/undocumented-immigrants-essential-coronavirus/>.

⁷ Nearly 50% of these workers are in the Food and Agriculture sector and in Residential and Shelter Facilities and Services. In general, they are in the highest percentage that cannot work remotely at home. See Elsie Gould and Heidi Shierholz, “Not Everybody Can Work from Home: Black and Hispanic Workers Are Much Less Likely to Be Able to Telework,” Economic Policy Institute, March 19, 2020, <https://www.epi.org/blog/black-and-hispanic-workers-are-much-less-likely-to-be-able-to-work-from-home/>.

⁸ Rong-Gong Lin II, “California Latino, Black Residents Hit Even Harder by Coronavirus as White People See Less Danger,” *Los Angeles Times*, June 27, 2020, <https://www.latimes.com/california/story/2020-06-27/california-latinos-black-people-hit-even-harder-by-coronavirus>.

⁹ On April 20, 2020, Donald Trump tweeted, “In light of the attack from the Invisible Enemy, as well as the need to protect the jobs of our GREAT American Citizens, I will be signing an Executive Order to temporarily suspend immigration into the United States!”

¹⁰ For more information, see Congressional Research Service, “COVID-19 and Direct Payments to Individuals: Summary of the 2020 Recovery Rebates in the CARES Act (S. 3548),” March 20, 2020, <https://crsreports.congress.gov/product/pdf/IN/IN11262>.

¹¹ Nicole Narea, “Immigrants Were Largely Overlooked in the US’s Coronavirus Response. The Latest Relief Bill Aims to Fix That,” *Vox*, May 15, 2020, https://www.vox.com/2020/5/15/21257361/heroes-act-coronavirus-bill-immigrants?fbclid=IwAR3QSpFcGtjyJ5S4rwpGHB2JNU8ZsUFA6QrDCREqEzsm-qb_va1Y9dMIYL.

¹² Sara Kimberlin, “CalEITC/Young Child Tax Credit (YCTC) Expansion Proposals 2019–20—Cost Benefit Estimates,” California Budget and Policy Center, September 26, 2019, <https://drive.google.com/file/d/1zxFlbHOa7Lo4N1K2srIFnabcPuVKQDrR/view>.

¹³ Randy Capps, Jeanne Batalova, and Julia Gelatt, “COVID-19 and Unemployment: Assessing the Early Fallout for Immigrants and Other US Workers,” Migration Policy Institute, June 2020, <https://www.migrationpolicy.org/research/covid-19-unemployment-immigrants-other-us-workers>.

¹⁴ Capps, Batalova, and Gelatt, "COVID-19 and Unemployment."

¹⁵ Rebecca Smith, "Immigrant Workers' Eligibility for Unemployment Insurance," National Employment Law Project, March 31, 2020, <https://www.nelp.org/publication/immigrant-workers-eligibility-unemployment-insurance/>.

¹⁶ Paul Ong, Chhandara Pech, Silvia Gonzalez, Sonja Diaz, Jonathan Ong, Elena Ong, and Julie Aguilar, "Jobless during a Global Pandemic: The Disparate Impact of COVID-19 on Workers of Color in the World's Fifth Largest Economy," UCLA Center for Neighborhood Knowledge, Ong & Associates, and UCLA Latino Policy and Politics Initiative, June 11, 2020, <https://latino.ucla.edu/research/jobless-during-a-global-pandemic-the-disparate-impact-of-covid-19-on-workers-of-color-in-the-worlds-fifth-largest-economy/>.

¹⁷ While other research institutions have done surveys of Latinxs on how they have been impacted by the current economic crisis, this paper is constructed from detailed sectoral employment and shock analysis. See Latino Decisions, "First National Poll of Latinos in 2020 Finds 35% of Households Have Experienced a Layoff as a Result of COVID-19," April 20, 2020, <https://latinodecisions.com/blog/first-national-poll-of-latinos-in-2020-finds-35-of-households-have-experienced-a-layoff-as-a-result-of-covid-19/>. Also see Mark Lopez, Lee Rainie, and Abby Budiman, "Financial and Health Impacts of COVID-19 Vary Widely by Race and Ethnicity," Pew Research Center, May 5, 2020, <https://www.pewresearch.org/fact-tank/2020/05/05/financial-and-health-impacts-of-covid-19-vary-widely-by-race-and-ethnicity/>.

¹⁸ Christopher C. Krebs, "Advisory Memorandum on Identification of Essential Critical Infrastructure Workers during COVID-19 Response," US Department of Homeland Security, Cybersecurity and Infrastructure Security Agency, April 17, 2020, https://www.cisa.gov/sites/default/files/publications/Version_3.0_CISA_Guidance_on_Essential_Critical_Infrastructure_Workers_3.pdf.

¹⁹ This report analyzes the essential industries defined by DHS CISA, <https://www.cisa.gov/identifying-critical-infrastructure-during-covid-19>.

²⁰ Determined using IMPLAN employment multiplier coefficients.

²¹ GDP and employment figures were calibrated with results consistent with estimates by Mark Zandi and Cristian deRitis, "COVID-19 Economic Forecast Scenarios: The Shape of the Coming Recovery," Moody's Analytics, June 2020, <https://www.moodyanalytics.com/webinars-on-demand/2020/covid-19-economic-forecast-scenarios-shape-of-the-recovery>; and Jason Furman, "Prepared Testimony on 'The Unemployment Pandemic: Addressing America's Jobs Crisis,'" Before the US Congress Select Subcommittee on the Coronavirus Crisis, June 16, 2020, <https://www.piie.com/system/files/documents/2020-06-18-furman-testimony-pandemic-unemployment.pdf>.

²² See Nicole Narea, "Trump Is Continuing Deportations during the Pandemic. It's Causing the Coronavirus to Spread," *Vox*, May 12, 2020, <https://www.vox.com/2020/5/12/21250540/coronavirus-immigration-limits-trump-deportations-guatemala-honduras>; and Eddie Bejarano, "Anti-Immigrant Movement Has History of Politicizing Disease," Southern Poverty Law Center, April 21, 2020, <https://www.splcenter.org/hatewatch/2020/04/21/anti-immigrant-movement-has-history-politicizing-disease>.

²³ Raul Hinojosa-Ojeda, Sherman Robinson, and Karen Theirfelder, "Before and after NAFTA: How Are Trade and Migration Policy Options Changing?," in *The Trump Paradox: Migration, Trade, and Racial Politics in US-Mexico Relations*, ed. Raul Hinojosa-Ojeda and Edward Telles, chapter 9 (Berkeley: University of California Press, forthcoming).

²⁴ CIR provides a path to naturalization for undocumented immigrants. See Raul Hinojosa-Ojeda, "Raising the Floor for American Workers," Center for American Progress, January 7, 2010, <https://www.americanprogress.org/issues/immigration/reports/2010/01/07/7187/raising-the-floor-for-american-workers/>.

²⁵ Congressional Budget Office, "S.744, Border Security, Economic Opportunity, and Immigration Modernization Act," June 18, 2013, <https://www.cbo.gov/publication/44225>.

²⁶ "Angeleno Campaign: Frequently Asked Questions," Mayor's Fund for Los Angeles website, accessed August 7, 2020, <https://mayorsfundla.org/angeleno/angeleno-campaign-frequently-asked-questions/>.

²⁷ Kerry Crowley, “California Closes Disaster Relief Assistance Applications for Undocumented Immigrants,” *The Mercury News*, June 30, 2020, <https://www.mercurynews.com/2020/06/30/coronavirus-california-closes-disaster-relief-assistance-applications-for-undocumented-immigrants/>.

²⁸ Kimberlin, “CalEITC/Young Child.”

²⁹ For more information, see Abraham Hoffman, *Unwanted Mexican Americans in the Great Depression: Repatriation Pressures, 1929–1939* (Tucson: University of Arizona Press, 1974); and Francisco E. Balderrama and Raymond Rodriguez, *Decade of Betrayal: Mexican Repatriation in the 1930s* (Albuquerque: University of New Mexico Press, 2006).

³⁰ Immigrant Legal Resource Center, “Public Charge,” accessed June 28, 2020, <https://www.ilrc.org/public-charge>. Although public-charge rules do not apply to COVID-19 testing and care, immigrants may still be fearful of immigration consequences and forgo COVID-19 testing or treatment.

³¹ This report refers to the essential sectors defined by DHS CISA: <https://www.cisa.gov/identifying-critical-infrastructure-during-covid-19>.

³² US Immigration and Customs Enforcement, “Updated ICE statement on COVID-19,” March 18, 2020, <https://www.ice.gov/news/releases/updated-ice-statement-covid-19#wcm-survey-target-id>.

³³ SAM multiplier models are described in detail in Ronald E. Miller and Peter D. Blair, “Social Accounting Matrices,” in *Input-Output Analysis: Foundations and Extensions*, 2nd ed., (Cambridge: Cambridge University Press, 2009), 499–541.

³⁴ Our analysis examines non-Latinx White, Latinx, Black, Asian, and Latinx foreign-born nonnaturalized and undocumented populations. We also present results by gender and various skill categories that are not reported here.

³⁵ Public Use Micro Sample of the Current Population Survey of the US Census.

³⁶ See Jeffrey S. Passel and D’Vera Cohn, “Industries of Unauthorized Immigrant Workers,” Pew Research Center, November 3, 2016, <https://www.pewresearch.org/hispanic/2016/11/03/industries-of-unauthorized-immigrant-workers/>.

³⁷ Recent applications of SAM multiplier to analysis of COVID-19 shocks include Yumei Zhang, Xinshen Diao, Kevin Z. Chen, Sherman Robinson, and Shenngen Fan, “Impact of COVID-19 on China’s Macroeconomy and Agri-Food System: An Economy-wide Multiplier Model Analysis,” *China Agricultural Economic Review* (forthcoming).

³⁸ We use two SAM modeling methodologies: a standard IMPAN 540 sector and a 180 sector SAM, the latter built by the authors in conjunction with a US-Mexico project. This report is part of a larger collaboration between the UCLA North American Integration and Development Center and the Mexican Instituto Nacional de Estadística Geografía. The project is designed to measure the transnational impacts and policy options in a variety of areas, including the impact of the global COVID-19 crisis in Mexico and the United States and on diaspora populations in the United States.

³⁹ “Angeleno Campaign: Frequently Asked Questions,” Mayor’s Fund for Los Angeles, accessed May 26, 2020, <https://mayorsfundla.org/angeleno/angeleno-campaign-frequently-asked-questions/>.

⁴⁰ “Garcetti Announces Prepaid Debit Card Program for Low Income Angelenos Struggling In Wake of Coronavirus Pandemic,” *CBS Los Angeles News*, April 13, 2020, <https://losangeles.cbslocal.com/2020/04/13/coronavirus-los-angeles-garcetti-prepaid-debit-card-low-income-families/>.

⁴¹ “LA Mayor’s ‘Angeleno Card’ Program Glitch Frustrates Applicants,” *CBS Los Angeles News*, May 6, 2020, <https://losangeles.cbslocal.com/2020/05/06/goldstein-investigation-la-mayors-angeleno-card-program-plagued-by-name-mix-ups-glitches/>.

⁴² Internal Revenue Service, “Do I Qualify for the EITC?,” accessed May 20, 2020, <https://www.irs.gov/credits-deductions/individuals/earned-income-tax-credit/do-i-qualify-for-earned-income-tax-credit-eitc>.

⁴³ Internal Revenue Service.

⁴⁴ “CALEITC: Eligibility for Working Immigrant Tax-Filers,” California Immigrant Policy Center, April 2019, <https://caimmigrant.org/wp-content/uploads/2019/09/EITC-Fact-Sheet-2.pdf>.

⁴⁵ Kelsey Snell, “What’s Inside the Senate’s \$2 Trillion Coronavirus Aid Package,” *NPR*, March 26, 2020, <https://www.npr.org/2020/03/26/821457551/whats-inside-the-senate-s-2-trillion-coronavirus-aid-package>.

⁴⁶ Marisa Peñaloza, "Lawsuit Alleges CARES Act Excludes US Citizen Children of Undocumented Immigrants," *NPR*, May 5, 2020, <https://www.npr.org/2020/05/05/850770390/lawsuit-alleges-cares-act-excludes-u-s-citizen-children-of-undocumented-immigrants>.

⁴⁷ Institute on Taxation and Economic Policy, "Analysis: How the HEROES Act Would Reach ITIN Filers," May 14, 2020, <https://itep.org/analysis-how-the-heroes-act-would-reach-itin-filers/>.

⁴⁸ "Governor Newsom Announces New Initiatives to Support California Workers Impacted by COVID-19," Office of Governor Gavin Newsom, April 15, 2020, <https://www.gov.ca.gov/2020/04/15/governor-newsom-announces-new-initiatives-to-support-california-workers-impacted-by-covid-19/>.

⁴⁹ Edward Orozco Flores, Ana Padilla, Karina Juarez, and Rabia Qaiser, "Massive Job Losses among Non-Citizens in California and the US," Community and Labor Center at the University of California, Merced, May 2020, https://ssha.ucmerced.edu/sites/ssha.ucmerced.edu/files/documents/massive_job_losses.pdf.

⁵⁰ Flores et al.

⁵¹ "CALEITC: Eligibility for Working Immigrant Tax-Filers," California Immigrant Policy Center, February 2020, <https://caimmigrant.org/wp-content/uploads/2020/02/20200200-CALEITC-FACT-SHEET-R3.pdf>.

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⁵³ Governor Gavin Newsom, "California State Budget 2020-21," State of California, accessed July 9, 2020, <http://www.ebudget.ca.gov/FullBudgetSummary.pdf>.

⁵⁴ Jacqueline Garcia and Jackie Botts, "'We Live Paycheck to Paycheck': Undocumented Workers Struggle as Economy Grinds to a Halt," *Cal Matters*, March 24, 2020, <https://calmatters.org/california-divide/2020/03/california-undocumented-workers-struggle-economy-coronavirus/>.

⁵⁵ Kimberlin, "CALEITC/Young Child."

⁵⁶ "CALEITC: Eligibility for Working Immigrant Tax-Filers," California Immigrant Policy Center. See also California Legislature, *AB-1593 Personal Income Taxes: Earned Income Credit*, no.1593, 2019–2020 Regular Session, introduced in Assembly April 1, 2019, https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB1593.

⁵⁷ Summer Lin, "Who's Eligible for Unemployment Benefits in California and How to File for Them." *Sacramento Bee*, April 16, 2020, <https://www.sacbee.com/news/coronavirus/article242063431.html>.

⁵⁸ Michael Finney, "California PUA: Self-employed, Freelance, and Gig Economy Workers Can Apply for Unemployment Benefits Starting Today," *ABC News*, April 28, 2020, <https://abc7news.com/pua-unemployment-california-pandemic-assistance-edd-application/6134981/>.

⁵⁹ Legal Aid at Work, "Employment Rights of Undocumented Workers," accessed July 9, 2020, <https://legalaidthatwork.org/factsheet/undocumented-workers-employment-rights/>.