



COVID-19 and the Economically Vulnerable Populations in Hawaii

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Introduction

COVID-19 (formally, coronavirus disease 2019) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease has a particularly deadly combination of ease of transmission and mortality rates, leading Governor Ige to issue an emergency proclamation on March 4, 2020 to protect the health and safety of Hawai'i's citizens and mitigate damages caused by COVID-19. Since then, the Governor has issued 8 supplemental proclamations including ordering residents to stay home (effective March 25), all people arriving in the state to self-quarantine for 14 days (effective March 26), and all interisland travelers to self-quarantine for 14-days (effective April 1). These orders have led to concerns about a recession, as demand is weakened, particularly in the tourism sector and sectors that promote larger social gatherings or personal close contact.

According to a report from the Brookings Institution, the Kahului-Lahaina-Wailuku metro area has the second highest share of jobs in industries at high risk from COVID-19 and Urban Honolulu is ranked 21st.¹ Further, recent analyses of the economic impacts of COVID-19 and related quarantine policies have pointed to particularly vulnerable workers and people, including in a recent survey done by the Economic Research Organization at the University of Hawaii (UHERO) and Chamber of Commerce Hawaii.² Accordingly, the purpose of this report is to consider who might be economically vulnerable to COVID-19 and take a look at how many in Hawaii fall into these vulnerable populations. These people could be more likely to lose their jobs, or losing their job could be particularly harmful to their well-being, for example. The data come from the American Community Survey (ACS) 2014-2018 5-year sample.

Vulnerable Workers

There are clear links between social distancing and decreased demand for particular occupations and industries. Even more so, the requirement to self-quarantine for 14 days after arriving in Hawaii has severely depressed the tourism sector.

Accordingly, the broad occupation categories that are considered vulnerable for this report are sales; food preparation and serving; transportation and material moving; personal care and services; education, training, and library; and arts, design, entertainment, sports, and media.³ The first three occupation categories are in the top 5 of occupation categories with regards to number of workers, and personal care and services is ninth. About 213,000 workers, just under 40% of the private and self-employed workforce, are economically vulnerable because they work in a vulnerable occupation (see Table 1).

¹ See Muro, Maxim, and Whiton, 2020. "The places a COVID-19 recession will likely hit hardest." Available at <https://www.brookings.edu/blog/the-avenue/2020/03/17/the-places-a-covid-19-recession-will-likely-hit-hardest/>.

² See Garboden, 2020. "COVID-19's uneven impact of business and workers: results from a UHERO-Chamber of Commerce Hawaii survey." Available at <https://uhero.hawaii.edu/covid-19s-uneven-impact-on-businesses-and-workers-results-from-a-uhero-chamber-of-commerce-hawaii-survey/>.

³ While transportation and material moving occupations are in a high-risk industry, the survey from UHERO and the Chamber of Commerce Hawaii suggest that the transportation industry has not been particularly affected. Conversely, educational services is not considered a high-risk industry, but the UHERO survey finds that the educational services industry was one of the more affected industries.

Table 1. Economically Vulnerable Workers, Vulnerable Occupations

Occupation	Number of workers	Percentage of workforce
Sales and related	71,697	13.3%
Food preparation and serving	55,341	10.3%
Transportation and material moving	42,018	7.8%
Personal care and services	18,253	3.4%
Education, training, and library	14,057	2.6%
Arts, design, entertainment, sports, and media	12,138	2.3%
<i>Total</i>	<i>213,504</i>	<i>39.6%</i>

Source: Estimates based on U.S. Census Bureau, American Community Survey 2014-2018 5-year PUMS

Note: The average number of private and self-employed workers during the 2014-2018 period was 539,066.

The industries that are considered vulnerable are primarily related to the tourism sector: retail trade; food services; accommodation; other services; transportation and warehousing; educational services; and arts, entertainment, and recreation.⁴ The first two industries are among the top three industries with regards to number of workers. Table 2 shows the number and percentage of the private and self-employed workforce that works in these vulnerable industries. Just under 263,000 workers, or half of the private and self-employed workforce, are economically vulnerable because they work in a vulnerable industry. Note that many of the workers who are economically vulnerable because they work in a vulnerable occupation also are economically vulnerable because they work in a vulnerable occupation.

Table 2. Economically Vulnerable Workers, Vulnerable Industries

Industry	Number of workers	Percentage of workforce
Retail trade	73,770	13.7%
Food services	57,597	10.7%
Accommodations	37,575	7.0%
Other services except public administration	30,271	5.5%
Transportation and warehousing	29,603	5.6%
Educational services	19,653	3.6%
Arts, entertainment, and recreation	14,237	2.6%
<i>Total</i>	<i>262,706</i>	<i>48.7%</i>

Source: Estimates based on U.S. Census Bureau, American Community Survey 2014-2018 5-year PUMS

Note: The average number of private and self-employed workers during the 2014-2018 period was 539,066.

⁴ In the Brookings Institution analysis of high-risk industries, extraction (mining) is considered a high-risk industry, but there are few extraction jobs in Hawaii. While transportation and material moving is considered a high-risk industry, the survey from UHERO and the Chamber of Commerce Hawaii suggest that the transportation industry has not been particularly affected. Conversely, educational services is not considered a high-risk industry, but the UHERO survey finds that the educational services industry was one of the more affected industries.

Then there are also workers who are economically vulnerable due to their characteristics. For example, in the short run, part-time workers might be more readily laid off, regardless of whether they are in a vulnerable occupation/industry or not. Further, there are workers who might not be more likely to be laid off, but if they are laid off, they would face additional economic difficulties. For instance, low-wage-earners might not earn enough to build up an emergency fund, so self-sufficiency might be more difficult for those who are laid off. Likewise, self-employed workers are not generally eligible for unemployment insurance, so those who do not have sufficient savings might have limited income replacement options.⁵ Then, there are workers who are exposed to both types of vulnerabilities; younger workers might be more readily laid off due to their limited work experience and being unemployed at a young age can severely decrease career earnings. As government jobs might have processes that inhibits laying off employees, the below analysis focuses on employees of private companies and private organizations, and self-employed workers.

Table 3 shows the percentage of workers who fall into a vulnerable category among all workers. Younger workers are defined as workers 24 years old or younger. Part-time workers are those who work less than 20 hours, following Hawaii’s laws about employer-provided health insurance. Low-wage workers are workers who earn less than \$16.32 per hour, following the common definition of two-thirds the median wage of full-time, full-year workers aged 18-64.⁶ This report enhances this common definition of low-wage following the Brookings Institution, by excluding graduate or professional students, self-employed workers, and females.⁷

Table 3. Economically Vulnerable Worker, Worker Characteristic

Worker Characteristic: Vulnerable Category	Number of workers	Percentage of workforce
Young	65,473	12.1%
Part-time	38,721	7.2%
Low-wage	139,136	25.8%
Self-employed	71,742	13.3%
<i>Total (net)</i>	<i>255,964</i>	<i>47.5%</i>

Source: Estimates based on U.S. Census Bureau, American Community Survey 2014-2018 5-year PUMS
 Note: The average number of private and self-employed workers during the 2014-2018 period was 539,066.

⁵ The CARES Act gives states the option of extending unemployment compensation to independent contractors and other workers who are ordinarily ineligible for unemployment benefits, and Hawaii has extended unemployment benefits to cover these workers. However, to qualify, the worker must have been denied regular unemployment benefits. This means the time it takes to receive these extended unemployment benefits could take longer than it would take for regular unemployment benefits. Thus, self-employed workers with limited savings could still be vulnerable in unemployment.

⁶ Wages are calculated based on wage income earned, usual hours worked per week, and weeks worked. Reporting errors can lead to unrealistically low calculated wages, thus wages of less than \$9 are not considered “low-wage”.

⁷ See Ross and Batemen, 2019. “Meet the low-wage workforce.” Available at https://www.brookings.edu/wp-content/uploads/2019/11/201911_Brookings-Metro_low-wage-workforce_Ross-Bateman.pdf#page=5.

Just under half (47.5%) of all workers has at least one characteristic that falls into a vulnerable category, making them economically vulnerable. The vulnerable category with the highest percentage of workers is low wage (over a quarter of workers), followed by self-employed.

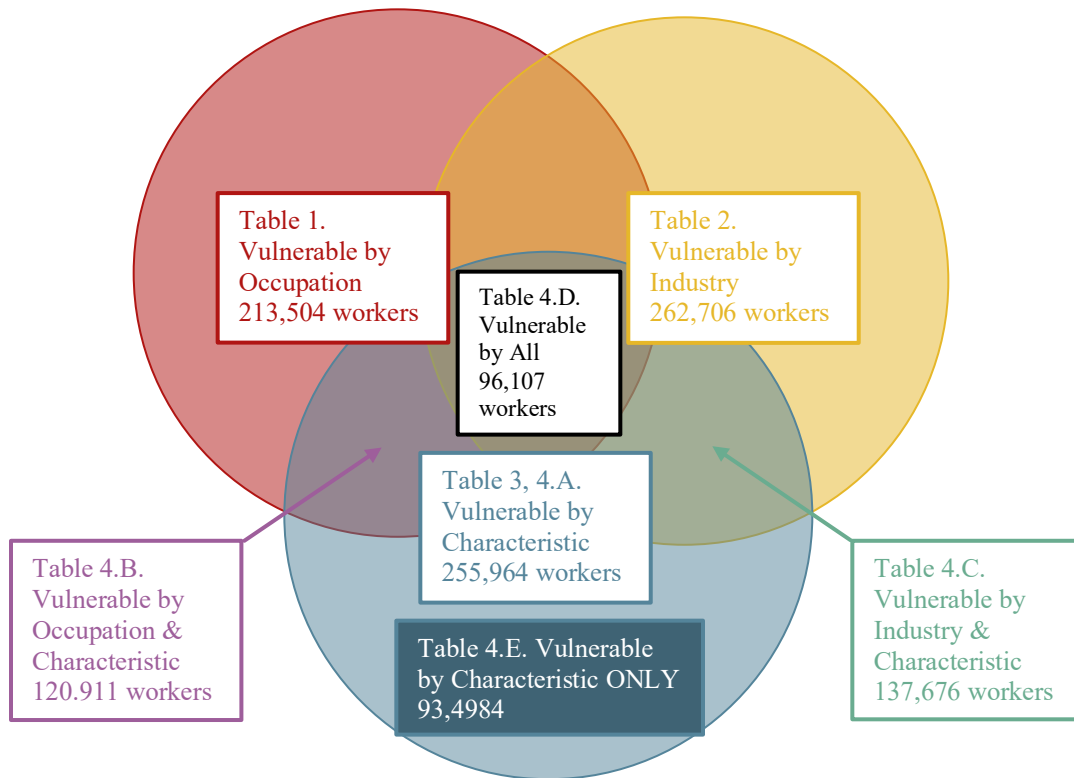
Workers can be particularly vulnerable: they have a characteristic that falls into a vulnerable category and they work in a vulnerable occupation/industry. Not only is there decreased demand for their job, but these particularly vulnerable workers are likely the first to be laid off or face additional economic difficulties if they are laid off. Table 4 combines the previous 3 tables to show how many of these particularly vulnerable workers there are. It also shows how the vulnerable occupations and industries differ with regards to their worker characteristics. Figure 1 shows how the different vulnerabilities and tables interact with each other.

Table 4. Vulnerable Workers, by Occupation, Industry, and Worker Characteristic

	Number of workers	Worker characteristics: % in vulnerable category				
		Young	Part-time	Low wage	Self-employed	All types (net)
A. All private sector, including self-employed	539,066	12.1%	7.2%	25.8%	13.3%	47.5%
B. Vulnerable occupations	213,504	19.1%	9.8%	31.5%	12.2%	56.6%
Sales & related	71,697	18.0%	8.2%	28.8%	14.9%	55.0%
Food preparation and serving	55,341	27.0%	8.8%	39.0%	2.0%	58.6%
Transportation & material moving	42,018	14.1%	6.0%	34.3%	6.6%	50.8%
Personal care & services	18,253	18.8%	15.2%	30.0%	27.5%	71.3%
Education, training, & library	14,057	14.2%	16.0%	22.9%	8.6%	46.6%
Arts, design, entertainment, sports, media	12,138	12.4%	21.6%	15.9%	43.2%	67.0%
C. Vulnerable industries	262,706	17.2%	9.1%	31.1%	9.6%	52.4%
Retail trade	73,770	18.7%	7.2%	35.9%	7.7%	55.3%
Food services	57,597	27.5%	11.0%	39.6%	5.2%	64.8%
Accommodations	37,575	5.3%	2.2%	24.7%	1.0%	30.4%
Other services except pub. admin.	30,271	7.9%	2.9%	25.1%	10.4%	40.8%
Transportation & warehousing	29,603	7.9%	11.5%	20.7%	26.5%	58.2%
Educational services	19,653	16.6%	20.8%	26.6%	8.3%	46.4%
Arts, entertainment, & recreation	14,237	17.8%	21.2%	25.8%	24.3%	66.3%
D. Vulnerable occupation and vulnerable industry	166,269	21.5%	10.5%	33.5%	9.6%	57.8%
E. By characteristics only: Neither vulnerable occupation nor vulnerable industry	229,125	6.6%	4.9%	20.1%	15.8%	40.8%

Source: Estimates based on U.S. Census Bureau, American Community Survey 2014-2018 5-year PUMS

Figure 1. Vulnerable Workers



Over a quarter of private and self-employed workers in Hawaii are particularly vulnerable. While less than half of workers are in a vulnerable occupation or vulnerable industry, and fewer than half of workers fall into a vulnerable category, there are a higher percentage of younger, part-time, or low-wage workers in vulnerable occupations and industries, compared to all workers.

Within the specific vulnerable occupations and vulnerable industries, there are differences in how many workers there are in the vulnerable categories. For example, in personal care and services occupations, the vulnerable categories are relatively evenly distributed. In contrast, in food preparation and serving occupations, there are relatively few part-time workers and self-employed workers. For vulnerable industries, the workers are relatively evenly distributed among the vulnerable categories in the arts, entertainment, and recreation industry, while accommodations has barely any part-time or self-employed workers.

The food services industry and food preparation and service occupations have the highest percentage of younger workers, with over a quarter of workers being less than 25 years old. No occupations have disproportionately fewer younger workers, but less than one in 10 workers in the accommodations, other services except public administration, and transportation and warehousing industries are younger than 25. Part-time workers are relatively prevalent in arts and entertainment, as well as educational service and relatively rare in the accommodation and other services except public administration industries. Food preparation and serving occupations and the food services industry have almost 40% of its workers considered low-pay, compared to around 15% for arts, design, entertainment, and sports occupations. Among vulnerable industries, all industries have around 25% or higher low-wage workers except for transportation

and warehousing. The percentage of self-employed workers is pretty spread out; there are some occupations and industries with very few self-employed workers, like accommodations (1%), whereas almost half of arts, design, entertain, and sports occupations are self-employed.

Vulnerable Households

Looking beyond workers, some people are likely to feel harder economic impacts from a (COVID-19-enduced) recession. Those with housing costs that exceed 30% of household income are considered “housing-cost burdened” and are generally at high risk if there is any sort of loss in income, whether it be due to being laid off or due to a reduction in hours. Low-income households in general are at risk if there is any loss of income; for the purposes of this report, “low-income” is defined as households who are eligible for the Low-Income Housing Tax Credit (LIHTC).⁸ Single-parent households will face barriers to work if schools remain closed for an extended period of time. Single-parent households are households where the only relatives to the head of household are children. This definition could undercount the number of vulnerable households; younger single parents who have a younger sibling in the household they must also care for are not included in this definition. Table 5 presents the number and percentage of households who are vulnerable do to having high housing costs by household size; Table 6 presents the number and percentage of households who are low-income or single-parent by household size.

Table 5. Vulnerable Households Due to High Housing Cost

Household type	Renter occupied			Owner occupied		
	Number of renter-occupied household	Gross rent >30% of household income		Number of owner-occupied household	Owner costs >30% of household income	
		Number	% of renter occupied		Number	% of owner occupied
All households	193,861	104,548	53.8%	262,923	73,972	28.4%
1-person household	55,379	35,264	63.7%	55,346	24,308	43.9%
2-4 person household	111,932	57,096	51.0%	167,194	43,156	25.8%
5+ person household	26,550	12,188	45.9%	40,383	7,534	18.7%

Source: Estimates based on U.S. Census Bureau, American Community Survey 2014-2018 5-year PUMS

⁸ In general, 80% of area median income (AMI) relative to household size is the cut-off for the LIHTC. However, in areas with high housing costs, the household income cutoff can be adjusted. For Hawaii, the cutoff exceeds 80% of AMI. The income cutoff comes from the Hawaii Community Development Authority (see <https://dbedt.hawaii.gov/hcda/annual-ami-stats/>)

Table 6. Other Vulnerable Households

Household type	Number of households	Low-income household		Single-parent household ¹	
		Number	%	number	%
All households	456,784	209,310	45.8%	14,693	3.2%
1-person household	110,725	75,512	68.2%	-	-
2-4 person household	279,126	109,021	39.1%	13,622	4.9%
5+ person household	66,933	24,777	37.6%	1,071	1.6%

Source: Estimates based on U.S. Census Bureau, American Community Survey 2014-2018 5-year PUMS

¹ “Single-parent” includes married parents whose spouse is absent from the household.

Over half of renter-occupied households have gross rent exceeding 30% of their household income. This is driven primarily by the 63.7% of single-person households with gross rent exceeding 30% of income. In contrast, just over a quarter of owner-occupied households have owner costs exceed 30% of household income. The lower percentage of owner-occupied households with a housing burden compared to renter-occupied households is due in part to the owner-occupied households that own their houses free and clear. Renters, for the most part, must pay rent (around 5% of renters do not pay rent), while a third of owner-occupied households do not have mortgage payments. High housing costs is more prevalent among smaller households.

For other vulnerable households, a little less than half of all households are considered low-income, again driven primarily by the high percentage (68.2%) of single-person households with low household income. Meanwhile, there are not many single-parent households according to this reports’ definition; only about 5% of 2-4 person households are single-parent households, and overall, there are less than 15,000 single-parent households in the state.