

An Economic Analysis of Hawaii's Labor Market

Hawaii

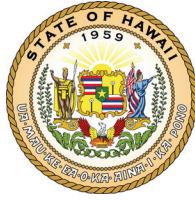
**Labor
Market
Dynamics**

2021

September 2022



STATE OF HAWAII
**Department of Labor
and Industrial Relations**



State of Hawaii
David Y. Ige, Governor

Department of Labor and Industrial Relations

Anne Perreira-Eustaquio, Director

JoAnn Vidinhar, Deputy Director

Workforce Development Division

Maricar Pilotin-Freitas, Administrator

Jarret Yip, Program Officer

Jeri Arucan, Research Statistician

830 Punchbowl Street, Room 329

Honolulu, HI 96813

Phone: 808-586-5577

Email: dlir.workforce.develop@hawaii.gov



The report is available at:

<https://www.hirenethawaii.com/admin/gsipub/htmlarea/uploads/HawaiiLaborMarketDynamics2021.pdf>

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Executive Summary

The Hawaii Labor Market Dynamics report analyzes economic and labor market conditions as it recovers from the COVID pandemic in 2021 along with the trends over the past decade. Some data for 2022 is included if available for the purposes of tracking the recovery.

- Hawaii's real gross domestic product (GDP) increased by 4.6 percent over-the-year to \$73.9 billion in 2021. Accommodation and food services experienced the fastest over-the-year growth as tourism rebounded from the pandemic.
- The population contracted by 0.7 percent over the past year to 1,441,553 in 2021, marking the third straight year of declines. Most of the outmigration occurred on Oahu, but Maui also experienced a small dip.
- The civilian labor force expanded by 0.9 percent to 668,400 in 2021, ending three consecutive years of declines. Between 2011 and 2021 Hawaii's labor force increased by 1.2 percent, while the U.S. grew four times as fast at a 4.9 percent rate. Hawaii's counties, except for Kauai, experienced an increase in labor force over the year. Coinciding with the increase in labor force is the higher labor force participation rate which rose to 59.8 percent in 2021. Over the decade, Hawaii's participation rate was down 2.8 percentage points, but the nation's deficit was almost a full percentage higher at 3.7 percent.
- The unemployment rate averaged 5.7 percent in 2021, down 6.3 percentage points from the record high of 12 percent in 2020. Comparatively, the U.S. rate was 5.3 percent in 2021. Kauai and Maui Counties suffered the highest rates of joblessness over seven percent, while Honolulu and Hawaii Counties fared the best with rates in the five-point range. In 2022, Hawaii's jobless ratio began to ease slightly before rising to 4.2 percent in June, while the U.S. rate remained stable at 3.6 percent.
- In 2021 the average number of Unemployment Insurance (UI) initial claims per week was around 2,700, a drop of nearly 68 percent from 2020. Weekly UI claims averaged about 16,400 in 2021, over 77 percent fewer than in 2020. As the economy continued to recover in 2022, initial claims receded to 1,400 per week through July and weekly claims came down to 7,300. These levels are still higher than the 2019 pre-COVID year but is trending downwards. Oahu's claims

followed the statewide trend but recovered at a slower rate. The neighbor islands experienced faster improvement, especially Maui County.

- UI claimants with 15 or more consecutive weeks of unemployment surged to 21,770 in 2020, receded to 3,500 in 2021, and decreased to 1,400 in the first seven months of 2022. Honolulu County had the lowest share of long-term unemployment among the counties, while Maui County had the highest share.
- Hawaii averaged 583,500 nonfarm jobs in 2021, a moderate recovery of 23,600 jobs or 4.2 percent over the prior year. Meanwhile, U.S. jobs increased by just 2.8 percent from 2020 to 2021. Honolulu County added the most jobs with 10,800 but had the slowest growth rate of 2.6 percent. From a percentage standpoint, Maui County fared the best among the counties growing by almost 13 percent. Both Kauai and Hawaii Counties registered 5.7 percent growth. As of June 2022, the statewide job count was 7.6 percent below the pre-COVID levels.
- Jobs data by industry reveal that only one industry fully recovered all pandemic job losses – information, especially motion picture and video industries. Leisure and hospitality endured the most substantial job losses because of COVID restrictions on tourism but as of June 2022 about 80 percent of those jobs were reinstated; food services including restaurants performed better than hotels.
- Employers advertised about 168,000 positions online in 2021, which is an increase of 32 percent over 2020, but about 2 percent shy of the pre-pandemic 2020 average. The healthcare and social assistance industry posted the most job openings in 2021, accounting for nearly 12 percent of all job postings in the State, representing a 35 percent increase over 2020. Healthcare was also tops in both Honolulu and Hawaii Counties and the second most recruited industry for Maui and Kauai Counties, where accommodation and food services was the most frequently advertised industry.
- Statewide occupational employment totaled 548,410 in May 2021. Over 13 percent of workers were in office and administrative support positions. Food preparation and serving related jobs accounted for almost 11 percent and sales and related occupations comprised 9 percent of Hawaii’s total employment. Among the counties, office and administrative support was the largest

occupational group in Honolulu and Hawaii; food preparation and serving led in Maui and Kauai.

- Meanwhile, the most popular types of occupations that employers recruited online in 2021 were as follows: registered nurses and other healthcare practitioners and technical workers; customer service reps and other office and administrative support positions; and management occupations.
- Real per capita personal income in Hawaii was \$47,234 in 2020. Comparatively, national income was \$53,504, about 13 percent higher than Hawaii. Honolulu County had the highest income, while Hawaii County had the lowest. Meanwhile, according to a BLS survey of wages, average salaries for Hawaii's UI-covered workers was \$59,644 in 2021 compared to \$67,610 for the U.S., a difference of about 12 percent.
- The employment forecast for the state was 15.3 percent job growth from 2020 to 2030, a very robust projection resulting from low employment levels in 2020 due to COVID and the rebound from the pandemic-induced recession. Tourism will be the driver of this recovery and food services and drinking places will generate 1 out of 4 of these jobs while the accommodation sector will register the fastest growth.
- For each projected job that is forecasted due to growth, there will be another eight openings created as people transfer into different types of jobs or exit the labor force entirely. Occupations in food preparation and serving will have the most openings and fastest growth.
- The best job opportunities in the upcoming decade have the most projected job openings, the fastest projected growth rates, and above-average wages. Many are management and business and financial operations positions.

Hawaii Workforce Infonet (HIWI)

<https://www.hiwi.org>




Hawaii Workforce Infonet
Quality Information for Informed Decisions

LMI Dashboard

LMI Dashboard:
customized widgets
current data
and more!

Tableau Dashboard:
<https://public.tableau.com/app/profile/hiwi>

Interactive Data Dashboard



Best Job Opportunities



UI Claims and Claimant Characteristics



Labor Underutilization

- ### Quick Data Links
- ▶ Employment Projections
 - ▶ Best Job Opportunities (Tableau dashboard): State | County
 - ▶ Advertised Jobs: Area | Industry | Occupation
 - ▶ Unemployment Rates
 - ▶ Job Count by Industry
 - ▶ Occupational Employment & Wages
 - ▶ Industry Employment & Wages
 - ▶ Employers by Size
 - ▶ Hours and Earnings
 - ▶ Affirmative Action Programs

- ### Reports and Publications
- ▶ Long-term Projections to 2030, State (*new*): Full Report (pdf) | Highlights (pdf) | Industry Data (xlsx) | Occupation Data (xlsx)
 - ▶ Best Job Opportunities to 2030, State (pdf) (*new*)
 - ▶ Affirmative Action data 2021 (*new*)
 - ▶ Short-term Forecasts to 2023 (pdf): Highlights | Full Report
 - ▶ Short-term Forecasts to 2023 (excel): Industry | Occupation
 - ▶ Hawaii Labor Market Dynamics 2020
 - ▶ Long-term Projections to 2028 (pdf): Honolulu | Hawaii | Maui | Kauai
 - ▶ Best Job Opportunities to 2028 (pdf): Honolulu | Hawaii | Maui | Kauai

- ### LMI Info and Resources
- ▶ Labor Market Facts
 - ▶ Local Employment Dynamics
 - ▶ Hawaii Green Jobs Portal
 - ▶ Green Employer Directory
 - ▶ Green Jobs Info
 - ▶ Largest Employers in Hawaii
 - ▶ Occupational Wage Comparison Tool
 - ▶ Workforce Information Grant Annual Performance Report, PY 2020
 - ▶ Soft Skills Survey Results and Analysis (June 2015)

Introduction

The Hawaii Labor Market Dynamics 2021 report focuses on the trends and challenges in Hawaii's economy after the onset of COVID and subsequent recovery during 2021 and continuing into 2022. It also includes analysis of the changes that occurred within the state's economy and workforce over the past ten years. This report includes monthly data for 2022 whenever appropriate. Comparisons are made between the State and the Nation and contains information for the Counties.

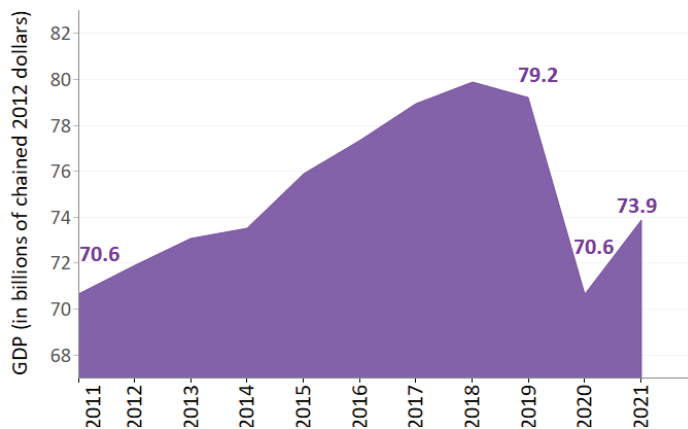
Some real-time data was incorporated to supplement the data presented in this report. The real-time data are derived from HireNet Hawaii, the state's official workforce system, which is summarized for statistical use in the Hawaii Workforce Infonet (HIWI) website.

The workforce and economic analyses provided in this annual publication supports Hawaii's workforce information system as directed by the U.S. Department of Labor's Employment and Training Administration. The report fulfills a key requirement of the Workforce Information Grant.

Real Gross Domestic Product

Hawaii's real gross domestic product (GDP) averaged \$73.9 billion in 2021, according to preliminary estimates published by the U.S. Bureau of Economic Analysis, up from \$70.6 billion in 2020. This improvement was spurred by the recovery from the COVID pandemic which impacted many segments of Hawaii's economy, but tourism related industries most of all. Despite the increase, 2021 GDP was only 93 percent of the 2019 GDP which can be viewed as the pre-COVID level. In addition, the 2020 GDP was even lower than the 2011 level. During the past 10 years, real GDP increased steadily from 2011 to 2018 before declining slightly in 2019. (Figure 1).

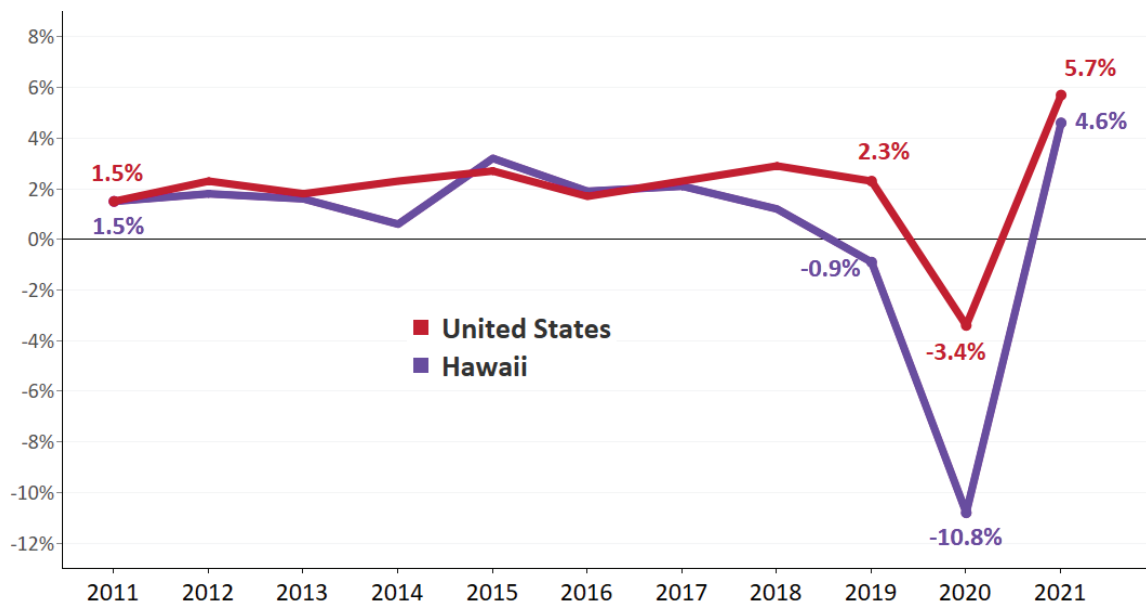
Figure 1. Real GDP, Hawaii, 2011-2021



The State registered real GDP expansion of 4.6 percent in 2021 following a steep drop of 10.8 percent in 2020 due to the pandemic recession and a smaller decline of 0.9 percent in 2019 (Figure 2). Over the past decade, Hawaii's over-the-year growth rate for real GDP has followed the U.S. trend for

Source: U.S. Bureau of Economic Analysis, Table SAGDP9N, updated 3/31/22.

Figure 2. Real GDP Over-the-Year Percent Change, Hawaii vs. U.S., 2011-2021



Source: U.S. Bureau of Economic Analysis, Table SAGDP9N, updated 3/31/22.

the most part. Noticeable differences occurred in 2014 and again in 2018 when the U.S. outgained Hawaii by 1.7 percentage points. This gap widened between 2019 and 2020 but shrank in 2021 as the Hawaii’s post-COVID recovery gained momentum.

Government and real estate and rental and leasing, the two biggest contributors to the state’s economy, accounted for nearly 39 percent of total GDP when combined. Real GDP for both industries experienced below average recovery from 2020 to 2021 (Figure 3). Government increased by a minimal 0.3 percent over-the-year in 2021, while the real estate, rental, and leasing sector expanded by an underwhelming 2.1 percent compared to the overall statewide growth rate of 4.6 percent.

The top three industries with the most significant growth were accommodation and food services (37.0 percent); arts, entertainment, and recreation (23.3 percent); and information (21.2) percent.

Six industries experienced a decline in real GDP: retail trade (-0.1 percent); construction (-0.6 percent); transportation and warehousing (-4.1 percent); mining (-4.6 percent); utilities (-6.5 percent); and agriculture, forestry, fishing, and hunting (-24.3 percent).

Figure 3. Real GDP by Industry, Hawaii, 2021

	% of Total GDP	Over-the-Year Percent Change
Accommodation and food services	8.3%	37.0%
Arts, entertainment, recreation	1.1%	23.3%
Information	3.4%	21.2%
Finance and insurance	4.1%	9.8%
Admin, support, waste mgmt, remediation	3.1%	8.3%
Professional, scientific, technical services	4.9%	7.1%
Health care and social assistance	8.2%	4.8%
TOTAL, ALL INDUSTRIES	100.0%	4.6%
Manufacturing	2.0%	4.0%
Wholesale trade	3.3%	2.8%
Real estate and rental and leasing	17.6%	2.1%
Educational services	1.0%	2.0%
Other services	2.0%	0.3%
Government	21.2%	0.3%
Management of companies & enterprises	1.6%	0.1%
Retail trade	7.1%	-0.1%
Construction	5.3%	-0.6%
Transportation and warehousing	3.4%	-4.1%
Mining	0.1%	-4.6%
Utilities	2.0%	-6.5%
Agriculture, forestry, fishing, hunting	0.6%	-24.3%

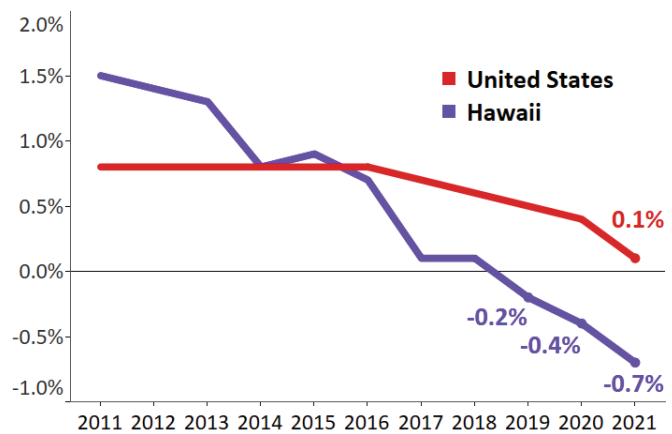
Source: U.S. Bureau of Economic Analysis, Table SAGDP9N, updated 3/31/22.

Population

Hawaii's population contracted by 0.7 percent from 2020 to 1,441,553 in 2021, according to the midyear estimates from the U.S. Census Bureau (Figure 4). The population decline began in 2019 with a 0.2 percent over-the-year dip but accelerated in 2020 and 2021. In comparison, the United States population has increased each year of the past decade and managed a minimal increase of 0.1 percent in 2021.

Between 2020 and 2021, the State lost 10,358 residents with most of the outmigration occurring on Oahu which experienced a loss of 12,337 residents for a reduction of 1.2 percent (Figure 5). The trend of residents relocating to the mainland for better job opportunities and lower cost of living, including more affordable housing, continues. Maui County's population also declined by 434 or 0.3 percent. Kauai residents increased by 253, or 0.3 percent, while the Big Island of Hawaii expanded by 2,160 residents for a gain of 1.1 percent.

Figure 4. Over-the-Year Percent Change in Population, Hawaii vs. U.S., 2011-2021



Source: U.S. Census Bureau from U.S. Bureau of Economic Analysis, Table SAINC1, updated 3/23/22. BEA produced intercensal estimates for 2011-2019.

Figure 5. Population, State and County, 2020-2021

Entity	Year	Population
State of Hawaii	2020	1,451,911
	2021	1,441,553
Honolulu County	2020	1,013,227
	2021	1,000,890
Hawaii County	2020	187,101
	2021	202,906
Maui County	2020	164,655
	2021	164,221
Kauai County	2020	73,201
	2021	73,454

Source: U.S. Census Bureau, Annual estimates of Resident Population for Counties in Hawaii, March 2022.

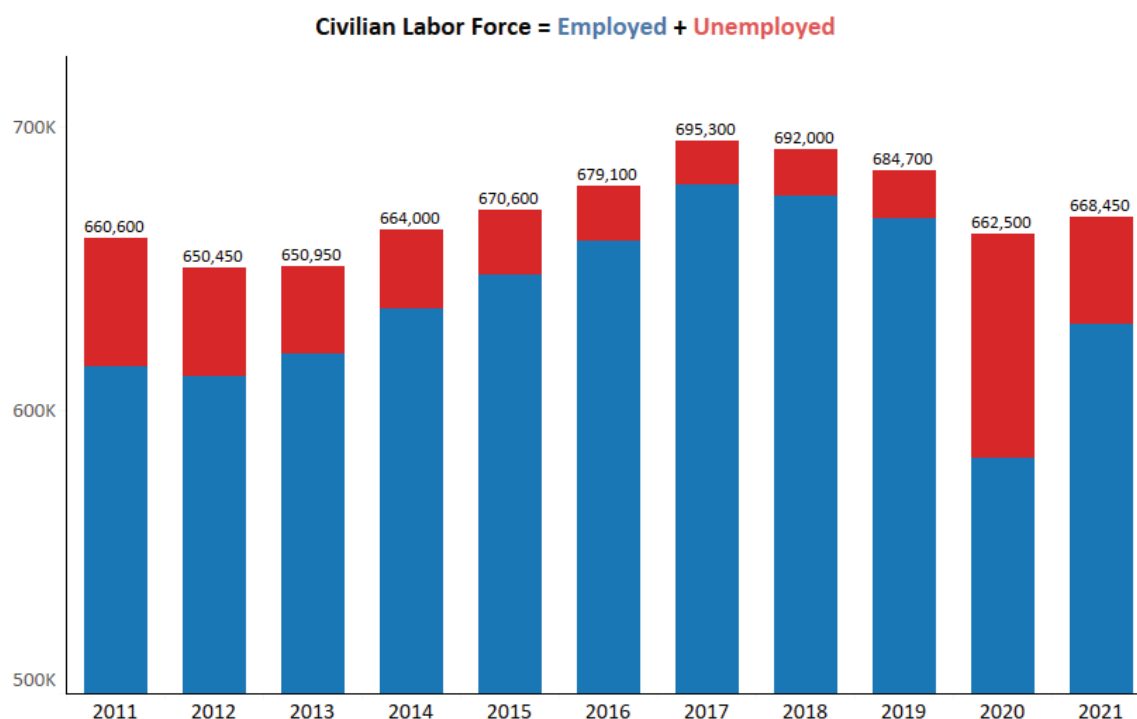
Civilian Labor Force

Hawaii’s civilian labor force expanded by 0.9 percent to 668,400 in 2021, ending three consecutive years of declines (Figure 6). The civilian labor force includes the number of people working (employed) or actively looking for work (unemployed). The number of employed averaged 630,200 in 2021, a gain of more than 8.0 percent over 2020. Meanwhile, unemployment plunged by nearly 52 percent for an average of 38,250 in 2021. Although this is a positive rebound from the pandemic low of 2020, it is still not back to pre-COVID levels.

How did Hawaii compare to the rest of the U.S.? The national civilian labor force grew by 0.3 percent, just one third of Hawaii's growth. The number of employed persons increased by 3.2 percent, two and a half times slower than Hawaii. Unemployment eased off by 33.4 percent, approximately one and a half times less than Hawaii. Hawaii fared far worse than the nation in 2020, so there was more ground to make up in 2021 compared to the U.S.

Between 2011 and 2021, Hawaii’s labor force expanded by 1.2 percent, while the United States grew four times as fast at 4.9 percent.

Figure 6. Civilian Labor Force (not seasonally adjusted), Hawaii, 2011-2021



Source: Hawaii DBEDT, READ, Local Area Unemployment Statistics.

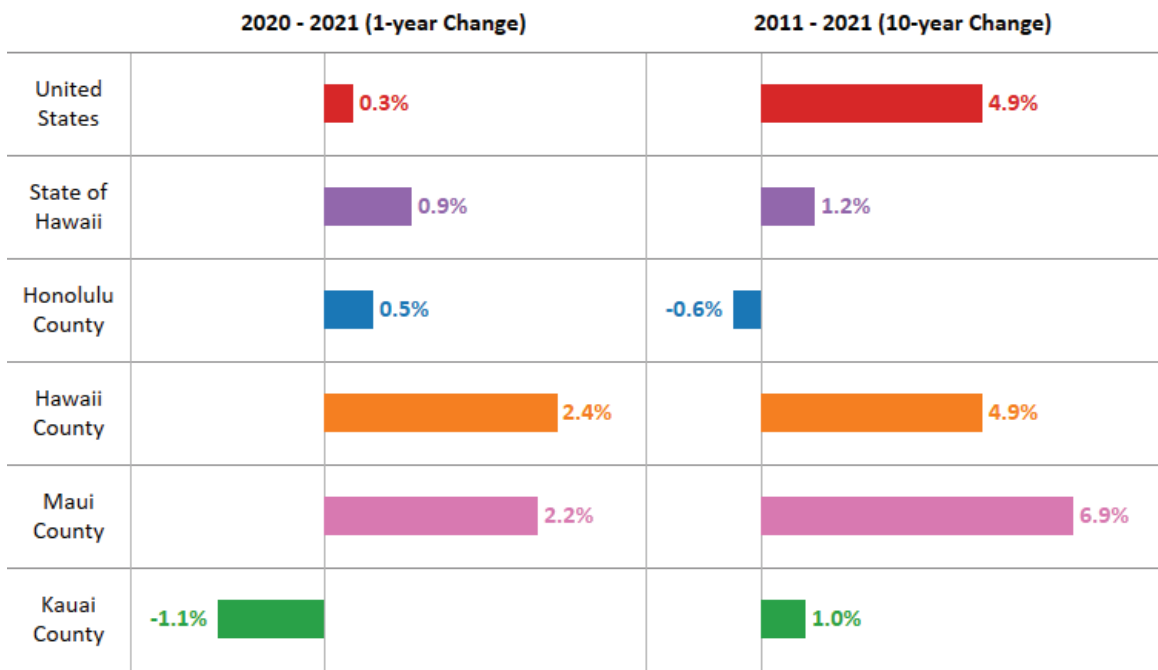
Hawaii’s counties, except for Kauai, experienced an increase in the civilian labor force from 2020 to 2021 (Figure 7). Honolulu County’s labor force registered an increase of 0.5 percent to average 451,650 in 2021 following three straight years of reductions. Although usually mirroring the State, Oahu’s labor force trended in the opposite direction between 2011 and 2021, contracting by 0.6 percent compared to the State’s growth of 1.2 percent.

The county with the greatest over-the-year increase of 2.4 percent was Hawaii, boosting its labor force to 93,850 in 2021. This rebound reverses a trend of three consecutive years of losses, like Oahu. Over the past decade from 2011 to 2021, the Big Island experienced an expansion of its labor force by 4.9 percent.

Maui County had a 2.2 percent gain in its civilian labor force to average 86,950 in 2021, after two years of decreases. The ten-year trend was the best among the counties – 6.9 percent from 2011 to 2021.

The smallest labor force is in Kauai County which suffered a contraction of 1.1 percent in 2021 as it averaged 35,950, marking two straight years of declines. The rate of growth between 2011 and 2021 was just 1.0 percent.

Figure 7. Civilian Labor Force Growth Rates (not seasonally adjusted), 2011-2021



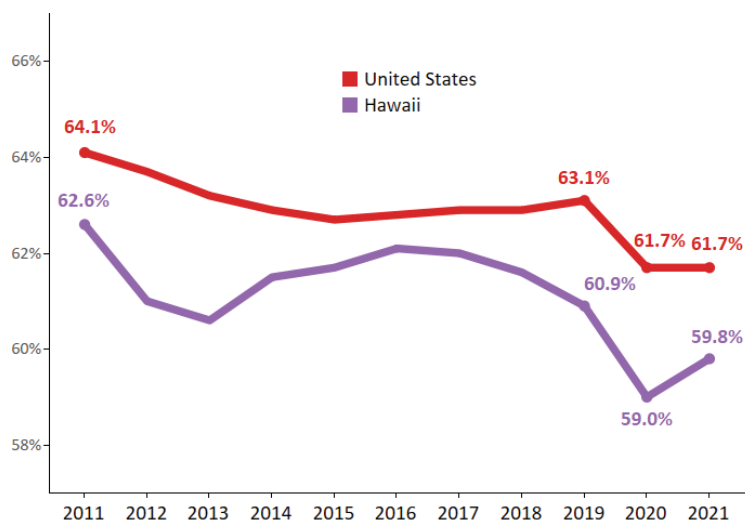
Source: United States - USDOL BLS; State and County - Hawaii DBEDT, READ, Local Area Unemployment Statistics.

Labor Force Participation Rate

What portion of Hawaii’s working age population is participating in the civilian labor force? The civilian labor force participation rate is calculated by dividing civilian labor force by the civilian noninstitutional population 16+ years of age. In 2021, a 59.8 percent share of Hawaii’s population was in the labor force, up 0.8 percentage points from 2020 which was the year COVID caused the participation rate to plunge by nearly two percentage points (Figure 8). Labor force participation in Hawaii had been declining since 2017. A positive trend took place between 2014 and 2016 but otherwise the overall trend over the past decade was a downswing of 2.8 percentage points from 2011 to 2021. Since 1976, when data first became available, Hawaii’s labor force participation rate has never been below 60 percent until 2020.

Meanwhile, the national labor force participation rate was 61.7 percent in 2021, unchanged from 2020. The U.S. experienced a bigger drop in 2020 than Hawaii did. Comparatively, the U.S. participation rate has not been this low since 1976 when it was 61.6 percent. Over the past decade, the national labor force participation rate was declined by 3.7 percentage points, almost a full percentage point more than Hawaii’s deficit.

Figure 8. Labor Force Participation Rate, HI vs US, 2011-2021



Source: US: USDOL BLS; HI: Hawaii DBEDT, READ, Local Area Unemp Stats.

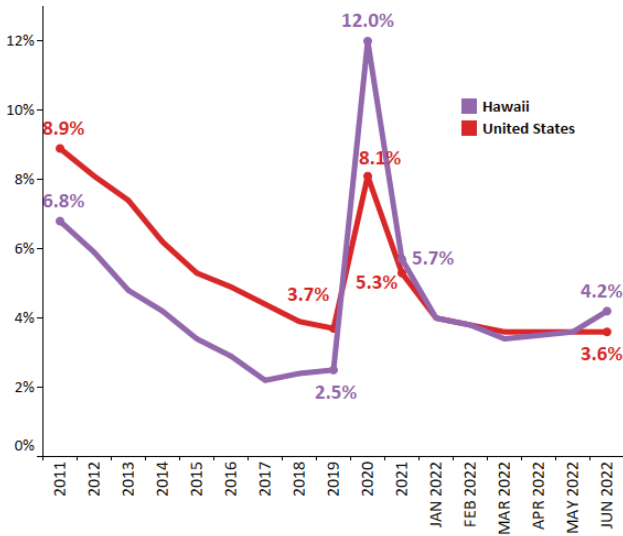
Historically, Hawaii had a higher rate of labor force participation compared to the nation going back to 1976. Then in 2002, the U.S. overtook Hawaii. In the past 10 years, the largest gap between the national rate and Hawaii’s rate was 2.7 percentage points in both 2012 and 2020. The smallest gap was in 2016 when it was 0.7 percentage points.

Unemployment

The unemployment rate in Hawaii averaged 5.7 percent in 2021, down 6.3 points from the record high of 12.0 percent in 2020 due to the COVID pandemic (Figure 9). After reaching a historic low of 2.2 percent in 2017, the State saw a steady uptick in unemployment in the succeeding years until the pandemic caused the jobless rate to

skyrocket more than nine percentage points. The national trend was similar, but it had a less dramatic spike to 8.1 percent in 2020, and the post-pandemic drop was 2.8 percentage points which brought the average to 5.3 percent in 2021. Then in 2022, Hawaii’s jobless ratio began to ease slightly before rising to 4.2 percent in June, while the U.S. rate remained stable at 3.6 percent.

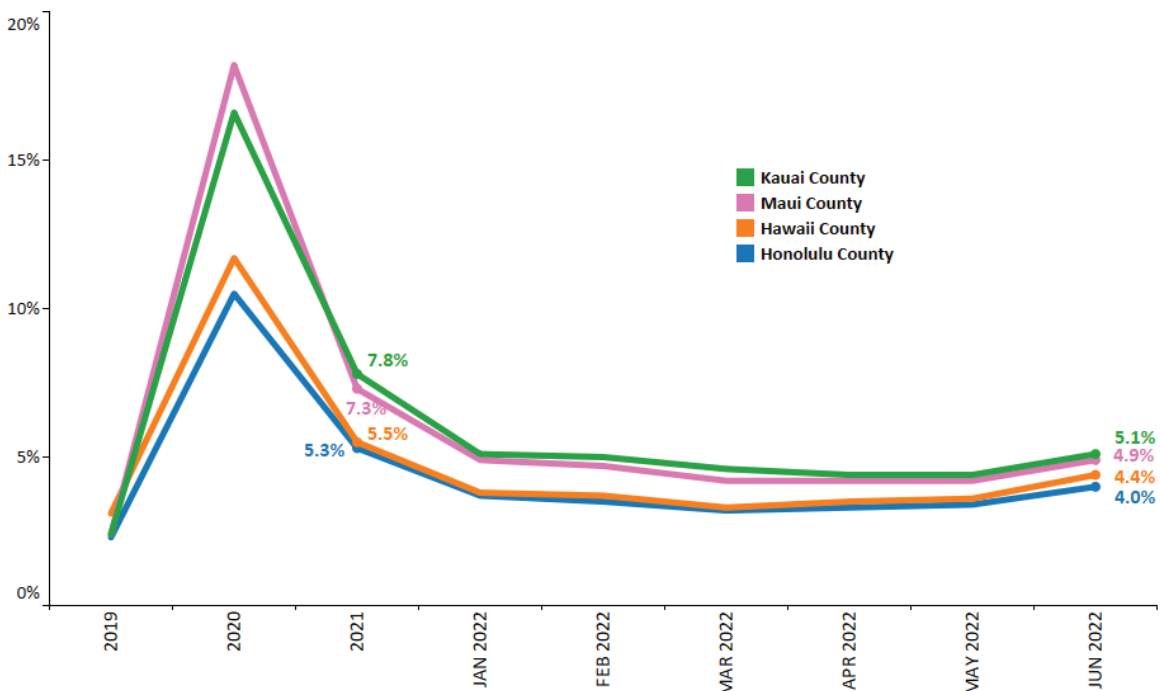
Figure 9. Unemployment Rate (not seasonally adjusted), Hawaii vs. U.S., 2011-June 2022



Source: USDOL BLS; Hawaii DBEDT, READ, LAUS.

Honolulu County’s jobless rate, usually the lowest among the

Figure 10. Unemployment Rate (not seasonally adjusted), County, 2019-June 2022



Source: Hawaii DBEDT, READ, LAUS.

counties, averaged 5.3 percent during 2021 (Figure 10). Hawaii County experienced the second to the lowest rate of unemployment with 5.5 percent which was also below the statewide average of 5.7 percent. The highest jobless ratio belonged to Kauai County with 7.8 percent, topping Maui County’s 7.3 percent rate. Unemployment continued to improve in 2022 and as of June, Oahu was still lower than the State with a 4.0 percent rate. The Big Island registered a 4.4 percent jobless rate, followed by Maui with 4.9 percent, and Kauai with 5.1 percent.

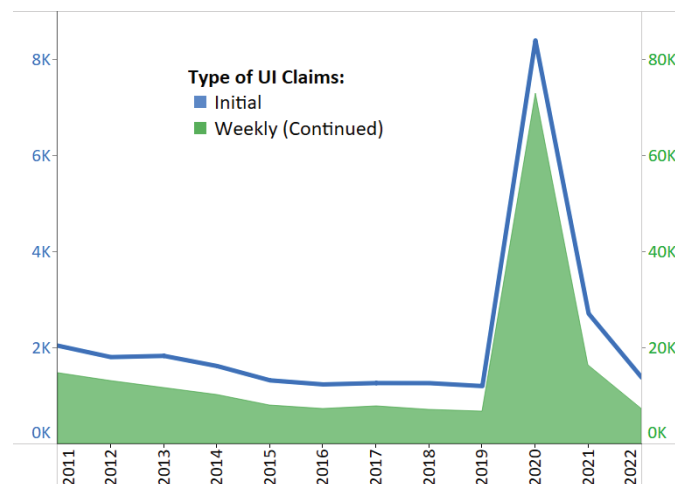
Unemployment Insurance Claims

Unemployment insurance (UI) claims are another indicator of job loss. The official unemployment rate may not be an accurate gauge of layoffs because it doesn’t count people who were technically not looking for work due to concerns about COVID or childcare issues. There are two types of UI claims - *initial* claims and *weekly* (or continued) claims. The weekly average of initial claims in 2021 was around 2,700, a drop of nearly 68 percent from 2020 (Figure 11). Meanwhile, weekly claims in 2021 averaged 16,400, over 77 percent fewer than in 2020.

As the economy continued to recover in 2022, initial claims averaged 1,400 per week, according to available data through July 2022. Weekly claims came down to 7,300. Although these levels are higher than the 2019 pre-COVID year, it is trending down.

With 2020 being the low point of the pandemic and recovery through July 2022, the State’s initial UI claims were reduced by nearly 84 percent and the weekly claims by 90 percent (Figure 12). Among the four counties, the trend in Honolulu County was similar to the State but at slower rate of recovery. From 2020 to 2022, Honolulu’s initial claims decreased by over 81 percent from 5,200 to 960. Weeks claimed averaged about 5,000 in 2022, down 88 percent from 42,800 in 2020.

Figure 11. UI Claims, Hawaii, 2011-2022, Weekly Avg.
(Note: 2022 average includes up to week ending 7/30/2022)



Source: Hawaii DLIR, Unemployment Insurance Division.

Figure 12. Average UI Claims per Week, State and County, 2020-2022

		INITIAL CLAIMS	WEEKLY CLAIMS
State of Hawaii	2020	8,397	72,878
	2021	2,711	16,382
	2022	1,382	7,282
Honolulu County	2020	5,211	42,819
	2021	1,745	10,623
	2022	958	4,992
Maui County	2020	1,400	14,230
	2021	367	2,128
	2022	157	761
Hawaii County	2020	1,070	9,193
	2021	343	2,083
	2022	187	992
Kauai County	2020	587	5,513
	2021	169	1,031
	2022	59	343

Source: Hawaii DLIR, Unemployment Insurance Division.

While all neighbor islands experienced a faster rate of improvement in UI claims, Maui County’s weekly claims had the greatest reduction in weekly claims between 2020 and 2022 with a decline of 95 percent. The weekly average of initial claims in 2022 was down almost 89 percent from 2020.

The best recovery for initial claims occurred in Hawaii County as the 2022 average was over 90 percent lower than the 2020 average. Weeks claimed was 89 percent lower than 2020 levels.

In Kauai County, the number of initial claims went down nearly 90 percent from 2020 levels. Meanwhile, weeks claimed decreased by almost 94 percent from 2020.

Long-term Unemployed

When the pandemic led to unprecedented amounts of workers filing for unemployment benefits and the ensuing economic shutdown kept workers at home for months, the number of long-term unemployed, those out for 15 or more consecutive weeks, surged to 21,770 in 2020 which was 33 percent of all UI claimants (Figure 13). As tourism

rebounded in 2021, more people were able to go back to work and the long-term unemployed receded to 3,500, or 27 percent of the total unemployed. This trend continued into the first seven months of 2022 where the average proportion of the long-term jobless to the total claimants was just 23 percent, slightly above the 2019 share (pre-COVID) of 21 percent.

Oahu had the lowest ratio of long-term unemployment among the counties with 31 percent during COVID (2020) and 26 percent in 2021. During the January to July 2022 period, long-term unemployed accounted for 23 percent of all claimants, which is slightly higher than the 21 percent share from 2019 (pre-COVID).

Maui County had the highest proportion of long-term unemployment in 2020 with 36 percent and again in 2021 with 29 percent. Up through July 2022, the share of long-term jobless averaged 23 percent, matching the 2019 average.

The Big Island did even better with a county best 22 percent proportion of long-term unemployed in 2022, lower than the 2019 average of 26 percent. Kauai County registered a 24 percent share in the first seven months of 2022, compared to 23 percent in 2019.

Figure 13. Long-term Unemployed, State and County, 2020-2022 Jan-Jul 2022

Area	Year	% of Unemployed	Number of Long-term Unemployed
State of Hawaii	2020	33%	21,773
	2021	27%	3,532
	2022	23%	1,407
Honolulu County	2020	31%	12,380
	2021	26%	2,312
	2022	23%	991
Maui County	2020	36%	4,873
	2021	29%	526
	2022	23%	153
Hawaii County	2020	33%	2,776
	2021	27%	464
	2022	22%	192
Kauai County	2020	34%	1,744
	2021	27%	230
	2022	24%	70

Source: Hawaii DLIR, Unemployment Insurance Division

Industry Employment

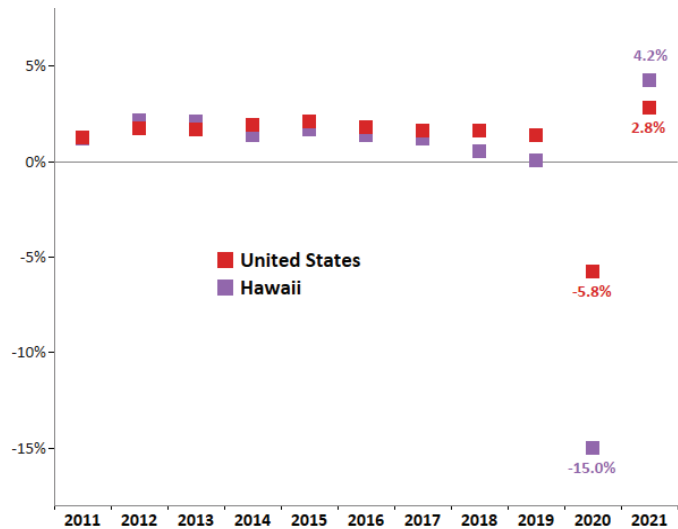
Hawaii averaged 583,500 nonfarm jobs in 2021, a moderate recovery of 23,600 jobs or 4.2 percent from 2020 when jobs plunged by 15.0 percent due to the pandemic recession (Figure 14). Prior to COVID, Hawaii's job count was growing very slowly, less than one percent per year after 2017. Meanwhile, U.S. jobs increased by just 2.8 percent from 2020 to 2021 following a 5.8 percent drop between 2019 and 2020.

How did jobs in the four counties respond after the pandemic?

Honolulu County generated the most jobs (10,800) but had the slowest rate of growth (2.6 percent) which is not unusual because it had the greatest number of total nonfarm jobs with 421,800 in 2021 (Figure 15). Maui County recovered 7,900 jobs in 2021 and led all counties with the fastest growth of 12.9 percent. Hawaii and Kauai County both registered 5.7 percent growth between 2020 and 2021. The Big Island created 3,500 jobs while Kauai generated 1,500 jobs.

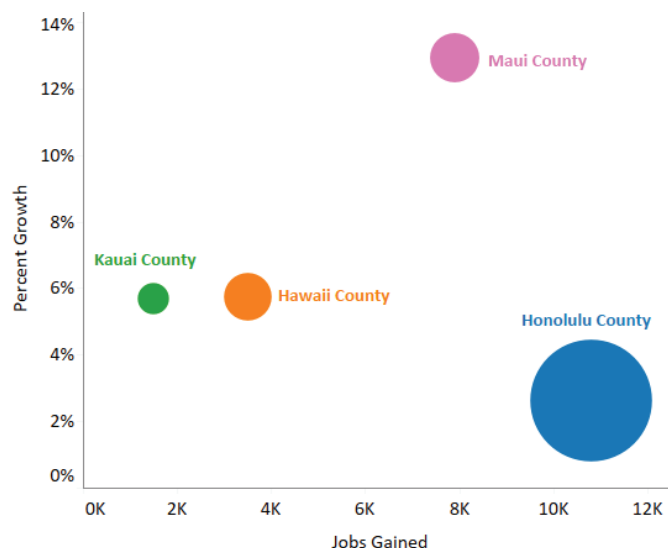
As of June 2022, there were 607,400 estimated jobs statewide, about 7.6 percent or 50,300 fewer than the pre-pandemic level of 657,700 back in March 2020 (Figure 16). Oahu followed a similar path as the state and as of June 2022 the job count was 436,400 or 7.8 percent lower than the March

Figure 14. Over-the-Year Percent Change in Jobs, Hawaii vs U.S., 2011-2021



Source: U.S. Bureau of Labor Statistics

Figure 15. Over-the-Year Change in Jobs, County, 2020-2021 (Size of bubble indicates 2021 jobs)



Source: Hawaii DBEDT, READ, Labor Research, CES program.

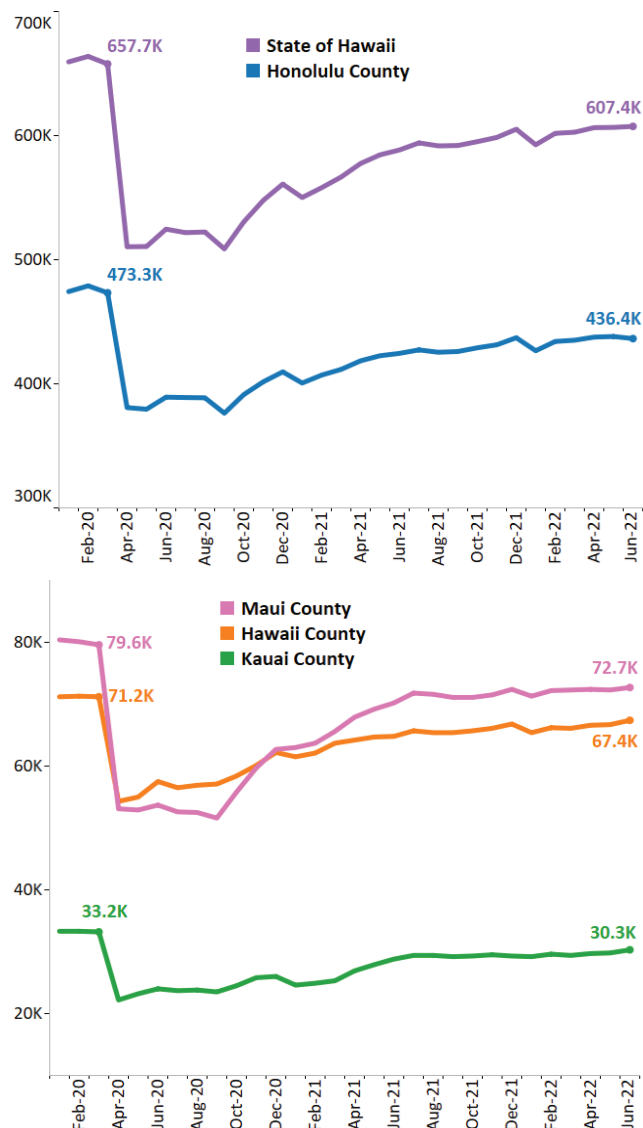
2020 level of 473,300. Maui and Kauai Counties both registered job counts in June 2022 that were 8.7 percent lower than the pre-COVID month of March 2022. The most successful in regaining the pandemic job losses was the Big Island – it was only 5.3 percent below March 2020 job levels with 67,400 jobs in June 2022.

Evaluating jobs data by industry reveals how different sectors of our economy have recovered from the pandemic. Figure 17 charts the ten major industries in the State and compared the jobs lost from March to April 2020 with the jobs gained from April 2020 through June 2022. The only industry that fully recovered all jobs lost during COVID was information, which includes telecommunications, radio and tv broadcasting, news and book publishers; however, the sector that was most responsible for the strong rebound was the motion picture and video industries. Jobs in June 2022 are about 31 percent higher than pre-pandemic levels.

Leisure and hospitality endured the most substantial job losses because of COVID restrictions on tourism. Fast forward to June 2022 and about 80 percent of the 65,500 jobs that were eliminated in April 2020 were reinstated. Food services, including restaurants, recovered more than hotels because they are not entirely dependent on tourists. The arts, entertainment, and recreation sector did not bring back as many jobs as accommodation and food services.

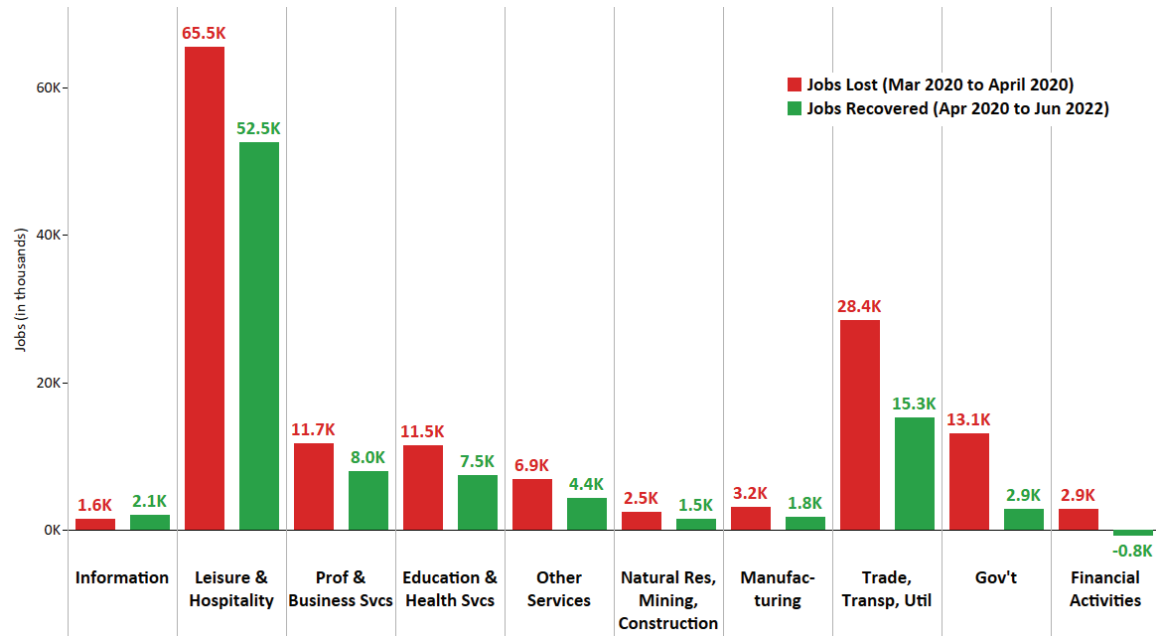
Professional and business services managed to recoup about 68 percent of the pandemic job cuts. Some of the better performing sectors were computer systems design; architectural and engineering; management, and scientific, and technical consulting.

Figure 16. Jobs (in thousands), HI, Jan 2020-Jun 2022



Source: Hawaii DBEDT, READ, Labor Research, CES program.

Figure 17. Jobs by Industry, State of Hawaii, March 2020 to June 2022



Source: Hawaii DBEDT, READ, Labor Research, CES program.

Meanwhile, the **education and health services** industry regained over 65 percent of the COVID job losses from April 2020 to June 2022. The educational sector reinstated nearly 88 percent of the jobs that were temporarily eliminated – elementary and secondary schools were fortunate to recover fully while the colleges and other educational institutions did not. The health care and social assistance sector only regained 56 percent of the pandemic job cuts. The hospital jobs did not improve from April 2020 to June 2022 and nursing and residential care facilities lost more jobs. Social assistance recovered only 53 percent while ambulatory health care services regained almost 75 percent.

The only industry that continued to shed jobs into 2022 was financial activities which experienced an additional 3 percent job loss from April 2020 to June 2022, concentrated in the finance and insurance sector. The real estate and rental and leasing sector experienced job gains during the same period.

Advertised Jobs by Industry

Employers in Hawaii advertised about 168,000 jobs online in 2021, which is an increase of 32 percent over 2020 but about 2 percent shy of the pre-pandemic 2019 average. Almost 39 percent of online jobs did not have an industry classification because the information was not available in the job posting.

The industry posting the most job openings in 2021 was **healthcare and social assistance** with 19,900 openings, nearly 12 percent of all postings, representing an increase of 35 percent over 2019 (Figure 18). More than 4 out of 10 job openings were classified in ambulatory health care services such as home health care, medical labs, outpatient care, doctors, and other health practitioners' offices. Another integral part of the front-line workforce during the pandemic, hospitals, accounted for over one-third of online jobs. Social assistance, individual and family services in particular, contributed 13 percent of the job listings. Another nine percent of jobs were categorized in the nursing and residential care facilities.

Accommodation and food services was the second most prevalent industry with about 13,000 or 8 percent of all advertised jobs. As expected, this industry suffered a severe drop in 2020 when COVID struck but job openings grew by 79 percent by the end of 2021. However, it is still about 13 percent down from the 2019 job listings. About 6 out of 10 listings were in the accommodations sector and the remaining 40 percent in food services and drinking places. Advertised jobs were not for bars, restaurants, or fast food establishments, but for special food services such as contractors, caterers, and mobile food services.

Figure 18. Advertised Job Openings by Industry, Hawaii, 2021

Industry	Job Openings	% Change from 2019 to 2021
TOTAL, ALL INDUSTRIES	168,364	-1.9%
Health Care & Social Assistance	19,871	35.4%
Accommodation & Food Services	12,919	-13.3%
Professional, Scientific, Technical Svcs	12,641	14.5%
Retail Trade	10,991	-11.0%
Admin, Support, Waste Mgmt, Remediation	9,548	-20.3%
Transportation & Warehousing	5,656	48.6%
Finance & Insurance	5,577	-14.9%
Educational Services	4,295	-19.3%
Manufacturing	3,785	-21.5%
Public Administration	3,537	-32.6%
Wholesale Trade	3,188	22.5%
Other Services	2,897	-3.6%
Information	2,496	47.3%
Real Estate, Rental & Leasing	2,076	-28.5%
Construction	1,436	17.8%
Arts, Entertainment, Recreation	830	48.2%
Utilities	673	23.0%
Mgmt of Companies & Enterprises	637	-48.0%
Mining	358	-51.8%
Agriculture, Forestry, Fishing, Hunting	180	-12.6%

Source: Hawaii Workforce Infonet (HIWI) website - <https://www.hiwi.org>

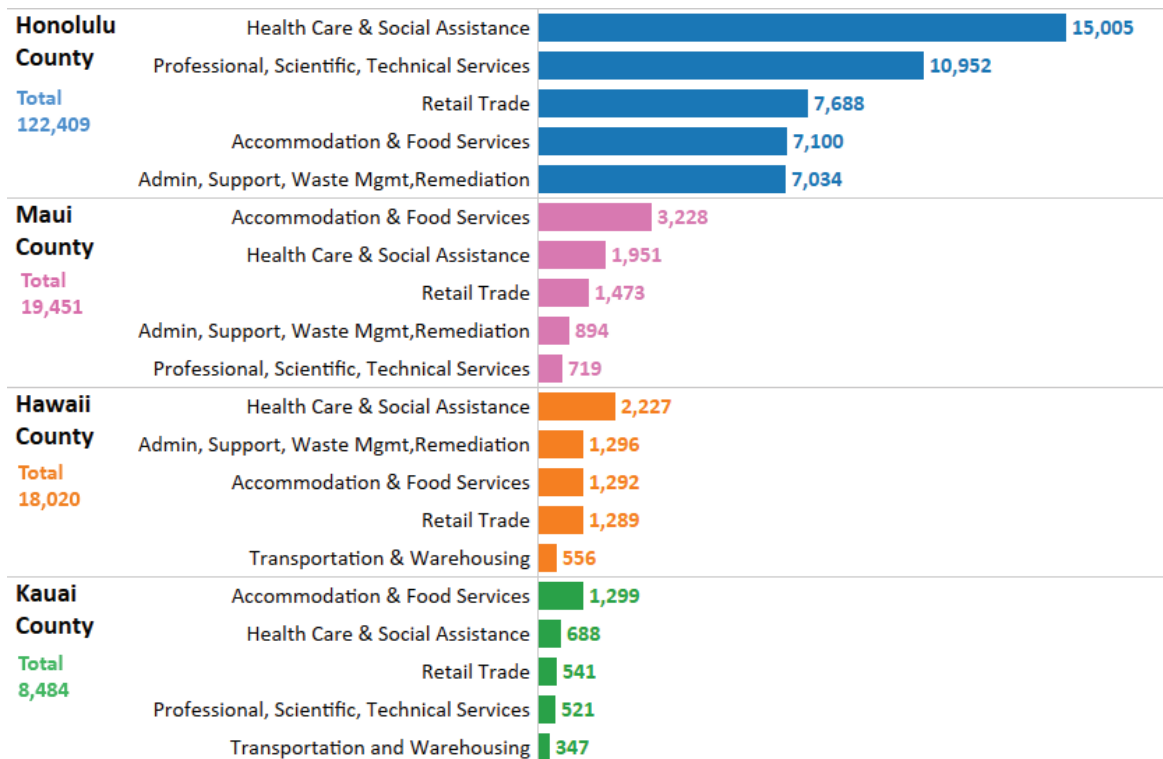
Honolulu County had 122,400 advertised job openings in 2021, up from 95,400 in 2020 but still 3 percent below the 2019 pre-pandemic level. Like the State, health care and social assistance was the top recruiting industry on Oahu with 15,000 job listings (Figure 19). In both Honolulu and Maui Counties, the top five industries were the same as the State. Hawaii and Kauai Counties differed in that transportation and warehousing made the top five.

Maui County had nearly 19,500 job listings which is a significant jump from 12,900 in 2020 and pushes it four percent over the 2019 count. The jobs were concentrated most in accommodation and food services with 3,200 online openings, accounting for almost 17 percent of the total.

Hawaii County employers posted 18,000 advertised jobs, a five percent increase over 2019 with 2,200 job openings in the healthcare and social assistance industry.

Kauai County had the least number of job openings for job seekers with 8,500 openings and despite an increase of 45 percent from 2020 it was down about 10 percent from the 2019 job opening total. Over 15 percent of the job listings were in accommodation and food services.

Figure 19. Advertised Job Openings by Industry, County, 2021



Source: Hawaii Workforce Infonet (HIWI) website - <https://www.hiwi.org>

Occupational Employment

Occupational staffing patterns for industry employment offer another way to look at the labor market’s structure. The U.S. Department of Labor’s Bureau of Labor and Statistics, in partnership with the State Department of Business, Economic Development and Tourism, produces employment and wage data for over 800 occupations that are aggregated into 22 major occupational groups (Figure 20). The latest estimates provided for May 2021 tallied 548,410 workers in Hawaii.

Over 13 percent of Hawaii’s workers were in the office and administrative support occupational group. Of these 72,080 workers, 15,680 or 22 percent were general office clerks, which is the third largest occupation in the State.

Food preparation and serving related jobs accounted for almost 11 percent of the State’s workforce with 57,620 employees. Three out of 10 workers in this group were fast food and counter workers, making it the State’s largest occupation.

The third-largest group, sales and related occupations, accounted for nine percent of Hawaii’s total employment. Retail salespersons, the second largest occupation in the State, represented the largest occupation in this group with 17,040. There were also 14,550 cashiers, making it the 4th largest job statewide.

Occupational groups with the highest location quotients in 2021 were building grounds and cleaning and maintenance (1.69), protective service (1.48), and community and

Figure 20. Employment and Location Quotient by Occupational Group, Hawaii, May 2021

Occupational Group	Location Quotient	Employment
Office and Administrative Support	1.01	72,080
Food Preparation & Serving Related	1.32	57,620
Sales and Related	0.97	50,070
Transportation and Material Moving	0.84	41,250
Educational Instruction and Library	1.17	37,420
Management	1.01	35,140
Healthcare Practitioners & Technical	0.92	31,300
Construction and Extraction	1.32	30,140
Business and Financial Operations	0.77	27,150
Building & Grounds Cleaning/Maint	1.69	27,050
Installation, Maintenance, Repair	1.07	23,230
Healthcare Support	0.82	21,030
Protective Service	1.48	19,480
Community and Social Service	1.40	12,180
Production	0.36	11,870
Personal Care and Service	1.14	11,430
Computer and Mathematical	0.63	11,330
Architecture and Engineering	0.90	8,550
Art, Design, Entertainment, Sports, Media	1.05	7,440
Life, Physical, and Social Science	1.36	6,760
Legal	0.91	4,190
Farming, Fishing, and Forestry	0.96	1,690

Source: Hawaii DBEDT, Occupational Employment & Wage Statistics.

social service (1.40). Production (0.36), computer and mathematical (0.63), and business and financial operations (0.77) occupations had the lowest location quotients.

Honolulu County recorded 395,060 employees in May 2021. The top five largest occupational groups were the same as the State with office and administrative support leading the way with over 13 percent of Honolulu's jobs (Figure 21). Hawaii County reported 62,110 workers with the same top five occupational groups as the State and Honolulu County. Office and administrative support jobs accounted for over 13 percent of workers, followed by food preparation with almost 12 percent.

In Maui County, about 15 percent of the 64,090 workers were in food preparation and serving related jobs and over 12 percent in office and administrative support. Kauai County had the lowest employment of 26,830 with almost 14 percent in the food preparation and serving occupations. Office and administrative support accounted for about 13 percent of workers.

The **location quotient** is used to compare Hawaii's concentration of occupational employment to the national average concentration. If the ratio is greater than one it means that the occupation has a higher share of employment in Hawaii compared to the nation, and a location quotient less than one indicates the occupation is less prevalent in Hawaii than it is in the United States.

Figure 21. Occupational Groups with Highest Employment, County, May 2021

Honolulu County Total 395,060	Office & Admin Support	52,430
	Food Prep & Serving Related	37,510
	Sales & Related	34,360
	Transportation & Material Moving	29,750
	Educational Instruction & Library	27,420
Maui County Total 64,090	Food Prep & Serving Related	9,360
	Office & Admin Support	8,010
	Sales & Related	6,880
	Building & Grounds Cleaning/Maint	5,040
	Transportation & Material Moving	4,730
Hawaii County Total 62,110	Office & Admin Support	8,240
	Food Prep & Serving Related	7,120
	Sales & Related	6,230
	Educational Instruction & Library	4,980
	Transportation & Material Moving	4,950
Kauai County Total 26,830	Food Prep & Serving Related	3,610
	Office & Admin Support	3,350
	Sales & Related	2,540
	Building & Grounds Cleaning/Maint	2,150
	Transportation & Material Moving	1,810

Source: Hawaii DBEDT, Occupational Employment and Wage Statistics program.

Advertised Jobs by Occupation

Online job listings with an occupational assignment totaled 96,564 in 2021 (Figure 22). Nearly 19 percent or 17,920 openings were for healthcare practitioners and technical occupations; registered nurses accounted for almost one half of these openings as the pandemic escalated the demand for nurses. The second most recruited group, office and administrative support, accounted for 14 percent of the statewide job openings with about 1 out of 4 job postings for customer service representatives. An additional 15 percent of the available jobs were for executive secretaries and administrative assistants while receptionists and information clerks accounted for nine percent. Management occupations were represented in 10 percent of the job listings.

Online recruitment rose by 30 percent in 2021 as the economy rebounded after the pandemic in 2020, but job listings still lag eight percent behind 2019. What types of jobs showed the most growth between 2020 and 2021? Transportation and material moving occupations had a 61 percent increase in job postings, followed by building and grounds cleaning and maintenance with 48 percent, and arts, design, entertainment, sports and media at 43 percent.

Figure 22. Advertised Job Openings by Occupation Group, Hawaii, 2021

Occupation	Job Openings	% Change from 2019 to 2021
Healthcare Practitioners & Technical	17,920	23.2%
Office & Administrative Support	13,840	-12.4%
Management	10,062	-10.0%
Sales & Related	7,878	-22.3%
Transportation & Material Moving	7,121	11.8%
Food Preparation & Serving Related	6,167	-26.3%
Computer & Mathematical	3,811	-21.1%
Healthcare Support	3,621	10.0%
Installation, Maintenance, Repair	3,340	-14.1%
Business & Financial Operations	3,314	-8.3%
Building & Grounds Cleaning/Maint	2,683	0.4%
Protective Service	2,614	-30.2%
Personal Care & Service	2,386	-30.4%
Architecture & Engineering	2,370	-5.6%
Educational Instruction & Library	1,950	-29.2%
Arts, Design, Entertainment, Sports, Media	1,848	-1.5%
Production	1,802	-7.5%
Community & Social Service	1,399	-12.3%
Construction & Extraction	1,165	-4.0%
Life, Physical, Social Science	881	9.2%
Legal	317	-38.7%
Farming, Fishing, Forestry	75	-59.0%

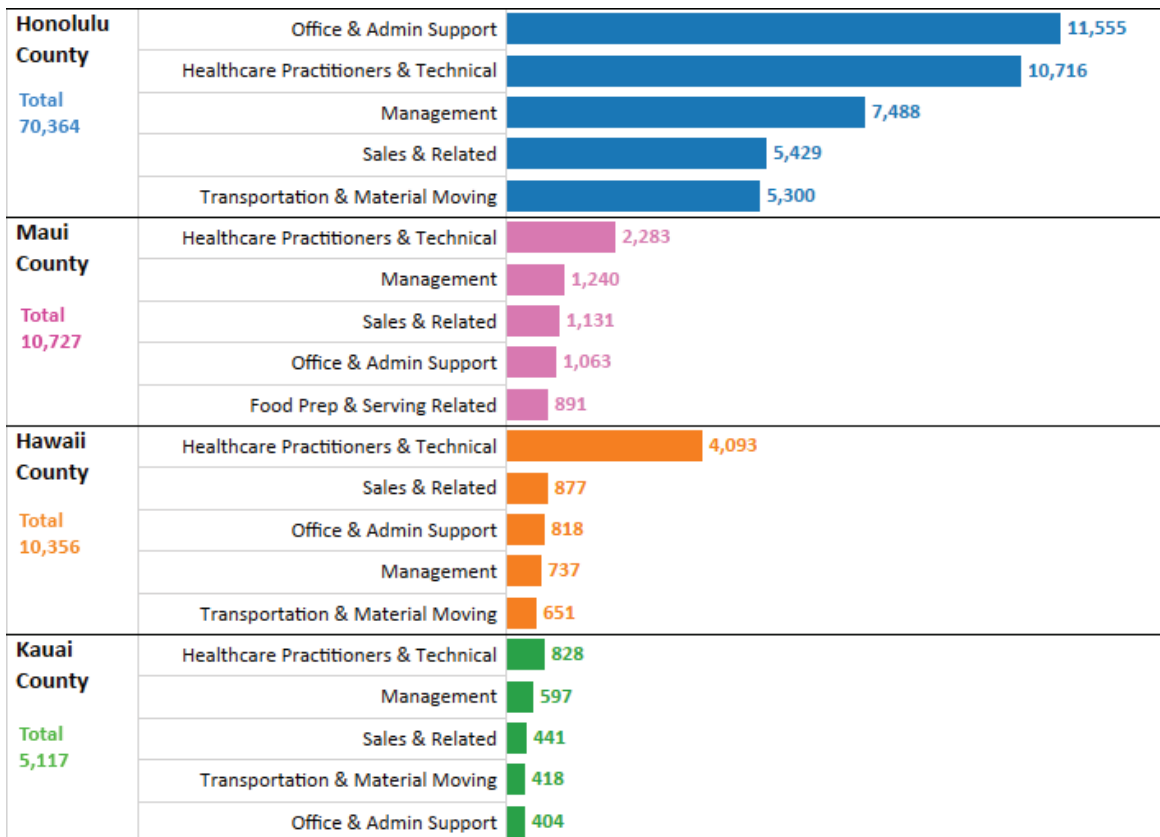
Source: Hawaii Workforce Infonet (HIWI) website - <https://www.hiwi.org>

Five occupational groups managed to post more jobs in 2021 than it had in 2019: life, physical, and social science (9 percent); healthcare practitioners and technical (23 percent); healthcare support (10 percent); building and grounds cleaning and maintenance (0.4 percent); and transportation and material moving occupations (12 percent).

Honolulu County accounted for 70,360 advertised job openings that had an occupational classification. Positions for office and administrative support made up over 16 percent of Oahu’s recruitment effort (Figure 23). Healthcare practitioners and technical occupations followed with 15 percent.

About 10,730 job postings were in Maui County and healthcare practitioners and technical occupations comprised 21 percent. Hawaii County provided 10,360 advertised jobs with an overwhelming proportion of 40 percent in healthcare practitioners and technical occupations. There were only 5,120 job listings in Kauai County and the leading occupational group was also healthcare practitioners and technical with a 16 percent.

Figure 23. Advertised Job Openings by Occupation Group, County, 2021



Source: Hawaii Workforce Infonet (HIWI) website - <https://www.hiwi.org>

Income and Wages

Personal Income

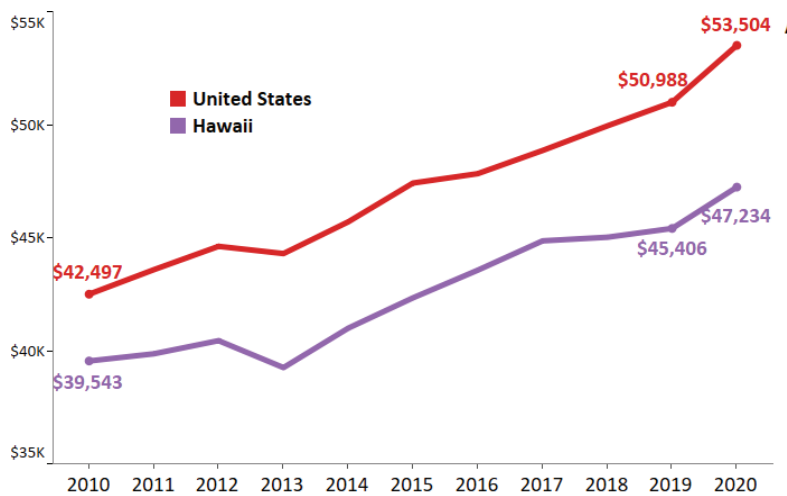
Real per capita personal income in Hawaii was \$47,234 in 2020, according to the U.S. Bureau of Economic Analysis' latest annual update (Figure 24). Comparatively, national real per capita income was \$53,504, about 13 percent or \$6,270 higher than Hawaii. The income gap was only seven percent in 2010 but has widened over the past decade. The nation as a whole out-earned Hawaii during the 10-year period from 2010 to 2020 with a 26 percent increase, compared to Hawaii's 19 percent. Over-the-year growth for Hawaii's income was four percent in 2020, slower than the five percent for the United States.

Personal income sources include paychecks, insurance, business ownership, rental property, Social Security and other gov't benefits, interest, and dividends; it excludes capital gains.

Real personal income is adjusted using regional price parities to better compare buying power of income across states. They are also adjusted for inflation.

For the counties, real per capita personal income is not available so Figure 25 uses regular per capita income for the State for comparison purposes. Honolulu County had the highest income of \$62,793 in 2020, while Hawaii County had the lowest with \$46,281. The difference of \$16,512 or 36 percent is substantial. Both Kauai and Maui are about midway between the two extremes, with \$54,089 and \$51,838, respectively.

Figure 24. Real Per Capita Personal Income (in chained 2012 \$), Hawaii vs. U.S., 2010-2020

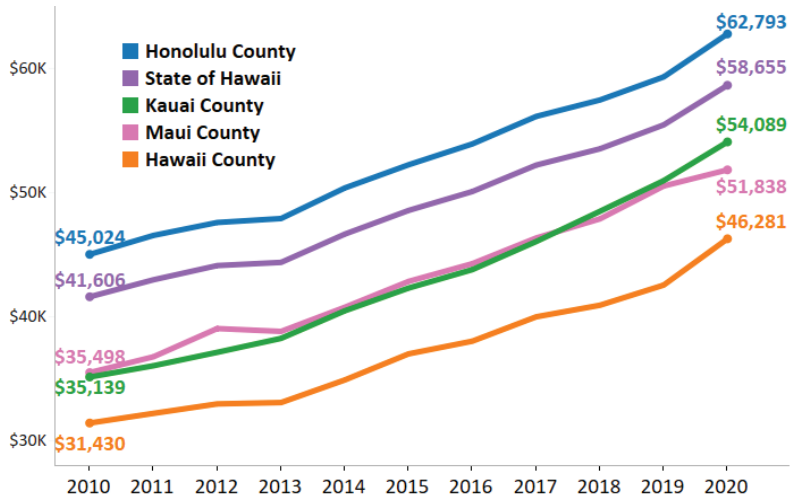


Source: U.S. Bureau of Economic Analysis

When comparing the growth rates between the counties, Kauai experienced the greatest improvement over the past decade with a 54 percent increase while Hawaii County had the best over-the-year jump of nearly nine percent. Maui managed to improve income by 46 percent over the past 10 years but over

the past year growth was sluggish at under three percent. This is how Kauai was able to pull away from Maui in 2020 after both counties had nearly equal income in 2019. Meanwhile, Honolulu County grew at the slowest pace over the past decade with less than 40 percent growth.

Figure 25. Per Capita Personal Income, State, County, 2010-2020



Source: U.S. Bureau of Economic Analysis

Covered Wages

According to the U.S. Department of Labor’s Bureau of Labor Statistics (BLS) census of workers covered by unemployment insurance, Hawaii’s annual wage in 2021 was \$59,644, about 12 percent lower than the national average (Figure 26). In the past decade, the U.S. saw pay increases of 40.7 compared to Hawaii’s 40.4 percent. Hawaii had slower growth of three percent over the year compared to the nation's five percent.

Wages in Honolulu County averaged \$62,291 and gains of nearly 41 percent over the 2011 to 2021 decade led all counties. Maui County's average wage \$53,409 after posting above average growth of five percent from 2020 to 2021. Kauai’s average salary was \$52,272 and its 10-year and over-the-year growth was the slowest among the counties with 37 and two percent, respectively. Annual average pay in Hawaii County was \$51,497 and even though it was the lowest among the counties, it made the greatest strides over the past year with nearly 6 percent growth.

Figure 26. Annual Wages, 2011, 2020-2021

Area	Year	Annual Wages
United States	2011	\$48,043
	2020	\$64,021
	2021	\$67,610
State of Hawaii	2011	\$42,473
	2020	\$57,934
	2021	\$59,644
Honolulu County	2011	\$44,233
	2020	\$60,749
	2021	\$62,291
Maui County	2011	\$38,114
	2020	\$50,868
	2021	\$53,409
Hawaii County	2011	\$36,595
	2020	\$48,690
	2021	\$51,497
Kauai County	2011	\$38,038
	2020	\$51,310
	2021	\$52,272

Source: U.S. DOL, Bureau of Labor Statistics, QCEW

Employment Outlook

Employment in Hawaii was forecasted to expand by 15.3 percent to nearly 699,000 between 2020 and 2030, according to the latest projections from the State Department of Labor and Industrial Relations. All major industries are expected to create jobs. Many of the sectors have rapid projected growth rates resulting from low employment levels in 2020 and the rebound from the pandemic-induced recession.

Industry Forecast

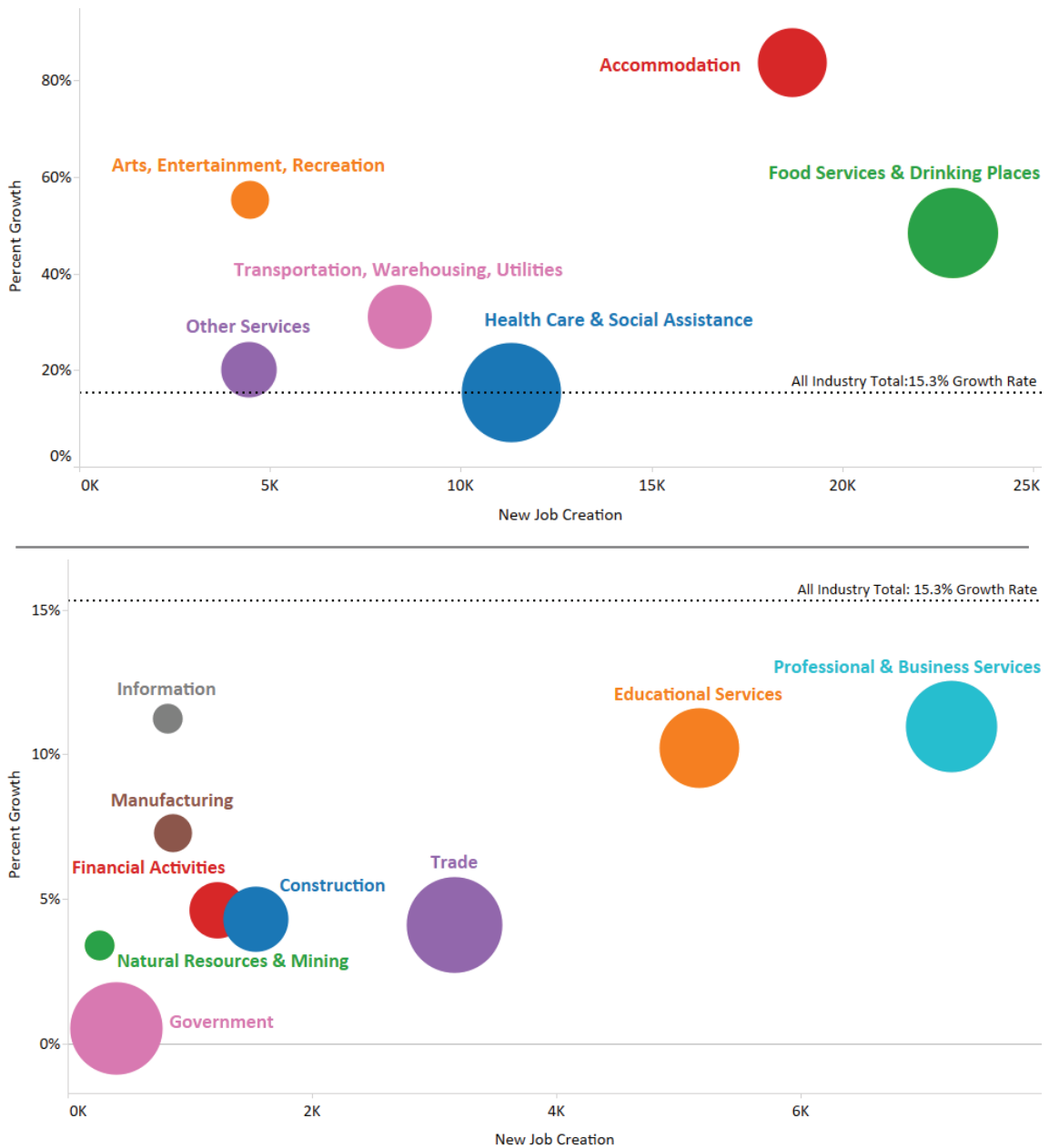
The main driver of this recovery is tourism, accounting for about 60 percent of the new jobs during this forecast period. With visitor arrivals reaching at least 94 percent of pre-COVID levels as of July 2022, the expectation is that Hawaii's economy is well on its way to a successful recovery. Visitor spending in July 2022 has surpassed the 2019 level by 14 percent.

Food services and drinking places, though only partially dependent on visitors, will generate 1 out of 4 jobs between 2020 and 2030 (Figure 27). Nearly 23,000 new jobs at restaurants and bars translates into over 48 percent growth over the 10-year period. This sector was the hardest hit when the pandemic prompted a shutdown of certain segments of the economy to prevent the spread of the coronavirus. When the restrictions were lifted, businesses had difficulty finding enough workers but now have the opportunity to establish a new normal in terms of improving efficiency.

The accommodation sector was also severely affected by the pandemic when tourism was virtually shut down by quarantine requirements instituted for incoming travelers. The visitor industry rebounded strongly due to pent up demand for vacations and the perception that Hawaii was a safe destination. Visitors from the U.S. mainland and some international travelers from Canada have boosted tourism numbers thus far in 2022. Once the Asian market comes back, tourism will get an additional lift. The hotels are expected to lead all industries with growth exceeding 83 percent over the forecast period while producing over 18,000 jobs.

The second fastest growing industry will be arts, entertainment, and recreation with 55 percent. Some sectors in this industry will benefit from increased tourism, such as museums, historical sights, and amusement parks. The largest component in the industry is other amusement and recreation including golf courses, fitness centers,

Figure 27. Projected Job Creation and Growth by Industry, State of Hawaii, 2020-2030
(size of bubble = 2030 employment)



Source: Hawaii DLIR WDD, Long-Term Projections 2020-2030

and bowling alleys which were affected by the government mandated closures of non-essential businesses. Now free of restrictions, the jobs in this segment of the economy will make a comeback.

The tourist reliant transportation, warehousing, and utilities industry will provide more than 8,000 new positions for a 31 percent increase during the 10-year projection period. The airlines will create over 2,400 of the new jobs to meet future demand for

international travel from Asia which has yet to resume. Another 2,300 jobs will be generated by scenic and sightseeing transportation companies which offer both land- and water-based tours. Transit and ground passenger transportation (taxi, ride sharing, and school buses) will produce about 2,100 jobs

Hawaii's largest industry, health care and social assistance, will expand by more than 11,000 jobs for a 15 percent gain. Over half, around 6,000 jobs, will be in ambulatory health care services such as doctor offices, outpatient care, dentist offices, home health care, and laboratories. About 3,400 more jobs will be produced in social assistance agencies, mostly individual and family services but also in child day care, vocational rehabilitation, and community food and housing and emergency services. Hospitals, predominantly privately owned, will increase by 1,400 positions.

Occupational Forecast

Using staffing patterns from the Bureau of Labor Statistics' employment and wage survey to convert the industry projections into occupational projections allows us to see what types of jobs will be available in the future regardless of industry. There will be at least 82,000 job openings each year during the forecast period, about 9,000 of which will be new jobs created by Hawaii employers. Additionally, for each job opening created by economic expansion, there will be another eight openings that occur as people transfer into different types of jobs or exit the labor force entirely.

All major occupational groups will display positive job growth from 2020 to 2030 as the economy emerges from the COVID-19 pandemic (Figure 28). Growth rates range from a low of 2.3 percent in architecture and engineering to a high of 46.5 percent in food preparation and serving. Five other occupational groups will exceed the overall statewide growth rate of 15.3 percent: personal care and service (34.0 percent); healthcare support (23.5 percent); building and grounds cleaning and maintenance (22.1 percent); transportation and material moving (20.5 percent); and arts, design, entertainment, sports, and media (19.4 percent).

The largest group, food preparation and serving, is the fastest growing and ranks first in terms of new job creation with almost 28,000 jobs. This group accounts for 30 percent of all projected new jobs and will also lead the State with the most job openings of about 15,800 per year. The job openings include new jobs plus openings that will occur when people leave or transfer out of one type of occupation into another type of occupation. The most prevalent jobs will be waiters and waitresses; restaurant cooks;

and fast food and counter workers. Besides the restaurant business, hotels also employ a lot of these food prep and serving related occupations.

Transportation and material moving jobs are anticipated to be the second-best job producing occupational group with over 9,000 new jobs and 20.5 percent growth. The annual job openings will average over 7,000 during the 10-year period. This group will benefit from higher visitor numbers as the airlines, tour companies, and ground transportation will provide the greatest boost for these occupations. Drivers transporting passengers in school buses, shuttle buses, taxis and ridesharing vehicles will see the most jobs created with over 1,200.

The third most job creation is in building and grounds cleaning and maintenance occupations with just under 7,100 for a 22 percent surge. The 5,300 annual job openings will be predominantly from transfers and exits. Hotels are the main job source for the maids and housekeeping cleaners which will be the most in demand for this group. Other popular jobs are landscaping and groundskeeping workers and janitors, both of which are primarily found in the administrative and support services industry.

Figure 28. Projected Job Creation, Growth, and Openings by Occupation Group, State of Hawaii, 2020-2030 (sorted by 2030 employment)

Occupation Group	2030 Employment	New Jobs Projected	Growth Rate	Total Annual Openings
Food Preparation & Serving	87,450	27,750	46.5%	15,810
Office & Admin Support	74,740	2,990	4.2%	8,350
Sales & Related	56,740	3,380	6.3%	7,660
Transportation & Material Moving	54,380	9,240	20.5%	7,160
Management	53,040	5,810	12.3%	4,700
Education, Training, Library	44,200	4,900	12.5%	4,330
Building & Grounds Cleaning/Maint	39,200	7,090	22.1%	5,330
Construction & Extraction	39,100	1,960	5.3%	3,840
Healthcare Practitioners & Technical	36,650	3,460	10.4%	2,190
Business & Financial Operations	34,570	2,990	9.5%	3,090
Healthcare Support	28,900	5,490	23.5%	3,680
Installation, Maintenance, Repair	26,210	2,770	11.8%	2,640
Personal Care & Service	21,680	5,500	34.0%	3,320
Protective Service	21,080	2,090	11.0%	2,430
Production	14,720	1,190	8.8%	1,730
Computer & Mathematical	13,640	1,590	13.2%	1,060
Community & Social Service	12,450	1,500	13.7%	1,310
Arts, Design, Entertainment, Sports, Media	11,460	1,860	19.4%	1,250
Architecture & Engineering	10,040	220	2.3%	740
Life, Physical, Social Science	8,170	380	4.8%	780
Farming, Fishing, Forestry	5,690	160	2.9%	890
Legal	4,860	320	7.0%	350

Source: Hawaii DLIR WDD, Long-Term Projections 2018-2028

Best Job Opportunities

Using the projected growth of detailed occupations and incorporating median wages to determine the best job opportunities is helpful in many ways. It can guide jobseekers in their job search or career choices, as well as aid educational and training providers in developing relevant training programs. The criteria to produce this list of best job opportunities is above average employment growth rate during 2020-2030 (15.3 percent or higher); median annual wages of \$47,700 or higher in 2021; and the most projected annual job openings between 2020 to 2030.

Table 1 contains the occupations with at least 100 total annual openings. Each projected opening is an opportunity for someone to enter the occupation; it includes those due to projected growth plus others created by separations - such as when people retire, switch careers, and get promoted from line level staff to a management level position.

Of the 27 occupations, seven are in the management field. Business and financial operations occupations was also well represented in the list with four.

Fifteen of the State's future job opportunities require a bachelor's degree. However, nine of these occupations do not require anything more than a high school education and one had no educational requirement at all.

Included in the table is the automation exposure score, which helps to identify occupations and tasks that are most likely to be impacted by 21st century automation technologies. The exposure score ranges from 1 (least exposure to automation) to 10 (most exposure to automation). A high score does not necessarily mean that the occupation is in danger of disappearing. For many occupations, automation will increase productivity so workers have time to do additional tasks and will require new skills to use the new automation processes.

Seven of the best jobs have a score over five and are at higher risk of automation technologies – many of these don't require higher education. Two jobs requiring a Bachelor's degree will be highly impacted by new technology: aircraft pilots and clinical lab technologists. At the other end of the spectrum, 15 jobs have a score below five – these typically require college degrees, with some exceptions such as self-enrichment teachers and fitness trainers.

Table 1. Best Job Opportunities, State of Hawaii, 2020-2030 (sorted by total annual openings)

OCCUPATION	TOTAL ANNUAL OPENINGS	ANNUAL GROWTH OPENINGS	GROWTH RATE	2030 EMPLOYMENT	2021 MEDIAN WAGE	AUTO-MATION RISK	EDUC REQ
General & Operations Mgrs	910	140	16.0%	10,110	\$96,060	3	Bach
General Maint & Repair Workrs	800	160	25.4%	7,640	\$47,760	7	HS
Sales Reps of Services	400	60	19.7%	3,350	\$60,330	N/A	HS
Self-Enrichment Educ Teachers	380	70	31.7%	3,070	\$47,730	2	HS
Management Analysts	350	50	16.0%	3,610	\$80,700	1	Bach
Supervisors of Transportation & Material Moving Workers	330	40	17.0%	2,890	\$49,950	N/A	HS
Bus Drivers, Transit & Intercity	300	60	31.9%	2,410	\$61,920	9	HS
Financial Managers	300	70	23.4%	3,650	\$103,030	3	Bach
Market Research Analysts & Marketing Specialists	250	60	36.6%	2,290	\$60,360	2	Bach
Fitness Trainers & Aerobics Instructors	230	50	54.1%	1,400	\$47,910	4	HS
Food Service Managers	230	50	35.5%	1,910	\$72,870	6	HS
Software Developers, Quality Assurance Analysts & Testers	220	50	25.5%	2,540	\$97,180*	4	Bach
Massage Therapists	210	60	49.7%	1,690	\$49,080	5	PS
Medical & Health Services Mgrs	210	60	31.6%	2,340	\$121,260	3	Bach
Supervisors of Housekeeping & Janitorial Workers	200	30	24.5%	1,660	\$48,880	5	HS
Administrative Services & Facilities Managers	190	30	15.8%	2,150	\$94,050*	4	Bach
Airline Pilots, Flt Engrs	180	30	26.3%	1,540	\$202,180†	9	Bach
Sales Managers	170	30	15.9%	1,810	\$103,030	1	Bach
Musicians & Singers	140	20	25.9%	1,100	\$47.15/hr	6	None
Aircraft Mechanics, Svc Techs	140	30	24.2%	1,490	\$77,950	6	PS
Coaches & Scouts	140	30	35.1%	970	\$49,920	2	Bach
Substance Abuse, Behavioral, Mental Health Counselors	130	30	25.6%	1,250	\$51,060	3	Bach
Chefs & Head Cooks	120	30	55.0%	880	\$78,530	5	HS
Convention, Event Planners	120	30	48.6%	960	\$60,090	3	Bach
Training & Developmnt Spec	110	20	17.5%	1,070	\$61,850	1	Bach
Clinical Lab Technologists/Techs	110	20	16.4%	1,440	\$60,850	7	Bach
Computer & Info Systems Mgrs	100	20	15.4%	1,250	\$124,500	3	Bach

Data Sources:

Openings, Growth, Employment: DLIR Long-Term Projections 2020-2030

Median wage: USDOL BLS Occupational Employment & Wage Statistics; wage substitutions: *Statewide 2020, †National 2020.

Automation risk: C2ER, The Council for Community and Economic Research; scores range from 1 (low risk) to 10 (high risk).

Educational requirements: USDOL BLS. HS = High School, PS = Post-secondary, no degree