

A Comprehensive Economic Analysis of Hawaii's Work and Labor Force

Hawaii Labor Market Dynamics 2017

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The report is available at:
<https://www.hiwi.org/admin/gsipub/htmlarea/uploads/HawaiiLaborMarketDynamics2017.pdf>

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Executive Summary

This report provides a current overview of the local labor market and economy to inform those developing workforce development policies and making workforce investment decisions. The following are some of the significant findings for 2017:

Labor Force

- Among the 50 states, Hawaii ranked 31st highest in terms of labor force growth, expanding by 0.2 percent to 685,400.
- The percentage of older workers in Hawaii 55 years and older expanded the most, and now makes up more than a quarter of the workforce.
- Labor force participation rose for the fourth year in a row, increasing to 62.6 percent which is slightly below the national rate of 62.9 percent.
- Hawaii's unemployment rate decreased by 0.5 percentage point to 2.4 percent, well below the U.S. rate of 4.4 percent, and lowest in the nation. Unemployment in all four counties also dropped - Honolulu County posted the lowest rate (2.2 percent), followed by Kauai County (2.4 percent), Maui County (2.5 percent), and Hawaii County (2.8 percent).
- Based on U.S. Census data for 2012-2016, unemployment rates for four subgroups within the state are as follows: veterans (4.3 percent); Native Hawaiians (10.7 percent); individuals with a disability (12.1 percent); and individuals below poverty level (21.9 percent)

Jobs

- Hawaii's non-farm job count improved by 1.0 percent to 652,700, the seventh consecutive year of increases following the recession. All four counties reported job gains. Overall, the economy regained 65,800 jobs since bottoming out in 2010.
- Five of the ten major industries posted job gains from 2007 to 2017. Three industries grew at faster than average rates during the ten-year period: education and health services; leisure and hospitality; and professional and business services.
- According to the Local Employment Dynamics program's Quarterly Workforce Indicators (QWI) data, from the second quarter of 2007 to the second quarter of 2017, the number of hires was seven percent lower, due to a significant dropoff during the recession, and separations were also down by more than five percent.

- Hawaii's data on Job-to-Job Flows from second quarter 2006 to second quarter 2016 shows a significant decline during the recession. Employment flows reveals some fluctuation between hires and separations to and from persistent nonemployment.
- The volume of online job advertisements for the state far outnumber the amount of candidates available for work and the number unemployed.

Wages

- In 2017, Hawaii workers earned \$20.02 per hour compared to \$18.12 per hour nationally, based on median wages collected in the Occupational Employment Statistics (OES) program. At the county level, Honolulu County employees averaged \$20.62, followed by Maui County at \$19.37. Kauai County workers took home \$18.78 and Hawaii County trailed all counties with earnings of \$18.41 per hour.
- Annual wages calculated by the Quarterly Census of Employment and Wages (QCEW) for the state advanced by 27.5 percent to \$48,177 from 2006 to 2016. Private sector employees averaged \$45,545 annually while government workers took home \$59,467 in 2016.
- Average monthly earnings rose by 29.1 percent for new hires and 25.5 percent for stable employees from 2007 to 2017, according to QWI data. In 2017, stable workers in more than half of Hawaii's 20 key industries fared well as wages outpaced the state's monthly average of \$4,024.

Job Outlook

- The pace of job growth is expected to be better over the short-term with 0.9 percent average annual growth through 1st Quarter 2019 as the economy continues to expand, compared to the long-term period with 0.6 percent average annual growth through 2026. Industries with the most job growth will be: leisure and hospitality; education and health services; and trade, transportation, and utilities.
- From 2014 to 2024, job advances of 8.5 percent in Hawaii County will lead all counties followed by Kauai County with 8.0 percent growth, and Maui County with an expected gain of 7.3 percent. Honolulu County will post the slowest growth rate of 5.7 percent, however, almost two thirds of all openings created statewide will originate from this county.

Introduction

The Hawaii Labor Market Dynamics report focuses on significant labor market statistics and trends that affected Hawaii's economy in 2017. This report looks at the dynamics occurring in the labor force, jobs, and earnings over the past ten years, and provides both short-and long-term employment forecasts for the state. Whenever feasible, comparisons are made between the state and the nation as well as the state's counties.

To produce a more comprehensive analysis, multiple sources were utilized to analyze Hawaii's workforce information. Programs administered by the Bureau of Labor Statistics (BLS) through state partnerships produce employment and wage data for the nation as well as for each of the 50 states. This includes data from the Local Area Unemployment Statistics (LAUS), the Quarterly Census of Wages and Employment (QCEW), the Current Employment Statistics (CES), and the Occupational Employment Statistics (OES) program. Industry and occupational employment projected for the short-term (2 years) as well as for the long-term (10 years) were generated by the Research and Statistics office in cooperation with the Projections Management Partnership. In addition, data extracted from the Local Employment Dynamics (LED) program which is part of the U.S. Census Bureau supplies more detailed socio-economic information, and HireNet Hawaii generates real-time data on jobs.

The workforce and economic analyses provided in this report supports Hawaii's workforce information system as directed by the U.S. Department of Labor's Employment and Training Administration.

As we continually seek to improve upon the quality of this report, we welcome any suggestions or comments.

Labor Force

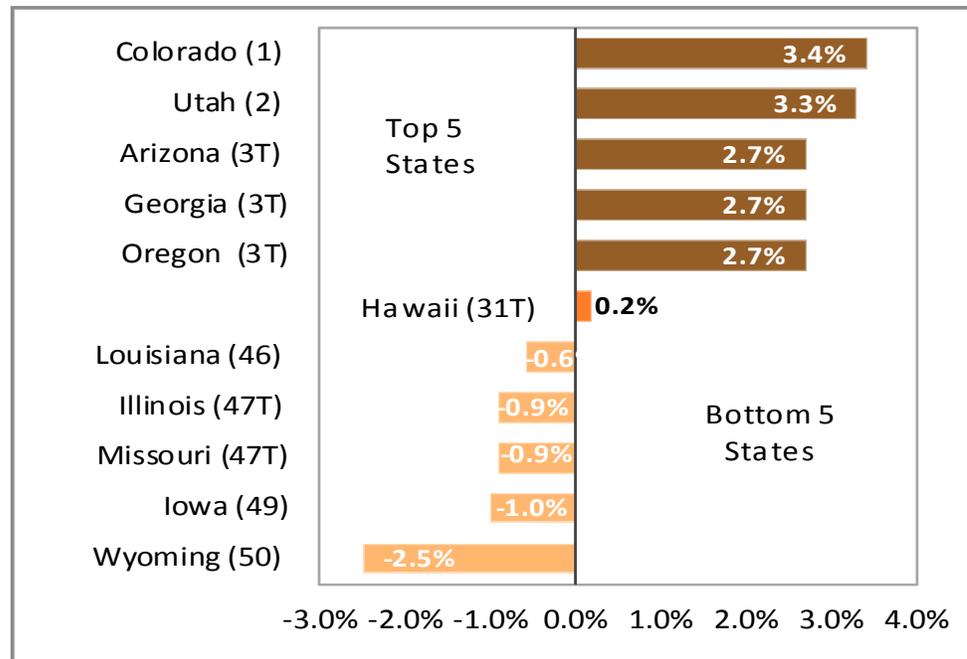
Hawaii’s civilian labor force reached a new high of 685,400 in 2017. Although this marks the fifth consecutive year of growth, the current annual increase of 0.2 percent was much lower than the U.S. increase of 1.3 percent. Both components – the number of unemployed and the total number of employed persons improved from year-ago totals. The employment count added 5,200 rising to 669,250, while the number of unemployed fell to 16,200, dropping below 20,000 for the first time since the pre-recession period in 2007.

Hawaii’s labor force expands for the 5th straight year

Hawaii’s 0.2 percent growth in the civilian labor force from 2016 to 2017 ranked near the bottom third of the 50 states, tied for 31st with Rhode Island (Figure 1). Colorado surpassed all states with an expansion rate of 3.4 percent. At the opposite end, of the 13 states that reported declines, Wyoming reported the largest annual drop of 2.5 percent.

Over the past 10 years, Hawaii’s labor force posted a net increase of approximately 47,000 for a gain of 7.4 percent. In comparison, the nation expanded its labor force by 5.0 percent during

Figure 1. Civilian Labor Force Growth, Hawaii vs. Other States, 2017

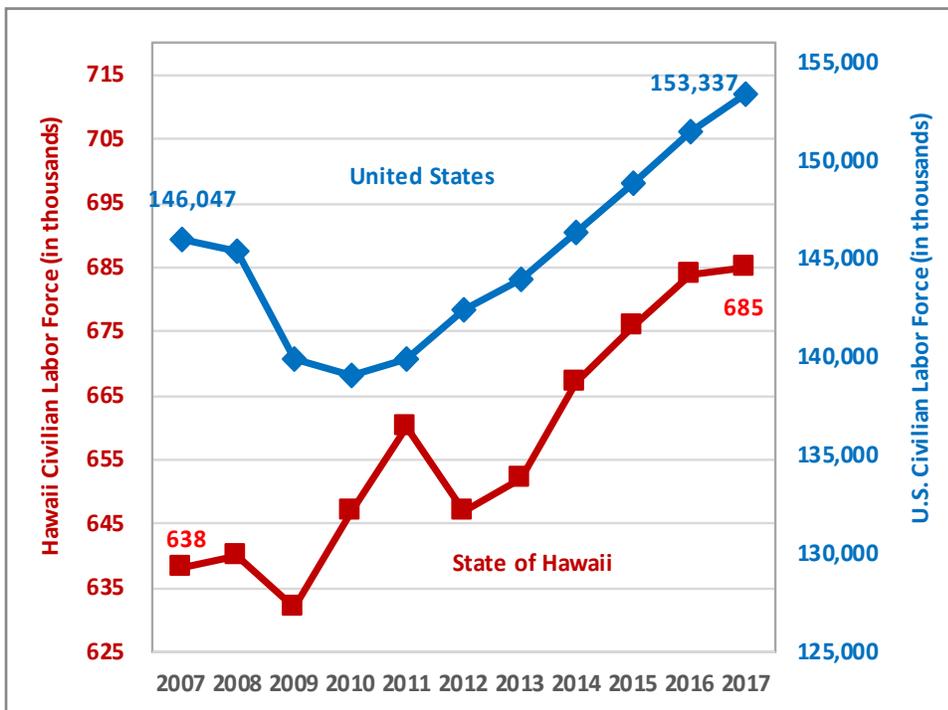


Source: U.S. Bureau of Labor Statistics

the same decade. From 2007 to 2008, prior to the recession, Hawaii’s economy, edged up slightly by 0.2 percent (Figure 2). The economic impact of the Great Recession in 2009 drove Hawaii’s labor force down by 1.3 percent. This drop was fairly steep relative to the other states, accounting for the fifth largest percentage loss in the nation, and placed Hawaii in a tie for 45th place out of 50 in terms of over-the-year change. During the next two years, the state’s civilian labor force turned around and grew by the fourth fastest rate in 2010 with a gain of 2.5 percent, and climbed another 2.0 percent in 2011, ranking fifth fastest in the nation. Unfortunately, the labor force contracted in 2012 and Hawaii tied with Oregon for 48th place in terms of over-the-year change, dropping by 2.0 percent. Similar to the nation, Hawaii’s civilian labor force remained relatively stagnant in 2013 with an increase of 0.7 percent, ranking 10th among the states in terms of yearly change. Growth in Hawaii’s labor force picked up to 2.3 percent the following year ranking the state third fastest among all states. However the pace tapered off from 2015 to 2017, trailing the nation’s rate of advancement.

**Growth in Hawaii’s
labor force trailed
the nation**

Figure 2. Civilian Labor Force, Hawaii vs. U.S., 2007-2017



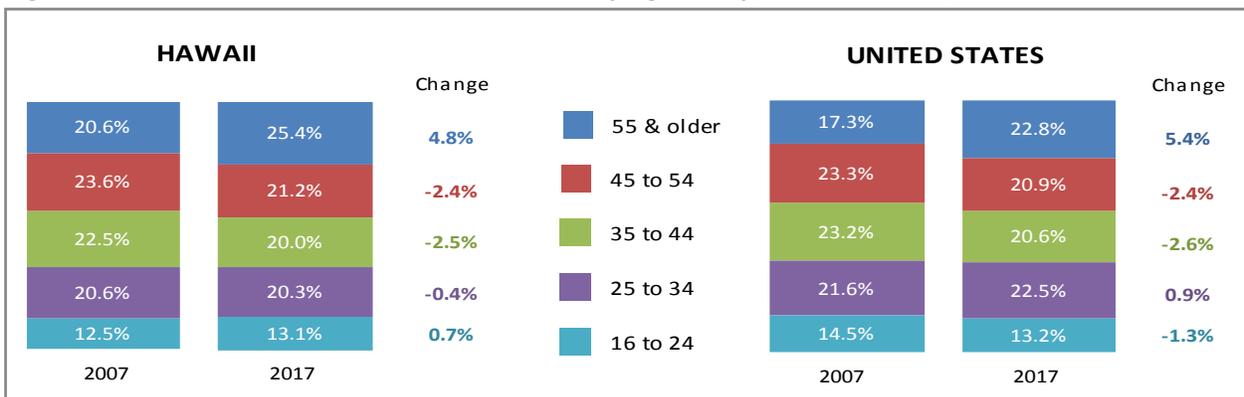
Source: U.S. Bureau of Labor Statistics

Taking a closer look at the breakout of the civilian labor force by age group for both Hawaii and the nation between 2007 and 2017 (Figure 3), certain trends were apparent:

Civilian labor force grows older

- The youngest workers - those between 16 to 24 years old constitute a similar share for both Hawaii and the nation. Approximately 13 percent of the labor force consists of individuals in this category.
- Those classified in the prime working age group - 25 to 54 years old, declined from 2007 to 2017. In 2007, two-thirds of the labor force was between the age of 25 to 54 for the U.S. as well for Hawaii. By 2017 Hawaii's percentage fell to 61.5 percent, while the U.S. was at 64.0 percent.
- As the population continued to mature, those aged 55 years and older expanded. In 2017, over one-quarter of Hawaii's civilian labor force fell in this older age segment. Meanwhile in the U.S., this age group increased by 5.4 percent to 22.8 percent over the decade.

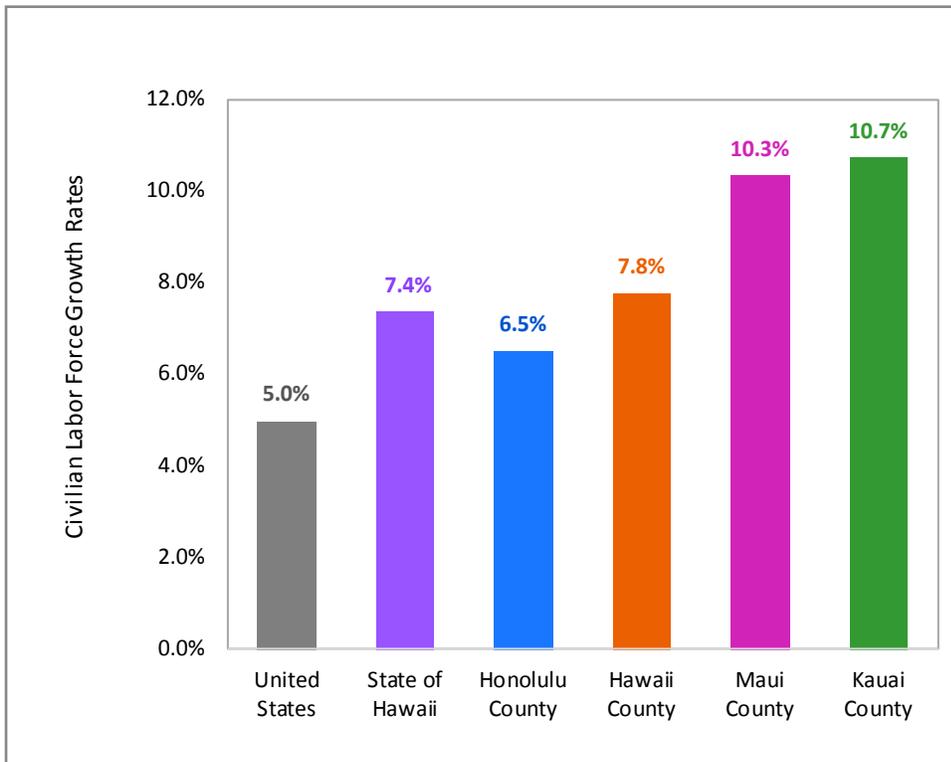
Figure 3. Percent Distribution of the Labor Force by Age Group, Hawaii vs. U.S., 2007 and 2017



Source: U.S. Bureau of Labor Statistics.

From 2007 to 2017, Kauai County’s civilian labor force recorded the greatest increase among the counties with an expansion rate of 10.7 percent (Figure 4). Maui County followed closely with 10.3 percent growth, Hawaii County was next fastest with a gain of 7.8 percent, both outpacing the state gain. Only Honolulu County lagged behind the state with growth that amounted to 6.5 percent over the same period.

Figure 4. Civilian Labor Force Growth Rates, 2007-2017



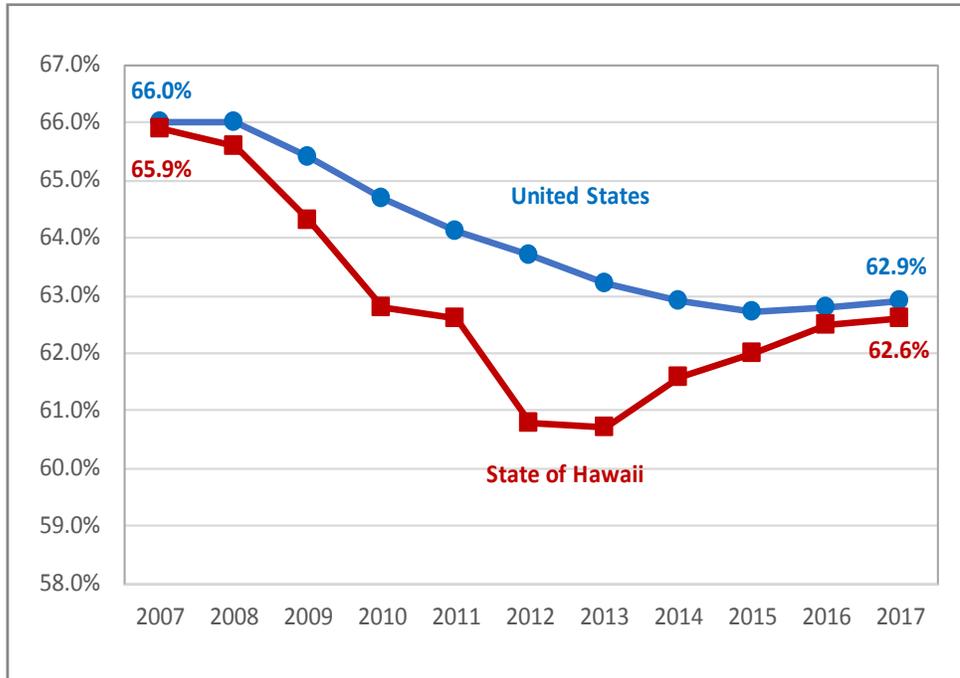
Source: U.S. Bureau of Labor Statistics.

Labor Force Participation Rate

The labor force participation rate is the proportion of an area’s working age population that is employed or actively looking for work. In 2017, Hawaii’s labor force participation rate inched upward to 62.6 percent from 62.5 percent in 2016. After declining sharply from 2007 to 60.7 percent in 2013 following the economic slowdown, the statewide labor force participation ratio has improved for four straight years (Figure 5). This brings Hawaii’s participation rate closer to the national rate of 62.9 percent in 2017.

Labor force participation in Hawaii edges closer to the United States

Figure 5. Civilian Labor Force Participation Rates, Hawaii vs. U.S., 2007-2017

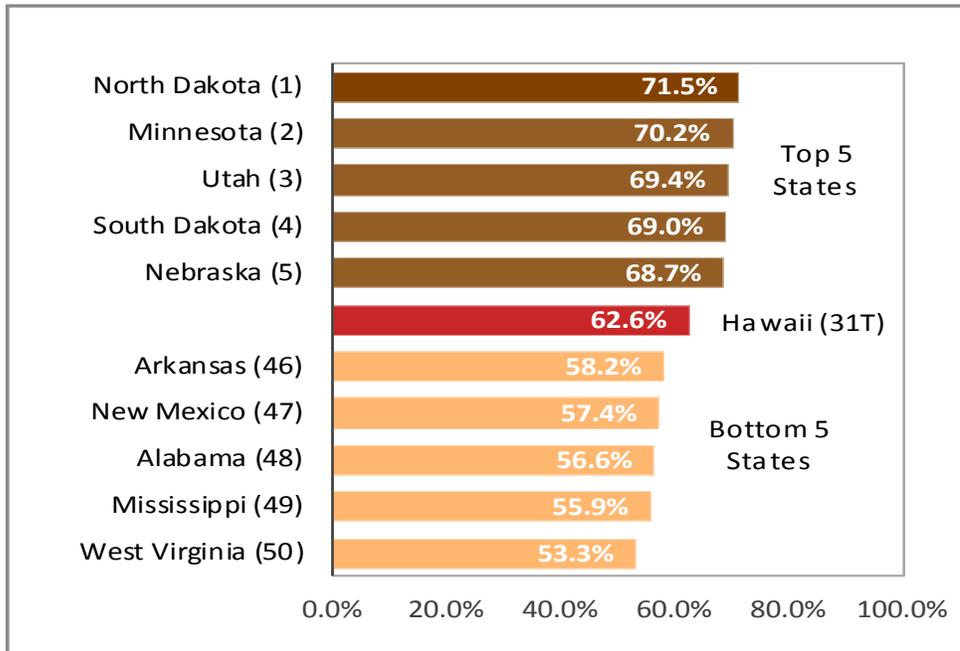


Source: U.S. Bureau of Labor Statistics.

The 2017 labor force participation rates for all states ranged from a high of 71.5 percent for North Dakota to 53.3 percent posted by West Virginia (Figure 6). Hawaii tied with Pennsylvania for 31st highest, nearly identical to the previous three years, but well above the 2012 and 2013 ranks which dropped the state’s ranking to 39th and 38th respectively.

State's labor force participation rate ranks 31st in the Nation

Figure 6. Civilian Labor Force Participation Rates, Hawaii vs. Other States, 2017



Source: U.S. Bureau of Labor Statistics

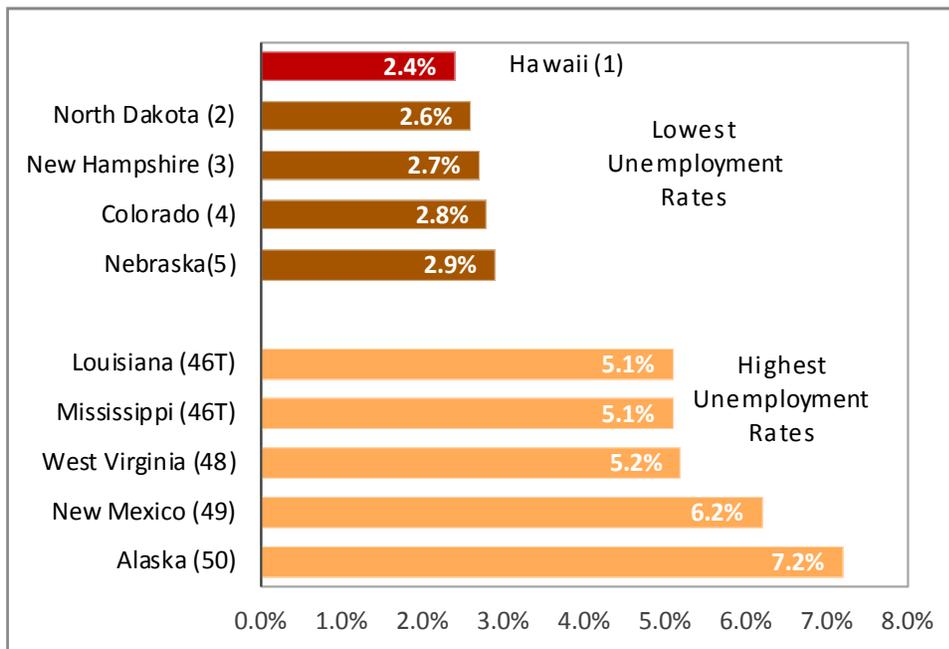
Unemployment Rate

As the state's job market tightened further in 2017, the unemployment rate fell by 0.5 percentage points to 2.4 percent from the 2016 ratio of 2.9 percent. This marks a new historical low for the state. In relation to the U.S. rate, Hawaii's ratio remained 2 percentage points lower than the 4.4 percent posted for the nation.

**Unemployment rate
lowest in the Nation**

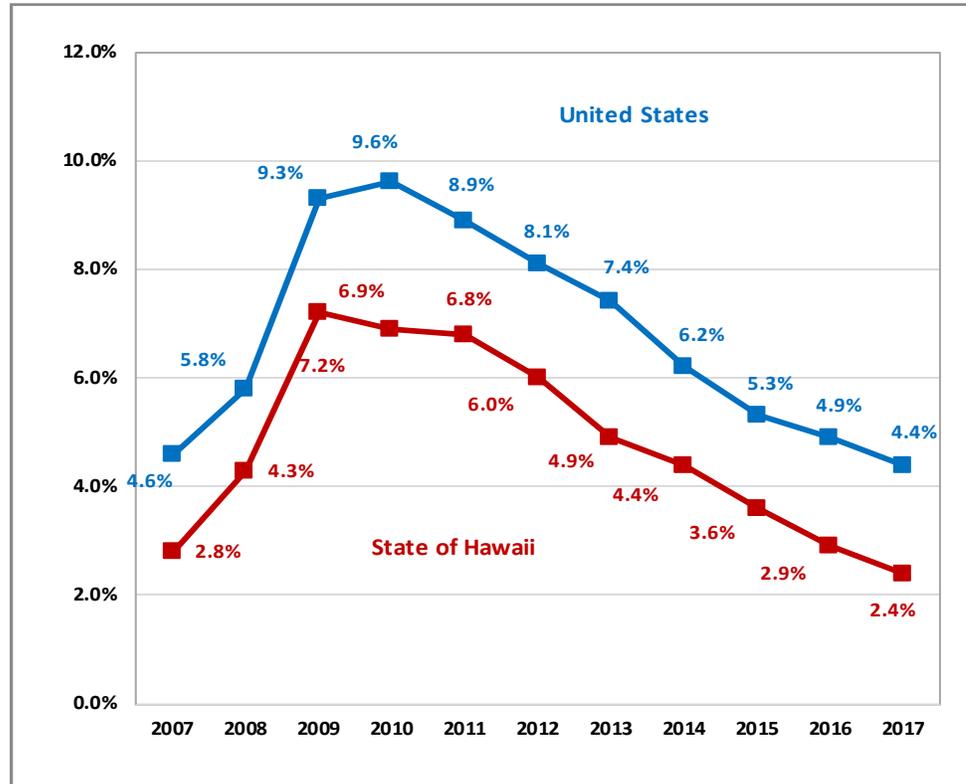
In 2017, and in 2016 as well, Hawaii recorded the lowest unemployment ratio among all the 50 states (Figure 7). Only a handful of states - North Dakota at 2.6 percent, New Hampshire at 2.7 percent, Colorado at 2.8 percent, and Nebraska at 2.9 percent, averaged an unemployment rate below 3 percent in 2017. At the other end of the spectrum, Alaska topped all states with a ratio of 7.2 percent.

Figure 7. Unemployment Rates, Hawaii vs. Other States, 2017



Source: U.S. Bureau of Labor Statistics

Figure 8. Unemployment Rates, Hawaii vs. U.S., 2007-2017



Source: U.S. Bureau of Labor Statistics

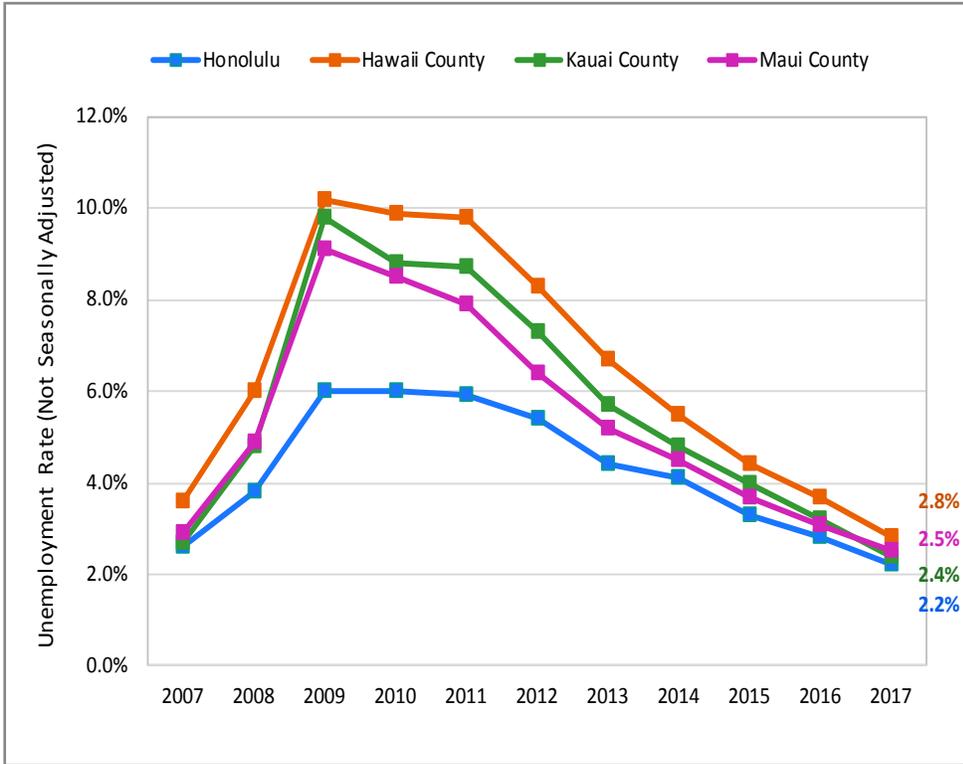
Throughout the past ten years, Hawaii’s unemployment rate has remained consistently lower than the national rate (Figure 8). The gap has ranged from at least 1.5 percentage points (in 2008) to 2.7 percentage points (in 2010) below the national rate. As a result, Hawaii was among the 10 states with the lowest unemployment ratio in seven out of the last 10 years. Hawaii was nudged out of the Top 10 in 2008 and also in 2009 when the rate climbed to 7.2 percent but did retain the number nine spot in 2010. After falling to number 13 in 2011 and to 12 in 2012, Hawaii’s rate has ranked in the top 10 over the last five years.

Although the state’s unemployment rate has been relatively low, among the counties, unemployment has been uneven. Since more opportunities normally exist in urban areas, the unemployment rates in these areas generally tend to be lower than those of more rural regions.

Counties post lower unemployment rates

In 2017, the over-the-year drop in the unemployment ratio of the four counties varied from 0.6 to 0.9 percentage point. (Figure 9). Honolulu MSA posted the lowest unemployment ratio of 2.2 percent, edging downward by 0.6 percentage point, followed by Kauai County which decreased by 0.8 percentage point to 2.4 percent. With a decline of 0.8 percentage point from a year ago, Maui County's ratio fell to 2.5 percent. Hawaii County posted the highest rate of 2.8 percent but it posted the greatest drop of 0.9 percent and marks a vast improvement from the height of the recession when the ratio jumped to 10.2 percent in 2009.

Figure 9. Unemployment Rates, Counties of Hawaii, 2007-2017



Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, LAUS program.

In direct correlation to the state's unemployment rate, from 2007-2017, Honolulu MSA posted the lowest rate. Even throughout the economic slowdown from 2008 to 2010, the rate increase of 2.2 percentage points was the smallest among the counties. In fact, the annual unemployment rate of 2.2 percent in 2017, has not been this low since 1991 when the ratio fell to 2.1 percent.

From 2007 to 2017, Maui County's unemployment ratio has generally ranked second lowest of the counties. Even during the recession, although Maui's unemployment rate spiked to 9.1 percent in 2009, this still fell below Kauai and Hawaii County's rate. Since then, the ratio has continued to improve.

After hovering near the state's unemployment ratio prior to the recession, Kauai County's unemployment rate climbed the fastest, with a gain of 5.0 percentage points from 2008 to 2009. After peaking at 9.8 percent in 2009, the ratio has declined by 7.4 percentage points over the last eight years.

At 10.2 percent in 2009, Hawaii County posted the highest unemployment rate of all the counties during the recession period. In fact, over the past 10 years, Hawaii County's ratio has exceeded the other counties every year. Following the same trend as the other counties, after two years of increases from 2008 to 2009, the ratio finally edged downward to 9.9 percent in 2010. This momentum has continued since that time, lowering the county rate down to 2.8 percent in 2017.

Though each county averaged under 3.0 percent unemployment in 2017, slight improvement remains possible in 2018. So far the unemployment rates for January through August 2018 are at least equal to or lower than the 2017 rates across all counties except for three months in Kauai County and a modest increase of 0.2 percentage point in August for Hawaii County.

2018 unemployment rates for counties remains low

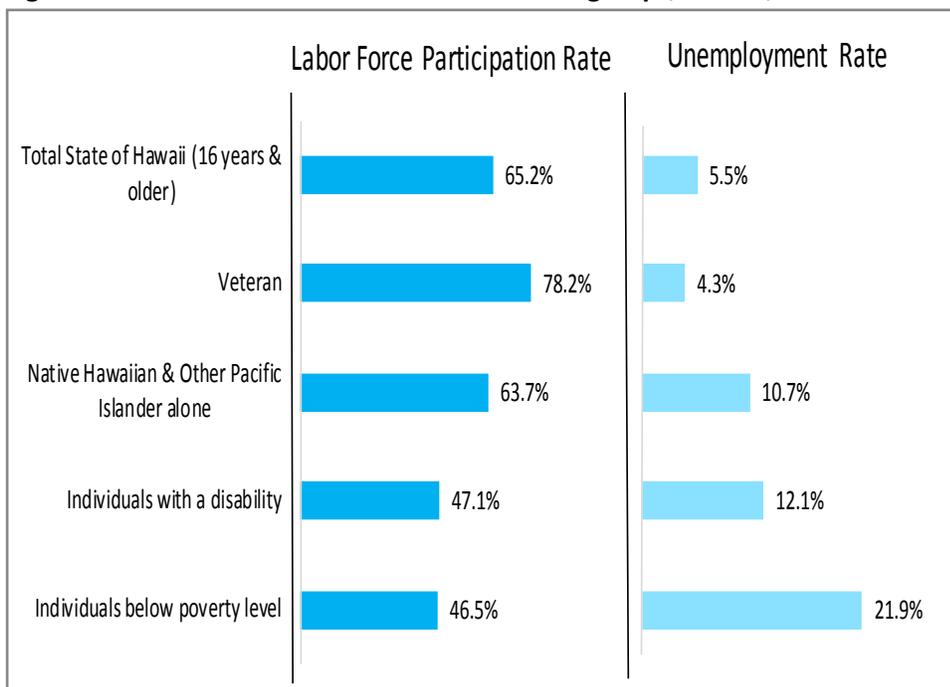
Unemployment Rate of Subgroups

As the state's unemployment rate hovers around record lows, employers clamor for workers. But how well have different segments of the state's population fared in this latest economic boom? The following chart uses survey data from the U.S. Census Bureau and examines four different subgroups within Hawaii's population.

The data provides mixed results. According to the labor force statistics which includes 2012 to 2016, veterans have been the most successful in finding employment (Figure 10). More than three-quarters of this group participated in the labor force, and veterans posted an unemployment rate of 4.3 percent, even lower than the state's rate of 5.5 percent. Approximately 10.7 percent of Native Hawaiians did not work, almost double the rate of unemployment experienced statewide. Labor force participation totaled less than 50 percent for two groups – individuals with a disability and those with incomes below poverty level. The unemployment rate for persons with a disability stood at 12.1 percent, while the unemployment rate for individuals below the poverty level was significantly higher at 21.9 percent.

More than three-fourths of veterans participated in the labor force

Figure 10. Labor Force Statistics for Selected Subgroups, Hawaii, 2012-2016



Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Table S2301, C18120, data as of 08/27/18.

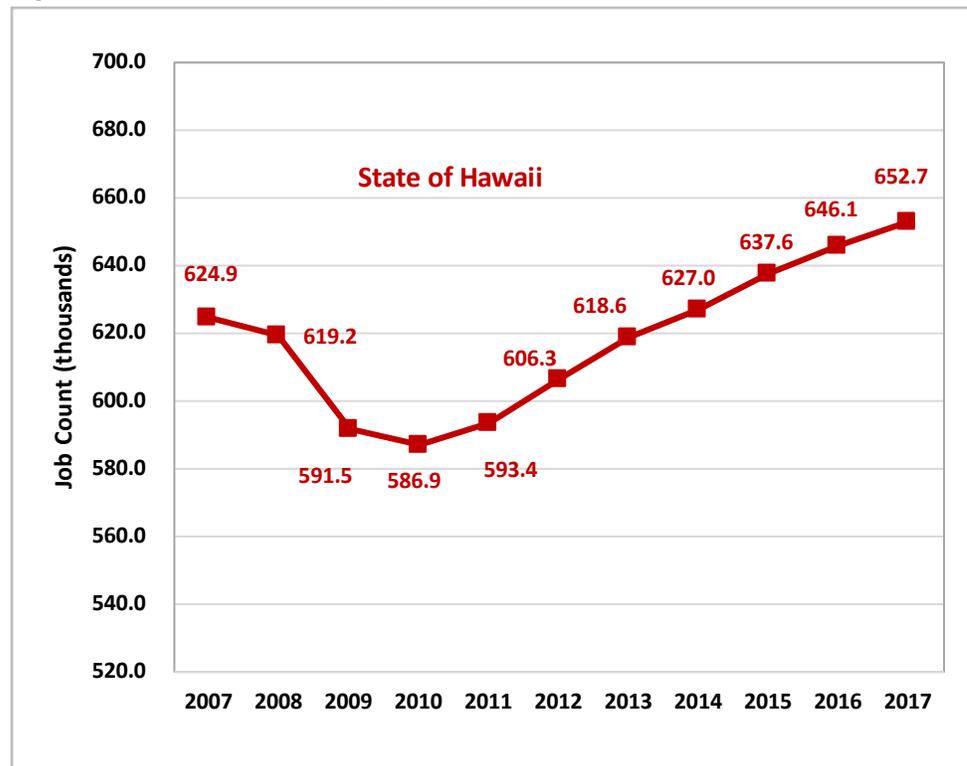
Jobs

The state's non-farm job count rose by 6,600 to a new high of 652,700 in 2017 (Figure 11). However, with the increase of 1.0 percent over the previous year, this was the smallest percentage increase since the job count began recovering in 2011. Meanwhile, the U.S. advanced by 1.6 percent and was preceded by growth of 1.8 percent during the previous year.

Job count rose for the 7th consecutive year

Over the past 10 years, Hawaii's job count has grown by 27,800 jobs for an increase of 4.4 percent. The 2017 total of 652,700 jobs continued to set a new high for the fourth year in a row, exceeding the 2016 figure of 646,100. Preceding the slowdown from 2008 to 2010, the state's economy was booming following a succession of widespread gains. A slight decline in 2008 was followed by a large drop of 4.5 percent in 2009. Non-farm employment continued to spiral downward in 2010 to 586,900. Since bottoming out in 2010, the state's economy started to

Figure 11. Non-Farm Job Count, Hawaii, 2007-2017



Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, CES program.

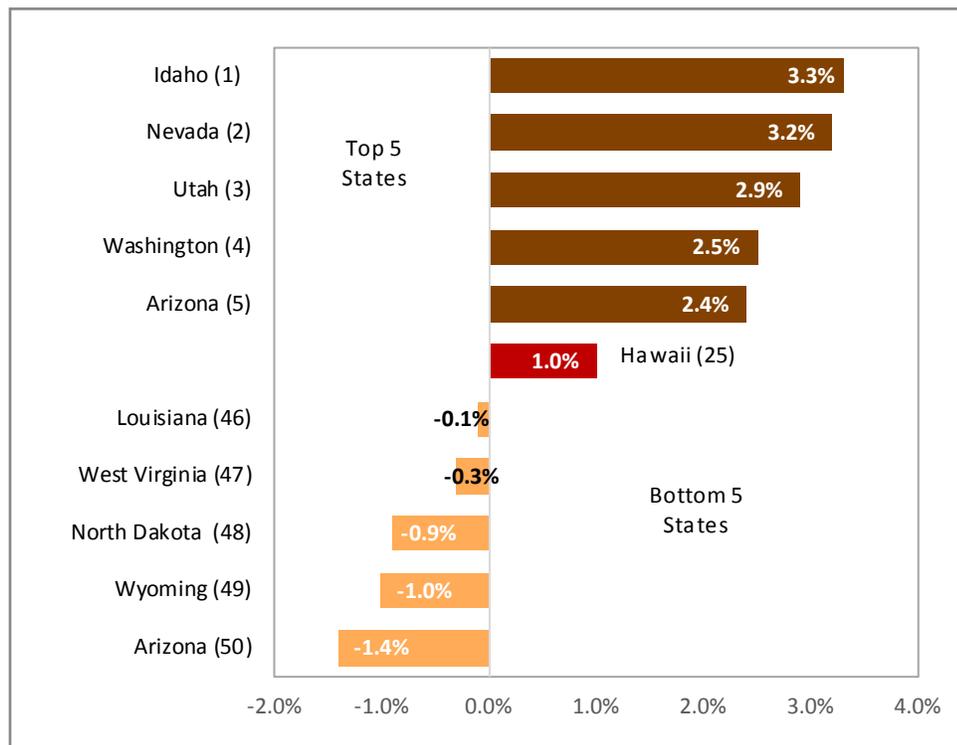
recover in 2011 and has added jobs ever since. Based on 2017 figures, Hawaii along with 43 other states or more than four-fifths of the 50 states surpassed their 2007 pre-recession job totals.

In relation to the rest of the nation, Hawaii’s rate of expansion fell directly in the middle, with a ranking of 25 for the second straight year (Figure 12). Idaho and Nevada outpaced all states and forged ahead by 3.3 percent and 3.2 percent respectively. Only five states reported job losses. Alaska suffered the greatest decline of 1.4 percent, followed by Wyoming with a 1.0 percent drop, North Dakota was down by 0.9 percent, West Virginia fell by 0.3 percent and Louisiana’s job loss totaled 0.1 percent.

Pace of job growth slower for Hawaii compared to the Nation

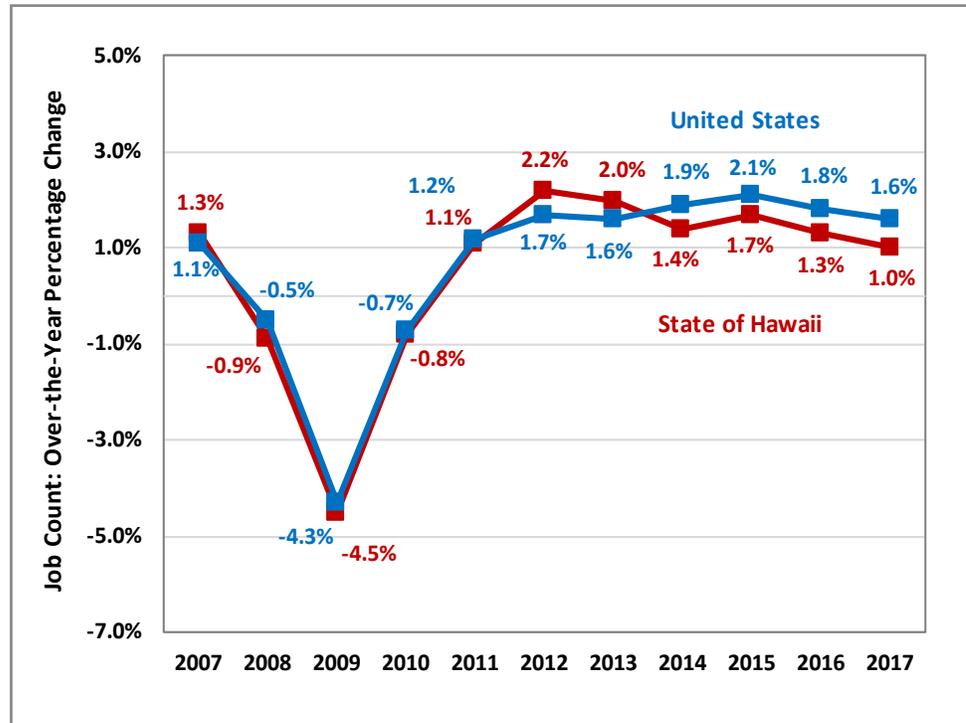
Prior to 2008, Hawaii’s job growth outpaced the nation. During the downturn, from 2008 and into the early part of the recovery, up until 2011, Hawaii’s trend paralleled the nation. Over the last six years, although the job count has continued to expand for both Hawaii and the U.S., Hawaii advanced faster in 2012 and 2013, then trailed the nation from 2014 through 2017 (Figure 13).

Figure 12. Non-Farm Over-the-Year Job Growth, Hawaii vs. Other States, 2017



Source: U.S. Bureau of Labor Statistics

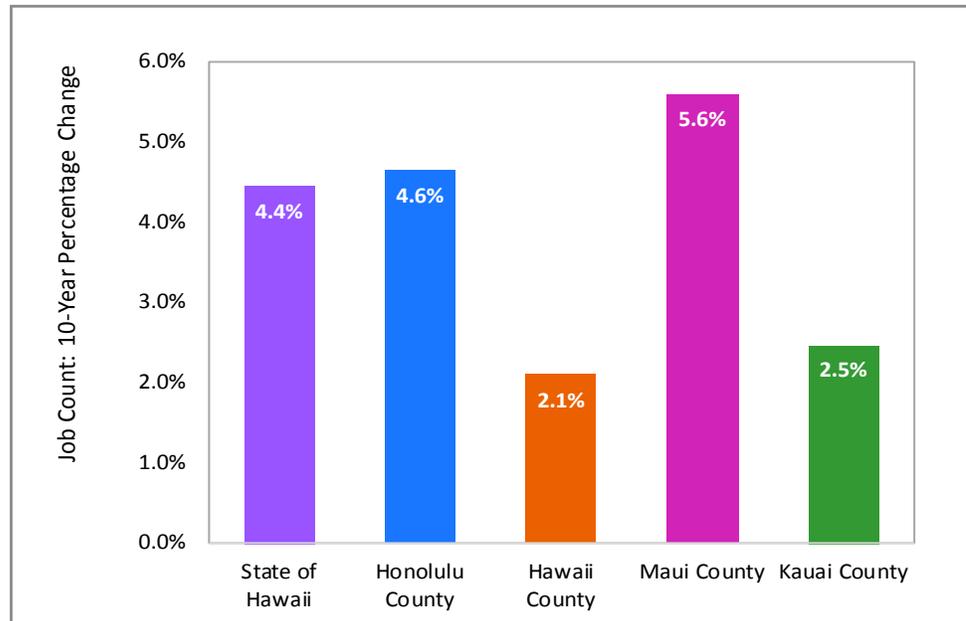
Figure 13. Job Count Over-the-Year Percent Change, Hawaii vs. U.S., 2007-2017



Source: U.S. Bureau of Labor Statistics; Hawaii State Department of Labor & Industrial Relations, Research & Statistics Office, CES program.

So far, given the available data for January through August 2018, Hawaii’s job count is 1.7 percent higher than the same 8-month period in the prior year. Meanwhile, the nation’s non-farm count is averaging an increase of 1.6 percent over the same time frame between 2017 and 2018.

Figure 14. Job Count 10-Year Percent Change, Counties of Hawaii, 2007-2017



Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, CES program.

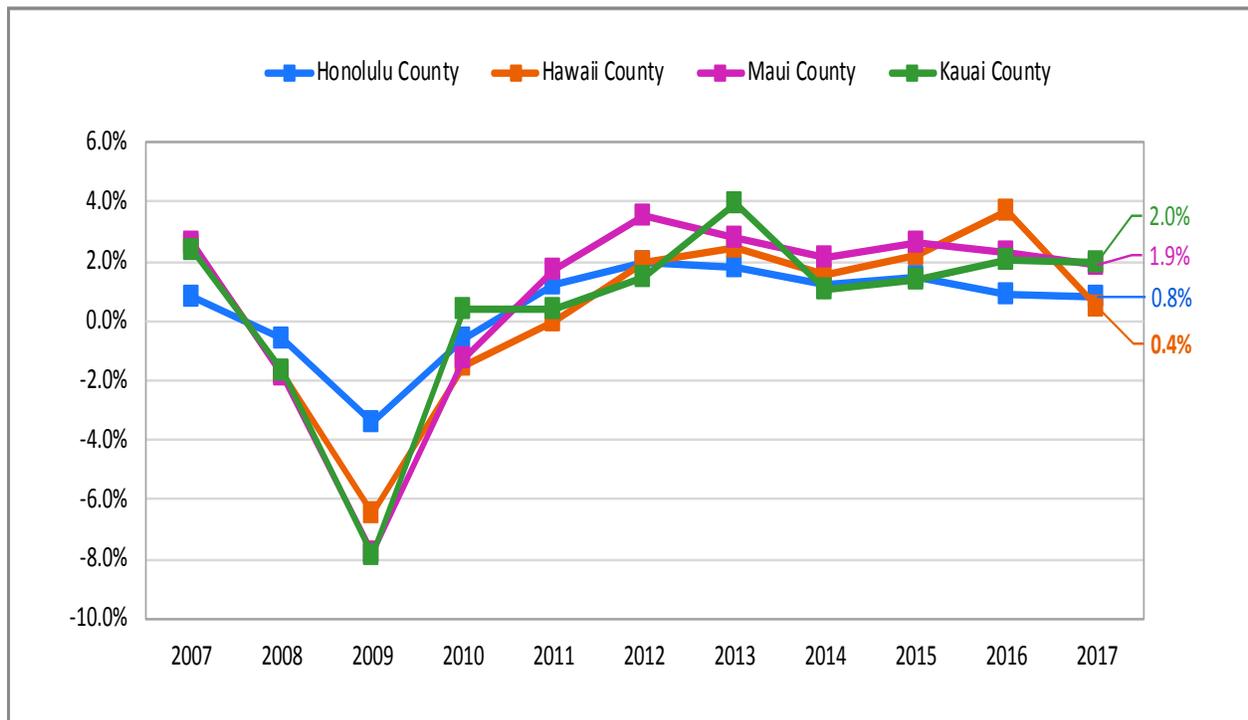
While the state’s job count expanded by 4.4 percent from 2007 to 2017, two of the four counties generated gains in non-farm payroll jobs that exceeded the statewide growth rate (Figure 14). Maui County forged ahead with growth of 5.6 percent. Honolulu County followed with a gain of 4.6 percent. Kauai County ranked third with 2.5 percent growth while Hawaii County was up by 2.1 percent, trailing the other counties.

County job growth follows state trend

Between 2007 and 2017, over-the-year growth rates for the Counties generally followed the same trend as the nation and the state - job losses in 2008 to 2010, followed by a rebounding job market in 2011 (Figure 15). Honolulu County posted the smallest growth rates, in general, but experienced the largest numerical increase.

The job gains in non-farm employment are likely to continue in 2018. Based on data for the first eight months of 2018, Hawaii County posted an increase of 1.4 percent compared to the same timeframe a year earlier. Kauai County is up by 1.6 percent, while Honolulu’s gain mirrors the statewide increase of 1.7 percent. Maui County is ahead by 2.0 percent over the 2017 average.

Figure 15. Job Count Over-the-Year Percent Change, Counties of Hawaii, 2007-2017



Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, CES program.

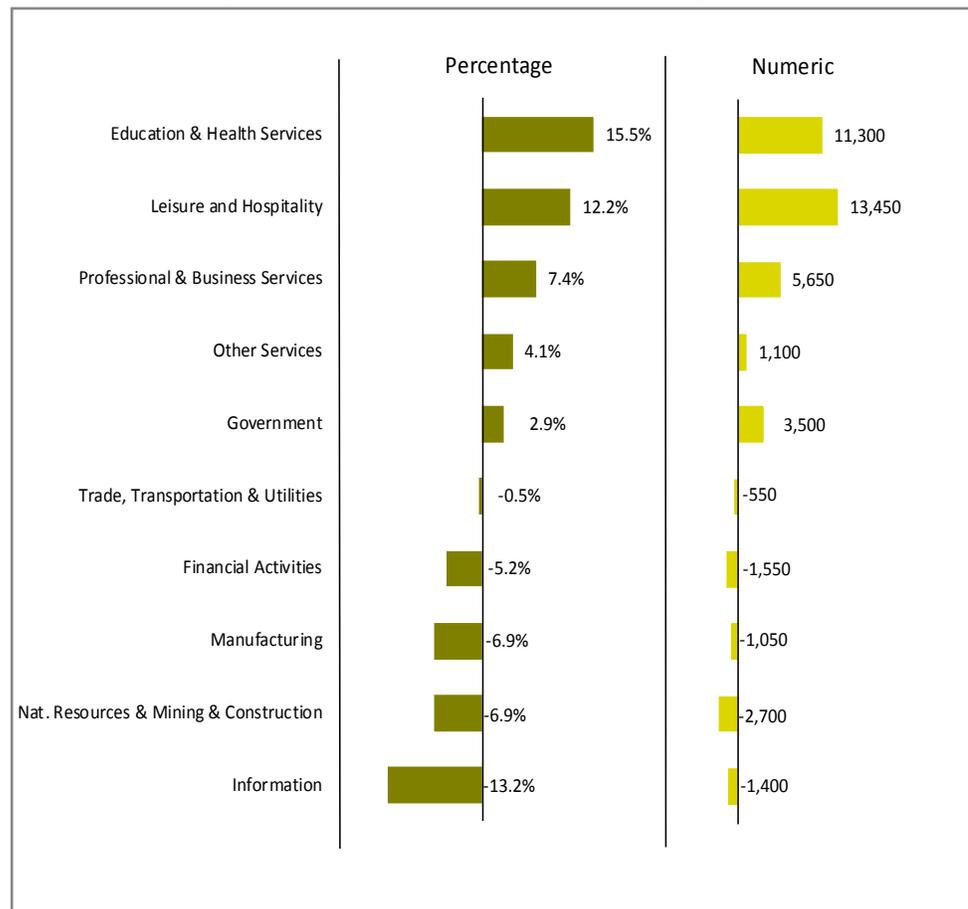
Overall trend positive for ten-year period

Major Industries

Although total non-farm jobs increased by 4.4 percent with the addition of 27,800 jobs from 2007 to 2017, examining job growth by industry over this same period reveals different trends among the industries. Of the ten major industries, five exceeded their 2007 pre-recession employment level (Figure 16).

Education and health services expanded the fastest with 15.5 percent growth, adding 11,300 new jobs from 2007 to 2017. Although the education sector actually posted a decline of 300 positions, hiring within health care and social assistance more than made up for the job loss with an increase totaling 11,600. More than half of the new healthcare jobs were in the ambulatory health care services sub-sector.

Figure 16. Industry Job Count Percent and Numeric Change, Hawaii, 2007-2017



Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, CES program.

Leisure and hospitality also showed strength with a gain of 12.2 percent and posted the largest overall numerical gain of 13,450 new jobs. Tourism continued to boost the accommodations and food services sub-sector upward with the addition of 12,900 positions.

Expanding by the third fastest rate, professional and business services expanded by 7.4 percent, which resulted in a gain of 5,650 jobs. The administrative, support, waste management and remediation services sub-sector was responsible for 4,650 jobs primarily created in employment service agencies.

Other services moved upward by 4.1 percent, slightly below the statewide average of 4.4 percent. This translated into 1,100 new jobs over the ten-year period.

In 2017, government, which remained Hawaii's largest industry, reported an increase of 3,500 for a modest rise of 2.9 percent. Even though the job count declined over the last two years, losing 400 jobs in 2016 and again in 2017, the 2017 job count still remained above the 2007 level.

In terms of job losses, information, the smallest industry suffered the largest percentage loss of 13.2 percent which reduced this industry's workforce by 1,400 jobs. Natural resources and mining and construction, along with manufacturing both fell by 6.9 percent. Construction of buildings accounted for more than 60 percent of the loss in the natural resources and mining and construction sector, while both durable and nondurable goods impacted the manufacturing industry negatively. The finance and insurance sub-sector together with the real estate and rental and leasing sub-sector contributed to the decline of 5.2 percent posted by the financial activities industry.

One of the larger industries - trade, transportation, and utilities was down by 550 jobs or 0.5 percent. Although this industry has added jobs over the last seven years, the positions lost during 2008 to 2010 have not been fully recovered.

**Employment higher
in five of ten major
industries**

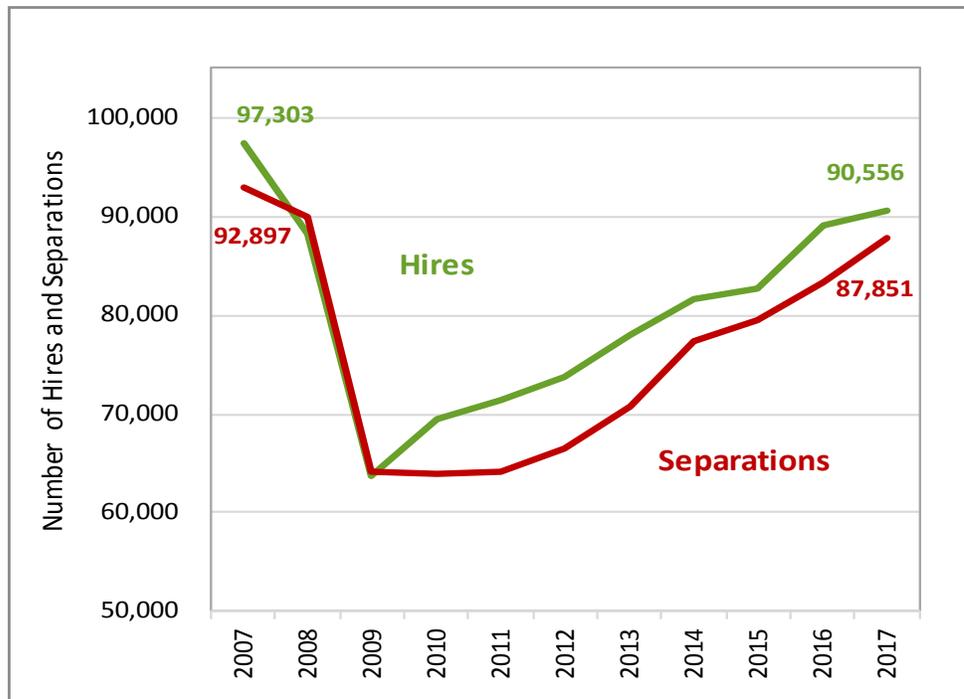
Hires and Separations

The U.S. Census Bureau's Local Employment Dynamic (LED) program produces Quarterly Workforce Indicators (QWI) that gives an overview of the State's workforce. The latest data available is for the second quarter of 2017 and comparisons against the same quarter of a prior ten year period illustrate some of the dynamics happening within the workforce. *Hires* are defined as the estimated number of workers who started a new job in the specified quarter - it is the sum of new hires and recalled hires. *Separations* are the estimated number of workers whose job with a given employer ended in the specified quarter.

Hires outnumber separations

Preceding the recession, hires peaked at 97,303 in 2007 (Figure 17). This count began to dwindle in 2008 as the recession took

Figure 17. Hires vs. Separations, Hawaii, 2007-2017 (Second Quarter)



Source: U.S. Census Bureau, Local Employment Dynamics, Quarterly Workforce Indicators, LED Extraction tool, data as of 8/09/18.

hold and reached its lowest point of 63,701 in 2009. During this 2-year downturn, separations slightly outnumbered hires. However, beginning in 2010 hires partially rebounded as Hawaii entered the recovery phase. However, in 2017 the number of hires were still about 7 percent lower than they were ten years prior.

Separations in 2017 were also down by more than 5 percent from 2007. One interesting trend is that even during the recession period, there was a drop in separations. It most likely indicated that people hung onto their jobs during lean times, whereas during boom years, more people left their positions seeking to change, upgrade, or retire from their jobs.

Overall, Hawaii's economy performed favorably as hires outnumbered separations in all but two years during the last decade.

Firm Net Job Change

In the LED program, there are many indicators that involve *firms* and not just *individuals* as was just previously addressed with the hires and separations data.

Job creation is defined as the estimated number of jobs gained at firms throughout the quarter - a measure that counts total employment increase at firms that grew over the course of the quarter. *Job destruction*, on the other hand, is the estimated number of jobs lost at firms throughout the quarter - counts of employment decrease at firms that shrank over the course of the quarter. The difference between job creation and job destruction is the *firm net job change*, which can illustrate which industries moved in a positive direction over the last decade.

**Firm net job change
fluctuates among
major industries**

Looking at five of Hawaii’s major industries, there is evidence that firm net job change fluctuated differently for various industries (Figure 18). It did not always follow the job trend of the economic recession.

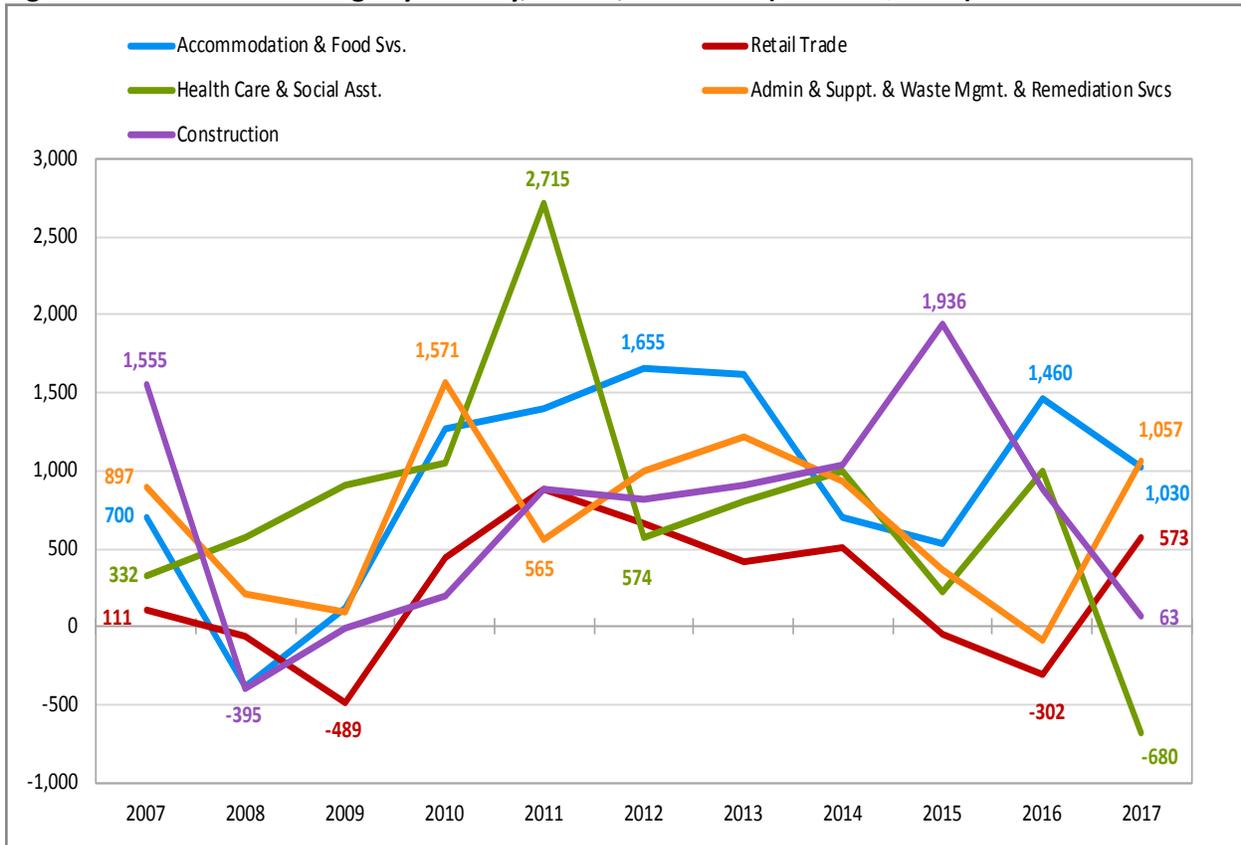
Following a firm net job loss of 382 in 2008, accommodation and food services crept above zero in 2009 and continued in the positive range for the next nine years.

Retail trade relatively stable among key industries

From 2007, health care and social assistance moved steadily upward over the next four years and peaked at 2,715 in 2011. Since then, the net change has exhibited large swings, mainly positive up till 2016. In 2017, the net change fell to -680, representing the only time this industry has experienced a net loss in the last 10 years.

Surprisingly, the trend in retail trade, considered a high-turnover industry, was relatively stable compared to the other key industries.

Figure 18. Firm Net Job Change by Industry, Hawaii, 2007-2017 (Second Quarter)



Source: U.S. Census Bureau, Local Employment Dynamics, Quarterly Workforce Indicators, LED Extraction tool, data as of 8/09/18

After the downturn in 2008 and 2009, retail trade remained in positive territory over the next five years. However job losses outnumbered job creation in 2015 and 2016. The industry turned around in 2017 which resulted in a net gain of 573.

Administrative and support and waste management and remediation services exhibited a mainly positive net change from 2007 to 2017. Only in 2016 did the trend turn slightly negative with a net change of -82, but in 2017 a sizable shift occurred and job gains in firms outweighed losses.

Prior to 2008, construction displayed the highest positive job change among the five industries. Then came a drop below zero in 2008 and 2009, followed by a recovery to 193 in 2010. Improvement has continued over the next eight years, reaching 1,936 in 2015. In 2016 and 2017, the net job change tapered a bit, falling to 63.

What these firm net job changes illustrate is that there is a lot of churning going on within companies that are not visible in other data sets dealing with employment. While overall jobs could appear to be stable on the outside, the dynamics may be very active on the inside.

Job-to-Job Flows

In addition to job growth through business expansion, an enormous churn of workers occurs across all firms, including shrinking firms that still have vacancies to fill. Employers look at not only the pool of unemployed workers, but also workers currently employed at other businesses. These job-to-job moves, mainly among younger workers, in many cases result in improved job matches and increased earnings for workers. The Job-to-Job flows data tool provided by the U.S. Census Bureau measures this job movement.

The key variables include:

Job-to-Job Flows

- **Job-to-job hires:** Hires that are part of a job-to-job move with little-to-no nonemployment between jobs.

- **Job-to-job separations:** Separations that are part of a job-to-job move with little-to-no nonemployment between jobs.

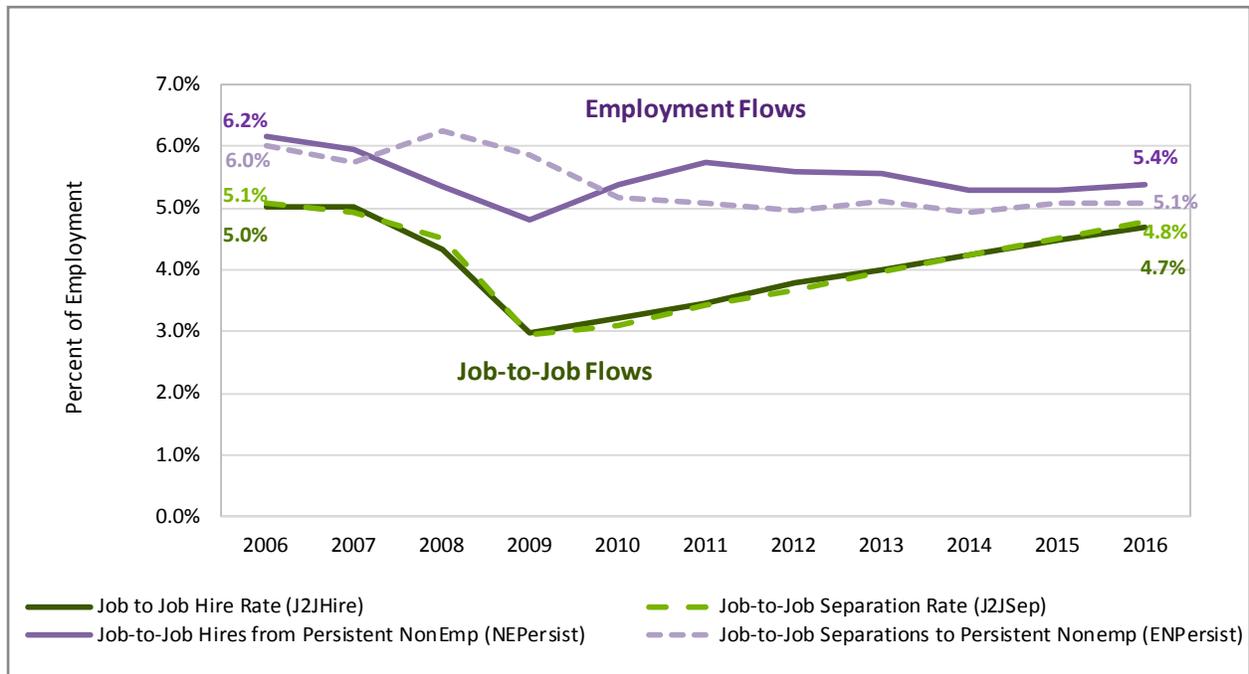
Employment Flows

- **Hires from persistent nonemployment:** Employees who are employed on the last day of the current quarter but were not employed on the first day of the current quarter or the first day of the previous quarter.
- **Separations to persistent nonemployment:** Employees with the firm on the first day of the quarter who separate during the current quarter and were not employed on the last day of the subsequent quarter.

Marked decline in job movement during the recession

According to Hawaii’s data, from second quarter 2006 to second quarter 2016, the job-to-job flows shows that the movement from one job to another job either through hires or separations follow a very similar path (Figure 19). Not surprisingly the trend shows a marked decline in the rate of job movement in 2009 which correlates to the recession. Since then, the rate of job change has recovered but as of 2016, still remained slightly below the 2006 level.

Figure 19. Hires and Separations Due to Job Changes, Hawaii, 2006-2016 (Second Quarter)



Source: U.S. Census Bureau, Local Employment Dynamics, J2J Data, data as of 8/04/18

The graph also illustrates the flow of individuals moving in and out of employment. Between 2006 and 2016, the separations rate exceeded hires in 2008 and 2009. In the following years, the percentage of hires from persistent nonemployment has remained above separations. As of 2016, the rates were relatively close with 5.4 percent of hires from persistent nonemployment while the separations moving to persistent nonemployment stood at 5.1 percent.

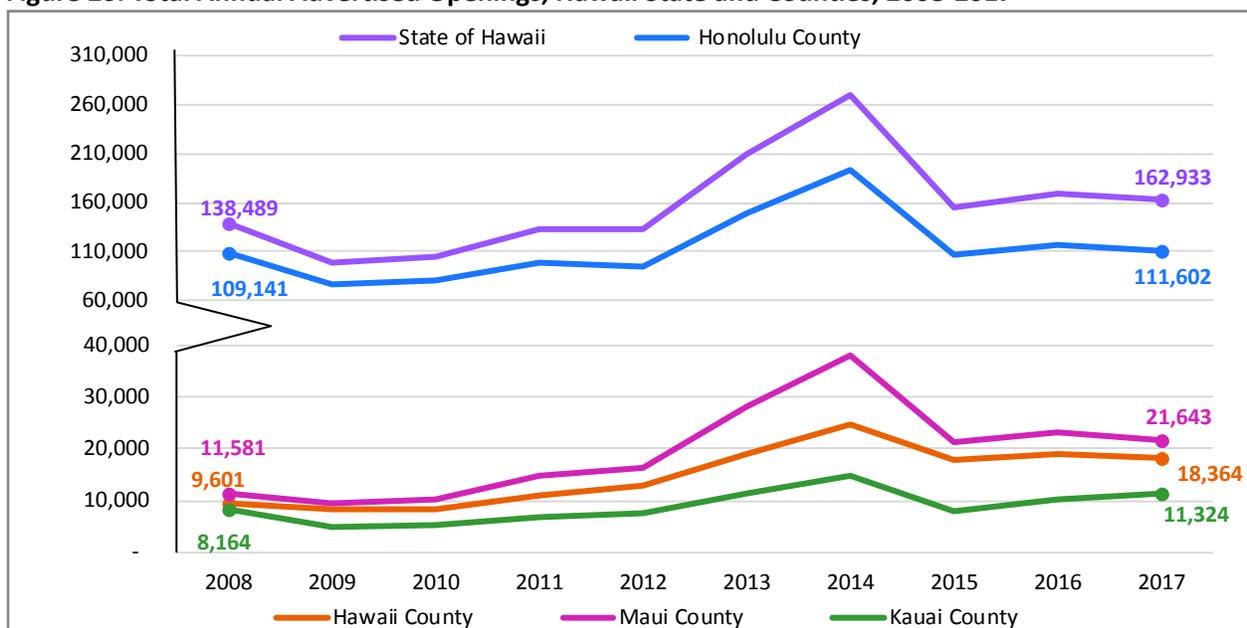
Advertised Online Jobs

From 2008 to 2017, the number of online job advertisements posted on HireNet Hawaii expanded by 17.7 percent throughout the state. All counties posted higher numbers. The volume of advertised openings for Hawaii County almost doubled with an upward spike of 91.3 percent. Maui County also experienced a significant increase of 86.9 percent. Advances in Kauai County followed at a slower pace, rising by 38.7 percent. Although the number of ads placed by Honolulu employers posted a gain of only 2.3 percent, unemployment remained lower than the other counties.

Job advertisements trends for state and counties follow similar pattern

During the past nine years, job advertisements for the counties have generally mirrored the same trend as the state (Figure 20). Following the slowdown in 2009 and 2010, the number of listings

Figure 20. Total Annual Advertised Openings, Hawaii State and Counties, 2008-2017



Source: Online advertised jobs data, HireNet Hawaii as of 09/17/18.

improved in 2011 and 2012. From 2013 to 2014 the number of listings indicated a pronounced rise in hiring throughout the state. Job advertisements peaked in 2014, then declined by more than 40 percent in 2015 for the state, Honolulu County, Maui County, and Kauai County. Hawaii County's decline was not as drastic, falling by 26.8 percent. In 2016, three of the four counties - Honolulu, Hawaii and Maui, generated a small increase ranging from six to nine percent in 2016, proceeded by a reduction of jobs posted online in 2017. Only Kauai County deviated, with a sizable gain of 25 percent in 2016, and continued to rise by 11.9 percent in 2017.

**Advertised jobs
for the State and
Honolulu outnumber
candidates**

Jobseekers as well as employers may wonder about the volume of candidates available to fill the current job openings. Another key variable, potential candidates defined as individuals with active resumes in the workforce system, provides information on the supply of workers (Figure 21).

Figure 21. Ratio of Candidates per Job, Hawaii State & Counties, Sept. 2018

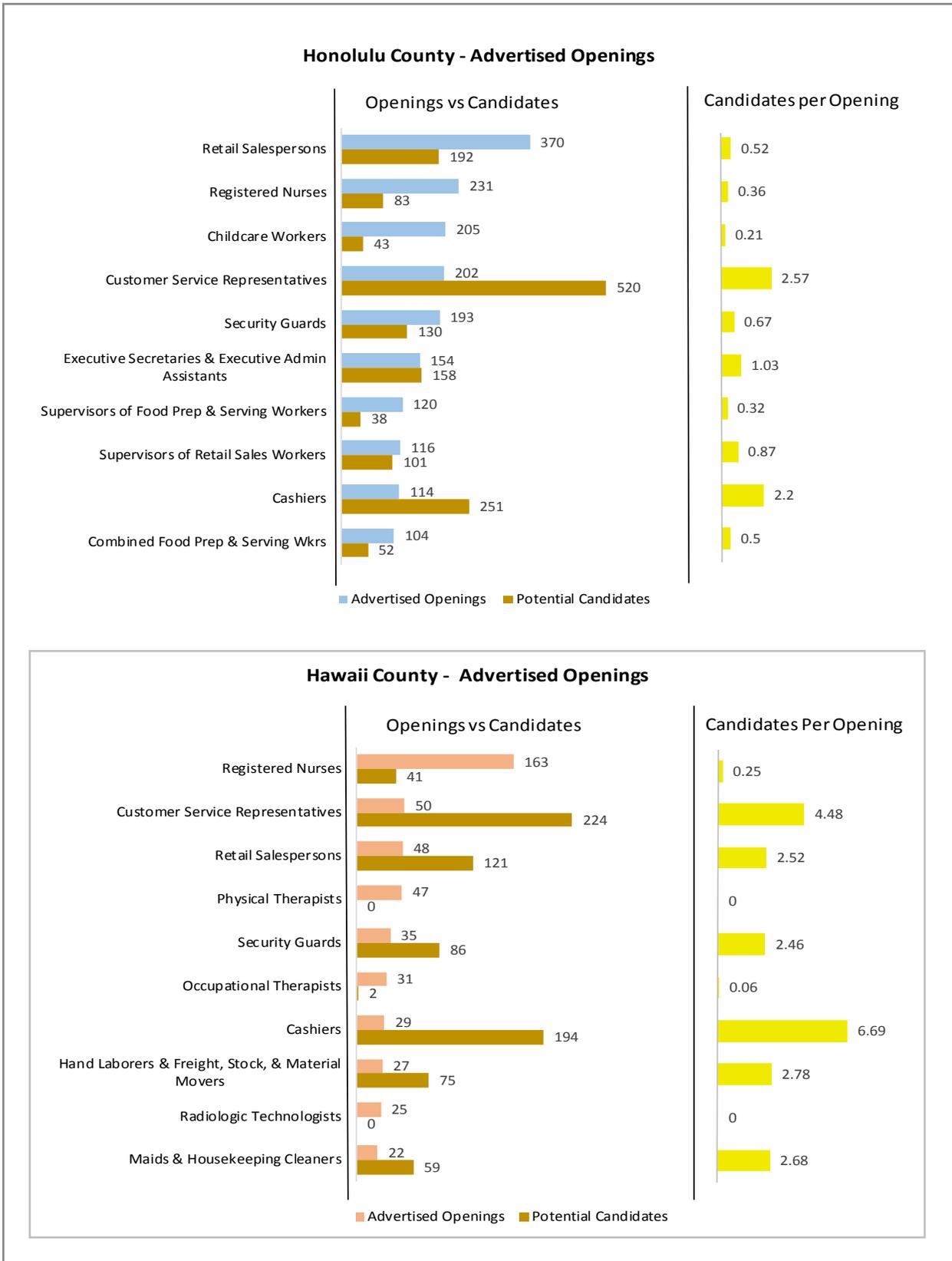
Area	Job Openings	Candidates	Candidates per Job
State of Hawaii	19,163	18,218	0.95
Kauai County	1,423	3,966	2.79
Hawaii County	2,261	5,903	2.61
Maui County	2,625	4,964	1.89
Honolulu County	12,854	11,189	0.87

Source: Online advertised jobs data, HireNet Hawaii as of 09/07/18.

Largely reflective of Honolulu's data, the state's ratio of advertised jobs to the number of potential candidates averaged 0.95, slightly higher than Honolulu's ratio of 0.87 per job. While this means advertised jobs outnumber candidates for Honolulu and statewide, there was more competition among jobseekers in the other three counties. Kauai County experienced the highest ratio of 2.79, Hawaii County was next highest with a ratio of 2.61, and in Maui County the number of potential candidates per job totaled 1.89 persons.

The charts on the next two pages (Figure 22) present the top 10 occupations with the most advertised openings by county as of September 2018. As can be expected, many of these jobs are often associated with high turnover. Four occupations common to all counties include: registered nurses; retail salespersons; security guards; and cashiers.

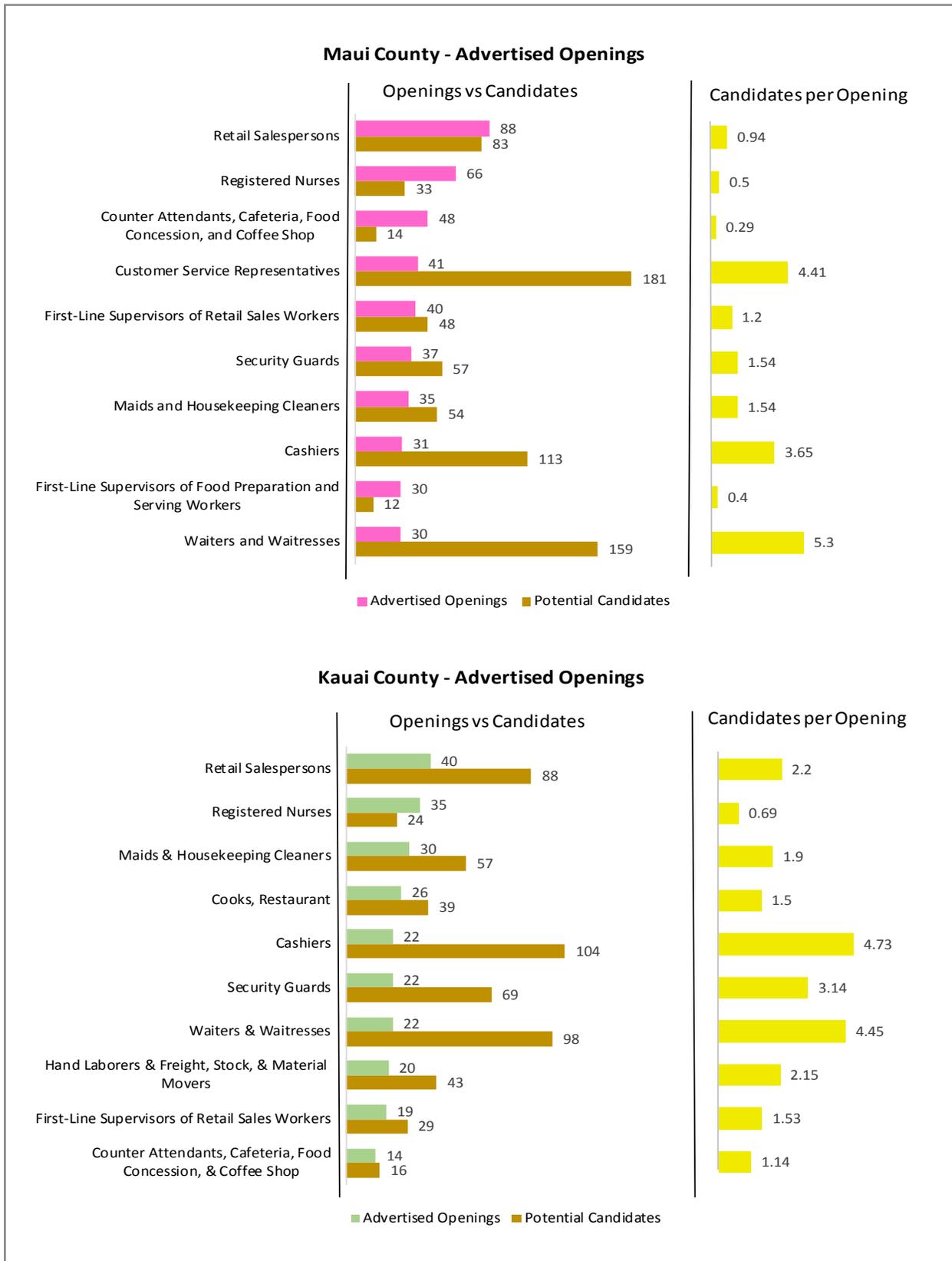
Figure 22. Top 10 Advertised Job Openings by County, Sept. 2018



Job Source: Online advertised jobs data

Candidate Source: Individuals with active resumes in the workforce system as of September 6, 2018

Figure 22. Top 10 Advertised Job Openings by County, Sept. 2018 (continued)



Job Source: Online advertised jobs data

Candidate Source: Individuals with active resumes in the workforce system as of September 6, 2018

Looking at the ratio of jobs to candidates for these jobs, the trends generally followed the overall county ratios. Seven of the top 10 jobs in Honolulu averaged less than one candidate per job compared to Kauai County, which averaged multiple candidates for nine out of the 10 jobs listed. In Honolulu this includes: childcare workers (0.21); supervisors of food preparation and serving workers (0.32); registered nurses (0.36); food preparation and serving workers (0.5); retail salespersons (0.52); security guards (0.67); and supervisors of retail sales workers (0.87). In Hawaii County, physical therapists (0); radiologic technologists (0); occupational therapists (0.06); and registered nurses (0.25), advertised jobs exceed potential candidates. Job shortages in Maui County include: counter attendants, cafeteria, food concession, and coffee shop (0.29); supervisions of food preparation and serving workers (0.4); and registered nurses (0.5). In Kauai County, only the ratio for registered nurses (0.69) falls below one.

**More job openings
than jobseekers**

Another indication of the strength of the labor market is the ratio of the total number of unemployed persons to the number of advertised job openings. (Figure 23). In fact, each county's ratio remained below one, meaning there were more job openings than jobseekers. Kauai County posted the best ratio of 0.43, followed by Maui County with 0.44, while Honolulu County posted a ratio of 0.45 per opening. Hawaii County's ratio of 0.73 ranked highest.

Overall, the average number of advertised jobs statewide during the first eight months of 2018 is down from the same period the year before. While job advertisements for Honolulu County and Kauai County have declined, Maui County and Hawaii County have risen. Although the volume is trending downward, the number of job openings still exceed the total unemployed count.

Figure 23. Ratio of Unemployed per Job Opening, Hawaii State and Counties, September 2018

	Number of Unemployed	Job Openings	Number of Unemployed Per Job Opening
State	15,100	31,558	0.48
Hawaii County	2,800	3,817	0.73
Honolulu County	9,550	21,289	0.45
Maui County	1,900	4,348	0.44
Kauai County	900	2,104	0.43

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics program and Online Advertised Jobs data as of September 6, 2018.

Wages

Occupational Wages

Hawaii's median hourly rate higher than the United States

Workers in Hawaii received a median wage of \$20.02 per hour as of May 2017, a difference of almost \$2.00 per hour more than the national median of \$18.12 per hour. In fact, Hawaii's earnings exceeded U.S wages for 16 out of the 22 major occupational groups. These groups are highlighted in the table below. (Figure 24).

Figure 24. Average Median Hourly Wage, Hawaii vs. U.S., May 2017 (Sorted by Hawaii's Hourly Wages)

Major Occupational Group	% of Total Employment		Median Hourly Wage		Difference in Wage	
	Hawaii	U.S.	Hawaii	U.S.	#	%
Management	5.5%	5.1%	\$44.52	\$49.32	-\$4.80	-9.7%
Healthcare Practitioners and Technical	4.9%	6.0%	\$40.72	\$31.14	\$9.58	30.8%
Architecture and Engineering	1.5%	1.8%	\$38.41	\$38.07	\$0.34	0.9%
Legal	0.6%	0.8%	\$37.94	\$38.50	-\$0.56	-1.5%
Computer and Mathematical	1.6%	3.0%	\$37.24	\$40.66	-\$3.42	-8.4%
Life, Physical, and Social Science	1.0%	0.8%	\$31.46	\$31.01	\$0.45	1.5%
Construction and Extraction	5.1%	4.0%	\$30.91	\$21.51	\$9.40	43.7%
Business and Financial Operations	4.3%	5.2%	\$30.65	\$32.55	-\$1.90	-5.8%
Installation, Maintenance, and Repair	4.0%	3.9%	\$25.74	\$21.40	\$4.34	20.3%
Community and Social Service	1.6%	1.5%	\$24.38	\$21.08	\$3.30	15.7%
Education, Training, and Library	6.8%	6.1%	\$23.23	\$23.43	-\$0.20	-0.9%
Arts, Design, Entertainment, Sports, Media	1.5%	1.4%	\$23.01	\$23.19	-\$0.18	-0.8%
Protective Service	3.2%	2.4%	\$20.42	\$19.01	\$1.41	7.4%
Total, All Occupations	100.0%	100.0%	\$20.02	\$18.12	\$1.90	10.5%
Office and Administrative Support	14.2%	15.4%	\$18.17	\$16.70	\$1.47	8.8%
Transportation and Material Moving	6.5%	7.0%	\$17.66	\$15.19	\$2.47	16.3%
Production	2.4%	6.3%	\$17.54	\$16.34	\$1.20	7.3%
Farming, Fishing, and Forestry	0.1%	0.3%	\$17.24	\$11.73	\$5.51	47.0%
Building & Grounds Cleaning & Maintenance	5.7%	3.1%	\$16.73	\$12.32	\$4.41	35.8%
Healthcare Support	3.1%	2.9%	\$16.03	\$13.80	\$2.23	16.2%
Sales and Related	9.8%	10.2%	\$13.30	\$12.99	\$0.31	2.4%
Food Preparation and Serving Related	13.0%	9.3%	\$13.14	\$10.53	\$2.61	24.8%
Personal Care and Service	3.5%	3.6%	\$12.83	\$11.35	\$1.48	13.0%

Source: Occupational Employment Statistics Program.

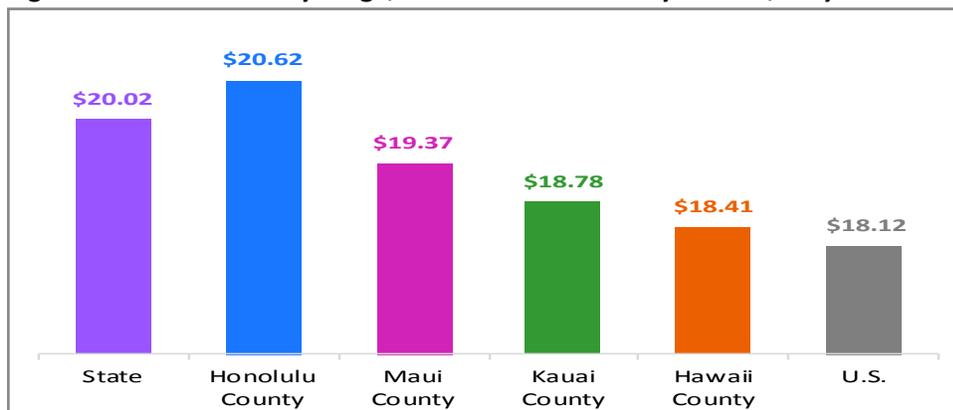
Although the six occupational groups that earned wages below the U.S. ranked in the upper tier of the payscale, these workers constituted only about 20 percent of Hawaii’s total workforce. Meanwhile among the highest paid occupational groups, earnings for two of the state’s major groups significantly exceeded the national average. Healthcare practitioners and technical workers earned \$40.72 versus \$31.14 for the U.S., while construction and extraction occupations earned \$9.40 more per hour than U.S. workers. In addition, occupational groups with the highest concentrations of workers in Hawaii such as: office and administrative support (14.2 percent); food preparation and serving related (13.0 percent); and sales and related occupations (9.8 percent) paid a higher salary compared to their national counterparts.

County median wage also higher than the United States

At the county level, Honolulu County’s average median wage of \$20.62 topped both the state’s and the national hourly rate (Figure 25). Wage earners in Maui County took home the next highest hourly rate of \$19.37. The average for Kauai County at \$18.78 followed, and Hawaii County’s rate of \$18.41 ranked the lowest.

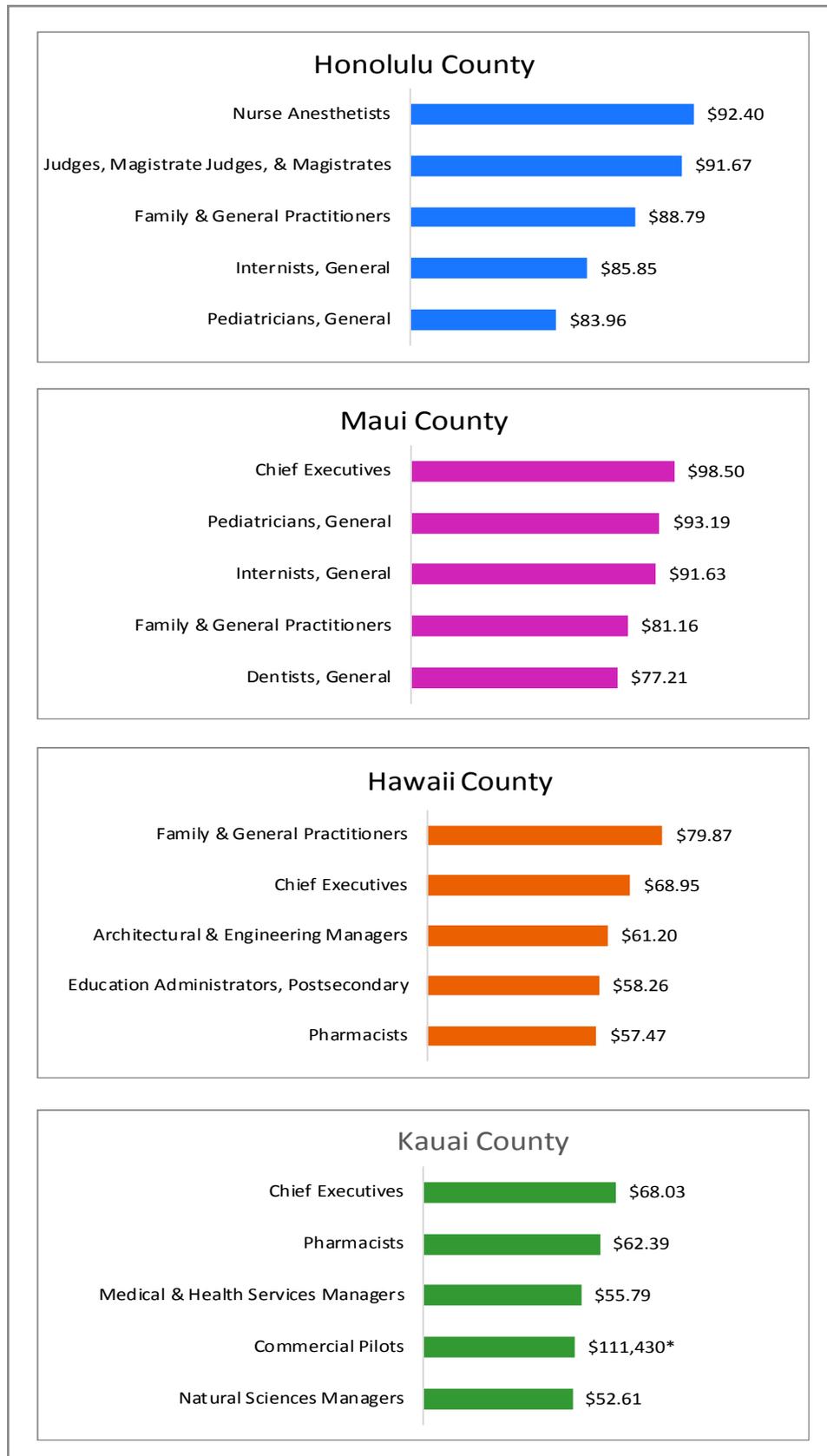
The top five occupations that pay the most in each of the counties typically fall under two categories - healthcare professionals, and managers (Figure 26). Only two occupations - judges, magistrate judges, and magistrates, which is categorized in the legal occupational division; and commercial pilots, part of the division that includes transportation and material moving occupations, fall outside of that path.

Figure 25. Median Hourly Wage, Hawaii State & County vs. U.S., May 2017



Source: Occupational Employment Statistics Program.

Figure 26. Occupations with Highest Median Hourly Wage, County, May 2017



*Annual median wage, hourly rate not available.
 Source: Occupational Employment Statistics Program.

Industry Annual Wages

A comparison of annual wages for private industry workers versus government workers provides another perspective on wage data. The Quarterly Census of Employment and Wages (QCEW) program computes this data from the quarterly tax reports submitted by employers subject to State Unemployment Insurance laws and from Federal agencies subject to the Unemployment Compensation for Federal Employees (UCFE) program.

For this survey, wages consist of the total compensation paid quarterly, regardless of when the services were performed. Included are bonuses, stock options, severance pay, the cash value of meals and lodging, tips and other gratuities.

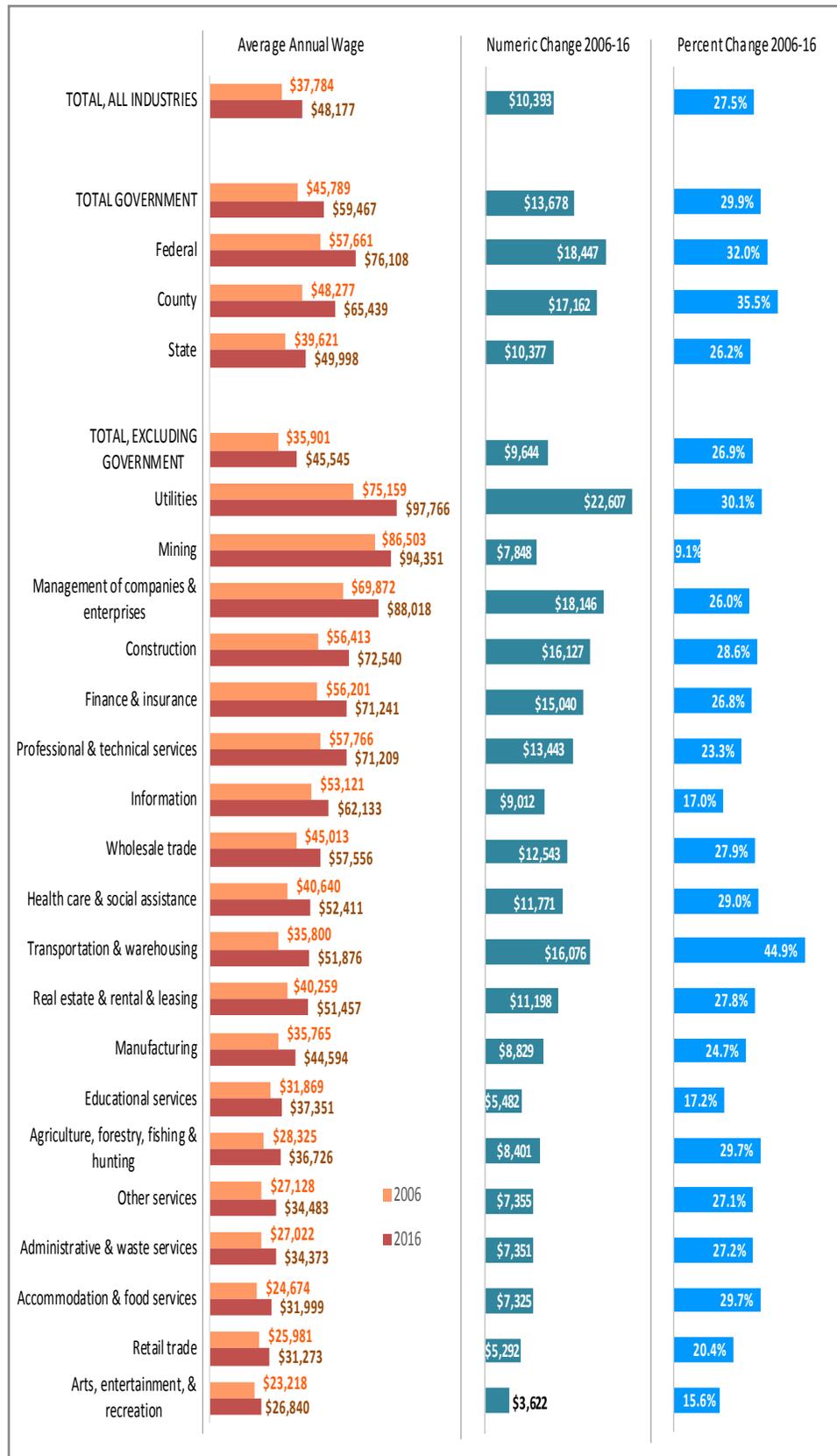
From 2006 to 2016, average wages for all workers rose by 27.5 percent, increasing to \$48,177 from \$37,784 annually (Figure 27). Both public and private sector employees enjoyed advances - 29.9 percent for government workers and 26.9 percent for non-government employees

On the whole, salaries of government workers improved faster and were higher than those employed in non-government jobs. Federal government workers earned \$76,108, while the annual salary for county level employees averaged \$65,439. Even at the lower end, take-home pay for State government employees, which averaged \$49,998 annually, exceeded the overall earnings for all industries.

Non-government employees, with an annual wage of \$45,545, represented 81 percent of the workforce in 2016. The top three industries with the highest wages (utilities; mining; and management of companies and enterprises) were well above the State's average wage. However, only two percent of private sector workers were employed in these three industries. Accommodation and food services, along with retail trade, the two largest industries ranked near the bottom of the payscale. On a positive note, transportation and warehousing posted the greatest improvement of 44.9 percent, with earnings of \$51,867 in 2016, up from \$35,800 in 2006.

***Average wages rise
for public and
private workers***

Figure 27. Average Annual Wages of Workers Covered by Hawaii Employment Security Law and Unemployment Compensation for Federal Employees by Industry, Hawaii, 2006 and 2016



Source: Quarterly Census of Employment and Wages Program.

Monthly Industry Earnings

With Hawaii's low unemployment, the good news is that average monthly earnings have risen by 29.1 percent for new hires, and by 25.5 percent for stable employees (Figure 28) based on 2007 and 2017 second quarter data from the Local Employment Dynamics program. Average monthly earnings by industry discussed here include employees with stable jobs (those that worked with the same firm throughout the quarter) and stable new hires (those that worked the full quarter and who were new hires with the same firm during the previous quarter).

Figure 28. Average Monthly Earnings for New Hires vs. Stable Employees and Percent Difference, Hawaii, 2007 and 2017 (Second Quarter)

Ranked by 2017 Stable Earnings	New Hires			Stable		
	2007	2017	Percent Difference	2007	2017	Percent Difference
Utilities	\$4,207	\$5,373	27.7%	\$5,852	\$8,131	38.9%
Mining, Quarrying, and Oil and Gas Extraction	\$4,715	\$6,251	32.6%	\$6,798	\$7,664	12.7%
Finance and Insurance	\$3,012	\$4,283	42.2%	\$4,638	\$6,189	33.4%
Construction	\$3,864	\$4,766	23.3%	\$4,886	\$5,951	21.8%
Professional, Scientific, and Technical Services	\$3,525	\$4,515	28.1%	\$4,853	\$5,914	21.9%
Public Administration	\$3,032	\$3,096	2.1%	\$4,335	\$5,576	28.6%
Management of Companies and Enterprises	\$3,089	\$4,013	29.9%	\$4,230	\$5,494	29.9%
Wholesale Trade	\$2,653	\$3,497	31.8%	\$3,923	\$4,875	24.3%
Transportation and Warehousing	\$2,207	\$2,547	15.4%	\$3,274	\$4,834	47.6%
Real Estate and Rental and Leasing	\$2,333	\$3,645	56.2%	\$3,451	\$4,474	29.6%
Health Care and Social Assistance	\$2,342	\$2,778	18.6%	\$3,439	\$4,377	27.3%
Information	\$2,753	\$6,370	131.4%	\$4,123	\$4,225	2.5%
All Industries	\$2,174	\$2,807	29.1%	\$3,206	\$4,024	25.5%
Manufacturing	\$2,207	\$2,891	31.0%	\$3,196	\$3,782	18.3%
Admin. & Support and Waste Mgmt. & Remediation Svcs.	\$1,980	\$2,455	24.0%	\$2,624	\$3,270	24.6%
Educational Services	\$1,864	\$1,467	-21.3%	\$2,909	\$3,179	9.3%
Agriculture, Forestry, Fishing and Hunting	\$1,891	\$2,458	30.0%	\$2,570	\$3,091	20.3%
Accommodation and Food Services	\$1,509	\$2,458	62.9%	\$2,270	\$3,009	32.6%
Other Services (except Public Administration)	\$1,740	\$1,928	10.8%	\$2,378	\$2,974	25.1%
Retail Trade	\$1,612	\$1,905	18.2%	\$2,422	\$2,873	18.6%
Arts, Entertainment, and Recreation	\$1,402	\$1,775	26.6%	\$2,235	\$2,863	28.1%

Source: U.S. Census Bureau, Local Employment Dynamics, Quarterly Workforce Indicators, QWI Explorer, data as of 08/29/18.

New hires earn less than stable workers in most industries

As expected, new hires earned less than stable workers except for the information industry in 2017. In fact, this spike in earnings for newly hired employees exceeded the salary of stable workers in this industry and most of the other industries as well. Take-home pay within the educational services industry dropped for new hires in 2017 but rose slightly for stable employees from 2007 to 2017.

Of the state’s five key industries, workers employed in construction jobs earned the most compared to the four other major industries (Figure 29). In 2007, stable workers received \$1,022 per month more than new employees and this amount increased to \$1,185 in 2017. Since the wage increase over the 10-year period for both sets of workers was relatively close, the wage gap between new and stable hires experienced a small percentage change. Stable workers earned 26.4 percent more in 2007 compared to 24.9 percent in 2017.

Figure 29. Average Monthly Earnings of New Hires vs Stable Hires for Key Industries, Hawaii 2007-2017 (Second Quarter)



Source: U.S. Census Bureau, Local Employment Dynamics, Quarterly Workforce Indicators, QWI Explorer tool, data as of 08/30/18.

The earnings gap between new and stable hires in health care and social assistance widened to 57.6 percent in 2017, up from 46.8 percent in 2007. This represented the biggest gap among the five key industries, as wages for stable workers, who also earn more, experienced a bigger percentage boost in pay than employees just starting employment within the firm. Wages in this field were also higher than the average pay for all industries.

Stable workers realized earnings growth of 24.6 percent versus 24.0 percent for those newly hired in the administration and support and waste management and remediation services industry over the ten-year period. As a result, the gap of 32.5 percent between the new hires versus stable workers in 2007 rose slightly to 33.2 percent in 2017.

In general, workers employed in accommodation and food service establishments received earnings below the state's overall industry average. On the positive side, the pay gap decreased by the largest rate amongst the key industries. The variance in earnings totaled 50.4 percent in 2007 and fell sharply to 22.4 percent during 2017, mainly due to substantial wage growth of 62.9 percent for new hires.

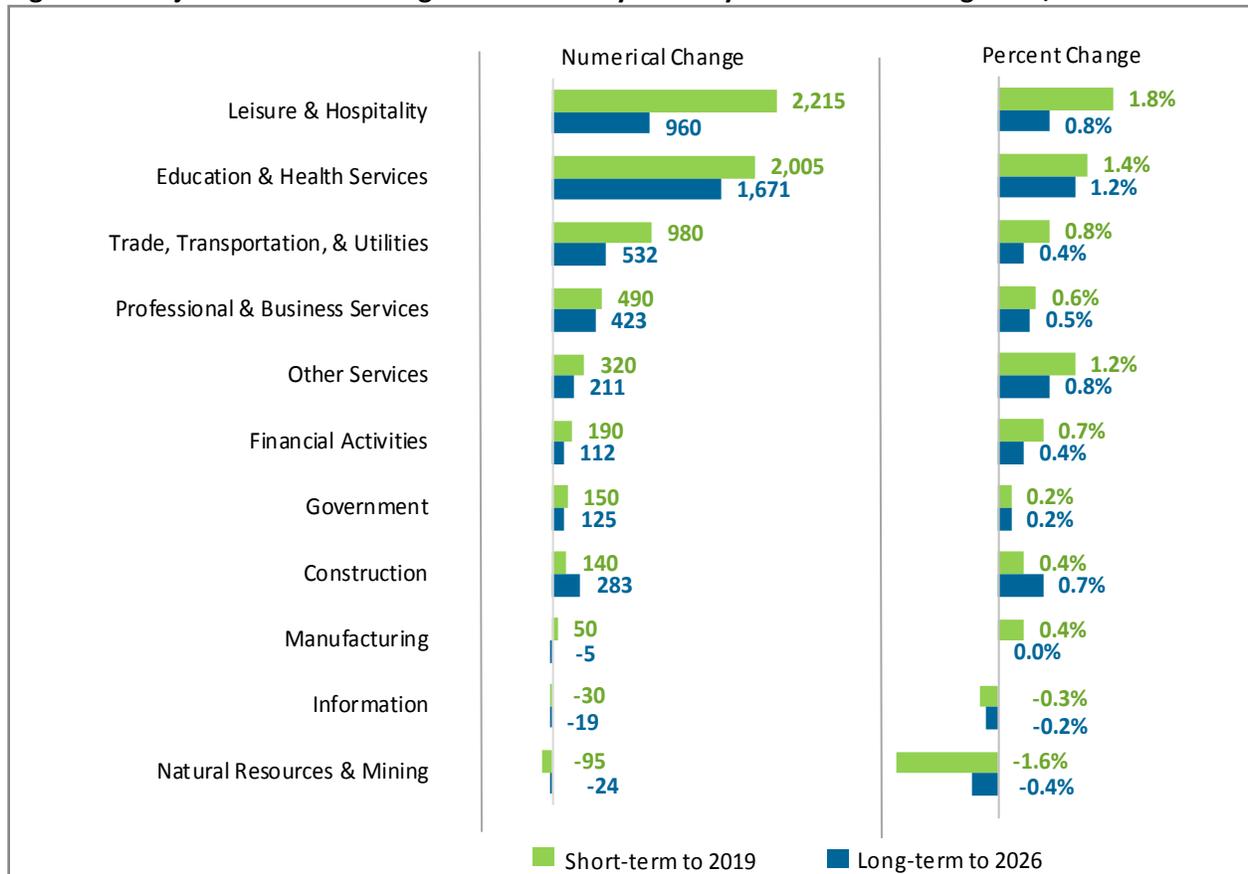
A fairly large difference in pay of approximately 50 percent between stable and newly hired employees existed in the retail trade sector in both time periods. In addition, wages in this industry, \$1,905 for new hires and \$2,873 as of the second quarter of 2017 for those with experience, rank among the lowest.

Job Outlook

Job growth projected for short-term and long-term

Future job growth in Hawaii for both the short-term and the long-term remains positive. The short-term forecast from 2017 to 2019 points to further improvement in the economy, growing at 0.9 percent per year. Growth over the longer term will average a more modest rate of increase at 0.6 percent annually from 2016 to 2026. Short- and long-term projections are calculated independently using different starting and ending periods, making direct comparisons difficult. In addition, the methodology for the short-term forecast attempts to incorporate the current business cycle, whereas the long-term projections assumes structural stability in the economy. This explains why growth rates may be higher in the short-term as Hawaii's current economy continues to expand following the recession compared to the long-term which assumes full employment. Therefore, to lessen the impact of the differences between short- and long-term methodologies, average growth is presented on an annual basis.

Figure 30. Projected Annual Average Job Growth by Industry for Short- and Long-Term, Hawaii



Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, Projections Program.

In the near future, most of the job gains will be in the following major industries (Figure 30): leisure and hospitality; education and health services; trade, transportation, and utilities; and professional and business services. Since these are the four largest industries, it is not surprising that they will provide the most job growth in the coming years.

Leisure and hospitality will continue to benefit from the strength of tourism and is poised to lead all industry gains over the short-term. Within this industry, the accommodation and food services sector will contribute the most new jobs. As far as the long-term, this industry will remain a major source of jobs and is anticipated to post the second largest increase over the ten-year projected period.

Also important to job expansion, the education and health services industry will incur the next largest gain over the short-term, and will top all long-term industry advances. Not surprisingly, the health care needs of an aging population will drive employment upward, particularly in ambulatory health care services.

Rounding out the top growing industries, trade, transportation, and utilities is also positively impacted by high levels of visitor spending. Within professional and business services, the administrative and support services sector will help boost the job count higher.

Government, the fourth largest industry, is projected to post minimal gains for both the 2-year as well as the 10-year forecast. Budget constraints will limit job creation in all government sectors during the short-term. Over the long-term, expected job losses at the Postal Service will negate the anticipated gains in local government employment.

These forecasted new jobs are just one part of the future job openings, and are attributed to economic growth. However, when a current worker leaves the labor force or changes occupation, it also creates a job opening, which we refer to as separations openings. The combined total of the openings due to growth and separations represent the total openings.

**Largest industries
provide most job
growth**

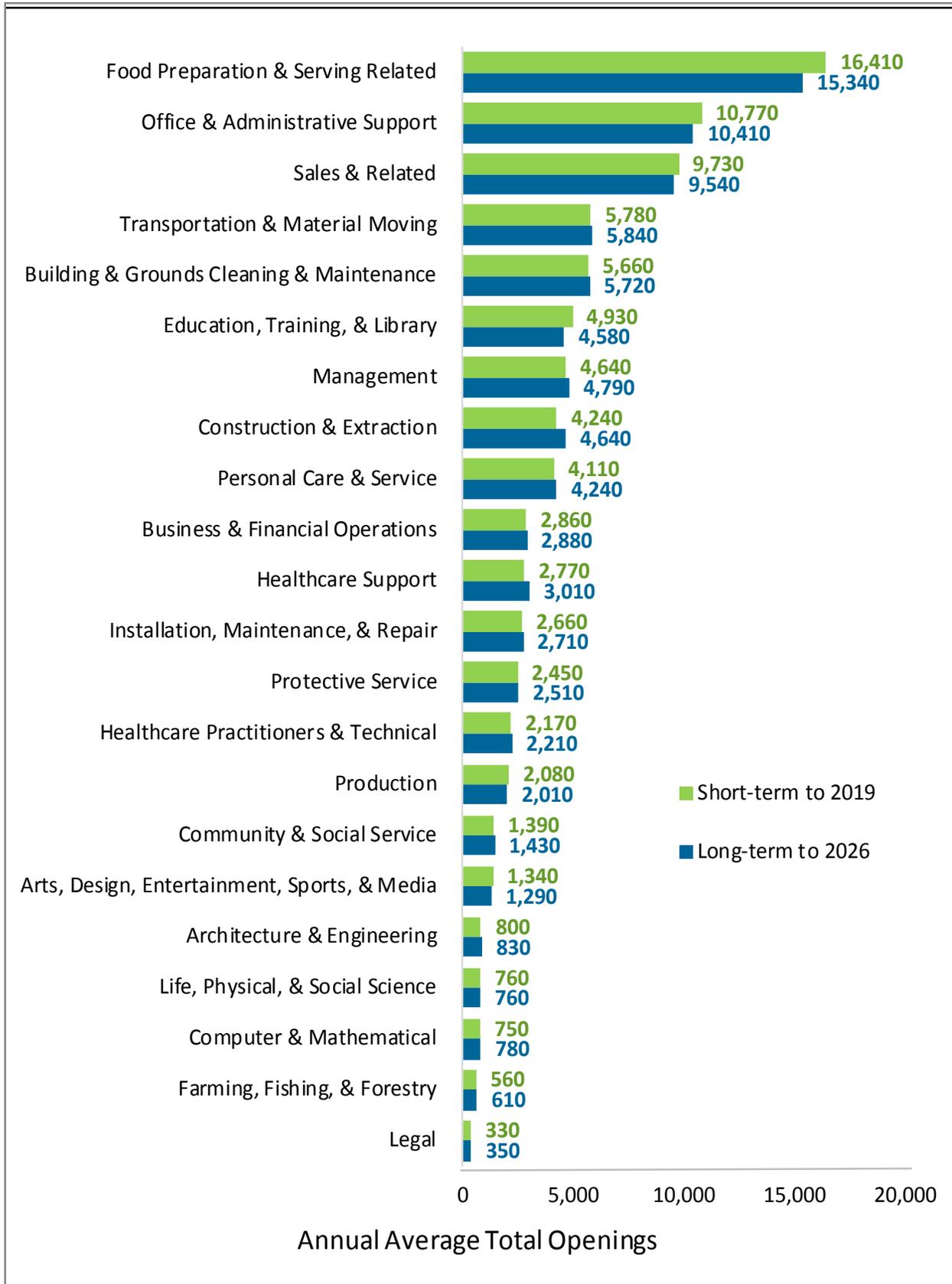
Many of the projected job openings will occur in entry level, transitional jobs in which there is a constant turnover of workers, such as those related to: food preparation and serving; office and administrative support; and sales and related occupations (Figure 31). Rounding out the top five groups, transportation and material moving occupations, along with building and grounds cleaning and maintenance workers will provide many openings in the near future and will continue over the long-term. Jobs requiring postsecondary education will also create numerous openings. These include education, training and library occupations as well as opportunities within management occupations.

Occupations with the most openings mainly related to tourism

Figure 32 lists the 15 occupations projected to average the most job openings annually for the long-term as well as the short-term future. Although the numbers vary slightly, all 15 jobs are ranked in exactly the same order for both time periods. Retail salespersons, waiters and waitresses, cashiers, and food preparation and serving workers, four of the larger occupations, top the list with at least 2,700 projected openings to fill annually. Most of the positions listed are either directly or indirectly related to tourism. Three jobs are office-related - general office clerks, stock clerks and order fillers, and general and operations managers.

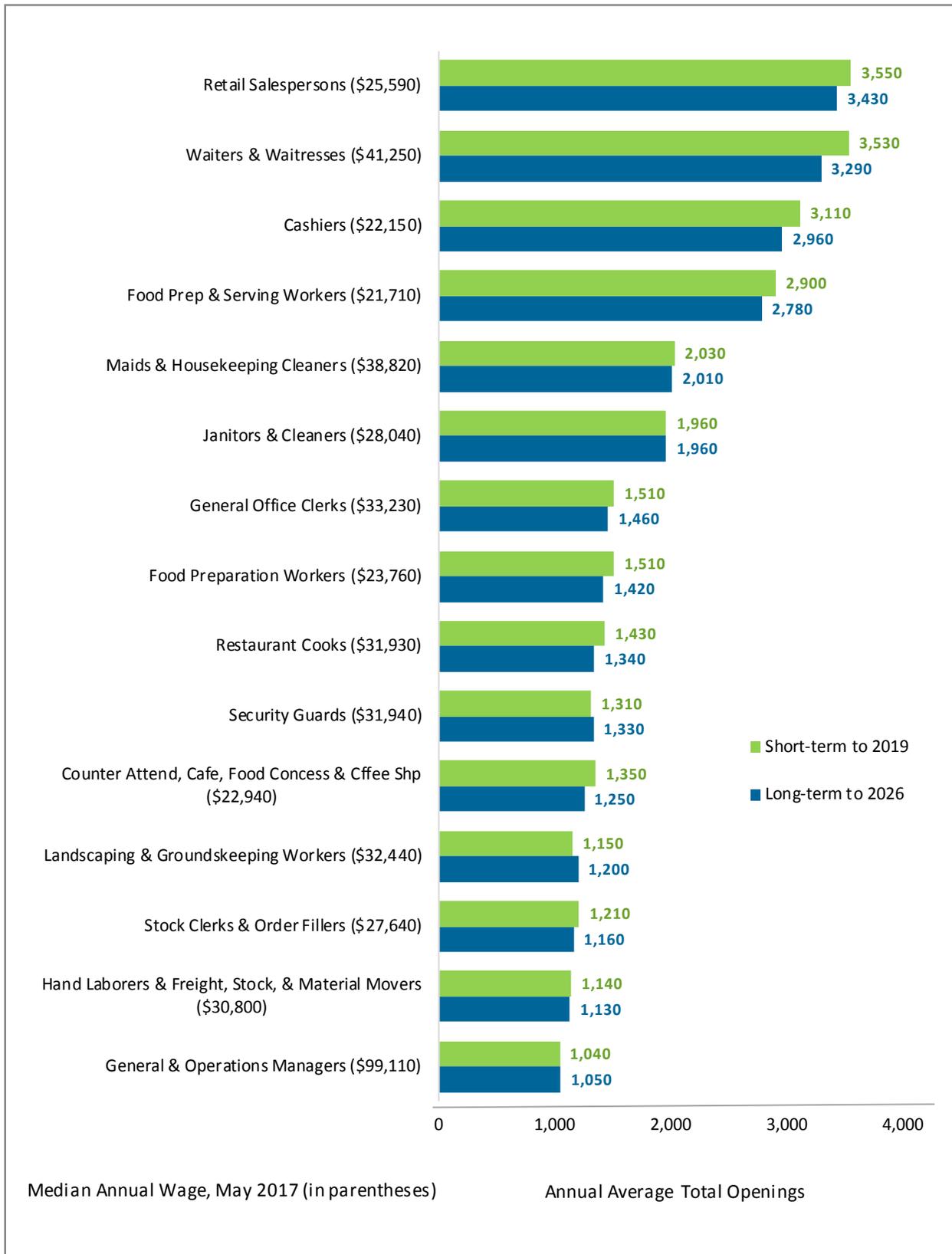
Not surprisingly, wages for most of the top 15 jobs are on the lower end of the payscale, with minimal education and training requirements. General and operations managers is the only occupation that requires a bachelor's degree and also earns more than the overall median of \$41,650 for all occupations. In addition, three occupations, which includes the two office jobs - general office clerks, and stock clerks and order fillers, plus security guards, requires a high school diploma. The other 11 occupations do not have any formal educational requirement. However, either short-term or moderate-term on-the-job training is mandatory for all 11 jobs.

Figure 31. Projected Annual Average Total Job Openings by Occupation Group for Short- and Long-Term, Hawaii



Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, Projections Program.

Figure 32. Occupations with the Most Projected Annual Average Total Job Openings in the Short- and Long-Term, Hawaii



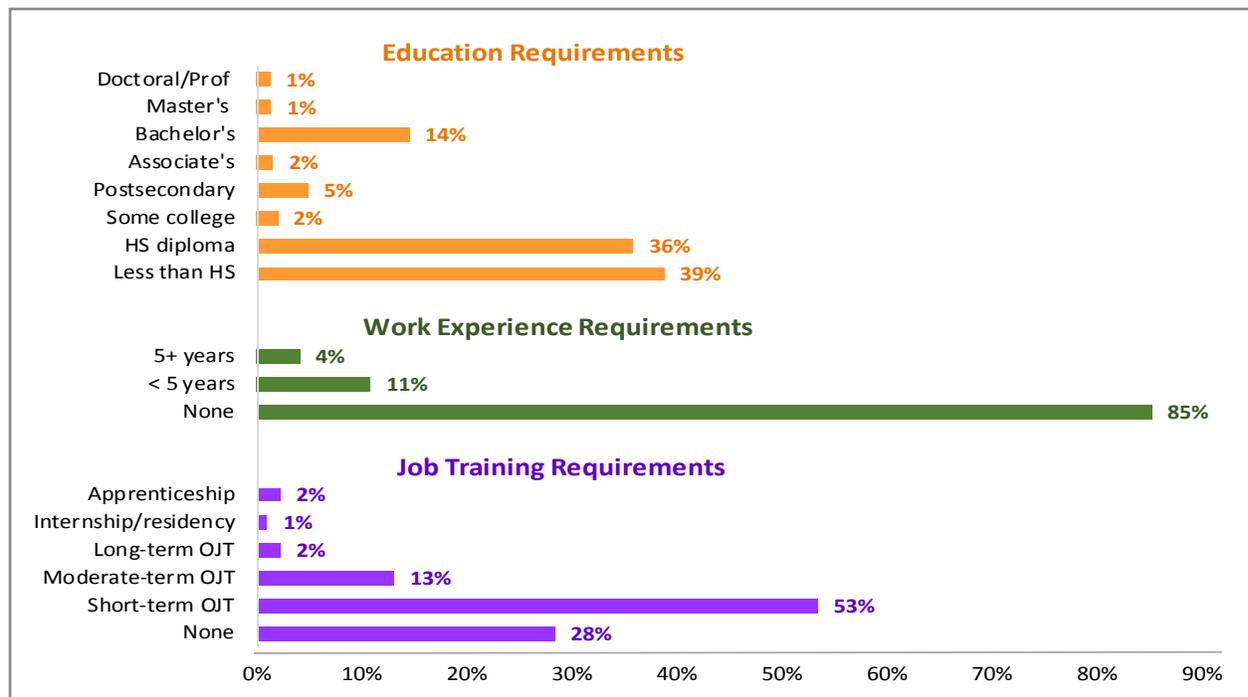
Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, Projections Program.

Overall, about 75 percent of the state’s projected job openings through 2026 require only a high school diploma or less (Figure 33). About 14 percent of the future openings will require a Bachelor’s degree and another 2 percent will need an Associate’s degree. The prerequisite for 1 percent of all openings will be a Master’s degree, while another 1 percent will necessitate a Doctoral/Professional degree for employment. The remaining job opportunities call for a postsecondary certificate (5 percent) or some college (2 percent).

A significant portion of job openings, 85 percent, will not demand any related work experience. About 11 percent will require less than 5 years experience and the remaining 4 percent will need 5 or more years.

Around 28 percent of the job openings will not have any job training requirements. More than half or 53 percent will require short-term on-the-job training and another 13 percent will require moderate-term on-the-job training. Long-term on-the-job training will be needed for just 2 percent of job openings. The rest of the openings will need an internship/residency (1 percent) or an apprenticeship training program (2 percent).

Figure 33. Distribution of Projected Annual Average Total Job Openings by Education, Work Experience, and Job Training Requirements, Hawaii, 2016-2026

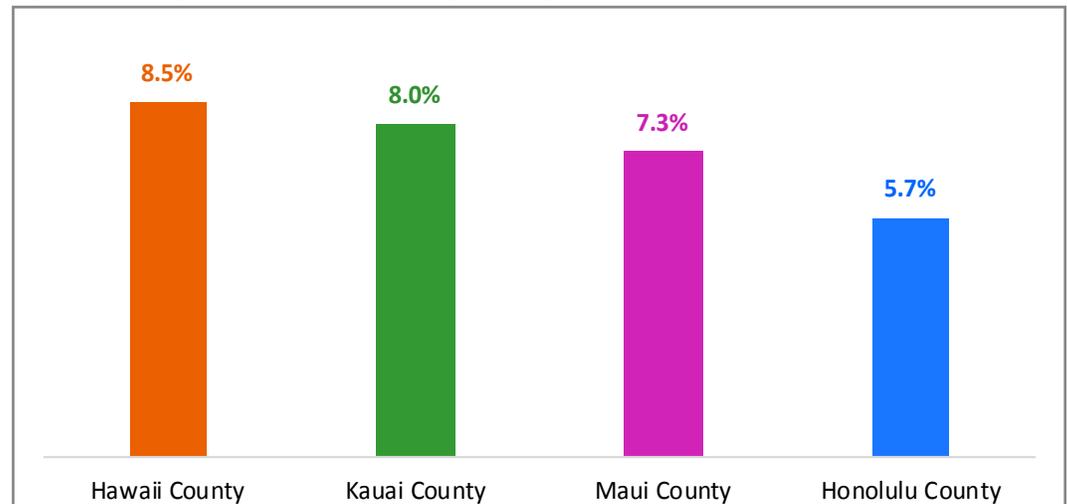


Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, Projections Program.

Long-Term County Job Outlook

As the youngest members of the baby boom generation turns 60 years old by the year 2024, the overall pace of job growth from 2014 to 2024 will slow down compared to previous forecasts. Total projected growth will range from 8.5 percent to 5.7 percent which translates to annual average growth of less than one percent for each county (Figure 34).

Figure 34. Projected Growth Rates by County, 2014-2024



Pace of job growth expected to slow down

Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, Projections Program.

Hawaii County's projected employment gain of 8.5 percent will top job growth among the four counties. Three industries will contribute more than 60 percent of the total jobs added in Hawaii County. These include: education and health services (1,770); leisure and hospitality (1,180); and trade, transportation, and utilities (1,020). The construction industry, with an expansion rate of 12.8 percent will advance the fastest. Education and health services, and leisure and hospitality, in addition to providing numerous jobs, will post the next highest growth totaling 11.8 percent and 8.9 percent, respectively. Two other industries - natural resources and mining with growth of 8.8 percent, and professional and business services, up by 8.6 percent, will increase faster than the county average of 8.5 percent.

Employment growth in Kauai County will improve by 8.0 percent, the second fastest rate, but the projected numerical gain of 2,670 will be the smallest numerical increase. The three largest industries: leisure and

hospitality; education and health services; and trade, transportation, and utilities will create almost 60 percent of the increase in jobs. Construction with a projected hike of 25.6 percent, and an anticipated boost of 17.4 percent in manufacturing jobs, will lead growth among all industries. However, the actual number of jobs added between these two industries will total 390 positions. Higher than average growth is also predicted for education and health services (10.3 percent) and professional and business services (9.8 percent).

***Two-thirds of overall
job advances
originates in Honolulu***

Maui County will post an expansion rate of 7.3 percent or 5,920 jobs. Projected gains in the three largest industries - trade, transportation, and utilities with an increase of 1,530 positions, education and health services calculated to rise by 1,210, and an advance of 1,020 in leisure and hospitality will account for almost two-thirds of the total jobs created over the ten-year period. With a growth rate of 20.5 percent, construction will accelerate the fastest; followed by education and health services up by 10.7 percent; an increase of 10.6 percent in trade, transportation, and utilities; and growth in professional and business services of 9.1 percent.

Almost two-thirds of the statewide job advances will originate in Honolulu County, however, the projected growth of 5.7 percent will be the slowest among the four counties. Education and health services, the county's largest industry division will provide one-third of all openings. The next largest increase of 4,660 jobs will result from gains in professional and business services, followed by trade, transportation, and utilities (4,340 jobs). Construction will spike upward with the largest percentage increase of 12.4 percent, more than two times higher than Honolulu County's rate of 5.7 percent. Other industries with above average growth include: education and health services (9.5 percent); professional and business services (7.1 percent); and information (6.0 percent).

Within the counties, all but one of the major occupational groups will expand during the 2014 to 2024 projection period. The only exception is farming, fishing, and forestry occupations on Honolulu and Maui County. However, this occupational group will still provide job openings due to replacement needs. The following table (Figure 35) provides a snapshot of the variety of jobs projected to provide better job opportunities with earnings averaging \$50,000 or more annually.

Figure 35. Top 5 Occupations with the Best Growth Opportunities and the Most Openings in each County, 2014-2024, (Median Annual Wage, May 2017)

With the Highest Growth Rates				With the Most Annual Openings		
Physical Therapist Assistants	32.1%	\$54,880	Honolulu County	Registered Nurses	320	\$104,920
Electrical Power-Line Installers and Repairers	26.6%	\$87,720		General & Operations Managers	260	\$106,440
Web Developers	26.1%	\$60,620		Accountants & Auditors	150	\$60,450
Personal Financial Advisors	22.2%	\$71,710		Construction Laborers	140	\$61,910
Occupational Therapists	21.5%	\$82,870		Elementary School Teachers, Exc. Special Education	140	\$60,510
Medical & Health Services Managers	30.7%	\$93,190	Maui County	General & Operations Managers	50	\$83,100
First-Line Supervisors of Construction Trades & Extraction Workers	21.0%	\$77,150		Bartenders	40	\$50,980
Heating, Air Conditioning, & Refrigeration Mechanics and Installers	16.2%	\$61,140		Registered Nurses	30	\$93,640
Aircraft Mechanics & Service Technicians	15.8%	\$63,210		Carpenters	30	\$66,410
Automotive Body & Related Repairers	15.5%	\$52,040		Accountants & Auditors	20	\$61,370
Physical Therapists	33.3%	\$93,270	Hawaii County	General & Operations Managers	40	\$78,050
Dental Hygienists	18.9%	\$72,090		Registered Nurses	40	\$93,540
Mobile Heavy Equipment Mechanics, Exc. Engines	15.8%	\$57,560		Carpenters	20	\$61,450
Registered Nurses	14.6%	\$93,540		Bartenders	20	\$51,370
First-Line Supervisors of Office & Administrative Support Wkrs	12.8%	\$51,000		First-Line Supervisors of Office & Administrative Support Wkrs	20	\$50,240
Construction Laborers	24.1%	\$51,890	Kauai County	General & Operations Managers	20	\$81,480
Electricians	22.9%	\$75,170		Construction Laborers	10	\$51,890
Carpenters	18.6%	\$64,510		Carpenters	10	\$64,510
Commercial Pilots	15.8%	\$111,430		First-Line Supervisors of Office & Administrative Support Wkrs	10	\$50,240
Massage Therapists	10.9%	\$69,090		Massage Therapists	10	\$69,090

Source: Hawaii State Department of Labor and Industrial Relations, Research and Statistics Office, Projections Program.
Wage Source: Occupational Employment Statistics Program

Hawaii Workforce Infonet

For more information, visit the Research and Statistics Office’s website at www.hiwi.org. There you will find many publications that the Labor Market Research Section produces about the state of the local labor market as well as employment projections by industry and occupations and detailed analyses. Recently published reports include:

- Affirmative Action Programs – Labor Information tables for state and counties updated Table 1- Labor Force Information by Sex and Race with 2017 Annual Local Area Unemployment Statistics (LAUS) data and based on 2006-2010 Census.
- Employment Forecasts for the Short-Term Future provides short-term industry and occupational projections for Hawaii, using 1st Quarter 2017 employment data to forecast employment for the 1st Quarter 2019.
- Local Employment Dynamics reports can be generated for Hawaii private industries based on quarterly workforce indicators such as employment, job creation and flow via new hires and separations, worker turnover, and wages by industry, age, and gender.
- Long-Term Industry and Occupational Projections, State of Hawaii 2016-2026 tables contain state employment for industries and occupations and expected growth amounts for the designated time period as well as occupational openings based on growth and replacement needs.
- Long-Term Industry and Occupational Projections, Counties 2014-2024 tables contain county employment for industries and occupations and expected growth amounts for the designated time period as well as occupational openings based on growth and replacement needs.
- Occupational Employment and Wages in Hawaii 2017 is an annual report compiling the results of the Occupational Employment Statistics survey, collecting employment and wage data by occupation over a three-year period from approximately 3,800 establishments.



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