

# How Do Wages in Hawaii Compare to Wages on the Mainland?

*Average weekly wages for full-time employees studied in Hawaii ranged from \$384 for key entry operators to \$1,005 for Engineers. Generally, Hawaiian wages were about 7 percent below comparable mainland averages. Higher skilled workers in Hawaii tended to earn less than comparable mainland workers, while lower skilled and entry level workers tended to earn close to the mainland average.*

BY HILERY Z. SIMPSON

A primary purpose of the Occupational Compensation Survey (OCS) was to provide an accurate measure of local labor market pay levels in the United States for the purpose of setting locality based Federal wages and salaries.<sup>1</sup> Prior to OCS, the Federal Government usually paid an identical wage for an occupation regardless of geographic location. This system made it difficult to recruit workers in certain higher paying areas, although employees in various lower paying areas were comparatively overpaid. In response to these discrepancies, Congress passed the Federal Employees Pay Comparability Act in 1990, which mandated that the Bureau of Labor Statistics (BLS) collect the necessary wage comparability data.

The Act only applies to Federal workers within the contiguous 48 States (mainland). Federal wages in Alaska, Hawaii, Puerto Rico, and other areas such as Guam and the Northern Marianas Islands are adjusted using a methodology based on the Consumer Price Index. In response to litigation about pay adjustments in the areas

excluded from the Act, the Office of Personnel Management (OPM) contracted with BLS to conduct occupational wage surveys in Alaska, Hawaii, and Puerto Rico in 1996. This article presents selected survey results for the State of Hawaii and the Honolulu Metropolitan Statistical Area (MSA).

## Survey design

Standard OCS procedures were used to complete the surveys for Honolulu and Hawaii. As a result, data are comparable between all published OCS geographic areas. The main objective of all OCS surveys was to describe the level and distribution of occupational pay in a given labor market. Another objective was to provide information on the incidence of employee benefits among and within given labor markets. However, because the contract with OPM only included funds for the collection of wages and salaries, no benefit data were collected for either the Honolulu or Hawaii surveys.

The OCS randomly sampled establishments employing 50 or more work-

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ers in goods-producing industries (mining, construction, and manufacturing); service-producing industries (transportation, communications, electric, gas, and sanitary services; wholesale and retail trade; finance, insurance, and real estate); and State and local governments.<sup>2</sup> Private households, the Federal Government, the self-employed, and agricultural employees are excluded from the survey. Unless specifically included in a Bureau job description, working supervisors, trainees, and part-time employees are also excluded.<sup>3</sup>

Establishments in the Hawaiian surveys were randomly sampled using State unemployment insurance reports for the State of Hawaii and the Honolulu MSA as of 1994. From these reports, establishments were classified into strata (groups) based on industry and employment size. The number of establishments sampled from a stratum was determined by the number of employees expected to be found (based on previous occupational pay surveys) in professional, administrative, technical, protective services, and clerical occupations. In other words, the larger the number of employees expected to be found in the selected occupations, the larger the number of establishments sampled in that stratum. Establishment sampling was also increased for industry strata expected to have relatively high sampling errors.

A total of 1,199 establishments employing nearly 300,000 employees were found to be within the scope of the two surveys. Of those, 273 establishments employing 168,620 workers were studied in the Hawaii survey, and 177 establishments employing 121,949 workers were examined in the Honolulu survey.<sup>4</sup> Because the majority of sample establishments in Hawaii are located within the Honolulu MSA, there was much overlap between the two surveys in terms of establishments and workers surveyed. Data were collected concurrently for the two surveys, starting in July 1996 and lasting through October 1996. The average payroll reference month was August 1996.

Wage data were collected for all employees in 46 pre-selected occupations<sup>5</sup> that met OCS definitions.<sup>6</sup> For example, the OCS definition of a word processor, in summary, is anyone whose primary duties are to produce such items as memos, forms, or graphs using word processing software packages. Excluded are typists who use non-editing typewriters, key entry operators, and employees requiring subject matter knowledge, even if their job title was word processor.

The purpose of using concise job descriptions is two-fold. First, it helps field economists classify workers into appropriate occupations. Second, it permits establishments to compare their employees' wages with the earnings of other employees who do the same type of work. Because of the emphasis on comparability of occupational content, the Bureau's job description for an occupation may differ significantly from those used in individual establishments.

In addition to classifying employees into specific occupations, they are further classified into grade levels. Just as occupations are clearly defined, so are grade levels. For example, the definition of a level-1 accounting clerk states, "Performs very simple and routine accounting clerical operations...." The description then goes on to explain the level of supervision received and the specific procedures that incumbents are expected to be able to complete, such as "verifying mathematical accuracy." At level 2, accounting clerks are expected to "perform one or more routine operations such as examining...transactions to ensure accuracy...." At the next level, they are expected to do double entry bookkeeping. Finally, accounting clerks level 4, the highest level surveyed, balance and reconcile accounts. (Actual published occupation and grade level definitions are much more detailed than shown in this example.)

As these definitions illustrate, the responsibilities and knowledge needed to complete the work rise from one level to the next. The number of levels within an occupation depends upon

its range of complexity. For example, the occupation of engineer has eight levels, while receptionist has one level.

The classification of workers within an occupation into various levels allows comparability of duties and skills. This is particularly useful to wage and salary administrators and others who compare wage rates among establishments for workers who do the same work, not just workers who have the same job title.

### Wages by establishment size

The percent of Hawaiian employees in establishments with 500 or more workers was slightly higher than the mainland average. They accounted for 55 percent of all Hawaiian workers, 4-percentage points above the mainland average. Hawaii had 99 large establishments, of which 71 were surveyed.

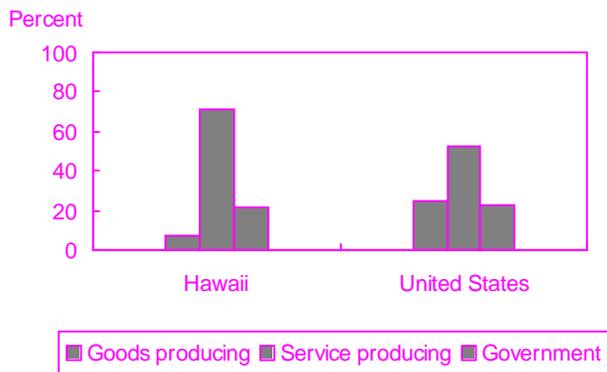
Previous BLS studies have shown that average occupational wages in larger establishments tend to be higher than in smaller establishments.<sup>7</sup> However, this was not the case in either the Hawaii or Honolulu surveys. (See table 1.)

Unless otherwise noted, wage data presented in the rest of this article are for all surveyed establishments regardless of size.

**Table 1. Average weekly wages in Hawaii by establishment size, 1996**

Occupation	Mean	
	All establishments surveyed	Surveyed establishments employing 500 or more workers
Accountants .....	\$749	\$735
Engineers .....	961	965
Computer programmers .....	640	640
Computer systems analysts .....	822	820
Personnel specialists .....	785	766
Accounting clerks .....	491	469
General clerks ..	418	399
Key entry operators .....	384	385
Secretaries .....	611	621
Personnel assistants .....	498	495

**Chart 1. Percent of non-agricultural workforce by industry sector, Hawaii and United States, 1996-97**



### Different industry concentrations

Private industry employment breakouts differ significantly between the State of Hawaii and the mainland. (See chart 1.) In Hawaii, close to 75 percent of the workers are employed in service-producing industries and less than 10 percent are in goods-producing industries. By comparison, 54 percent of civilian non-agricultural workers on the mainland are employed in service-producing industries while just under 25 percent are in goods-producing industries. The percentage of Hawaiian workers employed by State and local governments, however, is almost identical to the mainland average of 21 percent.

### Occupational pay data

The occupational pay data presented here are for full-time workers who work a regular weekly schedule as established by their employer (approximately 40 hours in Hawaii on average). The published data exclude premium pay for overtime, weekends, holidays, and late shifts. Also excluded are nonproduction bonuses and lump-sum payments. Pay increases under cost-of-living clauses and incentive payments (production bonuses), however, are included.

Unless otherwise noted, the pay data presented are for employees in private industry, as well as State and local governments. Average pay data were published in Hawaii for 38 se-

lected occupations; however, data for 15 occupations are presented in this article. Occupations were included based on their prevalence in the local economy, their comparability with mainland averages, and their suitability to illustrate a point.<sup>8</sup> The earnings data presented are the mean weekly wages of all sampled workers in an occupation. Mean wages were computed by summing the pay for all workers in each occupation and level and then dividing by the total number of employees in each category. Median wages, the point at which half the workers earned less and half earned more, as well as middle ranges were also published, but are not included in this article. For data comparison purposes, the contiguous 48 States are referred to as the mainland.

### Professional occupations

*Accountants.* Like most other professional occupations surveyed, accountants were paid less on average in Hawaii than on the mainland.<sup>9</sup> (See table 2.)

As seen in many of the occupations surveyed, the difference in pay between Hawaii and the mainland average was most noticeable for those accountants with greater responsibilities than for those less experienced. Level-2 accountants, responsible for applying accounting concepts just beyond the application of rules and instructions,

were paid close to the mainland level. In comparison, level-4 accountants, who must apply accounting procedures to a wide variety of difficult problems, were paid at a significantly lower rate in Hawaii compared to the mainland. Similar results were also found in the Honolulu survey.<sup>10</sup>

*Engineers.* Mid-level engineers earn, on average, about 10 percent less in Honolulu than on the mainland. (See table 2.) When State and local government employees are excluded, however, the pay gap almost disappears. Level-3 engineers in private industry, who independently evaluate standard engineering techniques and use judgment in making minor modifications to specifications, earn almost identical wages in Honolulu as on the mainland. Level-4 engineers, who are knowledgeable of all conventional aspects of their profession and use much judgment, earn slightly more outside of Hawaii.

### Administrative and technical occupations

*Computer programmers.* Although the national market for computer programmers has become increasingly tight in recent years, their wages in Honolulu and Hawaii are below the mainland average. Table 2 shows the average weekly wages of mid-level computer programmers who apply standard procedures and detailed knowledge to their work.

*Computer systems analysts.* Similar to professional occupations, higher-level computer systems analysts are paid relatively less compared to the mainland average than are lower level systems analysts. Computer system analysts, in general, analyze business and scientific problems for resolution through electronic data processing; however, their responsibilities can vary significantly by skill level. A level-2 systems analyst, who must be competent in most phases of systems analysis and have knowledge of pertinent system software and computer equipment, is paid 12 percent less in Hawaii

than on the mainland, and a level-3 analyst who has more complex responsibilities makes approximately 24 percent less on the islands.

*Personnel specialists.* Personnel specialists do professional work in one or more personnel specialties such as benefit administration, recruitment, or labor relations. Workers were paid similar wages in Honolulu as across the State, but sometimes these differed from mainland averages.

As seen in other occupations, the wages of personnel specialists tended to drop relative to the mainland average as their experiences and skills increase. Level-2 personnel specialists, who perform standard procedures, earn a wage just above the mainland average, although wages for level-4 personnel specialists, who have moderately complex duties, are considerably lower than those paid to comparable workers on the mainland. (See table 2.)

### Clerical occupations

*Clerks.* The differences between Hawaiian and mainland wage averages for clerks sometimes were considerable, just as they were for professional occupations. For example, clerks in Hawaii earned anywhere from 19 percent less to 11 percent more than the comparable mainland average. Professional and technical occupations, on the other hand, rarely earned above the mainland average and often earned much less. Unlike high level professionals who often saw their relative wages falling further below the mainland average as their skills and responsibilities increased, the wages of accounting and key entry clerks in Hawaii typically remained close to the mainland average. For example, the highest level of systems analysts earned close to 25 percent less in Hawaii, while the highest level of accounting clerks actually earned about the same as the comparable mainland average. (See table 2.)

Clerks in Hawaii were among the lowest paid workers surveyed. Average weekly earnings for clerks ranged

**Table 2. Average weekly wages for various occupations and levels, 1996**

Occupation and level	Honolulu	Hawaii	Mainland	Ratio <sup>1</sup>
<b>Professional</b>				
Accountants				
2 .....	\$596	\$603	\$626	96
3 .....	759	753	811	93
4 .....	885	885	1,041	85
Engineers				
3 .....	853	870	959	91
4 .....	1,037	1,037	1,167	89
<b>Administrative and technical</b>				
Computer programmers				
3 .....	672	671	788	85
Systems analysts				
1 .....	744	750	779	96
2 .....	831	829	940	88
3 .....	850	847	1,111	76
Personnel specialists				
2 .....	641	640	611	105
3 .....	796	797	804	99
4 .....	851	854	1,045	82
<b>Clerical</b>				
Accounting clerks				
2 .....	422	421	379	111
3 .....	454	454	464	98
4 .....	578	569	549	104
General clerks				
2 .....	332	334	342	98
3 .....	398	403	429	94
4 .....	447	398	493	81
Key entry operators				
1 .....	353	352	353	100
2 .....	424	431	414	105
Secretaries				
2 .....	547	541	476	114
3 .....	610	611	557	110
4 .....	726	721	665	108
Personnel assistants				
2 .....	433	429	409	105
3 .....	502	501	508	99
4 .....	542	545	596	91

<sup>1</sup> Ratio is Hawaii to mainland wages.

from \$332 for a general clerk level 2 to \$578 for an accounting clerk level 4. Accounting clerks level 2 had higher than average wages in Hawaii, while levels 3 and 4 earned close to the comparable mainland average. Key entry operators also earned close to or above the mainland average. Pay for general clerks, on the other hand, followed the same pattern as professional occupations; they earned closer to the mainland average in the lower levels, although level 4 earned substantially less.

*Secretaries and personnel assistants.* Secretaries was the only occupation with multiple levels that earned wages above the comparable mainland average at all published levels. However, their wage advantage tended to decline as their level increased. Personnel assistants, on the other hand, followed the pattern of professionals by earning relatively close to the mainland average at the lower levels, but below the mainland average at the highest level. (See table 2.)

**Table 3 Average weekly wages for protective services occupations, 1996**

Occupation	Honolulu	Hawaii	Mainland	Ratio <sup>1</sup>
Corrections officers .....	\$555	\$551	\$529	104
Firefighters .....	604	607	690	88
Police officers Level 1 .....	660	649	700	93

<sup>1</sup> Ratio is Hawaii to mainland wages.

**Table 4. Average hourly wage rates for truckdriver occupations, 1996**

Truck type	Honolulu	Hawaii	Mainland	Ratio <sup>1</sup>
Light .....	\$9.01	\$9.13	\$8.53	107
Heavy .....	11.87	11.91	13.38	89
Tractor-trailer .....	14.11	13.82	14.24	97

<sup>1</sup> Ratio is Hawaii to mainland wages.

### Protective services occupations

*Police, firefighters, and corrections officers.* Employed almost exclusively by State and local governments, earnings of protective services workers averaged just above \$600 per week. Hawaiian corrections officers earned roughly \$50 per week less than firefighters and close to \$100 less than police officers. (See table 3.)

Although Hawaiian police officers earned more than their protective services colleagues, their pay fell below the mainland average. Firefighters fell even further behind, earning \$607 per week compared to the mainland average of \$690. Although they had the lowest average earnings of the three protective services groups, corrections officers' average earnings were actually above the mainland average.

### Blue-collar occupations

*Truckdrivers.* Drivers of light trucks earned slightly more than their mainland counterparts, while drivers of tractor-trailers and heavy trucks on the islands earned less.<sup>11</sup> As expected, the hourly wages of Honolulu truckdrivers, like those on the mainland, varied by the size of the truck driven. As the size of the vehicle increased (and often the driver's level of required experience and education) so did the hourly wage rate. (See table 4.)

### Summary

Wage progression within many of the sampled occupations was less in Hawaii than for comparable occupations on the mainland. Wages of Hawaiian workers increased as their knowledge and responsibilities in a given occupation increased; however, this increase was less than on the mainland. This trend is most pronounced in higher skilled occupations. For example, entry level engineers, accountants, and systems analysts in Hawaii earned close to or just below the mainland average, while the highest skilled employees in these occupations earned much less than the mainland average. (See charts 2, 3, and 4.)

This phenomenon was not exclusive to the professional and technical occupations; it was also found among clerical, protective services, and blue-collar occupations. Only secretaries actually earned more than the mainland average at the lower- and mid-grade levels, and then matched the mainland average at the highest grade level. (See chart 5.)

Occupational wages in Hawaii tended to have a smaller range in pay between the lowest and highest skilled employees than the Nation as a whole. For example, in 1995, the average mainland mean weekly pay for experienced accountants (level 5) was

\$1,375, while entry level accountants (level 1) earned \$523, a spread of 163 percent. Experienced accountants in Hawaii, however, were paid \$927 per week, while entry level accountants earned \$542, a spread of 71 percent.

Several factors could be causing this slower occupational wage progression. First, Hawaii's smaller labor market may have less demand for higher skilled workers than the mainland. This could be caused by the relative lack of certain types of large private establishments, such as corporate headquarters or research centers, which often employ the highest skilled employees within an occupation. Second, the Hawaiian economy is more heavily weighted toward service establishments than the mainland economy. Approximately 75 percent of the Hawaiian economy is represented by service sector employees as compared to about 50 percent of the mainland economy. Service sector employees earn close to 20 percent less than employees in goods-producing industries. Finally, Hawaiians are less mobile than their mainland counterparts on the whole, largely because of the expense associated with moving to the mainland.

The slower wage growth within occupations, however, is not caused by a lower cost of living on the islands. According to the State of Hawaii, it takes 135 percent of the urban mainland income to maintain the same standard of living in Honolulu.<sup>12</sup>

### Additional survey information

*Publishing data by occupation and grade level.* Although the list of occupations and grade levels are known prior to collection, the occupations and grade levels which meet the necessary requirements for publication are determined only after the survey is completed. For a specific occupation or grade level to be published, it must: (1) Be sampled from at least three establishments; (2) have a minimum of 6 weighted workers; and (3) not have a single establishment contribute more than 60 percent of the workers in that occupation or grade level.

The prevalence of an occupation in the surveyed area is the primary factor determining which occupations will meet publication requirements. For example, a State or MSA with large numbers of engineers is more likely to have all eight levels of engineers published than an area with relatively few engineers. In the Hawaii survey, 38 of the 46 occupations had at least one level published, and 12 occupations had all possible levels published.

Occupational pay information is published for both private industry and State and local governments when possible. Within private industry, more detailed information is presented to the extent that the surveys' establishment sample can support such detail. In the Hawaii and Honolulu surveys, data are also published for occupations regardless of establishment size and for occupations within establishments that employ 500 or more workers.

*Survey nonresponse.* Sample loss rates were lower in the Hawaii and Honolulu surveys than for OCS in general. (See chart 6.) Wage data were not collected from 11.8 percent of the sam-

pled establishments in Hawaii and 13.1 percent in Honolulu, primarily due to lack of cooperation. The relative sample weights originally assigned to those establishments that chose not to participate were redistributed among the participating establishments. This ensures that published average wages take into account industry variations, among other factors. In addition to refusals, close to 2 percent of the sampled establishments in each survey were either out-of-business or out-of-scope at the time of collection.<sup>13</sup>

In addition to establishment losses, certain participating respondents would not provide wage data for each occupation requested. The proportion of employees for whom wage information was not available was less than 5 percent in both surveys. No weight adjustments were made for those establishments providing partial data.

*Data quality.* Estimates of relative standard errors for these surveys vary among occupational work levels, and depend upon such factors as the frequency with which the job occurs, the dispersion of salaries for the job, and the survey design. The tabulation be-

low shows the distribution of the published work levels for one relative standard deviation from the Honolulu survey.<sup>14</sup>

<i>Relative standard error</i>	<i>Percent of published occupational work levels</i>
Less than 1 percent .....	3.4
1 and under 3 percent .....	62.4
3 and under 5 percent .....	26.5
5 percent or more .....	7.7

Similar results were also found for the Hawaii survey.

The sampling errors mentioned above are measured, but nonsampling errors are not. Nonsampling errors stem from many sources, such as the inability to obtain information from some establishments, difficulties with survey definitions, and the inability of respondents to provide correct data. While very difficult to measure, such errors are expected to be minimal due to the high response rate, the extensive training of field economists who collect the data, and constant, rigorous review of both the occupational definitions and the collected data.

<sup>1</sup> In July 1997, BLS concluded 6 years of locality pay and Service Contract Act surveys collected under the umbrella of the Occupational Compensation Survey (OCS) program. The OCS program was discontinued as the first step in phasing in the new National Compensation Survey (NCS) program. For additional information on NCS, see Beth Levin Crimmel, "COMP2000: Designing a New Wage Survey," *Compensation and Working Conditions*, December 1996, pp. 9-11.

<sup>2</sup> For these surveys, an establishment is an economic unit which produces goods or services, a central administrative office, or an auxiliary unit providing support services to a company. In manufacturing industries, the establishment is usually at a single physical location. In service-producing industries, all locations of a company in a Metropolitan Statistical Area or nonmetropolitan county are usually considered an establishment. In government, an establishment is generally defined as all locations of a specific government entity.

<sup>3</sup> Working supervisors, apprentices, learners, beginners, and trainees, as well as part-time, temporary, and probationary workers are excluded, unless specifically included in the job description.

<sup>4</sup> Includes all workers in all establishments with total employment at or above the minimum levels.

<sup>5</sup> The selected occupations are as follows: *Professional occupations*—accountants, public

accountants, attorneys, engineers, and registered nurses; *administrative occupations*—budget analysts, buyers, computer programmers, computer systems analysts, supervisors/managers, personnel specialists, personnel supervisors/managers, and tax collectors; *clerical occupations*—accounting clerks, general clerks, order clerks, key entry operators, personnel assistants, secretaries, switchboard operators/receptionists, and word processors; *protective service occupations*—corrections officers, firefighters, and police officers; *technical occupations*—computer operators, drafters, engineering technicians, civil engineering technicians, licensed practical nurses, and nursing assistants; *maintenance and powerplant occupations*—general maintenance workers, maintenance electricians, maintenance electronics technicians, maintenance machinists, machinery maintenance mechanics, motor vehicle maintenance mechanics, and tool and die makers; *custodial and material movement occupations*—forklift operators, guards, janitors, material handling laborers, order fillers, shipping and receiving clerks, truckdrivers, and warehouse specialists.

<sup>6</sup> See, for example, Appendix B. Occupational Descriptions, *Occupational Compensation Survey: Pay Only, State of Hawaii*, Bulletin 3085-37, Bureau of Labor Statistics, August 1996.

<sup>7</sup> See, for example, Robert W. Van Giezen, "Occupational Pay by Establishment Size," *Compensation and Working Conditions*, Spring

1998, pp. 28-36.

<sup>8</sup> Occupations and occupational levels with fewer than 100 workers were not included in this article.

<sup>9</sup> *Occupational Compensation Survey: Pay Only, State of Hawaii*, Bulletin 3085-37, Bureau of Labor Statistics, August 1996; and *Honolulu, Hawaii Metropolitan Area*, Bulletin 3085-34, Bureau of Labor Statistics, August 1996.

<sup>10</sup> Estimates of sample error were not available for many of the Honolulu jobs discussed in this article. For this reason, most data comparisons made in this article for Honolulu jobs were not evaluated for statistical significance.

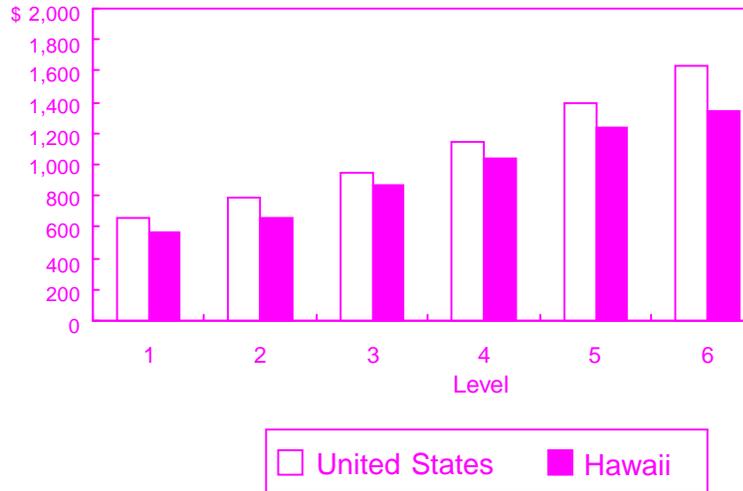
<sup>11</sup> BLS categorizes truckdrivers by the type and rated capacity of the vehicle they drive as follows: Light trucks—under 1.5 tons, usually 4 wheels; heavy trucks—over 4 tons, usually 10 wheels; and tractor trailers—separable cab and trailer, usually 18 wheels.

<sup>12</sup> See Naomi Harada, "Selected Wage Information for Hawaii," State of Hawaii Department of Labor and Industrial Relations, Research and Statistics Office, December 1996.

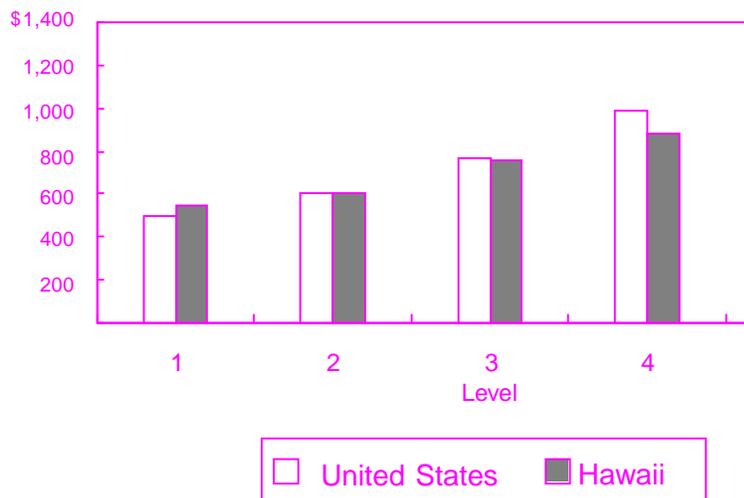
<sup>13</sup> Out-of-scope establishments primarily include those in agriculture, private households, and the self-employed.

<sup>14</sup> The standard error indicates the precision with which an estimate from a particular sample approximates the average result of all possible samples. The relative standard error is the standard error divided by the estimate. The smaller the relative error, the greater the reliability of the estimate.

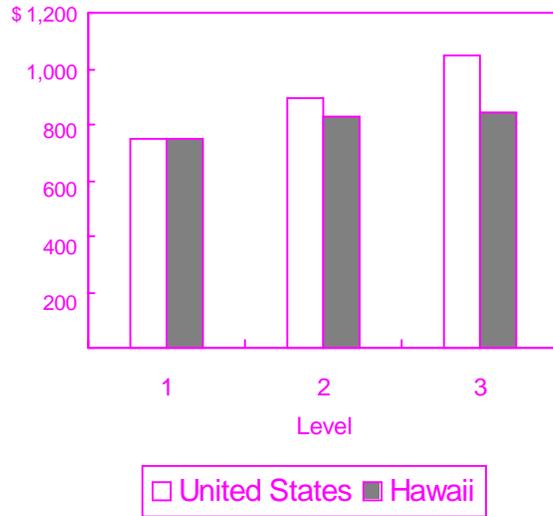
**Chart 2. Average weekly wages by level for engineers, Hawaii 1996 and United States 1995**



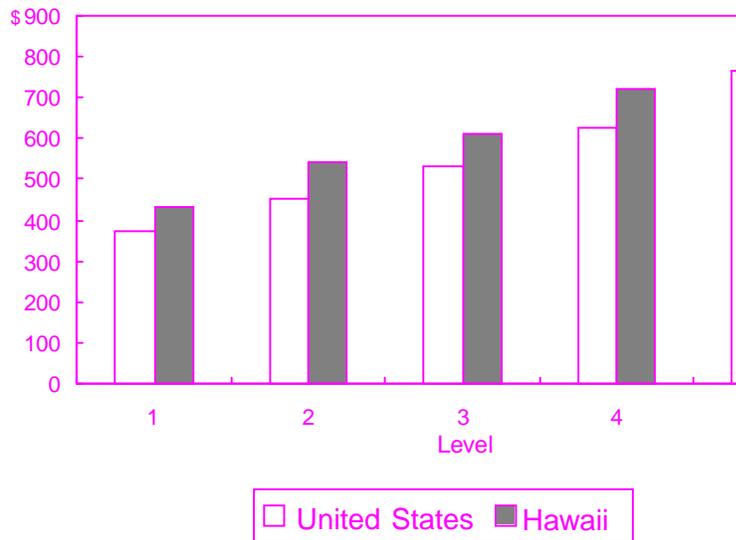
**Chart 3. Average weekly wages by level for accountants, Hawaii 1996 and United States 1995**



**Chart 4. Average weekly wages by level for systems analysts, Hawaii 1996 and United States 1995**



**Chart 5. Average weekly wages by level for secretaries, Hawaii 1996 and United States 1995**



**Chart 6. Sample establishment loss rates, Honolulu and Hawaii 1996 and national average 1995**

