

Hawaii Economic Issues

Periodic research and data reports on issues of current interest
State of Hawaii - Department of Business, Economic Development & Tourism
Research & Economic Analysis Division



Economic Report

WAGE AND EMPLOYMENT STRUCTURE: Comparing the Trends between Hawaii and the United States

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Preface

This report provides a comparative analysis of historical trends on industry wages and employment between Hawaii and the U.S. as a whole. The report compares current employment structure and average wages by sector between Hawaii and the U.S., as well as changes in employment and wage structure between 1990 and 2010. This information can be useful in planning and development of workforce for high paying sectors and in identifying low-paying sectors that need attention to improve wages.

Hawaii's economy went through stagnation during most of the second half of the 1990s, while the U.S. economy experienced a strong growth. However, in recent years, especially after the attacks of September 2001, Hawaii has outperformed the U.S. in terms of several key economic indicators. The most notable indicators in which Hawaii has consistently outpaced the U.S. economy during the last 10 years are employment and income growth.

The wage gap between the U.S. and Hawaii has widened over time, especially the gap in real wage. In real terms, the average wage for the U.S. in 2010 was about \$37,200 an increase of 27.0 percent from 1980. The average real wage for Hawaii in 2010 was about \$32,600, about 14.5 percent higher than in 1980.

In terms of the average wages by sector, the highest paying sectors in 1990 included utilities, mining, construction, management of companies and enterprises, professional, scientific, and technical services, information, and federal civilian government.

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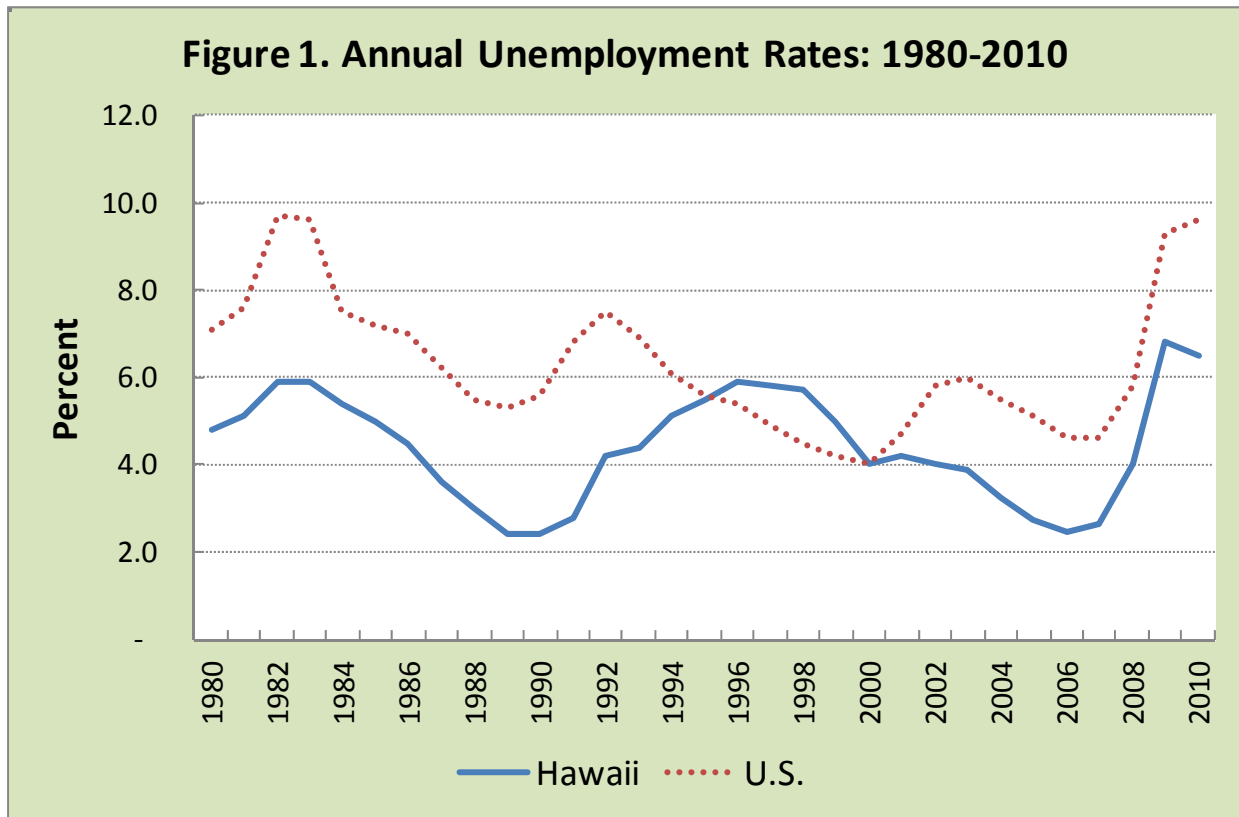
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Wage and Employment Structure: Comparing the Historical Trends between Hawaii and the United States

Background

Hawaii's economy went through stagnation during most of the second half of the 1990s, while the U.S. economy experienced a strong growth. However, in recent years, especially after the attacks of September 2001, Hawaii has outperformed the U.S. in terms of several key economic indicators.

The most notable indicators in which Hawaii has consistently outpaced the U.S. economy during the last 10 years are employment and income growth. For example, from 2001 to 2010, annual unemployment rates averaged 4.0 percent for Hawaii, compared to 6.1 percent for the U.S. In contrast, from 1995 to 2000, annual unemployment rates averaged 5.3 percent for Hawaii, compared to 4.8 percent for the U.S. During the first half of the 1990s and all of 1980s, Hawaii's unemployment rates were 2–3 percentage points lower than those for the nation (Figure 1).



The above differences in employment growth between Hawaii and the U.S. were also reflected in total personal and wage and salary incomes. From 2001 to 2010, in real terms total personal income increased at an annual rate of 2.1 percent for Hawaii, compared to just 1.4 percent for the U.S. (i.e., 5.2 percent and 3.7 percent, respectively, in nominal terms).

From 2001 to 2010, the total real wage and salary income increased 1.1 percent annually for Hawaii, against just 0.5 percent for the U.S. In nominal terms, total wage and salary income increased 4.2 percent annually for Hawaii, compared to just 2.9 percent for the U.S.

In contrast, from 1995 to 2000, the nation's economy expanded at a much faster pace than Hawaii's. For example, total real personal income grew at an annual rate of 4.1 percent for the U.S., compared to 2.2 percent for Hawaii. Similarly, total nominal personal income increased at the annual rates of 6.7 percent and 3.2 percent, respectively. In real terms, total wage and salary income expanded at an annual rate of 4.6 percent for the U.S., compared to 1.9 percent for Hawaii. In nominal terms, total wage and salary income rose 7.2 percent per annum for the U.S. vs. 2.8 percent for Hawaii (Figures 2 and 3).

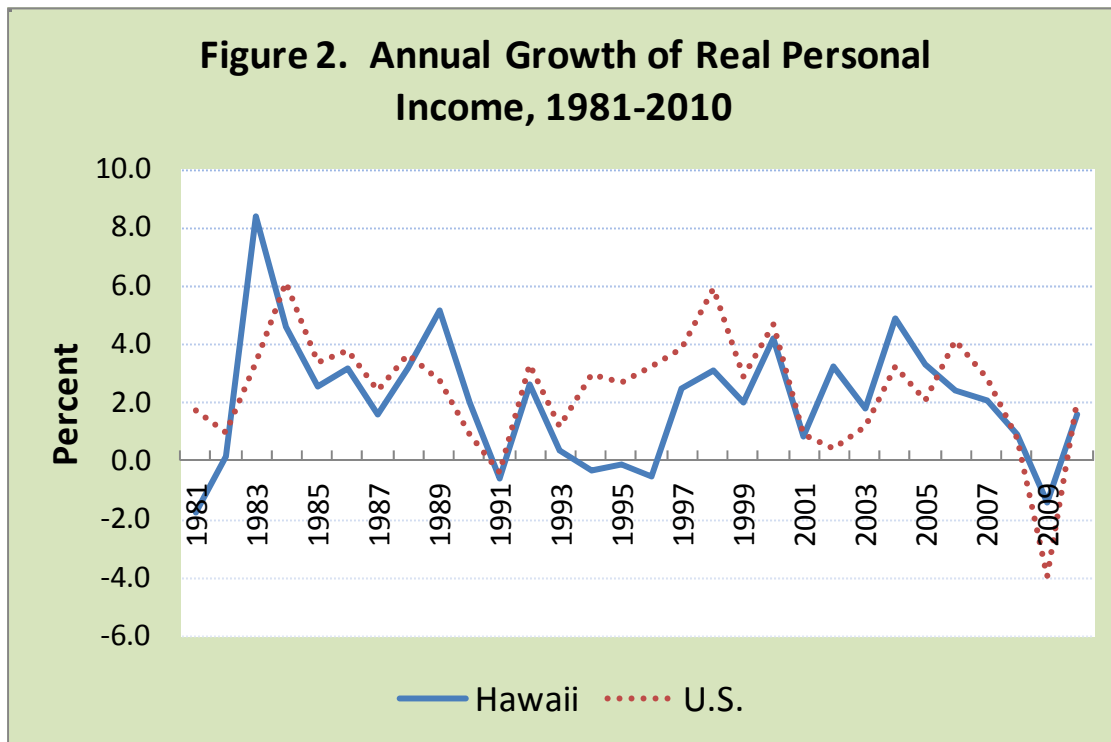
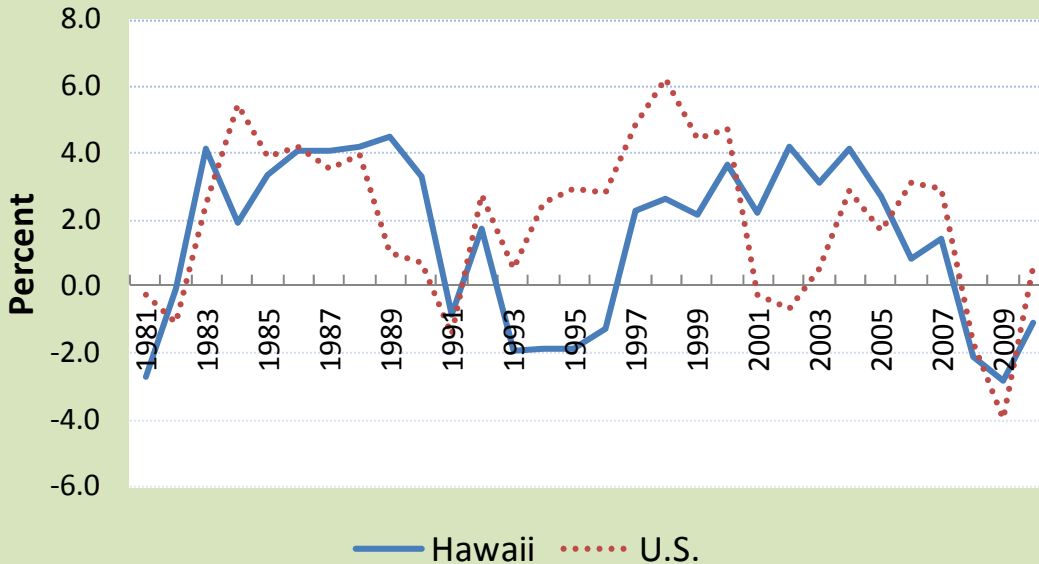


Figure 3. Annual Growth in Real Wage and Salary Income: 1981-2010



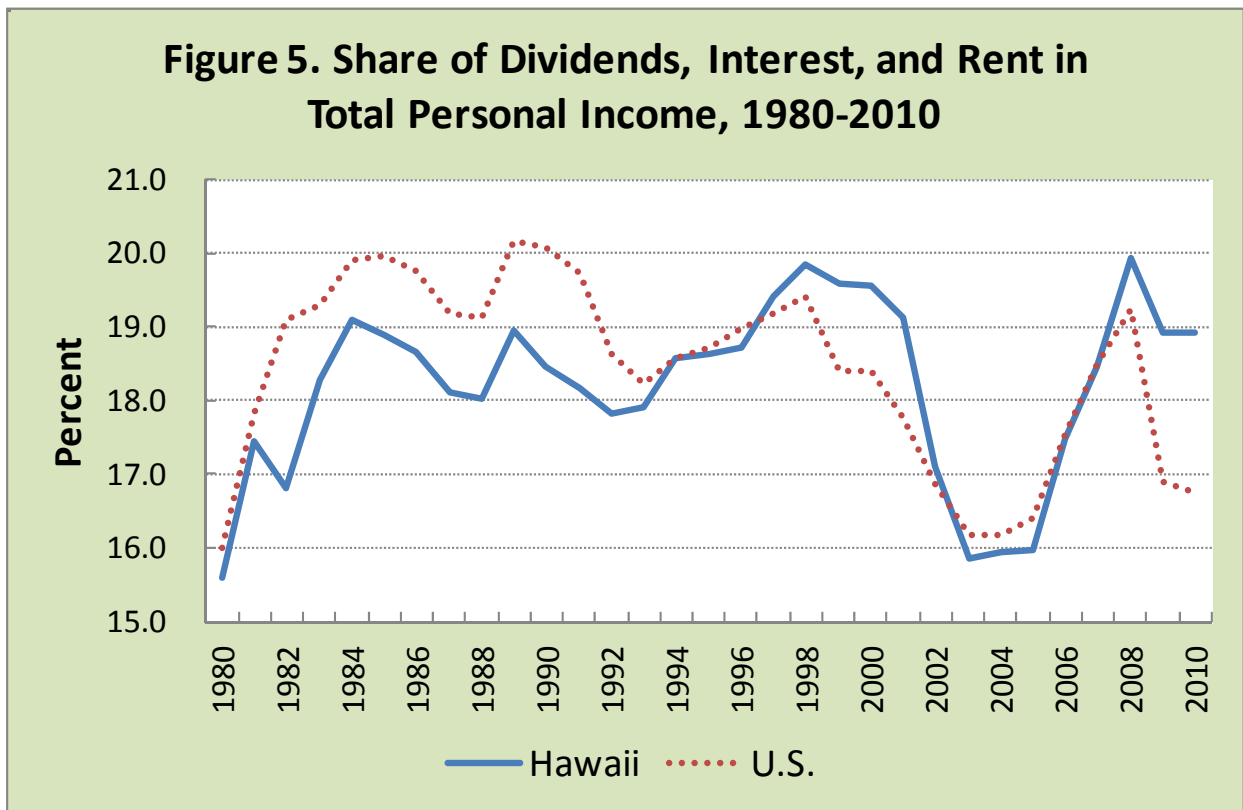
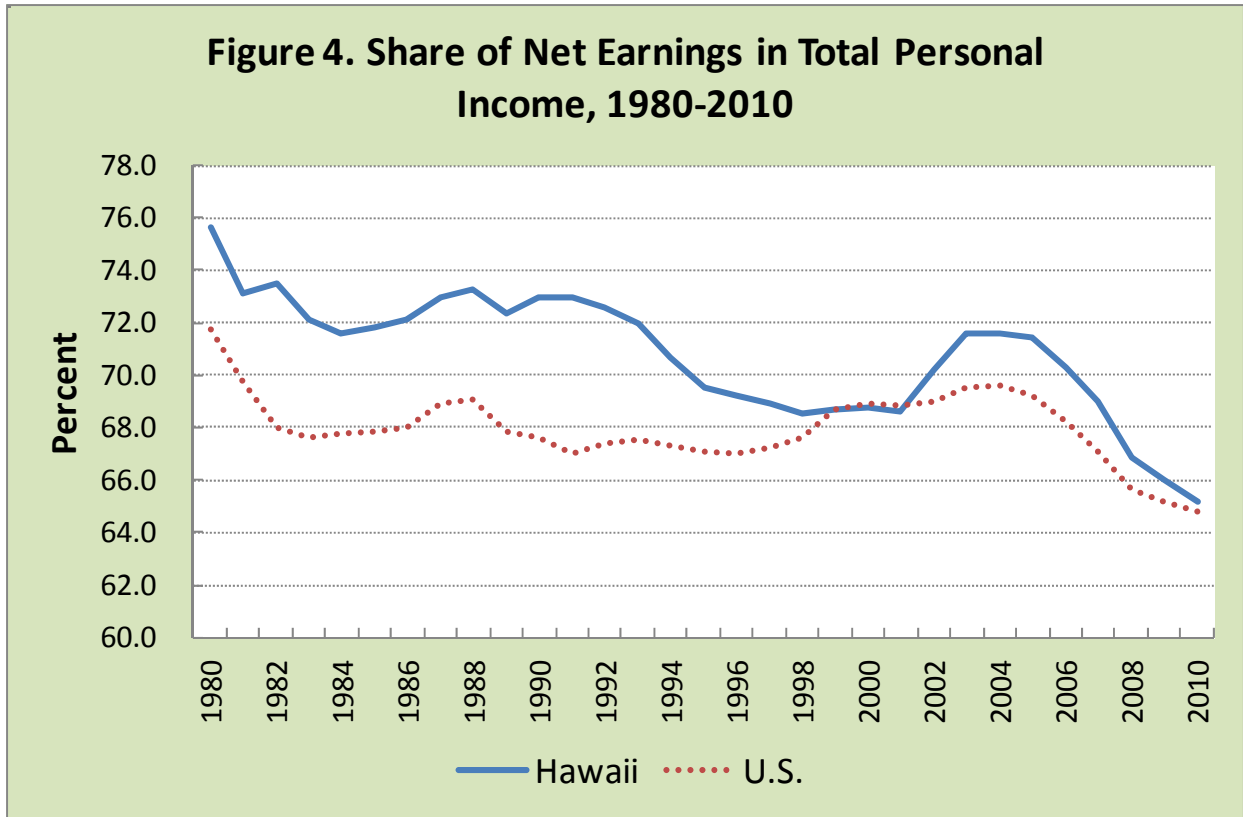
Composition of Total Personal Income

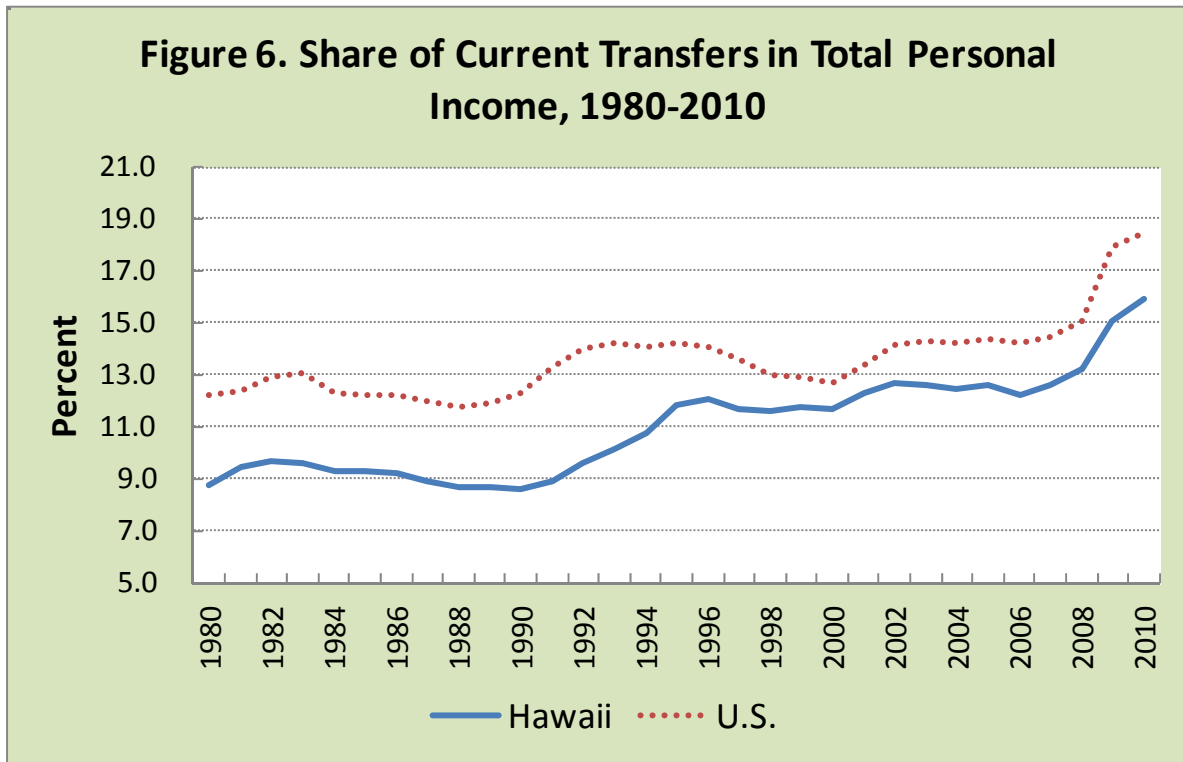
Total personal income is composed of three major components, (1) net earnings from work, (2) dividends, interest and rent, and (3) personal current transfers. Net earnings are earnings by place of work adjusted for employer and employee contributions for government social insurance. Based on the 1980–2010 data, net earnings accounted for 68.0 percent of total personal income for the U.S. and 70.8 percent for Hawaii. From 1982 to 2006, the share of net earnings in total income has been relatively stable for the U.S., while it has been more variable for Hawaii, with its magnitude tending to increase when the economy is strong and to decrease when the economy is weak (Figure 4). From 2006 to 2010, the share decreased from 68.2 percent to 64.8 percent for the U.S., and decreased from 70.3 percent to 65.2 percent for Hawaii.

From 1980 to 2010, dividends, interest and rent accounted for about 18 percent of total personal income on average for both the U.S. and Hawaii (Figure 5). Except for a couple of years between 1997 and 2002, and since 2008, the contribution of dividends, interest and rent to total personal income was generally smaller for Hawaii.

Personal current transfers (formally known as transfer income) made up the remainder of total personal income. Both for the U.S. and for Hawaii, the share of dividends, interest and rent

in total personal income has declined, while the share of personal current transfers has increased in recent years (Figure 6).





Wage and Salary Employment and Wages

In this section, Hawaii and the U.S. are compared in terms of distributions of total wage and salary jobs, as well as average wages by sectors classified based on the North American Industry Classification System (NAICS). Since job data by NAICS code from BEA are only available since 1990, and some data by detailed NAICS code are not available, only 23 sectors by NAICS code are compared.

Wage and Salary Employment

The wage and salary jobs by 23 NAICS sectors in the U.S. and Hawaii for 1990, 2000, and 2010 are provided in Table 1. Between 1990 and 2010, total wage and salary employment for the U.S. expanded by 19.5 million (Table 2), a total increase of 16.7 percent for the period (Table 3) or 0.8 percent increase per annum (Table 4). For Hawaii, total wage and salary jobs increased by 45 thousand for the same period, an increase of 7.3 percent over that period or an annual increase of 0.4 percent. The U.S. job growth from 1990 to 2010 was all occurred between 1990 and 2000, while the Hawaii job growth was mainly occurred between 2000 and 2010.

Table 1. Wage and Salary Jobs in Hawaii and the U.S. by NAICS Sectors, 1990, 2000, and 2010

Sectors	Wage and Salary Jobs					
	1990		2000		2010	
	HI	U.S.	HI	U.S.	HI	U.S.
1 Farm, forestry & fishing	11,679	1,394,000	9,249	1,435,000	7,233	1,269,000
2 Mining	179	663,000	253	521,000	338	649,000
3 Utilities	2,943	740,000	2,765	602,000	3,215	552,000
4 Construction	36,532	5,327,000	25,290	6,886,000	29,877	5,767,000
5 Manufacturing	20,400	17,717,000	16,383	17,296,000	12,944	11,525,000
6 Wholesale trade	17,671	5,211,000	16,385	5,788,000	17,836	5,520,000
7 Retail trade	67,679	13,454,000	67,203	15,488,000	67,084	14,742,000
8 Transportation & warehousing	25,103	3,492,000	25,592	4,464,000	23,480	4,228,000
9 Information	11,323	2,752,000	12,312	3,620,000	9,857	2,720,000
10 Finance & insurance	21,328	5,181,000	17,466	5,760,000	16,150	5,718,000
11 Real estate and rental and leasing	13,753	1,820,000	12,920	2,107,000	11,867	2,015,000
12 Professional, scientific & technical services	20,056	4,932,000	20,306	6,912,000	24,517	7,600,000
13 Management of companies & enterprises	4,226	1,320,000	5,730	1,738,000	6,651	1,853,000
14 Administrative & waste services	25,869	4,611,000	36,021	8,088,000	41,321	7,515,000
15 Educational services	8,247	1,754,000	12,133	2,417,000	15,649	3,212,000
16 Health care & social assistance	39,981	9,884,000	49,661	13,087,000	62,082	16,533,000
17 Arts, entertainment & recreation	9,614	1,262,000	10,960	1,793,000	10,534	1,945,000
18 Accommodation & food services	83,612	7,927,000	88,839	10,048,000	90,848	11,261,000
19 Other services	26,908	5,871,000	28,705	6,623,000	31,403	6,742,000
20 Federal civilian	33,720	3,233,000	30,172	2,893,000	34,869	3,037,000
21 Federal military	67,225	2,718,000	52,496	2,067,000	56,267	2,101,000
22 State government	54,368	4,404,000	65,923	4,949,000	70,840	5,290,000
23 Local government	16,417	10,877,000	17,405	13,028,000	19,017	14,252,000
Total	618,833	116,544,000	624,169	137,610,000	663,879	136,046,000

Source: BEA

As shown in Table 2, from 1990 to 2000, 18 of the 23 U.S. NAICS sectors added jobs and only 5 of the U.S. NAICS sectors lost jobs. The 18 U.S. positive growth sectors added a total of 22.8 million wage and salary jobs, and the 5 negative growth sectors lost only 1.7 million jobs, with a net gain of 21.1 million jobs. This is an 18.1 percent increase for the period (i.e., an increase of 1.7 percent per annum). For the same period, only 13 of the 23 Hawaii NAICS sectors added jobs and 10 of the Hawaii NAICS industries lost jobs. The 13 Hawaii positive growth sectors added a total of 47.9 thousand jobs, and the 10 negative growth sectors lost 42.6 thousand jobs, with a net gain of only 5.3 thousand jobs. The total wage and salary job count for Hawaii in 2000 was less than 1.0 percent higher than that in 1990 (i.e., an annual increase of less than 0.1 percent).

Table 2. Changes in Wage and Salary Jobs in Hawaii and the U.S. by NAICS Sectors

Sectors	Changes of W&S Jobs					
	1990-2000		2000-2010		1990-2010	
	HI	U.S.	HI	U.S.	HI	U.S.
1 Farm, forestry & fishing	-2,430	41,000	-2,016	-166,000	-4,446	-125,000
2 Mining	74	-142,000	85	128,000	159	-14,000
3 Utilities	-178	-138,000	450	-50,000	272	-188,000
4 Construction	-11,242	1,559,000	4,587	-1,119,000	-6,655	440,000
5 Manufacturing	-4,017	-421,000	-3,439	-5,771,000	-7,456	-6,192,000
6 Wholesale trade	-1,286	577,000	1,451	-268,000	165	309,000
7 Retail trade	-476	2,034,000	-119	-746,000	-595	1,288,000
8 Transportation & warehousing	489	972,000	-2,112	-236,000	-1,623	736,000
9 Information	989	868,000	-2,455	-900,000	-1,466	-32,000
10 Finance & insurance	-3,862	579,000	-1,316	-42,000	-5,178	537,000
11 Real estate and rental and leasing	-833	287,000	-1,053	-92,000	-1,886	195,000
12 Professional, scientific & technical services	250	1,980,000	4,211	688,000	4,461	2,668,000
13 Management of companies & enterprises	1,504	418,000	921	115,000	2,425	533,000
14 Administrative & waste services	10,152	3,477,000	5,300	-573,000	15,452	2,904,000
15 Educational services	3,886	663,000	3,516	795,000	7,402	1,458,000
16 Health care & social assistance	9,680	3,203,000	12,421	3,446,000	22,101	6,649,000
17 Arts, entertainment & recreation	1,346	531,000	-426	152,000	920	683,000
18 Accommodation & food services	5,227	2,121,000	2,009	1,213,000	7,236	3,334,000
19 Other services	1,797	752,000	2,698	119,000	4,495	871,000
20 Federal civilian	-3,548	-340,000	4,697	144,000	1,149	-196,000
21 Federal military	-14,729	-651,000	3,771	34,000	-10,958	-617,000
22 State government	11,555	545,000	4,917	341,000	16,472	886,000
23 Local government	988	2,151,000	1,612	1,224,000	2,600	3,375,000
Total	5,336	21,066,000	39,710	-1,564,000	45,046	19,502,000
# of sectors lost jobs	10	5	8	11	9	7
Total added jobs	47,937	22,758,000	52,646	8,399,000	85,309	26,866,000
Total lost jobs	-42,601	-1,692,000	-12,936	-9,963,000	-40,263	-7,364,000
Net job gains	5,336	21,066,000	39,710	-1,564,000	45,046	19,502,000

Source: BEA

Table 3. Cumulative Wage and Salary Jobs Growth in Hawaii and the U.S. by NAICS Sectors

Sectors	Cumulative W&S Jobs Growth (%)					
	1990-2000		2000-2010		1990-2010	
	HI	U.S.	HI	U.S.	HI	U.S.
1 Farm, forestry & fishing	-20.8	2.9	-21.8	-11.6	-38.1	-9.0
2 Mining	41.3	-21.4	33.6	24.6	88.8	-2.1
3 Utilities	-6.0	-18.6	16.3	-8.3	9.2	-25.4
4 Construction	-30.8	29.3	18.1	-16.3	-18.2	8.3
5 Manufacturing	-19.7	-2.4	-21.0	-33.4	-36.5	-34.9
6 Wholesale trade	-7.3	11.1	8.9	-4.6	0.9	5.9
7 Retail trade	-0.7	15.1	-0.2	-4.8	-0.9	9.6
8 Transportation & warehousing	1.9	27.8	-8.3	-5.3	-6.5	21.1
9 Information	8.7	31.5	-19.9	-24.9	-12.9	-1.2
10 Finance & insurance	-18.1	11.2	-7.5	-0.7	-24.3	10.4
11 Real estate and rental and leasing	-6.1	15.8	-8.2	-4.4	-13.7	10.7
12 Professional, scientific & technical services	1.2	40.1	20.7	10.0	22.2	54.1
13 Management of companies & enterprises	35.6	31.7	16.1	6.6	57.4	40.4
14 Administrative & waste services	39.2	75.4	14.7	-7.1	59.7	63.0
15 Educational services	47.1	37.8	29.0	32.9	89.8	83.1
16 Health care & social assistance	24.2	32.4	25.0	26.3	55.3	67.3
17 Arts, entertainment & recreation	14.0	42.1	-3.9	8.5	9.6	54.1
18 Accommodation & food services	6.3	26.8	2.3	12.1	8.7	42.1
19 Other services	6.7	12.8	9.4	1.8	16.7	14.8
20 Federal civilian	-10.5	-10.5	15.6	5.0	3.4	-6.1
21 Federal military	-21.9	-24.0	7.2	1.6	-16.3	-22.7
22 State government	21.3	12.4	7.5	6.9	30.3	20.1
23 Local government	6.0	19.8	9.3	9.4	15.8	31.0
Total	0.9	18.1	6.4	-1.1	7.3	16.7

Source: BEA

The administrative and waste services sector was the largest contributor (15 percent) to total wage and salary employment added by the U.S. sectors during 1990–2000, followed by the health care and social assistance sector (14 percent), the local government, accommodation and food services, retail trade, and the professional scientific, and technical services sector each contributed about 9 percent of the total job gains. For Hawaii, state government added the most (24 percent) wage and salary jobs, followed by administrative and waste services (21 percent), health care and social assistance (20 percent), accommodation and food services (11 percent), and educational services (8 percent).

Table 4. Annual Wage and Salary Jobs Growth in Hawaii and the U.S. by NAICS Sectors

Sectors	Annual W&S Jobs Growth (%)					
	1990-2000		2000-2010		1990-2010	
	HI	U.S.	HI	U.S.	HI	U.S.
1 Farm, forestry & fishing	-2.3	0.3	-2.4	-1.2	-2.4	-0.5
2 Mining	3.5	-2.4	2.9	2.2	3.2	-0.1
3 Utilities	-0.6	-2.0	1.5	-0.9	0.4	-1.5
4 Construction	-3.6	2.6	1.7	-1.8	-1.0	0.4
5 Manufacturing	-2.2	-0.2	-2.3	-4.0	-2.2	-2.1
6 Wholesale trade	-0.8	1.1	0.9	-0.5	0.0	0.3
7 Retail trade	-0.1	1.4	0.0	-0.5	0.0	0.5
8 Transportation & warehousing	0.2	2.5	-0.9	-0.5	-0.3	1.0
9 Information	0.8	2.8	-2.2	-2.8	-0.7	-0.1
10 Finance & insurance	-2.0	1.1	-0.8	-0.1	-1.4	0.5
11 Real estate and rental and leasing	-0.6	1.5	-0.8	-0.4	-0.7	0.5
12 Professional, scientific & technical services	0.1	3.4	1.9	1.0	1.0	2.2
13 Management of companies & enterprises	3.1	2.8	1.5	0.6	2.3	1.7
14 Administrative & waste services	3.4	5.8	1.4	-0.7	2.4	2.5
15 Educational services	3.9	3.3	2.6	2.9	3.3	3.1
16 Health care & social assistance	2.2	2.8	2.3	2.4	2.2	2.6
17 Arts, entertainment & recreation	1.3	3.6	-0.4	0.8	0.5	2.2
18 Accommodation & food services	0.6	2.4	0.2	1.1	0.4	1.8
19 Other services	0.6	1.2	0.9	0.2	0.8	0.7
20 Federal civilian	-1.1	-1.1	1.5	0.5	0.2	-0.3
21 Federal military	-2.4	-2.7	0.7	0.2	-0.9	-1.3
22 State government	1.9	1.2	0.7	0.7	1.3	0.9
23 Local government	0.6	1.8	0.9	0.9	0.7	1.4
Total	0.1	1.7	0.6	-0.1	0.4	0.8

Source: BEA

Of the total jobs lost in the U.S. from 1990 to 2000, the federal military government sector accounted for the most (39 percent), followed by manufacturing (25 percent), and federal civilian government (20%). Among the Hawaii sectors that lost jobs during the same period, the federal military government also accounted for the most (35 percent), followed by construction (26 percent), and manufacturing (9 percent).

From 2000 to 2010, the performance of the Hawaii sectors was better than the national average. At the national level, only 12 of the 23 sectors added jobs during this period. The 12 positive growth sectors only added a total of 8.4 million jobs, and the 11 negative growth sectors lost 10.0 million jobs, with a net loss of 1.6 million jobs. About 41 percent of the job gains at the national level occurred in the health care and social assistance sector, followed by the local government (14.6 percent), and accommodation and food services (14.4 percent). Manufacturing accounted for the largest proportion (lost 57.9 percent) of total jobs lost by the

U.S. industries during this period, followed by construction (lost 11.2 percent), information (lost 9.0 percent), and retail (lost 7.5 percent).

For the same period, 15 of the 23 Hawaii sectors added jobs. These sectors added a total of 52.6 thousand jobs, and the 8 negative growth sectors lost only 12.9 thousand jobs, with a net gain of 39.7 thousand jobs or an annual gain of 0.6 percent for the period. As for the nation, health care and social assistance also contributed the most additional jobs (23.6 percent) in Hawaii during this period, followed by administrative and waste services sector (10.1 percent), state government (9.3 percent), federal civilian government (8.9 percent), and construction (8.7 percent). Manufacturing accounted for the largest share (lost 26.6 percent) of total jobs lost by the Hawaii industries during this period, followed by information (lost 19.0 percent), transportation (lost 16.3 percent), farm, forestry and fishing (lost 15.6 percent), and finance & insurance (lost 10.2 percent).

A more detailed analysis of wage and salary employment data by industry would provide useful insights into the changes in the industry structure of an economy over time. Comparing the data between 1990 and 2000, both in the U.S. and in Hawaii the share of private services-producing sectors in total wage and salary employment has increased, while that of goods-producing sectors (i.e., manufacturing) has decreased. In addition, the jobs in the federal military government decreased substantially both in the whole nation and in Hawaii.

For example, from 1990 to 2000, the share of manufacturing in total wage and salary employment decreased from 15.2 percent to 12.6 percent for the U.S. and from 3.3 percent to 2.6 percent for Hawaii. The share of agriculture (farm, forestry & fishing) in total wage and salary jobs decreased from 1.2 percent to 1.0 percent for the U.S. and from 1.9 percent to 1.5 percent for Hawaii. The share of government also experienced a slight decline both in the nation and in Hawaii, primarily due to the decline in the federal military government. Distributions of total wage and salary jobs by NAICS sector for 1990 and 2000 are shown in Figures 7 and 8.

As can be seen from Figures 7 and 8, except for government, manufacturing, and accommodation & food services, industries' contributions to total wage and salary employment are more or less similar for the U.S. and Hawaii. The share of government in total wage and salary employment is much higher in Hawaii than in the U.S. While the share of state and local government in total employment is similar and had remained steady at 11–13 percent, the share of federal government is much higher in Hawaii although it had declined over time. For example, in 1990, the federal government accounted for about 16.3 percent of total wage and

salary jobs in Hawaii, compared to just 5.1 percent for the U.S. These figures were 13.2 percent vs. 3.6 percent in 2000. In contrast, the U.S. manufacturing share in total wage and salary employment is 4–5 times higher than Hawaii’s. On the other hand, the share of accommodation & food services in Hawaii is about 2 times higher than that of the nation.

Figure 7. Distribution of Wage and Salary Jobs by NAICS Sector, 1990

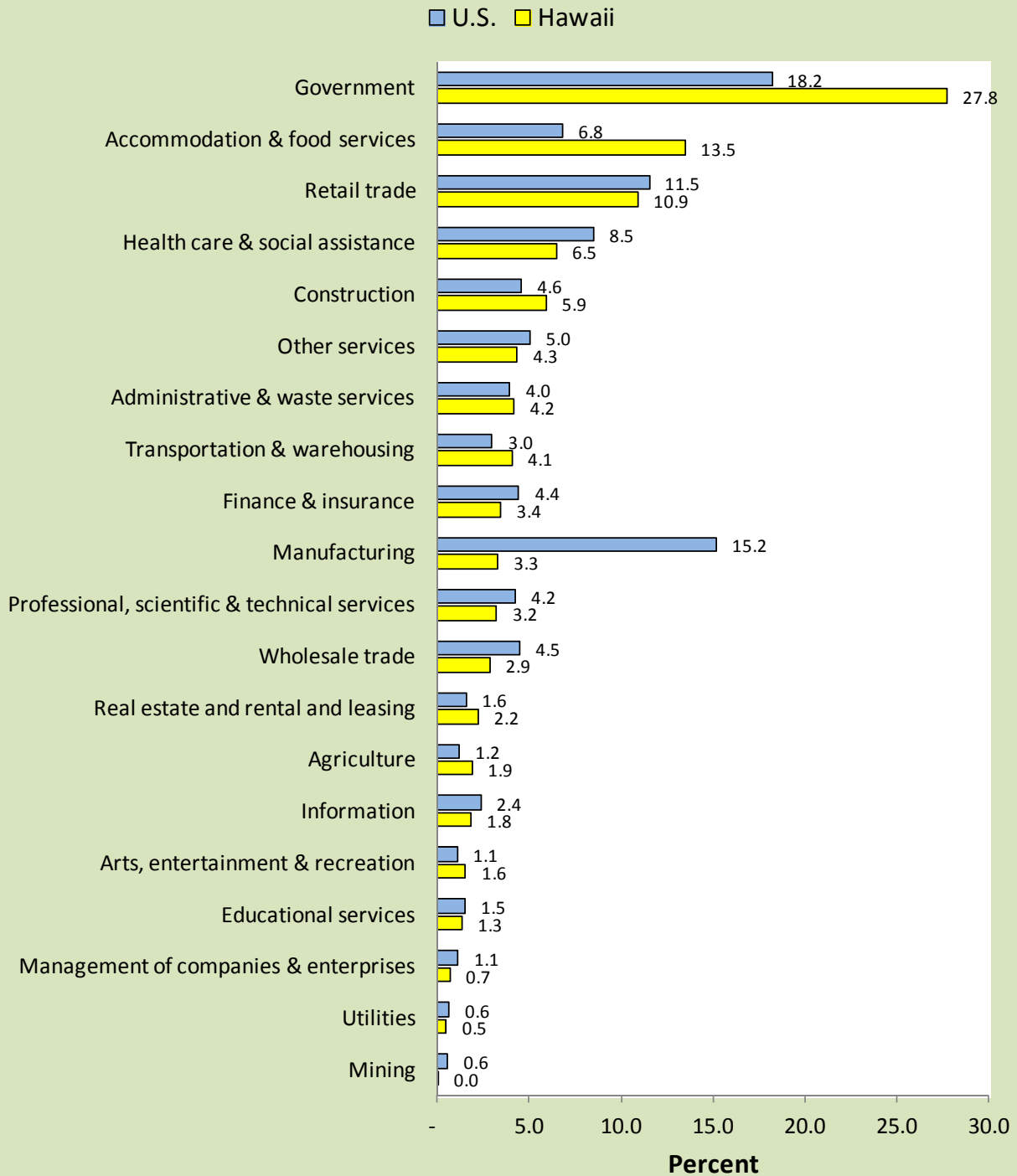


Figure 8. Distribution of Wage and Salary Jobs by NAICS Sector, 2000

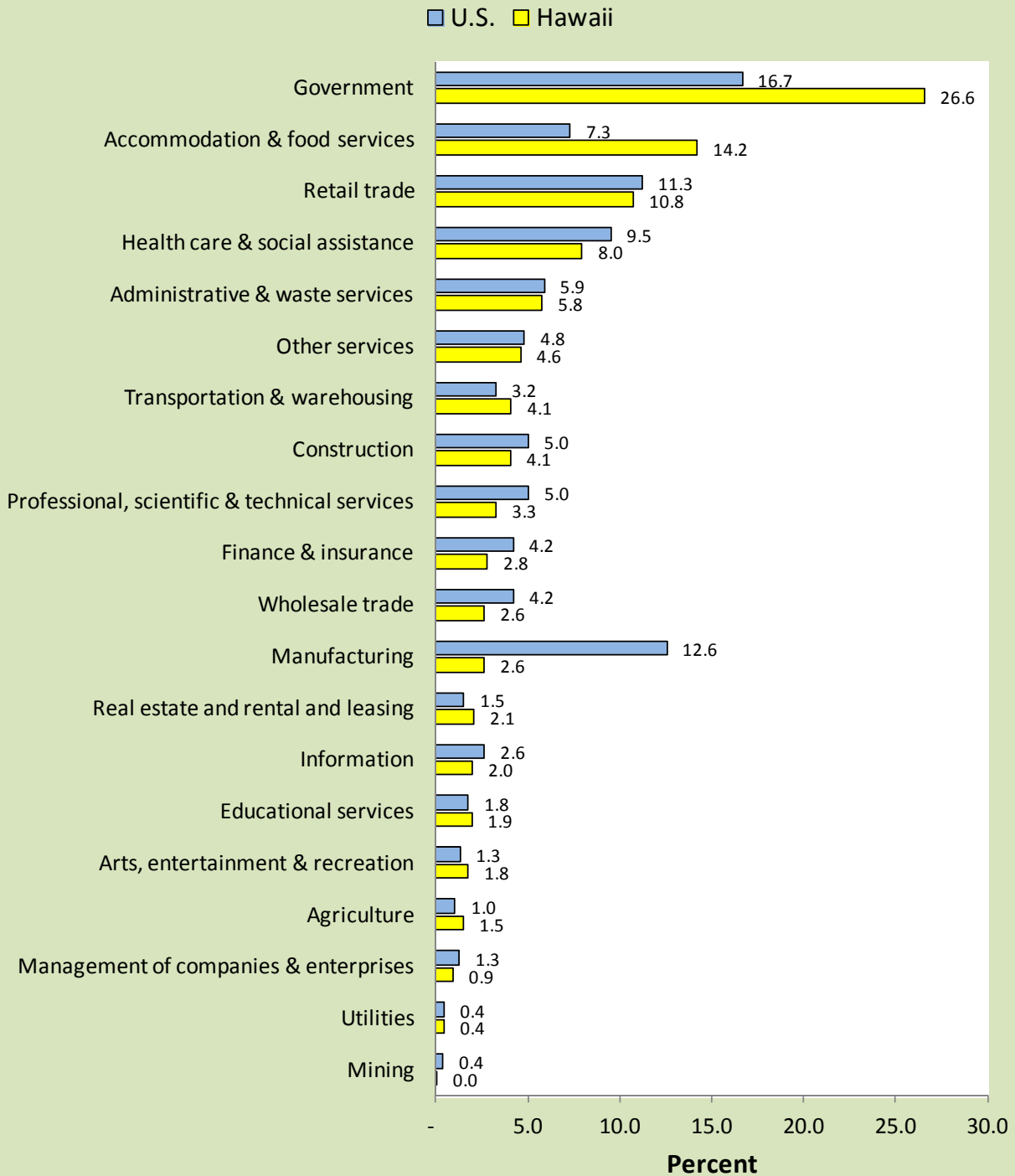


Figure 9 compares industries' share in total wage and salary employment for the U.S. and Hawaii in 2010.

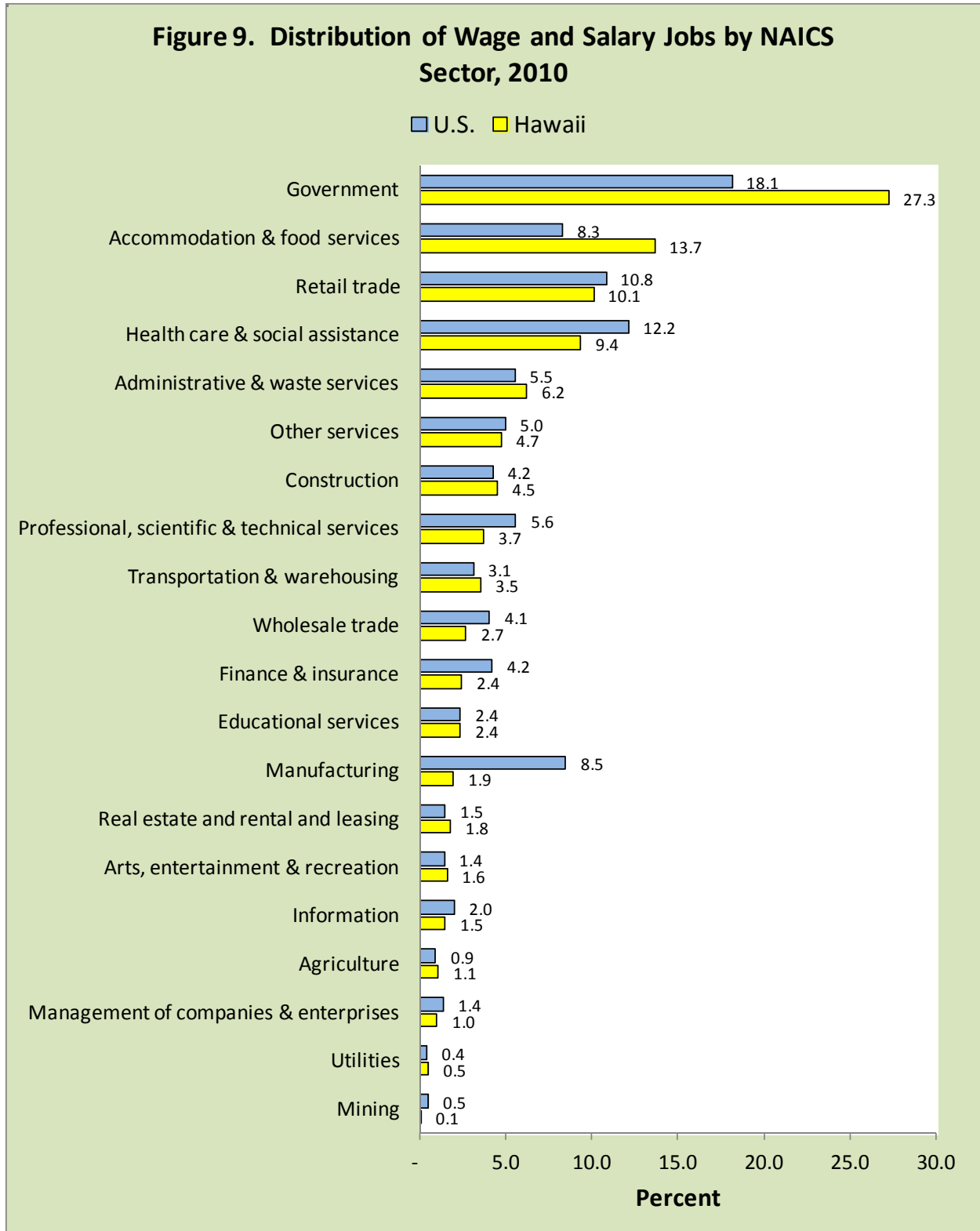


Figure 10 shows cumulative changes in wage and salary employment by sector between 1990 and 2000. Accordingly, from 1990 to 2000, educational services, administrative and waste services, management of companies and enterprises, and health care and social assistance experienced the highest rate of growth in wage and salary employment both for the U.S. and Hawaii. The only two private sectors that experienced job losses both in the U.S. and in Hawaii were manufacturing the utility. Interestingly, construction employment increased significantly in the U.S., while it experienced a significant decline in Hawaii. Agriculture jobs also decreased significantly in Hawaii but increased slightly in the U.S.

The cumulative changes in wage and salary employment from 2000 to 2010 are shown in Figure 11. There are several notable differences in wage and salary employment growth between the two periods, as well as between the U.S. and Hawaii.

Information, manufacturing, agriculture, transportation, real estate, and finance & insurance employment decreased both in the U.S. and in Hawaii during 2000–2010. Information jobs decreased 24.9 percent in the U.S. and decreased 19.9 percent in Hawaii despite its significant increase during 1990–2000. Manufacturing employment continued to decline both in the U.S. and Hawaii. However, the rates of decline were lower for Hawaii than the U.S. during 2000–2010. Agriculture jobs decreased 21.8 percent in Hawaii and 11.6 percent in the U.S. from 2000 to 2010, compared to 20.8 percent decrease in Hawaii and 2.9 percent increase in the U.S. from 1990 to 2000. Transportation jobs decreased 5.3 percent in the U.S. and 8.3 percent in Hawaii from 2000 to 2010, compared to a 27.8 percent increase in the U.S. and 1.9 percent increase in Hawaii from 1990 to 2000. Real estate jobs decreased 8.2 percent in the U.S. and 4.4 percent in Hawaii from 2000 to 2010, compared to a 15.8 percent increase in the U.S. and 6.1 percent decrease in Hawaii from 1990 to 2000.

Construction, utilities, and administrative and waste services showed mixed patterns during 2000–2010, with their employment showing some increases for Hawaii and declines for the U.S.

Industries featuring a positive job growth both for the U.S. and Hawaii during 2000–2010 included educational services, professional, scientific, and technical services, management of companies and enterprises, health care and social assistance, mining, other services, accommodation and food services, and government.

Figure 10. Cumulative Wage and Salary Job Growth from 1990 to 2000 by NAICS Sector

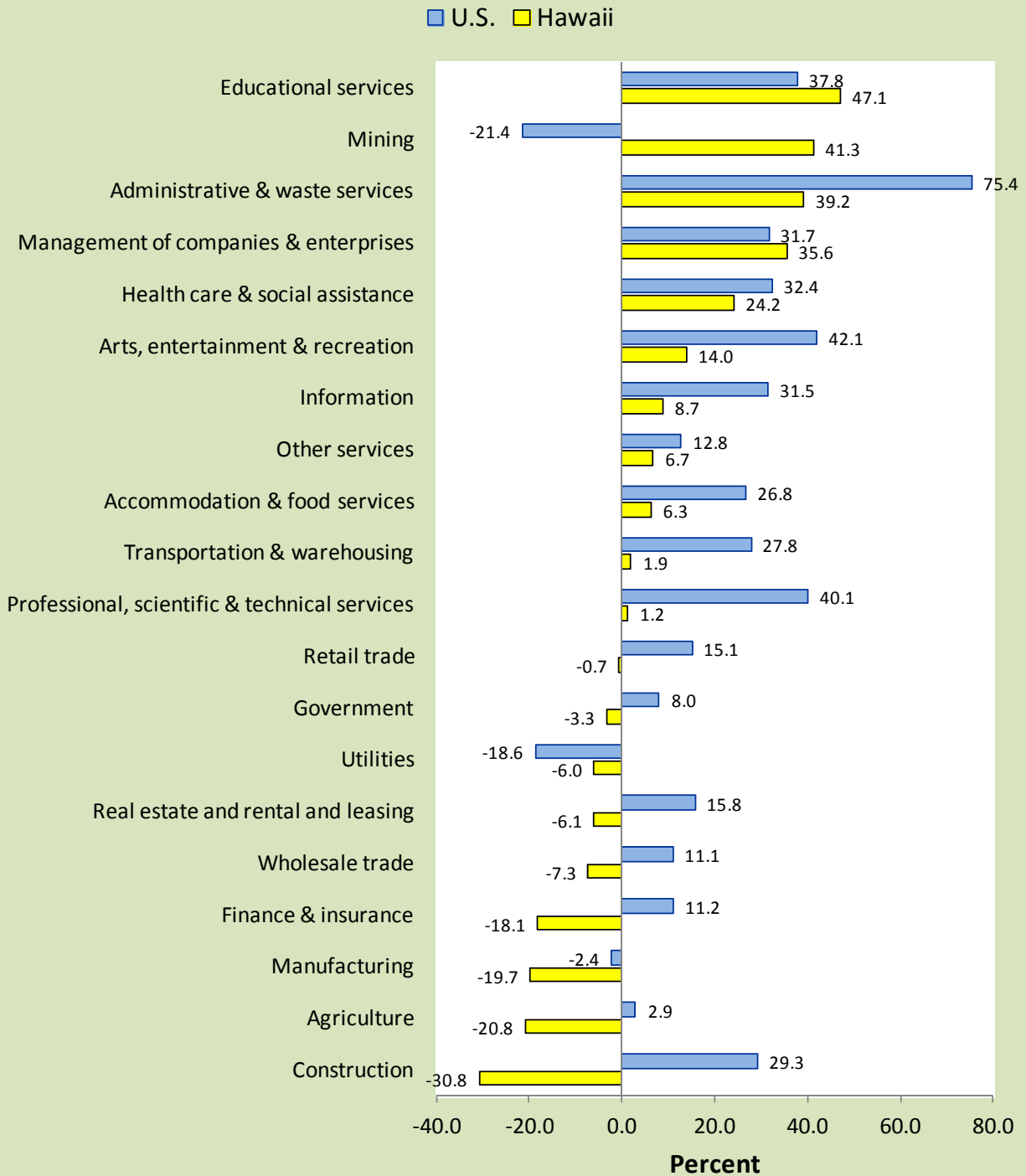
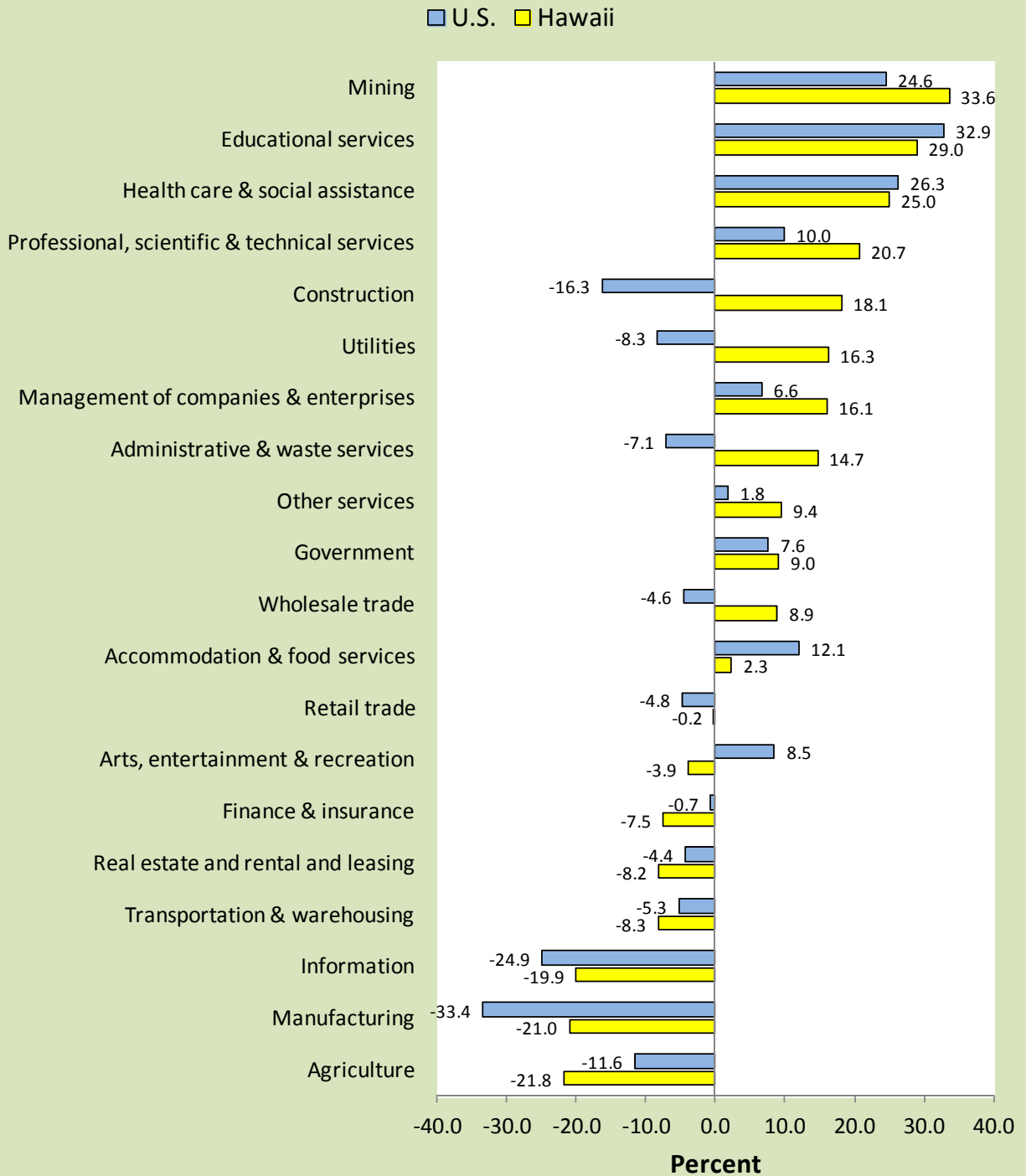
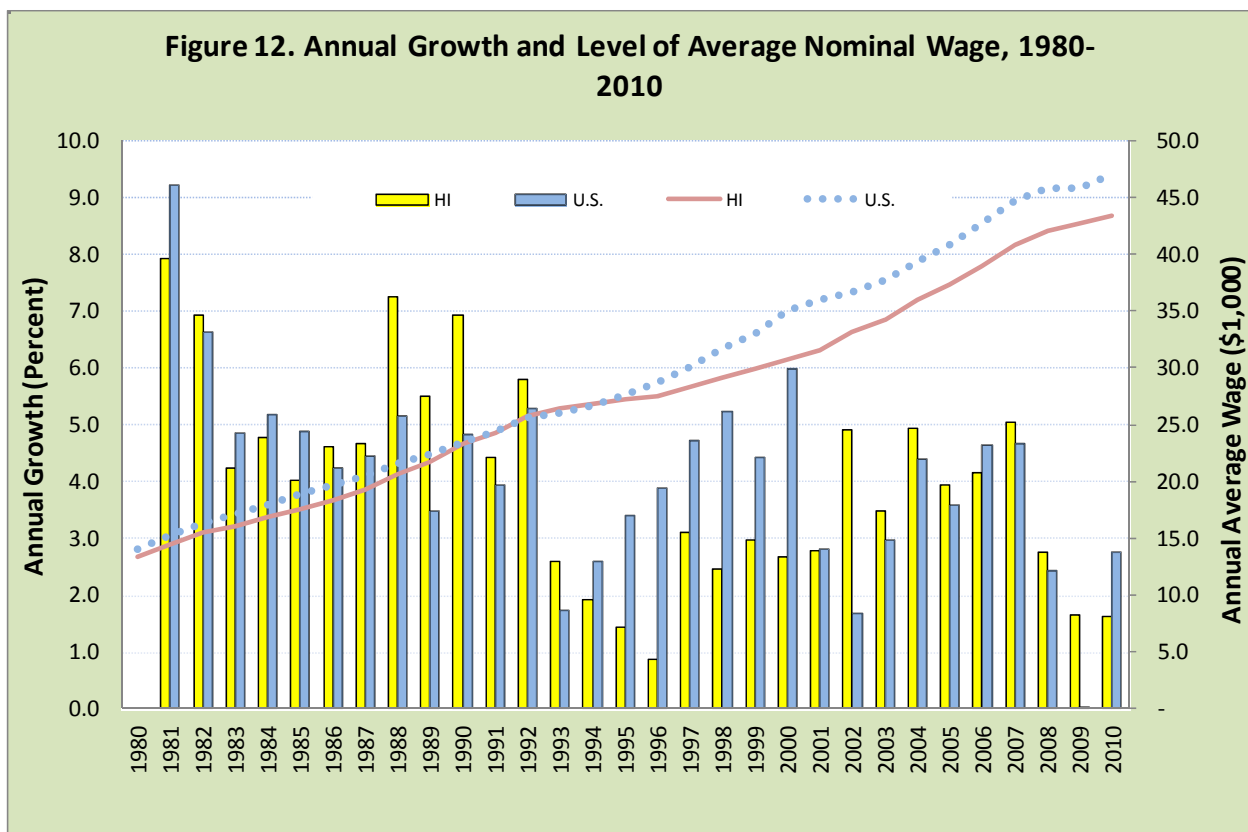


Figure 11. Cumulative Wage and Salary Job Growth from 2000 to 2010 by NAICS Sector



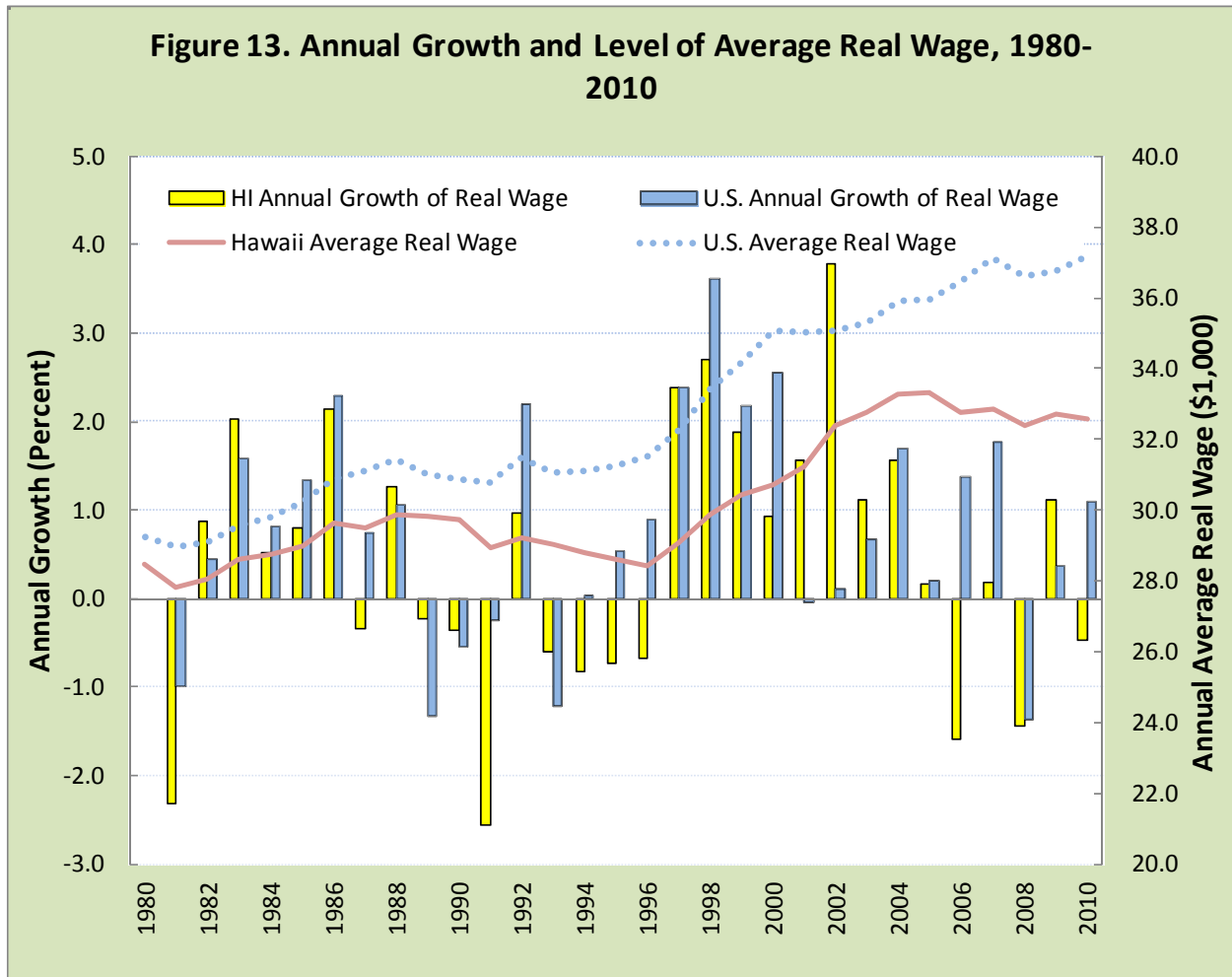
Average Wages

For the U.S, the aggregate nominal wage (which is computed as the ratio between total wage and salary disbursements and total wage and salary employment) increased from \$14,000 in 1980 to about \$47,000 in 2010, while for Hawaii it increased from \$13,400 to about \$43,400. These figures translate to cumulative increases of 236 percent and 224 percent and annual increases of 4.1 percent and 4.0 percent, respectively. In real terms (in 2000 dollars), the average wage for the U.S. increased 27.0 percent to about \$37,200 in 2010 (or 0.8 percent annual increase from 1980). The average real wage for Hawaii in 2010 was about \$32,600, about 14.5 percent higher than in 1980 (or 0.5 percent annual increase). Figure 12 compares the average nominal wages and their annual changes between the U.S. and Hawaii, while Figure 13 compares real wages.



As can be seen from the figures, the wage gap between the U.S. and Hawaii has widened over time, especially the gap in real wage. The pattern of annual changes in wages is very similar to that for employment, as discussed previously. From 2000 to 2010, the average

nominal wage in Hawaii increased at a faster rate of 3.5 percent per annum compared to a 3.0 percent growth rate for the U.S. In the same period, the real wages increased 0.6 percent both in the U.S. and in Hawaii. This pattern was quite opposite for the 1990–2000 period in which average wages rose faster for U.S. For example, from 1990 to 2000 the nominal wage increased at an annual rate of 4.1 percent for the U.S. vs. 2.8 percent for Hawaii. Real wages increased at the annual rates of 1.3 percent and 0.3 percent, respectively.



Wages by Sector

Figure 14 compares the average nominal wages by NAICS sector between the U.S. and Hawaii for 1990 and Figure 15 and Figure 16 provide the same information for 2000 and 2010, respectively. These figures provide several interesting insights as to how Hawaii differs from the

U.S. with respect to levels of wages by industry, as well as how these differences have changed from 1990 to 2000 and from 2000 to 2010.

In 1990, among the twenty sectors considered for comparison, thirteen sectors had higher wages in Hawaii. Hawaii's average nominal wage in the accommodation and food services sector was about 56 percent higher than that of the U.S., followed by construction (37 percent), agriculture (28 percent), other services (24 percent), real estate (15 percent), utilities (14 percent), health care and social assistance (11 percent), and retail trade (11 percent). Among the seven sectors that had lower wages in Hawaii, the management of companies and enterprises sector has average wage 32 percent below the national average, followed by the manufacturing sector (17 percent lower), finance and insurance (12 percent lower), and wholesale trade (11 percent lower).

The changes from 1990 to 2000 were significant. In 2000, not only the number of sectors with higher wages in Hawaii than the U.S. decreased from thirteen to seven, the magnitude of the differences also decreased significantly. Hawaii's average nominal wage in the accommodation and food services sector was 48 percent higher than that of the U.S., followed by construction (23 percent), agriculture (20 percent), health care and social assistance (9 percent), and other services (5 percent). Among the thirteen sectors that had lower wages in Hawaii, the manufacturing sector has average wage 32.5 percent below the national average, followed by information (27.8 percent lower), finance and insurance (26.3 percent lower), management of companies and enterprises (26.0 percent lower), professional, scientific, and technical services (25.5 percent lower), wholesale trade (24.5 percent lower), arts, entertainment, and recreation (20.5 percent lower), administrative and waste services (10.8 percent lower), and real estate, rental and leasing (9.3 percent lower). In 1990, wages in real estate and retail trade were higher in Hawaii, but this was reversed in 2000.

Figure 14. Average Nominal Wage by NAICS Sector, 1990

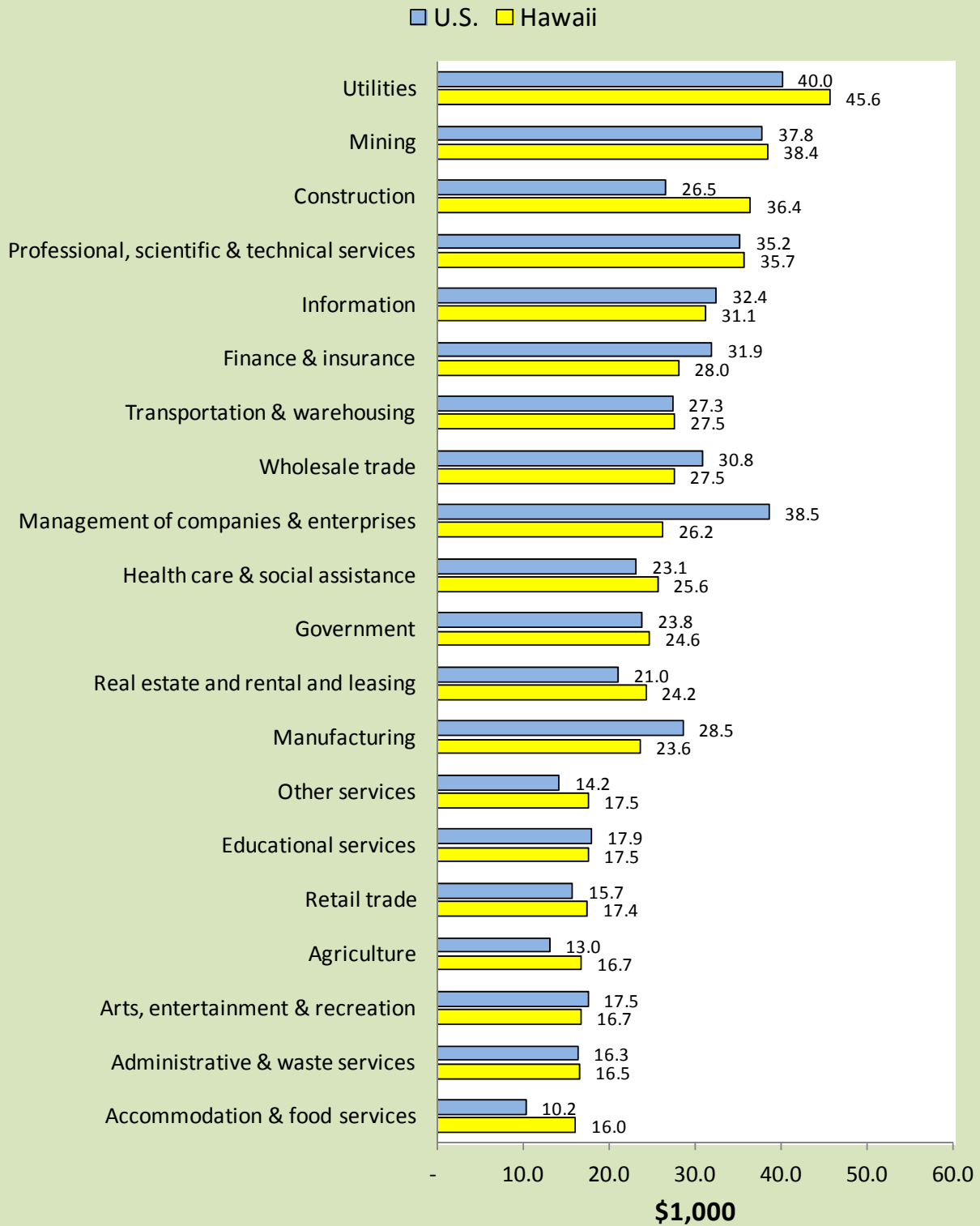


Figure 15. Average Nominal Wage by NAICS Sector, 2000

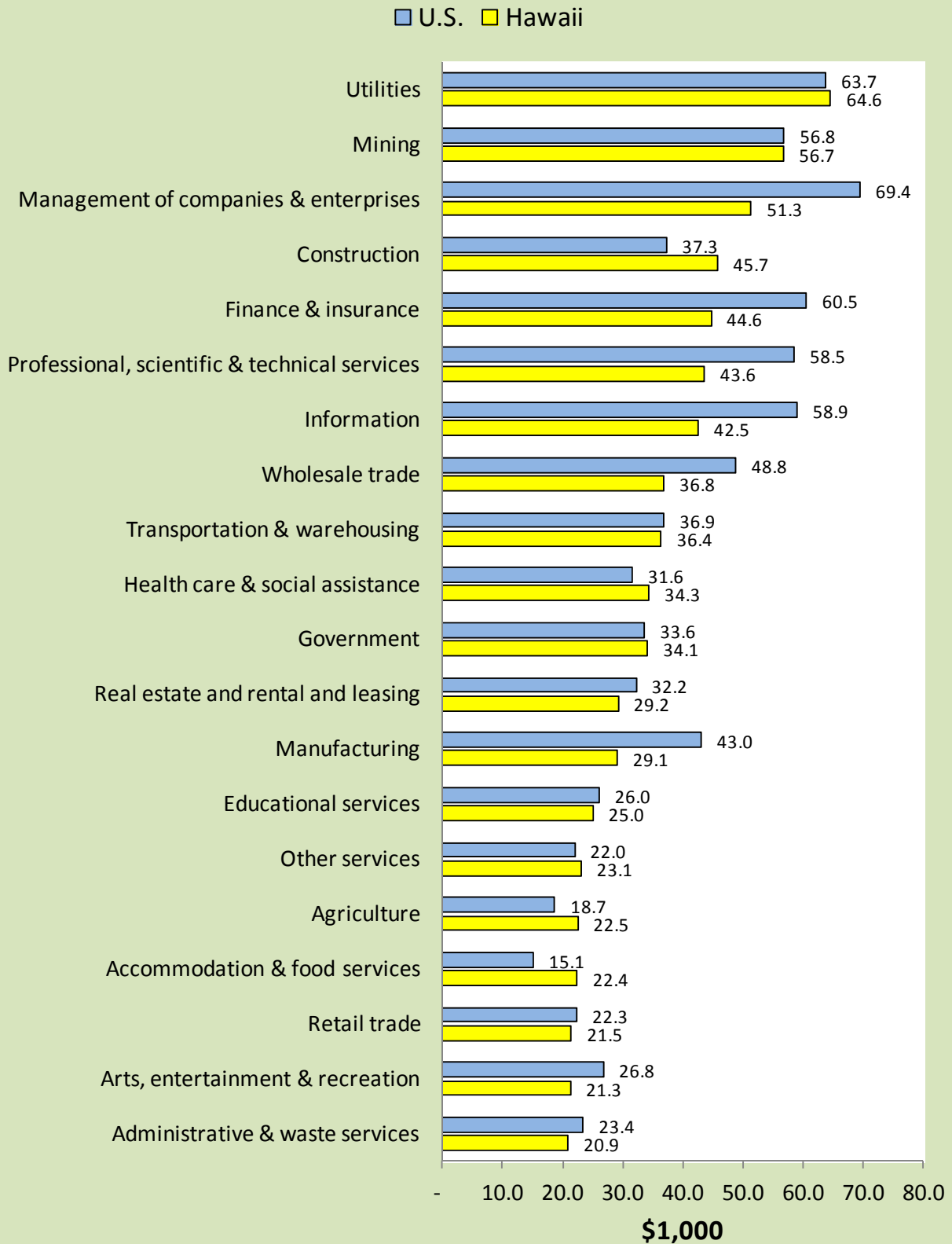
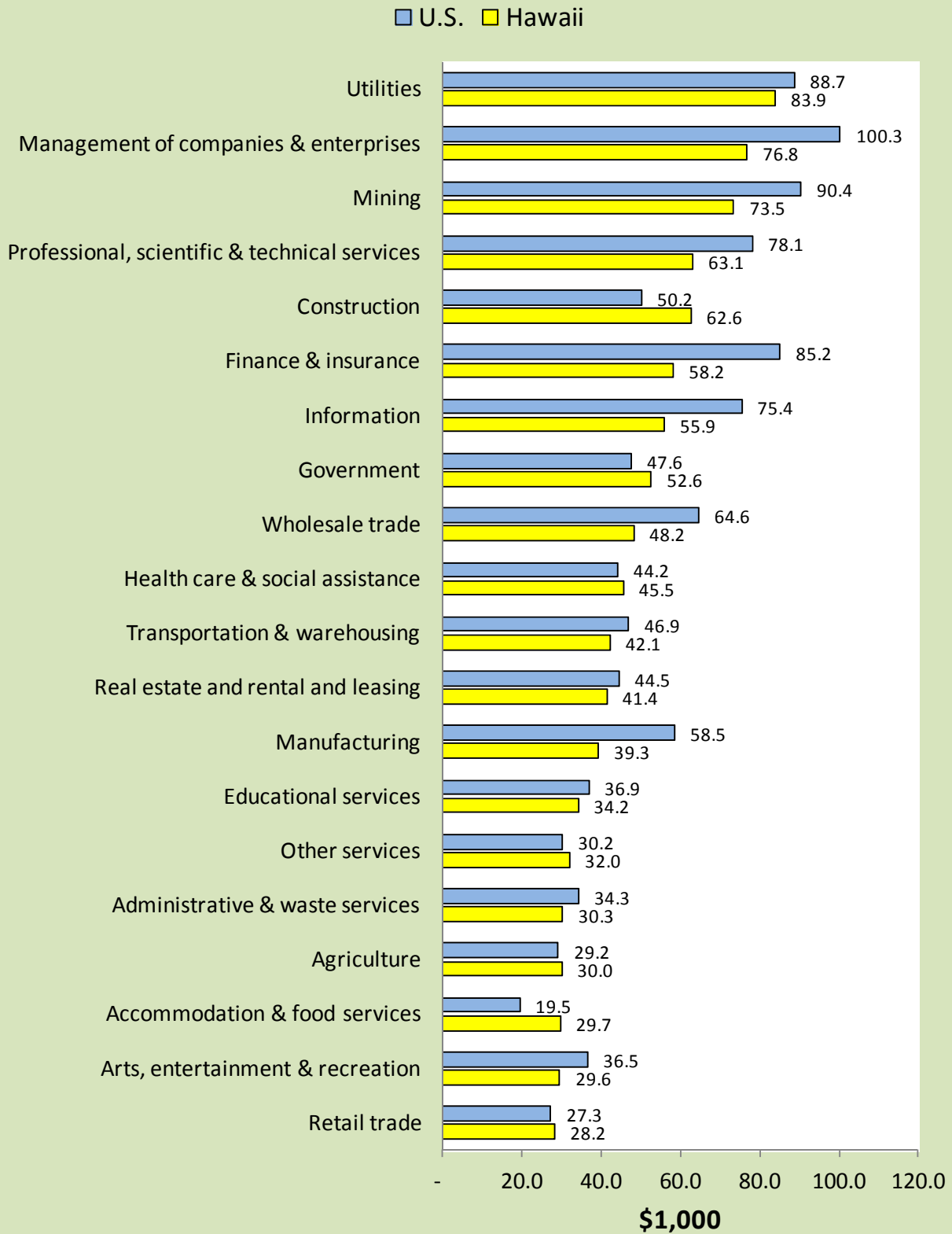


Figure 16. Average Nominal Wage by NAICS Sector, 2010



The changes from 2000 to 2010 were less significant. From 2000 to 2010, the number of sectors with higher wages in Hawaii remained same at seven.

In 2010, the average wage in Hawaii's accommodation and food services sector was 52 percent higher than that of the U.S., followed by construction (25 percent), government (11 percent), other services (6 percent), health care and social assistance (3 percent), agriculture (3 percent), and retail trade (3 percent).

Among the sectors that had lower wages in Hawaii, the manufacturing sector has average wage 33 percent below the national average, followed by finance and insurance (32 percent lower), information (26 percent lower), wholesale trade (25 percent lower), management of companies and enterprises (23 percent lower), professional, scientific, and technical services (19 percent lower), arts, entertainment, and recreation (19 percent lower), mining (19 percent lower), administrative and waste services (12 percent lower), and transportation and warehousing (10 percent lower).

The average annual growth rates in nominal wage and real wage from 1990 to 2010 by NAICS sectors are compared in Figure 17 and Figure 18, respectively.

For both Hawaii and the U.S., the annual average growth rates in nominal wages were positive for all sectors during this period. The annual average growth rates in real wages were also positive for all U.S. sectors; but in negative in three Hawaii sectors – transportation, retail, and manufacturing. In addition, the annual growth rates of wages in both nominal and real terms were lower in Hawaii for almost all of the twenty NAICS sectors; only the management of companies and enterprises sector experienced faster real wage growth in Hawaii compared with the national average.

The gap in real wage growth was largest in information, followed by finance and insurance, professional, scientific, and technical services, mining, agriculture, real estate, and manufacturing.

Figure 17. Average Annual Growth in Nominal Wage by NAICS Sector, 1990-2010

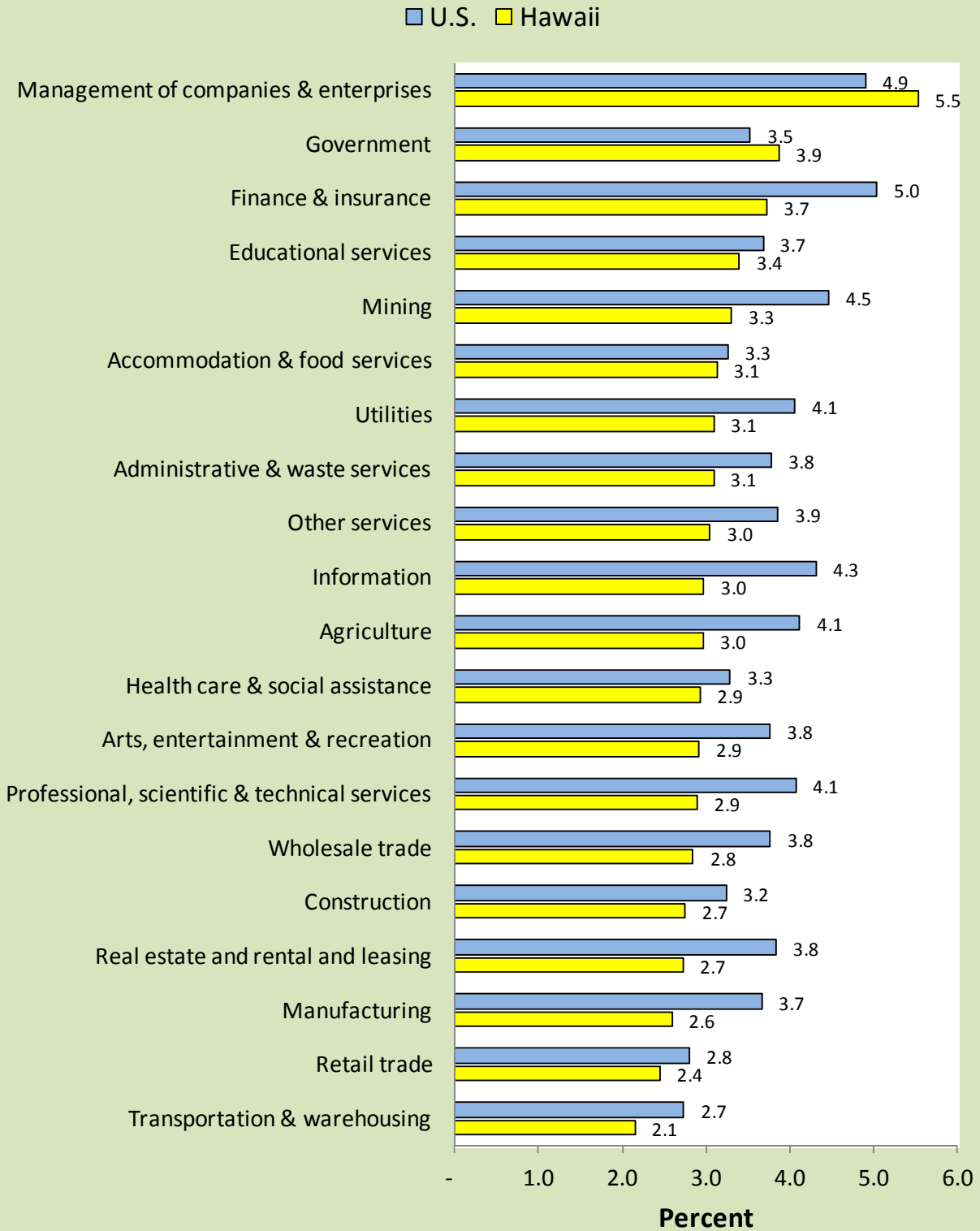
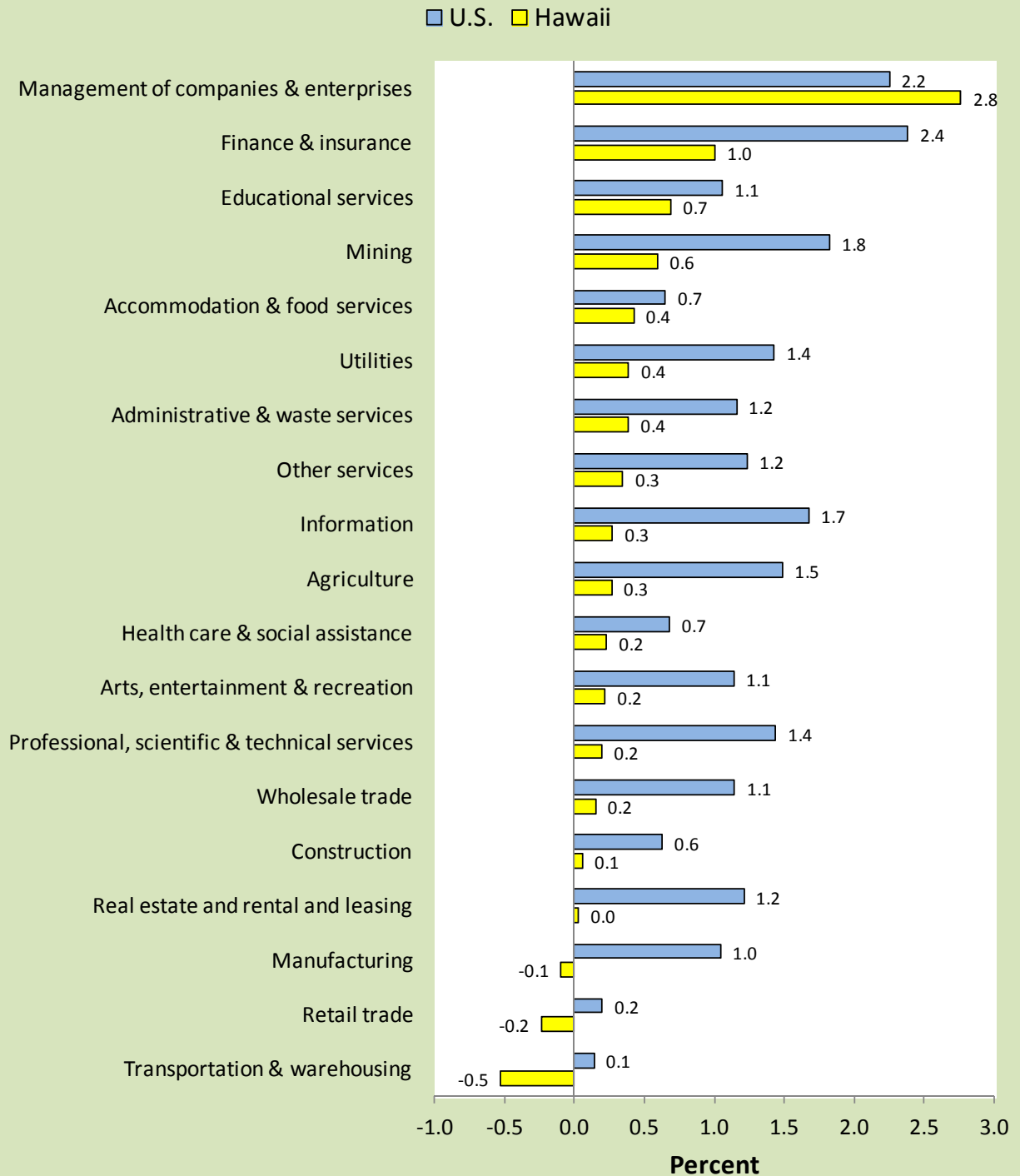


Figure 18. Average Annual Growth in Real Wage by NAICS Sector, 1990-2010



Hawaii Ranking of Wages by Sector

Based on the 1990, 2000 and 2010 data on average nominal wages by sector, Hawaii was ranked amongst all the states in the U.S. These results are provided in Tables 5–7. In terms of average wages for all sectors combined, Hawaii moved down from the 11th position in 1990 to the 28th position in 2000 and then moved up to the 22nd position in 2010.

Except for a few industries, the Hawaii rankings in wages by sector have changed substantially over time. In all three years considered for comparison, Hawaii's ranks remained unchanged for only two sectors. Hawaii ranked #2 in both federal military wages after Virginia and in accommodation and food services wages after Nevada in all the three years.

Other sectors where Hawaii workers have been paid consistently higher wages than those from most other states were the construction sector, local government, and health care and social assistance. In 1990 Hawaii ranked # 2 in terms of averages wages in the construction sector, decreased to #6 in 2000, and increased to #2 again in 2010. Hawaii's rank in local government wages remained #6 in 1990 and 2000, and increased to #3 in 2010. Hawaii's rank in health care and social assistance wages decreased from #5 in 1990 to #6 in 2000 and to #11 in 2010.

Among the industries for which Hawaii wages remained consistently lower than the majority of the states were manufacturing, wholesale trade, management of companies and enterprises, and transportation and warehousing. For example, in 2010 Hawaii ranked #50 in manufacturing wages, #47 in whole sale wages, #38 in management of companies and enterprises wages, and #35 in transportation and warehousing wages.

There are few other industries for which Hawaii wages have deteriorated over time vis-à-vis other states. For example, from 1990 to 2010, Hawaii's ranks in farm, forestry and fishing wages dropped from # 3 to #24. Similarly, Hawaii's ranks decreased from #5 to #25 in utilities wages; decreased from #9 to #30 in professional, scientific, and technical services wages; decreased from #8 to #16 in real estate wages; and decreased from #3 to #9 in other services during this period.

Besides Hawaii rankings in average wages by sector vis-à-vis other states, Tables 5-7 also show information on the highest and lowest average wages in the U.S. and the states that paid the highest and lowest wages. Table 8 compares Hawaii's ranks and average nominal wage in 1990, 2000, and 2010 by 23 NAICS sectors.

In terms of the average wages by sector, the highest paying sectors in 1990 included utilities, mining, construction, management of companies and enterprises, professional, scientific, and technical services, information, and federal civilian government. This was true both for the U.S. and Hawaii except for a couple of sectors. For example, construction was the third highest paying sector for Hawaii, while for the U.S. construction wages were relatively lower. Management of companies and enterprises was the second highest paying sector in the U.S., but ranked much lower in Hawaii.

Accommodation and food services, farm, forestry, fishing and related activities, retail trade, other services, arts & entertainment, administrative and waste services, and education were the lowest paying sectors in 1990. This was true for both the U.S. and Hawaii.

The highest and lowest paying sectors were fairly robust between 1990 and 2010. In 2010, the management of companies and enterprises was found to be the highest paying sector for the U.S. and the second for Hawaii; the utilities and mining ranked #1 and #3, respectively, in Hawaii, and #3 and #2, respectively, in the U.S.; other sectors with high wages in both the U.S. and Hawaii include construction, professional, scientific, and technical services, finance and insurance, information, and federal civilian government.

As in 1990, accommodation and food services, farm, forestry, fishing and related activities, retail trade, other services, arts & entertainment, administrative and waste services, and education were also the lowest paying sectors in 2010.

Table 5. Hawaii Rankings of Average Nominal Wage by NAICS Sector, 1990

	Avg. Wage (\$)		Hawaii	Min. Avg. Wage		Max. Avg. Wage	
	U.S.	Hawaii	Rank	State	Value	State	Value
1 Farm, forestry & fishing	13,028	16,713	3	TN	8,498	AK	39,448
2 Mining	37,780	38,380	8	ME	19,390	AK	67,387
3 Utilities	40,031	45,625	5	TN	29,403	DE	49,251
4 Construction	26,532	36,403	2	SD	18,953	AK	41,269
5 Manufacturing	28,495	23,555	40	MS	19,580	CT	34,470
6 Wholesale trade	30,817	27,495	27	SD	19,984	CT	39,823
7 Retail trade	15,719	17,393	7	SD	12,134	AK	19,983
8 Transportation & warehousing	27,330	27,547	17	RI	20,586	AK	34,751
9 Information	32,435	31,132	13	WY	20,203	NY	41,253
10 Finance & insurance	31,886	27,997	17	SD	20,727	NY	49,862
11 Real estate and rental and leasing	20,958	24,186	8	SD	11,836	NY	27,656
12 Professional, scientific & technical services	35,187	35,667	9	SD	20,505	DE	43,360
13 Management of companies & enterprises	38,526	26,183	42	LA	19,118	IN	56,403
14 Administrative & waste services	16,316	16,487	13	SD	10,567	AK	24,674
15 Educational services	17,912	17,504	16	MT	11,029	CT	22,819
16 Health care & social assistance	23,124	25,572	5	IA	17,541	NV	30,044
17 Arts, entertainment & recreation	17,460	16,651	10	ND	7,876	CA	26,899
18 Accommodation & food services	10,241	16,020	2	ND	6,712	NV	17,297
19 Other services	14,165	17,532	3	ND	9,891	UT	19,329
20 Federal civilian	30,839	29,767	25	ND	24,265	NJ	33,578
21 Federal military	17,046	21,207	2	VT	6,961	VA	23,150
22 State government	24,195	24,879	13	MT	16,967	AK	36,024
23 Local government	23,177	27,236	6	SD	15,227	AK	31,786
All Sectors	23,423	23,275	11	SD	16,347	AK	28,932

Source: BEA

Table 6. Hawaii Rankings of Average Nominal Wage by NAICS Sector, 2000

	Avg. Wage (\$)		Hawaii	Min. Avg. Wage		Max. Avg. Wage	
	U.S.	Hawaii	Rank	State	Value	State	Value
1 Farm, forestry & fishing	18,714	22,497	14	TN	13,326	AK	45,372
2 Mining	56,806	56,696	5	ME	25,117	AK	86,473
3 Utilities	63,709	64,563	12	SD	43,159	NJ	76,777
4 Construction	37,272	45,732	6	MS	27,916	MA	48,864
5 Manufacturing	43,043	29,051	48	MS	28,657	MA	55,639
6 Wholesale trade	48,761	36,802	37	MT	31,326	MA	64,437
7 Retail trade	22,298	21,458	19	WV	17,030	CA	27,555
8 Transportation & warehousing	36,857	36,357	16	ME	29,419	TX	43,073
9 Information	58,940	42,528	30	MT	29,296	WA	129,856
10 Finance & insurance	60,539	44,643	24	WV	30,961	NY	125,180
11 Real estate and rental and leasing	32,190	29,208	19	ND	17,139	MA	42,532
12 Professional, scientific & technical services	58,476	43,574	30	ND	30,250	MA	76,522
13 Management of companies & enterprises	69,394	51,342	34	MT	34,384	CT	112,338
14 Administrative & waste services	23,408	20,876	29	AR	16,052	MA	30,273
15 Educational services	26,037	25,004	19	MT	14,452	CT	32,300
16 Health care & social assistance	31,577	34,346	6	MT	25,900	NV	36,795
17 Arts, entertainment & recreation	26,758	21,267	26	ND	11,813	NY	37,810
18 Accommodation & food services	15,102	22,381	2	ND	9,804	NV	27,527
19 Other services	21,975	23,085	12	ND	16,205	UT	28,315
20 Federal civilian	46,538	46,233	12	ND	35,108	MD	52,457
21 Federal military	24,623	30,799	2	VT	10,211	VA	34,623
22 State government	33,360	30,342	31	ND	23,653	NY	44,541
23 Local government	32,209	37,250	6	SD	21,710	NJ	42,062
All Sectors	35,054	30,719	28	MT	24,172	NY	44,663

Source: BEA

Table 7. Hawaii Rankings of Average Nominal Wage by NAICS Sector, 2010

	Avg. Wage (\$)		Hawaii	Min. Avg. Wage		Max. Avg. Wage	
	U.S.	Hawaii	Rank	State	Value	State	Value
1 Farm, forestry & fishing	29,199	29,973	24	VA	22,982	MA	44,221
2 Mining	90,444	73,488	14	ME	38,049	CA	125,069
3 Utilities	88,699	83,884	25	TN	61,571	MD	107,302
4 Construction	50,157	62,615	2	SD	38,084	AK	70,726
5 Manufacturing	58,497	39,281	50	HI	39,281	MA	75,201
6 Wholesale trade	64,560	48,190	47	MT	45,193	CT	81,487
7 Retail trade	27,296	28,200	9	IA	22,651	CA	31,893
8 Transportation & warehousing	46,883	42,127	35	VT	37,264	AK	59,197
9 Information	75,428	55,902	27	SD	39,891	WA	111,476
10 Finance & insurance	85,183	58,152	32	WV	42,473	NY	191,500
11 Real estate and rental and leasing	44,471	41,369	16	MT	26,555	MA	60,288
12 Professional, scientific & technical services	78,106	63,077	30	SD	46,427	MA	100,957
13 Management of companies & enterprises	100,281	76,794	38	MT	58,060	NY	140,136
14 Administrative & waste services	34,261	30,291	32	ND	25,148	AK	42,638
15 Educational services	36,888	34,159	19	MT	21,220	CT	47,632
16 Health care & social assistance	44,179	45,549	11	ID	36,158	CA	53,357
17 Arts, entertainment & recreation	36,541	29,590	24	ND	16,449	CA	54,484
18 Accommodation & food services	19,456	29,651	2	IA	13,979	NV	33,762
19 Other services	30,204	31,958	9	ND	23,783	UT	38,754
20 Federal civilian	69,676	66,820	14	ND	55,037	MD	89,018
21 Federal military	47,833	58,293	2	IA	27,551	VA	62,669
22 State government	44,852	40,863	31	SD	33,602	NJ	59,879
23 Local government	43,810	53,513	3	SD	29,478	NJ	56,468
All Sectors	47,045	43,403	22	SD	33,999	NY	59,534

Source: BEA

Table 8. Changes of Hawaii Rankings of Average Nominal Wage by NAICS Sector

	Hawaii Ranks			Hawaii Avg. Nominal Wage (\$)			Annu. Growth
	1990	2000	2010	1990	2000	2010	1990 to 2010
1 Farm, forestry & fishing	3	14	24	16,713	22,497	29,973	3.0
2 Mining	8	5	14	38,380	56,696	73,488	3.3
3 Utilities	5	12	25	45,625	64,563	83,884	3.1
4 Construction	2	6	2	36,403	45,732	62,615	2.7
5 Manufacturing	40	48	50	23,555	29,051	39,281	2.6
6 Wholesale trade	27	37	47	27,495	36,802	48,190	2.8
7 Retail trade	7	19	9	17,393	21,458	28,200	2.4
8 Transportation & warehousing	17	16	35	27,547	36,357	42,127	2.1
9 Information	13	30	27	31,132	42,528	55,902	3.0
10 Finance & insurance	17	24	32	27,997	44,643	58,152	3.7
11 Real estate and rental and leasing	8	19	16	24,186	29,208	41,369	2.7
12 Professional, scientific & technical services	9	30	30	35,667	43,574	63,077	2.9
13 Management of companies & enterprises	42	34	38	26,183	51,342	76,794	5.5
14 Administrative & waste services	13	29	32	16,487	20,876	30,291	3.1
15 Educational services	16	19	19	17,504	25,004	34,159	3.4
16 Health care & social assistance	5	6	11	25,572	34,346	45,549	2.9
17 Arts, entertainment & recreation	10	26	24	16,651	21,267	29,590	2.9
18 Accommodation & food services	2	2	2	16,020	22,381	29,651	3.1
19 Other services	3	12	9	17,532	23,085	31,958	3.0
20 Federal civilian	25	12	14	29,767	46,233	66,820	4.1
21 Federal military	2	2	2	21,207	30,799	58,293	5.2
22 State government	13	31	31	24,879	30,342	40,863	2.5
23 Local government	6	6	3	27,236	37,250	53,513	3.4
All Sectors	11	28	22	23,275	30,719	43,403	3.2

Source: BEA

Figure 19. Changes of Hawaii Rankings of Average Nominal Wage by NAICS Sector: 1990-2010

