



Hawaii's Economic Structure: An Analysis Using Industry Level Gross Domestic Product Data April 2020 Update



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EXECUTIVE SUMMARY

The gross domestic product (GDP) in a region is the monetary value of all goods and services produced within the geographic area of the region in a particular period of time. It is the broadest quantitative measure of a region's total economic activity.

Top Five Industries: Hawaii and the U.S.

In this study, the economies (national, state, and county) are divided into 20 industry groups based on roughly the two-digit North American Industry Classification System (NAICS) code. The state of Hawaii generated approximately \$97.3 billion of nominal GDP in 2019. The real estate and rental and leasing sector generated the most GDP at about \$19.8 billion or 20.3%; followed by government at about \$19.1 billion or 19.7%, accommodation and food services at about \$8.8 billion or 9.1%, health care and social assistance at about \$6.6 billion or 6.8%, and retail trade at about \$6.2 billion or 6.4%. The top five groups in Hawaii accounted for 62.2% of total nominal GDP in 2019. The same five groups in the U.S. accounted for 41.8% of total GDP in 2019. The top five groups in the U.S. in 2019 were real estate and rental and leasing, government, manufacturing, professional, scientific, and technical services, and finance and insurance. The top five groups in the U.S. accounted for 51.9% of total nominal GDP in 2019, and the same five groups in Hawaii accounted for 49.5% of total GDP in 2019. Based on GDP for the top five industry groups, Hawaii's economy is more concentrated than the U.S. economy.

The gap for 2019 GDP share between Hawaii and the U.S. was the largest for the government group, with the share of Hawaii above that of the nation by 7.4 percentage points; followed by real estate and rental and leasing by 7.0 percentage points, and accommodation and food services by 6.0 percentage points. On the other hand, the share of Hawaii's manufacturing was below that of the nation by 9.1 percentage points; followed by finance and insurance by 4.0 percentage points, and professional, scientific, and technical services by 3.7 percentage points.

TABLE S1. TOP FIVE INDUSTRY GROUPS IN THE STATE OF HAWAII AND THE U.S. IN 2019

Industry Group	% of Total Nominal GDP in 2019		
	Hawaii	U.S.	HI above U.S.
Top 5 Sectors in State of Hawaii	62.2%	41.8%	20.5%
Real estate and rental and leasing	20.3%	13.4%	7.0%
Government	19.7%	12.3%	7.4%
Accommodation and food services	9.1%	3.1%	6.0%
Health care and social assistance	6.8%	7.6%	-0.8%
Retail trade	6.4%	5.5%	0.9%
Top 5 Sectors in the U.S.	49.5%	51.9%	-2.4%
Real estate and rental and leasing	20.3%	13.4%	7.0%
Government	19.7%	12.3%	7.4%
Manufacturing	1.9%	11.0%	-9.1%
Professional, scientific, and technical services	4.0%	7.7%	-3.7%
Finance and insurance	3.6%	7.6%	-4.0%

Source: BEA and DBEDT, READ.

Top Five Industries: Counties in Hawaii

The top five industry groups that generated the most GDP in 2018 by respective county are provided in Table S2. Economies in neighbor island counties are more concentrated in tourism. Accommodation and food services industry appeared among the top five industry groups in all neighbor island counties.

TABLE S2. TOP FIVE INDUSTRY GROUPS IN 2018 BY COUNTY AND FOR THE STATE OF HAWAII

Industry Group	% of Total Nominal GDP in 2018		
	County	State	County above State
Top 5 Sectors in Honolulu	60.5%	61.9%	-1.4%
Government	22.5%	19.6%	2.9%
Real estate and rental and leasing	17.8%	20.1%	-2.3%
Accommodation and food services	7.1%	9.1%	-1.9%
Health care and social assistance	7.0%	6.7%	0.4%
Retail trade	6.0%	6.5%	-0.5%
Top 5 Sectors in Maui	69.2%	60.9%	8.3%
Real estate and rental and leasing	31.8%	20.1%	11.7%
Accommodation and food services	15.2%	9.1%	6.2%
Government	8.4%	19.6%	-11.3%
Retail trade	7.7%	6.5%	1.2%
Transportation and warehousing	6.1%	5.6%	0.6%
Top 5 Sectors in Hawaii County	65.2%	61.9%	3.2%
Real estate and rental and leasing	23.3%	20.1%	3.2%
Government	15.4%	19.6%	-4.3%
Accommodation and food services	11.8%	9.1%	2.8%
Retail trade	8.3%	6.5%	1.8%
Health care and social assistance	6.3%	6.7%	-0.3%
Top 5 Sectors in Kauai	64.7%	58.9%	5.9%
Real estate and rental and leasing	20.6%	20.1%	0.5%
Accommodation and food services	18.1%	9.1%	9.0%
Government	11.3%	19.6%	-8.3%
Finance and insurance	7.9%	3.6%	4.3%
Retail trade	6.8%	6.5%	0.3%

Source: BEA and DBEDT, READ.

Top Five Contributors to Economic Growth 2001-2019: Hawaii and the U.S.

From 2001 to 2019, total real GDP (in 2012\$) for the state of Hawaii increased approximately \$27.5 billion. The real estate and rental and leasing sector contributed the most to real GDP at about 27.8%; followed by government at about 12.8%, health care and social assistance at about 8.9%, transportation and warehousing at about 8.7%, and retail trade at about 7.1%. The top five groups in Hawaii accounted for 65.2% of total additional real GDP from 2001 to 2019. The same five groups in the U.S. accounted for 37.4% of total additional real GDP from 2001 to 2019. The top five groups in the U.S. accounted for 61.5% of total additional real GDP from 2001 to 2019, and the same five groups in Hawaii accounted for 47.2% of total additional real GDP from 2001 to 2019.

The large contribution to economic growth in Hawaii by the real estate and rental and leasing sector was partially due to the rapid growth of imputed rent, which does not create additional jobs in the economy. From 2001 to 2018, the imputed rent in Hawaii increased about \$3.3 billion or about 10.6% per year on average. In comparison, total nominal GDP for the real estate and rental and leasing sector excluding imputed rent increased only about \$8.1 billion or 4.8% per year on average during the same period.

The difference in real GDP contribution between Hawaii and the U.S. was the largest in real estate and rental and leasing, with the share of Hawaii above that of the nation by 13.2 percentage points; followed by government by 8.9 percentage points, and transportation and warehousing by 5.7 percentage points. On the other hand, the share of Hawaii's manufacturing was below that of the nation by 9.3 percentage point; followed by information by 9.0 percentage points, and professional, scientific, and technical services by 7.2 percentage points.

TABLE S3. TOP FIVE INDUSTRY GROUPS IN THE STATE OF HAWAII AND THE U.S. THAT CONTRIBUTED MOST REAL GDP FROM 2001 TO 2019

Industry Group	% of Total Additional Real GDP, 2001-2019		
	Hawaii	U.S.	HI above U.S.
Top 5 Sectors in the State of Hawaii	65.2%	37.4%	27.8%
Real estate and rental and leasing	27.8%	14.6%	13.2%
Government	12.8%	3.9%	8.9%
Health care and social assistance	8.9%	10.8%	-1.9%
Transportation and warehousing	8.7%	3.0%	5.7%
Retail trade	7.1%	5.1%	1.9%
Top 5 Sectors in the U.S.	47.2%	61.5%	-14.3%
Real estate and rental and leasing	27.8%	14.6%	13.2%
Information	4.9%	13.9%	-9.0%
Professional, scientific, and technical services	4.6%	11.8%	-7.2%
Health care and social assistance	8.9%	10.8%	-1.9%
Manufacturing	1.1%	10.4%	-9.3%

Source: BEA and DBEDT, READ.

Top Five Contributors to Economic Growth 2001-2018: Counties in Hawaii

The top five industry groups that contributed the most additional real GDP from 2001 to 2018 by county are listed in Table S4.

TABLE S4. TOP FIVE INDUSTRY GROUPS THAT GENERATED THE MOST GDP IN 2018 BY COUNTY IN COMPARISON WITH STATE

Industry Group	% of Total Additional Real GDP, 2001-2018		
	County	State	County above State
Top 5 Sectors in Honolulu	64.2%	63.0%	1.2%
Real estate and rental and leasing	23.9%	27.7%	-3.9%
Government	15.4%	12.6%	2.7%
Transportation and warehousing	9.6%	9.3%	0.3%
Health care and social assistance	9.1%	8.4%	0.7%
Information	6.2%	4.9%	1.3%
Top 5 Sectors in Maui	80.9%	57.9%	23.0%
Real estate and rental and leasing	45.2%	27.7%	17.4%
Retail trade	11.9%	6.9%	5.1%
Transportation and warehousing	9.2%	9.3%	0.0%
Health care and social assistance	8.0%	8.4%	-0.4%
Accommodation and food services	6.5%	5.6%	1.0%
Top 5 Sectors in Hawaii County	66.4%	55.9%	10.5%
Real estate and rental and leasing	30.6%	27.7%	2.9%
Government	11.8%	12.6%	-0.8%
Retail trade	9.0%	6.9%	2.1%
Health care and social assistance	7.8%	8.4%	-0.6%
Agriculture, forestry, fishing, and hunting	7.3%	0.3%	7.0%
Top 5 Sectors in Kauai	62.9%	58.1%	4.8%
Real estate and rental and leasing	22.3%	27.7%	-5.5%
Finance and insurance	15.5%	2.9%	12.5%
Transportation and warehousing	10.5%	9.3%	1.2%
Accommodation and food services	7.6%	5.6%	2.0%
Government	7.2%	12.6%	-5.5%

Source: BEA and DBEDT, READ.

From 2001 to 2018, Honolulu's share of total state nominal GDP decreased, while the shares of all the other counties increased. Honolulu's share of nominal GDP decreased from 76.7% to 73.8%, Maui's share increased from 9.6% to 11.5%, Hawaii County's share increased from 9.2% to 9.8%, and Kauai's share increased from 4.5% to 4.9%.

I. INTRODUCTION

The gross domestic product (GDP) in a region is the monetary value of all goods and services produced within the geographic area of the region in a particular period of time. It is the broadest quantitative measure of a region's total economic activity and is one of the most observed economic indicators by policy makers, businesses, and the public.

Research Objectives

This study analyzes the structural changes for the economies of the nation, the state, and the respective counties between 2001 and 2019 (2018 for counties) using the GDP by industry data. This period covers the most recent two business cycles. The comparisons identify industry advantages and economic diversification across the three geographic levels.

Data Sources and Definitions

The primary data source for this report was the U.S. Bureau of Economic Analysis (BEA). This data includes GDP by industry data for three geographic levels (nation, state, and county). The data is analyzed using two-digit North American Industry Classification System (NAICS) codes from 1997 to the latest year available (2019 for the state and national level).

In the BEA's GDP by County Account, GDP from 2001 to 2018 are available at the 2-digit NAICS level for Honolulu and most of the 2-digit NAICS level for Maui. GDP for some of the 2-digit NAICS level for Hawaii County and Kauai County are not available. The missing GDP data at the 2-digit NAICS level for Hawaii County and Kauai County are estimated based on the two counties' shares of earnings calculated from the BEA's Personal Income and Employment Account and data from Economic Modeling Specialists, Inc. (EMSI).

The values included in this study are defined using BEA definitions. GDP by state is the measure of the market value of all final goods and services produced within a state in a particular period of time. In concept, an industry's GDP by state, referred to as its "value added", is equivalent to its gross output (sales or receipts and other operating income, commodity taxes, and inventory change) minus its intermediate inputs (consumption of goods and services purchased from other U.S. industries or imported). GDP by state is the state counterpart of the Nation's GDP, the Bureau's featured and most comprehensive measure of U.S. economic activity.

Real GDP is an inflation-adjusted measure of gross product. The real estimates of GDP are measured in chained (2012) dollars.

Major Industry Groups of the Economy

Based on the data availability, the economy is grouped into 20 industry groups based on roughly the two-digit NAICS code. As shown in Table 1, in 2019, the state of Hawaii generated approximately \$97.3 billion of nominal GDP. Real estate and rental and leasing generated the most GDP at about \$19.8 billion or 20.3%; followed by government at about \$19.1 billion or 19.7%, accommodation and food services at about \$8.8 billion or 9.1%, health care and social assistance at about \$6.6 billion or 6.8%, and retail trade at about \$6.2 billion or 6.4%. The top five groups accounted for 62.2% of total nominal GDP in 2019.

The large share of real estate and rental and leasing of GDP is partially due to the inclusion of imputed rent in this sector. Without imputed rent, the real estate and rental and leasing GDP share would be much smaller. Imputed rent does not create many jobs. In fact, in 2018 the share of real estate and rental and leasing sector of total compensation of employee was only 1.8%.

TABLE 1. NOMINAL GDP BY INDUSTRY IN THE STATE OF HAWAII IN 2018

Rank	Industry Group	2019 GDP (\$M)	Share of 2019 Total GDP
1	Real estate and rental and leasing	19,771	20.3%
2	Government	19,122	19.7%
3	Accommodation and food services	8,817	9.1%
4	Health care and social assistance	6,597	6.8%
5	Retail trade	6,246	6.4%
6	Construction	5,562	5.7%
7	Transportation and warehousing	5,341	5.5%
8	Professional, scientific, and technical services	3,860	4.0%
9	Finance and insurance	3,530	3.6%
10	Administrative and waste management services	3,329	3.4%
11	Wholesale trade	2,969	3.1%
12	Other services, except government	2,170	2.2%
13	Information	2,099	2.2%
14	Utilities	2,028	2.1%
15	Manufacturing	1,896	1.9%
16	Management of companies and enterprises	1,262	1.3%
17	Arts, entertainment, and recreation	1,072	1.1%
18	Educational services	1,017	1.0%
19	Agriculture, forestry, fishing, and hunting	509	0.5%
20	Mining	85	0.1%
	Total	97,282	100.0%

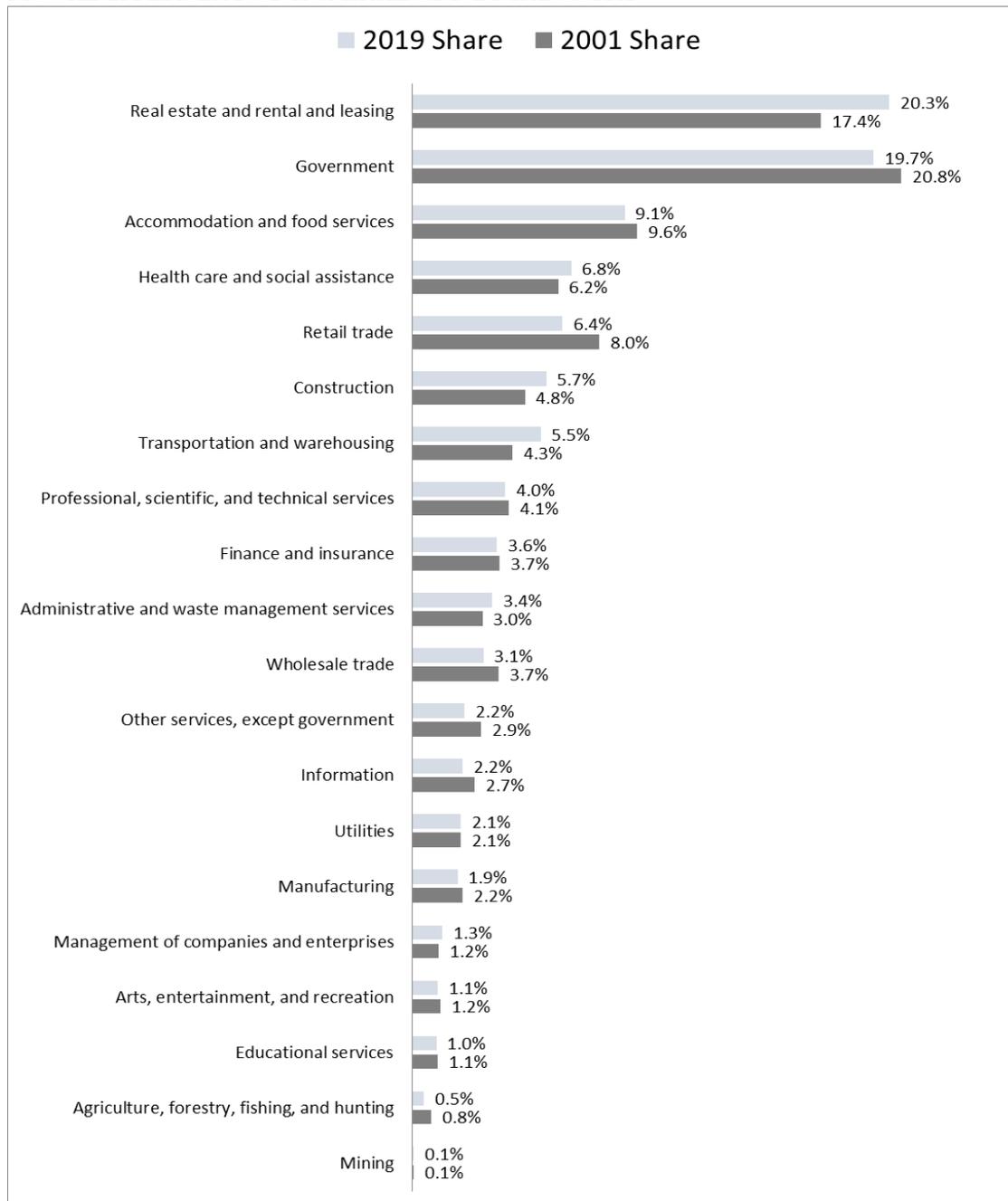
Source: BEA and DBEDT, READ.

II. INDUSTRY STRUCTURAL CHANGE: HAWAII STATE

Changing Industrial Structures in Hawaii

The industrial structure in terms of GDP has changed over time. As shown in Figure 1, from 2001 to 2019, 14 of the 20 sectors lost their respective share of total nominal GDP, and six sectors gained respective share of nominal GDP. The real estate and rental and leasing sector gained the most, followed by transportation and warehousing, construction, health care and social assistance, and administrative and waste management services. The retail trade sector lost the most, followed by government, other services, except government, wholesale trade, and information.

FIGURE 1. PERCENT OF NOMINAL GDP BY INDUSTRY



As shown in Table 2, among the 20 sectors, the real estate and rental and leasing sector had the largest share of nominal GDP in 2019; followed by government, accommodation and food services, health care and social assistance, and retail trade.

TABLE 2. SHARES OF TOTAL NOMINAL GDP BY INDUSTRY

	Industry Group	Shares of Total			Changes in Shares		
		2001	2007	2019	01 to 07	07 to 19	01 to 19
1	Real estate and rental and leasing	17.4%	18.4%	20.3%	1.0%	1.9%	2.9%
2	Government	20.8%	20.5%	19.7%	-0.3%	-0.8%	-1.2%
3	Accommodation and food services	9.6%	9.2%	9.1%	-0.4%	-0.2%	-0.5%
4	Health care and social assistance	6.2%	5.7%	6.8%	-0.5%	1.0%	0.6%
5	Retail trade	8.0%	7.0%	6.4%	-0.9%	-0.6%	-1.6%
6	Construction	4.8%	7.3%	5.7%	2.4%	-1.5%	0.9%
7	Transportation and warehousing	4.3%	4.5%	5.5%	0.2%	0.9%	1.2%
8	Professional, scientific, and technical services	4.1%	4.4%	4.0%	0.2%	-0.4%	-0.2%
9	Finance and insurance	3.7%	3.5%	3.6%	-0.2%	0.1%	-0.1%
10	Administrative and waste management services	3.0%	3.0%	3.4%	0.0%	0.4%	0.4%
11	Wholesale trade	3.7%	3.2%	3.1%	-0.5%	-0.2%	-0.7%
12	Other services, except government	2.9%	2.5%	2.2%	-0.5%	-0.2%	-0.7%
13	Information	2.7%	2.8%	2.2%	0.1%	-0.7%	-0.5%
14	Utilities	2.1%	2.0%	2.1%	-0.1%	0.1%	0.0%
15	Manufacturing	2.2%	1.8%	1.9%	-0.3%	0.1%	-0.2%
16	Management of companies and enterprises	1.2%	1.2%	1.3%	0.0%	0.1%	0.1%
17	Arts, entertainment, and recreation	1.2%	1.0%	1.1%	-0.2%	0.1%	-0.1%
18	Educational services	1.1%	1.0%	1.0%	0.0%	0.0%	0.0%
19	Agriculture, forestry, fishing, and hunting	0.8%	0.6%	0.5%	-0.2%	-0.1%	-0.3%
20	Mining	0.1%	0.1%	0.1%	0.1%	-0.1%	0.0%
	Total	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%

Source: BEA and DBEDT, READ.

Table 3 shows the changes in the GDP shares of the four tourism intensive industries between 2007 and 2019 for the state of Hawaii. From 2007 to 2019, the total share of the four tourism intensive industries decreased only slightly from 23.1% to 22.1%. The shares of retail trade, accommodation and food services, and arts, entertainment, and recreation decreased, while the share of the transportation and warehousing sector increased slightly.

TABLE 3. SHARES OF TOURISM INTENSIVE INDUSTRIES IN NOMINAL GDP

Industry Group	% of Total Nominal GDP		
	2007	2019	Changes
Tourism Intensive Sectors in the State of Hawaii			
Retail trade	8.0%	6.4%	-1.6%
Transportation and warehousing	4.3%	5.5%	1.2%
Arts, entertainment, and recreation	1.2%	1.1%	-0.1%
Accommodation and food services	9.6%	9.1%	-0.5%
Tourism Intensive	23.1%	22.1%	-1.0%

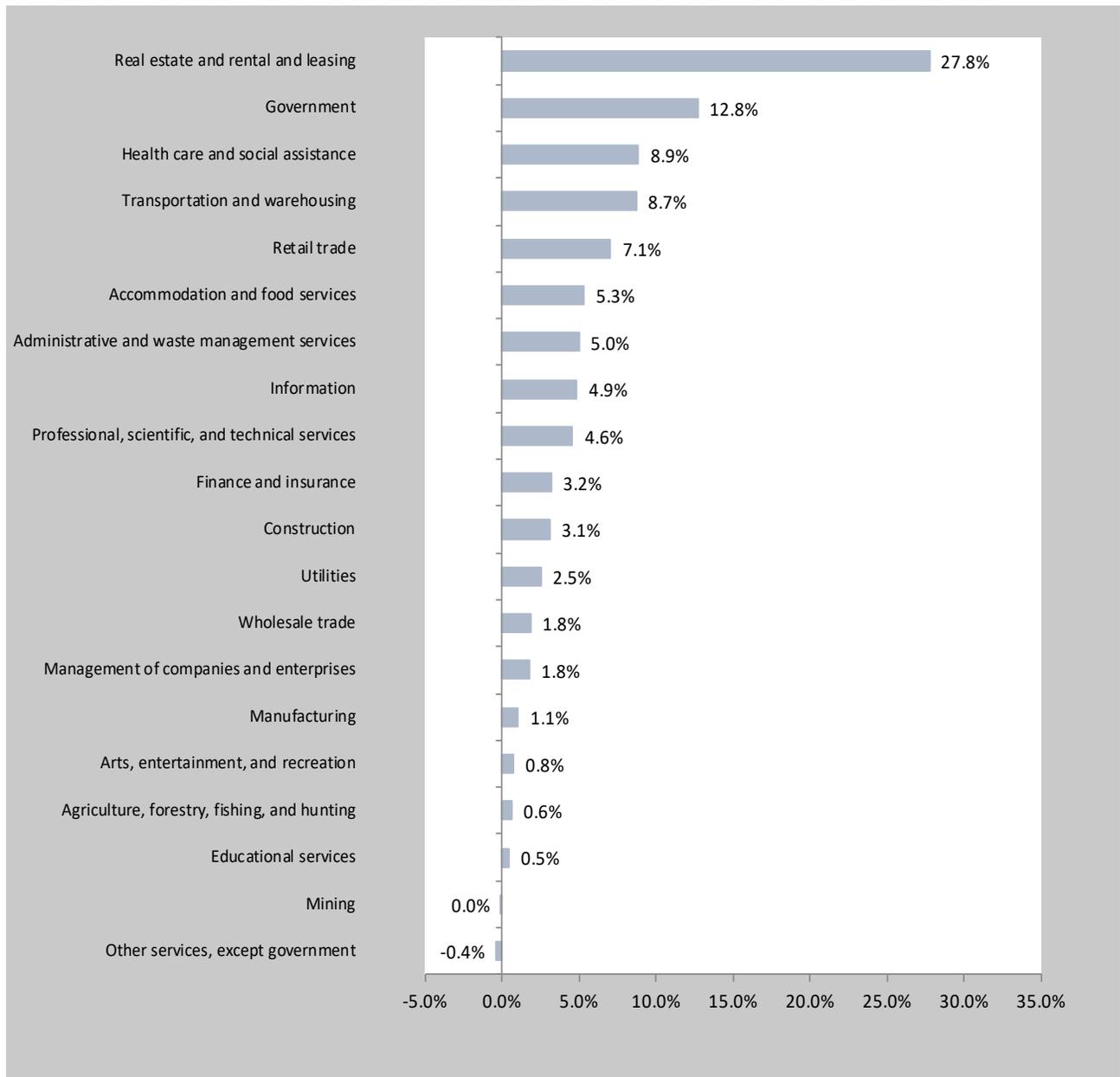
Source: BEA and DBEDT, READ.

Although the two tourism intensive industries – Accommodation and food services and Retail trade lost shares of GDP between 2001 and 2019, they were still among the top five industries in terms of nominal GDP in 2019.

Sector Contribution to Real GDP Growth

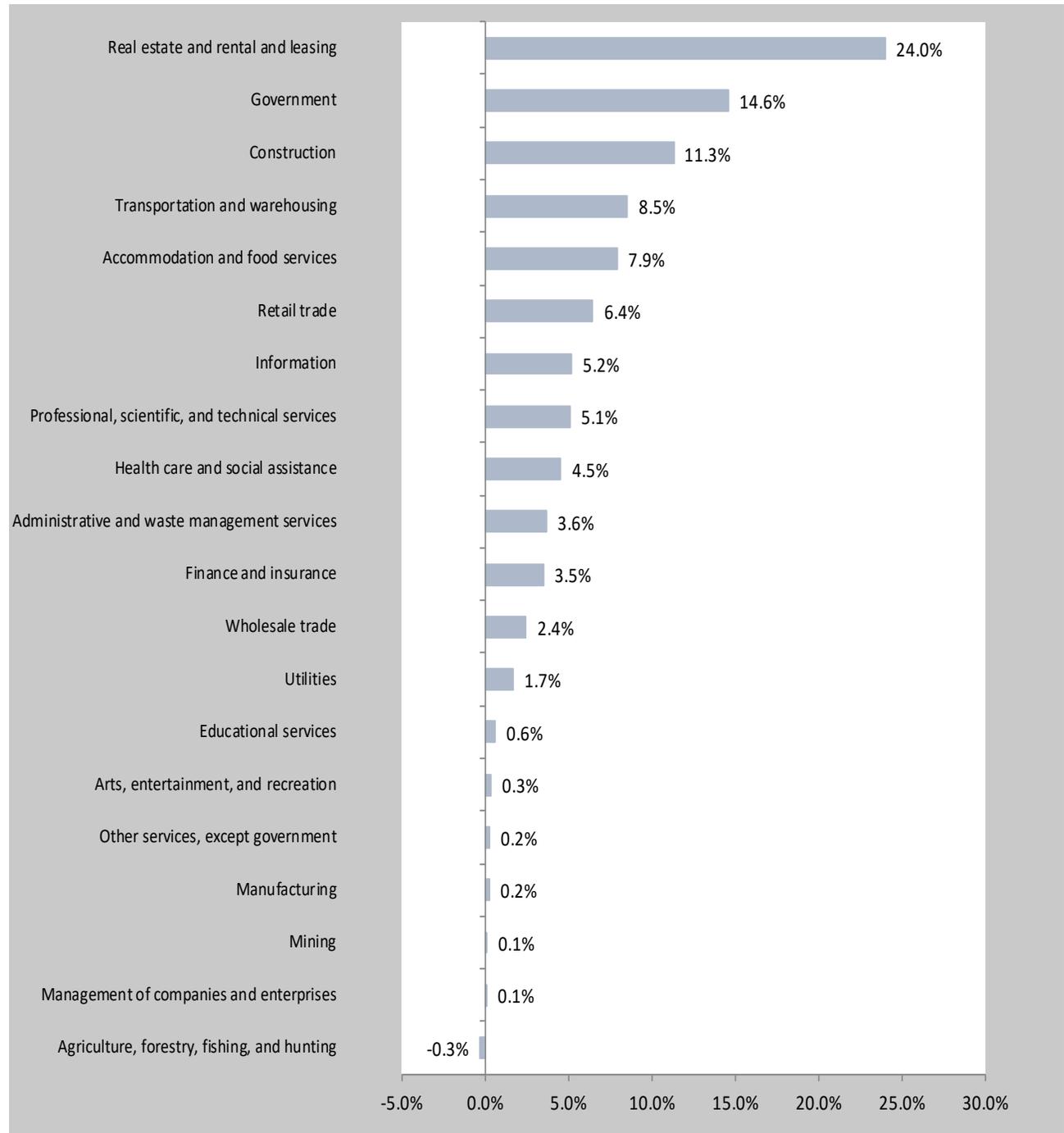
From 2001 to 2019, total real GDP in Hawaii (in 2012\$) increased \$27.4 billion or about 49.1%. As shown in Figure 2, from 2001 to 2019, the real estate and rental and leasing sector contributed the most at 27.8% of additional real GDP, followed by government at 12.8%, healthcare and social assistance at 8.9%, transportation and warehousing at 8.7%, and retail trade at 7.1%. The top five industry groups together contributed about 65.2% of total additional real GDP from 2001 to 2019.

FIGURE 2. CONTRIBUTION OF ADDITIONAL REAL GDP FROM 2001 TO 2019 IN HAWAII



The sector contributions of real GDP during the past two expansion cycles: 2001-2007 and 2009-2019 varied slightly. From 2001 to 2007, total real GDP (in 2012\$) in Hawaii increased about \$15.2 billion or about 27.1%. As shown in Figure 3, from 2001 to 2007, the real estate and rental and leasing sector contributed the most at 24.0% of additional real GDP; followed by government at 14.6%, construction at 11.3%, transportation and warehousing at 8.5%, and accommodation and food services at 7.9%. The top five industry groups together contributed about 66.4% of total additional real GDP from 2001 to 2007.

FIGURE 3. CONTRIBUTION OF ADDITIONAL REAL GDP FROM 2001 TO 2007 IN HAWAII



From 2009 to 2019, total real GDP in Hawaii increased about \$14.4 billion or about 20.9%. As shown in Figure 4, from 2009 to 2019, the real estate and rental and leasing sector contributed the most at 26.5% of additional real GDP; followed by accommodation and food services at 12.9%, transportation and warehousing at 9.7%, retail trade at 9.9%, and health care and social assistance at 9.3%. The top five industry groups together contributed about 68.4% of total additional real GDP from 2009 to 2019. Tourism intensive industries contributed much more to the economic growth during the current expansion (2009-2019) at 35.5% than the previous expansion (2001-2007) at 27.8%.

FIGURE 4. CONTRIBUTION OF ADDITIONAL REAL GDP FROM 2009 TO 2019 IN HAWAII

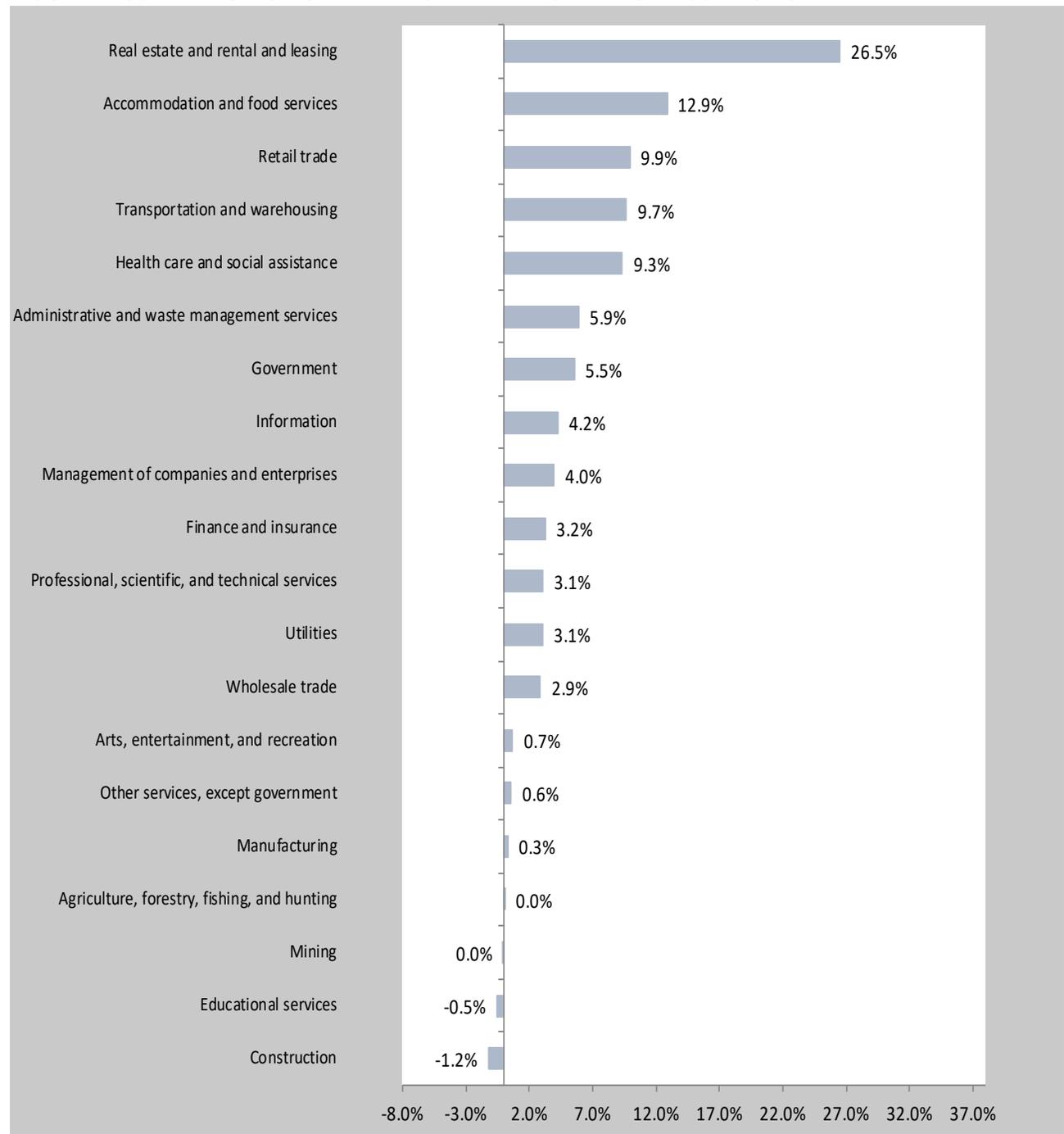


Table 4 shows the state level real GDP (in 2012\$) by sectors. From 2001 to 2007, total real GDP increased 4.0% per year on average. Among the 20 sectors, only the agriculture, forestry, fishing, and hunting sector had negative growth in real GDP. From 2009 to 2019, the annual average growth rate of total real GDP decreased to 1.9%. Three of the 20 sectors had negative growth. From 2001 to 2019, the annual average growth rate of total real GDP was 2.2%. Two of the 20 sectors had negative growth.

TABLE 4. STATE OF HAWAII REAL GDP BY SECTORS (\$M)

SECTOR	Industry Group	2001	2007	2009	2019	Annual Growth 01-07	Annual Growth 09-19	Annual Growth 01-19
1	Agriculture, forestry, fishing, and hunting	558	509	721	727	-1.5%	0.1%	1.5%
2	Mining	125	137	125	122	1.6%	-0.2%	-0.1%
3	Utilities	1,066	1,312	1,311	1,754	3.5%	2.9%	2.8%
4	Construction	3,257	4,930	4,279	4,102	7.2%	-0.4%	1.3%
5	Manufacturing	1,508	1,542	1,758	1,799	0.4%	0.2%	1.0%
6	Wholesale trade	2,137	2,499	2,224	2,641	2.6%	1.7%	1.2%
7	Retail trade	4,099	5,053	4,590	6,025	3.5%	2.8%	2.2%
8	Transportation and warehousing	2,035	3,298	3,011	4,413	8.4%	3.9%	4.4%
9	Information	1,002	1,768	1,718	2,332	9.9%	3.1%	4.8%
10	Finance and insurance	1,887	2,400	2,290	2,760	4.1%	1.9%	2.1%
11	Real estate and rental and leasing	9,091	12,644	12,820	16,665	5.7%	2.7%	3.4%
12	Professional, scientific, and technical services	2,275	3,024	3,087	3,530	4.9%	1.4%	2.5%
13	Management of companies and enterprises	824	832	738	1,311	0.2%	5.9%	2.6%
14	Administrative and waste management services	1,497	2,037	2,008	2,859	5.3%	3.6%	3.7%
15	Educational services	721	808	924	844	1.9%	-0.9%	0.9%
16	Health care and social assistance	3,500	4,169	4,566	5,919	3.0%	2.6%	3.0%
17	Arts, entertainment, and recreation	701	750	808	907	1.1%	1.2%	1.4%
18	Accommodation and food services	5,526	6,695	5,118	6,984	3.2%	3.2%	1.3%
19	Other services, except government	1,851	1,887	1,672	1,754	0.3%	0.5%	-0.3%
20	Government	12,791	14,952	15,467	16,269	2.6%	0.5%	1.3%
	Total	56,449	71,245	69,236	83,716	4.0%	1.9%	2.2%

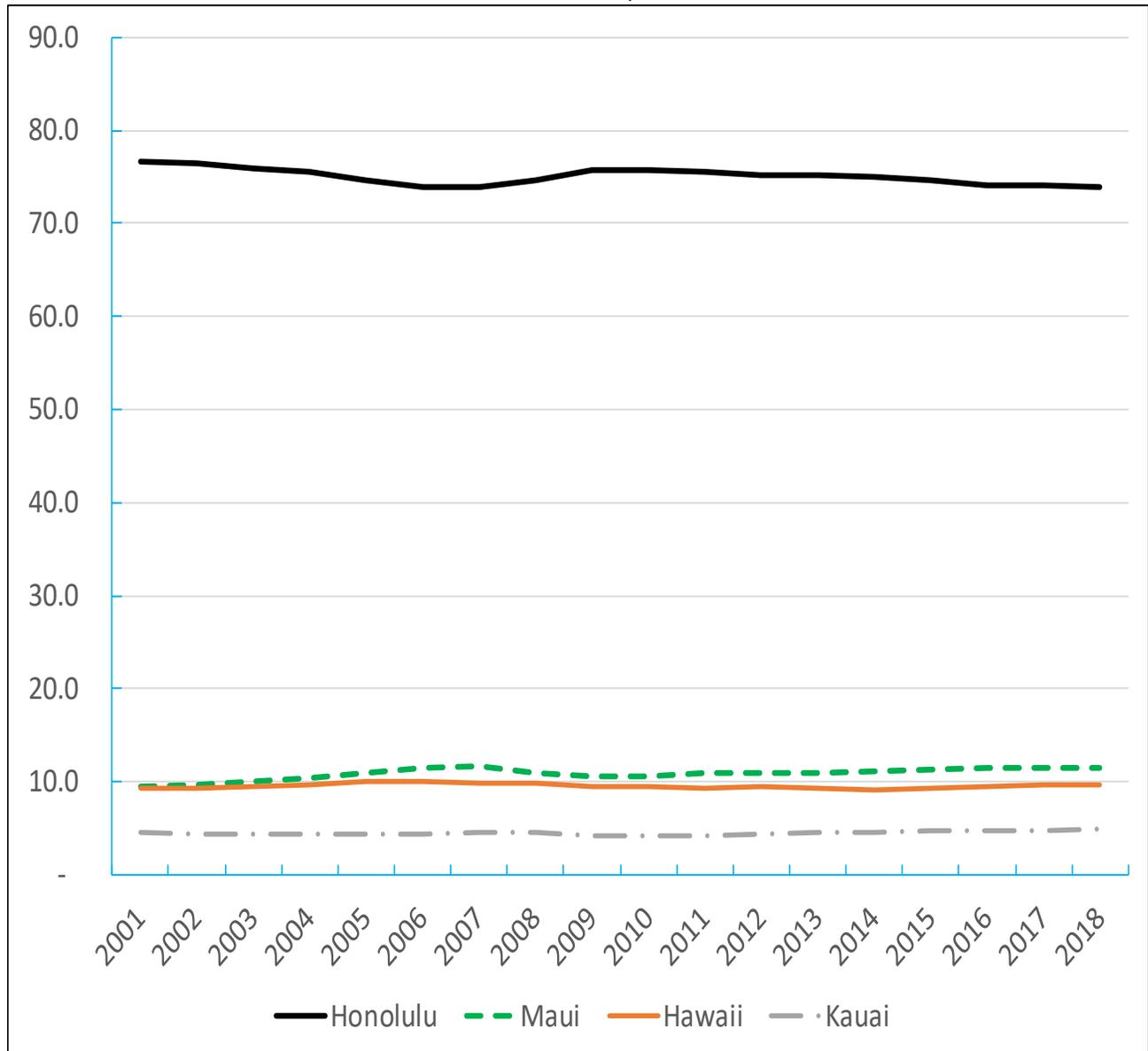
Source: BEA and DBEDT, READ.

III. INDUSTRY STRUCTURAL CHANGE: COUNTIES IN HAWAII

County Shares of State GDP by Industry

From 2001 to 2018, the Honolulu share of total state GDP decreased, while the shares of all the other counties increased. As shown in Figure 5, from 2001 to 2018, Honolulu's share of nominal GDP decreased from 76.7% to 73.8%, Maui's share increased from 9.6% to 11.5%, Hawaii County's share increased from 9.2% to 9.8%, and Kauai's share increased from 4.5% to 4.9%.

FIGURE 5. COUNTY'S SHARE IN STATE NOMINAL GDP, 2001-2018



As shown in Table 5, in 2001, Honolulu's share of state nominal GDP ranged from 54.7% for accommodation and food services to 88.5% for educational services. Twelve of the 20 sectors in Honolulu had shares above Honolulu's share of total nominal GDP. Maui's share of state nominal GDP ranged from 3.8% for wholesale trade to 21.7% for arts, entertainment, and recreation. Five of the 20 sectors in Maui had shares above its share of total nominal GDP. Hawaii County's share of state nominal GDP ranged from 2.8% for finance and insurance to 25.1% for agriculture, forestry, fishing, and hunting. Seven of the 20 sectors in Hawaii County had shares above the total nominal GDP share. Kauai's shares of the state nominal GDP ranged from 1.6% for manufacturing to 10.5% for accommodation and food services. Eight of the 20 sectors in Kauai had shares above the total nominal GDP share.

TABLE 5. COUNTIES' SHARES OF NOMINAL GDP BY INDUSTRY-2001

	Industry Group	State \$M	% of State Total			
			Honolulu	Maui	Hawaii	Kauai
1	Agriculture, forestry, fishing, and hunting	352	59.2	6.4	25.1	9.3
2	Mining	39	74.5	8.3	8.7	8.5
3	Utilities	898	71.5	13.2	11.0	4.3
4	Construction	2,065	66.6	15.4	14.2	3.8
5	Manufacturing	928	84.1	7.8	6.5	1.6
6	Wholesale trade	1,591	87.7	3.8	6.3	2.3
7	Retail trade	3,421	74.8	8.0	11.7	5.5
8	Transportation and warehousing	1,841	81.3	9.2	7.9	1.6
9	Information	1,150	83.7	8.0	5.1	3.2
10	Finance and insurance	1,598	88.2	4.8	2.8	4.2
11	Real estate and rental and leasing	7,470	71.2	12.5	10.8	5.4
12	Professional, scientific, and technical services	1,774	87.7	5.1	5.3	1.9
13	Management of companies and enterprises	495	80.1	8.5	6.7	4.7
14	Administrative and waste management services	1,290	79.1	8.7	6.8	5.3
15	Educational services	468	88.5	4.1	5.5	1.8
16	Health care and social assistance	2,673	80.0	7.4	8.8	3.8
17	Arts, entertainment, and recreation	530	58.0	21.7	12.0	8.3
18	Accommodation and food services	4,111	54.7	19.9	14.9	10.5
19	Other services, except government	1,264	78.8	9.6	8.0	3.6
20	Government	8,934	85.5	5.0	6.8	2.6
	Total	42,894	76.7	9.6	9.2	4.5

Source: BEA and DBEDT, READ.

As shown in Table 6, in 2018, Honolulu's share of state nominal GDP ranged from 25.9% in agriculture, forestry, fishing, and hunting to 93.9% in mining. Twelve of the 20 sectors in Honolulu had shares above Honolulu's total nominal GDP share. Maui's share of state nominal GDP ranged from 1.6% in mining to 19.3% for accommodation and food services. Eight of the 20 sectors in Maui had shares above Maui's total nominal GDP. Hawaii County's share of state nominal GDP ranged from 0.4% in mining to 54.9 in agriculture, forestry, fishing, and hunting. Eight of the 20 sectors in Hawaii County had shares above its total nominal GDP share. Kauai's shares of state nominal GDP ranged from 2.3% for manufacturing to 12.0% for agriculture, forestry, fishing, and hunting. Ten of the 20 sectors in Kauai had shares above Kauai's total nominal GDP share.

TABLE 6. COUNTIES' SHARES OF NOMINAL GDP BY INDUSTRY-2018

	Industry Group	State	% of State Total			
		\$M	Honolulu	Maui	Hawaii	Kauai
1	Agriculture, forestry, fishing, and hunting	451	25.9	7.1	54.9	12.0
2	Mining	92	93.9	1.6	0.4	4.2
3	Utilities	2,031	70.2	12.2	12.5	5.1
4	Construction	5,381	72.8	11.5	10.6	5.1
5	Manufacturing	2,000	87.9	4.5	5.3	2.3
6	Wholesale trade	2,846	80.0	8.0	9.2	2.9
7	Retail trade	6,090	68.7	13.6	12.5	5.2
8	Transportation and warehousing	5,231	74.5	12.6	8.4	4.5
9	Information	2,062	85.1	6.5	6.0	2.4
10	Finance and insurance	3,380	79.9	4.8	4.5	10.9
11	Real estate and rental and leasing	18,866	65.5	18.1	11.3	5.1
12	Professional, scientific, and technical services	3,743	86.1	5.5	5.8	2.6
13	Management of companies and enterprises	1,140	82.0	6.4	6.6	5.0
14	Administrative and waste management services	3,157	74.0	10.6	9.5	5.8
15	Educational services	975	81.4	7.3	6.9	4.5
16	Health care and social assistance	6,243	77.8	9.8	9.3	3.1
17	Arts, entertainment, and recreation	1,112	58.2	18.8	13.2	9.8
18	Accommodation and food services	8,491	58.1	19.3	12.7	9.9
19	Other services, except government	2,096	70.2	14.1	10.8	4.8
20	Government	18,411	84.6	4.9	7.6	2.8
	Total	93,798	73.8	11.5	9.8	4.9

Source: BEA and DBEDT, READ.

As shown in Table 7, from 2001 to 2018, Honolulu's share of total nominal GDP decreased 2.9 percentage points. In seven of the 20 sectors, Honolulu's shares increased. The mining sector increased the most at 19.4 percentage points; followed by construction, manufacturing, accommodation and food services, management of companies and enterprises, and information. The agriculture, forestry, fishing, and hunting sector in Honolulu lost the most at 33.3 percentage points; followed by other services, except government, and finance and insurance. From 2001 to 2018, Maui's share of total nominal GDP increased 1.9 percentage points. In ten of the 20 sectors, Maui's shares increased. The retail trade sector increased the most at 5.6 percentage points, while the mining sector lost the most at 6.7 percentage points. Hawaii County's share of total nominal GDP increased 0.5 of a percentage point. In 15 of the 20 sectors, Hawaii County's shares increased. The agriculture, forestry, fishing, and hunting sector increased the most at 29.8 percentage points, while the mining sector lost the most at 8.4 percentage points. Kauai's share of total nominal GDP increased 0.5 of a percentage point. In 14 of the 20 sectors, Kauai's shares increased. The finance and insurance sector increased the most at 6.7 percentage points, while the mining sector lost the most at 4.4 percentage points.

TABLE 7. CHANGES IN COUNTIES' SHARES OF NOMINAL GDP BY INDUSTRY: 2001-2018

	Industry Group	Changes in Percentage Points			
		Honolulu	Maui	Hawaii	Kauai
1	Agriculture, forestry, fishing, and hunting	-33.3	0.7	29.8	2.7
2	Mining	19.4	-6.7	-8.4	-4.4
3	Utilities	-1.3	-1.0	1.6	0.7
4	Construction	6.3	-3.9	-3.6	1.3
5	Manufacturing	3.8	-3.3	-1.2	0.7
6	Wholesale trade	-7.7	4.2	2.9	0.6
7	Retail trade	-6.1	5.6	0.8	-0.3
8	Transportation and warehousing	-6.8	3.5	0.5	2.9
9	Information	1.4	-1.5	1.0	-0.8
10	Finance and insurance	-8.3	0.0	1.7	6.7
11	Real estate and rental and leasing	-5.7	5.6	0.5	-0.4
12	Professional, scientific, and technical services	-1.6	0.4	0.5	0.8
13	Management of companies and enterprises	1.9	-2.1	0.0	0.3
14	Administrative and waste management services	-5.1	1.9	2.7	0.5
15	Educational services	-7.2	3.1	1.4	2.7
16	Health care and social assistance	-2.2	2.5	0.4	-0.7
17	Arts, entertainment, and recreation	0.2	-2.8	1.1	1.5
18	Accommodation and food services	3.4	-0.6	-2.1	-0.6
19	Other services, except government	-8.6	4.6	2.8	1.2
20	Government	-0.9	-0.2	0.9	0.2
	Total	-2.9	1.9	0.5	0.5

Source: BEA and DBEDT, READ.

County Industrial Structure and Sector Contribution to Real GDP Growth

The following tables summarize each respective county with three metrics: the 2018 industry structures, the changes in the shares of tourism intensive sectors from 2007 to 2018, and the sector contribution of real GDP growth for the 2001-2007, 2009-2018, and 2001-2018 periods.

City & County of Honolulu

As shown in Table 8, in 2018, Honolulu generated approximately \$69.3 billion of nominal GDP. Government generated the most GDP at about \$15.6 billion or 22.5% of total GDP; followed by real estate and rental and leasing at about \$12.4 billion or 17.8%, accommodation and food services at about \$4.9 billion or 7.1%, health care and social assistance at about \$4.9 billion or 7.0%, and retail trade at about 4.2 billion or 6.0%. The top five groups accounted for 60.5% of total nominal GDP in 2018.

TABLE 8. NOMINAL GDP BY INDUSTRY IN HONOLULU IN 2018

Rank	Industry Group	2018 GDP (\$M)	Share of 2018 Total GDP
1	Government	15,580	22.5%
2	Real estate and rental and leasing	12,359	17.8%
3	Accommodation and food services	4,936	7.1%
4	Health care and social assistance	4,855	7.0%
5	Retail trade	4,183	6.0%
6	Construction	3,919	5.7%
7	Transportation and warehousing	3,896	5.6%
8	Professional, scientific, and technical services	3,221	4.7%
9	Finance and insurance	2,700	3.9%
10	Administrative and waste management services	2,337	3.4%
11	Wholesale trade	2,275	3.3%
12	Manufacturing	1,757	2.5%
13	Information	1,756	2.5%
14	Other services, except government	1,472	2.1%
15	Utilities	1,426	2.1%
16	Management of companies and enterprises	934	1.3%
17	Educational services	793	1.1%
18	Arts, entertainment, and recreation	647	0.9%
19	Agriculture, forestry, fishing, and hunting	117	0.2%
20	Mining	87	0.1%
	Total	69,252	100.0%

Source: BEA and DBEDT, READ.

Table 9 shows the changes in the GDP shares of the four tourism intensive industries in Honolulu. From 2007 to 2018, the total share of the four tourism intensive industries remained about the same at 19.7% in Honolulu. The shares of retail trade and accommodation and food services decreased slightly, while the shares of other two sectors increased slightly.

TABLE 9. SHARES OF TOURISM INTENSIVE INDUSTRIES IN HONOLULU

Industry Group	% of Total Nominal GDP		
	2007	2018	Changes
Tourism Intensive Sectors in Honolulu			
Retail trade	6.8%	6.0%	-0.7%
Transportation and warehousing	4.9%	5.6%	0.7%
Arts, entertainment, and recreation	0.7%	0.9%	0.2%
Accommodation and food services	7.3%	7.1%	-0.2%
Tourism Intensive	19.7%	19.7%	0.0%

Source: BEA and DBEDT, READ.

From 2001 to 2018, total real GDP (in 2012\$) for Honolulu increased \$18.0 billion or about 42.0%. As shown in Table 10, from 2001 to 2018, the real estate and rental and leasing sector contributed the most at 23.9% of additional real GDP; followed by government at 15.4%, transportation and warehousing at 9.6%, healthcare and social assistance at 9.1%, and information at 6.2%. The top five industry groups together contributed about 64.2% of total additional real GDP from 2001 to 2018.

TABLE 10. CONTRIBUTION OF ADDITIONAL REAL GDP IN HONOLULU

	Industry Group	% of Additional Real GDP		
		2001-2007	2009-2018	2001-2018
1	Real estate and rental and leasing	16.3%	26.4%	23.9%
2	Government	19.1%	6.0%	15.4%
3	Transportation and warehousing	10.5%	11.0%	9.6%
4	Health care and social assistance	5.7%	8.9%	9.1%
5	Information	7.2%	5.3%	6.2%
6	Accommodation and food services	9.7%	13.2%	5.6%
7	Professional, scientific, and technical services	6.6%	3.7%	5.6%
8	Retail trade	5.5%	9.0%	5.5%
9	Construction	10.1%	0.5%	4.9%
10	Administrative and waste management services	3.3%	6.4%	4.9%
11	Utilities	1.6%	3.7%	2.7%
12	Finance and insurance	4.7%	1.2%	2.5%
13	Manufacturing	-0.2%	1.8%	2.2%
14	Management of companies and enterprises	0.0%	3.2%	1.6%
15	Wholesale trade	2.1%	2.7%	1.4%
16	Arts, entertainment, and recreation	-0.1%	1.2%	0.9%
17	Educational services	0.3%	-1.1%	0.2%
18	Mining	0.2%	0.0%	0.0%
19	Agriculture, forestry, fishing, and hunting	-1.3%	-3.5%	-1.0%
20	Other services, except government	-1.3%	0.5%	-1.2%
	Total	100.0%	100.0%	100.0%

Source: BEA and DBEDT, READ.

Maui County

As shown in Table 11, in 2018, Maui generated approximately \$10.8 billion of nominal GDP. Real estate and rental and leasing generated the most GDP at about \$3.4 billion or 31.8% of total GDP; followed by accommodation and food services at about \$1.6 billion or 15.2%, government at about \$0.9 billion or 8.4%, retail trade at about \$0.8 billion or 7.7%, and transportation and warehousing at about 0.7 billion or 6.1%. The top five groups accounted for 69.2% of total nominal GDP in 2018.

TABLE 11. NOMINAL GDP BY INDUSTRY IN MAUI IN 2018

Rank	Industry Group	2018 GDP (\$M)	Share of 2018 Total GDP
1	Real estate and rental and leasing	3,419	31.8%
2	Accommodation and food services	1,636	15.2%
3	Government	900	8.4%
4	Retail trade	828	7.7%
5	Transportation and warehousing	661	6.1%
6	Construction	618	5.7%
7	Health care and social assistance	614	5.7%
8	Administrative and waste management services	334	3.1%
9	Other services, except government	296	2.8%
10	Utilities	247	2.3%
11	Wholesale trade	227	2.1%
12	Arts, entertainment, and recreation	209	1.9%
13	Professional, scientific, and technical services	206	1.9%
14	Finance and insurance	162	1.5%
15	Information	134	1.2%
16	Manufacturing	91	0.8%
17	Management of companies and enterprises	73	0.7%
18	Educational services	71	0.7%
19	Agriculture, forestry, fishing, and hunting	32	0.3%
20	Mining	1	0.0%
	Total	10,760	100.0%

Source: BEA and DBEDT, READ.

Table 12 shows the changes in the GDP shares of the four tourism intensive industries for Maui. From 2007 to 2018, the total share of the four tourism intensive industries increased 6.1 percentage points from 27.9% to 31.0% in Maui. The shares of all tourism intensive sectors increased from 2007 to 2018.

TABLE 12. SHARES OF TOURISM INTENSIVE INDUSTRIES IN MAUI

Industry Group	% of Total Nominal GDP		
	2007	2018	Changes
Tourism Intensive Sectors in Maui			
Retail trade	5.5%	7.7%	2.2%
Transportation and warehousing	3.9%	6.1%	2.2%
Arts, entertainment, and recreation	1.8%	1.9%	0.1%
Accommodation and food services	13.7%	15.2%	1.5%
Tourism Intensive	24.9%	31.0%	6.1%

Source: BEA and DBEDT, READ.

From 2001 to 2018, total real GDP in Maui increased \$4.0 billion or about 76.1%. As shown in Table 13, from 2001 to 2018, the real estate and rental and leasing sector contributed the most at 45.2% of additional real GDP; followed by retail trade at 11.9%, transportation and warehousing at 9.2%, health care and social assistance at 8.0%, and accommodation and food services at 6.5%. The top five industry groups together contributed about 80.9% of total additional real GDP from 2001 to 2018.

TABLE 13. CONTRIBUTION OF ADDITIONAL REAL GDP IN MAUI

	Industry Group	% of Additional Real GDP		
		2001-2007	2009-2018	2001-2018
1	Real estate and rental and leasing	47.1%	29.5%	45.2%
2	Retail trade	4.5%	16.7%	11.9%
3	Transportation and warehousing	5.0%	11.9%	9.2%
4	Health care and social assistance	1.6%	13.3%	8.0%
5	Accommodation and food services	2.4%	15.2%	6.5%
6	Administrative and waste management services	3.7%	3.2%	4.2%
7	Wholesale trade	3.4%	3.0%	3.3%
8	Government	5.1%	-2.8%	3.1%
9	Utilities	1.1%	0.7%	1.9%
10	Other services, except government	2.4%	1.7%	1.8%
11	Information	1.5%	1.9%	1.7%
12	Professional, scientific, and technical services	1.4%	1.4%	1.7%
13	Educational services	1.0%	0.0%	0.8%
14	Arts, entertainment, and recreation	0.0%	1.0%	0.7%
15	Finance and insurance	0.9%	0.8%	0.7%
16	Agriculture, forestry, fishing, and hunting	5.8%	1.2%	0.2%
17	Management of companies and enterprises	0.2%	2.0%	0.1%
18	Mining	0.0%	-0.3%	-0.2%
19	Manufacturing	0.7%	-0.4%	-0.3%
20	Construction	11.9%	-0.3%	-0.5%
	Total	100.0%	100.0%	100.0%

Source: BEA and DBEDT, READ.

Hawaii County

As shown in Table 14, in 2018, Hawaii County generated approximately \$9.2 billion of nominal GDP. Real estate and rental and leasing generated the most GDP at about \$2.1 billion or 23.3% of total GDP; followed by government at about \$1.4 billion or 15.4%, accommodation and food services at about \$1.1 billion or 11.8%, retail trade at about \$0.8 billion or 8.3%, and health care and social assistance at about \$0.6 billion or 6.3%. The top five groups accounted for 65.2% of total nominal GDP in 2018.

TABLE 14. NOMINAL GDP BY INDUSTRY IN HAWAII COUNTY IN 2018

Rank	Industry Group	2018 GDP (\$M)	Share of 2018 Total GDP
1	Real estate and rental and leasing	2,132	23.3%
2	Government	1,407	15.4%
3	Accommodation and food services	1,082	11.8%
4	Retail trade	763	8.3%
5	Health care and social assistance	580	6.3%
6	Construction	571	6.2%
7	Transportation and warehousing	439	4.8%
8	Administrative and waste management services	301	3.3%
9	Wholesale trade	261	2.9%
10	Utilities	255	2.8%
11	Agriculture, forestry, fishing, and hunting	248	2.7%
12	Other services, except government	226	2.5%
13	Professional, scientific, and technical services	217	2.4%
14	Finance and insurance	151	1.6%
15	Arts, entertainment, and recreation	146	1.6%
16	Information	124	1.4%
17	Manufacturing	106	1.2%
18	Management of companies and enterprises	76	0.8%
19	Educational services	67	0.7%
20	Mining	0	0.0%
	Total	9,153	100.0%

Source: BEA and DBEDT, READ.

Table 15 shows the changes in the GDP shares of the four tourism intensive industries in Hawaii County. From 2007 to 2018, the total share of the four tourism intensive industries decreased 1.2 percentage point from 27.7% to 26.6% in Hawaii County. Increased share in transportation and warehousing was offset by decreased shares in retail trade and accommodation and food services.

TABLE 15. SHARES OF TOURISM INTENSIVE INDUSTRIES IN HAWAII COUNTY

Industry Group	% of Total Nominal GDP		
	2007	2018	Changes
Tourism Intensive Sectors in Hawaii County			
Retail trade	10.0%	8.3%	-1.7%
Transportation and warehousing	3.3%	4.8%	1.5%
Arts, entertainment, and recreation	1.3%	1.6%	0.3%
Accommodation and food services	13.2%	11.8%	-1.4%
Tourism Intensive	27.7%	26.6%	-1.2%

Source: BEA and DBEDT, READ.

From 2001 to 2018, total real GDP in Hawaii County increased \$2.9 billion or about 56.6%. As shown in Table 16, from 2001 to 2018, the real estate and rental and leasing sector contributed the most at 30.6% of additional real GDP; followed by government at 11.8%, retail trade at 9.0%, health care and social assistance at 7.8%, and agriculture, forestry, fishing, and hunting at 7.3%. The top five industry groups together contributed about 66.4% of total additional real GDP from 2001 to 2018.

TABLE 16. CONTRIBUTION OF ADDITIONAL REAL GDP IN HAWAII COUNTY

	Industry Group	% of Additional Real GDP		
		2001-2007	2009-2018	2001-2018
1	Real estate and rental and leasing	30.2%	25.8%	30.6%
2	Government	9.8%	8.9%	11.8%
3	Retail trade	12.6%	8.8%	9.0%
4	Health care and social assistance	3.3%	7.6%	7.8%
5	Agriculture, forestry, fishing, and hunting	-3.0%	9.3%	7.3%
6	Transportation and warehousing	3.3%	8.3%	6.6%
7	Administrative and waste management services	3.4%	6.9%	5.7%
8	Wholesale trade	3.0%	6.1%	3.8%
9	Utilities	2.4%	3.9%	3.6%
10	Information	2.5%	4.0%	3.0%
11	Accommodation and food services	6.6%	8.8%	2.8%
12	Professional, scientific, and technical services	4.6%	0.9%	2.4%
13	Finance and insurance	1.7%	1.1%	1.8%
14	Arts, entertainment, and recreation	0.5%	3.4%	1.5%
15	Other services, except government	3.3%	0.6%	1.5%
16	Management of companies and enterprises	-1.9%	3.7%	0.8%
17	Educational services	1.9%	-0.8%	0.6%
18	Manufacturing	1.7%	0.2%	0.5%
19	Mining	-0.3%	-0.5%	-0.4%
20	Construction	14.4%	-6.9%	-0.6%
	Total	100.0%	100.0%	100.0%

Source: BEA and DBEDT, READ.

Kauai County

As shown in Table 17, in 2018, Kauai generated approximately \$4.6 billion of nominal GDP. Real estate and rental and leasing generated the most GDP at about \$1.0 billion or 20.6% of total GDP; followed by accommodation and food services at about \$0.8 billion or 18.1%, government at about \$0.5 billion or 11.3%, finance and insurance at about \$0.4 billion or 7.9%, and retail trade at about 0.3 billion or 6.8%. The top five groups accounted for 64.7% of total nominal GDP in 2018.

TABLE 17. NOMINAL GDP BY INDUSTRY IN KAUAI IN 2018

Rank	Industry Group	2018 GDP (\$M)	Share of 2018 Total GDP
1	Real estate and rental and leasing	955	20.6%
2	Accommodation and food services	836	18.1%
3	Government	524	11.3%
4	Finance and insurance	367	7.9%
5	Retail trade	316	6.8%
6	Construction	273	5.9%
7	Transportation and warehousing	235	5.1%
8	Health care and social assistance	194	4.2%
9	Administrative and waste management services	184	4.0%
10	Arts, entertainment, and recreation	109	2.4%
11	Utilities	103	2.2%
12	Other services, except government	102	2.2%
13	Professional, scientific, and technical services	98	2.1%
14	Wholesale trade	82	1.8%
15	Management of companies and enterprises	57	1.2%
16	Agriculture, forestry, fishing, and hunting	54	1.2%
17	Information	49	1.1%
18	Manufacturing	45	1.0%
19	Educational services	44	0.9%
20	Mining	4	0.1%
	Total	4,633	100.0%

Source: BEA and DBEDT, READ.

Table 18 shows the changes in the GDP shares of the four tourism intensive industries in Kauai. From 2007 to 2018, the total share of the four tourism intensive industries decreased 3.7 percentage points from 36.0% to 32.3% in Kauai. Decreased shares in arts, entertainment, and recreation and accommodation and food services more than offset the increased share in transportation and warehousing.

TABLE 18. SHARES OF TOURISM INTENSIVE INDUSTRIES IN KAUAI

Industry Group	% of Total Nominal GDP		
	2007	2018	Changes
Tourism Intensive Sectors in Kauai			
Arts, entertainment, and recreation	9.4%	6.8%	-2.6%
Transportation and warehousing	3.4%	5.1%	1.7%
Arts, entertainment, and recreation	3.3%	2.4%	-0.9%
Accommodation and food services	19.9%	18.1%	-1.9%
Tourism Intensive	36.0%	32.3%	-3.7%

Source: BEA and DBEDT, READ.

From 2001 to 2018, total real GDP for Hawaii County increased \$1.6 billion or about 63.8%. As shown in Table 19, from 2001 to 2018, the real estate and rental and leasing sector contributed the most at 22.3% of additional real GDP; followed by finance and insurance at 15.5%, transportation and warehousing at 10.5%, accommodation and food services at 7.6%, and government at 7.2%.

TABLE 19. CONTRIBUTION OF ADDITIONAL REAL GDP IN KAUAI

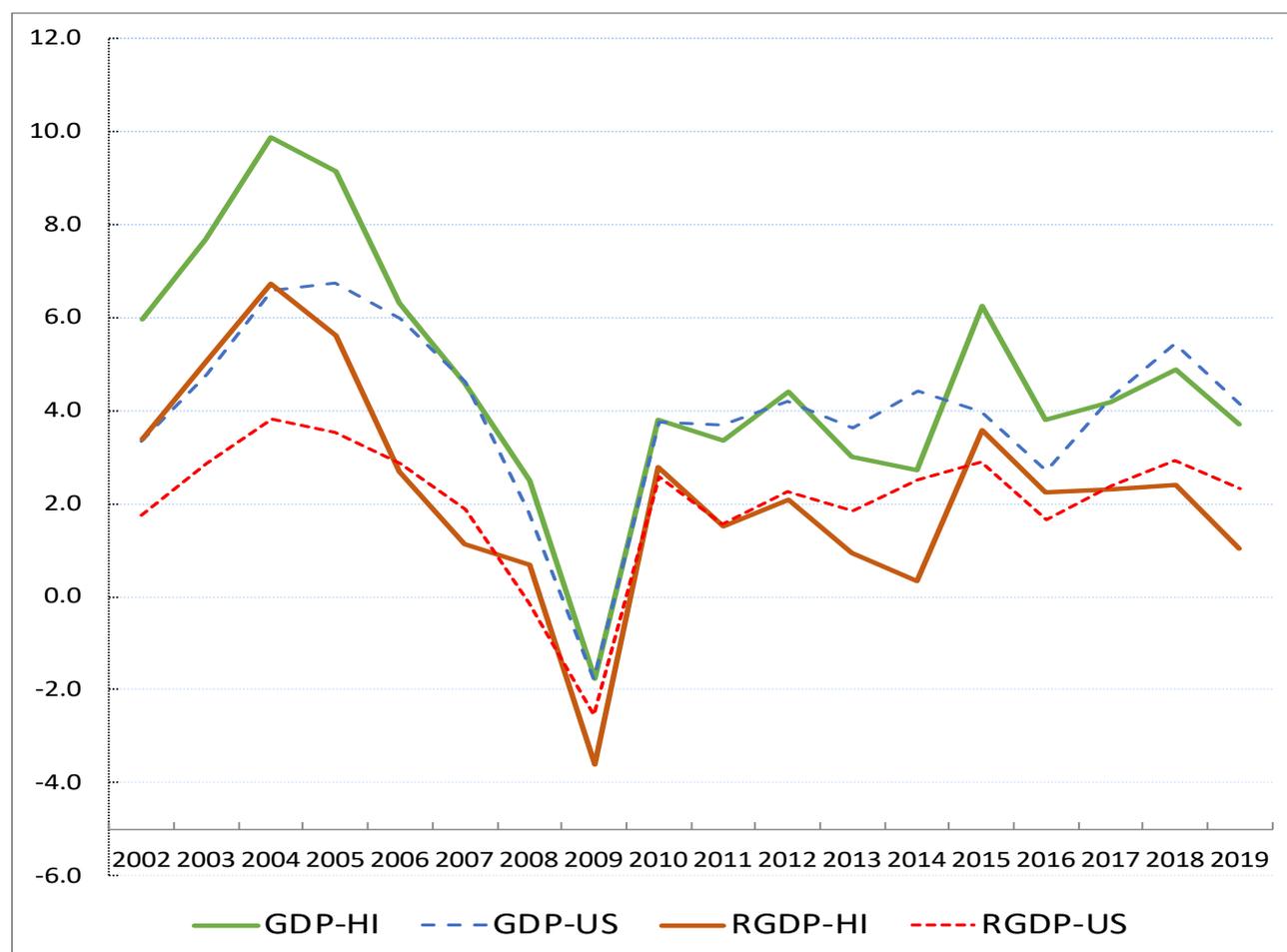
	Industry Group	% of Additional Real GDP		
		2001-2007	2009-2018	2001-2018
1	Real estate and rental and leasing	12.1%	21.7%	22.3%
2	Finance and insurance	1.7%	20.1%	15.5%
3	Transportation and warehousing	11.1%	10.8%	10.5%
4	Accommodation and food services	10.7%	22.2%	7.6%
5	Government	7.2%	4.1%	7.2%
6	Construction	16.6%	-0.9%	5.7%
7	Administrative and waste management services	8.7%	3.6%	5.3%
8	Retail trade	11.6%	3.6%	5.3%
9	Professional, scientific, and technical services	1.1%	1.0%	3.0%
10	Health care and social assistance	4.1%	-2.2%	3.0%
11	Utilities	3.3%	5.1%	2.8%
12	Arts, entertainment, and recreation	7.0%	-2.0%	2.4%
13	Wholesale trade	1.4%	2.9%	1.7%
14	Agriculture, forestry, fishing, and hunting	-4.6%	2.7%	1.7%
15	Educational services	-1.3%	1.1%	1.5%
16	Information	1.0%	1.6%	1.5%
17	Manufacturing	0.9%	1.3%	1.2%
18	Management of companies and enterprises	4.5%	3.5%	1.2%
19	Other services, except government	3.6%	0.1%	1.2%
20	Mining	-0.6%	-0.3%	-0.4%
	Total	100.0%	100.0%	100.0%

Source: BEA and DBEDT, READ.

IV. COMPARISON BETWEEN HAWAII AND THE NATION

Hawaii's economic performance varied from that of the nation. As shown in Figure 6, from 2002 to 2010, Hawaii's annual growth rates of nominal GDP and real GDP (RGDP) were mostly above that of the nation. From 2011 to 2014; however, Hawaii's annual growth rates of nominal and real GDP were mostly below the national growth rates. In 2015 and 2016, the growth rates of nominal and real GDP in Hawaii were both above that of the nation. From 2017 to 2019, the growth rates of nominal and real GDP in Hawaii were both below that of the nation.

FIGURE 6. COMPARISON OF ANNUAL GDP GROWTH RATE, 2002-2019



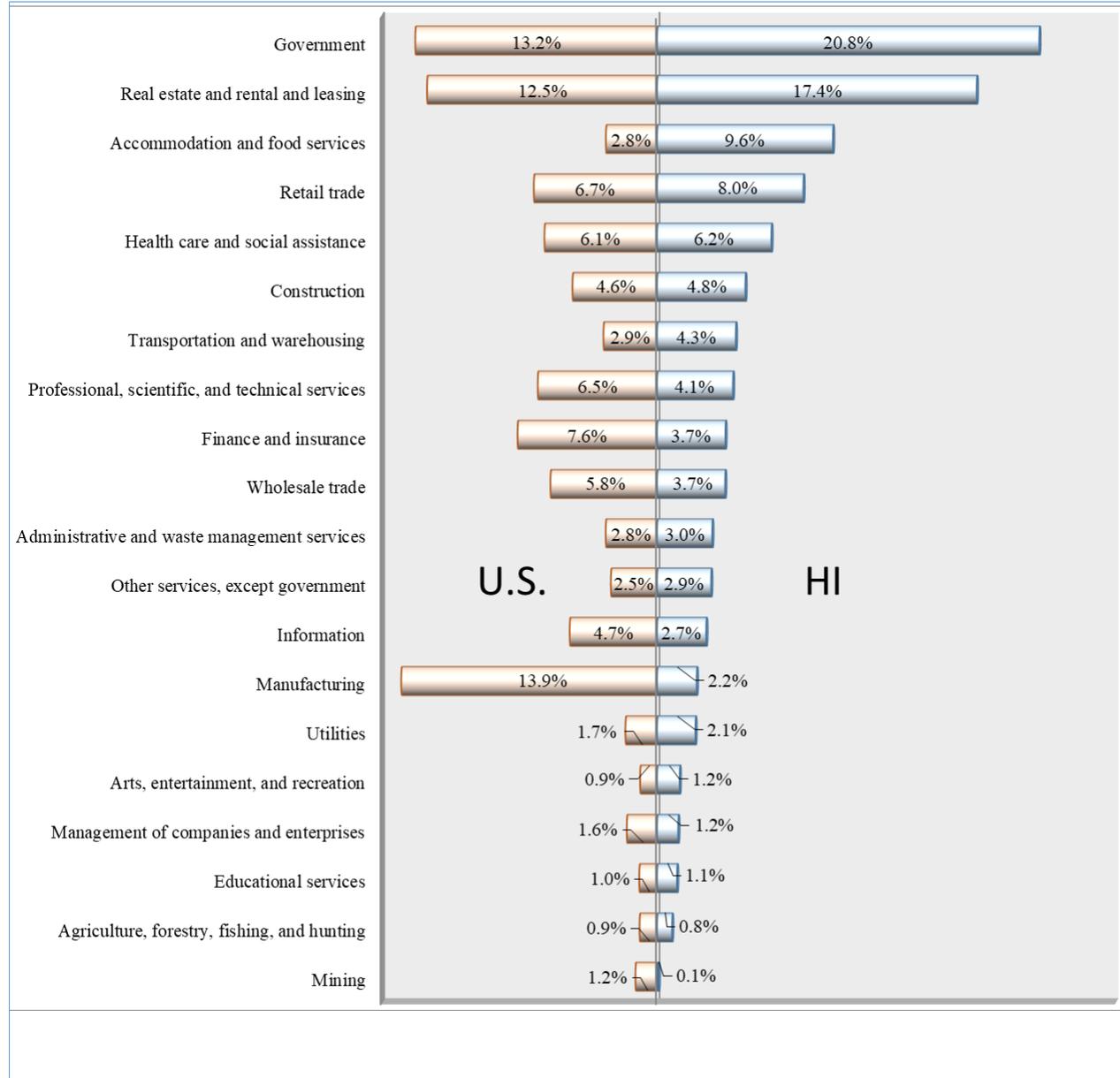
Comparison of Industrial Structures

Hawaii's economic structure varies from that of the nation. As shown in Figure 7, in 2001, the top 5 sectors that generated a majority of Hawaii's nominal GDP were government (20.8%), real estate and rental and leasing (17.4%), accommodation and food services (9.6%), retail trade (8.0%) and health care and social assistance (6.2%). Together these sectors generated 62.0% of Hawaii's total nominal GDP in 2001. In comparison, the same sectors generated only 41.3% of the U.S. total nominal GDP.

The largest gap (the share of Hawaii above the share of the U.S.) between Hawaii and the nation was in government (7.7 percentage points); followed by accommodation and food services (6.8

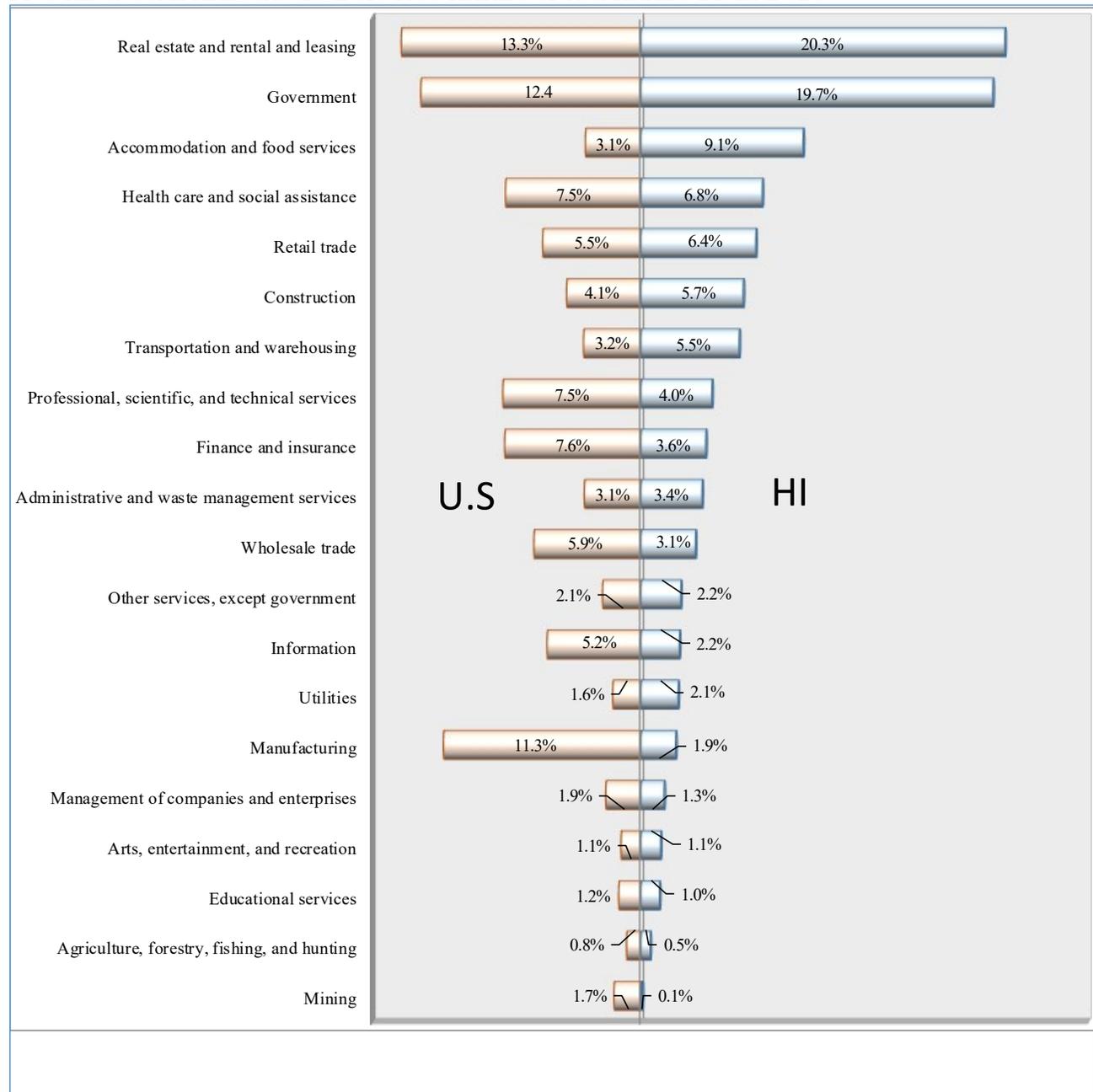
percentage points), real estate and rental and leasing (4.9 percentage points), transportation and warehousing (1.4 percentage point), and retail trade (1.3 percentage point). The largest negative gap (the share of Hawaii below the share of the U.S.) was in manufacturing (11.8 percentage points); followed by finance and insurance (3.9 percentage points), professional, scientific, and technical services (2.4 percentage points), wholesale trade (2.1 percentage points), and information (2.1 percentage points).

FIGURE 7. COMPARISON OF SECTORS' SHARES OF NOMINAL GDP IN 2001



As shown in Figure 8, in 2019, the top 5 sectors in Hawaii were real estate and rental and leasing (20.3%), government (19.7%), accommodation and food services (9.1%), health care and social assistance (6.8%), and retail trade (6.4%). Together these sectors generated 62.2% of Hawaii's total nominal GDP in 2019. In comparison, the same sectors generated only 41.8% of the U.S. total nominal GDP in 2019. The largest gap between Hawaii and the nation was in government (7.4 percentage points); followed by real estate and rental and leasing (7.0 percentage points), accommodation and food services (6.0 percentage points), transportation and warehousing (2.3 percentage points), and construction (1.6 percentage point). The largest negative gap was in manufacturing (9.1 percentage points); followed by finance and insurance (4.0 percentage points), professional, scientific, and technical services (3.7 percentage points), information (3.1 percentage points), and wholesale trade (2.9 percentage points).

FIGURE 8. COMPARISON OF SECTORS' SHARES OF NOMINAL GDP IN 2019



Comparison of Sector Contribution to Real GDP Growth

The sector contributions of real GDP growth from 2001 to 2019 are provided in Table 20. In Hawaii, the real estate and rental and leasing sector contributed the most to real GDP at about 27.8%; followed by government at about 12.8%, health care and social assistance at about 8.9%, transportation and warehousing at about 8.7%, and retail trade at about 7.1%. The top five groups in Hawaii accounted for 65.2% of total additional real GDP from 2001 to 2019. The same five groups in the U.S. accounted for 37.4% of total additional real GDP from 2001 to 2019. The top five groups in the U.S. are real estate and rental and leasing, information, professional, scientific, and technical services, health care and social assistance, and manufacturing. The top five groups in the U.S. accounted for 61.5% of total additional real GDP from 2001 to 2019, and the same five groups in Hawaii accounted for 47.2% of total additional real GDP from 2001 to 2019.

The gap between Hawaii and the U.S. was the largest for real estate and rental and leasing, with the share of Hawaii above that of the nation by 13.2 percentage points; followed by government by 8.9 percentage points, and transportation and warehousing by 5.7 percentage points. On the other hand, the share of Hawaii for manufacturing was below that of the nation by 9.3 percentage points; followed by information by 9.0 percentage points, and professional, scientific, and technical services by 7.2 percentage points.

TABLE 20. COMPARISON OF CONTRIBUTION OF ADDITIONAL REAL GDP, 2001-2019

	Industry Group	% of Additional Real GDP 2001-2019		
		HI	U.S.	HI above U.S.
1	Real estate and rental and leasing	27.8%	14.6%	13.2%
2	Government	12.8%	3.9%	8.9%
3	Health care and social assistance	8.9%	10.8%	-1.9%
4	Transportation and warehousing	8.7%	3.0%	5.7%
5	Retail trade	7.1%	5.1%	1.9%
6	Accommodation and food services	5.3%	2.0%	3.4%
7	Administrative and waste management services	5.0%	4.3%	0.7%
8	Information	4.9%	13.9%	-9.0%
9	Professional, scientific, and technical services	4.6%	11.8%	-7.2%
10	Finance and insurance	3.2%	4.2%	-1.0%
11	Construction	3.1%	-2.1%	5.2%
12	Utilities	2.5%	1.3%	1.2%
13	Wholesale trade	1.8%	5.7%	-3.8%
14	Management of companies and enterprises	1.8%	2.7%	-0.9%
15	Manufacturing	1.1%	10.4%	-9.3%
16	Arts, entertainment, and recreation	0.8%	1.3%	-0.5%
17	Agriculture, forestry, fishing, and hunting	0.6%	1.5%	-0.9%
18	Educational services	0.5%	1.1%	-0.7%
19	Mining	0.0%	4.8%	-4.8%
20	Other services, except government	-0.4%	-0.4%	0.0%
	Total	100.0%	100.0%	0.0%

Source: BEA and DBEDT, READ.

The sector contributions of real GDP growth from 2001 to 2007 are provided in Table 21. In Hawaii, the real estate and rental and leasing sector contributed the most real GDP at about 24.0%; followed by government at about 14.6%, construction at 11.3%, transportation and warehousing at about 8.5%, and accommodation and food services at about 7.9%. The top five groups in Hawaii accounted for 66.4% of total additional real GDP from 2001 to 2007. The same five groups in the U.S. accounted for 23.9% of total additional real GDP from 2001 to 2007.

The gap between Hawaii and the U.S. was the largest for construction, with the share of Hawaii above that of the nation by 12.3 percentage points; followed by real estate and rental and leasing by 10.5 percentage points, government by 8.7 percentage points, accommodation and food services by 5.7 percentage points, and transportation and warehousing by 5.1 percentage points. On the other hand, the share of Hawaii for manufacturing was below that of the nation by 20.3 percentage points; followed by wholesale trade by 6.3 percentage points, information by 5.6 percentage points, health care and social assistance by 4.0 percentage points, and professional, scientific, and technical services by 2.9 percentage points.

TABLE 21. COMPARISON OF CONTRIBUTION OF ADDITIONAL REAL GDP, 2001-2007

	Industry Group	% of Additional Real GDP 2001-2007		
		HI	U.S.	HI above U.S.
1	Real estate and rental and leasing	24.0%	13.5%	10.5%
2	Government	14.6%	5.9%	8.7%
3	Construction	11.3%	-1.0%	12.3%
4	Transportation and warehousing	8.5%	3.4%	5.1%
5	Accommodation and food services	7.9%	2.2%	5.7%
6	Retail trade	6.4%	4.8%	1.7%
7	Information	5.2%	10.7%	-5.6%
8	Professional, scientific, and technical services	5.1%	7.9%	-2.9%
9	Health care and social assistance	4.5%	8.5%	-4.0%
10	Administrative and waste management services	3.6%	4.9%	-1.3%
11	Finance and insurance	3.5%	4.8%	-1.3%
12	Wholesale trade	2.4%	8.8%	-6.3%
13	Utilities	1.7%	1.0%	0.7%
14	Educational services	0.6%	1.0%	-0.4%
15	Arts, entertainment, and recreation	0.3%	1.0%	-0.6%
16	Other services, except government	0.2%	0.0%	0.2%
17	Manufacturing	0.2%	20.6%	-20.3%
18	Mining	0.1%	1.9%	-1.8%
19	Management of companies and enterprises	0.1%	-0.8%	0.9%
20	Agriculture, forestry, fishing, and hunting	-0.3%	0.9%	-1.3%
	Total	100.0%	100.0%	0.0%

Source: BEA and DBEDT, READ.

The sector contributions of real GDP growth from 2009 to 2019 are provided in Table 22. In Hawaii, the real estate and rental and leasing sector contributed the most real GDP at about 26.5%; followed by accommodation and food services at about 12.9%, retail trade at about 9.9%, transportation and warehousing at about 9.7%, and health care and social assistance at about 9.3%. The top five groups in Hawaii accounted for 68.4% of total additional real GDP from 2009 to 2019. The same five groups in the U.S. accounted for 34.0% of total additional real GDP from 2009 to 2019.

The gap between Hawaii and the U.S. was the largest in real estate and rental and leasing, with Hawaii's share above that of the nation by 13.7 percentage points; followed by accommodation and food services by 10.0 percentage points, transportation and warehousing by 6.4 percentage points, government by 4.5 percentage points, and retail trade by 3.2 percentage points. On the other hand, the Hawaii's share for information was below that of the nation by 9.1 percentage points; followed by professional, scientific, and technical services by 9.1 percentage points, manufacturing by 8.9 percentage points, mining by 5.0 percentage points, and wholesale trade by 3.6 percentage points.

TABLE 22. COMPARISON OF CONTRIBUTION OF ADDITIONAL REAL GDP, 2009-2019

	Industry Group	% of Additional Real GDP 2009-2019		
		HI	U.S.	HI above U.S.
1	Real estate and rental and leasing	26.5%	12.9%	13.7%
2	Accommodation and food services	12.9%	2.9%	10.0%
3	Retail trade	9.9%	6.7%	3.2%
4	Transportation and warehousing	9.7%	3.3%	6.4%
5	Health care and social assistance	9.3%	8.2%	1.1%
6	Administrative and waste management services	5.9%	4.4%	1.5%
7	Government	5.5%	1.1%	4.5%
8	Information	4.2%	13.4%	-9.1%
9	Management of companies and enterprises	4.0%	4.9%	-0.9%
10	Finance and insurance	3.2%	3.0%	0.2%
11	Professional, scientific, and technical services	3.1%	12.2%	-9.1%
12	Utilities	3.1%	1.4%	1.7%
13	Wholesale trade	2.9%	6.5%	-3.6%
14	Arts, entertainment, and recreation	0.7%	1.3%	-0.6%
15	Other services, except government	0.6%	0.4%	0.1%
16	Manufacturing	0.3%	9.2%	-8.9%
17	Agriculture, forestry, fishing, and hunting	0.0%	1.1%	-1.0%
18	Mining	0.0%	5.0%	-5.0%
19	Educational services	-0.5%	0.3%	-0.9%
20	Construction	-1.2%	2.0%	-3.3%
	Total	100.0%	100.0%	0.0%

Source: BEA and DBEDT, READ.