

FORECAST OF TOTAL PERSONAL INCOME

CY2021 TO CY2022

COUNCIL ON REVENUES

August 2, 2021

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Table 1
Economic Data

	CY 2019					CY 2020					CY 2021
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Annual	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Annual	Jan-Mar
1. U.S. GDP in Current Dollars (in billions)	\$21,115	\$21,330	\$21,540	\$21,747	\$21,433	\$21,561	\$19,520	\$21,170	\$21,495	\$20,937	\$22,062
2. U.S. GDP Implicit Price Deflator (2012=100)	111.4	112.1	112.5	113.0	112.3	113.4	112.8	113.8	114.4	113.6	115.6
3. Construction (in millions)	\$2,311	\$2,461	\$2,409	\$2,449	\$9,631	\$2,396	\$2,368	\$2,554	\$2,431	\$9,749	\$2,460
4. Total Private Building Authorizations (in millions)	\$761	\$809	\$799	\$853	\$3,221	\$785	\$693	\$843	\$787	\$3,109	\$803
5. Total Wages (in millions)	\$8,575	\$8,422	\$8,544	\$9,052	\$34,593	\$8,842	\$7,413	\$7,489	\$8,651	\$32,395	\$7,902
6. Total Personal Income (in millions)	\$80,078	\$80,375	\$80,868	\$81,585	\$80,727	\$82,000	\$92,528	\$86,508	\$84,058	\$86,273	\$95,417
7. Visitor Arrivals by Air (in thousands)											
a. Total State	2,487	2,607	2,640	2,509	10,243	2,096	31	64	496	2,686	847
b. Domestic	1,682	1,916	1,888	1,768	7,254	1,483	30	61	489	2,063	839
c. International	805	691	752	741	2,989	612	1	3	7	624	8
8. Average Daily Visitor Census (in thousands)											
a. Total State	252	245	248	239	246	213	9	20	70	78	103
b. Domestic	178	188	185	178	182	158	9	20	69	64	101
c. International	73	56	63	61	64	56	0	1	1	14	2
9. Honolulu CPIU (1982-84=100) 1/	280.7	280.7	282.5	282.5	281.6	285.1	285.1	286.9	286.9	286.0	289.0
10. State General Fund Tax Revenue (in millions)	\$1,688	\$2,101	\$1,852	\$1,675	\$7,316	\$1,791	\$1,364	\$1,793	\$1,454	\$6,403	\$1,592
11. General Excise & Use Tax (in millions) 2/	\$916	\$898	\$923	\$864	\$3,602	\$971	\$677	\$696	\$694	\$3,039	\$793
12. Individual Income Tax (in millions) 2/											
a. Net Individual Income Tax	\$524	\$888	\$659	\$612	\$2,684	\$560	\$528	\$916	\$593	\$2,597	\$657
b. Declaration of Estimated Taxes	\$140	\$397	\$171	\$67	\$776	\$200	\$146	\$361	\$90	\$798	\$214
c. Withholding Tax on Wages	\$547	\$525	\$528	\$552	\$2,153	\$572	\$479	\$522	\$524	\$2,097	\$562
13. TAT (in millions) 2/	\$167	\$151	\$177	\$142	\$637	\$197	\$47	\$14	\$23	\$282	\$60
14. Civilian Unemployment Rate (%)	2.7	2.6	2.5	2.1	2.5	2.0	19.4	14.5	11.2	11.8	9.1
15. Non-Agricultural Wage and Salary Jobs (in thousands)	657	658	653	666	659	660	515	516	537	557	547
16. Hotel Occupancy Rate (%)	80.5	80.3	82.8	79.6	80.8	70.6	12.9	20.7	21.9	31.5	32.3
17. Average Daily Room Rate	\$291	\$270	\$281	\$288	\$283	\$301	\$140	\$160	\$232	\$208	\$265

1/ Semiannual data, if available, or the average of available bimonthly data.

2/ Beginning in FY 2020, reported collections for the individual income tax, the transient accommodations tax, and the general excise and use tax include revenue collections generated by the Special Enforcement Section of the Department of Taxation.

Table 1 (Cont.)
Economic Data (% Change)

	CY 2019					CY 2020					CY 2021
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Annual	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Annual	Jan-Mar
1. U.S. GDP in Current Dollars	4.3%	3.8%	3.8%	4.0%	4.0%	2.1%	-8.5%	-1.7%	-1.2%	-2.3%	2.3%
2. U.S. GDP Implicit Price Deflator (2012=100)	2.0%	1.8%	1.7%	1.6%	1.8%	1.8%	0.6%	1.2%	1.3%	1.2%	1.9%
3. Construction	3.8%	2.1%	-5.6%	3.2%	0.7%	3.7%	-3.8%	6.0%	-0.7%	1.2%	2.7%
4. Total Private Building Authorizations	8.7%	-27.0%	7.5%	19.0%	-1.4%	3.1%	-14.3%	5.6%	-7.7%	-3.5%	2.3%
5. Total Wages	3.5%	3.1%	3.7%	3.3%	3.4%	3.1%	-12.0%	-12.4%	-4.4%	-6.4%	-10.6%
6. Total Personal Income	3.2%	2.8%	2.8%	2.9%	2.9%	2.4%	15.1%	7.0%	3.0%	6.9%	16.4%
7. Visitor Arrivals by Air											
a. Total State	2.4%	6.1%	6.3%	4.9%	4.9%	-15.7%	-98.8%	-97.6%	-80.2%	-73.8%	-59.6%
b. Domestic	4.2%	9.3%	9.8%	7.2%	7.7%	-11.8%	-98.4%	-96.8%	-72.4%	-71.6%	-43.4%
c. International	-1.0%	-2.0%	-1.6%	-0.1%	-1.2%	-23.9%	-99.9%	-99.6%	-99.0%	-79.1%	-98.8%
8. Average Daily Visitor Census											
a. Total State	-0.3%	2.6%	4.1%	2.7%	2.2%	-15.1%	-96.2%	-91.8%	-70.7%	-68.2%	-51.6%
b. Domestic	0.8%	5.4%	6.2%	5.3%	4.4%	-11.3%	-95.2%	-89.4%	-61.5%	-65.0%	-35.8%
c. International	-2.9%	-5.6%	-1.6%	-4.1%	-3.5%	-24.4%	-99.8%	-99.1%	-97.8%	-77.3%	-96.4%
9. Honolulu CPIU (1982-84=100) 1/	2.0%	2.0%	1.3%	1.3%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.4%
10. State General Fund Tax Revenue	-1.3%	12.4%	9.1%	1.2%	5.5%	6.1%	-35.1%	-3.2%	-13.2%	-12.5%	-11.1%
11. General Excise & Use Tax 2/	-4.5%	21.3%	4.9%	2.1%	5.1%	6.0%	-24.6%	-24.6%	-19.7%	-15.6%	-18.3%
12. Individual Income Tax 2/											
a. Net Individual Income Tax	3.1%	6.8%	13.8%	6.1%	7.5%	6.8%	-40.5%	38.9%	-3.1%	-3.2%	17.4%
b. Declaration of Estimated Taxes	-24.3%	43.6%	49.4%	-6.9%	19.6%	42.6%	-63.2%	111.6%	33.5%	2.8%	6.9%
c. Withholding Tax on Wages	17.8%	-14.1%	4.1%	5.6%	2.2%	4.4%	-8.7%	-1.2%	-5.1%	-2.6%	-1.6%
13. TAT 2/	6.9%	-1.5%	12.5%	13.9%	7.7%	17.9%	-68.5%	-92.1%	-83.5%	-55.8%	-69.4%
14. Civilian Unemployment Rate (change)	0.6	0.3	0.0	-0.5	0.1	-0.7	16.8	12.0	9.1	9.3	7.1
15. Non-Agricultural Wage and Salary Jobs	0.1%	-0.1%	0.1%	0.0%	0.0%	0.4%	-21.7%	-20.9%	-19.4%	-15.4%	-17.2%
16. Hotel Occupancy Rate (change)	-3.0	-0.8	2.7	3.2	0.5	-9.9	-67.4	-62.1	-57.7	-49.3	-38.3
17. Average Daily Room Rate	-0.5%	1.1%	2.8%	3.9%	1.8%	3.5%	-48.3%	-42.9%	-19.7%	-26.3%	-12.1%

1/ Semiannual data, if available, or the average of available bimonthly data.

2/ Beginning in FY 2020, reported collections for the individual income tax, the transient accommodations tax, and the general excise and use tax include revenue collections generated by the Special Enforcement Section of the Department of Taxation.

Table 2
Total Personal Income: CY 1969 - CY 2021
(In Millions of Dollars)

Calendar Year	Jan.-Mar.	Apr.-Jun.	Jul.-Sep.	Oct.-Dec.	Annual
1969	3,471	3,535	3,690	3,877	3,643
1970	4,035	4,174	4,309	4,382	4,225
1971	4,438	4,542	4,641	4,716	4,584
1972	4,787	4,936	5,121	5,347	5,048
1973	5,451	5,516	5,620	5,785	5,593
1974	6,025	6,260	6,501	6,657	6,361
1975	6,694	6,846	6,961	7,175	6,919
1976	7,258	7,382	7,540	7,684	7,466
1977	7,864	7,973	8,103	8,396	8,084
1978	8,548	8,775	9,132	9,362	8,954
1979	9,662	9,913	10,202	10,395	10,043
1980	11,073	11,339	11,613	11,911	11,484
1981	12,317	12,505	12,638	12,276	12,434
1982	12,850	13,039	13,273	13,503	13,166
1983	14,174	14,290	14,408	14,901	14,443
1984	14,990	15,417	15,647	15,837	15,473
1985	16,165	16,359	16,547	16,739	16,453
1986	17,054	17,300	17,619	17,860	17,458
1987	18,041	18,377	18,780	19,277	18,619
1988	19,708	20,240	20,720	21,243	20,478
1989	21,805	22,286	23,243	24,160	22,874
1990	24,141	24,726	25,240	25,810	24,979
1991	25,993	26,138	26,522	27,078	26,433
1992	27,698	28,257	28,632	29,151	28,435
1993	29,583	29,601	29,372	29,350	29,476
1994	29,799	29,937	30,241	30,677	30,164
1995	30,679	30,996	30,891	30,890	30,864
1996	30,814	30,869	30,903	30,994	30,895
1997	31,459	31,720	32,166	32,286	31,908
1998	32,258	32,388	32,614	32,866	32,531
1999	33,000	33,279	34,046	34,305	33,658
2000	34,820	35,632	35,889	36,387	35,682
2001	36,926	37,021	37,427	37,442	37,204
2002	38,275	38,785	39,112	39,646	38,955
2003	39,998	40,467	40,980	41,720	40,791
2004	42,546	43,465	44,407	45,491	43,977
2005	46,031	47,013	47,442	48,740	47,306
2006	49,729	50,393	51,145	51,539	50,701
2007	52,335	53,149	53,795	54,413	53,423
2008	55,307	57,028	56,157	55,747	56,060
2009	55,375	55,946	55,641	55,797	55,690
2010	56,044	56,718	57,653	58,302	57,179
2011	59,440	59,717	60,103	60,918	60,045
2012	61,729	62,475	62,227	63,393	62,456
2013	62,621	62,992	63,486	64,168	63,317
2014	65,368	66,465	67,414	68,137	66,846
2015	69,255	70,059	70,711	71,480	70,376
2016	72,197	72,780	73,269	73,946	73,048
2017	75,305	75,802	76,417	76,914	76,110
2018	77,580	78,190	78,664	79,311	78,436
2019	80,078	80,375	80,868	81,585	80,727
2020	82,000	92,528	86,508	84,058	86,273
2021	95,417				

Source: United States Department of Commerce, Bureau of Economic Analysis, June 22, 2021.
New estimates for Jan.-Mar. 2021. Revised estimates for Jan.-Mar. 2020 - Oct.-Dec. 2020.

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Table 2 (Cont.)
Total Personal Income: CY 1969 - CY 2021
(% Change from the Same Period in Previous Year)

Calendar Year	Jan.-Mar.	Apr.-Jun.	Jul.-Sep.	Oct.-Dec.	Annual
1969	15.5	13.2	12.5	16.6	14.4
1970	16.2	18.1	16.8	13.0	16.0
1971	10.0	8.8	7.7	7.6	8.5
1972	7.9	8.7	10.4	13.4	10.1
1973	13.9	11.7	9.7	8.2	10.8
1974	10.5	13.5	15.7	15.1	13.7
1975	11.1	9.4	7.1	7.8	8.8
1976	8.4	7.8	8.3	7.1	7.9
1977	8.4	8.0	7.5	9.3	8.3
1978	8.7	10.1	12.7	11.5	10.8
1979	13.0	13.0	11.7	11.0	12.2
1980	14.6	14.4	13.8	14.6	14.4
1981	11.2	10.3	8.8	3.1	8.3
1982	4.3	4.3	5.0	10.0	5.9
1983	10.3	9.6	8.6	10.4	9.7
1984	5.8	7.9	8.6	6.3	7.1
1985	7.8	6.1	5.8	5.7	6.3
1986	5.5	5.8	6.5	6.7	6.1
1987	5.8	6.2	6.6	7.9	6.7
1988	9.2	10.1	10.3	10.2	10.0
1989	10.6	10.1	12.2	13.7	11.7
1990	10.7	11.0	8.6	6.8	9.2
1991	7.7	5.7	5.1	4.9	5.8
1992	6.6	8.1	8.0	7.7	7.6
1993	6.8	4.8	2.6	0.7	3.7
1994	0.7	1.1	3.0	4.5	2.3
1995	3.0	3.5	2.2	0.7	2.3
1996	0.4	-0.4	0.0	0.3	0.1
1997	2.1	2.8	4.1	4.2	3.3
1998	2.5	2.1	1.4	1.8	2.0
1999	2.3	2.8	4.4	4.4	3.5
2000	5.5	7.1	5.4	6.1	6.0
2001	6.1	3.9	4.3	2.9	4.3
2002	3.7	4.8	4.5	5.9	4.7
2003	4.5	4.3	4.8	5.2	4.7
2004	6.4	7.4	8.4	9.0	7.8
2005	8.2	8.2	6.8	7.1	7.6
2006	8.0	7.2	7.8	5.7	7.2
2007	5.2	5.5	5.2	5.6	5.4
2008	5.7	7.3	4.4	2.5	4.9
2009	0.1	-1.9	-0.9	0.1	-0.7
2010	1.2	1.4	3.6	4.5	2.7
2011	6.1	5.3	4.3	4.5	5.0
2012	3.9	4.6	3.5	4.1	4.0
2013	1.4	0.8	2.0	1.2	1.4
2014	4.4	5.5	6.2	6.2	5.6
2015	6.0	5.4	4.9	4.9	5.3
2016	4.3	3.9	3.6	3.5	3.8
2017	4.3	4.2	4.3	4.0	4.2
2018	3.0	3.2	2.9	3.1	3.1
2019	3.2	2.8	2.8	2.9	2.9
2020	3.8	3.4	3.3	3.4	6.9
2021	19.2				

Source: United States Department of Commerce, Bureau of Economic Analysis, June 22, 2021.
New estimates for Jan.-Mar. 2021. Revised estimates for Jan.-Mar. 2020 - Oct.-Dec. 2020.

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Table 3
2020 Total Personal Income: Annual Growth Rate
Actual vs. Forecast

	Annual Growth Rate (%)
Council on Revenues' Forecast	
July 2020	-7.00
October 2020	5.00
Model Forecast in July 2020	
<i>Annual Single Equation</i>	
Model 1a: Construction Expenditures & Visitor Arrivals	3.23
Model 1b: Construction Expenditures & Visitor Daily Census	3.07
<i>Annual Component Equation</i>	
Model 2a: Construction Expenditures & Visitor Arrivals	6.74
Model 2b: Construction Expenditures & Visitor Daily Census	6.59
<i>Quarterly Single Equation</i>	
Model 3: Construction Expenditures & Visitor Arrivals	2.46
<i>Quarterly Component Equation</i>	
Model 4: Construction Expenditures & Visitor Arrivals	6.70
Model Forecast in October 2020	
<i>Annual Single Equation</i>	
Model 1a: Construction Expenditures & Visitor Arrivals	3.03
Model 1b: Construction Expenditures & Visitor Daily Census	2.86
<i>Annual Component Equation</i>	
Model 2a: Construction Expenditures & Visitor Arrivals	8.62
Model 2b: Construction Expenditures & Visitor Daily Census	8.48
<i>Quarterly Single Equation</i>	
Model 3: Construction Expenditures & Visitor Arrivals	8.26
<i>Quarterly Component Equation</i>	
Model 4: Construction Expenditures & Visitor Arrivals	10.57
Actual *	6.90

*Source: United States Department of Commerce, Bureau of Economic Analysis, released on June 22, 2021.

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**Table 4. Summary of Total Personal Income Forecasts
(Annual Growth Rates)**

	Calendar Year	
	2021	2022
	(percent)	
Council on Revenues' Official Forecast in October 2020	(4.00)	n/a
Model Forecast in July 2021		
<i>Annual Single Equation</i>		
Model 1a: Construction Expenditures & Visitor Arrivals	2.89	3.45
Model 1b: Construction Expenditures & Visitor Daily Census	2.79	3.38
<i>Annual Component Equation</i>		
Model 2a: Construction Expenditures, Visitor Arrivals & Other Variables	1.19	(5.06)
Model 2b: Construction Expenditures, Visitor Daily Census & Other Variables	2.29	(4.30)
<i>Quarterly Single Equation</i>		
Model 3: Construction Expenditures & Visitor Arrivals	9.45	4.09
<i>Quarterly Component Equation</i>		
Model 4: Construction Expenditures, Visitor Arrivals & Other Variables	(0.15)	(5.40)
Simple average of all models in July 2021	3.08	(0.64)
Council on Revenues, General Fund Meeting of May 2021	1.49 ^{1/}	2.23 ^{2/}
DBEDT Forecast as of May 21, 2021	(0.90)	(2.50)
UHERO Forecast as of May 14, 2021	1.40	(1.90)
Average of all independent forecasts in July 2021	1.27	(0.70)

Note:

1/ Average of FY 2021 and FY 2022 forecast figures.

2/ Average of FY 2022 and FY 2023 forecasts.

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**Table 5. Forecasts of Total Personal Income - Model 1a: Annual Single Equation
(Construction Expenditures & Visitor Arrivals as Exogenous Variables)**

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Total Personal Income (million dollars)	76,110	78,436	80,727	86,273	88,768	91,834
Annual Growth Rate (%)	4.19	3.06	2.92	6.87	2.89	3.45

Exogenous Variables

Fiscal Year					Estimated	
	2017	2018	2019	2020	2021	2022
Construction Expenditures (1-month lag)						
Value (million dollars)	8,557	9,002	9,699	9,623	9,780	10,161
Annual growth rate (%)	6.46	5.21	7.74	(0.79)	1.63	3.90
Visitor Arrivals						
Persons (thousand)	9,017	9,612	9,970	7,276	3,067	6,924
Annual growth rate (%)	3.93	6.60	3.72	(27.02)	(57.84)	125.73

Sources:

Hawaii Department of Business, Economic Development & Tourism, May 2021.

Office of Tax Research and Planning, Hawaii Department of Taxation, July 2021.

Council on Revenues, May 2021.

**Table 6. Forecasts of Total Personal Income - Model 1b: Annual Single Equation
(Construction Expenditures & Visitor Daily Census as Exogenous Variables)**

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Total Personal Income (million dollars)	76,110	78,436	80,727	86,273	88,678	91,676
Annual Growth Rate (%)	4.19	3.06	2.92	6.87	2.79	3.38

Exogenous Variables

Fiscal Year					Estimated	
	2017	2018	2019	2020	2021	2022
Construction Expenditures (1-month lag)						
Value (million dollars)	8,557	9,002	9,699	9,623	9,780	10,161
Annual growth rate (%)	6.46	5.21	7.74	(0.79)	1.63	3.90
Visitor Daily Census						
Persons (thousand)	223	237	242	177	75	169
Annual growth rate (%)	3.88	6.07	2.05	(26.62)	(57.84)	125.73

Sources:

Hawaii Department of Business, Economic Development & Tourism, May 2021.
Office of Tax Research and Planning, Hawaii Department of Taxation, July 2021.
Council on Revenues, May 2021.

**Table 7. Forecasts of Total Personal Income - Model 2a: Annual Component Equation
(Construction Expenditures & Visitor Arrivals as Exogenous Variables)**

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Total Personal Income (million dollars)*	76,110	78,436	80,727	86,273	87,300	82,882
Wages and Salaries	37,102	38,293	39,570	36,797	36,244	36,743
Supplements to Wages and Salaries	10,417	11,011	11,188	10,615	10,349	10,380
Proprietors' Income	6,107	6,404	6,709	6,719	6,963	7,152
Dividends, Interest, and Rent	16,606	16,917	17,168	17,093	17,392	18,370
Current Transfer Receipts	11,942	12,152	12,673	21,262	22,519	16,407
Contributions for Government Social Insurance	6,065	6,341	6,581	6,213	6,167	6,170

* Totals may not add up due to rounding.

Annual Growth Rate (%)

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Total Personal Income	4.19	3.06	2.92	6.87	1.19	(5.06)
Wages and Salaries	3.47	3.21	3.33	(7.01)	(1.50)	1.38
Supplements to Wages and Salaries	2.43	5.70	1.61	(5.12)	(2.51)	0.30
Proprietors' Income	10.57	4.86	4.76	0.15	3.63	2.71
Dividends, Interest, and Rent	4.51	1.87	1.48	(0.44)	1.75	5.62
Current Transfer Receipts	4.43	1.76	4.29	67.77	5.91	(27.14)
Contributions for Government Social Insurance	4.07	4.55	3.78	(5.59)	(0.74)	0.05

Table 7 (Cont.) Exogenous Variables

Fiscal Year					Estimated	
	2017	2018	2019	2020	2021	2022
Construction Expenditures (with 1-month lag)						
Value (million dollars)	8,557	9,002	9,699	9,623	9,780	10,161
Annual growth rate (%)	6.46	5.21	7.74	(0.79)	1.63	3.90
Visitor Arrivals						
Persons (thousand)	9,017	9,612	9,970	7,276	3,067	6,924
Annual growth rate (%)	3.93	6.60	3.72	(27.02)	(57.84)	125.73

Sources:

Hawaii Department of Business, Economic Development & Tourism, May 2021.

Office of Tax Research and Planning, Hawaii Department of Taxation, July 2021.

Council on Revenues, May 2021.

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
U.S. current transfer receipts						
Value (billion dollars)	2,855	2,970	3,125	4,268	4,500	3,781
Annual growth rate (%)	2.82	4.04	5.22	36.56	5.43	(15.97)
U.S. dividends, interests, & rents						
Value (billion dollars)	3,456	3,701	3,750	3,710	3,818	4,123
Annual growth rate (%)	7.00	7.10	1.32	(1.07)	2.91	8.00

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis, June 22, 2021.

UCLA Anderson Forecast, June 2021.

**Table 8. Forecasts of Total Personal Income - Model 2b: Annual Component Equation
(Construction Expenditures & Visitor Daily Census as Exogenous Variables)**

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Total Personal Income (million dollars)*	76,110	78,436	80,727	86,273	88,252	84,457
Wages and Salaries	37,102	38,293	39,570	36,797	37,069	38,052
Supplements to Wages and Salaries	10,417	11,011	11,188	10,615	10,527	10,702
Proprietors' Income	6,107	6,404	6,709	6,719	6,965	7,213
Dividends, Interest, and Rent	16,606	16,917	17,168	17,093	17,392	18,370
Current Transfer Receipts	11,942	12,152	12,673	21,262	22,519	16,407
Contributions for Government Social Insurance	6,065	6,341	6,581	6,213	6,220	6,287

* Totals may not add up due to rounding.

Annual Percentage Growth Rate (%)

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Total Personal Income	4.19	3.06	2.92	6.87	2.29	(4.30)
Wages and Salaries	3.47	3.21	3.33	(7.01)	0.74	2.65
Supplements to Wages and Salaries	2.43	5.70	1.61	(5.12)	(0.83)	1.66
Proprietors' Income	10.57	4.86	4.76	0.15	3.66	3.56
Dividends, Interest, and Rent	4.51	1.87	1.48	(0.44)	1.75	5.62
Current Transfer Receipts	4.43	1.76	4.29	67.77	5.91	(27.14)
Contributions for Government Social Insurance	4.07	4.55	3.78	(5.59)	0.11	1.08

Table 8 (Cont.) Exogenous Variables

Fiscal Year					Estimated	
	2017	2018	2019	2020	2021	2022
Construction Expenditures (with 1-month lag)						
Value (million dollars)	8,557	9,002	9,699	9,623	9,780	10,161
Annual growth rate (%)	6.46	5.21	7.74	(0.79)	1.63	3.90
Visitor Daily Census						
Persons (thousand)	223	237	242	177	75	169
Annual growth rate (%)	3.88	6.07	2.05	(26.62)	(57.84)	125.73

Sources:

Hawaii Department of Business, Economic Development & Tourism, May 2021.

Office of Tax Research and Planning, Hawaii Department of Taxation, July 2021.

Council on Revenues, May 2021.

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
U.S. current transfer receipts						
Value (billion dollars)	2,855	2,970	3,125	4,268	4,500	3,781
Annual growth rate (%)	2.82	4.04	5.22	36.56	5.43	(15.97)
U.S. dividends, interests, & rents						
Value (billion dollars)	3,456	3,701	3,750	3,710	3,818	4,123
Annual growth rate (%)	7.00	7.10	1.32	(1.07)	2.91	8.00

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis, June 22, 2021.

UCLA Anderson Forecast, June 2021.

**Table 9. Forecasts of Total Personal Income - Model 3: Quarterly Single Equation
(Construction Expenditures & Visitor Arrivals as Exogenous Variables)**

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Total Personal Income (million dollars)	76,110	78,436	80,727	86,274	94,430	98,295
Annual Growth Rate (%)	4.19	3.06	2.92	6.87	9.45	4.09

Exogenous Variables

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Construction Expenditures (1-month lag) 1/						
Value (million dollars)	8,377	9,563	9,637	9,748	10,017	10,385
Annual growth rate (%)	(0.78)	14.15	0.77	1.16	2.76	3.67
Visitor Arrivals 2/						
Persons (thousand)	9,321	9,876	10,509	2,322	3,308	4,905
Annual growth rate (%)	5.46	5.95	6.41	(77.90)	42.47	48.28

Notes:

1/ Construction expenditures are adjusted for weekend and seasonal effects.

2/ Visitor arrivals are adjusted for seasonal effects.

**Table 10. Forecasts of Total Personal Income - Model 4: Quarterly Component Equation
(Construction Expenditures & Visitor Arrivals as Exogenous Variables)**

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Total Personal Income (million dollars)*	76,110	78,436	80,727	86,274	86,144	81,489
Wages and Salaries	37,102	38,293	39,570	36,797	37,195	37,168
Supplements to Wages and Salaries	10,417	11,012	11,188	10,615	10,746	10,857
Proprietors' Income	6,107	6,404	6,709	6,719	7,259	6,869
Dividends, Interest, and Rent	16,606	16,917	17,168	17,093	17,524	18,667
Current Transfer Receipts	11,943	12,152	12,673	21,262	19,723	14,178
Contributions for Government Social Insurance	6,065	6,341	6,581	6,213	6,302	6,249

* Totals may not add up due to rounding.

Annual Percentage Growth Rate (%)

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Total Personal Income	4.19	3.06	2.92	6.87	(0.15)	(5.40)
Wages and Salaries	3.47	3.21	3.33	(7.01)	1.08	(0.07)
Supplements to Wages and Salaries	2.43	5.71	1.60	(5.12)	1.23	1.03
Proprietors' Income	10.57	4.86	4.76	0.15	8.04	(5.37)
Dividends, Interest, and Rent	4.51	1.87	1.48	(0.44)	2.52	6.52
Current Transfer Receipts	4.44	1.75	4.29	67.77	(7.24)	(28.11)
Contributions for Government Social Insurance	4.07	4.55	3.78	(5.59)	1.43	(0.84)

Table 10 (Cont.) Exogenous Variables

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
Construction Expenditures (1-month lag) 1/						
Value (million dollars)	8,377	9,563	9,637	9,748	10,017	10,385
Annual growth rate (%)	(0.78)	14.15	0.77	1.16	2.76	3.67
Visitor Arrivals 2/						
Persons (thousand)	9,321	9,876	10,509	2,322	3,308	4,905
Annual growth rate (%)	5.46	5.95	6.41	(77.90)	42.47	48.28

Notes:

1/ Construction expenditures are adjusted for weekend and seasonal effects.

2/ Visitor arrivals are adjusted for seasonal effects.

Calendar Year					Estimated	
	2017	2018	2019	2020	2021	2022
U.S. current transfer receipts						
Value (billion dollars)	2,855	2,970	3,125	4,268	4,500	3,781
Annual growth rate (%)	2.82	4.04	5.22	36.56	5.43	(15.97)
U.S. dividends, interests, & rents						
Value (billion dollars)	3,456	3,701	3,750	3,710	3,818	4,123
Annual growth rate (%)	7.00	7.10	1.32	(1.08)	2.91	8.00

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis, June 22, 2021.

UCLA Anderson Forecast, June 2021.

Appendix

U.S. Bureau of Economic Analysis Glossary for Personal Income and its Components

Personal income. Income received by persons from all sources. It includes income received from participation in production as well as from government and business transfer payments. It is the sum of compensation of employees (received), supplements to wages and salaries, proprietors' income with inventory valuation adjustment (IVA) and capital consumption adjustment (CCAdj), rental income of persons with CCAdj, personal income receipts on assets, and personal current transfer receipts, less contributions for government social insurance. Related terms: state personal income, local area personal income.

Compensation of employees (received). Wage and salary disbursements and supplements to wages and salaries received by U.S. residents, including wages and salaries received from the rest of the world.

Supplements to wages and salaries. Consists of employer contributions for employee pension and insurance funds and employer contributions for government social insurance.

Proprietors' income. Current-production income of sole proprietorships, partnerships, and tax-exempt cooperatives. Excludes dividends, monetary interest received by nonfinancial business, and rental income received by persons not primarily engaged in the real estate business.

Rental income of persons with capital consumption adjustment. Earnings from the rental of real property by persons who are not primarily engaged in the real estate business. It also includes the imputed net rental income of owner-occupants and the royalties received by persons from patents, copyrights, and rights to natural resources.

Personal income receipts on assets. Personal interest income plus personal dividend income.

Personal current transfer receipts. Consists of income payments to persons for which no current services are performed and net insurance settlements. It is the sum of government social benefits and net current transfer receipts from business.

Contributions for government social insurance. Employer contributions for government social insurance as well as payments by employees, the self-employed, and other individuals who participate in government social insurance programs.

Source: <https://www.bea.gov/help/glossary>