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GDP, personal income, and more...

The statistics discussed in this *Regional Quarterly Report* include the following: (1) state gross domestic product (GDP) statistics for 2020, (2) state personal income statistics for 2020, and (3) personal consumption expenditures (PCE) by state statistics for 2020.

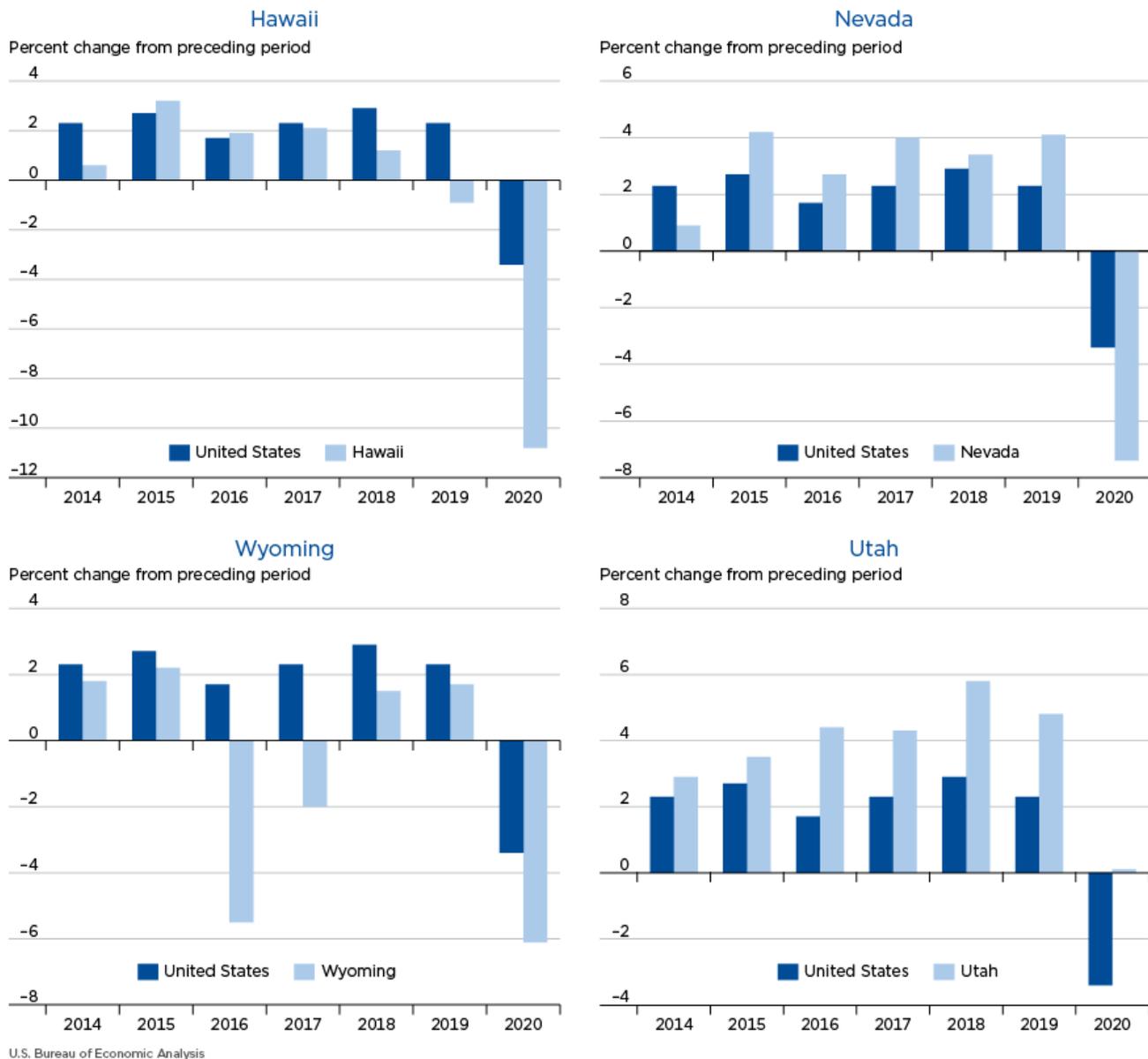
Kyle K. Hood prepared the section on state GDP. Kyle K. Hood and Jeffrey L. Newman prepared the section on state personal income. Kyle K. Hood and Mahsa Gholizadeh prepared the section on PCE by state.

State Gross Domestic Product for 2020

Real gross domestic product (GDP) growth slowed in all states and the District of Columbia in 2020. The largest declines in GDP were in Hawaii (-10.8 percent), Nevada (-7.4 percent), Connecticut (-6.2 percent), Wyoming (-6.1 percent), and Alaska (-6.0 percent). Real GDP decreased in 48 states and the District of Columbia, with only Utah (0.1 percent) and South Dakota (0.1 percent) experiencing positive growth rates (table A).

Chart 1 displays growth in real GDP for the years 2014 to 2020 in four states (Hawaii, Nevada, Wyoming, and Utah) each alongside real GDP growth in the entire United States. Hawaii, which experienced the largest drop in real GDP in 2020, also experienced a decline in 2019, and lagged behind the rest of the country in 2018. In contrast, real GDP growth in Nevada, which was significantly negative in 2020, exceeded that of the United States from 2015 to 2019, with the 2020 decline thus representing a substantial decrease. Real GDP growth in Wyoming has been more volatile, with declines in 2016 and 2017, increases in 2018 and 2019, and an even larger decline in 2020. Finally, Utah, which showed a small uptick in 2020, has grown at a consistently faster rate than the entire United States from 2014 to 2020.

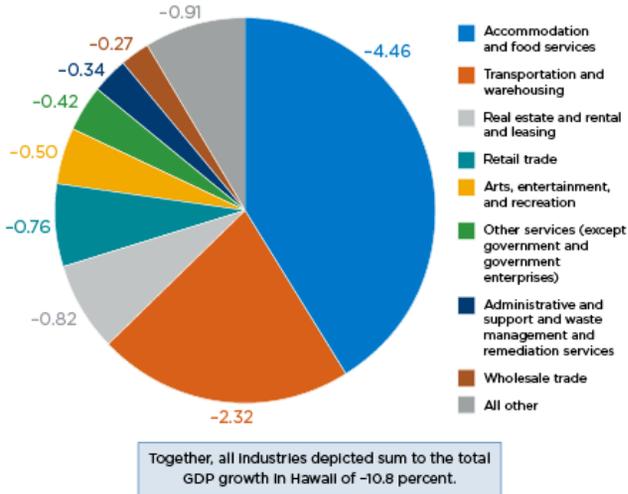
Chart 1. GDP Growth Rates, Selected States



The sources of these declines suggest a substantial impact of the COVID-19 pandemic on different state GDP growth rates. Large declines in expenditures on restaurants, accommodation, and gasoline at the onset of the pandemic¹ corroborate declines in specific service industries between 2019 and 2020.

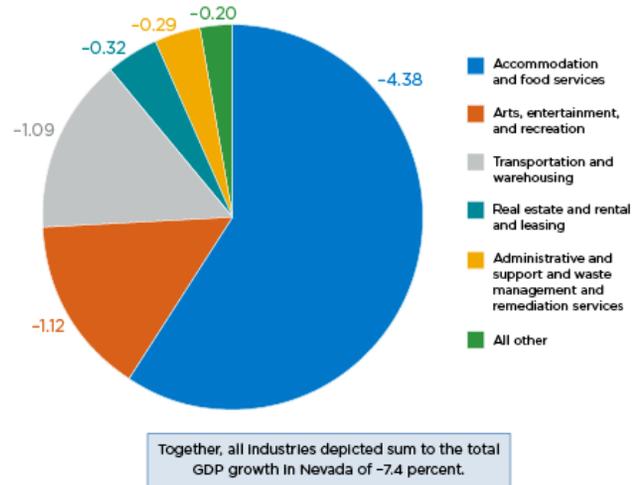
Many of largest declines in GDP at the state level were driven by one or a few industries that are directly linked to pandemic-driven drops in spending at the national level. For example, nearly half of Hawaii's 10.8 percent drop in real GDP was accounted for by accommodation and food services, which contributed a drop of 4.5 percent. Chart 2 shows the top industries contributing to the 2020 decline in Hawaii GDP. This chart suggests that only a few industries drove most of the decline, while the remainder contributed very little to it. Nevada shows a similar pattern, where a drop in accommodation and food services accounted for 4.4 percent of the 7.4 percent decline in real GDP. See chart 3.

Chart 2. Contributions to Hawaii GDP Growth, by Selected Industries



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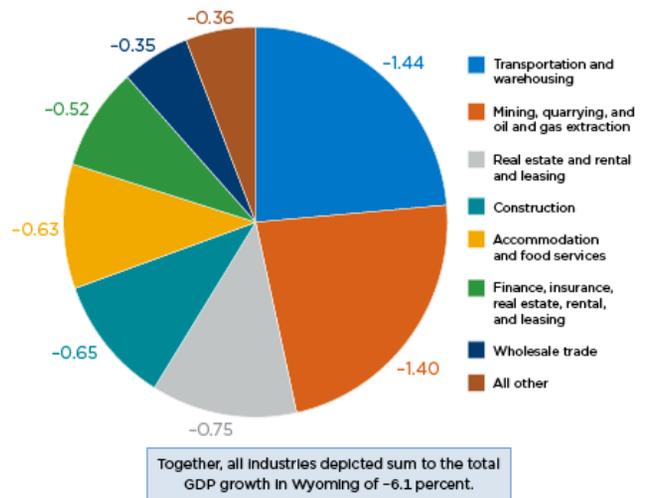
Chart 3. Contributions to Nevada GDP Growth, by Selected Industries



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The contrasting story of Wyoming's drop in GDP is shown in chart 4. In Wyoming, the largest contributors to the decrease in output were transportation and warehousing (including pipeline transportation) and mining, quarrying, and oil and gas extraction. These industries also substantially contributed to the large declines in real GDP in Alaska, Louisiana, and Oklahoma. These declines correlate with a large and sustained reduction in demand for gasoline at the outset of the COVID-19 pandemic. In contrast to Hawaii and Nevada, accommodation and food services accounts for only 0.63 percent of the drop in Wyoming's GDP, as it makes up a substantially smaller part of Wyoming's economy.

Chart 4. Contributions to Wyoming GDP Growth, by Selected Industries



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Value added by industry

While the largest declines at the state level correlate with the direct impacts of the COVID-19 pandemic on consumer spending, decelerations or declines at the national level were broadly shared across many industries.

Table B shows real GDP by industry at the national level. In 2020, GDP fell in 43 of the 65 industries and decelerated in 50 of 65 industries. Eight industries experienced declines of above 20 percent: air transportation (-51.4 percent); support activities for mining (-45.2 percent); performing arts, spectator sports, museums, and related activities (-39.6 percent); accommodation (-32.8 percent); amusement, gambling, and recreation industries (-28.9 percent); transit and ground passenger transportation (-27.8 percent); food services and drinking places (-26.0 percent); and other transportation equipment manufacturing (-22.9 percent). In contrast, there were increases in GDP of at least 10 percent in only three industries, with none exceeding 20 percent.

Pandemic-related production declines have been linked to global supply chain disruptions, affecting industries that use imported products (inputs and final goods), and industries that export their output.² These disruptions could have affected many industries including wholesale and retail trade and manufacturing. However, while there were declines in the output of the wholesale and retail trade industries, declines in GDP were not shared by all manufacturing industries. In 6 of the 19 manufacturing industries in table B, GDP growth accelerated, while in 12 manufacturing industries, GDP fell.

2020 annual update

Each fall, BEA typically revises the preliminary estimates of annual GDP by state released in the spring in order to incorporate the results of the annual updates of the National Income and Product Accounts (NIPAs),³ the GDP by industry statistics, the state personal income statistics, and to incorporate state source data that are more complete and more detailed than those previously available. This year, the annual estimates from 1997 to 2020 were revised. The newly available and revised source data, which became available after last year's annual update, include the following:

- U.S. Census Bureau, Economic Census for 2017 (construction, manufacturing, and mining industries only; service-related industries were incorporated in 2020)
- U.S. Census Bureau Census American Community Survey, 1-year PUMS file (2001–2019)
- U.S. Census Bureau, Annual Survey of State and Local Government Finances for fiscal years 2016–2018 (revised) and 2019 (new)
- Energy Information Administration, gas and electricity consumption for 2019 (revised) and 2020 (new)
- Energy Information Administration, oil, gas production and prices, and coal reports for 2019 (revised) and 2020 (new)
- Federal Deposit Insurance Corporation, branch office deposits for 2020 (new)
- Federal Home Loan Bank Board, income and expenses for 2020 (new)
- Federal Reserve Banks, income and expenses for 2020 (new)
- National Association of Insurance Commissioners, premiums and losses for 2020 (new)
- National Science Foundation, Business Research and Development Survey for 2019 (new)
- U.S. Department of Agriculture, Economic Research Service, farm income and expenses for 2016–2019 (revised) and 2020 (new)
- U.S. Department of Transportation, Bureau of Transportation Statistics, transportation finance, passengers, and freight for 2020 (new)
- U.S. Geological Survey, mineral resources for 2020 (new)
- BEA, compensation of employees, proprietors' income, and rental income from state personal income for 2016–2019 (revised) and 2020 (new)

Table A. Gross Domestic Product (GDP) by State and the District of Columbia, 2019–2020
 [Percent change]

Region	Current dollars		Quantity index for real GDP	
	2019	2020	2019	2020
United States	4.1	-2.2	2.3	-3.4
Alabama	3.2	-1.8	1.3	-3.2
Alaska	-0.3	-8.7	0.2	-6.0
Arizona	5.7	1.0	3.3	-1.0
Arkansas	2.8	-0.1	0.7	-1.6
California	5.4	-1.5	3.6	-2.8
Colorado	5.6	-2.5	4.2	-3.0
Connecticut	2.6	-4.1	0.6	-6.2
Delaware	6.3	-1.6	4.1	-3.4
District of Columbia	3.3	0.1	0.9	-2.1
Florida	5.5	-0.9	3.0	-2.8
Georgia	5.9	-2.4	3.5	-3.9
Hawaii	1.7	-9.7	-0.9	-10.8
Idaho	6.4	1.7	4.0	-0.3
Illinois	2.6	-3.6	0.5	-5.1
Indiana	2.0	-1.5	0.4	-2.5
Iowa	2.1	0.0	0.0	-2.0
Kansas	2.6	-0.9	0.8	-2.1
Kentucky	3.8	-1.6	1.7	-3.0
Louisiana	-0.5	-7.5	-0.1	-5.8
Maine	4.5	1.2	2.2	-1.1
Maryland	2.6	-2.6	0.3	-4.5
Massachusetts	5.2	-1.8	2.9	-3.7
Michigan	2.0	-3.1	-0.1	-4.6
Minnesota	2.6	-2.4	0.5	-4.0
Mississippi	2.1	-0.8	0.4	-1.8
Missouri	4.0	-0.9	1.7	-2.8
Montana	1.7	-0.5	0.4	-1.3
Nebraska	3.5	1.6	1.2	-0.5
Nevada	6.7	-5.9	4.1	-7.4
New Hampshire	4.4	0.1	2.1	-2.1
New Jersey	4.2	-3.3	2.1	-4.6
New Mexico	4.8	-3.4	4.3	-2.3
New York	4.9	-3.0	2.5	-5.0
North Carolina	4.5	-1.0	2.1	-2.9
North Dakota	-0.1	-7.0	0.6	-3.0
Ohio	3.9	-2.3	2.0	-3.5
Oklahoma	0.6	-7.7	1.7	-4.9
Oregon	4.0	-1.2	2.0	-3.0
Pennsylvania	3.5	-3.5	1.7	-4.5
Rhode Island	3.7	-1.2	1.4	-3.4
South Carolina	4.7	0.1	2.3	-1.9
South Dakota	2.9	1.6	0.4	0.1
Tennessee	4.3	-1.9	2.0	-3.9
Texas	3.0	-4.7	3.2	-2.9
Utah	6.8	1.3	4.8	0.1
Vermont	3.3	-2.0	1.0	-4.2
Virginia	4.2	-0.9	2.0	-2.8
Washington	5.9	1.1	3.9	-0.6
West Virginia	0.1	-4.2	-0.8	-3.9
Wisconsin	3.8	-2.0	1.5	-4.0
Wyoming	1.5	-8.3	1.7	-6.1

Table B. U.S. Real Gross Domestic Product by Industry, 2019–2020

Industry	Percent change		Contribution to percent change		Change (millions of 2012 chained dollars)	
	2019	2020	2019	2020	2019	2020
All industry total	2.3	-3.4	2.30	-3.40	425,885	-647,985
Farms	-8.6	18.7	-0.06	0.10	-17,436	34,832
Forestry, fishing, and related activities	2.5	0.2	0.00	0.00	855	59
Oil and gas extraction	20.4	2.7	0.17	0.01	67,629	10,713
Mining (except oil and gas)	1.9	-7.1	0.01	-0.02	1,186	-4,578
Support activities for mining	-4.5	-45.2	-0.01	-0.11	-2,771	-26,337
Utilities	1.2	4.2	0.02	0.06	3,446	12,006
Construction	1.4	-3.6	0.06	-0.15	9,057	-24,307
Wood product manufacturing	7.0	-3.6	0.01	-0.01	1,941	-1,070
Nonmetallic mineral product manufacturing	1.2	-0.6	0.00	0.00	600	-317
Primary metal manufacturing	9.5	14.2	0.03	0.04	6,903	11,353
Fabricated metal product manufacturing	-0.5	-12.9	0.00	-0.10	-755	-18,267
Machinery manufacturing	-1.4	-8.8	-0.01	-0.07	-1,978	-12,310
Computer and electronic product manufacturing	1.3	3.0	0.02	0.04	4,447	10,273
Electrical equipment, appliance, and component manufacturing	-4.0	-2.3	-0.01	-0.01	-2,475	-1,333
Motor vehicles, bodies and trailers, and parts manufacturing	1.1	-2.2	0.01	-0.02	1,486	-3,149
Other transportation equipment manufacturing	2.4	-22.9	0.02	-0.18	3,547	-34,040
Furniture and related product manufacturing	-2.0	-6.1	0.00	-0.01	-575	-1,740
Miscellaneous manufacturing	-2.3	0.7	-0.01	0.00	-2,058	593
Food and beverage and tobacco product manufacturing	2.3	-2.5	0.03	-0.03	5,662	-6,366
Textile mills and textile product mills	-0.5	-9.0	0.00	-0.01	-85	-1,454
Apparel, leather, and allied product manufacturing	-2.7	5.2	0.00	0.00	-225	424
Paper manufacturing	1.1	6.0	0.00	0.02	580	3,113
Printing and related support activities	-3.3	-6.0	-0.01	-0.01	-1,279	-2,260
Petroleum and coal products manufacturing	8.8	0.7	0.07	0.00	19,822	1,802
Chemical manufacturing	3.2	1.5	0.06	0.03	9,964	4,965
Plastics and rubber products manufacturing	-1.1	-3.9	0.00	-0.02	-887	-3,030
Wholesale trade	-0.5	-1.9	-0.03	-0.11	-5,191	-20,776
Retail trade	2.5	-2.9	0.14	-0.16	27,355	-32,405
Air transportation	1.6	-51.4	0.01	-0.32	1,945	-62,971
Rail transportation	-9.0	-15.3	-0.02	-0.03	-3,548	-5,474
Water transportation	-2.0	5.2	0.00	0.00	-186	477
Truck transportation	-0.5	-3.4	0.00	-0.03	-646	-4,646
Transit and ground passenger transportation	14.0	-27.8	0.03	-0.07	6,089	-13,838
Pipeline transportation	-10.8	-9.0	-0.02	-0.02	-3,989	-2,996
Other transportation and support activities	4.0	3.6	0.02	0.02	4,135	3,867
Warehousing and storage	11.2	6.2	0.04	0.02	7,731	4,781
Publishing industries (except internet)	7.4	9.6	0.10	0.13	21,413	29,795
Motion picture and sound recording industries	1.9	-17.1	0.01	-0.07	1,655	-15,304
Broadcasting (except internet) and telecommunications	2.3	-0.6	0.05	-0.01	12,020	-3,500
Data processing, hosting, and other information services	17.1	10.2	0.20	0.14	45,428	31,574
Monetary authorities—central bank, credit intermediation, and related services	0.4	7.3	0.01	0.25	1,824	31,733
Securities, commodity contracts, and other financial investments and related activities	3.0	-1.7	0.05	-0.03	6,442	-3,767
Insurance carriers and related activities	3.6	0.7	0.10	0.02	19,552	3,975
Funds, trusts, and other financial vehicles	-20.1	-2.6	-0.03	0.00	-5,186	-529
Real estate	1.4	-0.4	0.16	-0.05	28,601	-9,035
Rental and leasing services and lessors of nonfinancial intangible assets	9.5	-10.0	0.11	-0.12	23,623	-27,118
Legal services	0.9	-6.1	0.01	-0.08	1,866	-13,299
Computer systems design and related services	5.3	0.2	0.09	0.00	20,561	642
Miscellaneous professional, scientific, and technical services	5.0	-1.5	0.23	-0.07	43,590	-13,320
Management of companies and enterprises	7.1	1.5	0.13	0.03	28,854	6,317
Administrative and support services	3.9	-5.8	0.11	-0.17	20,210	-30,923
Waste management and remediation services	-0.3	-5.2	0.00	-0.01	-130	-2,427
Educational services	2.8	-11.3	0.04	-0.15	6,165	-25,830
Ambulatory health care services	4.5	-6.9	0.16	-0.25	32,369	-52,244
Hospitals	1.0	-2.5	0.02	-0.06	4,244	-10,751
Nursing and residential care facilities	-0.7	-6.4	0.00	-0.05	-867	-8,334
Social assistance	4.8	-7.9	0.03	-0.05	5,313	-9,220
Performing arts, spectator sports, museums, and related activities	2.9	-39.6	0.02	-0.27	3,437	-48,718
Amusement, gambling, and recreation industries	1.7	-28.9	0.01	-0.13	1,381	-23,498
Accommodation	2.1	-32.8	0.02	-0.27	3,066	-48,465
Food services and drinking places	1.8	-26.0	0.04	-0.61	6,696	-99,538
Other services (except government and government enterprises)	0.0	-12.4	0.00	-0.27	24	-45,866
Federal civilian	0.5	3.3	0.01	0.08	2,312	14,186
Military	0.9	2.1	0.01	0.03	2,540	6,062
State and local	0.6	-2.6	0.05	-0.22	8,442	-39,277

State Personal Income for 2020

Personal income grew in every state and the District of Columbia in 2020, and accelerated in all states except Alaska, Oklahoma, and Wyoming (tables C and E). Personal income growth across states ranged from 10.3 percent in Arizona to 1.7 percent in Wyoming. Substantial growth in personal current transfer receipts was the leading contributor to personal income growth across all states and the District of Columbia.

Personal current transfer receipts were the category affected the most by policy responses to the pandemic. These policies included various increases and extensions of unemployment benefits, an increase in Medicare reimbursement rates, economic income payments, and other programs.⁴ Personal current transfer receipts increased in all states and the District of Columbia in 2020, with states experiencing a range of growth from 18.2 percent in Alaska to 52.6 percent in Hawaii. For the United States, personal current transfer receipts increased 35.1 percent in 2020 (\$1.1 trillion), up from 5.5 percent in 2019. Of the \$1.1 trillion increase in personal current transfer receipts, \$394.7 billion is attributable to various unemployment insurance programs created in response to the COVID-19 pandemic, and \$274.7 billion to economic impact payments. In all, the various components of transfer payments associated with the policy response to the COVID-19 pandemic constitute \$819.0 billion of the \$1.1 trillion increase in transfer payments.

Property income (dividends, interest, and rent) decreased 1.1 percent in 2020, down from a 3.1 percent increase in 2019. Dividend, interest, and rent also declined in 47 states and the District of Columbia.

Compensation of employees, the largest component of personal income, grew 1.0 percent in the United States in 2020, down from 4.5 percent in 2019. The percent change in compensation across states ranged from 6.5 percent in Idaho to -5.7 percent in Hawaii. In terms of growth rates, compensation of employees decelerated in all states except Idaho and in the District of Columbia in 2020, and showed a decline in 15 states.

Many of the state-level changes in compensation correspond with the effects of the COVID-19 pandemic on businesses, and on the policy response to the COVID-19 pandemic. In April 2020 (immediately following the March 2020 pandemic declaration), the unemployment rate peaked at 14.8 percent, up from 3.5 percent in February, indicating substantial job losses.⁵ These job losses were concentrated in certain industries, leading to different impacts on compensation of employees across industries. Because state industry compositions vary, this effected variation in state-level employee compensation growth rates.

Table D shows the annual percentage change in compensation by industry in the entire United States for the years 2017 to 2020. These data reveal historically large drops in compensation in 2020 for mining industries (oil and gas extraction, mining (except oil and gas), and support activities for mining); many durable goods manufacturing industries (fabricated metal product manufacturing; machinery manufacturing; motor vehicles, bodies and trailers, and parts manufacturing; other transportation equipment manufacturing; and furniture and related product manufacturing); certain transportation industries (air transportation and pipeline transportation showing the largest declines); motion picture and sound recording industries; arts, entertainment, and recreation industries (performing arts, spectator sports, and related industries; museums, historical sites, and similar institutions; and amusement, gambling, and recreation industries); and accommodation and foods services industries. In Wyoming, which experienced the smallest percent increase in personal income in 2020, compensation is heavily concentrated in mining, quarrying, and oil and gas extraction (12.1 percent of total compensation in 2019), pipeline transportation (5.5 percent of total compensation in 2019), and the accommodation industry (2.5 percent of total compensation in 2019). In contrast, Arizona experienced the largest percent increase in personal income in 2020, and its compensation is not concentrated in

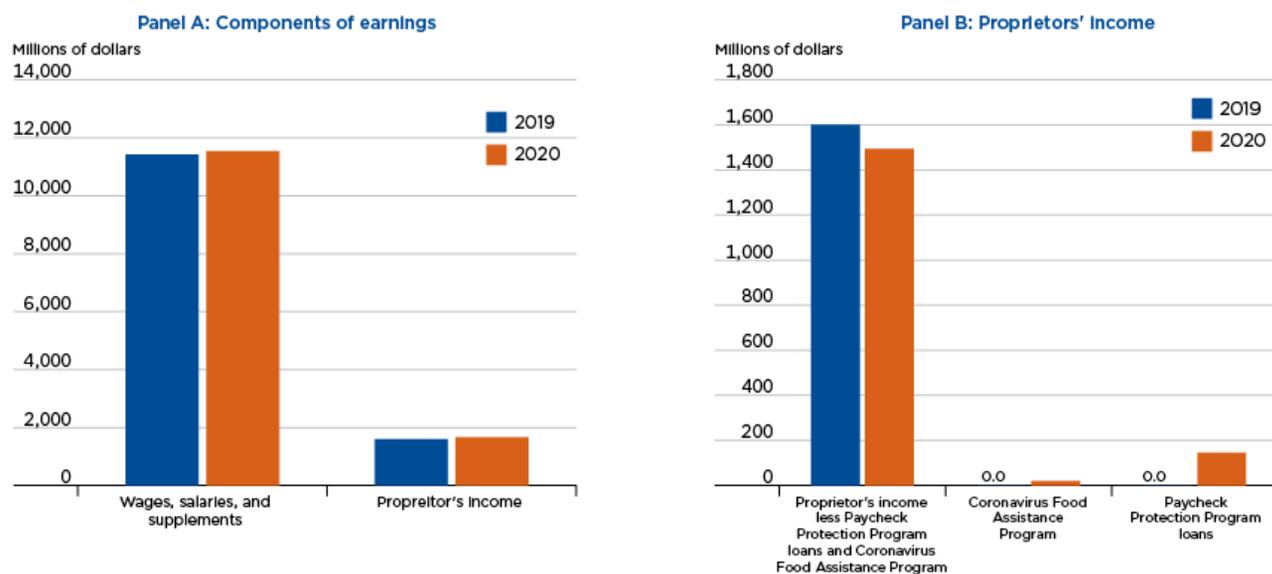
mining, quarrying, and oil and gas extraction (0.7 percent of total compensation in 2019), pipeline transportation (0.0 percent of total compensation in 2019), or accommodation (0.9 percent of total compensation in 2019). Large declines in compensation in these major industries in Wyoming thus contributed to a drop in compensation of 3.2 percent in 2020, while compensation in Arizona increased 4.7 percent over the same period.

Earnings are comprised of compensation (wages and salaries and supplements to wages and salaries) and proprietors' income. Proprietors' income, which represents the income earned from current production by unincorporated businesses that is received by persons, grew 3.7 percent for the United States in 2020, up from 1.4 percent growth in 2019. U.S. farm proprietors' income rose 97.6 percent (\$39.2 billion) in 2020 after increasing 8.7 percent (\$3.2 billion) in 2019. \$20.4 billion of the \$39.2 billion increase in U.S. farm proprietors' income is attributable to the Coronavirus Food Assistance Program⁶ and \$4.4 billion is attributable to Paycheck Protection Program (PPP) loans to businesses.⁷ U.S. nonfarm proprietors' income grew 1.2 percent in 2020 (\$19.4 billion), the same rate as in 2019. However, \$140.9 billion of the change in U.S. nonfarm proprietors' income in 2020 was associated with PPP loans to businesses. Without PPP loans, proprietors' income decreased by \$121.5 billion.

Industry-level compensation changes discussed above explain some variation in earnings. However, the proprietors' income component also explains some variation. As noted above, proprietors' income was impacted by two coronavirus assistance programs: The Coronavirus Food Assistance Program and PPP loans to businesses. Charts 5–7 show a breakdown of earnings in 2019 and 2020 for the entire United States, and for the states of Arizona and Wyoming. Panel A shows the two components of earnings: Compensation (wages, salaries, and supplements to wages and salaries) and proprietors' income. Panel B shows a further decomposition of proprietors' income into the contributions from the Coronavirus Food Assistance Program, from PPP loans to businesses, and from all other sources.

For the entire United States (chart 5), there was a small increase in compensation and in proprietors' income between 2019 and 2020. The small increase in proprietors' income can be explained by income from PPP loans of \$145.3 billion and by \$20.4 billion from the Coronavirus Food Assistance Program; netting out these sources, proprietors' income decreased by \$107.1 billion. The effects of these two programs compare with an increase in personal current transfer receipts of \$1.1 trillion.

Chart 5. Effects of Selected Federal Pandemic Response Programs on Personal Income by State, 2020: United States



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Arizona, which saw the largest increase in personal income among all states, is shown in chart 6. In Arizona, compensation increased by \$9.6 billion, while proprietors' income increased \$2.1 billion. Panel B shows that PPP loans contributed an increase of \$3.0 billion to proprietors' income, while the Coronavirus Food Assistance Program added \$0.1 billion; netting out these sources, Arizona's proprietors' income decreased \$1.1 billion. These compare to an increase in personal current transfer receipts of \$24.2 billion.

Chart 6. Effects of Selected Federal Pandemic Response Programs on Personal Income by State, 2020: Arizona

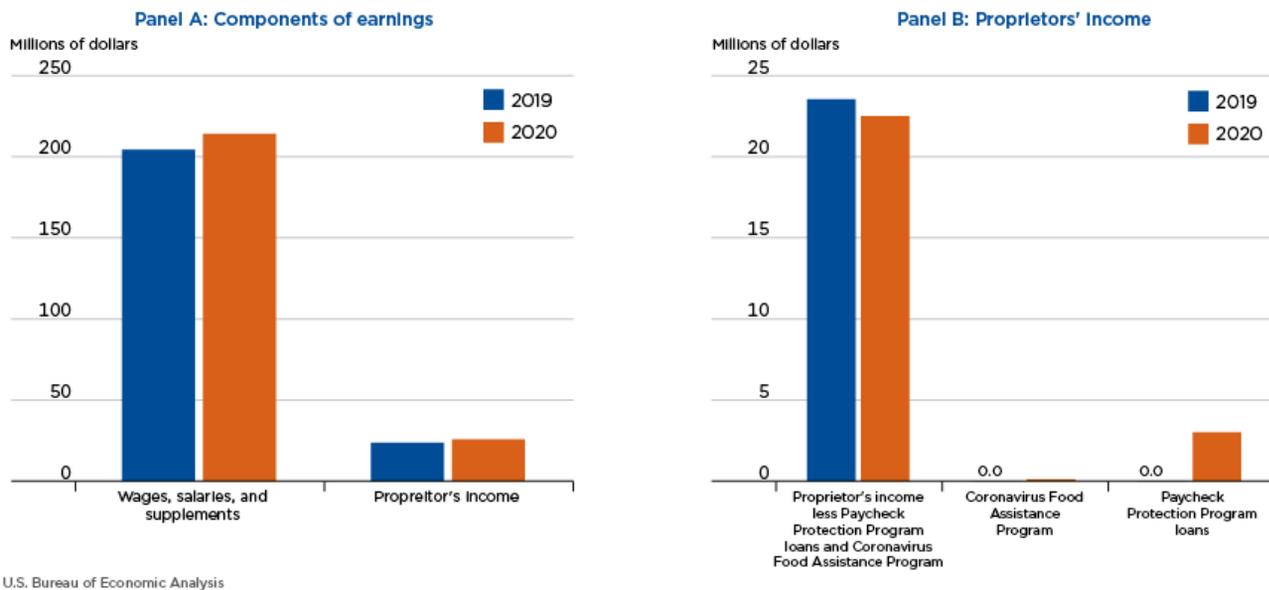
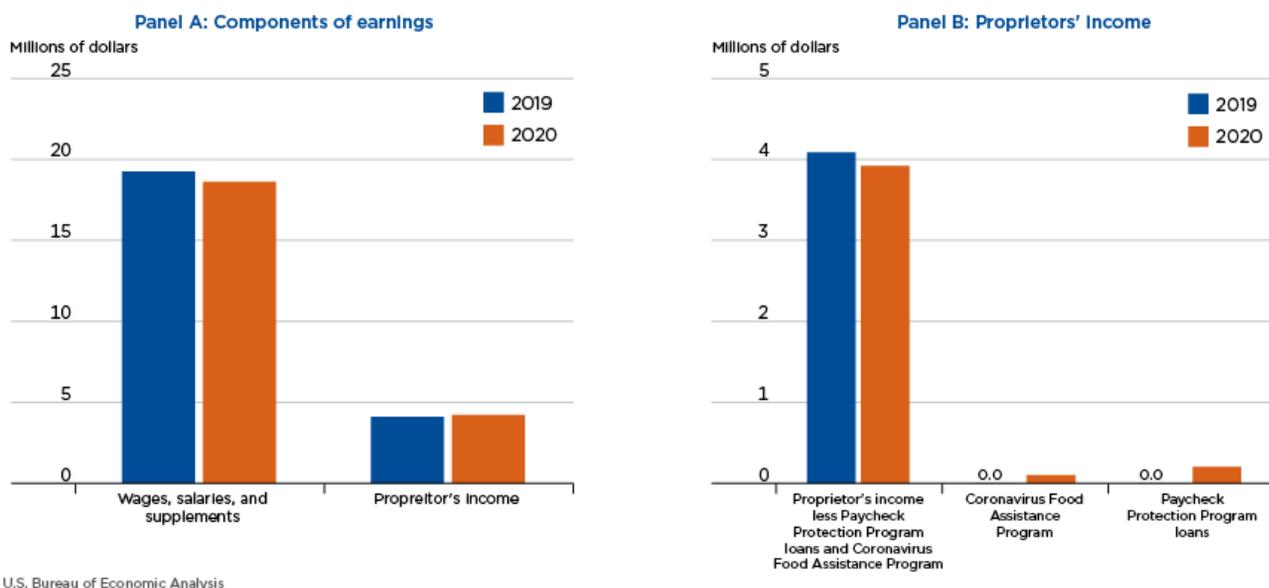


Chart 7 shows the same breakdown of earnings for Wyoming. The most noticeable contrast to Arizona is the decrease in compensation of \$0.6 billion. Proprietors' income increased by \$0.1 billion. Panel B shows that PPP loans contributed an increase of \$0.2 billion to proprietors' income, while the Coronavirus Food Assistance Program added \$0.1 billion; netting out these sources, Wyoming's proprietors' income decreased \$0.2 billion. These compare to an increase in personal current transfer receipts of \$1.4 billion.

Chart 7. Effects of Selected Federal Pandemic Response Programs on Personal Income by State, 2020: Wyoming



Arizona and Wyoming are examples of a larger trend across states and the District of Columbia. Compensation increased in some states and decreased in others based on industry composition, but generally slowed from 2019. Netting out COVID-19 programs, proprietors' income also decreased from 2019, but this slowdown was more than made up for by the Coronavirus Food Assistance Program and the Paycheck Protection Program, each of which had a positive but relatively small effect on income in most states and the District of Columbia. In contrast, the increase in current transfer receipts was large relative to income: The increase in current transfer receipts between 2019 and 2020 in Wyoming was equal to about 4 percent of 2019 personal income, while in Arizona, it equaled more than 7 percent of 2019 personal income. In addition, because many of the various programs enacted in the wake of the COVID-19 pandemic did not link payments to changes in compensation or other sources of income, they did not serve to offset losses in income from these other sources. Thus, a significant proportion of the variation in changes in personal income across states and the District of Columbia in 2020 is attributable to a combination of industry-specific decreases in earnings and variation in changes in personal current transfer receipts.

Table C. Percent Change in Personal Income and Select Components by State and the District of Columbia, 2019–2020

Region	2019						2020					
	Personal income	Compensation of employees	Proprietors' income with IVA and CCAdj	Dividends, interest, and rent	Personal current transfer receipts	Contributions for government social insurance	Personal income	Compensation of employees	Proprietors' income with IVA and CCAdj	Dividends, interest, and rent	Personal current transfer receipts	Contributions for government social insurance
United States	4.1	4.5	1.4	3.1	5.5	4.5	6.6	1.0	3.7	-1.0	35.1	2.7
Alabama	4.3	4.4	-1.2	4.2	5.2	2.6	5.9	2.2	1.5	-1.4	23.1	5.5
Alaska	2.7	2.9	-4.5	2.7	5.4	3.2	2.5	-1.1	4.8	-1.9	18.2	-0.2
Arizona	5.8	5.8	8.0	4.0	7.1	6.7	10.3	4.7	8.9	1.0	36.2	6.8
Arkansas	3.4	3.6	-2.4	2.5	5.4	3.8	5.8	2.5	2.4	-1.6	22.4	7.3
California	4.6	5.4	1.0	3.0	6.5	5.8	8.6	2.8	2.1	-0.5	47.3	2.8
Colorado	5.6	6.8	2.7	4.0	5.3	6.4	5.7	2.1	2.9	-1.0	35.0	2.9
Connecticut	2.3	2.4	-4.0	1.9	2.4	2.8	3.5	-0.1	-0.7	-2.2	32.2	0.8
Delaware	2.4	3.9	-17.1	1.3	6.0	3.0	5.4	0.4	-2.5	-1.1	24.4	3.5
District of Columbia	1.2	2.9	-14.6	-0.8	6.0	2.3	7.8	1.6	7.9	-2.1	47.7	1.0
Florida	4.8	5.4	1.5	4.1	6.0	6.2	6.2	1.6	11.1	-0.2	26.3	4.7
Georgia	5.1	4.7	9.7	4.0	5.2	5.1	7.0	1.6	3.5	-1.3	37.4	3.7
Hawaii	3.1	2.6	6.3	2.9	4.3	4.7	5.1	-5.7	1.3	-1.1	52.6	-4.3
Idaho	6.7	5.5	16.5	4.1	7.5	5.4	8.9	6.5	8.6	-0.1	27.5	10.0
Illinois	2.8	2.7	3.6	2.4	4.0	3.5	5.8	-0.5	7.9	-1.7	40.2	1.0
Indiana	4.1	3.0	8.4	3.0	5.9	4.7	6.4	0.9	7.1	-1.2	28.9	4.8
Iowa	2.3	2.5	-7.3	3.1	5.9	3.6	6.0	1.6	5.2	-1.7	28.1	4.6
Kansas	4.0	3.6	5.6	2.9	6.0	4.2	5.5	1.5	6.6	-1.7	29.0	3.8
Kentucky	4.2	3.7	9.5	3.0	4.2	2.0	8.0	0.9	5.4	-0.6	32.5	5.7
Louisiana	3.2	2.1	4.5	3.4	4.9	2.0	6.4	-2.3	12.4	-1.8	32.2	2.3
Maine	4.2	4.7	3.7	1.7	5.1	4.3	7.9	2.9	3.4	-1.0	29.3	5.0
Maryland	2.5	3.4	-11.1	2.2	4.8	3.2	6.1	1.5	4.6	-1.0	35.3	1.4
Massachusetts	4.2	5.0	7.3	2.7	2.8	5.7	6.8	0.7	-1.0	-0.9	46.1	0.7
Michigan	3.3	2.5	3.5	3.0	5.6	2.9	7.9	-2.0	7.8	-0.7	41.3	-0.3
Minnesota	3.1	3.4	-2.5	3.1	4.7	3.8	6.5	0.0	20.7	-1.8	34.2	1.9
Mississippi	3.1	2.9	2.9	1.8	4.6	2.8	7.4	1.8	2.5	-1.6	26.4	5.6
Missouri	3.8	4.0	3.9	3.2	4.3	3.8	5.8	1.0	9.5	-1.2	25.3	4.8
Montana	5.1	3.9	11.0	4.1	6.2	2.6	7.5	3.8	9.6	-1.1	29.2	7.2
Nebraska	3.2	3.6	-2.5	3.3	5.5	3.7	6.8	2.3	18.4	-1.3	26.9	5.8
Nevada	6.1	5.6	17.2	4.1	6.9	7.8	6.1	-2.9	-1.3	-1.2	48.0	0.9
New Hampshire	4.4	4.1	9.9	1.4	4.0	4.9	5.6	2.9	-2.2	-0.3	32.6	3.4
New Jersey	3.7	3.8	2.1	1.8	4.4	3.7	5.4	0.2	3.0	-0.7	38.5	1.0
New Mexico	4.6	4.9	9.9	2.1	4.4	4.9	7.8	-0.1	7.1	-2.0	32.9	2.7
New York	3.4	4.3	-3.9	2.6	7.2	4.0	5.8	-1.2	-1.5	-1.4	40.3	-0.7
North Carolina	5.3	5.1	8.8	4.1	5.5	5.4	6.5	2.6	2.1	-0.3	27.1	4.8
North Dakota	3.7	4.1	3.0	1.9	5.6	2.8	6.0	-3.5	37.3	-4.6	34.9	0.9
Ohio	3.1	3.5	-2.9	2.9	4.6	3.9	6.8	0.4	9.0	-1.5	33.0	2.6
Oklahoma	4.8	3.7	9.1	3.2	6.6	3.8	3.8	-0.8	-1.4	-2.4	26.2	2.2
Oregon	4.6	4.9	1.8	3.9	5.7	4.9	8.0	2.2	7.1	-0.1	33.4	3.4
Pennsylvania	2.9	4.1	-4.4	2.7	3.8	3.2	7.0	-0.6	1.0	-0.6	37.2	0.3
Rhode Island	4.4	3.1	6.8	1.9	5.0	3.3	7.3	0.5	3.7	-0.7	35.1	0.9
South Carolina	5.3	5.0	6.0	5.2	6.3	5.0	6.9	0.8	6.6	1.3	25.6	2.4
South Dakota	5.5	4.5	11.4	3.9	5.9	5.1	9.0	4.3	25.9	-2.2	26.7	10.0
Tennessee	4.6	4.1	7.4	2.5	5.9	4.3	5.0	2.2	-5.8	-0.8	25.3	5.5
Texas	4.1	5.6	-2.5	3.2	5.4	4.5	4.8	0.4	-0.2	-2.0	35.2	2.5
Utah	7.5	6.7	13.7	7.2	8.2	7.1	7.8	5.9	6.6	0.9	30.6	7.6
Vermont	3.4	2.9	8.6	0.7	4.5	1.6	6.7	-0.2	1.3	-0.9	34.2	2.1
Virginia	3.6	4.1	7.0	1.6	5.9	4.2	5.9	2.6	3.7	-1.8	33.3	3.7
Washington	5.6	6.5	1.7	3.6	6.1	4.1	7.6	3.6	8.2	-0.3	34.9	4.1
West Virginia	2.0	0.3	2.1	1.9	3.1	-0.3	5.2	-2.9	6.1	-3.1	23.4	2.8
Wisconsin	3.5	3.4	3.3	3.1	4.8	4.0	5.2	0.4	11.2	-0.8	26.5	3.0
Wyoming	2.1	3.9	-0.1	-1.1	5.1	4.2	1.7	-3.2	3.2	-3.4	28.5	-0.5

CCAdj Capital consumption adjustment
IVA Inventory valuation adjustment

Table D. Compensation of Employees by Industry, United States, 2017-2020
[Percent growth rates]

Description	2017	2018	2019	2020
Farm compensation	6.3	-7.9	0.7	1.5
Forestry and logging	-4.3	4.2	-0.8	9.3
Fishing, hunting, and trapping	5.7	7.8	-1.6	1.9
Support activities for agriculture and forestry	4.1	5.6	4.0	10.4
Oil and gas extraction	-13.1	1.9	3.2	-8.0
Mining (except oil and gas)	7.6	7.9	0.0	-7.5
Support activities for mining	22.8	19.8	1.3	-31.4
Utilities	0.2	3.6	4.1	6.6
Construction of buildings	7.3	7.3	6.6	-0.2
Heavy and civil engineering construction	8.1	8.1	7.0	-0.3
Specialty trade contractors	6.7	7.0	7.2	-0.3
Wood product manufacturing	5.7	5.7	4.8	3.9
Nonmetallic mineral product manufacturing	5.2	4.3	3.5	-0.3
Primary metal manufacturing	4.5	7.0	1.0	-7.7
Fabricated metal product manufacturing	3.9	6.0	1.5	-4.4
Machinery manufacturing	4.4	6.0	1.4	-4.9
Computer and electronic product manufacturing	5.6	4.9	1.9	5.8
Electrical equipment, appliance, and component manufacturing	4.3	3.2	2.0	0.3
Motor vehicles, bodies and trailers, and parts manufacturing	4.1	5.9	0.8	-7.8
Other transportation equipment manufacturing	2.0	6.2	4.8	-2.1
Furniture and related product manufacturing	4.7	2.8	-0.9	-2.2
Miscellaneous manufacturing	4.0	4.8	2.7	-2.0
Food manufacturing	5.4	3.5	2.0	5.6
Beverage and tobacco product manufacturing	5.6	3.6	4.1	2.0
Textile mills	1.9	1.7	-2.1	-8.0
Textile product mills	2.5	2.4	-0.4	-5.5
Apparel manufacturing	-2.4	-1.7	-1.6	-13.0
Leather and allied product manufacturing	-1.3	-0.5	0.5	-3.1
Paper manufacturing	1.4	1.4	3.5	0.0
Printing and related support activities	0.3	1.2	0.5	-7.8
Petroleum and coal products manufacturing	0.0	2.4	5.4	-0.6
Chemical manufacturing	2.7	2.8	5.7	4.5
Plastics and rubber products manufacturing	5.0	4.6	2.7	0.5
Wholesale trade	4.3	2.4	2.4	0.8
Motor vehicle and parts dealers	2.9	3.3	5.3	0.1
Furniture and home furnishings stores	3.8	4.1	3.4	-3.9
Electronics and appliance stores	0.0	1.6	1.2	-1.3
Building material and garden equipment and supplies dealers	2.9	4.0	4.0	11.4
Food and beverage stores	3.2	2.5	4.6	9.5
Health and personal care stores	2.7	2.2	2.1	0.6
Gasoline stations	4.3	4.7	6.7	4.6
Clothing and clothing accessories stores	3.8	2.5	2.2	-16.4
Sporting goods, hobby, musical instrument, and book stores	0.0	-0.1	-0.3	-1.4
General merchandise stores	1.5	2.9	1.1	4.5
Miscellaneous store retailers	2.6	4.1	5.1	-3.6
Nonstore retailers	12.9	10.9	7.2	11.7
Air transportation	7.2	4.7	4.3	-6.9
Rail transportation	-0.1	5.9	-0.8	-3.8
Water transportation	1.3	2.9	5.3	-6.8
Truck transportation	3.9	7.4	7.1	-1.1
Transit and ground passenger transportation	8.2	10.1	21.8	-29.1
Pipeline transportation	5.4	2.0	10.0	-0.5
Scenic and sightseeing transportation	4.1	5.6	7.1	-38.5
Support activities for transportation	5.7	8.0	11.1	-3.0
Couriers and messengers	7.4	8.1	8.8	17.9
Warehousing and storage	10.6	12.4	6.9	18.5
Publishing industries (except internet)	6.9	10.0	9.2	9.6
Motion picture and sound recording industries	-0.6	4.4	5.9	-14.2
Broadcasting (except internet)	2.2	5.2	2.0	-3.3
Telecommunications	-1.3	-0.8	0.0	2.2
Data processing, hosting, and related services	9.5	16.7	8.1	9.4
Other information services	21.0	14.4	9.6	19.8
Monetary authorities-Central bank	5.7	8.2	2.4	5.1
Credit intermediation and related activities	6.1	3.9	5.8	10.4
Securities, commodity contracts, and other financial investments and related activities	9.9	2.4	1.5	5.1
Insurance carriers and related activities	6.0	5.4	4.5	6.0
Funds, trusts, and other financial vehicles	27.8	23.8	12.6	19.2
Real estate	6.1	7.0	7.1	3.4
Rental and leasing services	4.1	8.1	5.1	-10.9
Lessors of nonfinancial intangible assets (except copyrighted works)	10.0	-4.7	3.4	-1.3
Professional, scientific, and technical services	5.5	7.0	6.6	4.1
Management of companies and enterprises	6.5	5.5	4.9	0.1
Administrative and support services	7.0	5.4	5.4	-0.1
Waste management and remediation services	10.8	8.1	4.1	2.4
Educational services	1.0	5.1	5.4	0.6
Ambulatory health care services	4.9	5.7	5.5	1.9
Hospitals	4.0	3.9	3.8	3.3
Nursing and residential care facilities	2.2	4.4	3.4	5.9
Social assistance	6.1	6.8	8.3	6.2
Performing arts, spectator sports, and related industries	5.9	6.9	4.7	-18.4
Museums, historical sites, and similar institutions	5.0	5.9	4.3	-8.7
Amusement, gambling, and recreation industries	3.6	5.6	3.8	-20.4
Accommodation	4.1	5.0	6.1	-27.8
Food services and drinking places	5.6	5.7	5.0	-21.0
Repair and maintenance	3.7	4.4	5.0	-1.3
Personal and laundry services	6.8	5.6	2.9	-22.4
Religious, grantmaking, civic, professional, and similar organizations	3.6	5.0	4.0	6.8
Private households	-6.8	17.6	4.8	-1.9
Federal civilian	3.3	4.0	2.5	4.9
Military	1.0	-1.7	3.5	4.6
State government	3.2	3.2	3.3	2.2
Local government	2.5	4.5	2.7	1.5

Table E. Change in State Personal Income, by Component and by State and the District of Columbia, 2019-2020
 [Change from previous year (millions of dollars)]

State	2019								2020							
	Personal income	Compensation of employees	Proprietors' income with IVA and CCAdj		Dividends, interest, and rent	Personal current transfer receipts	Contributions for government social insurance	Adjustment for residence	Personal income	Compensation of employees	Proprietors' income with IVA and CCAdj		Dividends, interest, and rent	Personal current transfer receipts	Contributions for government social insurance	Adjustment for residence
			Farm	Nonfarm							Farm	Nonfarm				
United States	720,845	487,255	3,220	18,977	109,338	162,766	60,813	102	1,205,443	119,232	39,167	19,391	-36,531	1,102,037	37,997	144
Alabama	8,877	5,333	-140	-24	1,599	2,453	426	82	12,818	2,730	-126	340	-531	11,477	923	-149
Alaska	1,191	814	2	-151	227	406	101	-6	1,136	-314	44	109	-164	1,449	-6	5
Arizona	18,292	11,216	343	1,392	2,441	4,418	1,663	145	34,435	9,646	403	1,686	630	24,193	1,796	-329
Arkansas	4,437	2,541	-550	372	817	1,627	362	-7	7,845	1,850	-88	263	-538	7,075	726	9
California	112,413	83,308	-1,932	4,356	14,667	22,798	10,612	-172	219,077	44,970	5,961	-886	-2,748	177,290	5,366	-144
Colorado	18,435	13,896	344	577	2,921	2,288	1,632	41	20,002	4,607	678	333	-782	15,972	797	-8
Connecticut	6,020	3,469	68	-1,224	1,074	868	486	2,251	9,330	-168	25	-218	-1,255	11,675	144	-585
Delaware	1,227	1,309	26	-769	131	628	125	27	2,820	151	-122	33	-115	2,721	152	304
District of Columbia	667	2,761	0	-966	-79	409	246	-1,212	4,466	1,614	0	448	-214	3,432	106	-708
Florida	52,611	30,965	90	877	12,858	12,299	4,543	64	70,197	9,946	736	6,529	-601	57,265	3,665	-15
Georgia	25,103	14,799	252	3,859	3,689	4,289	1,922	137	36,288	5,230	-293	1,917	-1,271	32,258	1,478	-74
Hawaii	2,332	1,266	-2	403	434	525	294	0	4,011	-2,867	53	37	-166	6,673	-281	0
Idaho	5,153	2,326	669	664	693	1,060	327	68	7,244	2,892	1,046	-232	-17	4,155	635	36
Illinois	20,445	12,565	-841	2,794	3,562	4,316	1,926	-24	43,324	-2,209	3,348	1,177	-2,630	45,180	589	-953
Indiana	12,900	5,901	-230	2,722	1,552	3,539	1,161	577	21,078	1,742	1,842	427	-635	18,375	1,248	575
Iowa	3,592	2,395	-1,021	41	935	1,635	463	72	9,517	1,552	612	39	-523	8,202	604	239
Kansas	6,005	3,177	-53	989	867	1,422	496	99	8,501	1,361	1,153	13	-537	7,269	470	-290
Kentucky	7,889	4,268	391	754	951	1,879	301	-53	15,697	1,090	534	173	-197	15,307	885	-325
Louisiana	6,948	2,630	139	712	1,314	2,254	292	191	14,268	-2,921	264	2,216	-729	15,629	345	153
Maine	2,734	1,766	88	95	207	739	218	57	5,337	1,119	129	42	-133	4,429	261	12
Maryland	9,200	7,610	248	-3,669	1,494	2,507	895	1,904	23,124	3,355	-76	1,324	-726	19,447	400	201
Massachusetts	20,410	16,214	64	3,018	2,522	1,956	2,145	-1,218	34,241	2,323	46	-513	-835	33,290	276	206
Michigan	15,545	7,412	-86	1,171	2,634	5,540	1,115	-11	38,786	-6,000	1,511	975	-579	42,800	-128	-49
Minnesota	9,905	7,202	-810	222	1,929	2,408	1,016	-30	21,261	2	3,154	1,561	-1,166	18,180	536	66
Mississippi	3,518	1,796	35	195	327	1,363	244	46	8,652	1,159	-85	289	-299	8,098	492	-18
Missouri	11,092	7,320	578	175	1,848	2,412	891	-350	17,473	1,897	1,458	438	-733	14,932	1,144	626
Montana	2,623	1,048	218	288	533	609	106	34	4,048	1,076	560	-68	-153	3,053	300	-120
Nebraska	3,226	2,304	868	-1,132	678	860	303	-49	7,115	1,533	1,814	117	-274	4,434	495	-13
Nevada	9,135	5,031	93	1,675	1,496	1,714	851	-22	9,663	-2,745	74	-234	-471	12,741	102	401
New Hampshire	3,636	1,934	15	816	202	498	297	469	4,876	1,447	11	-215	-42	4,249	214	-361
New Jersey	22,061	12,948	235	1,046	1,882	3,703	1,614	3,862	33,433	789	89	1,721	-773	33,614	470	-1,536
New Mexico	4,007	2,503	154	364	352	919	336	53	7,064	-47	327	82	-345	7,139	195	103
New York	45,033	37,716	744	-6,037	7,002	15,529	4,133	-5,789	78,577	-10,804	558	-2,491	-3,841	92,667	-785	1,703
North Carolina	25,014	15,297	354	2,641	3,642	5,142	2,059	-3	32,772	8,198	211	578	-255	26,538	1,930	-567
North Dakota	1,598	1,190	-51	178	185	336	110	-129	2,669	-1,048	1,629	18	-465	2,224	35	346
Ohio	17,411	12,708	-733	-528	2,947	5,090	1,713	-359	40,054	1,393	1,742	1,975	-1,582	37,875	1,213	-135
Oklahoma	8,793	3,823	124	1,937	1,166	2,261	501	-17	7,185	-871	387	-725	-892	9,609	298	-24
Oregon	9,772	6,477	247	93	1,664	2,287	907	-90	17,661	3,067	1,015	353	-58	14,231	659	-289
Pennsylvania	20,824	17,286	680	-3,732	3,367	5,350	1,799	-327	51,564	-2,637	440	202	-737	53,849	167	615
Rhode Island	2,537	1,071	1	266	198	566	162	597	4,391	183	10	145	-71	4,165	45	4
South Carolina	11,879	6,441	52	862	2,252	3,013	860	121	16,130	1,076	141	917	580	13,083	443	775
South Dakota	2,516	1,112	-91	824	431	418	166	-12	4,373	1,121	1,889	-40	-258	2,022	344	-18
Tennessee	14,801	7,889	463	2,797	1,221	3,734	1,061	-240	16,796	4,418	283	-3,002	-377	16,840	1,436	70
Texas	60,899	50,226	858	-5,719	9,181	11,517	4,801	-365	74,614	3,878	1,186	-1,516	-5,923	79,569	2,780	201
Utah	11,009	6,509	130	1,464	2,270	1,500	849	-16	12,321	6,088	210	667	301	6,089	982	-51
Vermont	1,132	557	116	123	49	304	44	28	2,325	-41	46	-6	-66	2,410	59	40
Virginia	17,664	12,619	219	1,687	1,651	4,016	1,610	-917	29,655	8,207	198	882	-1,838	23,838	1,473	-158
Washington	25,584	19,019	587	29	3,456	3,985	1,585	93	36,600	11,243	1,980	1,008	-326	24,106	1,631	219
West Virginia	1,522	132	41	53	226	647	-20	403	4,005	-1,213	49	235	-367	5,075	161	387
Wisconsin	10,494	6,430	166	464	1,783	2,489	952	114	16,028	792	1,898	347	-466	14,404	740	-208
Wyoming	734	728	61	-64	-108	244	110	-17	595	-625	210	-80	-339	1,441	-13	-25

CCAdj Capital consumption adjustment
 IVA Inventory valuation adjustment

Updates to previously released estimates

Each September, BEA typically revises the preliminary estimates of annual state personal income released in March in order to incorporate the results of the annual update of the NIPAs and to incorporate state source data that are more complete and more detailed than those previously available (table F). In general, the components of personal income were revised from 1998 to 2020.

The NIPA estimate of U.S. personal income for 2020, after adjustment for differences in geographic coverage and the timing of the availability of source data, was revised down 0.4 percent (table G).⁸ This national estimate controls the state estimates.⁹ Table H shows contributions of revisions from components. U.S. personal current transfer receipts contributed 0.14 percent, nonfarm proprietors' income contributed 0.26 percent, and dividends, interest, and rent contributed 0.47 percent to this downward revision. These downward revisions were offset somewhat by a 0.53 percent upward contribution from wages and salaries, and small upward revisions to supplements to wages and salaries, farm proprietors' income, and contributions for government social insurance, contributing 0.04, 0.04 and 0.12 percent, respectively.

The unweighted average revision to 2020 personal income in the 50 states and the District of Columbia was 0.0 percent (table H). The average absolute revision was 1.1 percent.

The largest downward revisions for 2020 were for Hawaii (3.4 percent), Iowa (3.2 percent), and New Jersey (2.4 percent); the largest upward revisions were for North Dakota (3.6 percent) and South Dakota (3.5 percent). Property income (dividends, interest, and rent) and personal current transfer receipts contributed the most to the revision of personal income in Hawaii and New Jersey (table H). Farm proprietors' income and personal current transfer receipts contributed the most in Iowa. In North and South Dakota, the largest contributor to the upward revision was farm proprietors' income.

Table F. Regional Source Data Used to Estimate State Personal Income and Personal Current Taxes

Annual estimates	
Wages and salaries by industry	
In general	QCEW wage data.
Farm	USDA farm labor expense data.
Agriculture and forestry support activities	USDA farm labor expense data.
Rail transportation	RRB state payroll and employment data; Census Bureau ACS Journey to work data.
Educational services	CBP payroll data; Official Catholic Directory data.
Membership associations and organizations	CBP payroll data; RRB payroll data.
Private households	Census Bureau ACS data; Census Bureau population data.
Military	DOD personnel data; Coast Guard personnel and payroll data.
State and local government	Census Bureau Annual Survey of Public Employment and Payroll data; CES employment data.
Employer contributions for employee pension and insurance funds by industry	
Rail transportation	FRA casualties data.
State and local government	Census Bureau Annual Survey of Public Pensions contributions, pension service charges, and membership data; actuarial data from the CAFRs for a sample of state and local government retirement systems; MEPS employer contributions for health insurance data (certain states only).
All other industries	NAIC earned premium data and NASI employers cost of self insurance data; MEPS employer contributions for health insurance data (certain states only).
Employer contributions for government social insurance by industry	
All industries	Census Bureau State Government Finances data; QCEW data on contributions to unemployment insurance funds; OES data on employee wage distributions; CPS industry data on hours worked.
Proprietors' income	
Farm	USDA gross income and expense data; ACS gross rental income; USDA ARMS corporate farm income data; Census of Agriculture livestock purchased and corporate farm income data.
Nonfarm industries	IRS data on net profits of proprietorships and partnerships; USDA Rural Development net income of agricultural cooperatives; USDA RUS net margin, or profit, of cooperatives that have outstanding loans.
Residence adjustment	Census Bureau ACS Journey to work data; IRS wage data.
Dividends, interest, and rent	ACS 1-Year PUMS data; IRS income tax data on dividends, taxable interest, S Corporation distributions, gross rents and royalties, and net royalty income; OPM federal civilian retirement payments data; DOD military retirement payments data; SSA Social Security benefits data; FDIC deposits data; NCUA deposits data.
Personal current transfer receipts	SSA data on Social Security benefits and Supplemental Security Income benefits; Census Bureau state and local government finance data on disability benefits, income maintenance benefits, state workers' compensation, and education benefits; CMS medical benefits data; DOD medical benefits data; DVA veterans benefits data; USDA data on SNAP and WIC; IRS SOI tax credit data; PBGC benefits data; DOL data on unemployment benefits, black lung disability benefits, and trade adjustment; DOE Pell Grants and enrollment data; HHS data on TANF, foster care and adoption assistance, and energy assistance; Census Bureau population data; Railroad Retirement Board data on retirement and disability benefits and unemployment compensation; among others (For a complete list of source data used, see State Personal Income and Employment: Concepts, Data Sources, and Statistical Methods).
Employee and self-employed contributions for government social insurance	SSA Earnings and Employment Data for Workers Covered under Social Security and Medicare and other unpublished SSA data; California state temporary disability insurance data; Census Bureau state temporary disability insurance data; CMS supplemental medical insurance enrollment data; personal contributions for state unemployment insurance data from the states; DVA veterans' insurance premiums data.
Personal current taxes	IRS income tax data; Census Bureau quarterly tax collections and state tax collections data; Census Bureau state and local government finance data.
Quarterly estimates	
Wages and salaries by industry	
In general	QCEW wage data; CES employment data.
Transportation and warehousing	DOT payroll data.
Military	DOD personnel data; Coast Gurard payroll data.
Personal current transfer receipts	DOL unemployment rate data; CMS medical benefits data.

ACF TANF	Administration for Children and Families, Temporary Assistance to Needy Families
ACS	American Community Survey, Census Bureau
ARMS	Agricultural Resource Management Survey
CAFR	Comprehensive Annual Financial Report
CBP	County Business Patterns, Census Bureau
CES	Current Employment Statistics survey, Bureau of Labor Statistics
CMS	Centers for Medicare and Medicaid Services
CPS	Current Population Survey, Census Bureau
DOD	Department of Defense
DOE	Department of Education
DOL	Department of Labor
DOT	Department of Transportation
DVA	Department of Veterans Affairs
FDIC	Federal Deposit Insurance Corporation
FRA	Federal Railroad Administration
IRS	Internal Revenue Service

MEPS	Medical Expenditure Panel Survey, Agency for Healthcare Research and Quality
NAIC	National Association of Insurance Commissioners
NASI	National Academy of Social Insurance
NCUA	National Credit Union Administration
OASDHI	Old-Age, Survivors, Disability, and Hospital Insurance, Social Security Administration
OES	Occupational Employment Statistics, Bureau of Labor Statistics
OPM	Office of Personnel Management
PBGC	Pension Benefit Guaranty Corporation
QCEW	Quarterly Census of Employment and Wages, Bureau of Labor Statistics
RRB	Railroad Retirement Board
RUS	Rural Utilities Service
SNAP	Supplemental Nutritional Assistance Program
SSA	Social Security Administration
USDA	U.S. Department of Agriculture
WIC	Special Supplemental Nutrition for Women, Infants, and Children

Table G. Percent Revisions to Personal Income, by State and the District of Columbia, 2016–2020

State	2016	2017	2018	2019	2020
United States	-0.4	-0.6	-0.9	-0.8	-0.4
Alabama	0.0	-0.3	-0.8	-0.2	-0.9
Alaska	0.2	0.1	-0.6	-1.4	-2.0
Arizona	-0.4	-0.7	-1.1	-0.4	1.4
Arkansas	0.9	0.6	0.4	0.5	0.3
California	-2.4	-2.7	-3.3	-3.3	-1.8
Colorado	-0.3	-0.8	-1.0	-0.5	0.4
Connecticut	-1.0	-1.3	-1.2	-1.9	-1.5
Delaware	0.2	-0.1	0.4	-1.0	-1.2
District of Columbia	-1.3	-1.1	-0.7	-2.8	-0.6
Florida	0.5	0.6	0.4	1.2	0.6
Georgia	0.5	0.4	-0.1	1.2	1.2
Hawaii	-2.0	-2.2	-2.9	-2.7	-3.4
Idaho	-0.4	-0.7	-1.7	-0.4	0.3
Illinois	0.3	0.0	0.2	0.6	-0.1
Indiana	0.3	0.1	0.0	0.6	1.1
Iowa	0.0	-0.1	-1.2	-2.4	-3.2
Kansas	0.4	0.4	-0.2	-0.4	0.1
Kentucky	0.4	0.2	-0.3	0.4	1.8
Louisiana	0.6	0.5	-0.1	0.7	1.7
Maine	0.5	0.5	-0.3	-0.3	0.0
Maryland	-1.1	-1.2	-1.7	-2.4	-2.1
Massachusetts	-1.0	-1.3	-1.6	-0.9	-1.6
Michigan	0.4	0.1	-0.1	0.1	0.5
Minnesota	-0.3	-0.5	-0.6	-0.7	0.8
Mississippi	0.9	0.8	0.0	0.5	0.9
Missouri	0.3	0.2	0.4	0.7	1.0
Montana	0.6	0.3	-0.3	0.8	0.1
Nebraska	0.3	0.1	-0.6	-1.0	-0.6
Nevada	-0.2	-0.7	-1.0	0.9	0.2
New Hampshire	0.3	0.2	-0.1	0.5	1.0
New Jersey	-1.0	-0.9	-1.0	-1.1	-2.4
New Mexico	-0.3	-0.3	-0.8	-0.3	1.2
New York	-0.9	-1.3	-1.8	-2.4	-1.4
North Carolina	-0.5	-0.6	-0.9	-0.1	0.4
North Dakota	1.7	1.0	1.3	1.9	3.6
Ohio	0.6	0.4	0.1	0.1	0.7
Oklahoma	1.3	1.2	1.1	2.2	1.3
Oregon	-1.2	-1.5	-1.8	-1.4	-0.8
Pennsylvania	-0.2	-0.3	-0.1	-0.8	-0.8
Rhode Island	-0.6	-0.5	-0.4	0.3	0.0
South Carolina	0.5	0.3	-0.3	0.2	1.1
South Dakota	0.7	0.8	-0.5	1.7	3.5
Tennessee	0.1	-0.1	0.1	0.7	1.0
Texas	1.4	1.4	1.3	0.8	0.5
Utah	-0.8	-1.0	-1.3	0.3	-0.1
Vermont	0.4	0.4	0.0	0.2	0.9
Virginia	-0.6	-0.7	-1.6	-1.3	-0.7
Washington	-1.3	-1.7	-3.0	-2.7	-1.8
West Virginia	1.0	0.9	0.6	0.6	-0.3
Wisconsin	-0.1	-0.3	-0.7	-0.5	0.2
Wyoming	0.8	0.6	-1.0	-1.6	-2.2

Note. The annual revisions are calculated from the March 2020 release of State Personal Income.

Table H. Contributions to the Revision to Personal Income, by Component and by State and the District of Columbia for 2020¹

State	Percent revision	Contributions to the revisions (percentage points)							
	Personal income	Wages and salaries	Supplements to wages and salaries	Nonfarm proprietors' income	Farm proprietors' income	Dividends, interest, and rent	Personal current transfer receipts	Contributions for government social insurance	Adjustment for residence
United States	-0.4	0.53	0.04	-0.26	0.04	-0.47	-0.14	0.12	0.00
Alabama	-0.9	0.47	0.06	-0.53	0.21	0.02	-0.95	0.17	-0.03
Alaska	-2.0	0.55	0.15	-0.94	0.07	-0.73	-0.94	0.13	0.00
Arizona	1.4	0.79	0.07	0.24	0.04	-0.29	0.85	0.21	-0.06
Arkansas	0.3	0.35	0.03	-0.08	0.01	0.49	-0.33	0.24	0.04
California	-1.8	0.64	0.11	-0.28	-0.14	-2.56	0.48	0.05	0.00
Colorado	0.4	0.73	0.09	0.06	0.07	-0.56	0.14	0.13	0.00
Connecticut	-1.5	0.61	0.20	-0.82	-0.02	-1.18	-0.15	0.09	-0.03
Delaware	-1.2	0.44	0.07	-1.77	-0.03	0.60	-0.81	0.15	0.47
District of Columbia	-0.6	0.84	-0.05	-1.77	0.00	-0.86	1.47	-0.23	-0.42
Florida	0.6	0.38	-0.18	-0.65	-0.09	1.43	-0.15	0.11	-0.01
Georgia	1.2	0.51	0.12	-0.32	0.01	0.39	0.61	0.11	0.01
Hawaii	-3.4	0.04	0.41	0.23	-0.02	-2.25	-1.69	0.15	0.00
Idaho	0.3	0.69	-0.03	0.14	0.64	-0.51	-0.38	0.24	-0.01
Illinois	-0.1	0.47	0.03	-0.25	0.19	0.36	-0.67	0.12	-0.09
Indiana	1.1	0.47	0.16	0.30	0.36	0.14	-0.14	0.30	0.14
Iowa	-3.2	0.45	0.05	-0.25	-2.27	-0.36	-0.68	0.23	0.14
Kansas	0.0	0.42	-0.02	0.36	-0.86	0.18	0.29	0.18	-0.14
Kentucky	1.8	0.48	0.38	-0.04	0.31	0.04	1.13	0.31	-0.19
Louisiana	1.7	0.55	0.17	0.45	0.09	0.21	0.52	0.35	0.02
Maine	0.0	0.51	0.05	-0.17	0.14	0.01	-0.43	0.19	0.06
Maryland	-2.1	0.30	-0.03	-1.14	0.01	-1.41	-0.03	-0.02	0.14
Massachusetts	-1.6	1.05	0.11	0.38	0.00	-1.23	-1.78	0.14	0.02
Michigan	0.5	0.53	0.02	-0.17	0.17	0.21	-0.04	0.20	0.00
Minnesota	0.8	0.57	0.15	0.17	0.12	-0.17	0.06	0.18	0.03
Mississippi	0.9	0.54	0.21	-0.44	0.27	0.05	0.55	0.22	-0.05
Missouri	1.0	0.57	-0.17	-0.31	0.34	0.75	-0.06	0.24	0.12
Montana	0.1	0.54	-0.26	-0.01	0.23	0.40	-0.53	0.15	-0.17
Nebraska	-0.6	0.41	-0.25	-0.97	0.55	0.12	-0.32	0.19	0.00
Nevada	0.2	0.55	0.19	0.21	0.02	-0.41	-0.44	0.10	0.14
New Hampshire	1.0	0.89	0.02	0.55	0.00	0.04	-0.07	0.14	-0.28
New Jersey	-2.4	0.68	-0.01	0.01	0.01	-0.80	-2.18	0.09	0.01
New Mexico	1.2	0.70	0.28	0.21	0.09	-0.79	0.92	0.26	0.02
New York	-1.4	0.66	0.12	-0.80	0.02	-1.53	0.20	0.09	-0.01
North Carolina	0.4	0.32	-0.05	0.25	0.16	-0.09	0.07	0.14	-0.09
North Dakota	3.6	0.15	0.36	0.19	2.34	0.46	0.12	0.46	0.45
Ohio	0.6	0.34	-0.04	-0.17	0.22	0.41	0.02	0.14	0.01
Oklahoma	1.3	0.48	0.34	0.66	0.00	0.96	-0.87	0.26	-0.03
Oregon	-0.8	0.91	0.21	-0.28	0.27	-1.14	-0.61	0.08	-0.10
Pennsylvania	-0.8	0.51	0.02	-0.49	0.05	-0.08	-0.79	0.04	0.03
Rhode Island	0.0	0.61	0.20	0.11	0.00	-0.15	-0.77	0.05	0.02
South Carolina	1.1	0.33	-0.36	0.11	0.11	0.75	-0.02	0.05	0.22
South Dakota	3.5	0.47	-0.19	1.02	2.35	0.21	-0.10	0.24	-0.01
Tennessee	1.0	0.63	0.11	0.06	0.09	0.20	0.08	0.22	0.03
Texas	0.5	0.33	0.00	-0.70	0.07	1.22	-0.30	0.11	0.02
Utah	-0.1	0.77	-0.01	0.42	0.03	-0.13	-1.16	0.00	-0.01
Vermont	0.9	0.54	0.30	0.22	0.06	0.05	-0.02	0.28	0.06
Virginia	-0.6	0.42	0.08	0.06	0.06	-1.14	0.08	0.10	-0.10
Washington	-1.8	0.30	-0.13	-0.16	0.23	-2.13	-0.01	-0.08	0.06
West Virginia	-0.3	0.57	-0.41	-0.08	0.09	0.24	-0.67	0.30	0.30
Wisconsin	0.2	0.61	0.03	-0.18	0.25	-0.35	0.04	0.17	-0.05
Wyoming	-2.2	0.47	0.03	-0.59	0.35	-1.91	-0.22	0.22	-0.14

1. Personal income is the sum of wages and salaries, supplements to wages and salaries, nonfarm proprietors' income, farm proprietors' income, dividends, interest, and rent, and personal current transfer receipts less contributions for government social insurance plus the adjustment for residence.

Personal Income in the NIPAs and State Personal Income

The level of personal income in the national income and product accounts differs from the national total in the state personal income statistics because of differences in coverage and timing of the availability of source data.

The differences in coverage stem from different concepts of residence. For NIPA personal income, a U.S. resident has a center of economic interest in the country and resides, or expects to reside, in the country for a year or more. For state personal income, a resident is a participant in a U.S. regional economy, regardless of the individual's national citizenship or duration of residence.¹

In general, the NIPA measure of personal income is broader than state personal income:

- NIPA personal income includes the earnings of federal civilian and military personnel stationed abroad and the property income received by the federal retirement plans of these workers. The regional measure of personal income does not include this income.²
- NIPA personal income includes all income earned by U.S. citizens living abroad for less than a year. State personal income excludes the portion earned while an individual lives abroad.
- NIPA personal income includes the income of foreign nationals only if they live and work in the United States for a year or more. State personal income includes the income of resident foreign nationals working in the United States—including migrant workers—regardless of length of stay or residency.

The annual estimates of personal income in the NIPAs also diverge from the national totals of state personal income because of differences in the timing of the availability of source data. For example, farm proprietors' income in the NIPAs differs from farm proprietors' income in state personal income because the latter incorporates revised U.S. Department of Agriculture data that were not available until after the national estimate was released.

Both NIPA and state personal income include the income of U.S. residents employed by international organizations or by other countries while living in the United States, and both exclude the income of foreign nationals employed by their home governments. NIPA personal income also includes the income of foreign nationals working at international organizations in the United States.³ In addition, both measures exclude the income of private U.S. citizens living outside the country for a year or more.

Relation of Personal Income in the NIPAs and the State Personal Income Accounts

[Billions of dollars]

Component	2018	2019	2020
Personal income, NIPAs	17,706.0	18,424.4	19,627.6
Plus adjustments for:			
Coverage differences			
Federal workers abroad	-21.6	-22.8	-27.9
Wage and salary disbursements	-35.3	-38.0	-39.5
Supplements to wages and salaries ¹	-24.0	-25.6	-26.3
Dividends, interest, and rent ²	-7.7	-8.5	-9.1
Less: Personal contributions for social insurance	-6.0	-6.5	-6.7
Rest-of-the-world difference	-2.4	-2.6	-2.6
Wages of private foreign nationals in United States	13.7	15.2	11.6
Wages of private U.S. residents abroad	15.1	16.7	12.9
Use of more current source data			
Wage and salary disbursements	-1.4	-1.5	-1.3
Farm proprietors' income	-2.0	1.7	9.1
Personal current transfer receipts	-2.0	1.7	9.1
Statistical discrepancy ³	<0.1	<0.1	<0.1
Equals: State personal income⁴	17,681.2	18,402.0	19,607.4

1. Employer contributions for government social insurance and for employee pension and insurance funds for federal workers stationed abroad.
2. Investment income received by federal retirement plans that is attributed to federal workers stationed abroad.
3. Includes revisions made in the NIPAs that are not yet reflected in state personal income concerning wages of border workers and foreign nationals working for international organizations.
4. State personal income was released September 23, 2021.

1. See *State Personal Income and Employment: Concepts, Data Sources, and Statistical Methods* on BEA's Web site.

2. For a description of military coverage in state personal income, see "New Treatment of State Estimates of Military Compensation," *Survey* 85 (October 2005): 116.

3. For more information on the treatment of border workers in the residence adjustment, see *State Personal Income and Employment: Concepts, Data Sources, and Statistical Methods*.

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The estimates of wages and salaries, supplements to wages and salaries, farm proprietors' income, personal current transfer receipts, the adjustment for residence, taxes on production and imports, and personal current tax receipts were prepared by the Compensation Branch, under the supervision of Marcelo Yoon, Chief. Major responsibilities were assigned to Alexander Adams, Kendra Asher, Peter Battikha, Michael Berry, and John Laffman. Contributing staff members were Suet Boudhraa, John Broda, Ernie Enriquez, Terence Fallon, David Guo, Hong Han, Elizabeth McCormack, Paul Medzerian, Russell Moncrief, Krishna Parajuli, Jesse Park, Ross Stepp, Troy Watson, and Nicholas Wetzler.

The estimates of GDP by state, nonfarm proprietors' income, property income (personal dividends, interest, rents and royalties), and employee contributions for government social insurance were prepared by the Regional GDP Branch, under the supervision of Cliff Woodruff, Chief. Major responsibilities were assigned to Brian Maisano, Matthew von Kerczek, and Zheng Wang. Contributing staff members were Michael Bentley, Lam Cao, Taylor Grant, Solomon Kublashvili, Toan Ly, W. Timothy McKeel, JD Montgomery, Todd Siebeneck, Robert Tate, and Albert Yoon.

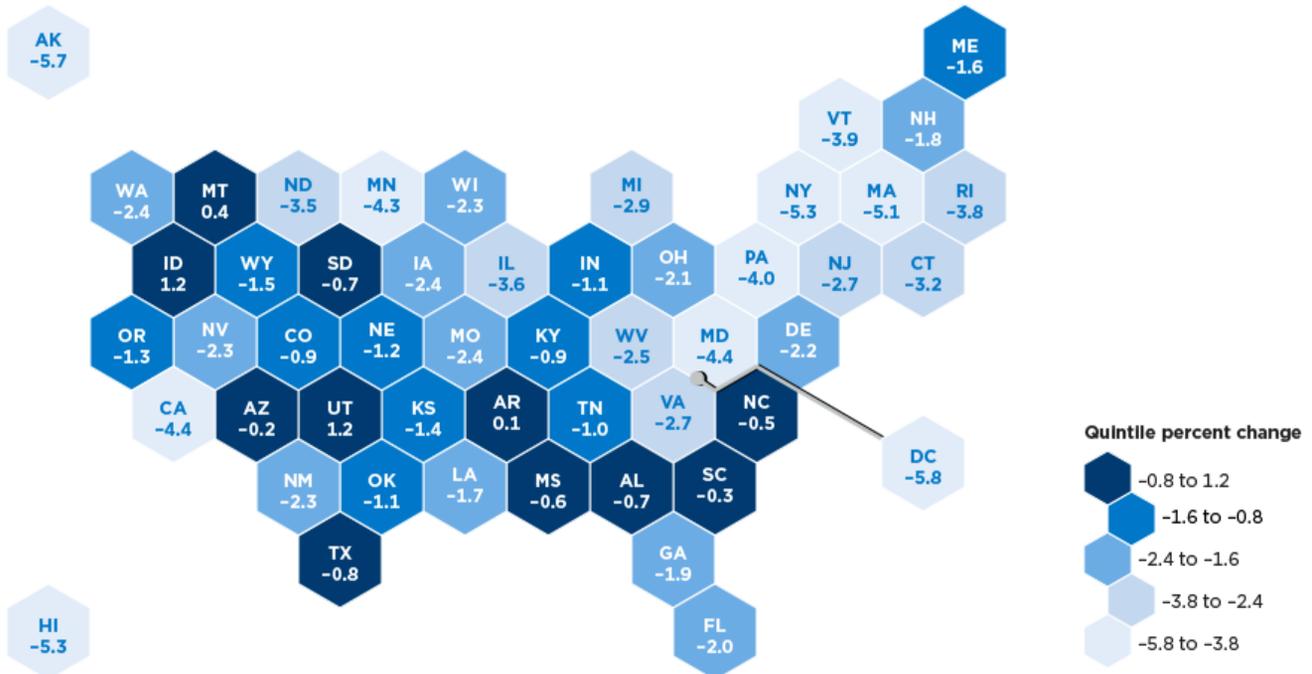
The quarterly estimates of state personal income were prepared by John Laffman, Brian Maisano, Alex Adams, and Kendra Asher under the supervision of Matt von Kerczek.

The public use tabulations and data files were assembled, and the tables were prepared by the Data and Administrative Systems Group, under the direction of Elizabeth Cologer and Nicholas Empey. Major responsibilities were assigned to Jeffrey Newman, Michael Paris, and Callan Swenson. Contributing staff members were Melanie Carrales, Jake Dillion, and Jonas Wilson.

Personal Consumption Expenditures by State for 2020

In October 2021, BEA released current-dollar statistics on personal consumption expenditures (PCE) by state for 2020. PCE fell 2.6 percent nationwide in 2020, falling in all states and the District of Columbia except for small increases in Arkansas, Idaho, Montana, and Utah. PCE decelerated in all states and the District of Columbia. The percent changes ranged from a low of -5.8 percent in the District of Columbia to a high of 1.2 percent in Utah (chart 8).

Chart 8. Percent Change in Personal Consumption Expenditure by State



U.S. Bureau of Economic Analysis

PCE by state is a household consumption measure that reflects the value of the goods and services purchased by, or on behalf of, households by state of residence. These statistics on households provide an indication of economic well-being as well as information on consumption patterns across states and over time. For example, the statistics show how households allocate their spending between goods and services or between necessities and discretionary items or how consumers adjust their spending to changes in the economy. As a more specific example of this concept, detailed information on PCE by category shows that in 2020, consumption of gasoline and other energy goods in Utah decreased from its 2019 level by \$922.3 million and consumption of food services and accommodations decreased by \$1.0 billion, while consumption of food and beverages purchased for off-premises consumption increased by \$995.7 million. This is consistent with a story of reduced travel and increased social distancing. One may use these figures to determine the extent to which spending on goods and services in these categories was affected in different states and the District of Columbia during a year in which the COVID-19 pandemic was a dominant theme.

The states for which PCE had the largest percent change from 2019 to 2020 include Arizona (-0.2 percent), Arkansas (0.1 percent), Idaho (1.2 percent), Montana (0.4 percent), South Carolina (-0.3 percent), and Utah (1.2 percent). This list includes only states in the Rocky Mountain, Southwest, and Southeast regions. (See table I.)

PCE declined the most in Alaska (-5.7 percent), California (-4.4 percent), the District of Columbia (-5.8 percent), Hawaii (-5.3 percent), Maryland (-4.4 percent), Massachusetts (-5.1 percent), Minnesota (-4.3 percent), and New York (-5.3 percent). This list includes multiple states in the Mideast region and in the Far West region, as well as one in each of the Great Lakes and New England regions.

Table I. Percent Change in Total Personal Consumption Expenditures, by State and the District of Columbia, 2019–2020
[Percent change]

State	2019	2020
United States	3.7	-2.6
Alabama	4.0	-0.7
Alaska	3.1	-5.7
Arizona	5.2	-0.2
Arkansas	2.7	0.1
California	4.7	-4.4
Colorado	5.2	-0.9
Connecticut	2.1	-3.2
Delaware	3.6	-2.2
District of Columbia	3.5	-5.8
Florida	4.3	-2.0
Georgia	4.0	-1.9
Hawaii	3.9	-5.3
Idaho	4.3	1.2
Illinois	2.6	-3.6
Indiana	2.5	-1.1
Iowa	2.1	-2.4
Kansas	3.0	-1.4
Kentucky	2.7	-0.9
Louisiana	3.0	-1.7
Maine	3.4	-1.6
Maryland	2.5	-4.4
Massachusetts	3.5	-5.1
Michigan	2.8	-2.9
Minnesota	2.9	-4.3
Mississippi	1.8	-0.6
Missouri	3.0	-2.4
Montana	3.5	0.4
Nebraska	2.6	-1.2
Nevada	4.8	-2.3
New Hampshire	3.6	-1.8
New Jersey	3.4	-2.7
New Mexico	2.0	-2.3
New York	3.9	-5.3
North Carolina	5.0	-0.5
North Dakota	2.1	-3.5
Ohio	2.7	-2.1
Oklahoma	2.2	-1.1
Oregon	4.5	-1.3
Pennsylvania	3.1	-4.0
Rhode Island	2.8	-3.8
South Carolina	4.3	-0.3
South Dakota	3.8	-0.7
Tennessee	4.1	-1.0
Texas	4.0	-0.8
Utah	5.4	1.2
Vermont	2.5	-3.9
Virginia	2.9	-2.7
Washington	4.5	-2.4
West Virginia	2.3	-2.5
Wisconsin	2.8	-2.3
Wyoming	2.0	-1.5
Net expenditures abroad by U.S. residents ¹	9.3	-2.8

1. Net expenditures abroad by U.S. residents consists of government and private employees' expenditures abroad less personal remittances in kind to nonresidents.

The District of Columbia, in which PCE dropped by 5.8 percent, was impacted by the pandemic particularly hard. The largest sources of the decline in PCE were expenditures on services. Transportation services contributed 1.5 percentage points to the decline, while reductions in food and accommodation services contributed 3.4 percentage points. The other major category in which PCE decreased in the District of Columbia was social services and religious activities, contributing 1.4 percentage points. Together, these three categories accounted for a decline of 6.4 percent, which was partially reversed by the remaining categories, which together contributed an increase in PCE of 0.6 percent. The categories contributing to the large decline in PCE were among those affected most by the COVID-19 pandemic.¹⁰

PCE in Utah, which increased by 1.2 percent, balanced an increase in spending on goods with a decrease in spending on services. Spending on goods contributed 2.5 percentage points to the increase in PCE, while spending on services contributed a reduction of 1.3 percentage points. Reductions in services spending were spread among health care and social assistance (0.8 percent), transportation services (0.7 percent), recreation services (1.0 percent) and food services and accommodation (0.8 percent). The categories that drove a large decrease in spending in the District of Columbia contributed less to the change in spending on Utah, and an increase in spending on goods more than made up for the decline in services consumption.

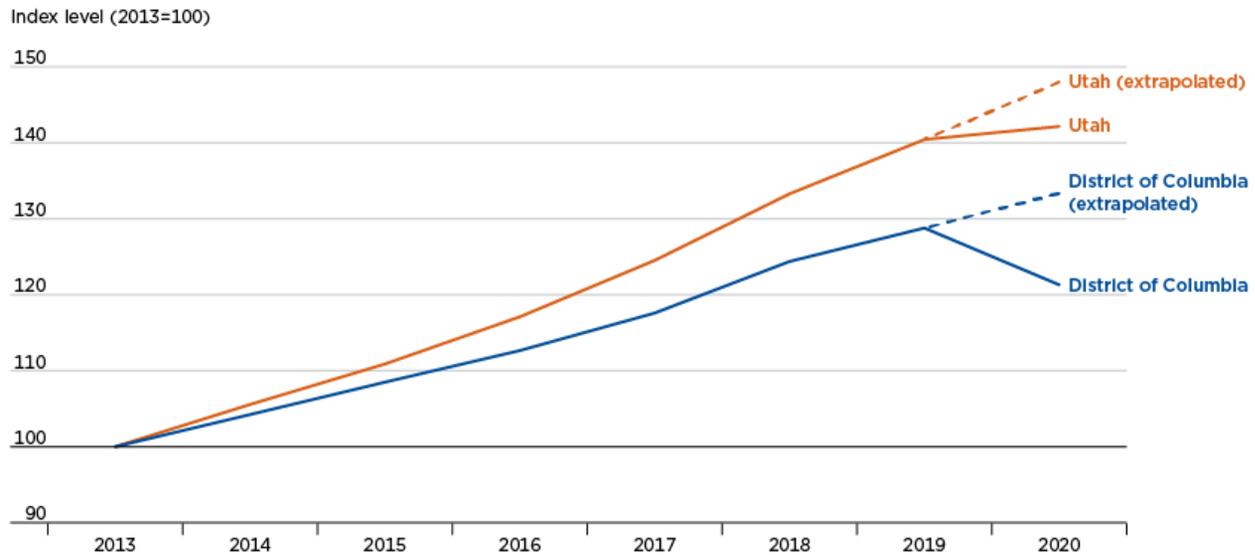
Table J. Population Growth Rates, Selected States

State	Population growth rate
Arizona	1.78%
Arkansas	0.32%
Idaho	2.12%
Montana	0.98%
South Carolina	1.17%
Utah	1.45%
Alaska	-0.33%
California	-0.18%
District of Columbia	0.64%
Hawaii	-0.61%
Maryland	0.01%
Massachusetts	-0.02%
Minnesota	0.31%
New York	-0.65%

Source. U.S. Census Bureau July 1, 2020, population estimates

Table J shows population growth rates for Utah and the District of Columbia. Typically states with the largest growth in PCE tend to have faster-growing populations, while states with slower growth or declines in PCE tend to have slow-growing or declining populations. Nevertheless, population growth trends do not explain all differences in PCE growth. Chart 9 shows PCE in Utah and in the District of Columbia, indexed to 2013. The solid lines represent indexed PCE, while the dotted lines represent PCE extrapolated for 2020 based on the previous year's growth rate. This graph shows that PCE growth in Utah has outpaced PCE growth in the District of Columbia over this period. However, it also suggests that the relatively larger increase in spending in Utah in 2020 was not exclusively due to differences in trends, since PCE in Utah fell less far below trend in 2020 than did the District of Columbia.

Chart 9. Index of Personal Consumption Expenditures, Utah and the District of Columbia



U.S. Bureau of Economic Analysis

Changes to concepts and methods

Improvements in methods and the addition of new source data resulted in revisions to personal consumption expenditures for 1997–2019. This first major improvement to methods relates to improved measurement of housing services, which BEA now computes using data about individual housing units from the American Community Survey.¹¹ In addition to improving the accuracy and reliability of BEA housing services measures, the new measures provide a more streamlined integrated approach to estimating housing services across BEA's national and regional programs. The second major improvement is use of new source data to conduct the residency adjustment (see box “Personal Consumption Expenditures by State,” below), wherein the PCE by state program applies adjustment factors to the detailed PCE categories rather than to more aggregate categories. The new source data used for residence adjustment are public use microdata from the Consumer Expenditures Survey and credit card spending flows data from Fiserv.¹² Additionally, there were improvements in methods and data for the measurement of expenditures on financial services and utilities. All three improvements provide additional accuracy and also allows the publication of data at a finer level of industry detail.

The newly introduced methods provide data users 113 publication lines and detailed information at the NIPA table 2.4.5 level and 124 publication lines and detailed information at the NIPA table 2.5.5 aggregation level by function. New tables are available from 1997 to 2020 for 50 states and the District of Columbia.

Revisions

The October release of PCE by state included updated statistics for 1997–2019. The updated statistics incorporated the results of the 2021 annual update of the NIPAs, newly available and revised regional source data, and improvements in concepts and methods.

New source data incorporated include (years affected in parentheses):

- Quarterly Census of Employment and Wages (BLS) (2016–2020)
- U.S. Census Bureau Census American Community Survey 1-year PUMS file (2001–2019)
- Consumer Expenditure Survey (2015–2019)
- Fiserv Card Transaction data (2015–2019)
- Other source data:
 - Census of Government Finances (2016–2019)
 - Data from the Federal Deposit Insurance Corporation (2020), the National Credit Union Administration (2020), and the National Association of Insurance Commissioners (2020)
 - United States Department of Agriculture/Economic Research Service (2019)
 - Bureau of Transportation Statistics (2020), National Association of Rail Passengers (2020)
 - BEA Employment (2016–2020)

Current-dollar national PCE was revised down in 2016 (–0.6 percent), 2017 (–0.8 percent), 2018 (–0.6 percent), and 2019 (–0.8 percent) (table K). Between 2016 and 2019, the largest upward revision at the state level was for the District of Columbia, which was revised up in each year between 6.1 percent in 2016 and 6.9 percent in 2019. The largest downward revisions were in Nevada (–7.9 percent in 2016) and in South Dakota (–7.8 percent in 2018 and 2019). The average unweighted revision across states and the District of Columbia ranged from 0.7 percent to 0.9 percent between 2016 and 2019.

Table K. Percent Revisions to Total Personal Consumption Expenditures, by State and the District of Columbia, 2016–2019

State	Percent revision			
	2016	2017	2018	2019
United States	-0.6	-0.8	-0.6	-0.8
Alabama	1.1	1.4	1.8	2.1
Alaska	1.6	1.1	1.7	1.9
Arizona	3.6	3.1	3.4	3.9
Arkansas	0.3	-0.2	-0.5	-1.2
California	-1.0	-1.2	-0.9	-1.3
Colorado	2.5	2.6	2.4	2.4
Connecticut	-4.0	-4.1	-4.4	-5.1
Delaware	2.4	1.9	2.5	2.8
District of Columbia	6.1	6.4	6.6	6.9
Florida	4.7	4.7	5.1	4.7
Georgia	2.4	2.3	2.7	3.0
Hawaii	-4.4	-4.6	-4.4	-4.3
Idaho	-4.3	-4.4	-3.5	-3.7
Illinois	-1.7	-2.1	-1.7	-1.9
Indiana	-1.0	-0.9	-0.5	-1.3
Iowa	-1.6	-2.1	-1.8	-1.8
Kansas	0.3	0.4	1.0	1.3
Kentucky	1.4	1.5	2.0	1.7
Louisiana	2.0	2.0	2.0	1.9
Maine	-2.6	-2.1	-2.4	-2.4
Maryland	-1.8	-2.3	-1.9	-2.3
Massachusetts	-2.4	-2.5	-2.6	-2.6
Michigan	0.8	1.0	1.6	1.4
Minnesota	-1.0	-1.0	-1.0	-1.3
Mississippi	1.7	0.8	0.7	0.3
Missouri	-0.1	-0.5	-0.2	-0.5
Montana	0.5	0.7	1.0	0.5
Nebraska	-0.4	-0.6	-0.1	-0.2
Nevada	-7.9	-7.2	-6.3	-5.3
New Hampshire	-3.3	-3.0	-2.9	-3.0
New Jersey	-4.6	-4.9	-4.4	-4.8
New Mexico	-2.5	-2.2	-2.1	-2.4
New York	-4.8	-4.8	-4.7	-4.9
North Carolina	4.7	4.5	4.5	4.8
North Dakota	-1.5	-2.6	-3.9	-4.6
Ohio	-3.8	-4.5	-4.6	-4.7
Oklahoma	-0.6	-0.9	-0.7	-1.4
Oregon	-2.8	-2.3	-2.0	-1.9
Pennsylvania	0.5	0.3	0.6	-0.1
Rhode Island	-4.5	-4.9	-5.0	-5.3
South Carolina	5.2	5.4	5.6	5.9
South Dakota	-7.3	-7.4	-7.8	-7.8
Tennessee	2.1	1.7	1.5	1.6
Texas	0.8	0.5	0.2	-0.2
Utah	-4.8	-4.8	-5.0	-5.3
Vermont	-1.1	-1.4	-0.8	-0.2
Virginia	-4.2	-4.8	-4.6	-5.0
Washington	-0.9	-0.9	-0.4	-1.2
West Virginia	2.2	1.8	2.4	2.0
Wisconsin	-3.2	-3.2	-2.7	-2.7
Wyoming	-0.1	-0.5	-1.2	-1.8
Net expenditures abroad by U.S. residents ¹	0.0	0.0	0.8	0.7

Note. Percent revision from preceding period was calculated from unrounded data. Expenditures may not sum to higher level aggregates because of rounding.

1. Net expenditures abroad by U.S. residents consists of government and private employees' expenditures abroad less personal remittances in kind to nonresidents.

Personal Consumption Expenditures by State

Concepts and definitions

PCE by state is the regional counterpart of national PCE, which measures the value of the goods and services purchased by, and on behalf of, households. PCE by state measures household consumption based on households' state of residence in the 50 states and the District of Columbia. Examples of purchases made on behalf of households include health care services paid for by Medicare and Medicaid and education services provided by nonprofit institutions or the government.

In addition to out-of-pocket household purchases and purchases made by third parties on behalf of households, PCE by state also includes imputations for the consumption of goods and services without market transactions. The two main imputations in PCE by state are owner-occupied housing and financial services with no explicit charge.

The housing imputation approximates the value of housing services provided by owner-occupied housing. This imputation ensures that the treatment of owner-occupied housing is comparable with that of tenant-occupied housing, which is valued by rent paid. Because homeowners consume the service of shelter, regardless of having a mortgage, this imputation represents the rent homeowners would pay if they rented the home they own.

The financial services imputation approximates the value of financial services that households receive either without payment or for a small fee, which does not reflect the full value of the service. Examples of these services include no-additional-fee checking accounts, recordkeeping, and safekeeping of deposits.

Finally, PCE by state includes the net expenditures of nonprofit institutions serving households (NPISHs). Since the services by NPISHs are typically provided to households for less than the cost of the service, these net expenditures represent the value of the services that is unaccounted for by households' out-of-pocket purchases.¹

PCE by state statistics are consistent with BEA national PCE statistics, with respect to concepts and definitions, and with BEA regional income statistics, with respect to residency. The latter allows for meaningful comparisons of household income and consumption within a given geography.

There are minor differences in coverage between the regional and national PCE statistics, which stem from differences in residency definitions across these statistics.² PCE by state excludes the net expenditures abroad by U.S. residents, which consist of government and private employees' expenditures abroad less personal remittances in kind to nonresidents.³ These expenditures are included in national PCE, but they cannot be attributed to a particular state. However, PCE by state does include the travel expenditures abroad by U.S. residents.

Residency adjustments

Residency definitions are important to the regional economic accounts to align measures of income and consumption within a given geography. PCE by state statistics use the residency concept of regional income statistics so state expenditures correspond to the same population used to measure state personal income.

For regional income statistics, a resident is considered a participant in a regional economy regardless of national allegiance or duration of residence. Regional income statistics exclude the income earned by U.S. residents living abroad but include the income earned by foreign nationals working in the United States. PCE by state also excludes net expenditures of U.S. residents abroad; however, PCE by state includes the travel expenditures abroad by U.S. residents.

Residency adjustments are made to both regional income and PCE statistics; however, these adjustments serve different purposes. For regional income statistics, a residence adjustment is made to reallocate income earned in places of work other than the recipients' place of residence. For the PCE by state statistics, a residency adjustment is made to reallocate expenditures made in states other than the households' state of residence.

1. For more information, see "[Chapter 5. Personal Consumption Expenditures](#)" in Concepts and Methods of the U.S. National Income and Product Accounts on the BEA website.

2. For a more detailed discussion on residency in the national and regional economic accounts, see Christian Awuku-Budu, Ledia Guci, Christopher A. Lucas, and Charles Ian Mead, "[Prototype Personal Consumption Expenditures by State](#)," *Survey* 94 (September 2014).

3. In 2019, the net expenditures abroad by U.S. residents were 0.08 percent of national total PCE.

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1. See Dunn, Abe, Kyle Hood, and Alexander Driessen, “[Measuring the Effects of the COVID-19 Pandemic on Consumer Spending Using Card Transaction Data](#),” BEA Working Paper Series, WP2020-5, April 2020.
2. See, for example, Friesen, Garth “[No End In Sight For The COVID-Led Global Supply Chain Disruption](#),” *Forbes*, September 3, 2021.
3. See “[The 2021 Annual Update of the National Income and Product Accounts](#),” *Survey of Current Business* 101 (August 2021).
4. See [How will the expansion of unemployment benefits in response to the COVID-19 pandemic be recorded in the NIPAs?](#), [How are federal economic impact payments to support individuals during the COVID-19 pandemic recorded in the NIPAs?](#), and [How does the federal response to the COVID-19 pandemic affect BEA's estimates of personal interest payments?](#) for additional details.
5. See <https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm>.
6. The Coronavirus Food Assistance Program, initially established by the CARES Act, provides direct support to farmers and ranchers where prices and market supply chains have been impacted by the COVID-19 pandemic.
7. The Paycheck Protection Program, initially established by the CARES Act, provides forgivable loans to help small businesses and nonprofit institutions make payroll and cover other expenses. It also provides funding to reimburse private lending institutions for the costs of administering these loans. For more information, see [How does the Paycheck Protection Program impact the national income and product accounts \(NIPAs\)?](#)
8. For more information about the adjustments, see the box “[Personal Income in the NIPAs and State Personal Income](#).”
9. The components of NIPA personal income are estimated independently of the components of state personal income, often using data sources that are not available for states. To reconcile the sum of state estimates with the adjusted NIPA estimates, the state estimates are adjusted proportionately. In other words, the adjusted NIPA estimates control the sum of the state estimates.
10. See Dunn, Abe, Kyle Hood, and Alexander Driessen, “[Measuring the Effects of the COVID-19 Pandemic on Consumer Spending Using Card Transaction Data](#),” BEA Working Paper Series, WP2020-5, April 2020.
11. See Rassier, Dylan G., Bettina H. Aten, Eric B. Figueroa, Solomon Kublashvili, Brian J. Smith, and Jack York (2021), “[Improved Measures of Housing Services for the U.S. Economic Accounts](#),” *Survey of Current Business*, May 2021.
12. A credit card intermediary company that provides detailed information on location of the consumer along with location of the firms.