

RESEARCH REPORT

Strong Tax Revenue Growth in the First Quarter of 2021, but Tax Volatility and Fiscal Uncertainties Continue

State Tax and Economic Review, 2021 Quarter 1

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Get Real-Time Data

The *State Tax and Economic Review* is the preeminent source of data and analysis on state tax collections. The Urban Institute's State and Local Finance Initiative regularly collects data and information from all 50 states, uses this information to adjust national and state data from the US Census Bureau, then provides the most timely, accurate, and in-depth look at how states are faring.

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[Monthly State Government Tax Revenue Data](#)

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Data from 41 states with broad-based income taxes from 2010 to present for the following components of personal income taxes: withholding, estimated payments, final payments, refunds, and total net personal income taxes.

[Quarterly State Government Tax Revenue Data](#)

Data from all states from 2010 to present on tax revenue from the individual income tax, corporate income tax, general sales tax, and motor fuel tax.

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Data from nearly all states from fiscal year 2015 onward for actual revenue collections and revenue forecasts for the individual income tax, corporate income tax, and general sales tax.

[Annual State and Local Government Gambling Revenue Data](#)

Data from all states for fiscal year 2000 onward for revenues collected on various types of gambling, including lottery, pari-mutuels, casinos and racinos, and video games.

[Monthly State Government Marijuana Tax Revenue Data](#)

Data from all states that tax sales of recreational marijuana from inception of the tax to present.

Executive Summary

- **State and local government tax revenues** from major sources—personal income, corporate income, sales, and property taxes—were 10.2 percent higher in the first quarter of 2021 than in the prior year. Their growth was stronger than the 2.5 percent average annual year-over-year growth rate for the prior four quarters. However, there is still a large variation in performance across the states. The COVID-19 pandemic had a very uneven impact on state and local government revenues, and the revenue and economic recovery from the pandemic-induced recession is also uneven across different states.
- **State government tax revenues** from major sources showed year-over-year growth of 12.3 percent in the first quarter of 2021, which is much stronger than the 2.8 percent average growth rate for the prior four quarters, though patterns in the earlier period were odd because of changes in tax deadlines. Growth in the first quarter of 2021 reflects continued recovery from the pandemic-induced recession. Revenue growth rates varied considerably among major revenue sources:
 - » **State personal income tax revenues** grew by \$18.9 billion or 18.4 percent in the first quarter of 2021 compared with the first quarter of 2020, but growth in the median state was weaker, at 15.5 percent. State personal income tax revenues showed extreme volatility in the prior quarters, in part because of federal and state policy decisions related to the pandemic, changing revenue deadlines, and behavioral responses to changing investor expectations following the 2020 election. State personal income tax revenues increased 4.7 percent for the second quarter of 2020 through the first quarter of 2021 combined, compared with the same period in the prior year.
 - » **State sales tax revenues** grew by \$2.7 billion or 3.2 percent in the first quarter of 2021, which contrasts with the 0.9 percent average decline for the prior four quarters. States saw steep declines in sales tax revenues in the second quarter of 2020, primarily because the pandemic led individuals, businesses, and governments to take actions that dramatically reduced business activity. State sales tax revenues had seen increases before the onset of the COVID-19 pandemic as states expanded sales tax rules to include collection of taxes from online sales. The ability of states to collect sales taxes on e-commerce transactions propped up sales taxes in many states during the pandemic as many consumers switched from in-person to online shopping. Despite

the rebound in revenues for the final quarters following the pandemic, cumulative state sales tax revenues still declined 1.3 percent for the period from the second quarter of 2020 through the first quarter of 2021 combined, compared with the same period a year earlier.

- » **State corporate income tax revenues** grew by \$3.1 billion or 30.7 percent in the first quarter of 2021 compared with the same quarter in 2020. As with personal income taxes, growth in the median state was weaker, at 24.4 percent. State corporate income tax revenues were 4.4 percent higher for the second quarter of 2020 through the first quarter of 2021 combined, compared with the same period in the prior year.
- **Local government tax revenues** from major sources showed year-over-year growth of 7.8 percent for the first quarter of 2021, which was stronger than the 3.4 percent average growth rate for the prior four quarters. Year-over-year growth in local government tax revenues from major sources was 4.7 percent for the second quarter of 2020 through the first quarter of 2021 combined, compared with the same period a year earlier.
 - » **Local property tax revenues**, the largest source for local government revenues, increased 8.5 percent year over year for the first quarter of 2021, which was stronger than the 3.7 percent average growth rate for the prior four quarters. Year-over-year growth in local government property tax revenues was 5.3 percent for the 12-month period from the second quarter of 2020 through the first quarter of 2021 combined, compared with the same period a year earlier.
- **Preliminary data for the second quarter of 2021** indicate skyrocketing year-over-year growth in overall state tax revenue collections as well as in major sources of tax revenues: personal income, corporate income, and sales taxes. The large growth is predominantly a mirror image of the freefall declines in the prior year caused by the pandemic and by delayed income tax filing due dates, which shifted revenues from the second quarter of 2020 into the third quarter of 2020. Revenue growth in the second quarter of 2020 was much weaker compared with the same quarter in 2019.
 - » **State personal income tax** collections grew 78.7 percent in the second quarter of 2021 compared with the same period a year earlier. Growth was 18.2 percent compared with the second quarter of 2019.
 - » **State sales tax** collections grew 41.4 percent in the second quarter of 2021 compared with the same period a year earlier. Growth was 21.7 percent compared with the second quarter of 2019.

- » **State corporate income tax** collections grew 176.9 percent in the second quarter of 2021 compared with the same period a year earlier. Growth was 46.9 percent compared with the same quarter in 2019.
- **Economic factors** driving revenue growth showed a positive, if mixed, picture for the first quarter of 2021, with house prices soaring but other economic indicators still weak following the pandemic-induced recession. State economic performance plummeted last spring as governments, businesses, and individuals took actions to curtail the spread of the pandemic across the nation. Some sectors have improved recently, but economic activity is increasing less dramatically than it decreased in the second quarter of 2020.
 - » Real **gross domestic product** (GDP) increased 0.4 percent for the first quarter of 2021 compared with the same quarter in 2020, which preceded three consecutive quarters of decline on a year-over-year basis. Current figures indicate a double-digit year-over-year growth in GDP in the second quarter of 2021 compared with declines last spring.
 - » The seasonally adjusted **unemployment rate** was 6.2 percent in the first quarter of 2021, which was higher than unemployment rates in the first quarter of 2020 but a substantial improvement over the much higher unemployment rates observed in the rest of 2020. However, the average unemployment rate in the first quarter of 2021 masks variable rates of unemployment across different groups of workers and different states.
 - » The year-over-year decline in **employment** was 6.1 percent for the first quarter of 2021. All states except Idaho and Utah reported employment declines in the first quarter of 2021 compared with a year earlier. Overall employment growth had slowed even before the onset of the COVID-19 pandemic, and it continued to fall following the onset of the pandemic although some sectors have improved since then.
 - » Real **personal consumption expenditures** increased 1.6 percent for the first quarter of 2021 compared with the same quarter a year earlier after three consecutive quarters of decline. Declines in personal consumption spending over that period were largely because of declines in spending on services and energy goods.
 - » **House prices** increased 7.2 percent in nominal terms for the first quarter of 2021 compared with a year earlier, which was the strongest growth in house prices since the second quarter of 2006. All 50 states reported year over year growth in house prices in the first quarter of 2021, with four states reporting double-digit growth. However, average house prices in Connecticut, Illinois, and Maryland are still below their pre-Great Recession peaks.

Trends in State and Local Revenues

The COVID-19 pandemic caused an unprecedented economic shock across the world. As a result, state and local government tax revenues saw steep declines in the spring of 2020. Some of the revenue losses were in response to government actions that deferred revenue collections to a later period; others were caused by changes in underlying economic factors.

In the past few months, most state tax revenues have rebounded relative to what was experienced in the spring of 2020. This is in part because of federal aid provided early in the pandemic and the ability of some sectors of the economy to continue and even thrive despite remote work. However, we expect the impact of the COVID-19 pandemic on state and local government tax revenues to be ongoing and to differ widely across states and localities depending on economic conditions, government responses, and (most importantly) public health conditions. Although some states have seen state revenues bounce back and even exceed prior levels, others have not. The American Rescue Plan Act (ARPA) enacted in March 2021 will further cushion state and local budgets and should help protect recent signs of economic recovery. However, states' fiscal needs and recovery paths are still uncertain because of changes in consumer behavior in response to the pandemic and because of public health and economic risks associated with the new variants of the novel coronavirus.

Even before the pandemic, state and local tax revenues had become increasingly volatile and sensitive to economic, policy, and behavioral changes. State and local government tax revenues fluctuated wildly after the passage of the Tax Cuts and Jobs Act of 2017 (TCJA), as discussed in previous *State Tax and Economic Review* quarterly reports. Growth in state and local government tax revenues had finally normalized in the second half of 2019, but that did not last as the COVID-19 pandemic spread to the United States.

[Table 1](#) shows state and local government tax revenues from major sources for the first quarter of 2020 and the first quarter of 2021 as well as the nominal percentage change between both quarters and the average quarterly year-over-year growth in the prior four quarters. [Table 1](#) also shows revenues in the second quarter of 2020 through the first quarter of 2021 combined as well as the nominal percentage changes from a year ago. Overall, states and localities reported solid revenue growth in the first quarter of 2021. Revenues in the second and third quarters of 2020 were especially volatile given the shifting of deadlines for filing income taxes and how delayed income tax revenues were accounted for, but this displacement did not greatly affect revenues in the fourth quarter of 2020 and the first quarter of 2021.

Major findings include the following:

- **State and local government tax revenues** from major sources grew 10.2 percent in the first quarter of 2021 compared with a year earlier, which is a substantial improvement compared with the average quarterly year-over-year growth rate of 2.5 percent in the prior four quarters. As noted, growth in the first quarter of 2021 reflects continued recovery from the pandemic-induced recession. State and local revenues in the second quarter of 2020 through the first quarter of 2021 combined increased 3.4 percent in nominal terms compared with the same period a year earlier.
- **State government tax revenue** from major sources grew 12.3 percent in the first quarter of 2021 relative to a year earlier, which is substantially stronger than the average year-over-year growth rate of 2.8 percent observed for the prior four quarters. State government tax revenues from major sources increased 2.2 percent in the second quarter of 2020 through the first quarter of 2021 combined, compared with the same period a year earlier. The growth in **state personal income tax** revenues was 18.4 percent for the first quarter of 2021 compared with the first quarter of 2020. This is substantially stronger than the average quarterly year-over-year growth of 6.1 percent for the prior four quarters and the year-over-year growth of 4.7 percent in the second quarter of 2020 through the first quarter of 2021 combined. **State corporate income tax** revenues increased 30.7 percent for the first quarter of 2021 compared with a year earlier, which is substantially stronger than the 4.4 percent growth in the second quarter of 2020 through the first quarter of 2021 combined compared with the same period a year earlier. **State sales tax** revenue collections increased 3.2 percent for the first quarter of 2021 compared with the first quarter of 2020. However, average sales tax revenues declined 1.3 percent in the second quarter of 2020 through the first quarter of 2021 combined, compared with the same period a year earlier.
- **Local government tax revenue** from major sources grew 7.8 percent from a year earlier in the first quarter of 2021, which is stronger than the 3.4 percent average quarterly year-over-year growth rate observed for the prior four quarters. Year-over-year growth in local government tax revenues from major sources was 4.7 percent in the second quarter of 2020 through the first quarter of 2021 combined. **Local property taxes**, the single largest source of local government tax revenues, increased 8.5 percent in the first quarter of 2021 compared with the prior year; average quarterly year-over-year growth was 3.7 percent for the prior four quarters. Year-over-year growth in local government property tax revenues was 5.3 percent in the second quarter of 2020 through the first quarter of 2021 combined. **Local sales taxes** increased 3.3 percent for the first quarter of 2021 compared with the level a year earlier. **Local personal income taxes** increased 8.7 percent and **local corporate income taxes** increased 7.8 percent in the first quarter of 2021, but these constitute a relatively small share of local revenues (less than 10 percent in a typical quarter) and are concentrated in a few states.

TABLE 1

State and Local Government Tax Revenue Trends

Tax source	2020 Q1	2021 Q1	Y-O-Y % change	Average quarterly Y-O-Y growth rate, prior four quarters (%)	2019 Q2 through 2020 Q1	2020 Q2 through 2021 Q1	Y-O-Y % change
Total state and local major taxes	\$386,095	\$425,410	10.2	2.5	\$1,603,664	\$1,658,159	3.4
State major taxes	\$201,608	\$226,475	12.3	2.8	\$856,511	\$875,722	2.2
Personal income tax	102,546	121,413	18.4	6.1	428,989	449,161	4.7
Corporate income tax	10,086	13,187	30.7	10.6	63,134	65,886	4.4
Sales tax	84,192	86,851	3.2	(0.9)	345,519	341,065	(1.3)
Property tax	4,784	5,024	5.0	4.1	18,869	19,610	3.9
Local major taxes	\$184,487	\$198,935	7.8	3.4	\$747,153	\$782,437	4.7
Personal income tax	10,426	11,332	8.7	1.0	41,076	41,052	(0.1)
Corporate income tax	2,539	2,738	7.8	1.8	9,230	9,510	3.0
Sales tax	23,606	24,379	3.3	3.7	94,001	97,038	3.2
Property tax	147,916	160,486	8.5	3.7	602,846	634,837	5.3

Source: US Census Bureau (tax revenue), with adjustments by the author.

Notes: Q = quarter; Y-O-Y = year-over-year.

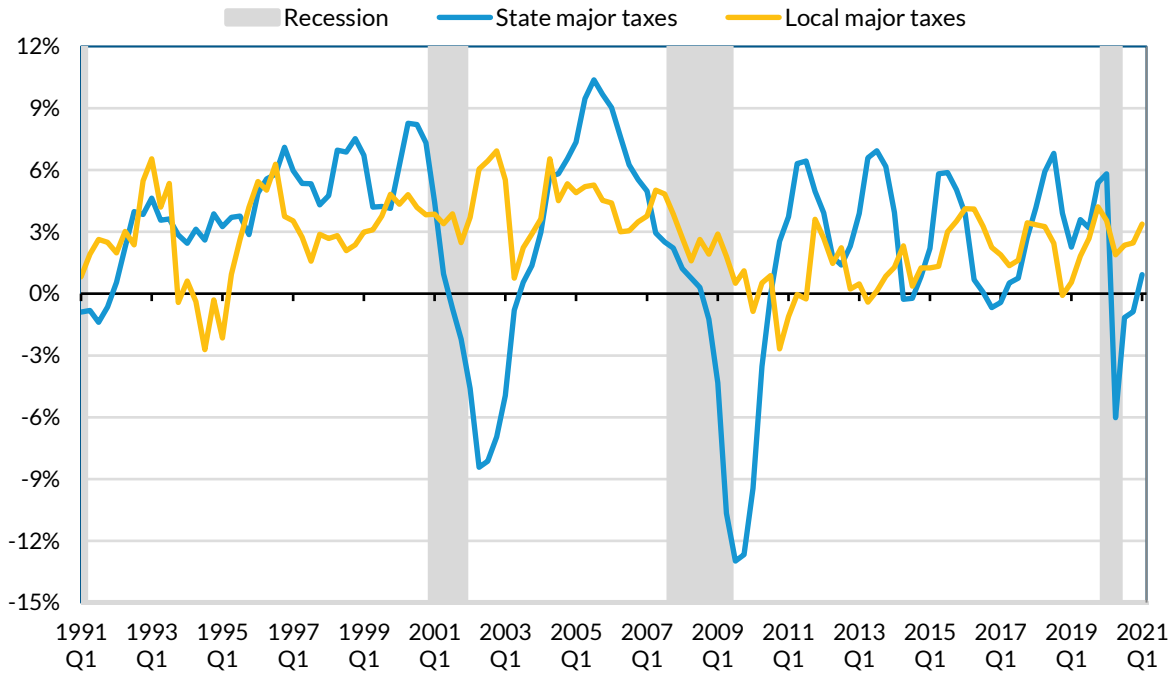
Figure 1 shows longer-term trends in state and local tax collections, specifically the year-over-year percentage change in the four-quarter moving average of inflation-adjusted state and local tax collections from major sources: personal income tax, corporate income tax, sales tax, and property tax. As shown in Figure 1, state tax revenues from major sources have fluctuated greatly over the past few years, mostly because of the federal fiscal cliff negotiations in 2013, volatility in the stock market, and the impact of taxpayer behavior in response to the passage of the TCJA. The pandemic caused further volatility in state tax revenues, while local tax revenues remained more resilient mostly because of a strong housing market and solid growth in property tax revenues. State tax revenues from major sources, adjusted for inflation, increased 0.9 percent on average for the past four quarters relative to a year earlier. Most states rely heavily on three major sources of taxes (personal income, corporate income, and sales tax), all of which respond relatively rapidly to economic upticks and declines as well as to government policy decisions.

The four-quarter moving average of inflation-adjusted local tax revenues from major sources showed a 3.4 percent increase for the first quarter of 2021. Most local governments rely heavily on property taxes, which are relatively stable and respond relatively slowly to changes in property values. Over the past two decades, property taxes have consistently made up at least two-thirds of total local tax collections.

FIGURE 1

Growth Rates for State Major Tax Revenues Now Are Above Their Prepandemic Levels

Year-over-year inflation-adjusted change in state and local taxes from major sources



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Source: US Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP), analysis by the author.

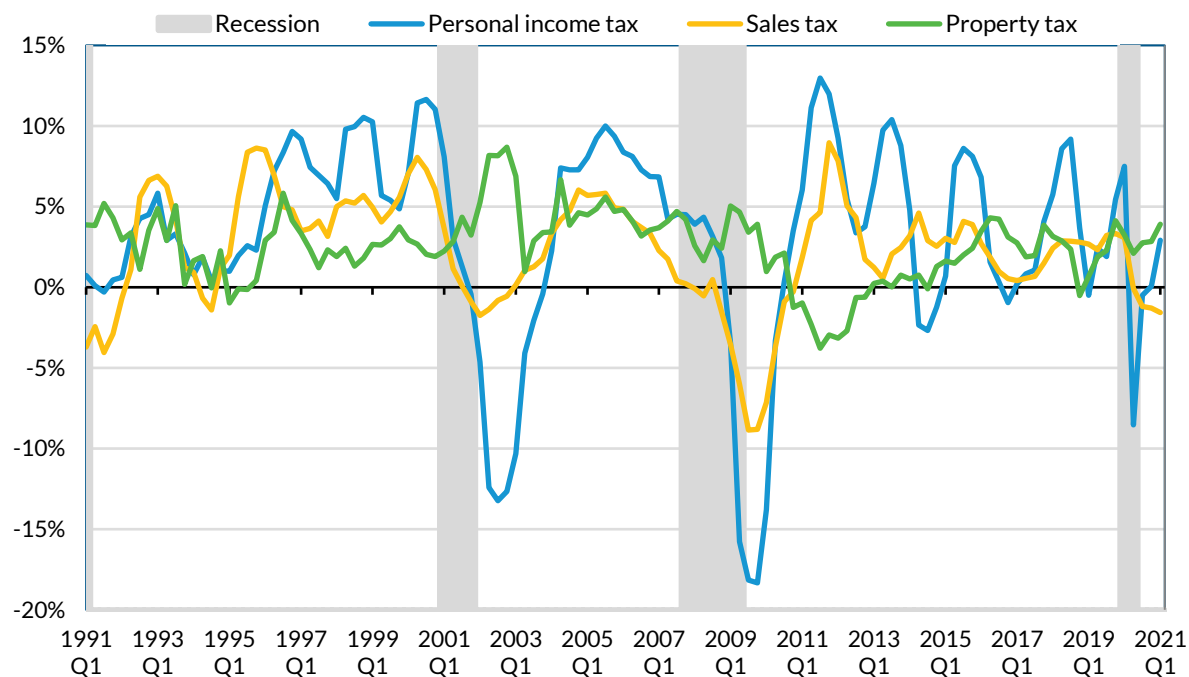
Notes: Year-over-year change is the percentage change of four-quarter moving averages. Data are adjusted for inflation. Data are for four major tax categories only: personal income, corporate income, general sales, and property.

Figure 2 breaks out inflation-adjusted state and local personal income, sales, and property tax revenue over the past 30 years. The graph shows the large fluctuations in real (inflation-adjusted) state and local personal income tax collections in recent years. State and local personal income tax revenues saw a 2.9 percent year-over-year increase in the first quarter of 2021. Real state and local sales tax revenues showed a 1.6 percent year-over-year decline in the first quarter of 2021. State and local property taxes, nearly all of which are collected by local governments, showed a 3.9 percent real growth rate from a year earlier for the first quarter of 2021.

FIGURE 2

State and Local Personal Income Tax Revenues Rebounded After Steep Declines in Early 2020

Year-over-year inflation-adjusted change in major state-local taxes



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Source: US Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP), analysis by the author.

Notes: Year-over-year change is the percentage change of four-quarter moving averages. Data are adjusted for inflation.

Trends in State Tax Revenue in 2021 Quarter 1

Total state tax revenue increased 9.4 percent in nominal terms in the first quarter of 2021 relative to a year earlier, according to US Census Bureau data adjusted by the author (Table A1).¹ All major sources of taxes (except for motor fuel taxes) showed growth in the first quarter of 2021. The year-over-year growth in state personal income tax revenues was 18.4 percent for the first quarter of 2021. Corporate income tax revenue collections grew 30.7 percent for the first quarter of 2021 compared with a year earlier. State sales tax collections grew 3.2 percent while motor fuel tax collections declined 7.4 percent relative to a year earlier. Table A1 shows (1) nominal and inflation-adjusted year-over-year growth in state government tax revenue collections from major sources in each quarter and (2) average quarterly year-over-year growth between the first quarter of 2010 and the first quarter of 2021. The inflation-adjusted average quarterly growth rate in overall state tax revenues since 2010 was 2.9 percent.

Some of the growth in income taxes in the first quarter of 2021 is related to the income tax filing due date shifts, which resulted in lower income tax revenue collections in the first and especially the second quarter of 2020. Moreover, the results of the 2020 presidential election likely led some high-income

taxpayers to shift income into tax year 2020 in anticipation of potential federal tax policy changes and higher taxes on capital gains under the Biden administration.

Regions differed in year-over-year total state tax revenue growth for the first quarter of 2021 (Table A2). State tax revenues saw growth in all regions but the Southwest region. The Far West and New England regions had the strongest year-over-year growth at 14.7 and 12.4 percent, respectively, while state tax revenues in the Southwest region declined 0.9 percent.²

Forty-one states reported growth in total state tax revenue collections for the first quarter of 2021 relative to a year prior, with 19 states reporting double-digit growth. State tax revenues declined in nine states, with Alaska and North Dakota reporting the steepest declines at 46.4 and 17.5 percent, respectively.

Because of effects of the pandemic and the deferral of tax filing deadlines for tax year 2020, it is important to analyze revenue growth trends over several quarters to understand where states were in the recession and where they stand in revenue recovery. State total tax revenues increased 0.6 percent in nominal terms in the second quarter of 2020 through the first quarter of 2021 combined, compared with the same period a year earlier, with a median growth of 1.6 percent (Table A3). State tax revenues declined in 18 states over that 12-month period, ranging from a less than 0.1 percent decline in Indiana to a 39.3 percent decline in Alaska. Thirty-two states reported growth, with Idaho and Utah reporting the largest growth at 12.3 and 8.7 percent, respectively.

Personal Income Taxes

State personal income tax revenues increased 18.4 percent in nominal terms and 16.1 percent in inflation-adjusted terms in the first quarter of 2021 compared with the same period in 2020. Growth in the median state was weaker, at 15.5 percent in nominal terms. The average quarterly year-over-year growth rate in state personal income tax collections since 2010 has been 6.4 percent in nominal terms and 4.7 percent in real terms (Table A1).

Because the Internal Revenue Service delayed income tax filing deadlines in 2020 from April 15 to July 15 and states generally followed suit, states collected substantially less income tax revenue in April 2020 than in previous years. Typically, April is the most important month for income tax payments. Usually, states collect around 13 to 15 percent of annual personal income tax revenues in April, with 70 to 75 percent coming from estimated and final payments. In 2020, large shares of estimated and final payments were shifted to July. These changes resulted in wild swings in revenues at the start of the pandemic that then moderated in August. Thus, there was large shifting of funds and in large variations

in income tax receipts compared to prior years, but these shifts were mainly during the second and third quarters of 2020, though the delayed deadline also led to a decline in tax returns in March 2020.

Personal income tax collections increased by double-digits across all regions in the first quarter of 2021 compared with the same period in 2020 (Table A2). The Far West region saw the most growth, at 30.1 percent, largely reflecting substantial income tax growth in California.

Overall, personal income tax collections increased in 41 states, with 29 states reporting double-digit percentage-point growth in the first quarter of 2021 compared with the same quarter in 2020. The largest growth in dollar value was in California, where income tax revenues increased by \$7.9 billion or 29.1 percent.

Despite strong year-over-year growth in the third and fourth quarters of 2020 and the first quarter of 2021, state personal income tax revenues were up a more modest 4.7 percent for 12-month period from the second quarter of 2020 through the first quarter of 2021 combined, compared with the same period a year earlier (Table A3). Moreover, personal income tax revenues in the median state increased only 2.4 percent for the same 12-month period.

Personal income tax collections saw wild swings during the first six months of the pandemic. The latest data indicate steep declines in personal income tax collections in the second quarter of 2020 followed by significant growth in the third quarter of 2020, largely because of delayed filing. Growth in personal income tax collections normalized during the fourth quarter of 2020 and then grew in the first quarter of 2021.

To get a clearer picture of the underlying trends in personal income tax collections, we examine trends in the four major components: withholding, quarterly estimated payments, final payments, and refunds. The US Census Bureau does not collect data on the individual components of personal income tax collections. The data presented here were collected by the author directly from the states.

TABLE 2
Growth in State Government Personal Income Tax Components

Year-over-year nominal percentage change

Personal income tax components	Prepandemic period				Pandemic period			
	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1
Withholding	5.2	4.3	4.8	5.8	(1.3)	5.1	6.2	6.5
Estimated payments	16.3	2.4	9.1	9.7	(64.0)	102.9	16.7	35.9
Final payments	39.0	21.2	20.8	(10.3)	(55.7)	621.7	(8.4)	10.2
Refunds	(1.1)	8.2	7.4	9.9	(16.4)	106.0	(10.6)	(13.1)
Total	18.7	3.9	6.2	4.4	(34.8)	47.5	7.7	20.2

Source: Individual state data, analysis by the author.

Notes: CY = calendar year; Q = quarter. The percentage changes for total personal income tax differ from data reported by the US Census Bureau. Red numbers in parentheses represent declines.

Table 2 shows the growth for each major component of personal income tax collections in the past eight quarters, which correspond to the prepandemic and pandemic periods, illustrating income tax volatility associated with the deferral of tax-filing deadlines. Personal income tax collections soared in the second quarter of 2019 because of an increase in estimated and final payments, which were shifted between tax years because of the TCJA (discussed in prior *State Tax and Economic Review* reports). Growth in personal income tax collections moderated in the third and fourth quarters of 2019 as well as the first quarter of 2020. But, year-over-year growth in the first quarter of 2020 was weaker than the growth in the fourth quarter of 2019, largely because of final tax payments.

The economic impact of the pandemic on personal income tax revenues was not as bad as initially feared, largely because the pandemic has disproportionately affected low-income earners employed in service industries. Many states have progressive income tax structures, which means higher-income taxpayers pay a higher percentage of their income than lower-income taxpayers.

We expect personal income tax revenues to fluctuate further, particularly in the second and third quarters of 2021, reflecting the impact of federal and state policy changes implemented last year and because of extensions in filing deadlines this tax season.

Withholding

Withholding is usually a good indicator of the current strength of personal income tax revenue and the economy because it comes largely from current wages and salaries and is less volatile than estimated payments or final settlements. However, bonuses and stock options received by employees are also subject to withholding.

Table A4 shows year-over-year growth in withholding for the past eight quarters for all states with a broad-based personal income tax. Year-over-year growth in withholding was solid, ranging between 4.3 and 5.8 percent, before the pandemic. But withholding declined 1.3 percent year over year for the second quarter of 2020 because of the economic disruptions caused by the COVID-19 pandemic, which triggered mass layoffs and furloughs beginning in the second half of March. The employment situation improved after the third quarter of 2020, which led to improvement in withholding tax collections as well. Year-over-year growth in withholding was 6.5 percent in the first quarter of 2021. However, growth in the median state was weaker, at 4.9 percent. Overall, withholding increased 4.3 percent in the second quarter of 2020 through the first quarter of 2021 combined compared with the same period a year earlier.

All regions showed year-over-year growth in withholding in the first quarter of 2021. The Far West region reported the strongest growth at 10.4 percent, while the Plains region reported the weakest year-over-year growth at 3.2 percent in the first quarter of 2021.

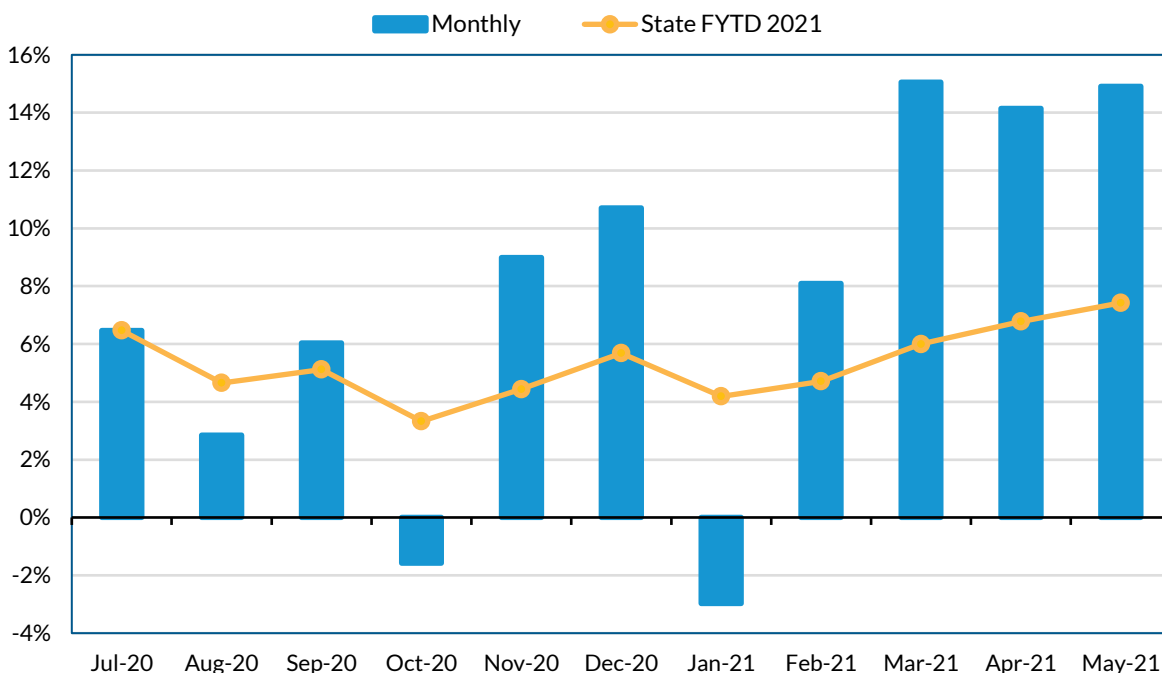
Thirty-eight of the 41 states with a broad-based personal income tax reported growth in withholding in the first quarter of 2021 compared with a year earlier, with six states (California, Delaware, Idaho, Maine, South Carolina, and Utah) reporting double-digit growth.

Figure 3 shows monthly and fiscal year-to-date growth rates in withholding between July 2020 and May 2021, which corresponds to the first 11 months of state fiscal year 2021 in 46 states. Monthly data should be viewed with caution because they may include one-time payments that are not likely to recur, or a given month may have fewer tax-processing days than the same month in the prior year.

FIGURE 3

Withholding Was Very Volatile throughout Fiscal Year 2021

Percentage change in withholding tax collections compared with the previous year, monthly and year-to-date for state fiscal year 2021



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Source: Individual state government agencies, analysis by the author.

Notes: FYTD = fiscal year to date.

Withholding was lower in October 2020 than in October 2019 and lower in January 2021 than in January 2020. The decline in withholding was likely caused by timing issues in some states. For example, Arizona reported one fewer tax processing day in October 2020 than in October 2019 and two fewer tax processing days in January 2021 than in January 2020.³ Withholding showed double-digit growth in December 2020 as well as in the months of March, April, and May of 2021. The strong growth in March, April, and May of 2021 relative to significantly weaker withholding in 2020 is largely attributable to mass layoffs or furloughs related to the pandemic.

Withholding was particularly strong in California, partially because large year-end bonuses led to higher withholding and because of large withholdings related to initial public offerings of California companies (such as AirBnB and DoorDash) in late 2020.⁴ More California-based companies also held initial public offerings in the months March, April, and May.⁵

Despite solid growth in withholding, unemployment rates remain higher in most states than their prepandemic levels. The disconnect between withholding tax collections and higher unemployment rates is largely because of the disproportionate impact of the pandemic-induced recession on lower-income taxpayers.

Year-to-date growth in withholding for the first 11 months of fiscal year 2021 was 7.4 percent. States collected around \$346 billion in withholding revenues from July 2020 through May 2021. Thirty-seven states reported growth while four states reported declines in withholding tax revenues for the July 2020 through May 2021 period.

Estimated Payments

Higher-income taxpayers (and the self-employed) generally make estimated tax payments (also known as declarations) on their income not subject to withholding. This income often comes from investments, such as capital gains realized in the stock market, or from self-employment or business income. Estimated payments normally represent a small share of overall income tax revenues, but because of their volatility, they can have a large impact on the direction of overall collections. Estimated payments accounted for 7.1 percent of total personal income tax revenues in the fourth quarter of 2020 and 27.6 percent in the first quarter of 2021.

The first estimated payment for each tax year is due in April in most states; the second, third, and fourth payments are generally due in June, September, and January, respectively (although many high-income taxpayers make the last estimated payment in December so that it is deductible on the federal tax return for that tax year rather than the next). In some states, the first estimated payment includes payments with extension requests for income tax returns for the previous tax year and is thus related partly to income received in that previous tax year. Subsequent estimated payments are generally related to income for the current tax year, although that relationship is often quite loose.

As noted, because the first estimated payment contains a combination of payments related to the current and prior tax year, it is not a good indication of the current strength of the economy. The second and third estimated payments are easier to interpret because they are almost always related to the current year, and they can give a real-time look at how the economy and income tax base are doing. Weakness in these payments can reflect weakness in nonwage income, such as that generated by the stock market. However, it can also be “noisy” in the sense that it reflects taxpayers’ responses to tax-payment rules as well as to expected nonwage income.

The filing deadline for federal individual income tax returns in 2021 was extended to May 15 and for 2020 was extended to July 15; most states delayed their filing deadlines as well.⁶ The federal government also extended the filing deadline for the first estimated tax payments for tax year 2020 that were due on April 15. Twenty-nine states followed the federal government and extended the filing deadline for the first estimated payments attributable to tax year 2020 from April 15 to July 15 (Loughead 2020).

To make things even more confusing, eight states (Delaware, Indiana, Montana, Nebraska, New Jersey, New York, Oklahoma, and Rhode Island) delayed the first estimated payments for tax year 2020 (originally due on April 15) to July 15 but did not extend the deadline for the second estimated payments for tax year 2020 (which were due on June 15). It appears that most taxpayers filed first estimated payments for tax year 2020 with their 2019 income tax returns, even in the states where the first estimated payments for tax year 2020 were due in April. That could be because of confusion caused by differences between federal and state due dates for filing first estimated payments for tax year 2020.

As expected, because of delays in filing deadlines as well as the loss of earnings for some self-employed individuals, all states but Arizona and Illinois reported double-digit percentage-point declines from prior-year levels for the first estimated payments for tax year 2020, those that were to be filed in April 2020. Estimated payments due in April declined 82.3 percent on average compared with the prior year, but the decline in the median state was 72 percent (Table A5). Arizona and Illinois are among the states that had not extended the deadline for the first quarterly estimated payments for tax year 2020. That is the likely reason that those two states, in contrast with the others, saw growth in estimated payments in April of 2020.

Declines in the second estimated payments for tax year 2020 were also steep and widespread, again likely because of delayed filing deadlines from June 15 to July 15. Estimated payments due in June 2020 declined 47.9 percent on average compared with the prior year; the decline in the median state was 38.8 percent. States also reported declines in the third estimated payments for tax year 2020 that were due in September 2020, although such declines were less severe, with an average of 1.5 percent.

Finally, states reported year-over-year growth of 33.5 percent for the fourth estimated payments for tax year 2020 (filed in December 2020 and January 2021). However, growth in the median state was 10.2 percent. As with withholding, the largest growth in dollar value was in California, where the fourth estimated payments increased by \$5.5 billion or 48.6 percent. The second largest growth in dollar value was in New York, reporting growth of \$0.9 billion or 21.9 percent in the fourth estimated payments for tax year 2020 (Table A5). Estimated payments in California alone represented nearly 50 percent of the total fourth estimated payments filed for tax year 2020. Given their size and population composition, it isn't surprising that the largest shares of payments are from these two states, but the level of concentration is disproportionate, and much of the strong growth for the fourth estimated payments is largely attributable to the growth in California.

Some taxpayers also likely held off making estimated payments during the year because of uncertainty around the pandemic and what their earnings would end up being. Strong growth in the fourth estimated payments for tax year 2020 could also reflect realization of higher capital gains from the strong

stock market and shifts of capital gains into tax year 2020 by some taxpayers in anticipation of possible higher tax rates with a new federal administration.

In prior *State Tax and Economic Review* reports, we have warned that because of wide fluctuations in the performance of financial markets, possible declines in self-employment income, and other changes in the economy related to the COVID-19 pandemic, estimated payments were likely to fluctuate as well. We find this is somewhat true: our data show that 20 states reported declines in estimated payments for the April 2020 through March 2021 period compared with the same period a year earlier. Estimated payments for the nation increased by \$3.0 billion or 3.6 percent between April 2020 to March 2021 compared with the same period a year earlier, but as noted, this is largely because of California, where estimated payments increased by \$3.3 billion or 12.1 percent. California's estimated payments represented over one-third of the national total. If we exclude California, estimated payments for the rest of the nation declined 0.5 percent between April 2020 and March 2021 ([Table A6](#)).

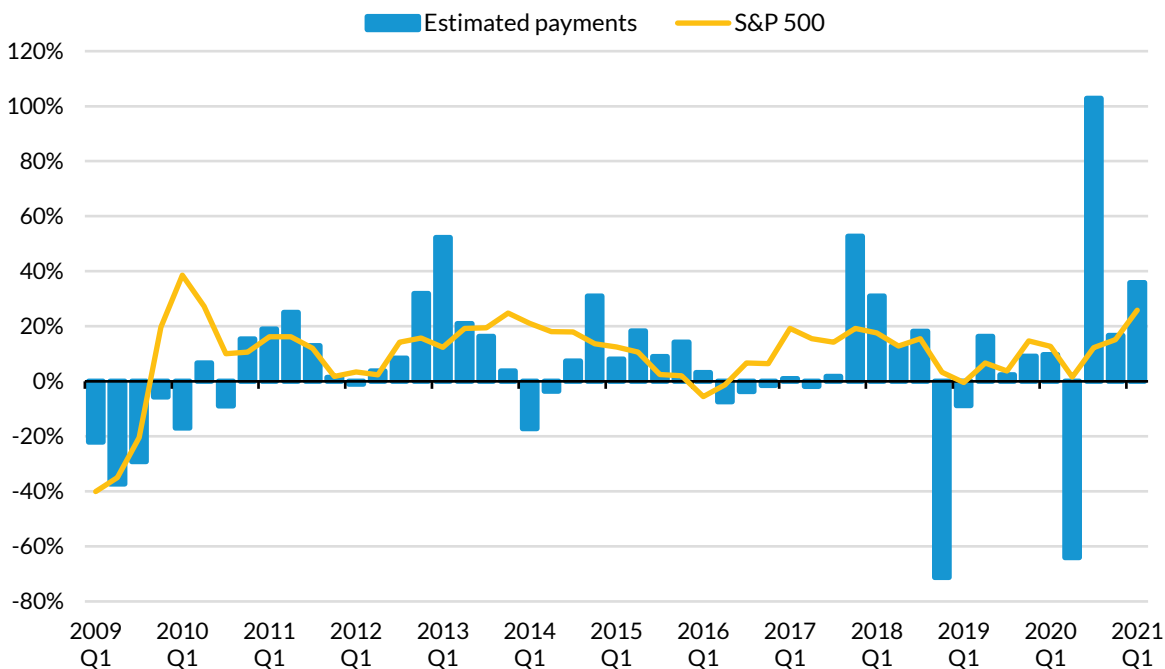
[Figure 4](#) shows year-over-year percentage change by quarter in estimated payments and in the S&P 500 Index for the past 13 years. The longer-term trends indicate substantial volatility in estimated payments, which is partially caused by volatility in the stock market but also by federal tax policy changes and taxpayer responses, which affect capital gains realizations and tax timing. For example, growth in estimated payments in the final quarter of 2012 and the first quarter of 2013 was much larger than the growth rates in the S&P 500 Index because estimated payments were tied to the impact of the “fiscal cliff” budget deal as Congress raised top federal income tax rates for tax year 2013. Therefore, some high-income taxpayers accelerated income into tax year 2012 to avoid higher tax rates for future years. This led to large declines in the year-over-year comparisons for estimated payments the following year.

Similarly, the substantial growth in estimated payments in the final quarter of 2017 and the first quarter of 2018, as well as the steep declines in estimated payments in the final quarter of 2018, were mostly attributable to the passage of the TCJA. However, the further decline in estimated payments in the first quarter of 2019 was likely also driven by the weak stock market performance in December 2018 and January 2019. In response to declines in realized capital gains, some taxpayers may have reduced their December 2018 and January 2019 estimated payments. After two consecutive quarters of decline, estimated payments rebounded and showed strong growth in the second quarter of 2019 compared with their level a year earlier, while growth in the stock market was weaker for the same period.

FIGURE 4

Large Volatility in Estimated Payments

Year-over-year percentage change in estimated payments and S&P 500 Index



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Source: Individual state government agencies and Yahoo Finance (S&P500), analysis by the author.

Estimated payments showed continued year-over-year growth for the second half of 2019 and for the first quarter of 2020; growth in the stock market was stronger for the same period. Estimated payments saw steep declines at 64 percent for the second quarter of 2020 compared with the same period in 2019, mostly because of filing-deadline extensions. For the second quarter of 2020, the stock market ended 1.6 percent higher than for the second quarter of 2019. Estimated payments showed abrupt growth in the third quarter of 2020, a mirror image of the steep declines in estimated payments in the second quarter of 2020 caused by the deferral of tax-filing deadlines. Year-over-year growth in the stock market was strong at 12.3 percent in the third quarter of 2020. Estimated payments increased 16.7 percent in the fourth quarter of 2020, which was more in line with the 15.2 percent growth in the stock market compared with a year earlier. Finally, growth in estimated payments was strong in the first quarter of 2021 at 35.9 percent, while growth in the stock market was 25.8 percent.

In general, estimated payments as a share of overall personal income taxes have grown somewhat over time. In state fiscal year 2018, estimated payments made up 22.2 percent of total personal income tax collections, up from 17.7 percent in fiscal year 2010 and 19.9 percent in fiscal year 2014. However, estimated payments as a share of total personal income tax collections declined in state fiscal year 2019, representing around 19.1 percent of the total, mostly because of the TCJA and subsequent income tax-shifting behavior. Estimated payments as a share of total personal income tax collections

declined further in state fiscal year 2020, representing only 15.7 percent of the total, with the decline mostly attributable to the shifting filing deadlines. The volatility of estimated payments adds more uncertainty to state income tax revenues and makes them harder to forecast. This was especially true for fiscal year 2021 because of the shift in tax-filing deadlines.

Final Payments

Final tax payments normally represent a small share of total personal income tax revenues in the first, third, and fourth quarters of the tax year and a much larger share in the second quarter of the tax year because of the April 15 personal income tax-filing deadline.⁷ Final payments accounted for 26.3 percent of all personal income tax revenues in the second quarter of 2019 but less than 7 percent in the third and fourth quarters of 2019 as well as in the first quarter of 2020 because of the changes in filing deadlines.

Because of the changed filing deadline in 2020, a significant share of final payments was shifted into the third quarter of 2020. Therefore, final payments represented only 17.9 percent of personal income tax revenues in the second quarter of 2020 (compared with 26.3 percent in 2019) and 17.2 percent in the third quarter of 2020. The shifting of final payments from the second quarter of 2020 to the third quarter of 2020 caused large variations in percentage changes. Final payments accounted for less than 6 percent of personal income tax revenues in the fourth quarter of 2020 and the first quarter of 2021.

[Table A7](#) shows year-over-year final payment amounts and growth rates for April 2020 through March 2021. In prior *State Tax and Economic Review* reports, we presented quarterly data. However, the alternative 12-month range paints a clearer picture of final payment tax collections during the pandemic. Final payments on average declined by \$0.5 billion or 1.0 percent for April 2020 through March 2021 from a year earlier but increased 0.4 percent in the median state. In contrast, final payments showed a 27.8 percent year-over-year growth in the prior year, for April 2019 through March 2020.

Eighteen states reported declines in final payments for April 2019 through March 2021 compared with a year earlier, while 21 states reported growth. Once again California had the largest increase in final payments in dollar value (\$846 million) from April 2020 through March 2021. Final payments in California represented nearly one-fifth of the national total.

Refunds

By definition, personal income tax refunds represent a negative share of personal tax revenues and usually are a small amount in the third and fourth quarters of the tax year and a much larger negative amount in the first and second quarters of the tax year.

In the first quarter of 2021, states paid out \$3.9 billion less in refunds than the same period of 2020, with 35 states paying out less in tax refunds. California had the largest decline in refunds in dollar value (\$663 million) in the first quarter of 2021, followed by Oregon (\$562 million). The declines in refunds in the first quarter of 2021 are largely because of delays in the start of the federal (and state) income tax season to mid-February.

Last year, refunds compared with the same period in 2019 increased 9.9 percent for the first quarter of 2020 but declined 16.4 percent for the second quarter of 2020 as people delayed filing their taxes. In total, states paid out \$3.9 billion less in tax refunds in the second quarter of 2020 than in the second quarter of 2019 because of office closures and the later processing of income tax returns after the onset of the COVID-19 pandemic. Delays in processing and the delayed deadline subsequently led to strong year-over-year growth in refunds in the third quarter of 2020, with states paying out \$5.6 billion more in tax refunds than in the same quarter in 2019. States paid out nearly \$1.0 billion less in tax refunds in the fourth quarter of 2020 than in the fourth quarter of 2019.

Actual versus Forecasted Income Tax Revenues

We collect data on actual and forecasted amounts for monthly personal income tax revenue from the states. Monthly personal income tax forecast information is currently available for 24 states ([Table 3](#)). In this section, we present data for the first quarter of 2021 to illustrate the variance between actual and forecasted personal income tax revenues because of various uncertainties associated with the pandemic.

Actual personal income tax collections in the first quarter of 2021 were higher than in the first quarter of 2020 in 23 of the 24 states for which we have detailed data. Personal income tax collections showed double-digit growth in 17 states in the first quarter of 2021.

Actual personal income tax collections in the first quarter of 2021 were higher than the forecasts in 21 states and below the forecasts in only 3 states, with an average underestimate of 13 percent and a median underestimate of 24.1 percent ([Table 3](#)). Some states regularly update their monthly revenue forecasts; other states prepare monthly revenue forecasts only once a year.

Forecasted values always depend on the date the forecast is made, but this is especially true this year because of uncertainty related to the pandemic and most notably the passage of a federal relief package that included both direct aid to states and changes in the tax treatment of other assistance. Even states that regularly update their monthly revenue forecasts faced difficulties forecasting revenues precisely.

TABLE 3

Actual versus Forecasted State Personal Income Tax Revenues

Dollar amounts in millions

State	2020 Q1 actual	2021 Q1 actual	2021 Q1 forecast	Percent change, 2021 Q1 vs 2020 Q1	Percentage variance, 2021 Q1 actual from forecast	Forecast date
Median				21.2	24.1	
Average	\$65,910	\$79,495	\$70,355	20.6	13.0	
Arizona	\$741	\$1,067	\$829	44.0	28.7	Jan-21
Arkansas	\$657	\$776	\$612	18.1	26.8	Apr-20
California	\$26,769	\$34,523	\$33,747	29.0	2.3	May-20
Colorado	\$1,958	\$2,103	\$2,223	7.4	(5.4)	Mar-21
Idaho	\$371	\$468	\$293	26.1	59.4	Jan-20
Indiana	\$1,228	\$1,510	\$1,283	22.9	17.7	Dec-20
Kansas	\$827	\$907	\$840	9.6	8.0	Nov-20
Maine	\$308	\$406	\$266	31.7	52.9	Dec-20
Massachusetts	\$3,807	\$4,635	\$3,991	21.7	16.1	Jan-21
Minnesota	\$2,487	\$3,000	\$2,464	20.6	21.8	Feb-21
Mississippi	\$239	\$329	\$257	37.7	28.0	Nov-19
Montana	\$313	\$394	\$300	25.9	31.3	Jun-19
Nebraska	\$554	\$637	\$407	15.1	56.6	Aug-20
New Mexico	\$312	\$170	\$235	(45.4)	(27.6)	Feb-21
New York	\$16,342	\$18,168	\$13,589	11.2	33.7	Sep-20
North Dakota	\$87	\$90	\$94	2.8	(4.9)	Mar-19
Ohio	\$1,576	\$1,964	\$1,841	24.7	6.7	Mar-19
Oklahoma	\$521	\$528	\$511	1.3	3.4	Jun-20
Pennsylvania	\$3,576	\$3,819	\$3,582	6.8	6.6	Jun-20
Rhode Island	\$266	\$359	\$257	34.6	39.8	Dec-20
South Carolina	\$606	\$876	\$530	44.6	65.4	Feb-21
Vermont	\$184	\$235	\$161	27.8	46.0	Jan-21
West Virginia	\$461	\$504	\$441	9.3	14.4	Jul-20
Wisconsin	\$1,719	\$2,027	\$1,603	17.9	26.4	Nov-20

Source: Individual state data, analysis by the author.

State revenue forecasters continue facing considerable challenges in forecasting revenues because of uncertainties about the length of the pandemic and associated economic damage (Dadayan 2020a). Recent federal policy changes are complicating revenue forecasting further. Specifically, the federal legislation changed the definition of taxable income for tax year 2020. The ARPA also gives a tax break on the first \$10,200 in unemployment benefits received in tax year 2020. Although states did not have to follow suit, about 25 states did so and exempted unemployment benefits from income tax for tax year 2020. Few states extended the exemption to tax year 2021. (Among the 41 states with a broad-based income tax, only 6 generally exclude unemployment benefits from taxable income: Alabama, California, Montana, New Jersey, Pennsylvania, and Virginia.)

Corporate Income Taxes

State corporate income tax revenue is highly volatile because corporate profits and the timing of tax payments can vary and shift across quarters. Further, most states collect a small share of state revenues from corporate taxes and can therefore experience large fluctuations in percentage terms, with little overall budgetary impact. Average quarterly year-over-year growth rates in state corporate income tax collections were 6.1 percent in nominal terms and 4.3 percent in real terms since 2010 ([Table A1](#)).

State corporate income tax revenue saw steep declines during the Great Recession and only recently approached or surpassed levels observed before the Great Recession. Year-over-year corporate income tax receipts grew by double digits in percentage-point terms for seven consecutive quarters, from the second quarter of 2018 through the fourth quarter of 2019. However, the strong growth observed during that time was largely attributable to the TCJA, which created an incentive for corporations to shift profits from tax year 2017 into tax years 2018 and beyond because of the law's lower federal corporate income tax rates. The growth weakened substantially in early 2020 and fell off because of the COVID-19 pandemic.

To mitigate the impact of the pandemic, the Internal Revenue Service also extended the filing deadline for corporations filing calendar-year income tax returns from March 15, 2020, to July 15, 2020.⁸ Many states followed and extended corporate income tax return and payment due dates as well. This led to steep declines in state corporate income tax revenues in the second quarter of 2020 followed by a spike in the third quarter of 2020. Growth in corporate income tax revenues was also strong in the fourth quarter of 2021, at 24 percent. The strong growth in corporate income tax revenues might be caused by corporations shifting income from tax year 2021 into tax year 2020, to avoid uncertainty related to possible higher corporate tax rates in 2021 following the election of President Biden.

State corporate income tax revenues increased 30.7 percent in the first quarter of 2021 compared with a year earlier. Growth in the median state was weaker, at 24.4 percent. Thirty-four states reported year-over-year growth in corporate income tax collections, with 30 states reporting double-digit growth ([Table A2](#)).

All regions reported double-digit growth, with the Great Lakes region reporting the strongest year-over-year growth in corporate income tax revenues at 52.7 percent and the Southwest region reporting the weakest growth at 11.1 percent. State corporate income tax revenues increased 4.4 percent in the second quarter of 2020 through the first quarter of 2021 combined than in the same period a year earlier. Growth in the median state was only 0.5 percent for the same period. Twenty-two states reported year-over-year declines over that 12-month period; another 22 states reported growth ([Table A3](#)).

The future of corporate income tax collections is unpredictable not only because of the impact of the COVID-19 pandemic but also because of the various provisions of the TCJA, some of which are phasing out or being altered under the Biden administration. (See prior [State Tax and Economic Review](#) reports for detailed discussions of the TCJA provisions and the law's impact on state corporate income taxes.)

Even before the pandemic, states were forecasting lower corporate income tax collections for fiscal year 2021, mostly because of higher costs for business inputs and a weaker global economy (Dadayan 2020a). Moreover, data from the Bureau of Economic Analysis indicated substantial prepandemic weakness in business investment,⁹ which implied lower corporate income tax revenue collections. The outlook for state corporate income tax revenues remains unclear for the coming months because of the pandemic-induced economic downturn, which had a strong negative impact on some industries (such as hospitality, entertainment, travel, and oil and gas) but a positive impact on others (such as construction).

General Sales Taxes

General state sales tax collections increased 3.2 percent in nominal terms and 1.2 percent in inflation-adjusted terms for the first quarter of 2021 compared with the same period in 2020 ([Table A1](#)). Sales tax collections saw sharp declines in the second quarter of 2020 that were the first in a decade and were primarily caused by the pandemic. Before the pandemic, sales tax collections had grown continuously since the first quarter of 2010 in nominal terms, and growth generally had been steady if unspectacular. State sales tax revenues were 1.3 percent lower in the 12-month period between the second quarter of 2020 through the first quarter of 2021 combined compared with the same period a year earlier ([Table A3](#)).

Year-over-year sales tax collections increased in all regions but the Southwest, Far West, and Midwest for the first quarter of 2021, where sales tax revenues declined by 2.9, 1.4, and 0.6 percent, respectively. ([Table A2](#)). The Southeast region reported the largest average growth at 8.6 percent; the Plains region reported the smallest average growth at 3.5 percent.

Thirty-five of 45 states with broad-based sales taxes reported growth in sales tax collections for the first quarter of 2021 compared with the prior year. Fourteen states reported double-digit percentage-point increases. Sales tax revenues declined in 10 states in the first quarter of 2021, with Maryland and Hawaii reporting the largest declines at 24.2 and 18.9 percent, respectively.

The recovery in sales tax collections was relatively slow following the Great Recession. The weak annual growth rate in sales tax collections in the post Great Recession period was partially attributable to tax dollars being lost because online retail sellers were not collecting and remitting sales tax on some

or all sales. However, growth in sales tax revenue collections strengthened in the recent past, largely because of sales tax base expansions in several states and because of states' efforts to capture tax revenues from a larger share of online sales following the US Supreme Court's decision in *South Dakota v. Wayfair*.

On June 21, 2018, the US Supreme Court ruled in favor of South Dakota in that case,¹⁰ giving states the authority to require out-of-state sellers with at least a specified amount of sales within the state to collect sales taxes and transfer the revenues to state governments. Currently all states with general sales taxes have enacted laws or regulations to require sales tax collections by remote sellers. Florida and Missouri passed appropriate legislation only recently.

States have set different sales and volume thresholds for internet sales taxation (Table A8). Finally, most states have also enacted laws or regulations requiring marketplace facilitators to collect sales taxes on behalf of their sellers. State implementation of online sales taxation does not address if and how local jurisdictions that operate independently and have independent taxing authority will collect sales taxes from remote sellers. However, some states (e.g., Alabama and Texas) have either passed legislation or continue debating regulations for creating a "single local use tax rate" that remote sellers can use to calculate the local tax due instead of applying local sales tax rates for the specific jurisdiction in which a sale is made.

The pandemic has had a detrimental impact on some state sales tax revenue collections, particularly in states with high reliance on the tourism, entertainment, and hospitality industries. Federally mandated travel restrictions and state or regionally mandated restrictions on a wide range of businesses and services, as well as individual and business actions taken to mitigate virus exposure, have led to less business activity, less consumer spending, and therefore less sales tax revenue collections for states, particularly during the second quarter of 2020. Sales tax revenue increases in the fourth quarter of 2020 and the first quarter of 2021 were caused in part by pent-up demand from consumers as well as growth in remote sales.

The Urban Institute recently conducted a survey of state government officials to understand the impact of the pandemic on state general sales taxes and to evaluate likely changes in state policies and actions in response to the new economic and fiscal reality. During the pandemic, most states saw growth in the consumption of goods and declines in the consumption of services (which are largely not subject to sales tax). It appears that many states are concerned about sales tax performance once the pandemic is behind us as many consumers might shift back to spending more on services than on goods. States are also concerned about their revenue performance after federal relief runs out (Dadayan and Rueben 2021a).

Motor Fuel Taxes

State motor fuel sales taxes declined 7.4 percent year over year for the first quarter of 2021. This is the fourth consecutive quarterly decline in motor fuel sales taxes in nominal terms. Moreover, the declines in motor fuel sales taxes observed since the second quarter of 2020 were much steeper than declines observed throughout the Great Recession, likely because of declines in travel caused by the pandemic.

Motor fuel sales tax collections have fluctuated since the Great Recession. Average quarterly year-over-year growth in state motor fuel tax collections has been 2.9 percent in nominal terms and 1.2 percent in real terms since 2010. Economic growth, changing fuel prices, general increases in fuel efficiency, and changing driving habits all affect gasoline consumption and motor fuel taxes. Changes in state motor fuel tax rates also affect tax collections.

Growth rates from the first quarter of 2020 to the first quarter of 2021 varied widely across states and regions ([Table A2](#)). Motor fuel tax revenue collections decreased in all regions. The steepest declines were in the Far West, Mideast, and New England regions, all showing double-digit declines.

Forty-one states reported year-over-year declines in motor fuel sales tax collections for the first quarter of 2021; 17 states reported double-digit declines. In total, nine states reported growth in motor fuel sales tax collections in the first quarter of 2021 compared with the same quarter in 2020.

State motor fuel sales tax revenues declined 9.5 percent in the second quarter of 2020 through the first quarter of 2021 combined compared with the same period a year earlier, with a median decline of 10.1 percent ([Table A3](#)). Declines in motor fuel sales tax revenue collections in this 12-month period were largely anticipated because of stay-at-home orders across states earlier in the spring and because many employees continue to work remotely, which has drastically reduced commuting traffic.

Other Taxes

The US Census Bureau's quarterly data on state tax collections provide detailed information for some smaller revenue sources, including state property taxes, tobacco product excise taxes, alcoholic beverage excise taxes, and motor vehicle and operators' license taxes. In [Table A9](#), we show year-over-year growth rates for four-quarter moving average inflation-adjusted revenue for the nation as a whole. In the first quarter of 2021, states collected \$61 billion from all the smaller tax sources, which constituted 20.7 percent of total state tax collections.

Compared with major tax sources, revenues from smaller state taxes have been growing at a slower pace since the Great Recession. The average quarterly year-over-year growth rate in state tax revenues from smaller sources was 1.4 percent in real terms since 2010.

The four-quarter moving average of inflation-adjusted revenues from smaller state tax sources showed a 4.1 percent decline for the first quarter of 2021 compared with the same quarter in 2020. State property taxes, which represent a small portion of overall state tax revenues, increased 2.6 percent. Tax revenue from motor vehicle and operators' licenses decreased 1.9 percent, tax revenue from alcoholic beverage sales decreased 5.2 percent, and revenue from tobacco product sales decreased 0.6 percent. Finally, revenues from all other smaller tax sources decreased 5.9 percent in the first quarter of 2021 compared with levels a year earlier.

Preliminary Review of State Tax Revenues in The Second Quarter of 2021

States usually release revenue numbers for June with a delay because June is the final month of the fiscal year in 46 states. Therefore, we present data for 46 states for which we were able to obtain complete data for the second quarter of 2021. Preliminary data collected by the Urban Institute for the second quarter of 2021 ([Table A10](#)) show skyrocketing growth in overall state tax collections, as well as in personal income, corporate income, and sales tax collections, compared with the same quarter in 2020.

The pandemic caused wild swings in states' economic activity, which consequently affected state tax revenues. Overall state tax collections increased 64.8 percent in the second quarter of 2021 compared with the same period in 2020. However, growth was much weaker compared to the second quarter of 2019, at 20.7 percent in nominal terms.

The skyrocketing growth is largely a mirror image of the freefall declines in the second quarter of 2020 caused by the pandemic as well as by the delayed income tax due dates, which shifted revenues from the second quarter of 2020 into the third quarter of 2020. These numbers should be used with caution, and we suggest relying on longer-term analysis to discern trends.

Preliminary data from all early reporting 46 states indicate double-digit percentage growth, with 20 states reporting growth of over 50 percent in the second quarter of 2021 compared with the same period in 2020. Total tax revenues declined in Alaska compared with revenues from two years ago.

Personal income tax collections increased 78.7 percent in the second quarter of 2021 compared with the same period a year earlier. All states but South Carolina and Wisconsin reported double-digit percentage growth in personal income tax collections. Growth in personal income tax revenues was a more moderate 18.2 percent in the second quarter of 2021 compared with the same quarter in 2019. Moreover, personal income tax revenues showed declined in four states (Louisiana, North Dakota, West Virginia, and Wisconsin) in the second quarter of 2021 relative to the same period in 2019.

State sales tax collections increased 41.4 percent in the second quarter of 2021 compared with the same quarter in 2020. All early reporting states had double-digit growth in sales tax collections. Growth in sales tax revenues was a more moderate 21.7 percent in the second quarter of 2021 compared with the second quarter of 2019. Sales tax revenues showed declines in Hawaii in the second quarter of 2021 relative to the same period in 2019.

Finally, corporate income tax revenues increased 176.9 percent year over year in the second quarter of 2021. All early reporting states but Rhode Island saw double-digit growth in corporate income tax collections. Growth in corporate income tax revenues was 46.9 percent in the second quarter of 2021 compared with the same quarter of 2019.

Looking ahead at the coming months, state tax revenues will continue showing large volatility partly because of government actions to combat the pandemic that have led to large swings in state tax revenues. Moreover, we continue seeing the negative impact of the pandemic on certain sectors of the economy, especially on the tourism, hospitality, and entertainment industries.

Factors Driving State Tax Revenues

Tax revenues vary across states and time because of three underlying forces: state-level changes in the economy (which often differ from national trends), the different ways that national economic changes and trends affect each state's tax system, and legislated changes in tax rates or rules. The next two sections discuss changes in both economic conditions and recently legislated tax changes.

On March 11, 2021, President Biden signed into law the ARPA, which includes \$350 billion in aid to help state, local, territorial, and tribal governments mitigate the impact of the pandemic on state budgets. However, the bill prevents states from using aid to fund pensions or offset revenue losses produced by a tax cut enacted on or after March 3, 2021. These restrictions on the use of federal aid will likely lead to some legislated tax changes in the coming months. The Urban Institute is closely monitoring the impact of the pandemic on state budgets and information about the allowable uses of these federal funds.¹¹

Economic Indicators

Most state tax revenue sources are heavily influenced by the economy. In general, state tax revenues rise when the state economy grows, income taxes grow when resident incomes go up, sales taxes generate more revenue when consumers increase their purchases of taxable items, property taxes increase when house prices go up, and so on.

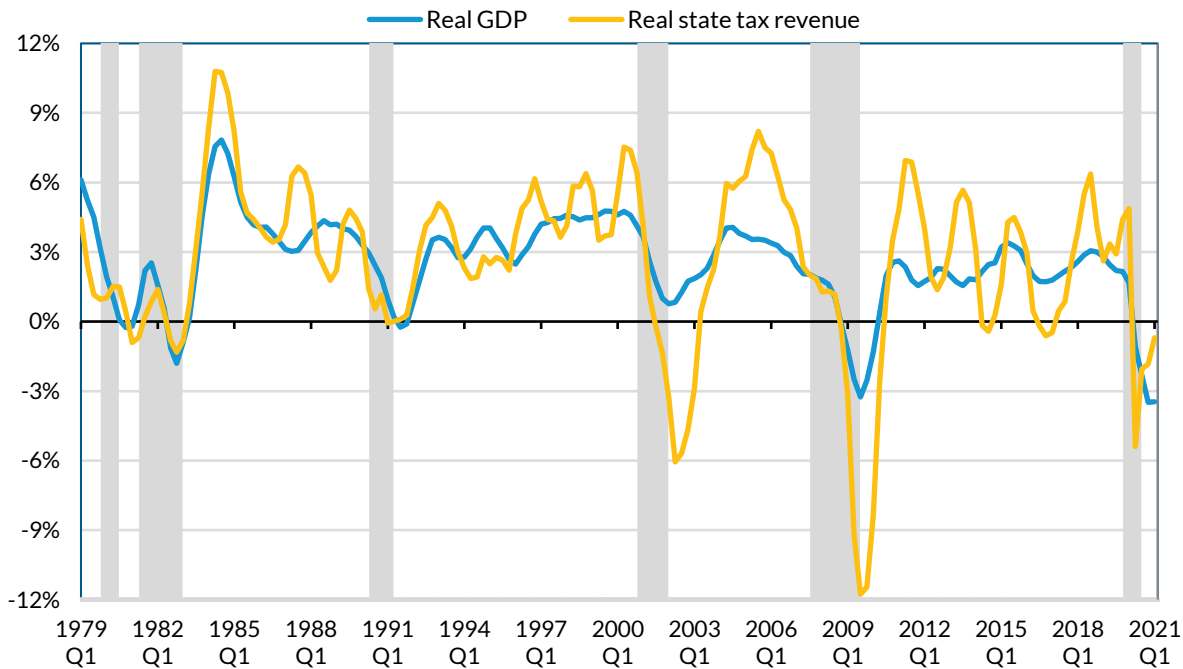
State Gross Domestic Product

When the economy booms, tax revenues tend to rise rapidly, and when the economy declines, revenues tend to decline, though these changes have different patterns and timing. [Figure 5](#) shows year-over-year growth for four-quarter moving averages in real state tax revenue and GDP. We present moving averages to smooth short-term fluctuations and illustrate the interplay between the state of the economy and state revenues. As shown in [Figure 5](#), real GDP showed uninterrupted growth between the second quarter of 2010 and the second quarter of 2020. Real GDP growth weakened throughout 2019 and the first quarter of 2020 and declined in the second, third, and fourth quarters of 2020 as well as the first quarter of 2021, based on the four-quarter moving-average measure. By this measure, real state tax revenues also declined in the final three quarters of 2020 and the first quarter of 2021.

Volatility in state tax revenue is not fully explained by changes in real GDP, a broad measure of the economy. State tax revenues became far more volatile in the past two decades, mostly because of

changes in state tax rates and states' growing reliance on income taxes, some of which are progressive and very dependent on volatile income sources such as stock options and capital gains.

FIGURE 5
State Tax Revenue Is More Volatile Than the Economy
Year-over-year change in real state taxes and real GDP



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Source: US Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP), analysis by the author.

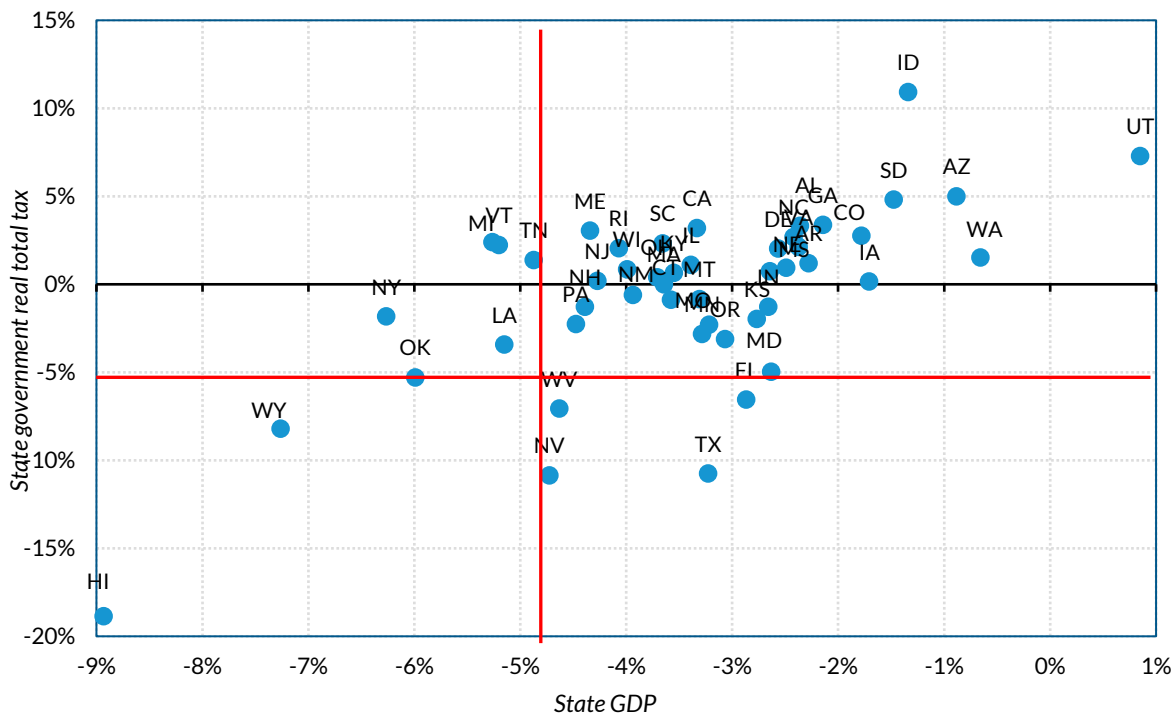
Notes: Year-over-year change is the percentage change of four-quarter moving averages. Data are adjusted for inflation.

States vary substantially in correlations between growth rates in real state tax revenues and state GDP. Figure 6 shows for each state the four-quarter moving averages in real state tax revenue and real state GDP for the first quarter of 2021 compared with the same quarter in 2020. By this measure, real state tax revenues decreased in 23 states, and real state GDP decreased in all states but Utah. (Alaska and North Dakota are outlier states and are excluded from Figure 6 to better display the overall relationship.) The year-over-year change in real state tax revenues ranged from -40 percent for Alaska and -32 percent for North Dakota to 10.9 percent for Idaho; the change in real state GDP ranged from -8.9 percent for Hawaii to 0.9 percent for Utah. The national average year-over-year decline in real state GDP was 3.5 percent, and the national average year-over-year decline in real state tax revenues was 0.7 percent, based on the four-quarter moving-average measure.

FIGURE 6

Growth Disparity: State Tax Revenues versus State GDP

Year-over-year change in real state taxes and real GDP, 2021 quarter 1 versus 2020 quarter 1



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Source: US Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP), analysis by the author.

Notes: Year-over-year change is the percentage change of four-quarter moving averages. Data are adjusted for inflation. Red lines show US averages. Figure excludes Alaska and North Dakota because both are outliers.

State Unemployment and Employment

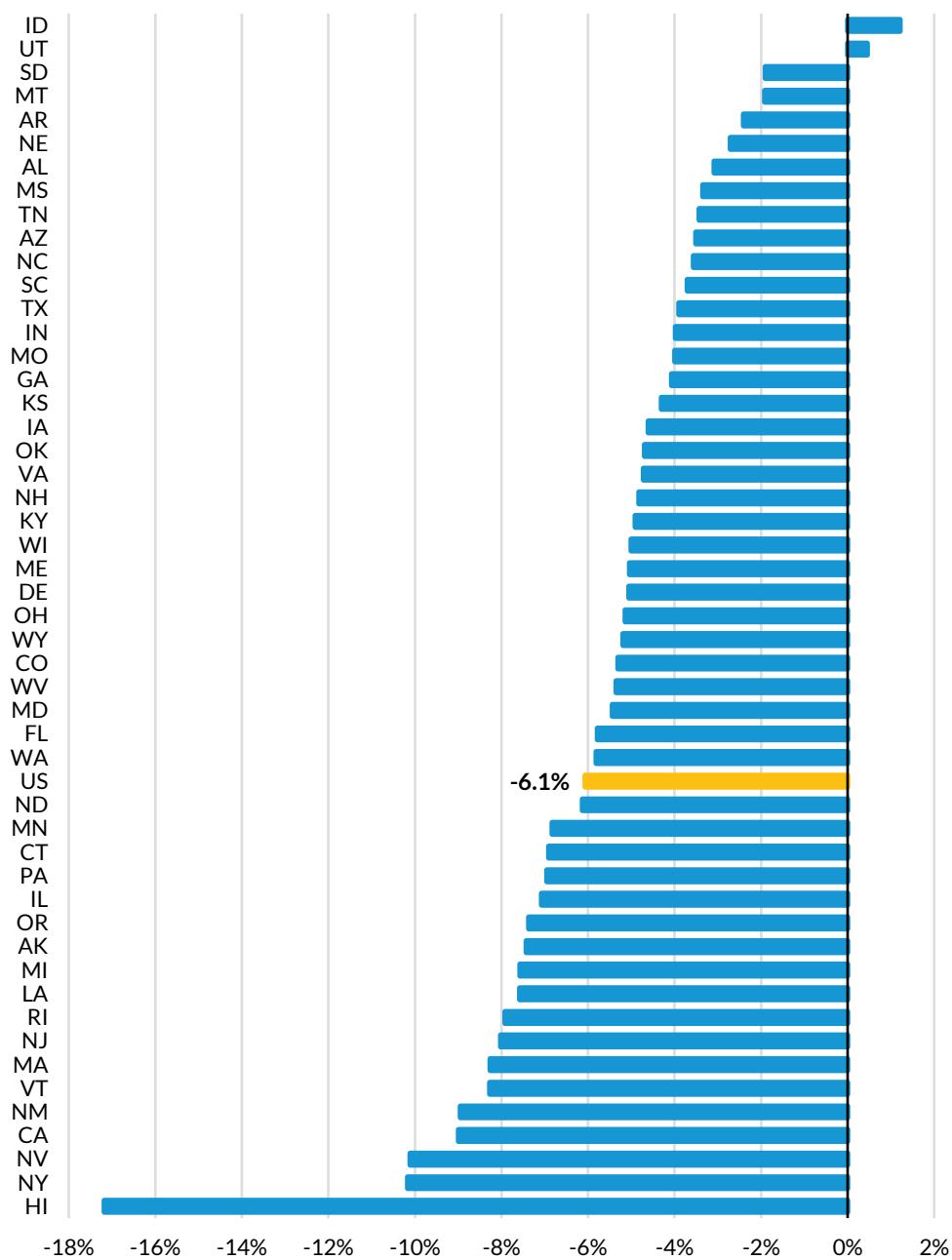
Before March 2020, the national unemployment rate had seen a nearly uninterrupted decline from its Great Recession peak. The unemployment rate was 3.6 percent in the fourth quarter of 2019, which was a 50-year low.¹² The unemployment rate increased to 3.8 percent in the first quarter of 2020 and increased to 13.0 percent in the second quarter of 2020, marking the highest level on record since 1948. However, the unemployment rate dropped to 8.8 percent in the third quarter of 2020 and dropped further to 6.7 percent in the fourth quarter of 2020 as state economies slowly reopened and vaccines rolled out. The unemployment rate dropped further to 6.2 percent in the first quarter of 2021.

Unemployment rates ranged from 3.0 percent in South Dakota, Utah, and Vermont to 9.5 percent in Hawaii for the first quarter of 2021, although unemployment rates varied by demographics in each state, with unemployment rate increases being larger for women and people of color. According to the latest data, the national unemployment rate dropped to 5.9 percent in the second quarter of 2021.

FIGURE 7

Employment is Still Down in the First Quarter of 2021, by State

Year-over-year change in seasonally-adjusted employment, 2021 quarter 1 versus 2020 quarter 1



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Source: Bureau of Labor Statistics, analysis by the author.

Nationwide employment declined 6.1 percent in the first quarter of 2021 compared with the same quarter in 2020 (Figure 7). Employment declines were particularly steep in states with a high reliance on the hospitality and tourism industries (such as Hawaii and Nevada) as well as in states that experienced high numbers of COVID-19 cases during the first phase of the pandemic (such as New

York). All states but Idaho and Utah reported declines in employment in the first quarter of 2021. Employment declines year over year ranged from 1.9 percent in Montana and South Dakota to 17.2 percent in Hawaii for the first quarter of 2021, while in Idaho and Utah employment increased 1.2 and 0.5 percent, respectively.

Although the employment situation improved in the first and second quarters of 2021, as of June of this year, nearly 7 million fewer people were employed than were employed last February. Moreover, about 15 percent of people who lost their jobs during the pandemic had been employed by state and local governments. Last spring, states and localities cut public-sector jobs to address budgetary challenges caused by the pandemic or in response to reduced demand, and all these declines have not been reversed. As of June, state and local governments still employed 1 million fewer people than pre-pandemic levels. The ARPA might help state and local governments rehire some of the employees who were laid off because of the pandemic.

Housing Market

House prices are an important determinant of local property taxes, though changes in property tax revenues often lag property price changes. Assessment lags and assessment caps can affect how quickly house price changes translate into property tax revenue changes. Declines in house prices usually lead to declines in property taxes, while growth in house prices usually leads to growth in property tax revenues. There has been recent strength in housing markets as demand for new housing outstripped supply in the early months of the pandemic.

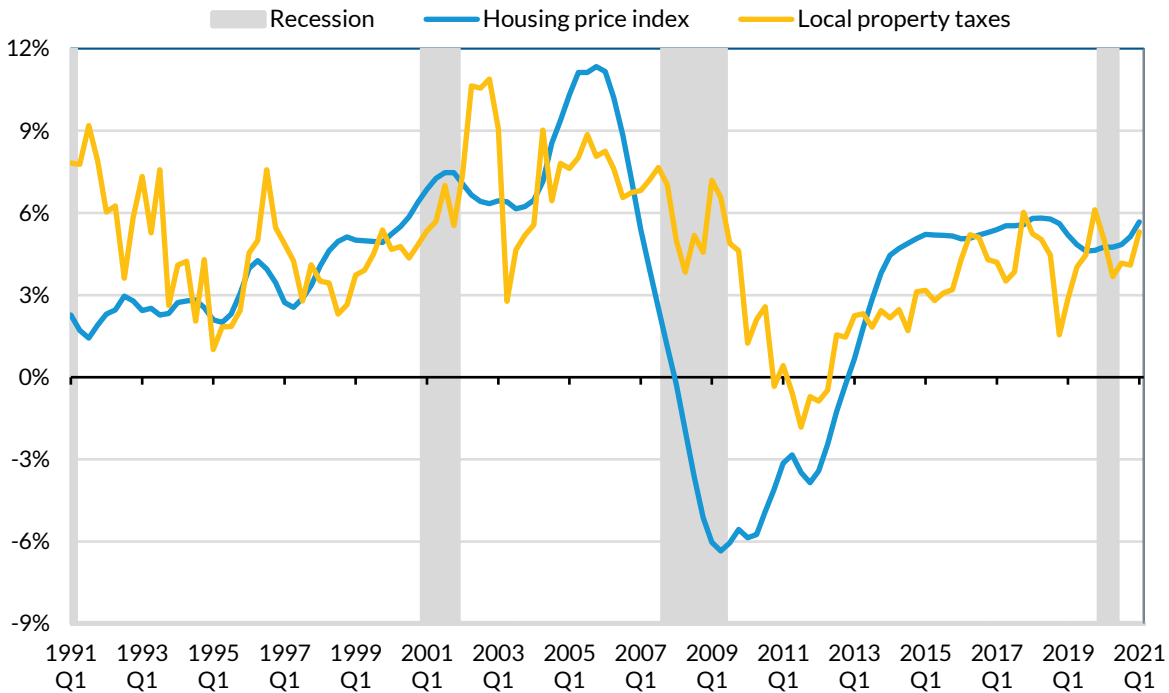
Figure 8 shows year-over-year percentage changes in the four-quarter moving average of the house price index and local property taxes in nominal terms. House prices saw steep declines during the Great Recession, which led to a significant slowdown in local property tax growth and to an actual decline in property tax revenues during state fiscal years 2011 and 2012.¹³ Growth in the house price index began weakening in mid-2005, and the price index declined for five straight years, between the first quarter of 2008 and the fourth quarter of 2012 (though patterns varied across states and regions).

The trend in the house price index has been generally upward between 2013 and 2018 but showed some weakness following the first quarter of 2019. National average house prices appreciated 5.7 percent for the first quarter of 2021 compared with one year earlier; year-over-year growth in local property taxes was 5.3 percent for the same period.

FIGURE 8

Sustained Growth in Housing Prices Despite the Pandemic

Year-over-year percentage change in house prices versus local property taxes



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Sources: US Census Bureau (property taxes) and Federal Housing Finance Agency (house price indexes), analysis by the author.

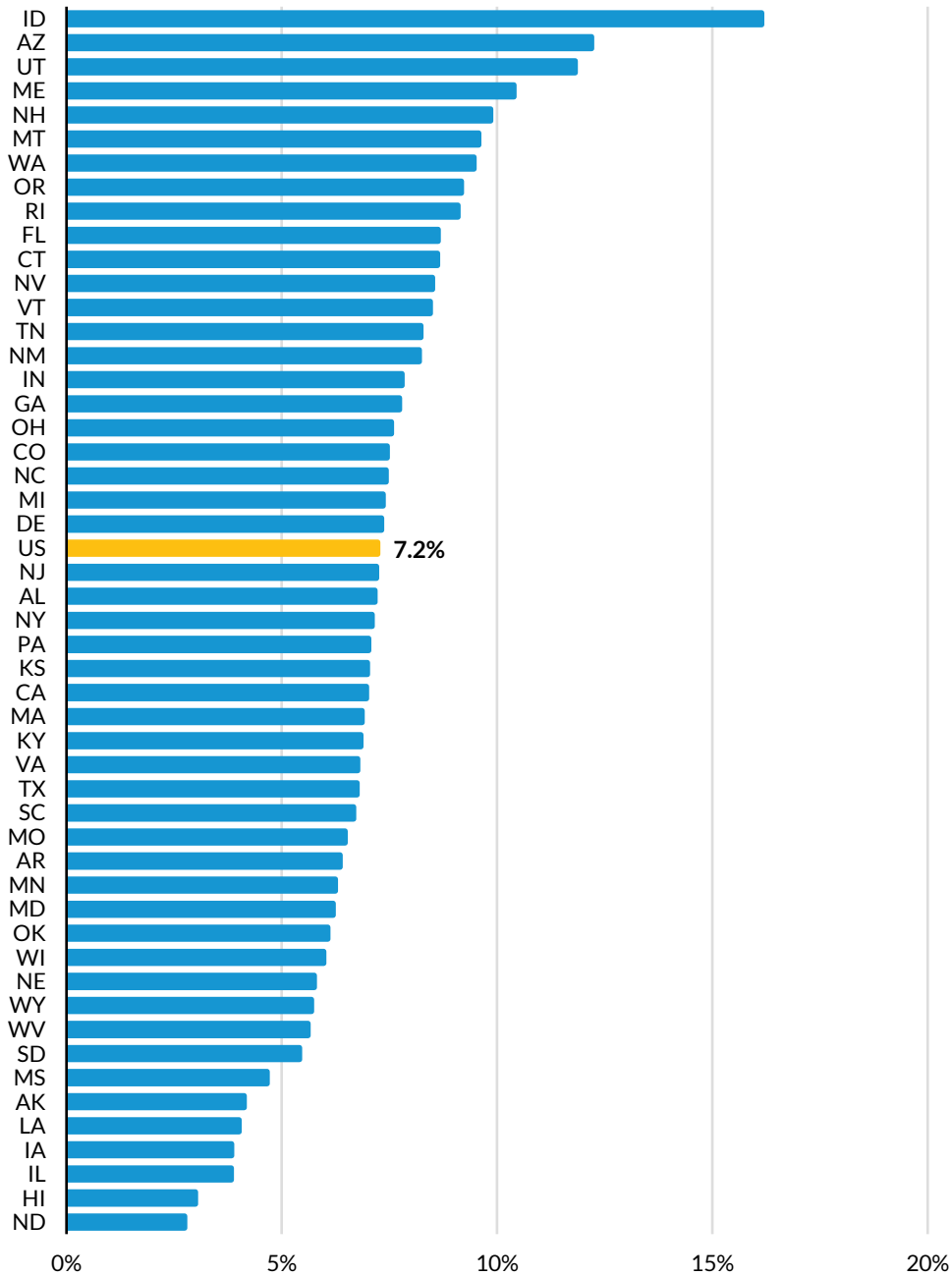
Notes: Year-over-year change is the percentage change of four-quarter moving averages.

Figure 9 shows the state-by-state nominal percentage change in house price indexes in the first quarter of 2021 compared with the first quarter of 2020. Statewide house price indexes increased in all states for the first quarter of 2021 compared with a year earlier, ranging from a 2.7 percent increase in North Dakota to a 16.1 percent increase in Idaho. Year-over-year growth was 7.2 percent for the nation. Despite continuous and strong nationwide growth in the housing market, prices are still below their pre-Great Recession peaks in Connecticut, Illinois, and Maryland.

The pandemic generally has not negatively impacted residential real estate property values. However, the pandemic's exact effects on commercial real estate property values, and thus commercial property tax revenues and potentially residential properties, remains uncertain. Most commercial property (hotels, retails, and offices) owners were expecting to see reductions in commercial property values in their 2021 assessments. Further, residential properties in high-cost or densely populated cities such as San Francisco or New York City have been negatively affected by the pandemic. For example, the final assessment roll for full market value as well as for taxable assessed value of all New York City properties decreased more than 5 percent for FY 2022. Reductions in property values for FY 2022 reflect the negative impact of COVID-19 on property values across the city.¹⁴

Predicting the pandemic's long-term effects on real estate and commercial properties is difficult because it is still unclear whether remote work and online shopping will remain even after other patterns revert to prepandemic trends.

FIGURE 9
Despite the Pandemic, All States Saw Solid Growth in Housing Prices
Percent change in house prices, 2021 quarter 1 versus 2020 quarter 1



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Source: Federal Housing Finance Agency (house price indexes for all transactions, seasonally not adjusted), analysis by the author.

Personal Consumption Expenditures

“Personal consumption expenditures” is a measure of national consumer spending. The measure shows the value of the goods and services purchased by American consumers and is correlated with the base for states’ sales taxes. [Figure 10](#) displays the year-over-year percentage change in the four-quarter moving average of real personal consumption expenditures for services, durable goods, and nondurable goods as well as for aggregate state real sales tax collections. We also show trends in the consumption of energy goods and services.

Before the pandemic, overall growth rates for both goods and services were weaker than growth rates observed before the Great Recession. Growth rates in state sales tax revenues were also substantially weaker than the peaks observed before the Great Recession, although growth in sales tax revenues improved after the *Wayfair* decision as states started requiring remote sellers to collect and remit sales tax. Year-over-year spending on services declined an average of 7.3 percent in the first quarter of 2021, while year-over-year spending on both durable and nondurable goods increased.

Before the pandemic, spending on services was resilient to economic downturns. However, spending on services declined in the second quarter of 2020, marking the first decline on record since 1948. Spending on services continued to decline in subsequent quarters, primarily because of the unique characteristics of the pandemic-induced downturn. American consumers spend substantially more on services (70 percent of total consumption) than on goods, and spending on services as a share of total personal consumption has generally grown steadily throughout the past four decades. However, with the decline in travel and attendance of in-person events, consumption of services has fallen. This current reversal in the long-term trend toward more spending on services is likely temporary.

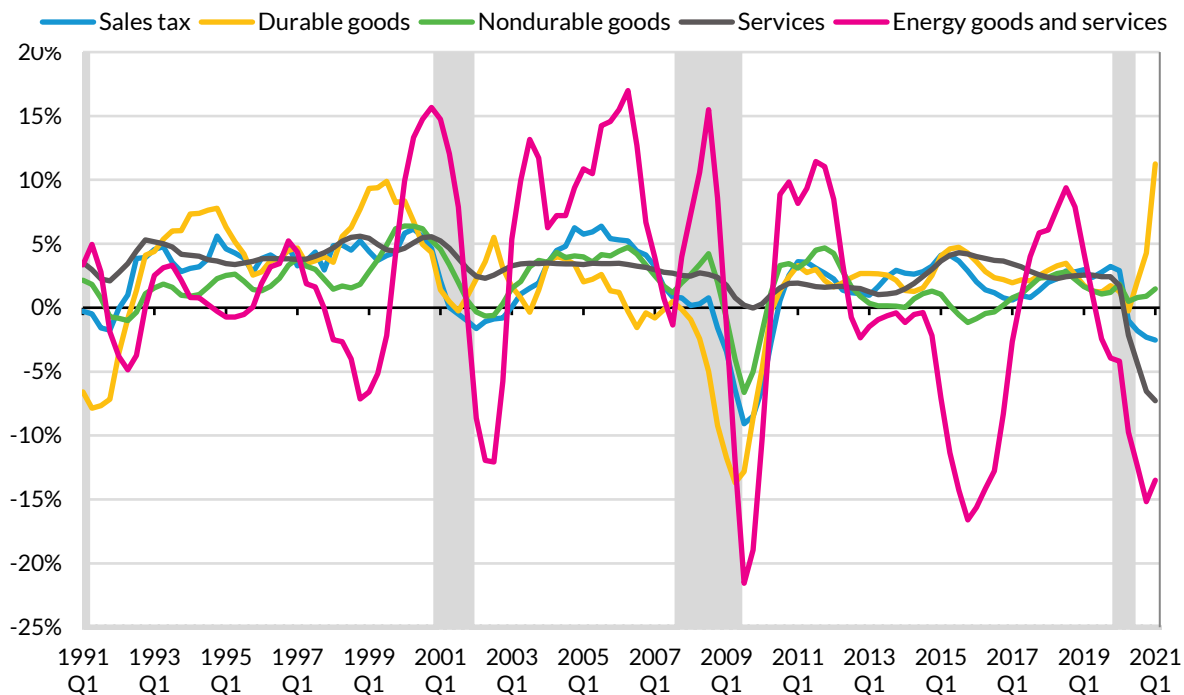
Although some states have expanded their sales tax bases to include some services, many services are still not subject to state sales tax. And some states, such as Arizona and Missouri, have banned taxing services altogether.

Year-over-year growth in real spending on durable goods was 11.3 percent for the first quarter of 2021, while growth in real spending on nondurable goods was 1.5 percent. The weakness in spending on nondurable goods is largely because of the lower consumption of gasoline and other energy goods (spending on gasoline and energy goods represents about one-fifth of total spending on nondurable goods).

FIGURE 10

Steep Declines in Energy Goods and Services

Year-over-year percentage change in real sales taxes and real personal consumption spending



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Sources: US Census Bureau (sales taxes) and Bureau of Economic Analysis (NIPA table 2.3.5), analysis by the author.

Notes: Year-over-year change is the percentage change of four-quarter moving averages. Data are adjusted for inflation.

As shown in Figure 10, year-over-year real spending on energy goods and services declined for 19 consecutive quarters, from the third quarter of 2012 to the first quarter of 2017. The decline was particularly dramatic throughout 2015 and 2016 in response to steep declines in oil and gas prices. The decline in total spending in the energy sector led to declines in overall general sales tax revenues, which are based on prices as well as quantity consumed. Overall consumption of energy goods and services had been recovering since the second quarter of 2017 and showed strong year-over-year growth through the first quarter of 2019, largely bouncing back from previously depressed levels. However, year-over-year growth in consumption of energy goods and services weakened substantially in the second quarter of 2019 and has declined since the third quarter of 2019.

Because many people are still commuting less and working remotely, spending on energy goods and services has continued to decline. If offices reopen in the months ahead, we will likely see some changes in these patterns. The year-over-year decline in real spending on energy goods and services for the first quarter of 2021 was 13.5 percent.

Tax Law Changes Affecting the First Quarter of 2021

Anticipated and actual federal policy changes had a substantial impact on state tax revenues in the past few years. But changes in state tax laws also affect state tax revenue trends. Only a few states enacted tax changes for fiscal year 2021, partly because of the pandemic and shortened legislative sessions but also because of deep uncertainty surrounding revenue projections at the time and what federal assistance would look like.

We present analysis here based on the data and information retrieved from the National Association of State Budget Officers' Fall 2020 Fiscal Survey of the States. However, the analysis and forecasted effects are based on anticipated revenue gains or losses based on states' legislated tax changes and do not include the effects of changing economic conditions related to the COVID-19 pandemic. Because of decreased economic activity, actual revenue collections typically varied from expected tax revenues. Note these reports also do not include any tax changes proposed or passed as part of states' fiscal year 2022 budgets, including changes made in response to the receipt of ARPA funds.¹⁵

During the first quarter of 2021, enacted tax changes were forecasted to increase revenues by \$1.3 billion compared with the same period in 2020.¹⁶ Overall, tax changes were expected to increase personal income taxes by \$94 million and increase corporate income taxes by \$1 billion. Enacted tax changes were also expected to increase sales taxes by \$49 million. Further, some states enacted tax changes in other taxes and fees, which were expected to increase state tax and fee revenues by approximately \$108 million (National Association of State Budget Officers 2020). Below, we discuss some of the major enacted tax changes for fiscal year 2021.

The estimated impact of all the enacted tax changes was a projected net increase of \$5.2 billion in state revenues in fiscal year 2021. By comparison, legislated tax actions in fiscal year 2020 were more substantial, with an estimated net revenue increase of \$8.1 billion. California and New Jersey enacted the most substantial changes, with estimated net revenue increases of \$5.0 billion and \$0.6 billion, respectively, for fiscal year 2021. Legislated changes were also substantial in Colorado, with an estimated net revenue increase of over \$236 million.

Three states enacted personal income tax increases and 12 states enacted decreases for fiscal year 2021. Legislated tax changes were estimated to increase aggregate personal income tax revenues by \$250 million in fiscal year 2021. The largest estimated increase was in New Jersey, where Governor Phil Murphy extended the millionaire tax by raising the gross income tax rate from 8.97 percent to 10.75 percent for taxpayers with an annual income between \$1 million and \$5 million. The tax rate increase is retroactive to January 1, 2020. Previously, the 10.75 percent tax rate applied only to taxpayers with an annual income of \$5 million or more.¹⁷ Lawmakers in Wisconsin reduced personal

income tax rates by cutting the two lowest income tax brackets from 3.86 percent to 3.54 percent and from 5.04 percent to 4.65 percent.¹⁸ These tax rate reductions were estimated to decrease personal income tax collections by \$179 million in fiscal year 2021.

Four states enacted corporate income tax increases, and five enacted decreases. Legislated tax changes were estimated to increase aggregate corporate income tax revenues by \$4.3 billion in fiscal year 2021. The largest corporate income tax change was in California, where Governor Gavin Newsom signed a tax bill that is estimated to increase corporate income tax revenues by \$4.1 billion in fiscal year 2021. The tax bill introduced two major changes pertaining to corporations. First, the tax bill suspended the net operating loss deductions for corporations with net income of over \$1 million for tax years 2020 through 2022. Second, the tax bill limited utilization of business credits for tax years 2020 through 2022; businesses can claim a maximum of \$5 million in tax credits. Some corporations have both net operating losses and credits. Because the tax bill put restrictions on both net operating losses and credits, the interaction between the two measures would increase the tax revenues even further for some corporations.¹⁹ In New Jersey, Governor Murphy signed a law that extended the 2.5 percent surtax imposed on corporations with annual net income over \$1 million through tax year 2023. The surtax, however, is not applicable on public utilities and S corporations. This measure is estimated to increase corporate income tax revenues by \$210 million in fiscal year 2021.²⁰

Seven states enacted sales tax increases, and five states enacted decreases. Legislated tax changes were estimated to increase sales tax revenues by \$128 million in fiscal year 2021. The most significant legislative change was in Tennessee, where officials revised the law related to online sales taxation to now require marketplace facilitators with sales over \$100,000 to remit sales and use tax. The revised law also lowered the annual sales economic nexus threshold from \$500,000 to \$100,000 for out-of-state marketplace sellers.²¹

Five states enacted changes for taxes on cigarettes and gaming, with an estimated overall decrease of \$42 million in fiscal year 2021. The estimated impact of each state's changes was not significant.

Twelve states enacted changes for some other taxes and fees, with an estimated overall increase of \$514 million in fiscal year 2021. These changes were estimated to increase state revenues in eight states but decrease revenue in four states. The largest estimated increase was in California, mostly because of the managed-care organization tax. In California, officials urged an extension of the managed-care organization tax that was set to expire on July 1, 2019.²² Governor Newsom approved the bill to renew the managed-care organization tax retroactively, subject to approval from the federal government.²³ The federal government initially rejected California's managed-care organization tax on January 30, 2020,²⁴ but finally approved it for the period of January 1, 2020, through June 30, 2023.²⁵

Conclusion

The COVID-19 pandemic rapidly altered states' fiscal year 2020 trajectory (Dadayan 2020b). Before the spread of the pandemic, states were forecasting solid growth for fiscal year 2020 (Dadayan 2020a). Although the pandemic-induced recession led to overall declines in state tax revenues, indications are that the impact of will be shorter and less severe than expected for most states.

Overall, the pandemic's impact on state personal income tax revenues has tended to be less severe than expected. States that have progressive income tax rate structures have seen solid growth in personal income tax revenue collections during the pandemic, which largely spared the earnings of high-income taxpayers. Strong stock market prices likely also contributed to the strength of personal income tax revenues. Robust income tax revenues might also be caused by greater capital gains realizations if taxpayers anticipated higher future tax rates on capital gains under the Biden administration.

Earlier in the pandemic, states were forecasting steep revenue shortfalls for fiscal year 2021 (Dadayan 2020c). But fiscal and monetary policies adopted by the federal government in response to the pandemic helped state governments sustain their revenue performance. For example, the \$600 weekly federal supplement to unemployment benefits under the Coronavirus Aid, Relief, and Economic Security Act may have helped states sustain their income tax withholding revenues. However, with the exemption of some 2020 unemployment compensation from federal income and some state taxes, we would expect lower state income taxes for the second quarter of 2021.

Although states reported solid revenue growth in the first quarter of 2021, there is wide variation across states and across revenue sources. If we look at revenue changes over the 12-month period (April 2020 through March 2021), we find a 0.6 percent year-over-year growth. Both personal and corporate income tax revenues showed growth for the nation during that 12-month period, while sales tax and motor fuel revenues saw declines. Moreover, state tax revenues were down in 18 states during that 12-month period compared with the same period a year earlier.

Overall state tax revenues were stronger during the pandemic than initially feared, in part because of the generous federal stimulus packages that have injected trillions of dollars into the economy. Further, the pandemic had a disproportionate impact on lower-income taxpayers, a majority of which were employed in service industries and lost their jobs during the pandemic. By contrast, higher-income taxpayers were able to work remotely, which helped states with personal income tax revenue collections. During the pandemic we have also witnessed a shift from spending on services to spending on goods; this helped states substantially because goods are usually subject to sales tax while many services are exempt. Moreover, the pandemic accelerated online sales purchases, and, thanks to the

Wayfair ruling, most states already had laws and regulations in place that required taxing these online sales transactions, which supported state sales tax revenues.

Despite a more positive fiscal and economic reality than initially feared, states continue to face fiscal uncertainties: unemployment rates are still higher than prepandemic levels; state and local government employment was still down by 1 million jobs as of June 2021; and states and localities are still facing increased spending demands related to the pandemic, vaccine roll-outs, and the reopening of the economy. State fiscal and economic recovery will in part depend on the new variants of the virus, potential new waves of outbreaks, the associated risks on the public health, and individual, business, and government responses to these changes. Although the pandemic's damage on state budgets was less severe than initially expected and the short-term forecast is relatively bright because of federal aid, it is unclear how state revenues will perform when these funds run out.

Appendix: Additional Tables

TABLE A1

Quarterly State Government Tax Revenue by Major Tax

2010 Q1–2021 Q1 average growth	Nominal Y-O-Y Percentage Change					Inflation rate	Real Y-O-Y Percentage Change				
	PIT	CIT	Sales	MFT	Total		PIT	CIT	Sales	MFT	Total
	6.4	6.1	3.6	2.9	4.6	1.6	4.7	4.3	2.0	1.2	2.9
2021 Q1	18.4	30.7	3.2	(7.4)	9.4	2.0	16.1	28.2	1.2	(9.2)	7.3
2020 Q4	9.0	24.0	3.0	(7.4)	5.9	1.3	7.7	22.5	1.7	(8.6)	4.6
2020 Q3	42.7	63.8	2.9	(5.3)	19.0	1.1	41.1	62.0	1.8	(6.3)	17.7
2020 Q2	(32.1)	(44.3)	(13.3)	(17.9)	(24.5)	0.6	(32.5)	(44.6)	(13.8)	(18.4)	(25.0)
2020 Q1	5.0	(1.3)	3.8	5.2	4.3	1.7	3.2	(2.9)	2.1	3.4	2.6
2019 Q4	6.2	19.6	5.7	8.3	5.6	1.6	4.5	17.7	4.0	6.5	3.9
2019 Q3	4.3	11.6	7.1	6.0	5.5	1.7	2.5	9.7	5.3	4.2	3.7
2019 Q2	18.8	21.0	2.3	3.2	10.4	1.8	16.7	18.8	0.5	1.3	8.5
2019 Q1	(2.4)	40.5	5.6	1.8	2.7	2.0	(4.3)	37.8	3.5	(0.2)	0.6
2018 Q4	(9.2)	12.0	4.5	6.0	(0.1)	2.3	(11.3)	9.4	2.1	3.6	(2.4)
2018 Q3	7.9	26.4	6.3	8.8	8.4	2.5	5.2	23.3	3.7	6.2	5.7
2018 Q2	10.6	17.5	5.3	8.9	8.9	2.6	7.8	14.5	2.6	6.1	6.2
2018 Q1	15.3	(6.5)	5.0	10.9	8.9	2.1	12.9	(8.4)	2.8	8.6	6.6
2017 Q4	14.9	10.5	4.5	9.7	9.1	2.0	12.6	8.4	2.4	7.6	7.0
2017 Q3	4.6	6.5	3.1	2.0	3.9	1.9	2.6	4.5	1.2	0.0	2.0
2017 Q2	(0.0)	11.7	3.2	5.2	2.3	1.7	(1.7)	9.8	1.5	3.5	0.6
2017 Q1	8.9	(28.1)	2.3	0.9	3.3	2.0	6.7	(29.5)	0.3	(1.1)	1.2
2016 Q4	0.3	(3.4)	1.7	1.2	1.2	1.5	(1.2)	(4.8)	0.2	(0.3)	(0.3)
2016 Q3	2.4	(9.0)	2.7	1.4	1.3	1.0	1.5	(9.8)	1.7	0.4	0.3
2016 Q2	(2.8)	(9.7)	1.2	0.3	(1.7)	0.9	(3.7)	(10.5)	0.2	(0.6)	(2.5)
2016 Q1	1.7	(5.9)	1.9	2.9	1.4	0.8	0.9	(6.6)	1.1	2.0	0.6
2015 Q4	5.1	(9.5)	2.7	3.5	2.4	0.8	4.3	(10.2)	1.8	2.7	1.5
2015 Q3	6.5	0.3	3.5	5.0	4.1	0.9	5.5	(0.6)	2.6	4.1	3.2
2015 Q2	14.0	6.0	3.6	2.5	7.1	1.1	12.8	4.8	2.5	1.5	5.9
2015 Q1	6.9	3.3	5.8	4.3	5.5	1.1	5.8	2.2	4.7	3.2	4.3
2014 Q4	8.4	10.1	6.5	2.4	5.7	1.5	6.8	8.5	5.0	0.9	4.1
2014 Q3	4.4	7.4	6.6	0.6	4.3	2.0	2.4	5.3	4.5	(1.3)	2.2
2014 Q2	(6.7)	(0.3)	4.6	4.0	(1.0)	2.1	(8.6)	(2.4)	2.5	1.9	(3.0)
2014 Q1	(1.3)	7.9	3.0	2.8	0.5	1.8	(3.0)	6.0	1.2	1.0	(1.3)
2013 Q4	1.1	3.6	5.1	3.6	3.0	1.8	(0.7)	1.8	3.2	1.7	1.2
2013 Q3	4.9	1.8	5.5	2.8	5.3	1.7	3.1	0.1	3.7	1.1	3.5
2013 Q2	19.2	8.5	4.6	2.0	10.0	1.7	17.2	6.6	2.8	0.3	8.1
2013 Q1	18.2	9.6	3.9	(1.7)	8.9	1.9	16.0	7.6	2.0	(3.4)	6.9
2012 Q4	10.4	2.5	3.3	1.3	5.6	2.1	8.1	0.4	1.2	(0.8)	3.4
2012 Q3	4.7	8.6	2.3	2.2	3.1	1.8	2.8	6.7	0.5	0.3	1.3
2012 Q2	4.7	1.5	2.1	1.7	3.2	1.7	2.9	(0.2)	0.4	(0.1)	1.4
2012 Q1	4.0	4.2	4.6	1.3	3.7	2.1	1.9	2.1	2.5	(0.8)	1.6
2011 Q4	3.7	(6.5)	3.5	0.7	3.2	2.0	1.7	(8.3)	1.5	(1.2)	1.2
2011 Q3	9.7	2.5	3.7	(0.3)	6.2	2.4	7.2	0.1	1.3	(2.6)	3.7
2011 Q2	15.3	19.4	5.7	7.5	11.1	2.2	12.9	16.9	3.5	5.2	8.8
2011 Q1	12.1	4.4	6.3	13.4	10.0	1.9	10.1	2.5	4.4	11.3	8.0
2010 Q4	10.5	19.8	4.8	11.8	8.4	1.6	8.8	17.9	3.2	10.1	6.7
2010 Q3	4.8	(0.9)	4.5	10.6	5.4	1.4	3.4	(2.3)	3.1	9.1	3.9
2010 Q2	2.2	(19.4)	4.8	4.0	2.6	1.1	1.0	(20.3)	3.7	2.8	1.5
2010 Q1	2.4	0.8	0.6	(0.2)	2.9	0.6	1.9	0.2	0.0	(0.7)	2.3

Source: Bureau of Economic Analysis (GDP) and US Census Bureau (tax revenue), analysis by the author.

Notes: CIT = corporate income tax; PIT = personal income tax; MFT = motor fuel tax; Y-O-Y = year-over-year.

TABLE A2

Quarterly State Government Tax Revenue, by State

Nominal percentage change, 2021 quarter 1 versus 2020 quarter 1

State/region	PIT	CIT	Sales	MFT	Total
US (median)	15.5	24.4	6.8	(6.8)	8.0
US (average)	18.4	30.7	3.2	(7.4)	9.4
New England	18.9	20.3	6.4	(12.7)	12.4
Connecticut	9.2	30.6	7.7	(11.1)	9.7
Maine	31.0	(8.3)	10.2	(8.7)	12.4
Massachusetts	22.0	18.0	3.8	(15.3)	15.4
New Hampshire	9.7	40.0	N/A	(38.2)	6.3
Rhode Island	25.8	(2.6)	9.2	29.3	12.0
Vermont	27.5	(36.2)	14.0	(5.2)	5.9
Mideast	10.5	12.0	(0.6)	(15.9)	8.1
Delaware	44.4	133.7	N/A	(16.3)	38.9
Maryland	2.9	32.7	(24.2)	(24.5)	(0.8)
New Jersey	9.0	14.2	7.1	(18.4)	13.7
New York	11.2	5.3	(3.1)	(16.4)	7.8
Pennsylvania	10.9	13.3	6.3	(12.3)	5.6
Great Lakes	17.3	52.7	8.0	(1.8)	8.8
Illinois	8.1	46.1	7.3	(7.9)	6.3
Indiana	12.5	33.7	6.8	0.4	8.3
Michigan	42.5	NM	15.8	40.0	15.4
Ohio	23.5	NM	5.0	(9.3)	7.3
Wisconsin	17.9	11.9	6.0	(5.1)	9.9
Plains	14.3	51.6	3.5	(9.1)	7.7
Iowa	17.4	66.3	8.5	(0.5)	13.2
Kansas	10.0	31.2	5.6	(10.3)	6.4
Minnesota	20.6	51.1	2.0	(6.5)	13.6
Missouri	5.1	NM	3.8	(21.6)	4.1
Nebraska	15.5	61.6	(1.3)	(3.5)	6.7
North Dakota	1.8	88.3	(10.3)	(17.6)	(17.5)
South Dakota	N/A	18.2	13.6	(2.5)	9.7
Southeast	13.5	22.4	8.6	(3.0)	8.9
Alabama	8.1	141.2	10.1	5.3	8.7
Arkansas	18.2	(19.9)	9.6	(6.8)	7.4
Florida	N/A	2.8	0.7	(7.4)	3.3
Georgia	19.9	17.4	13.9	(0.3)	14.7
Kentucky	4.8	146.6	5.8	(6.6)	4.9
Louisiana	12.6	NM	7.8	(5.5)	8.5
Mississippi	21.7	17.9	14.2	(2.8)	11.0
North Carolina	7.4	68.1	31.0	(9.4)	14.4
South Carolina	44.6	5.7	10.4	4.3	17.3
Tennessee	(13.0)	6.6	10.7	(4.0)	5.9
Virginia	12.0	17.8	6.7	15.5	10.9
West Virginia	9.3	10.6	6.6	(6.4)	2.8
Southwest	15.0	11.1	(2.9)	(9.2)	(0.9)
Arizona	43.9	97.7	8.9	(6.8)	21.3
New Mexico	(45.5)	(6.6)	(3.4)	(6.8)	(4.2)
Oklahoma	11.6	(44.0)	4.4	(8.4)	(0.2)
Texas	N/A	N/A	(6.1)	(10.1)	(6.0)
Rocky Mountain	14.5	35.4	7.7	(6.7)	9.7
Colorado	7.4	34.4	(0.8)	(18.0)	5.7
Idaho	25.5	11.5	18.2	3.0	16.2
Montana	25.9	33.4	N/A	(1.5)	12.3
Utah	21.5	48.8	14.6	0.5	16.3
Wyoming	N/A	N/A	(5.0)	(16.9)	(8.7)

State/region	PIT	CIT	Sales	MFT	Total
Far West	30.1	51.5	(1.4)	(10.5)	14.7
Alaska	N/A	NM	N/A	(5.1)	(46.4)
California	29.1	54.6	(5.9)	(11.7)	17.7
Hawaii	17.3	NM	(18.9)	(18.7)	(11.2)
Nevada	N/A	N/A	13.8	30.3	(2.1)
Oregon	51.3	54.4	N/A	(6.8)	37.0
Washington	N/A	N/A	10.2	(12.0)	3.4

Source: US Census Bureau (tax revenue), analysis by the author.

Notes: CIT = corporate income tax; PIT = personal income tax; MFT = motor fuel tax; N/A = not applicable; NM = not meaningful.

TABLE A3

State Government Tax Revenue Trends During the Pandemic, by State

Nominal percentage change, April 2019 to March 2020 versus April 2020 to March 2021

State/region	PIT	CIT	Sales	MFT	Total
US (median)	2.4	0.5	1.6	(10.1)	1.6
US (average)	4.7	4.4	(1.3)	(9.5)	0.6
New England	5.0	7.4	(0.4)	(14.8)	1.4
Connecticut	2.8	12.6	1.1	(13.5)	0.4
Maine	12.2	(3.4)	1.5	(12.3)	4.3
Massachusetts	4.8	5.6	(3.2)	(19.5)	1.3
New Hampshire	13.6	8.6	N/A	(29.2)	0.1
Rhode Island	4.7	18.7	3.2	24.9	3.4
Vermont	14.7	(34.1)	10.1	(5.6)	3.4
Mideast	1.6	1.6	(4.9)	(17.1)	(0.5)
Delaware	1.9	(14.5)	N/A	(18.7)	3.4
Maryland	3.7	12.8	(14.3)	(23.4)	(3.8)
New Jersey	(1.2)	(6.6)	(1.6)	(13.8)	1.4
New York	2.4	5.9	(8.9)	(18.3)	(0.5)
Pennsylvania	0.2	3.1	1.6	(14.6)	(0.9)
Great Lakes	2.8	7.0	1.5	(1.9)	2.1
Illinois	1.4	3.9	(0.6)	4.4	2.4
Indiana	1.9	(7.1)	2.9	(6.8)	(0.0)
Michigan	9.6	8.1	2.9	(7.1)	3.7
Ohio	0.7	NM	1.6	1.2	1.7
Wisconsin	1.1	22.5	1.1	(8.2)	2.1
Plains	0.7	5.3	0.5	(9.9)	(2.5)
Iowa	2.5	15.5	2.6	(9.1)	1.5
Kansas	(2.1)	(3.9)	3.2	(10.4)	(0.7)
Minnesota	1.4	13.6	(2.2)	(12.9)	(1.6)
Missouri	(2.1)	(2.4)	2.3	(10.7)	(1.0)
Nebraska	5.6	(14.2)	4.1	(3.0)	2.2
North Dakota	0.3	(18.7)	(17.0)	(14.7)	(31.1)
South Dakota	N/A	4.3	7.9	(4.1)	6.1
Southeast	3.8	(2.4)	0.1	(6.7)	1.0
Alabama	0.6	19.9	5.9	10.7	4.7
Arkansas	1.1	(2.9)	6.7	2.7	2.4
Florida	N/A	(20.7)	(6.8)	(11.9)	(5.3)
Georgia	9.0	2.7	1.2	0.5	4.7
Kentucky	4.7	7.6	2.9	(9.3)	1.9
Louisiana	(3.1)	19.1	(2.8)	(16.9)	(2.2)
Mississippi	1.8	(7.6)	8.5	(4.6)	2.0
North Carolina	3.0	13.7	7.4	(10.2)	4.0
South Carolina	9.4	(17.0)	3.3	(5.4)	3.6
Tennessee	(27.0)	(1.4)	3.6	(7.5)	2.7
Virginia	2.8	16.9	1.4	(0.9)	3.4
West Virginia	(1.1)	1.2	4.0	(11.8)	(5.9)
Southwest	4.6	10.0	(2.2)	(11.3)	(5.5)
Arizona	7.0	(7.3)	7.4	(10.8)	6.4
New Mexico	3.9	NM	(3.1)	(10.9)	0.6
Oklahoma	1.4	(16.0)	2.2	(10.2)	(4.1)
Texas	N/A	N/A	(4.4)	(11.7)	(9.6)
Rocky Mountain	11.2	(5.5)	4.4	(6.9)	5.4
Colorado	10.2	(7.9)	(1.9)	(10.5)	4.1
Idaho	19.8	(3.5)	13.0	1.0	12.3
Montana	1.8	(0.3)	N/A	(3.8)	0.4
Utah	13.0	(4.2)	10.7	(9.2)	8.7
Wyoming	N/A	N/A	(9.5)	(6.9)	(7.2)

State/region	PIT	CIT	Sales	MFT	Total
Far West	8.8	9.7	(3.5)	(13.0)	2.6
Alaska	N/A	(81.4)	N/A	(6.5)	(39.3)
California	10.0	12.0	(3.1)	(11.8)	4.6
Hawaii	(0.9)	(26.8)	(21.9)	(25.0)	(17.8)
Nevada	N/A	N/A	(5.8)	5.1	(9.8)
Oregon	(2.0)	6.5	N/A	(10.1)	(1.8)
Washington	N/A	N/A	0.2	(23.5)	2.8

Source: US Census Bureau (tax revenue), analysis by the author.

Notes: CIT = corporate income tax; PIT = personal income tax; MFT = motor fuel tax; N/A = not applicable; NM = not meaningful.

ABLE A4

State Personal Income Tax Withholding

Year-over-year nominal percentage change

State/region	Pre-pandemic period				Pandemic period			
	2019 Q2	2019 Q3	2019 Q4	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1
US (median)	5.3	5.0	4.3	6.9	(0.1)	4.0	4.0	4.9
US (average)	5.2	4.3	4.8	5.8	(1.3)	5.1	6.2	6.5
New England	3.2	4.5	3.1	4.7	2.5	4.7	5.1	6.6
Connecticut	7.3	5.5	2.8	2.0	1.9	4.0	6.6	2.3
Maine	5.3	7.4	6.7	7.6	2.8	9.2	7.8	10.7
Massachusetts	1.5	4.1	3.1	5.8	2.9	4.5	4.3	9.4
Rhode Island	1.2	3.8	2.0	6.9	1.1	3.4	4.0	0.2
Vermont	1.5	0.6	(0.3)	3.1	2.3	7.3	1.5	1.1
Mideast	5.0	5.1	4.6	5.6	(2.1)	4.3	2.8	4.7
Delaware	7.9	6.2	0.9	10.1	(2.3)	4.8	(39.8)	34.5
Maryland	4.0	6.7	5.5	8.9	2.7	5.3	7.7	0.7
New Jersey	4.5	6.2	3.2	7.0	(5.8)	7.5	9.5	7.3
New York	5.5	5.0	4.8	4.6	(1.8)	3.0	2.8	4.9
Pennsylvania	5.1	2.4	4.1	3.8	(6.7)	4.5	(6.7)	1.8
Great Lakes	5.3	4.0	4.1	4.2	(2.8)	4.7	3.6	5.2
Illinois	5.1	4.2	3.2	3.1	(0.0)	6.0	6.1	4.3
Indiana	8.7	1.4	4.8	7.3	(10.1)	9.6	2.3	6.0
Michigan	5.2	7.6	6.0	6.9	4.3	5.0	2.9	6.8
Ohio	3.5	2.5	1.9	1.6	(10.6)	1.3	0.4	1.6
Wisconsin	4.7	3.0	5.3	3.4	(1.3)	(0.0)	4.0	8.5
Plains	2.8	3.4	3.3	4.4	(1.9)	(0.6)	3.4	3.2
Iowa	(4.1)	(3.5)	(3.9)	3.0	0.8	3.6	1.2	3.2
Kansas	7.6	2.8	6.4	9.7	(4.0)	3.2	4.4	2.8
Minnesota	5.7	5.1	2.8	1.6	(2.2)	(6.0)	4.5	1.9
Missouri	(2.2)	6.0	6.4	4.7	(3.3)	0.1	1.9	5.5
Nebraska	8.2	2.1	6.5	10.9	2.3	8.2	6.2	5.4
North Dakota	5.5	10.2	3.7	13.3	(6.0)	2.5	(4.9)	(11.6)
Southeast	3.1	2.1	1.8	5.4	(0.6)	4.2	3.9	6.0
Alabama	8.3	1.7	5.4	9.0	(5.2)	1.9	3.9	4.8
Arkansas	8.2	1.9	5.7	9.3	(8.9)	(4.4)	(4.1)	(3.5)
Georgia	0.1	(2.4)	(2.3)	6.0	6.0	11.2	6.5	9.5
Kentucky	(4.0)	2.1	2.0	7.5	1.0	5.6	5.3	1.4
Louisiana	6.3	9.9	(4.7)	14.9	(7.9)	(11.0)	0.2	1.0
Mississippi	2.5	(1.0)	3.5	7.3	(4.7)	0.2	4.7	3.1
North Carolina	0.9	(1.0)	(0.2)	3.4	1.4	8.9	5.0	8.5
South Carolina	7.2	6.6	4.9	2.4	2.2	4.6	3.3	10.0
Virginia	4.5	5.8	5.8	2.9	(2.1)	2.4	3.4	5.1
West Virginia	6.8	(0.4)	1.2	4.1	(10.3)	(5.4)	(0.0)	1.9
Southwest	9.8	7.3	7.9	7.3	(0.4)	3.4	5.5	4.8
Arizona	8.4	7.1	8.7	10.3	2.5	2.4	8.5	7.6
New Mexico	20.1	13.2	13.9	12.8	(12.3)	3.2	5.3	2.2
Oklahoma	7.0	5.0	4.3	0.9	1.6	4.8	1.0	1.8
Rocky Mountain	2.8	6.1	5.8	10.8	7.7	9.3	13.7	9.9
Colorado	7.2	6.1	3.5	10.9	11.3	14.1	15.4	7.5
Idaho	(17.5)	3.2	9.7	12.1	8.0	11.5	14.9	18.9
Montana	5.6	7.6	4.2	9.7	0.7	2.8	11.2	9.7
Utah	3.3	6.5	9.0	10.3	3.3	1.6	10.9	11.3
Far West	8.4	5.3	8.2	7.2	(2.3)	8.4	12.6	10.4
California	9.4	5.1	8.2	7.5	(2.4)	9.2	14.2	11.1
Hawaii	(14.1)	4.1	5.6	4.4	(8.7)	(1.2)	(5.1)	(1.7)
Oregon	7.9	7.0	9.0	4.9	(0.1)	4.1	3.1	6.4

Source: Individual state data, analysis by the author.

Notes: Alaska, Florida, Nevada, New Hampshire, South Dakota, Tennessee, Texas, Washington, and Wyoming have no broad-based personal income tax and are not shown in this table. ND = no data.

TABLE A5

State Personal Income Tax: Estimated Payments/Declarations

Year-over-year nominal percentage change

State	Estimated Payments for Tax Year 2019				Estimated Payments for Tax Year 2020			
	April 2019, 1st payment	June 2019, 2nd payment	Sep. 2019, 3rd payment	Dec. 2019- Jan. 2020, 4th payment	April 2020, 1st payment	June 2020, 2nd payment	Sep. 2020, 3rd payment	Dec. 2020- Jan. 2021, 4th payment
Median	18.0	10.4	11.1	11.0	(72.0)	(38.8)	(2.3)	10.2
Average	35.7	1.3	0.4	10.5	(82.3)	(47.9)	(1.5)	33.5
Alabama	30.1	11.5	12.7	13.3	(74.8)	(61.2)	(3.6)	13.3
Arizona	(25.1)	13.4	13.3	15.1	16.4	(30.5)	0.3	33.2
Arkansas	(3.2)	3.1	14.3	9.8	(16.8)	(19.3)	11.2	21.9
California	7.6	(3.6)	(14.2)	8.6	(83.2)	(82.8)	11.3	48.6
Colorado	62.9	(0.5)	1.7	6.1	(92.0)	(66.3)	(2.2)	18.6
Connecticut	(18.3)	(31.1)	(15.9)	(11.0)	(76.1)	(75.8)	(5.5)	26.2
Delaware	11.2	12.3	15.0	13.5	(58.0)	(18.3)	9.0	17.9
Georgia	2.8	6.1	4.3	4.7	(76.4)	(69.7)	(9.5)	8.0
Hawaii	138.6	22.9	48.1	41.9	(66.8)	(39.9)	(17.6)	0.7
Illinois	19.7	12.3	8.9	7.2	9.5	(20.8)	(8.2)	10.2
Indiana	19.2	10.0	8.8	13.0	(72.2)	(52.8)	(0.1)	9.2
Iowa	9.4	7.3	15.7	18.2	(20.4)	(23.1)	4.2	(1.7)
Kansas	12.4	13.3	19.0	22.0	(56.7)	(31.9)	(1.3)	13.1
Kentucky	4.6	(0.7)	(1.0)	11.0	(82.8)	126.6	(1.4)	7.3
Louisiana	17.7	20.9	20.3	25.2	(45.4)	(31.3)	(2.5)	1.0
Maine	18.3	15.6	6.2	9.3	(66.0)	(51.6)	15.4	40.4
Maryland	(1.0)	19.9	20.7	16.5	(75.9)	41.1	1.7	74.4
Massachusetts	7.6	0.3	3.4	3.2	(77.2)	10.1	(4.0)	23.5
Michigan	9.9	5.5	3.8	3.6	(73.5)	(65.2)	(0.3)	20.7
Minnesota	71.0	9.3	9.3	11.6	(75.4)	103.3	2.4	12.1
Mississippi	97.8	20.1	11.0	14.0	(79.1)	(44.5)	(10.9)	9.8
Missouri	135.6	(68.7)	(74.7)	NM	(52.5)	54.1	15.2	NM
Montana	27.6	(0.8)	17.2	35.0	(66.1)	(26.3)	3.4	1.9
Nebraska	20.6	10.1	11.3	10.8	(63.7)	(20.7)	0.3	15.3
New Jersey	10.4	7.1	5.0	8.7	(75.0)	(43.7)	(7.9)	(4.3)
New York	57.1	7.5	2.8	7.3	(96.9)	(37.7)	(8.5)	21.9
North Carolina	15.1	13.2	11.8	16.2	(56.0)	(48.6)	1.0	9.6
North Dakota	40.6	12.7	16.0	9.6	(86.9)	(47.4)	(17.1)	4.6
Ohio	8.1	12.9	16.0	7.2	(66.0)	(55.5)	(6.1)	7.5
Oklahoma	31.6	3.6	(2.0)	(7.3)	(90.6)	(48.9)	(22.7)	(6.1)
Oregon	53.5	11.5	12.9	14.1	(77.1)	(1.8)	(4.4)	12.7
Pennsylvania	13.9	13.0	11.1	8.7	(70.0)	(59.0)	(10.8)	(50.7)
Rhode Island	5.3	10.6	9.9	16.6	(64.9)	(59.4)	(2.3)	(1.1)
South Carolina	157.4	18.2	11.1	16.8	(85.8)	28.3	4.4	18.5
Vermont	20.1	14.9	18.7	13.1	(71.8)	(55.0)	3.2	12.6
Virginia	30.3	13.7	20.5	24.7	(45.5)	(8.5)	(9.4)	(2.0)
West Virginia	(9.9)	10.0	5.2	5.3	(62.7)	(46.7)	(11.3)	(1.6)
Wisconsin	51.9	0.9	2.7	1.6	(86.7)	110.4	(11.5)	10.0

Source: Individual state data, analysis by the author.

Notes: Alaska, Florida, Nevada, New Hampshire, South Dakota, Tennessee, Texas, Washington, and Wyoming have no broad-based personal income tax and are not shown in this table. Data are not available for Idaho, New Mexico, and Utah.

NM = not meaningful.

TABLE A6

State Personal Income Tax: Estimated Payments/Declarations During the Pandemic

Amounts (dollars in millions) and year-over-year nominal dollar and percentage change

State	Dollars in millions			Dollar change		Percent change	
	Apr 2018- Mar 2019	Apr 2019- Mar 2020	Apr 2020- Mar 2021	Apr 2019- Mar 2020 vs Apr 2018- Mar 2019	Apr 2020- Mar 2021 vs Apr 2019- Mar 2020	Apr 2019- Mar 2020 vs Apr 2018- Mar 2019	Apr 2020- Mar 2021 vs Apr 2019- Mar 2020
Median						13.1	(0.3)
Average	\$75,047	\$83,222	\$86,219	8,174.2	2,997.8	10.9	3.6
Alabama	287	333	333	45.7	0.0	15.9	0.0
Arizona	564	641	734	77.0	93.2	13.7	14.5
Arkansas	337	363	406	26.1	42.9	7.7	11.8
California	26,632	27,266	30,555	634.5	3,288.6	2.4	12.1
Colorado	1,432	1,707	1,581	275.3	(126.0)	19.2	(7.4)
Connecticut	1,620	1,295	1,283	(324.7)	(11.9)	(20.0)	(0.9)
Delaware	206	229	252	23.4	22.9	11.4	10.0
Georgia	845	891	822	45.7	(68.7)	5.4	(7.7)
Hawaii	604	836	811	232.1	(24.3)	38.4	(2.9)
Illinois	2,014	2,258	2,448	243.5	190.3	12.1	8.4
Indiana	862	962	948	99.7	(13.9)	11.6	(1.4)
Iowa	488	557	560	68.7	3.5	14.1	0.6
Kansas	446	526	530	80.2	3.5	18.0	0.7
Kentucky	531	556	539	25.1	(16.6)	4.7	(3.0)
Louisiana	320	397	396	76.6	(1.3)	23.9	(0.3)
Maine	284	319	371	35.8	51.2	12.6	16.0
Maryland	2,018	2,291	2,851	273.0	560.0	13.5	24.4
Massachusetts	2,445	2,522	2,469	76.6	(52.6)	3.1	(2.1)
Michigan	1,236	1,293	1,302	57.5	8.9	4.7	0.7
Minnesota	2,124	2,675	2,572	551.3	(103.8)	26.0	(3.9)
Mississippi	426	514	494	87.8	(20.7)	20.6	(4.0)
Missouri	237	629	1,409	391.9	780.2	165.5	124.1
Montana	288	333	353	45.0	20.3	15.7	6.1
Nebraska	336	385	392	49.1	7.1	14.6	1.8
New Jersey	2,965	3,162	2,836	197.6	(325.6)	6.7	(10.3)
New York	14,010	17,025	16,441	3,015.2	(583.8)	21.5	(3.4)
North Carolina	1,224	1,380	1,386	155.5	6.3	12.7	0.5
North Dakota	70	84	79	14.4	(5.3)	20.7	(6.3)
Ohio	853	925	926	71.5	1.6	8.4	0.2
Oklahoma	442	479	361	37.2	(118.1)	8.4	(24.7)
Oregon	2,852	3,490	3,104	638.1	(386.0)	22.4	(11.1)
Pennsylvania	1,835	1,990	2,040	154.3	50.5	8.4	2.5
Rhode Island	226	252	237	25.5	(15.0)	11.3	(6.0)
South Carolina	342	408	421	65.8	12.9	19.2	3.2
Vermont	157	180	180	23.7	(0.5)	15.1	(0.3)
Virginia	1,985	2,423	2,291	437.7	(131.6)	22.1	(5.4)
West Virginia	263	268	254	5.7	(14.9)	2.2	(5.6)
Wisconsin	1,243	1,378	1,253	135.0	(125.7)	10.9	(9.1)

Source: Individual state data, analysis by the author.

Notes: Alaska, Florida, Nevada, New Hampshire, South Dakota, Tennessee, Texas, Washington, and Wyoming have no broad-based personal income tax and are not shown in this table. Data are not available for Idaho, New Mexico, and Utah.

TABLE A7

State Personal Income Tax: Final Payments

Amounts (dollars in millions) and year-over-year nominal dollar and percentage change

State	Dollars in millions			Dollar change		Percent change	
	Apr 2018- Mar 2019	Apr 2019- Mar 2020	Apr 2020- Mar 2021	Apr 2019- Mar 2020 vs Apr 2018- Mar 2019	Apr 2020- Mar 2021 vs Apr 2019- Mar 2020	Apr 2019- Mar 2020 vs Apr 2018- Mar 2019	Apr 2020- Mar 2021 vs Apr 2019- Mar 2020
	\$41,678.4	\$53,281.9	\$52,769.7	11,603.5	(512.2)	26.4 27.8	0.4 (1.0)
Alabama	476.7	634.4	618.1	157.7	(16.3)	33.1	(2.6)
Arizona	892.1	1,222.9	1,186.2	330.8	(36.7)	37.1	(3.0)
Arkansas	429.6	431.7	469.2	2.2	37.4	0.5	8.7
California	7,079.7	8,772.7	9,619.0	1,693.0	846.3	23.9	9.6
Colorado	898.2	1,047.2	1,106.7	149.0	59.5	16.6	5.7
Connecticut	1,581.5	1,448.9	1,420.4	(132.6)	(28.5)	(8.4)	(2.0)
Delaware	165.4	199.8	203.2	34.4	3.5	20.8	1.7
Georgia	926.6	1,378.4	1,399.7	451.7	21.3	48.7	1.5
Hawaii	232.3	282.7	318.8	50.4	36.1	21.7	12.8
Idaho	546.2	778.6	912.3	232.4	133.7	42.6	17.2
Illinois	1,982.9	2,888.1	2,328.1	905.2	(560.0)	45.6	(19.4)
Indiana	748.3	935.9	943.6	187.6	7.6	25.1	0.8
Iowa	423.4	648.0	523.7	224.5	(124.3)	53.0	(19.2)
Kansas	635.1	889.4	765.0	254.3	(124.5)	40.0	(14.0)
Kentucky	378.9	427.5	432.9	48.5	5.4	12.8	1.3
Louisiana	466.6	639.1	604.9	172.4	(34.1)	37.0	(5.3)
Maine	278.1	345.4	354.9	67.3	9.5	24.2	2.8
Maryland	1,875.7	2,513.7	2,340.1	638.0	(173.6)	34.0	(6.9)
Massachusetts	2,207.9	3,100.4	3,116.6	892.5	16.2	40.4	0.5
Michigan	984.5	1,330.6	1,332.3	346.0	1.8	35.1	0.1
Minnesota	1,625.3	2,000.1	2,008.7	374.8	8.6	23.1	0.4
Missouri	1,451.2	1,476.4	530.0	25.3	(946.5)	1.7	(64.1)
Montana	196.4	245.7	117.1	49.3	(128.6)	25.1	(52.3)
Nebraska	376.9	492.9	487.0	116.0	(5.9)	30.8	(1.2)
New Jersey	2,627.5	3,748.1	3,526.8	1,120.6	(221.3)	42.6	(5.9)
New Mexico	655.8	426.4	608.3	(229.4)	182.0	(35.0)	42.7
New York	2,577.7	3,342.6	3,455.8	764.9	113.2	29.7	3.4
North Carolina	2,003.3	2,557.7	2,497.3	554.3	(60.4)	27.7	(2.4)
North Dakota	64.4	74.5	72.4	10.1	(2.1)	15.7	(2.8)
Ohio	812.3	1,123.4	1,073.4	311.1	(50.0)	38.3	(4.4)
Oklahoma	377.4	449.2	436.1	71.8	(13.1)	19.0	(2.9)
Pennsylvania	1,401.6	1,744.3	1,715.5	342.7	(28.9)	24.4	(1.7)
Rhode Island	225.4	282.5	284.5	57.1	2.0	25.4	0.7
South Carolina	742.9	923.1	950.9	180.2	27.8	24.3	3.0
Utah	1,017.0	1,345.7	1,661.7	328.7	316.0	32.3	23.5
Vermont	147.7	178.2	194.0	30.5	15.8	20.7	8.9
Virginia	1,250.5	1,777.0	1,978.3	526.5	201.3	42.1	11.3
West Virginia	323.3	430.4	417.1	107.1	(13.3)	33.1	(3.1)
Wisconsin	591.9	748.4	759.1	156.5	10.7	26.4	1.4

Source: Individual state data, analysis by the author.

Notes: Alaska, Florida, Nevada, New Hampshire, South Dakota, Tennessee, Texas, Washington, and Wyoming have no broad-based personal income tax and are not shown in this table. Data are not available for Mississippi, New Mexico, and Oregon.

TABLE A8

States with Economic Nexus and Marketplace Laws*Economic Nexus threshold levels and effective dates*

State	Current threshold levels for economic nexus	Marketplace nexus	
		Economic nexus effective date	effective date
Alabama	>\$250,000	10/1/2018	1/1/2019
Arizona	>\$100,000	10/1/2019	10/1/2019
Arkansas	>\$100,000 or over 200 transactions	7/1/2019	7/1/2019
California	>\$500,000	4/1/2019	10/1/2019
Colorado	>\$100,000	6/1/2019	10/1/2019
Connecticut	>\$100,000 and over 200 transactions	12/1/2018	12/1/2018
Florida	>\$100,000	7/1/2021	7/1/2021
Georgia	>\$100,000 or over 200 transactions	1/1/2019	4/1/2020
Hawaii	>\$100,000 or over 200 transactions	7/1/2018	1/1/2020
Idaho	>\$100,000	6/1/2019	6/1/2019
Illinois	>\$100,000 or over 200 transactions	10/1/2018	1/1/2020
Indiana	>\$100,000 or over 200 transactions	10/1/2018	7/1/2019
Iowa	>\$100,000	1/1/2019	1/1/2019
Kansas	>\$100,000	10/1/2019	10/1/2019
Kentucky	>\$100,000 or over 200 transactions	10/1/2018	7/1/2019
Louisiana	>\$100,000 or over 200 transactions	7/1/2020	7/1/2020
Maine	>\$100,000 or over 200 transactions	7/1/2018	10/1/2019
Maryland	>\$100,000 or over 200 transactions	10/1/2018	10/1/2019
Massachusetts	>\$100,000	10/1/2019	10/1/2019
Michigan	>\$100,000 or over 200 transactions	10/1/2018	1/1/2020
Minnesota	>\$100,000 or over 200 transactions	10/1/2018	10/1/2018
Mississippi	>\$250,000	9/1/2018	7/1/2020
Missouri	>\$100,000	1/1/2023	1/1/2023
Nebraska	>\$100,000 or over 200 transactions	1/1/2019	4/1/2019
Nevada	>\$100,000 or over 200 transactions	10/1/2018	10/1/2019
New Jersey	>\$100,000 or over 200 transactions	11/1/2018	11/1/2018
New Mexico	>\$100,000	7/1/2019	7/1/2019
New York	>\$500,000 and over 100 transactions	6/21/2018	6/1/2019
North Carolina	>\$100,000 or over 200 transactions	11/1/2018	2/1/2020
North Dakota	>\$100,000	10/1/2018	10/1/2019
Ohio	>\$100,000 or over 200 transactions	8/1/2019	8/1/2019
Oklahoma	>\$100,000	7/1/2018	7/1/2018
Pennsylvania	>\$100,000	7/1/2019	7/1/2019
Rhode Island	>\$100,000 or over 200 transactions	7/1/2019	7/1/2019
South Carolina	>\$100,000	11/1/2018	11/1/2018
South Dakota	>\$100,000 or over 200 transactions	11/1/2018	3/1/2019
Tennessee	>\$500,000	10/1/2019	10/1/2020
Texas	>\$500,000	10/1/2019	10/1/2019
Utah	>\$100,000 or over 200 transactions	1/1/2019	10/1/2019
Vermont	>\$100,000 or over 200 transactions	7/1/2018	6/1/2019
Virginia	>\$100,000 or over 200 transactions	7/1/2019	7/1/2019
Washington	>\$100,000	10/1/2018	10/1/2018
West Virginia	>\$100,000 or over 200 transactions	1/1/2019	7/1/2019
Wisconsin	>\$100,000	10/1/2018	10/1/2019
Wyoming	>\$100,000 or over 200 transactions	2/1/2019	7/1/2019

Source: Individual state information, compiled by the author.**Notes:** CY = calendar year; TBD = to be determined. Alaska, Delaware, Montana, New Hampshire, and Oregon do not have sales tax.

States are hyperlinked to respective economic nexus guidelines.

TABLE A9

Quarterly State Government Tax Revenue for Nonmajor Tax Revenue Sources

Year-over-year real percentage change; four-quarter moving averages

2021 Q1 collections (\$ millions)	Property tax	Tobacco product sales tax	Alcoholic beverage sales tax	Motor vehicle & operators' license taxes	Other taxes	Total nonmajor taxes
	\$5,024	\$4,161	\$1,746	\$8,381	\$41,643	\$60,955
2010 Q1 - 2021 Q1 average growth	2.1	(0.4)	0.7	1.6	1.7	1.4
2021 Q1	2.6	(0.6)	(5.2)	(1.9)	(5.9)	(4.1)
2020 Q4	3.1	0.9	(4.9)	(1.6)	(5.4)	(3.6)
2020 Q3	2.7	(1.1)	(3.3)	(2.8)	(6.2)	(4.5)
2020 Q2	0.3	(2.5)	(2.3)	(2.8)	(4.3)	(3.5)
2020 Q1	1.2	(3.2)	2.7	1.9	1.9	1.4
2019 Q4	0.2	(4.1)	2.8	1.2	1.4	0.8
2019 Q3	(0.4)	(6.2)	0.2	1.3	3.4	1.8
2019 Q2	5.3	(7.7)	(1.3)	0.8	4.6	2.7
2019 Q1	6.4	(5.5)	(0.7)	4.3	5.2	3.9
2018 Q4	9.0	(5.3)	(1.5)	7.1	5.3	4.6
2018 Q3	8.1	0.8	0.0	4.4	5.2	4.8
2018 Q2	3.6	5.2	1.3	4.7	3.6	3.8
2018 Q1	1.0	4.7	1.1	1.1	2.6	2.4
2017 Q4	(0.6)	6.1	2.9	(0.3)	1.9	1.8
2017 Q3	(1.2)	3.6	3.0	3.7	0.5	1.1
2017 Q2	0.4	1.8	2.2	1.5	(0.4)	0.2
2017 Q1	3.0	1.2	1.1	2.3	(1.7)	(0.4)
2016 Q4	2.3	1.4	0.4	2.7	(1.7)	(0.4)
2016 Q3	4.9	1.2	0.7	1.0	(2.5)	(1.0)
2016 Q2	4.1	0.6	1.6	2.6	(1.8)	(0.4)
2016 Q1	5.0	1.8	2.6	2.3	(1.4)	0.0
2015 Q4	8.7	0.1	1.5	2.8	(1.0)	0.4
2015 Q3	6.1	(0.8)	1.3	1.6	(0.4)	0.4
2015 Q2	5.2	(2.1)	1.6	1.2	(0.7)	(0.0)
2015 Q1	4.3	(4.0)	(0.2)	1.2	(0.4)	(0.1)
2014 Q4	0.8	(4.6)	1.5	(0.7)	(1.9)	(1.7)
2014 Q3	3.2	(3.7)	1.3	0.6	(1.7)	(1.1)
2014 Q2	5.2	0.5	(0.1)	1.1	(0.4)	0.3
2014 Q1	5.1	1.8	1.3	0.8	0.4	1.0
2013 Q4	4.8	3.7	(0.7)	0.3	3.2	2.8
2013 Q3	3.2	3.6	(2.4)	(0.5)	3.6	2.8
2013 Q2	(0.3)	(1.0)	(1.9)	(0.9)	2.7	1.5
2013 Q1	(3.2)	(1.6)	(0.1)	0.2	2.5	1.3
2012 Q4	(4.8)	(2.6)	2.2	2.0	1.2	0.6
2012 Q3	(9.2)	(3.4)	3.4	3.1	2.2	0.9
2012 Q2	(10.6)	(2.3)	3.0	3.1	4.1	2.1
2012 Q1	(10.8)	(2.5)	0.6	2.1	7.6	4.0
2011 Q4	(11.0)	(1.9)	(0.5)	1.8	11.8	6.5
2011 Q3	(7.5)	(0.9)	0.5	0.4	12.8	7.3
2011 Q2	(3.8)	0.8	1.6	1.6	12.2	7.6
2011 Q1	2.5	2.8	3.2	3.4	10.1	7.4
2010 Q4	8.2	3.2	3.3	4.1	7.9	6.7
2010 Q3	13.4	2.3	3.1	5.7	5.0	5.5
2010 Q2	13.4	0.6	2.1	3.8	(0.9)	1.2
2010 Q1	9.9	(1.2)	0.7	1.5	(8.6)	(4.7)

Source: US Census Bureau (tax revenue), analysis by the author.

TABLE A10

Preliminary State Government Tax Revenues in The Second Quarter of 2021, by State*Nominal percentage change, 2021 quarter 2 versus 2020 quarter 2*

State/region	PIT	CIT	Sales	Total
US (median)	59.9	146.9	32.5	47.2
US (average)	78.7	176.9	41.4	64.8
New England	24.4	97.2	57.8	35.0
Connecticut	ND	ND	ND	ND
Maine	13.3	68.1	58.0	29.6
Massachusetts	20.2	107.3	62.0	35.0
New Hampshire	NM	91.8	N/A	49.5
Rhode Island	98.9	(90.7)	43.1	47.8
Vermont	102.9	305.5	31.7	25.9
Mideast	90.4	111.4	46.2	73.7
Delaware	75.4	126.4	N/A	30.1
Maryland	ND	ND	ND	ND
New Jersey	13.0	57.0	38.9	31.5
New York	156.9	183.7	47.8	122.0
Pennsylvania	63.8	162.0	53.8	65.3
Great Lakes	45.3	154.5	37.5	45.4
Illinois	48.6	146.9	46.6	54.0
Indiana	57.4	200.2	33.8	55.9
Michigan	63.2	232.1	53.8	65.8
Ohio	67.7	N/A	33.1	36.6
Wisconsin	6.9	108.0	21.5	18.9
Plains	47.8	135.6	24.6	42.7
Iowa	43.3	88.3	32.5	46.4
Kansas	84.2	197.5	24.7	63.2
Minnesota	34.2	123.9	25.9	34.4
Missouri	65.5	166.9	16.7	54.5
Nebraska	46.1	160.4	21.2	42.2
North Dakota	41.9	183.1	13.0	17.6
South Dakota	N/A	N/A	23.0	22.7
Southeast	31.8	111.2	37.3	41.3
Alabama	66.0	414.5	26.9	51.6
Arkansas	41.5	75.3	31.0	36.5
Florida	N/A	108.9	53.8	69.0
Georgia	18.3	79.4	38.1	25.5
Kentucky	N/A	51.6	31.4	26.9
Louisiana	38.1	235.0	32.8	46.6
Mississippi	42.8	109.6	11.9	31.5
North Carolina	62.4	166.5	21.0	51.2
South Carolina	4.8	112.9	32.0	23.7
Tennessee	90.3	76.9	37.3	54.7
Virginia	23.6	71.8	31.7	28.4
West Virginia	29.9	327.1	24.6	28.1
Southwest	68.7	265.1	52.4	61.8
Arizona	85.1	209.5	31.6	61.6
New Mexico	ND	ND	ND	ND
Oklahoma	42.0	432.5	23.2	49.5
Texas	N/A	N/A	57.7	63.6
Rocky Mountain	67.3	237.3	32.5	59.5
Colorado	64.9	385.8	29.1	68.2
Idaho	33.2	85.4	35.9	36.7

Montana	85.8	104.7	N/A	54.9
Utah	89.8	290.2	34.1	66.6
Wyoming	N/A	N/A	ND	ND
Far West	172.4	386.6	42.7	115.9
Alaska	N/A	1,249.4	N/A	89.3
California	184.4	420.2	46.0	141.2
Hawaii	125.1	2,093.0	32.1	75.1
Nevada	N/A	N/A	46.1	33.7
Oregon	87.8	70.9	N/A	84.4
Washington	N/A	N/A	33.2	28.0

Source: Individual state data, analysis by the author.

Notes: CIT = corporate income tax; PIT = personal income tax; N/A = not applicable; ND = no data.

Notes

- ¹ The author made several adjustments for the first quarter of 2021 and to several previous quarters of tax revenue data reported by the US Census Bureau based on information and data received directly from the states and from the Census Bureau.
- ² In this report, the author uses US Bureau of Economic Analysis regions as the basis of analysis.
- ³ See Arizona Joint Legislative Budget Committee, “Monthly Fiscal Highlights, November 2020” and “Monthly Fiscal Highlights, February 2021” accessed June 5, 2021, <https://www.azleg.gov/jlbc/monthlyhighlights.htm>.
- ⁴ Justin Garosi and Brian Uhler, “Income Tax Withholding Tracker: December 1 - December 23,” California Legislative Analyst’s Office, December 23, 2020, <https://lao.ca.gov/LAOEconTax/Article/Detail/603>.
- ⁵ Justin Garosi and Brian Uhler, “Income Tax Withholding Tracker: March 1 – March 29,” California Legislative Analyst’s Office, March 30, 2021, <https://lao.ca.gov/LAOEconTax/Article/Detail/636>.
- ⁶ Thirty-seven of 41 states with broad-based personal income tax extended their filing deadlines to July 15, 2020. Among the remaining four states, Idaho extended it to June 15, Hawaii to July 20, Iowa to July 31, and Virginia to June 1.
- ⁷ Income tax returns are due on April 15 in 35 of 41 states that have a broad-based personal income tax. The remaining six states have individual income tax return due dates later than April 15. Those states are Arkansas (May 15), Delaware (April 30), Hawaii (April 20), Iowa (April 30), Louisiana (May 15), and Virginia (May 1).
- ⁸ See “IRS Extends More Tax Deadlines to Cover Individuals, Trusts, Estates, Corporations and Others,” news release, Internal Revenue Service, April 9, 2020, <https://www.irs.gov/newsroom/irs-extends-more-tax-deadlines-to-cover-individuals-trusts-estates-corporations-and-others>.
- ⁹ See “Section 5 – Saving and Investment, National Income and Product Accounts,” US Bureau of Economic Analysis, accessed August 5, 2021, <https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=survey>.
- ¹⁰ See *South Dakota v. Wayfair*, Brief of Amici Curiae Law Professors and Economists in Support of Petitioner, No. 17-494, March 5, 2018, https://www.supremecourt.gov/DocketPDF/17/17-494/37603/20180305141434827_Brief%20of%20Amici%20Curiae%20Law%20Professors%20and%20Economists%20iso%20Petitioner.PDF.
- ¹¹ See “How the COVID-19 Pandemic is Transforming State Budgets,” Urban Institute, accessed August 5, 2021, <https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/projects/state-fiscal-pages-covid-edition>.
- ¹² See US Bureau of Labor Statistics, “Labor Force Statistics from the Current Population Survey,” accessed August 5, 2021, https://www.bls.gov/web/empsit/cpsee_e08.htm.
- ¹³ For more discussion of the relationship between property tax and house prices, see Dadayan (2012).
- ¹⁴ See New York City Department of Finance, “2021/22 Final Assessment Roll,” May 25, 2021, <https://www1.nyc.gov/assets/finance/downloads/pdf/21pdf/fy22-final-roll-summary.pdf>.
- ¹⁵ For state-by-state analysis on the impact of the Covid-19 related changes on state budgets, visit “How the COVID-19 Pandemic is Transforming State Budgets,” Urban Institute, accessed August 5, 2021, <https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/projects/state-fiscal-pages-covid-edition>.

- ¹⁶ Author's analysis of data from National Association of State Budget Officers (2020), table A-1.
- ¹⁷ See State of New Jersey, Governor Phil Murphy, "Governor Murphy, Lt. Governor Oliver, Senate President Sweeney, Assembly Speaker Coughlin, Assembly Budget Chair Pintor Marin, and Senate Budget Chair Sarlo Announce Agreement to Include Millionaire's Tax in Revised FY2021 Budget," September 17, 2020, <https://nj.gov/governor/news/news/562020/approved/20200917a.shtml>.
- ¹⁸ See Wisconsin Department of Revenue, "Wisconsin Tax Bulletin. Number 212," February 2021, <https://www.revenue.wi.gov/WisconsinTaxBulletin/212-02-21-WTB.pdf>.
- ¹⁹ See California Legislative Analyst's Office, "The 2020-21 May Revision: Revenue Proposals in the 2020-21 May Revision," May 20, 2020, <https://lao.ca.gov/Publications/Report/4238>.
- ²⁰ See New Jersey Treasury, Division of Taxation, "Corporation Business Tax Reform Information, Surtax," accessed August 5, 2021, <https://www.state.nj.us/treasury/taxation/cbt/surtax.shtml>.
- ²¹ See Tennessee Department of Revenue, "Marketplace Sellers, Marketplace Facilitators & Out-of-State Dealers," accessed August 5, 2021, <https://www.tn.gov/revenue/taxes/sales-and-use-tax/out-of-state-dealers-marketplace-facilitators.html>.
- ²² See Gabriel Petek, "The 2019-20 Budget: Analysis of the Medi-Cal Budget," California Legislative Analyst's Office, February 13, 2019, <https://lao.ca.gov/Publications/Report/3935>.
- ²³ See California Department of Health Care Services, letter to Kristin Fan, Centers for Medicare and Medicaid Services, "California Request for Waiver for Managed Care Organization Tax," September 30, 2019, <https://www.dhcs.ca.gov/services/Documents/MCOTax09302019.pdf>.
- ²⁴ See US Department of Health and Human Services' response letter addressed to the California Department of Health Care Services, January 30, 2020, <https://www.dhcs.ca.gov/services/Documents/CMS-Response-to-CA-Tax-Waiver-Request1-30-20.pdf>.
- ²⁵ See California Legislative Analyst's Office, "The 2020-21 Budget: Overview of the California Spending Plan," October 5, 2020, <https://lao.ca.gov/Publications/Report/4263>.

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Lucy Dadayan is a senior research associate with the Urban-Brookings Tax Policy Center at the Urban Institute. Before joining Urban, Dadayan was a senior research scientist with the Rockefeller Institute of Government, where she wrote extensively on state and local government fiscal issues, including state government tax revenue trends, personal income taxes, tax revenue forecasts, property taxes, gambling tax revenue, government employment, spending on social services, education spending, and state spending on children's programs. She has authored or coauthored four chapters for the *Book of the States* (2015, 2016, and 2017 editions). Dadayan's work is frequently cited in major news media, including the *Wall Street Journal*, the *New York Times*, the *Bond Buyer*, Bloomberg, the *Washington Post*, *Forbes*, the *Boston Globe*, the *Financial Times*, and the *Los Angeles Times*. Dadayan is often invited to present at conferences and provide testimonies for state government agencies. Dadayan holds an MA in public policy and affairs and a PhD in informatics, both from the State University of New York at Albany.

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