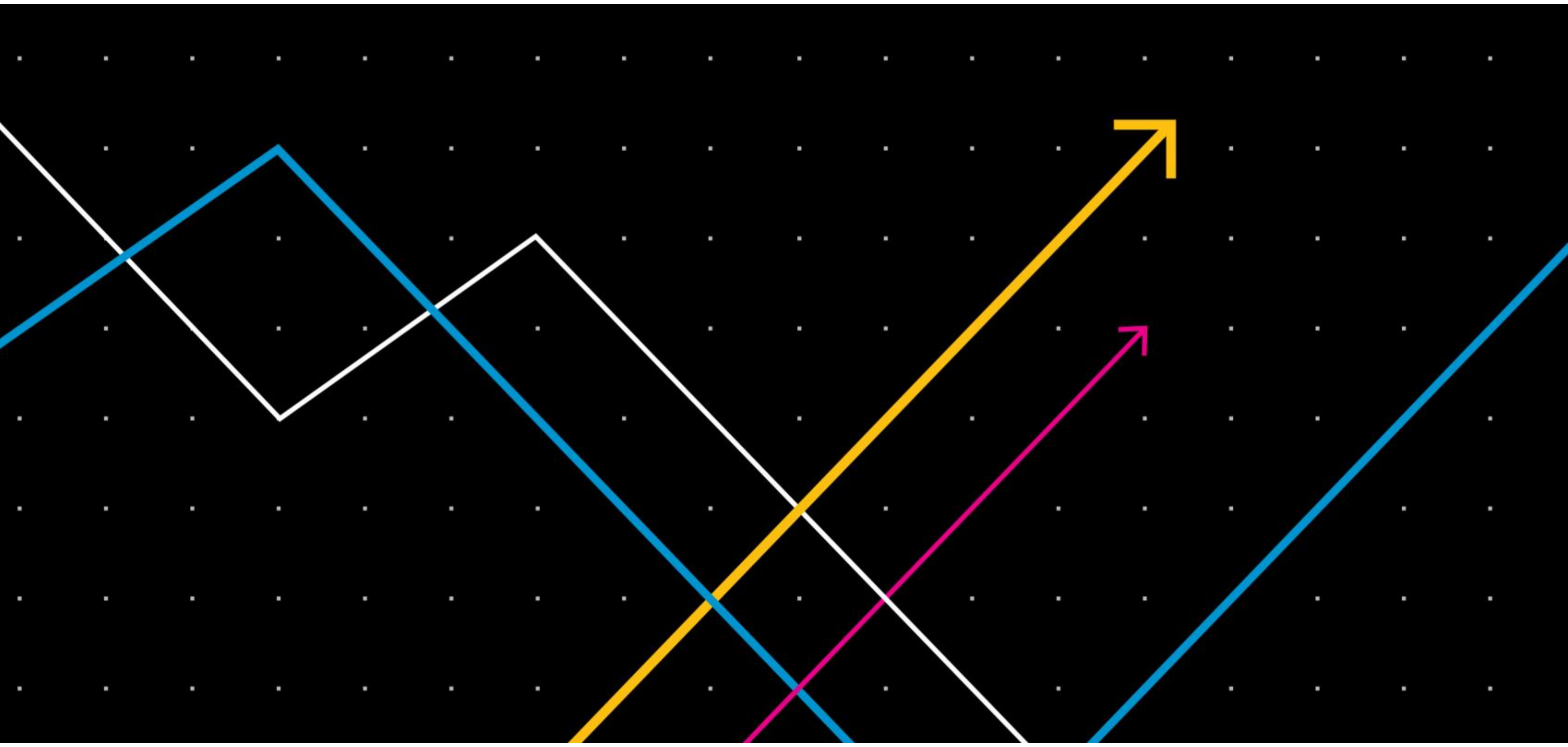
STATE AND LOCAL FINANCE INITIATIVE



RESEARCH REPORT

States Experienced Strong Revenue Growth in the Second Quarter of 2021

State Tax and Economic Review, 2021 Quarter 2

Lucy Dadayan

December 2021

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Acknowledgments

This report is funded in part by the Bill and Melinda Gates Foundation. We are grateful to them and to all our funders, who make it possible for Urban to advance its mission.

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Thanks to Kim Rueben, Tracy Gordon, Gabriella Garriga, and Michael Marazzi for their thoughtful review of and feedback on the report.

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Executive Summary

- **State and local government tax revenues** from major sources—personal income, corporate income, sales, and property taxes—showed high growth of 42.1 percent in the second quarter of 2021 compared with the same quarter in 2020. That growth is substantially stronger than the 6.3 percent average annual growth rates for the prior four quarters but is largely caused by the shifting of income tax filing deadlines in 2020. Still, growth in state and local government revenues in the second quarter of 2021 was also strong compared with the same quarter in 2019, averaging 16.6 percent in nominal terms.
- **State government tax revenues** from major sources showed growth of 65.2 percent in the second quarter of 2021 compared with 2020 and 21.7 percent compared with 2019, which is substantially stronger than the 4.8 percent average annual growth rate for the prior four quarters. Revenue growth rates in the second quarter of 2021 varied considerably among major revenue sources and across states:
    - **State personal income tax revenues** grew by $71.9 billion or 73.5 percent in the second quarter of 2021 compared with the second quarter of 2020, but growth in the median state was weaker, at 48.5 percent. State personal income tax revenues showed extreme volatility in the most recent quarters because of federal and state policy decisions related to the pandemic, changing revenue deadlines, and behavioral responses including changing investor expectations following the 2020 election. State personal income tax revenues increased 17.8 percent in the second quarter of 2021 compared with the same period in 2019.
    - **State sales tax revenues** grew by $31.7 billion or 40.0 percent in the second quarter of 2021 compared with the second quarter of 2020. That growth contrasts with the 1.0 percent average decline for the prior four quarters. States saw steep declines in sales tax revenues in the second quarter of 2020, primarily because of reductions in business activity at the start of the pandemic. 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. Growth in state sales tax revenues was also strong, at 21.5 percent, compared with the second quarter of 2019.

- **State corporate income tax revenues** grew by $24.1 billion or 160.7 percent in the second quarter of 2021 compared with the same quarter in 2020. That growth is substantially higher than the 18.6 percent average growth for the prior four quarters. State corporate income tax revenues were 45.3 percent higher for the second quarter of 2021 compared with the same period in 2019 and may reflect changes in business activity or decisionmaking after the presidential election in anticipation of changing federal tax rules.

- **Local government tax revenues** from major sources showed year-over-year growth of 9.9 percent for the second quarter of 2021, which was slightly stronger than the 8.2 percent average growth rate for the prior four quarters. Year-over-year growth in local government tax revenues from major sources was 7.2 percent in the second quarter of 2021 compared with the same period two years earlier, in 2019. Local taxes have been less volatile than state taxes over the last two years because of local governments' greater reliance on property taxes and less reliance on income tax revenues compared to states.
    - **Local property tax revenues**, the largest source for local government revenues, increased 5.1 percent year over year for the second quarter of 2021, which was weaker than the 9.4 percent average growth rate for the prior four quarters. Year-over-year growth in local government property tax revenues was 3.8 percent in the second quarter of 2021 compared with the same period two years earlier, in 2019.

- **Preliminary data for the third quarter of 2021** indicate year-over-year declines in overall state tax revenue collections as well as in personal and corporate income tax revenues compared to a year earlier but growth when compared to 2019. These patterns are caused by the delayed income tax filing due dates in 2020, which led to unusually high levels of reported income tax revenues in the third quarter of 2020. Growth in quarterly state tax revenues should return to more normal patterns beginning in the fourth quarter of 2021, absent additional external shocks and, most importantly, after a return to normal income tax filing due dates.
    - **State personal income tax** collections declined 16.7 percent in the third quarter of 2021 compared with the same period in 2020 but grew 20.3 percent compared with the same period in 2019.
    - **State sales tax** collections grew 12.5 percent in the third quarter of 2021 compared with the same period in 2020 and grew 15.6 percent compared with the third quarter of 2019.

   - **State corporate income tax** collections declined 3.5 percent in the third quarter of 2021 compared with the same period in 2020 but grew 58.0 percent compared with the same period in 2019.
- **Economic factors** that drive revenue growth were strong in the second quarter of 2021 compared with the same quarter in 2020 but are still weak compared with prepandemic levels. State economic performance plummeted in the spring of 2020 as governments, businesses, and individuals took actions to curtail the spread of the pandemic across the nation. The pandemic had a very uneven impact on various sectors of the economy and on different types of jobs. This has translated into very different effects across different jobs and places.
   - Year-over-year growth in real **gross domestic product** (GDP) was 12.2 percent for the second quarter of 2021, but that growth is compared with steep declines in the spring of 2020. Growth in real GDP was only 2.0 percent compared with the second quarter of 2019.
   - The seasonally adjusted **unemployment rate** was 5.9 percent in the second quarter of 2021, which was still higher than prepandemic unemployment rates but better than the much higher unemployment rates observed at the beginning of the pandemic. The average unemployment rate masks highly variable rates of unemployment across different groups of workers and different states.
   - Seasonally adjusted nationwide **employment** showed a strong growth of 8.2 percent in the second quarter of 2021 compared with the same quarter in 2020, but a decline of 11.8 percent compared with the second quarter of 2019. 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.
   - **House prices** increased 11.9 percent in nominal terms for the second quarter of 2021 compared with a year earlier, which was the strongest growth in house prices since the second quarter of 2005. All 50 states reported year-over-year growth in house prices in the second quarter of 2021, with 39 states reporting double-digit growth.
   - Real **personal consumption expenditures** increased 16 percent for the second quarter of 2021 compared with the same quarter in 2020. Personal consumption spending was depressed in the spring of 2020 as the pandemic temporarily paralyzed large portions of the economy. Growth in real personal consumption spending was only 4.1 percent in the second quarter of 2021 compared with the same quarter in 2019.

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.

State and local revenues have been rebounding across the nation in recent months, but there are still large variations in fiscal and economic performance across states and localities. The unprecedented federal aid provided to individuals, businesses, and state and local governments since March 2020 significantly helped the economy recover and stabilized state and local government budgets. The American Rescue Plan Act (ARPA) enacted in March 2021 will further cushion state and local budgets and will protect the economic recovery. However, states' fiscal needs and recovery paths are still uncertain because of changes in consumer behavior 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 policy and behavioral changes. State and local 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 normalized in the second half of 2019, but that did not last as the pandemic and responses to it distorted normal revenue patterns.

Table 1 shows state and local government tax revenues from major sources for the second quarter of 2019, 2020, and 2021 as well as the nominal percentage changes and the average quarterly year-over-year growth in the prior four quarters. We present information for 2019 in recognition of the shifts in filing deadlines that distorted revenue patterns in 2020. Overall, states and localities reported robust revenue growth in the second quarter of 2021 compared with the levels observed in the second quarters of 2020 and 2019.

Major findings include the following:

- **State and local government tax revenues** from major sources showed robust growth of 42.1 percent in the second quarter of 2021 compared with a year earlier and solid growth of 16.6 percent compared with the same quarter in 2019. Average quarterly year-over-year growth was only 6.3 percent in the prior four quarters.
- **State government tax revenue** from major sources grew 65.2 percent in the second quarter of 2021 relative to a year earlier and 21.7 percent relative to two years earlier, in 2019. Average quarterly year-over-year growth rate was 4.8 percent for the prior four quarters. The growth in **state personal income tax** revenues was 73.5 percent for the second quarter of 2021

compared with the second quarter of 2020 and 17.8 percent compared with the second quarter of 2019. This is substantially stronger than the average quarterly year-over-year growth of 9.5 percent for the prior four quarters. **State corporate income tax** revenues increased 160.7 percent for the second quarter of 2021 compared with a year earlier and 45.3 percent compared with two years earlier, in 2019. Average quarterly year-over-year growth rate was 18.6 percent for the prior four quarters. **State sales tax** revenue collections increased 40.0 percent for the second quarter of 2021 compared with the second quarter of 2020 and 21.5 percent compared with the second quarter of 2019. The strong growth contrasts with the average quarterly year-over-year 1.0 percent decline for the prior four quarters.

- **Local government tax revenue** from major sources grew 9.9 percent from a year earlier in the second quarter of 2021, which was somewhat stronger than the 8.2 percent average quarterly year-over-year growth rate for the prior four quarters. Local government tax revenues increased 7.2 percent in the second quarter of 2021 compared with the same period two years earlier, in 2019. **Local property taxes**, the single largest source of local government tax revenues, increased 5.1 percent in the second quarter of 2021 compared with the prior year; average quarterly year-over-year growth was 9.4 percent for the prior four quarters. Growth in local government property tax revenues was weaker, at 3.8 percent in the second quarter of 2021 compared with the same quarter in 2019. **Local sales taxes** increased 12.8 percent for the second quarter of 2021 compared with the level a year earlier. **Local personal income taxes** increased 42.9 percent and **local corporate income taxes** increased 58.4 percent in the second quarter of 2021 compared with the same quarter in 2020, 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

	Millions of dollars			Y-O-Y percent change		Average quarterly
Tax source	2019 Q2	2020 Q2	2021 Q2	2021 Q2 vs 2019 Q2	2021 Q2 vs 2020 Q2	Y-O-Y growth rate, prior four quarters
Total state and local major taxes	**$411,228**	**$337,350**	**$479,381**	**16.6**	**42.1**	**6.3**
State major taxes	***$266,561***	***$196,269***	***$324,310***	***21.7***	***65.2***	***4.8***
Personal income tax	144,066	97,848	169,736	17.8	73.5	9.5
Corporate income tax	26,893	14,993	39,086	45.3	160.7	18.6
Sales tax	91,272	79,259	110,925	21.5	40.0	(1.0)
Property tax	4,330	4,169	4,563	5.4	9.5	3.7
Local major taxes	***$144,667***	***$141,081***	***$155,071***	***7.2***	***9.9***	***8.2***
Personal income tax	12,293	9,766	13,955	13.5	42.9	1.5
Corporate income tax	2,853	2,449	3,878	35.9	58.4	5.4
Sales tax	22,798	23,428	26,418	15.9	12.8	3.2
Property tax	106,723	105,438	110,820	3.8	5.1	9.4

Source: US Census Bureau (tax revenue), with adjustments by the author.
Notes: Q = quarter; Y-O-Y = year-over-year.

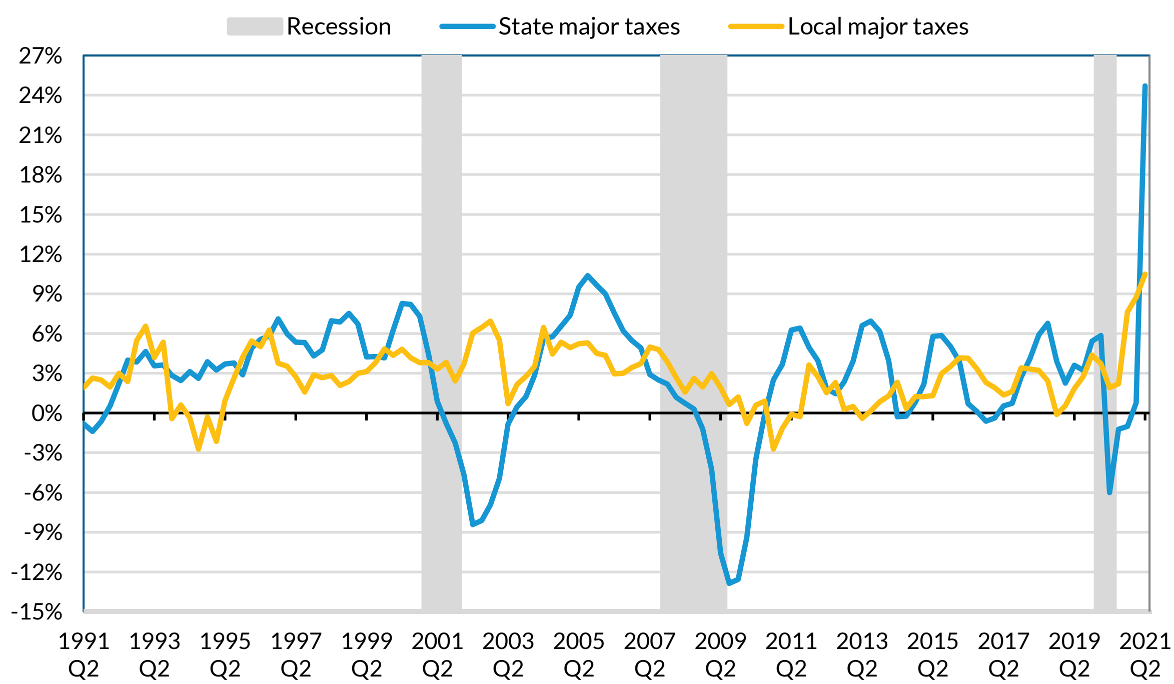
Figure 1 shows longer-term trends in state and local tax collections, specifically the year-over-year percentage change in the four-quarter moving average of inflation-adjusted state and local revenue collections from major sources: personal income tax, corporate income tax, sales tax, and property tax. 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 because of changes in individual behavior and filing deadlines. 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 state tax revenues from major sources showed a 24.7 percent increase for the second quarter of 2021.

Local tax revenues were mostly resilient throughout the pandemic mostly because of a strong housing market and solid growth in property tax revenues. The four-quarter moving average of inflation-adjusted local tax revenues from major sources showed a 10.5 percent increase for the second quarter of 2021. Most local governments rely heavily on property taxes, which have been relatively stable even during the pandemic and respond relatively slowly to changes in property values.

FIGURE 1

State Major Tax Revenues Fluctuated Wildly during the Pandemic

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



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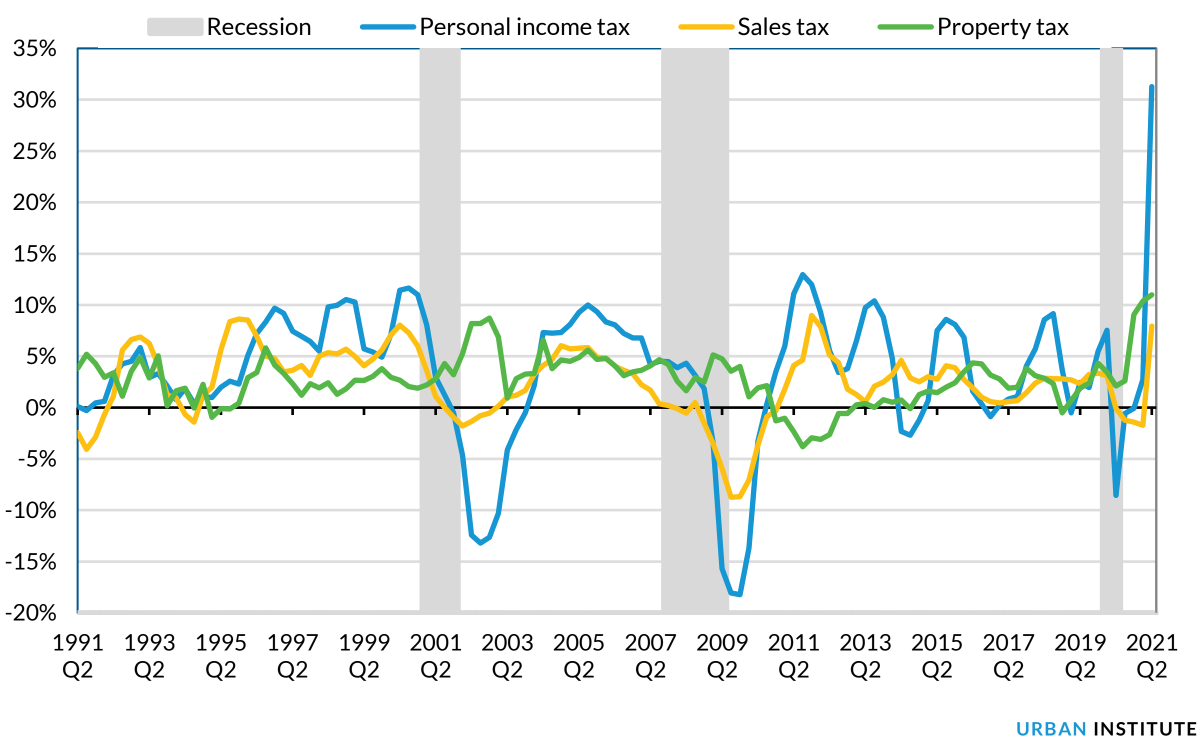
Source: US Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP), analysis by the author.
Notes: Year-over-year change is the percentage change of four-quarter moving averages. Data are adjusted for inflation. Data are for four major tax categories only: personal income, corporate income, 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 during the pandemic. Real state and local personal income tax revenues increased 31.3 percent in the second quarter of 2021 compared with the second quarter of 2020. Real state and local sales tax revenues increased 7.9 percent in the second quarter of 2021 compared with a year earlier. State and local property taxes, nearly all of which are collected by local governments, increased 11.0 percent in real terms for the second quarter of 2021 compared with a year earlier.

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



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.

State Tax Revenues in the Second Quarter of 2021

Total state tax revenues increased 57.3 percent in nominal terms in the second 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 showed robust growth in the second quarter of 2021. The year-over-year growth in state personal income tax revenues was 73.5 percent for the second quarter of 2021. Corporate income tax revenue collections grew 160.7 percent for the second quarter of 2021 compared with a year earlier. State sales tax collections grew 40.0 percent and motor fuel tax collections increased 25.7 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 second quarter of 2021. The average inflation-adjusted quarterly growth rate in overall state tax revenues since 2010 was 3.9 percent.

As noted, individual, business, and government actions to mitigate the impact of the pandemic has led to wild fluctuations in state government tax revenue growth patterns. Income tax revenues saw steep declines in the second quarter of 2020 and robust growth in the third quarter of 2020 because of the shifts in income tax filing due dates. Sales tax revenues saw steep declines in the second quarter of 2020 mostly because of statewide lockdowns and behavioral responses that temporarily shut down various sectors of the economy. Therefore, the strong growth observed in the second quarter of 2021 is predominantly a mirror image of the freefall declines in the prior year.

All regions saw robust year-over-year growth in total state tax revenues during the second quarter of 2021 (Table A2). The Far West region had the strongest year-over-year growth at 107.2, while state tax revenues in the Southeast region had the weakest year-over-year growth at 37.5 percent.[2]

All 50 states reported robust growth in total state tax revenue collections for the second quarter of 2021 relative to a year prior, with 42 states reporting growth of 25 percent or more. Year-over-year growth in state tax revenues ranged from 135 percent in California to 2.7 percent in Wyoming during the second quarter of 2021.

Personal Income Taxes

State personal income tax revenues increased 73.5 percent in nominal terms and 66.7 percent in inflation-adjusted terms in the second quarter of 2021 compared with the same period in 2020. Growth in the median state was weaker, at 48.5 percent in nominal terms. The average quarterly year-over-year growth rate in state personal income tax collections since 2010 has been 7.9 percent in nominal terms and 6.0 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 income tax receipts compared with prior years, particularly for the second and third quarters of 2020. Therefore, the significant growth in personal income tax revenues observed in the second quarter of 2021 was largely expected.

Personal income tax collections increased 20 percent or more across all regions in the second quarter of 2021 compared with the same period in 2020 (Table A2). The Far West region saw the most growth, at 172.4 percent, largely reflecting substantial income tax growth in California.

Overall, personal income tax collections increased in all states that tax income, with 21 states reporting growth of 50 percent or more in the second quarter of 2021 compared with the same quarter in 2020. The largest growth both in dollar value and in terms of percentage growth was in California, where income tax revenues increased by $30.1 billion or 184.4 percent.

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. The shifting of 2020 deadlines had much smaller effects on withholding than on the other components of income taxes.

TABLE 2

Growth in State Government Personal Income Tax Components

Year-over-year nominal percentage change

Personal income tax components	Prepandemic period				Pandemic period				
	2019Q Q2	2019 Q3	2019 Q4	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2
Withholding	5.2	4.3	4.8	5.8	(1.3)	5.1	6.2	6.5	15.4
Estimated payments	16.3	2.4	9.1	9.7	(64.0)	102.9	16.6	35.9	272.1
Final payments	39.0	21.2	20.8	(10.3)	(55.7)	621.7	(8.4)	10.2	175.0
Refunds	(1.1)	8.2	7.4	9.9	(16.4)	106.0	(10.6)	(13.1)	59.0
Total	**18.7**	**3.9**	**6.2**	**4.4**	**(34.8)**	**47.5**	**7.7**	**20.2**	**81.2**

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 nine 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.

Delayed income tax filing due dates led to wild fluctuations in income tax revenues during the pandemic. Personal income tax collections declined steeply in the second quarter of 2020 and soared in the third quarter of 2020, and this pattern reversed in 2021: dramatic growth in the second quarter of 2021 compared with 2020 and then declines in the third quarter of 2021 (as discussed below).

Overall, the economic impact of the pandemic on personal income tax revenues was not as bad as initially feared, because the pandemic has disproportionately affected the employment of 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.

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 A3 shows year-over-year growth in withholding for the past eight quarters for all states with a broad-based personal income tax. Prior to the pandemic, growth in withholding was solid and did not see any large swings. Withholding declined 1.3 percent year over year for the second quarter of 2020 because of the initial reaction to the economic disruptions caused by the COVID-19 pandemic, including mass layoffs and furloughs beginning in the second half of March 2020. The employment situation greatly improved after the third quarter of 2020, which led to improvement in withholding tax collections as well. Year-over-year growth in withholding was 15.4 percent in the second quarter of 2021. Growth in the median state was slightly weaker, at 12.1 percent. The strong growth in withholding is largely because of the growth in wages and salary disbursements with rebounds in the labor market.

All regions but the Southeast showed double-digit percentage growth in withholding in the second quarter of 2021 compared with the same quarter in 2020. The Far West region reported the strongest growth at 26 percent, while the Southeast region reported the weakest year-over-year growth at 9.8 percent in the second quarter of 2021.

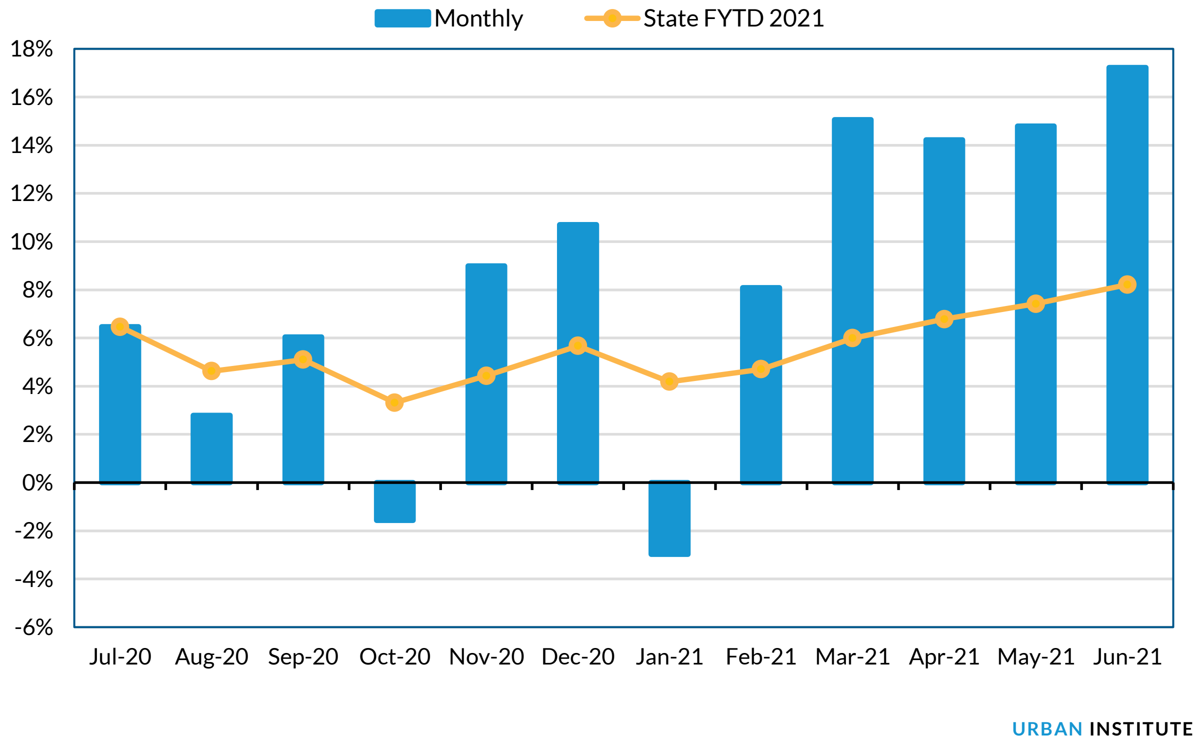
All states that levy tax on personal income reported growth in withholding in the second quarter of 2021 compared with a year earlier, with 31 states reporting double-digit growth. Growth rates ranged from 2.1 percent in Mississippi to 27.9 percent in California.

Figure 3 shows monthly and fiscal year-to-date growth rates in withholding between July 2020 and June 2021, which corresponds to 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



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 March, April, May, and June 2021. The strong growth in March through June of 2021 was largely caused by the rebounding economy and hiring, especially compared with the significantly weaker withholding in those same months in 2020.

In late 2020, 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).[4] More California-based companies also held initial public offerings in March, April, May, and June 2021. In April 2021 alone, 11 California companies held initial public offerings, including Coinbase with an initial valuation of $99.6 billion.[5] There were dozens more initial public offerings in California in May 2021 and June 2021.

Year-to-date growth in withholding for state fiscal year 2021 was 8.2 percent. States collected around $379 billion in withholding revenues from July 2020 through June 2021. All states except Arkansas, Louisiana, and North Dakota reported growth in withholding tax revenues for the July 2020 through June 2021 period.

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.

Estimated Payments

Higher-income taxpayers (and self-employed taxpayers) 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 less than a quarter 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 27.6 percent of total personal income tax revenues in the first quarter of 2021 and 29.1 percent in the second 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 their 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 2020 was extended to July 15 and the deadline for 2021 was extended to May 17; 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. This could be because of confusion caused by differences between federal and state due dates for filing first estimated payments for tax year 2020.

Because of the unusual changes in income tax filing deadlines, we present combined data for the April through July period, which largely corresponds to the first and second estimated payments for a tax year. Estimated payments saw large swings because of wide fluctuations in the performance of financial markets, loss of earnings for some self-employed individuals, and other changes in the economy related to the pandemic. Further, some taxpayers likely held off making estimated payments last year because of the uncertainty around the pandemic and what their earnings would end up being. Our data show that 34 states reported year-over-year declines in estimated payments for April 2020 through July 2020, which largely included the first and second estimated payments for tax year 2020. Estimated payments for the nation declined 18 percent between April 2020 and July 2020 compared with the same period a year earlier; the decline in the median state was 12.5 percent (Table A4).

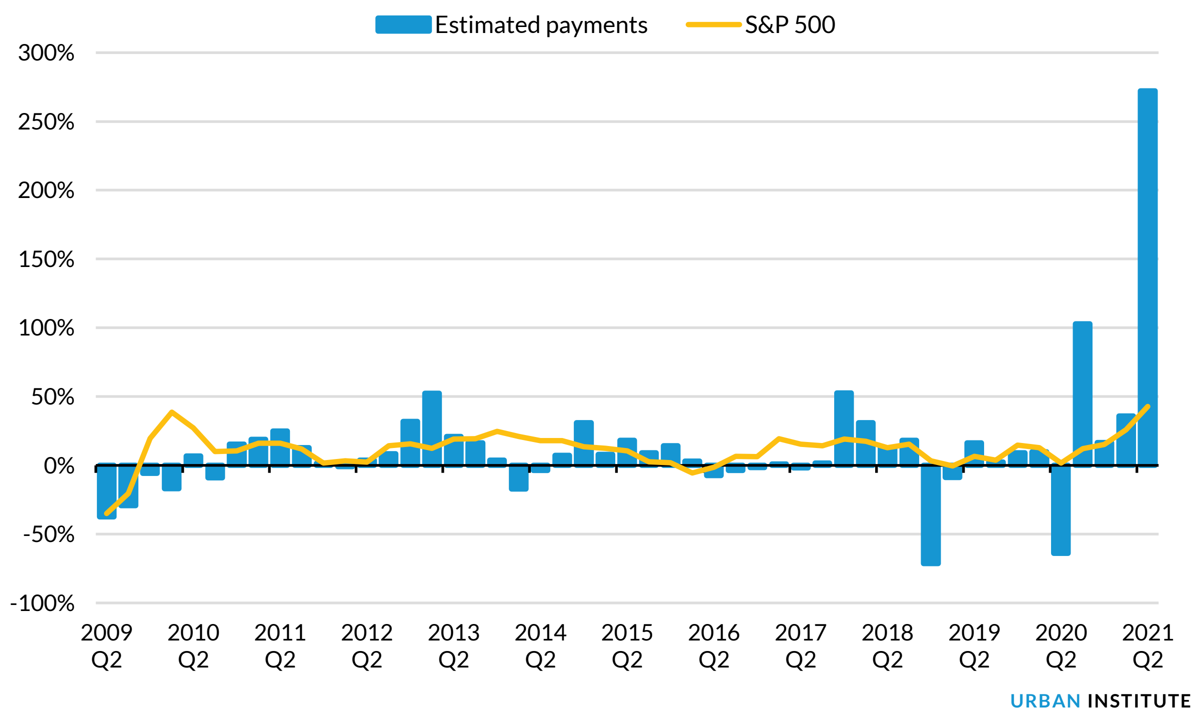
Estimated payments showed robust year-over-year growth of 62.9 percent for April 2021 through July 2021, which largely included the first and second estimated payments for tax year 2021. Growth in the median state was substantially lower, at 38.7 percent (Table A4). The strong growth in estimated payments observed from April 2021 through July 2021 is largely because of the stock market's strong performance since mid-2020. Growth in estimated payments during April 2021 through July 2021 period was widespread; estimated payments increased in all states but Missouri and North Dakota. The largest growth was in California, where estimated payments increased by $9.7 billion or 115.4 percent in April 2021 through July 2021 period compared with the same period a year earlier. The second largest growth in dollar value was in New York, reporting growth of $4.2 billion or 52.5 percent. Estimated payments in California and New York combined represented nearly 61 percent of the total estimated payments filed from April 2021 through July 2021. 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 is largely attributable to the growth in California.

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, 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.

FIGURE 4

Large Volatility in Estimated Payments

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



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

The volatility in estimated tax payments was particularly exacerbated during the pandemic. Estimated payments saw steep declines at 63.9 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 of 104 percent in the third quarter of 2020, making up for 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. Growth in estimated payments in the fourth quarter of 2020 and the first quarter of 2021 was more in line with the growth in the stock market. Finally, estimated payments showed dramatic growth of 271.3 percent in the second quarter of 2021 compared with the same quarter in 2020, largely because of the lower base in 2020. Year-over-year growth in the stock market was 42.8 percent in the second quarter of 2021.

In general, estimated payments as a share of overall personal income taxes have grown somewhat over time. The volatility of the stock market and the volatility of estimated payments adds more uncertainty to state income tax revenues and makes them harder to forecast.

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]

Because of the changed filing deadline in 2020, a significant share of final payments was shifted from the second quarter of 2020 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 26.8 percent in 2021) and 17.2 percent in the third quarter of 2020 (compared with 3.5 percent in 2019 and 3.9 percent in 2021). 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 but nearly 27 percent of personal income tax revenues in the second quarter of 2021.

Table A5 shows year-over-year growth rates in final payments for April through July 2021. In prior *State Tax and Economic Review* reports, we presented quarterly data. However, the alternative four-month range paints a clearer picture of final payment tax collections during the pandemic. Final payments on average declined by $2.2 billion or 5.7 percent for April 2020 through July 2020 from a year earlier. In contrast, final payments showed 30.1 percent year-over-year growth for April 2021 through July 2021.

All states but Vermont reported growth in final payments for April 2021 through July 2021 compared with a year earlier, with 33 states reporting double-digit percentage growth. California had the largest increase in final payments in dollar value ($1.6 billion) from April 2021 through July 2021. Final payments in California represented around 17 percent 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 second quarter of 2021, states paid out $11.7 billion more in refunds than the same period of 2020, with all states but Minnesota and Oregon paying out more in tax refunds. California had the largest increase in refunds in dollar value ($5.2 billion) in the second quarter of 2021, followed by New Jersey ($726 million).

The ARPA waived federal tax on up to $10,200 of unemployment benefits received by each person in tax year 2020. Although states did not have to follow suit, about 25 states did so and provided income tax exemptions for unemployment benefits 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.) These exemptions are partially the reason for the increase in income tax refunds in the second quarter of 2021, because some individuals had taxes withheld from unemployment payments that were refunded later.

Last year, refunds compared with the same period in 2019 declined 16.5 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 and nearly $4.0 billion less in the first quarter of 2021 than in the first quarter of 2020.

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. We present data for the second quarter of 2021 to illustrate the variance between actual and forecasted personal income tax revenues. Because of changing deadlines and uncertainty about the effect of the pandemic on economic activity, we expected to see higher levels of volatility in these estimates.

Actual personal income tax collections in the second quarter of 2021 were higher than in the second quarter of 2020 in all 24 states for which we have detailed data. Personal income tax collections showed double-digit growth in 19 states and triple-digit growth in 3 states in the second quarter of 2021 (Table 3).

TABLE 3

Actual versus Forecasted State Personal Income Tax Revenues

Dollar amounts in millions

State	2020 Q2 actual	2021 Q2 actual	2021 Q2 forecast	Percent change, 2021 Q2 vs 2020 Q2	Percentage variance, 2021 Q2 actual from forecast	Forecast date
Median				***41.6***	***19.1***	
Average	***$55,365***	***$110,946***	***$92,130***	***100.4***	***20.4***	
Arizona	$1,139	$2,108	$1,692	85.1	24.6	Apr-21
Arkansas	$741	$1,047	$784	41.3	33.6	Apr-20
California	$16,038	$45,626	$38,360	184.5	18.9	Jan-21
Colorado	$1,901	$3,135	$3,078	64.9	1.8	Jun-21
Idaho	$798	$1,064	$782	33.2	36.0	Jan-20
Indiana	$1,309	$2,545	$2,141	94.4	18.9	Apr-21
Kansas	$851	$1,569	$1,063	84.2	47.6	Apr-21
Maine	$656	$743	$475	13.3	56.3	May-21
Massachusetts	$5,852	$7,029	$4,771	20.1	47.3	Jan-21
Minnesota	$4,048	$5,431	$4,188	34.2	29.7	Feb-21
Mississippi	$570	$764	$669	34.0	14.2	Nov-19
Montana	$331	$606	$443	83.3	36.9	Jun-19
Nebraska	$648	$946	$757	46.1	25.0	Aug-20
New Mexico	$595	$670	$601	12.6	11.6	Feb-21
New York	$8,634	$22,179	$18,596	156.9	19.3	Apr-21
North Dakota	$103	$147	$148	41.9	(0.9)	Mar-19
Ohio	$1,874	$3,166	$2,930	68.9	8.1	Mar-19
Oklahoma	$630	$842	$807	33.7	4.3	Jun-20
Pennsylvania	$3,075	$5,075	$4,502	65.0	12.7	Jun-20
Rhode Island	$447	$519	$358	16.0	44.7	May-21
South Carolina	$1,492	$1,564	$1,131	4.8	38.3	Apr-21
Vermont	$178	$361	$310	102.9	16.2	Jan-21
West Virginia	$513	$666	$666	29.9	(0.0)	Jul-20
Wisconsin	$2,942	$3,146	$2,878	6.9	9.3	Nov-20

Source: Individual state data, analysis by the author.

Actual personal income tax collections in the second quarter of 2021 were higher than forecasted in 22 states and lower than forecasted in only 2 states, with an average underestimate of 20.4 percent and a median underestimate of 19.1 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.

State revenue forecasters continue to face considerable challenges in forecasting revenues because of uncertainties about the length of the pandemic and associated economic damage (Dadayan 2020b).

Recent federal policy changes are complicating revenue forecasting further, as is uncertainty concerning additional federal legislation.

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 9.4 percent in nominal terms and 7.5 percent in real terms since 2010 (Table A1).

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 and fell off in 2020 because of the COVID-19 pandemic and associated responses.

As with personal income taxes, 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. Year-over-year growth in corporate income tax revenues was also strong in the fourth quarter of 2020 and the first quarter of 2021, at 24.0 and 30.8 percent, respectively.

State corporate income tax revenues increased 160.7 percent in the second quarter of 2021 compared with a year earlier. Growth in the median state was weaker, at 112.9 percent. The robust growth in corporate income tax revenues observed in the second quarter of 2021 is in comparison to depressed revenue levels last year; growth was 45.3 percent compared with the second quarter of 2019. Also, some corporations may have been shifting income into the current tax year to avoid uncertainty related to possible higher corporate tax rates in federal bills currently under consideration.

All regions but the New England reported triple-digit growth, with the Far West region reporting the strongest year-over-year growth in corporate income tax revenues at 386.6 percent and the Mideast region reporting the weakest growth at 103.4 percent. Forty-four states reported year-over-year growth in corporate income tax collections, with 28 states reporting at least triple-digit growth (Table A2).

Prior to the pandemic, states were forecasting lower corporate income tax collections, mostly because of higher costs for business inputs and a weaker global economy (Dadayan 2020b). 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 current and immediate outlook for state corporate income tax revenues, however, improved substantially because of strong rebounding in corporate profits in the first half of 2021. According to data from the Bureau of Economic Analysis, US corporate profits increased by nearly $877 billion or 45 percent from second quarter of 2020 to the second quarter of 2021.[10] However, not all industries have seen increases in corporate profits. The pandemic and recovery have had an uneven impact on various industries.

The future of corporate income tax collections remains unpredictable in part 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.)

General Sales Taxes

State general sales tax collections increased 40.0 percent in nominal terms and 34.5 percent in inflation-adjusted terms for the second quarter of 2021 compared with the same period in 2020. The strong growth in the second quarter of 2021 stands out compared with the depressed levels seen last year. 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. Average quarterly year-over-year growth rates in state general sales tax collections were 4.4 percent in nominal terms and 2.7 percent in real terms since 2010 (Table A1).

Sales tax collections increased in all regions for the second quarter of 2021 compared with the same period in 2020. The Southwest region reported the largest average growth at 48.3 percent; the Plains region reported the smallest average growth at 23.9 percent (Table A2).

All 45 states with broad-based sales taxes reported growth in sales tax collections for the second quarter of 2021 compared with the prior year. In 28 states, year-over-year growth in sales tax revenues was 30 percent or above. Massachusetts had the strongest year-over-year growth in sales tax revenues at 62 percent, while New Mexico had the weakest growth at 1.9 percent.

The recovery in sales tax collections was relatively slow following the Great Recession. The weak annual growth rate in sales tax collections in following the Great Recession 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,[11] 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 such legislation only recently.

States have set different sales and volume thresholds for internet sales taxation (Table A6). 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. But some states, such as Alabama and Texas, have either passed legislation or continue to debate 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 and 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 most recent quarters reflect 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). Many state leaders are concerned about sales tax performance once the pandemic is contained as consumers might shift back to spending more on services than on goods (Dadayan and Rueben 2021). 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.

Motor Fuel Taxes

Motor fuel tax revenues saw steep declines between the second quarter of 2020 and the first quarter of 2021, likely because of declines in travel caused by the pandemic. After four consecutive quarterly declines, motor fuel tax revenues increased 25.7 percent during the second quarter of 2021 compared with the same quarter in 2020 (Table A1).

Motor fuel tax revenue collections increased in all regions for the second quarter of 2021 compared with the same period in 2020. The Far West region reported the largest average growth at 35.3 percent; the New England region reported the smallest average growth at 6.7 percent (Table A2).

Forty-four states reported year-over-year growth in motor fuel sales tax collections for the second quarter of 2021; 10 states reported growth of 30 percent or more. Six states (Alaska, Georgia, Massachusetts, New Hampshire, New Jersey, and Wyoming) reported declines in motor fuel sales tax collections in the second quarter of 2021 compared with the same quarter in 2020.

Motor fuel sales tax collections have fluctuated since the Great Recession. Average quarterly year-over-year growth rates in state motor fuel tax collections were 3.4 percent in nominal terms and 1.6 percent in real terms since 2010 (Table A1). 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.

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 A7, we show year-over-year growth rates for four-quarter moving average inflation-adjusted revenue for the nation as a whole. In the second quarter of 2021, states collected $65.7 billion from all the smaller tax sources, which constituted 16.4 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 1.5 percent in real terms since 2010.

The four-quarter moving average of inflation-adjusted revenues from smaller state tax sources showed a 6.3 percent increase for the second quarter of 2021 compared with the same quarter in 2020. State property taxes, which represent a small portion of overall state tax revenues, increased 4.6 percent. Tax revenues from tobacco product sales increased 0.7 percent, tax revenues from alcoholic beverage sales increased 5.3 percent, and revenues from motor vehicle and operators' licenses increased 7.2 percent. Finally, revenues from all other smaller tax sources increased 7.1 percent in the second quarter of 2021 compared with a year earlier.

Overview of Tax Revenues in State Fiscal Year 2021

Most states closed out state fiscal year 2021 with higher-than-expected revenues. According to preliminary data, in state fiscal year 2021, states collected $1,271 billion in total tax revenues, which was an increase of $235 billion or 22.7 percent from the prior year (Table A8). Growth in the median state was 15.1 percent. Although revenue growth was robust in most states in fiscal year 2021, some of the growth reflected the delay of income tax filing deadlines in 2020, which shifted income tax revenues into the first quarter of fiscal year 2021. In addition, the federal stimulus helped cushion state and local budgets during the pandemic.

All regions reported double-digit growth in state tax collections in fiscal year 2021. The Far West region had the strongest year-over-year increase at 40.2 percent, while the Plains region had the smallest growth at 14.3 percent. Forty-seven states reported year-over-year growth in overall state tax revenues in fiscal year 2021, with 4 states reporting growth of over 30 percent. Three states—Alaska, North Dakota, and Wyoming—reported declines in state fiscal year 2021 tax revenue collections. All three states have a high reliance on the oil and gas industry and thus on severance tax revenues (Dadayan and Boyd 2016). Because of the freefall of oil and natural gas prices in the spring of 2020, oil production and drilling declined sharply in these states, which subsequently led to weaknesses in overall state tax revenues. The global oil and gas market is extremely volatile, and in the longer-term, the industry might be further hurt because of growing support for renewable energy policies. Therefore, states that have a high dependance on the oil and gas industry and a high reliance on severance tax revenues might want to rethink and modify their tax revenue structures.

All major sources of state tax revenues increased for fiscal year 2021 compared with the prior fiscal year. Personal income tax revenues totaled $521 billion, which was $138 billion or 36.1 percent higher for fiscal year 2021 than for fiscal year 2020. The growth in the median state was 27.4 percent. All 43 states that levy tax on personal income reported year-over-year increases, with 15 states reporting growth of over 30 percent. The robust growth in personal income tax revenues in fiscal year 2021 was caused in part by the delays in state income tax filing deadlines that pushed personal income tax revenues into fiscal year 2021. Further, the pandemic's impact on state personal income tax revenues has tended to be less severe in the states that have progressive income tax rates and thus have greater reliance on high-income taxpayers. That largely reflects the fact that most Americans who have been economically affected by the pandemic's recession are lower-wage earners.

Corporate income tax revenues totaled $90 billion in fiscal year 2021, which was $39 billion or 75.6 percent higher than in fiscal year 2020. Growth in the median state was 51.2 percent. The robust growth in corporate income tax revenues reflects the rebound in corporate profits and recovery of the broader economy. However, growth in corporate income tax revenues was also in part because of the delay in filing deadlines in 2020, which largely shifted corporate income tax revenues from the final quarter of fiscal year 2020 into the first quarter of fiscal year 2021. Further, analysis from some states indicates that some corporate taxpayers had underpaid their estimated tax payments during the pandemic's onset and the businesses made up those underpayments for tax year 2020 through final payments, which were allocated in fiscal year 2021. All states but Alaska reported robust growth in corporate income tax revenue collections in fiscal year 2021 compared with year-earlier levels.

General sales tax revenues totaled $373 billion, which was $39 billion or 11.8 percent higher in fiscal year 2021 than in fiscal year 2020. Growth in the median state was 12.7 percent. The strong growth in general sales tax revenues was fueled in part by federal stimulus checks and surging consumer spending on durable goods, which are usually subject to sales tax. Forty-one states reported year-over-year growth in sales tax revenue in fiscal year 2021, while four states (Hawaii, New Mexico, North Dakota, and Wyoming) reported declines.

Finally, motor fuel tax revenues totaled $52 billion, which was $0.2 billion or 0.4 percent higher in fiscal year 2021 than in fiscal year 2020. There was large variation across the states; 24 states reported growth in motor fuel tax revenue collections while 26 states reported declines. The weak growth in motor fuel tax revenues was largely caused by higher rates of remote work throughout the year, which substantially decreased gasoline and diesel consumption.

Preliminary Review of State Tax Revenues in the Third Quarter of 2021

The Urban Institute regularly collects monthly state tax revenue data for all 50 states. Preliminary data from 46 states show year-over-year declines in overall state tax collections in the third quarter of 2021. However, these declines were largely caused by higher income tax payments in the third quarter 2020 from the changes in income tax filing deadlines. We urge caution when looking at the quarterly comparisons.

There was large variation across states and among various sources of tax revenues. Overall state tax collections declined 3.2 percent in the third quarter of 2021 compared with the same period in 2020, which contrasts with the 0.9 percent growth in the median state (Table A9). Among 46 states for which we have complete data, overall state tax revenues increased in 26 states and declined in 20 states in the third quarter of 2021.

Personal income tax collections declined 16.7 percent in the third quarter of 2021 compared with the same period a year earlier. Despite overall nationwide declines, personal income tax revenues increased in 11 states. According to our analysis, these 11 states had shifted personal income tax revenues received in the third quarter of 2020 back to the second quarter of 2020. Therefore, year-over-year growth in personal income tax revenues in these 11 states reflects the underlying economic reality and not distorted growth patterns caused by shifting tax filing deadlines.

State corporate income tax revenues declined 3.5 percent year over year in the third quarter of 2021, which is in sharp contrast to the 23.5 percent growth in the median state. According to our preliminary data analysis, corporate income tax revenues declined in 14 states but increased in 27 states in the third quarter of 2021 compared with the same quarter in 2020. The steepest decline in dollar value was in California, where corporate income tax revenues declined by $2.7 billion, or 39.3 percent compared with the same quarter in 2020. However, corporate income tax revenues increased by $1.8 billion or 77.5 percent in the third quarter of 2021 compared with the same quarter in 2019. Therefore, the large decline in California is not reflective of underlying economic activity; rather, it reflects the spike in third quarter of 2020 collections. If we exclude California, corporate income tax revenues for the rest of the nation showed 14.8 percent year-over-year growth in the third quarter of 2021.

Finally, state general sales tax collections increased 12.5 percent in the third quarter of 2021 compared with the same quarter in 2020. All early-reporting states except Texas reported growth in sales tax collections. Growth in sales tax revenues was even stronger, at 15.6 percent in the third quarter of 2021 compared with the third quarter of 2019. Strong growth in sales tax revenues is largely driven by continued growth in retail and remote online sales and the return of some entertainment and travel activity.

Looking ahead at the coming months, state tax revenues will likely show less volatility. We expect to see solid growth in state tax revenues because of persistent favorable economic conditions. Moreover, we expect continued recovery in sectors of the economy that were most negatively impacted by the pandemic, including tourism, hospitality, and entertainment. Recovery in these sectors will boost state tax revenues further.

Factors Driving State Tax Revenues

Tax revenues vary across states and over 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.

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

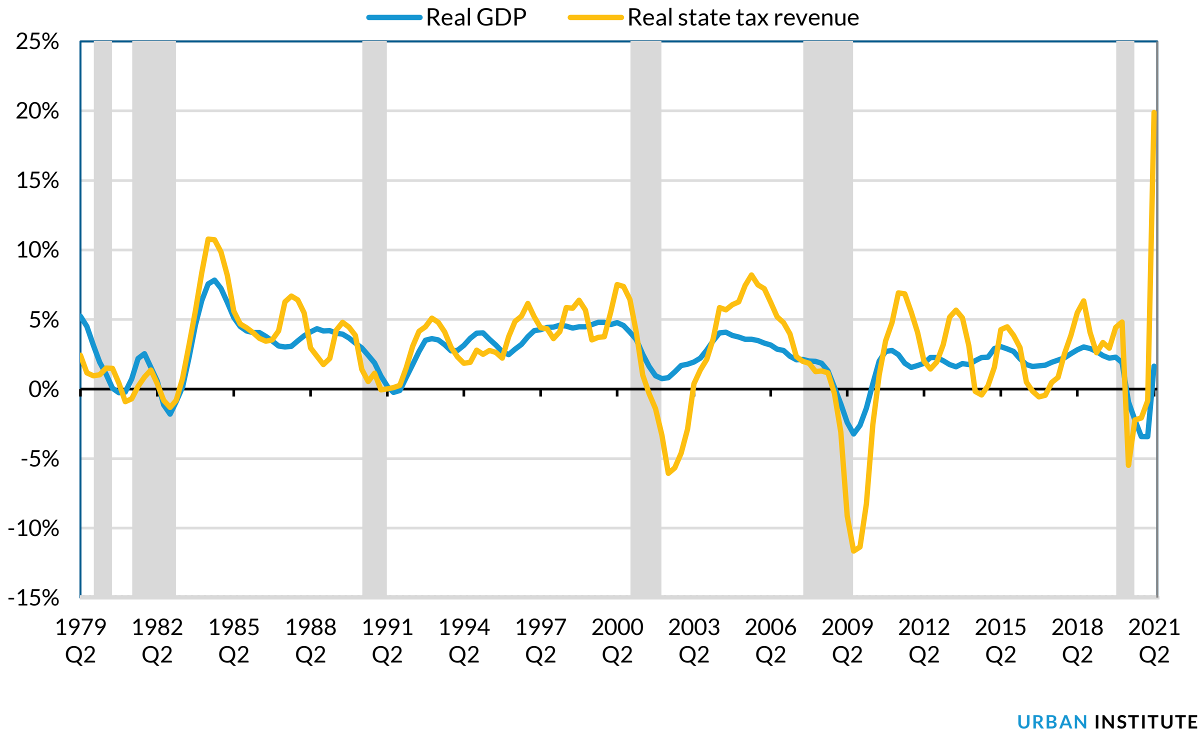
When the economy booms, tax revenues tend to rise rapidly, and when the economy declines, revenues tend to decline, though these changes have different patterns and timing. Figure 5 shows year-over-year growth for four-quarter moving averages in real GDP and real state tax revenue. We present moving 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. Real GDP as well as real state tax revenues resumed growth in the second quarter of 2021. However, there was a large gap between the growth rates: year-over-year growth for four-quarter moving averages was 1.6 percent in real GDP and 19.9 percent in real state tax revenues in the second quarter of 2021, but again this largely reflects state revenue shifts over the past two years.

Even excluding the most recent volatility related to the pandemic and government actions, 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



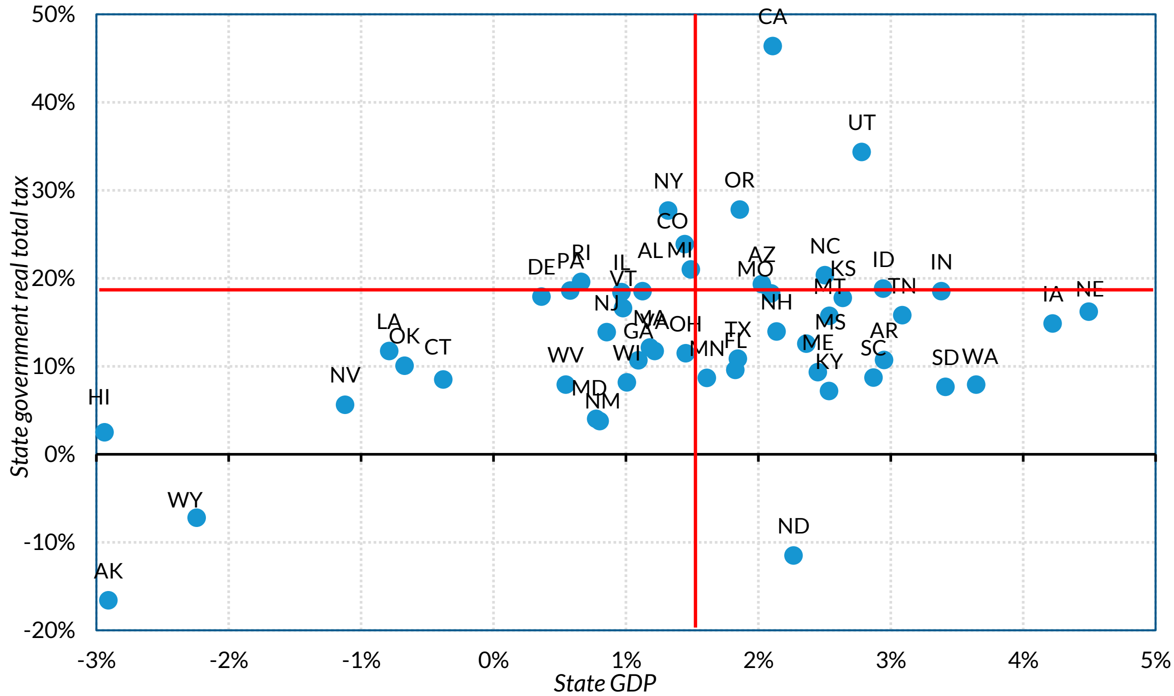
Source: US Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP), analysis by the author.
Notes: Year-over-year change is the percentage change of four-quarter moving averages. Data are adjusted for inflation.

States vary substantially in correlations between growth rates in real GDP and real state tax revenues. Figure 6 shows for each state the four-quarter moving averages in real GDP and real state tax revenues for the second quarter of 2021 compared with the same quarter in 2020. By this measure, real state GDP increased in 43 states while real state tax revenues increased in 47 states. The year-over-year change in real state GDP ranged from −2.9 percent for both Alaska and Hawaii to 4.5 percent for Nebraska; the change in real state tax revenues ranged from −16.6 percent for Alaska to 46.4 percent for California. The national average year-over-year growth in real state GDP was 1.6 percent, and the national average year-over-year growth in real state tax revenues was 19.9 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 2 versus 2020 quarter 2



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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.

State Unemployment and Employment

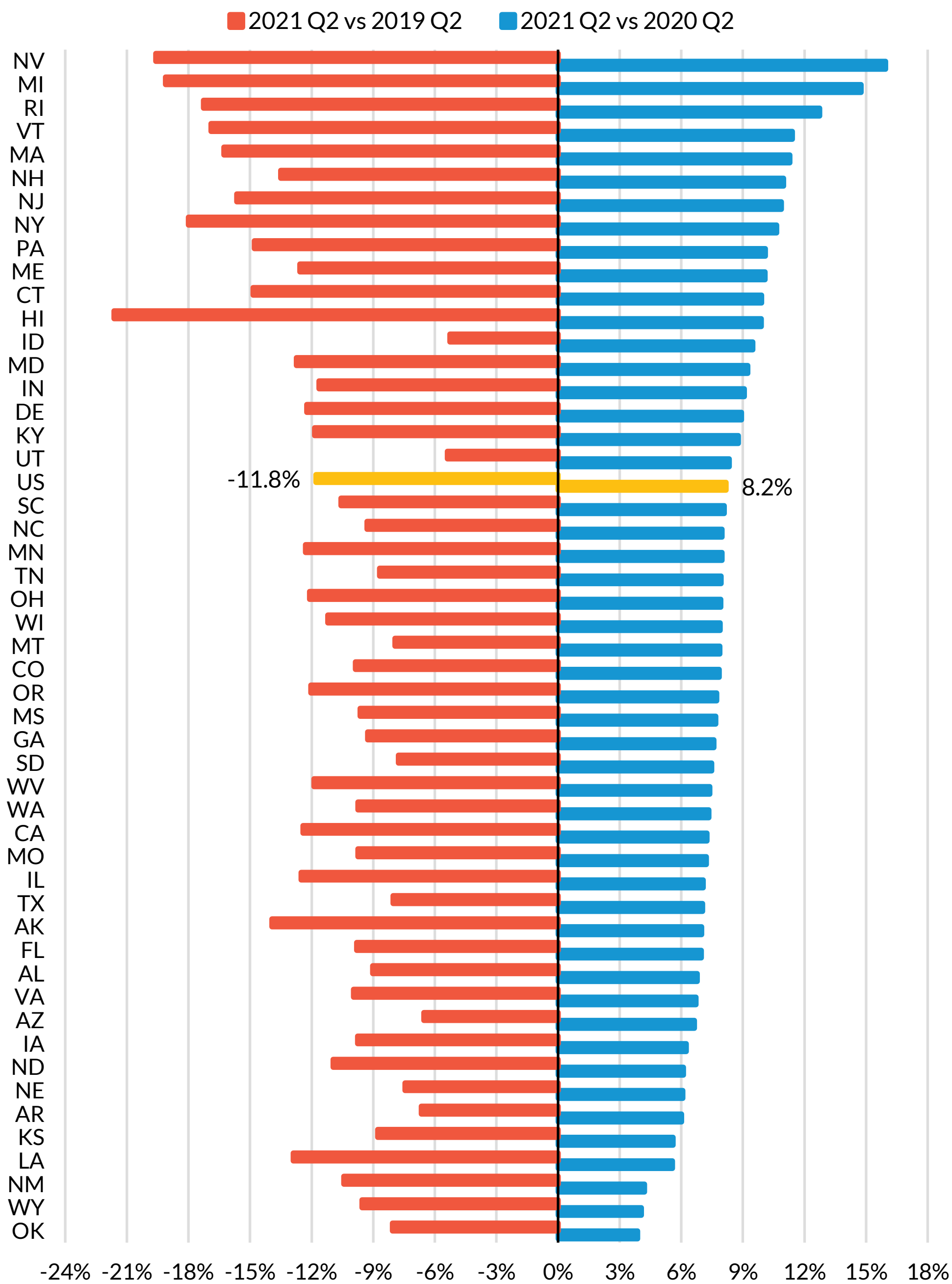
Before March 2020, the national unemployment rate had seen a nearly uninterrupted decline from its Great Recession peak. The unemployment rate was 3.6 percent in the fourth quarter of 2019, which was a 50-year low.[12] The unemployment rate increased to 3.8 percent in the first quarter of 2020 and increased 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. The unemployment rate showed continuous improvement since then as state economies slowly reopened and vaccines rolled out, and it dropped to 5.9 percent in the second quarter of 2021.

Unemployment rates ranged from 2.6 percent in Nebraska to 8.1 percent in Hawaii for the second quarter of 2021, although unemployment rates varied for different groups 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 5.1 percent in the third quarter of 2021.

FIGURE 7

Employment Rebounded in the Second Quarter of 2021 but Is Still Down Compared with Prepandemic Levels

Year-over-year change in employment, 2021 quarter 2 versus 2020 quarter 2 and 2019 qaurter 2



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

Notes: Year-over-year change is the percentage change of seasonally-adjusted employment.

Nationwide employment increased 8.2 percent in the second quarter of 2021 compared with the same quarter in 2020 but declined 11.8 percent compared with the same quarter two years ago, in

2019 (Figure 7). Overall employment declined substantially during the second quarter of 2020, which was largely caused by the adverse impact of the pandemic on various sectors of the economy. 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). Therefore, widespread employment growth observed in the second quarter of 2021 is largely attributable to the much lower employment base observed last year. All 50 states reported growth in employment in the second quarter of 2021 compared with the second quarter of 2020, but at the same time, all 50 states reported declines in employment compared with the second quarter of 2019. Year-over-year growth in employment ranged from 3.9 percent in Oklahoma to 15.9 percent in Nevada for the second quarter of 2021.

Although the employment situation improved substantially in recent months, current employment numbers are still below prepandemic levels. As of October 2021, around 4.2 million fewer people were employed than were employed in February 2020. 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. Further, some public-sector workers chose to retire. Even with federal aid and stronger budgets, many state and local governments have been unable to refill these positions, and these early declines have not been reversed. As of October 2021, state and local governments still employed nearly 1 million fewer people than they did before the pandemic.

Housing Market

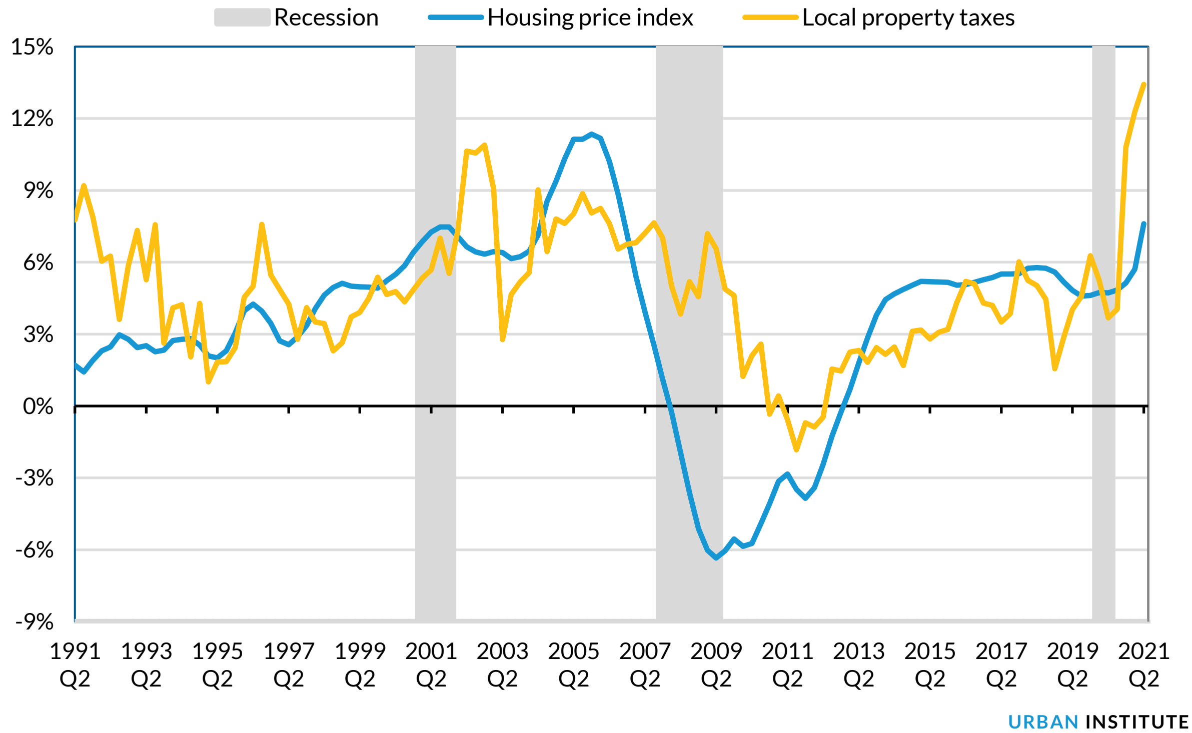
House prices are an important determinant of local property taxes, though changes in property tax revenues often lag property price changes. Assessment lags and assessment caps can affect how quickly house price changes translate into property tax revenue changes. Declines in house prices usually lead 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).

FIGURE 8

Strong Growth in Housing Prices and Local Property Taxes Despite the Pandemic

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



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.

House prices rebounded in 2013 and the trend has been generally upward since then. National average house prices showed strong growth during the pandemic and appreciated 7.6 percent for the second quarter of 2021 compared with one year earlier.

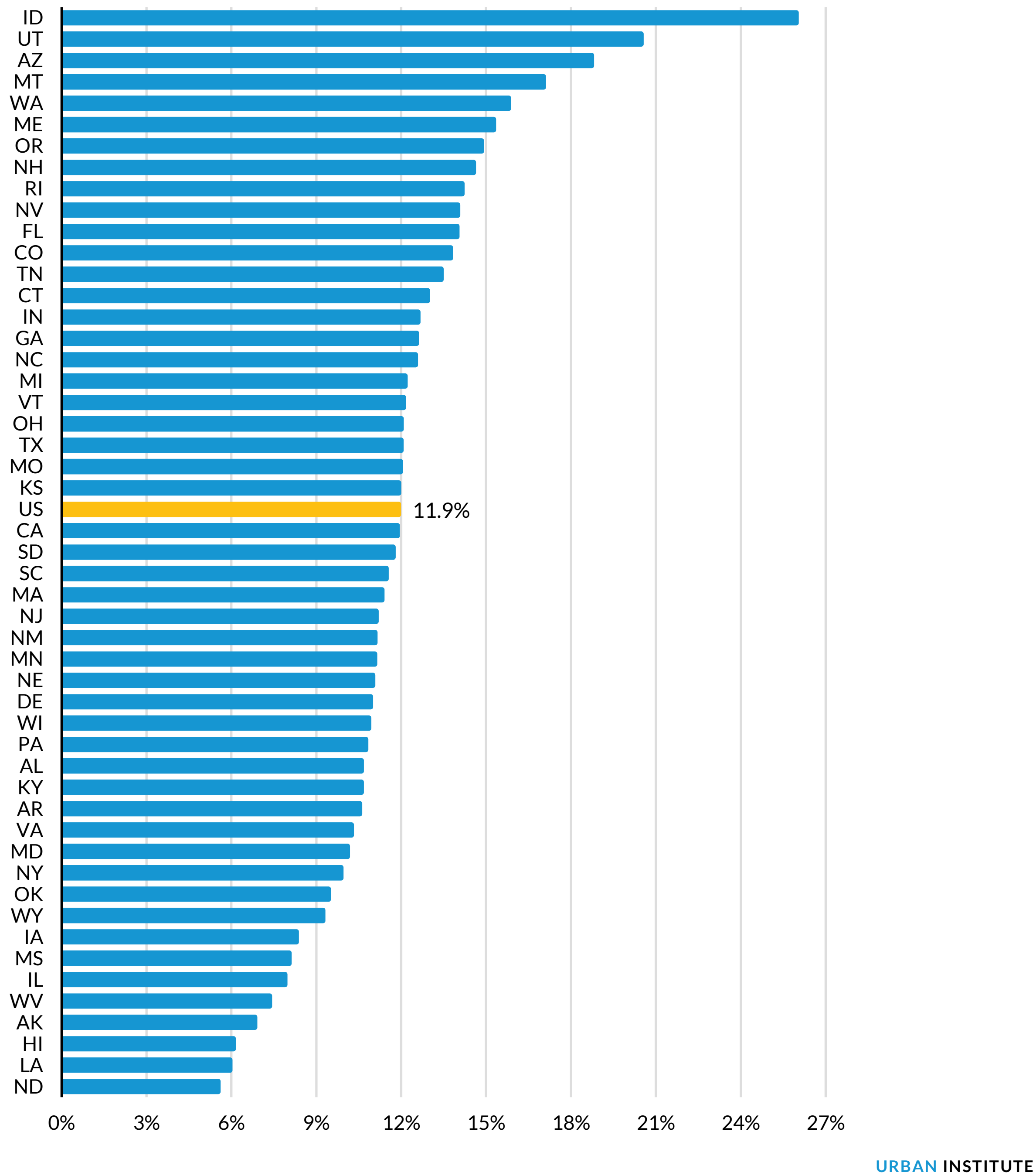
Figure 9 shows the state-by-state nominal percentage change in house price indexes in the second quarter of 2021 compared with the second quarter of 2020. Statewide house price indexes increased in all states for the second quarter of 2021 compared with a year earlier, ranging from a 5.5 percent increase in North Dakota to a 26 percent increase in Idaho. Year-over-year growth was 11.9 percent for the nation.

The pandemic generally has not negatively affected residential real estate property values. However, the pandemic's exact effects on commercial real estate property values, and thus commercial property tax revenues, remains uncertain. Declines in the value of commercial properties (such as hotels, retails, and offices) may lead to lower property tax assessments and revenues. Further, residential properties in high-cost or densely populated cities such as San Francisco or New York 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 fiscal year 2022. Reductions in property values for fiscal year 2022 reflect the negative impact of COVID-19 on property values across the city.[14]

FIGURE 9

Despite the Pandemic, All States Saw Solid Growth in Housing Prices

Percent change in house prices, 2021 quarter 2 versus 2020 quarter 2



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

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

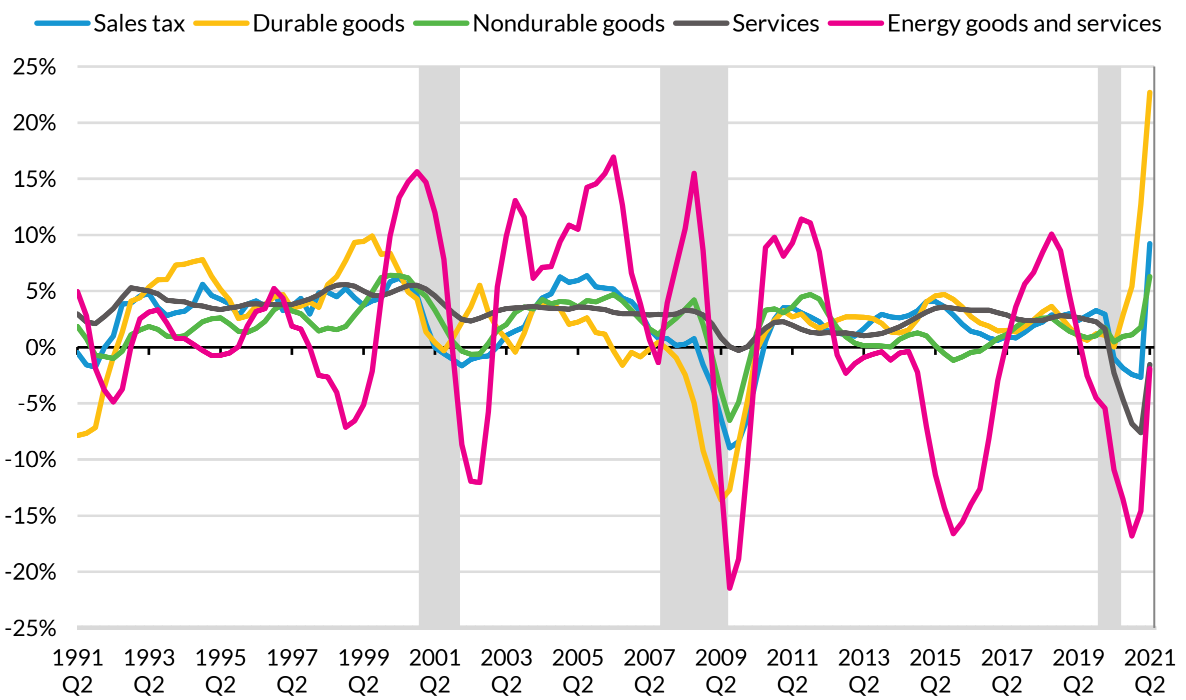
Personal Consumption Expenditures

"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.

FIGURE 10

Spending on Energy Goods and Services Are Still below Prepandemic Levels

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



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, prior to 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 taxes. Year-over-year spending on services declined an average of 1.6 percent in the second quarter of 2021, while year-over-year spending on both durable and nondurable goods increased 22.7 and 6.3 percent, respectively. The robust growth in spending on durable goods is largely because of the lower base in the second quarter of 2020.

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, consumption of services has fallen with the decline in travel and attendance of in-person events caused by the pandemic. This current reversal in the long-term trend toward more spending on services is likely temporary.

Spending on gasoline and energy goods represents about one-fifth of total spending on nondurable goods. 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 reflecting steep declines in oil and gas prices. Spending on energy goods and services increased between the second quarter of 2017 and the second quarter of 2019, largely bouncing back from previously depressed levels. However, consumption of energy goods and services showed year-over-year declines since then caused by the fall in oil and gas prices as well as reduced consumption. 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.

The year-over-year decline in real spending on energy goods and services for the second quarter of 2021 was 1.9 percent. Because many people are still commuting less and working remotely, spending on energy goods and services remains weak. However, as offices are gradually reopening and because the prices on gas and oil have gone up, we will likely see some rebounding in spending on energy goods and services in the coming months.

Tax Law Changes Affecting the Second 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 second 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 (though this reflects tax increases in some states and decreases in others) and increase corporate income taxes by $1 billion. Enacted tax changes were also expected to increase sales taxes by $54 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 economic nexus threshold for annual sales 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

State tax revenues saw large swings since the onset of the pandemic, in part because of government actions and behavioral responses to mitigate virus exposure. The pandemic caused an economic collapse, sending the country into recession. But the pandemic-induced recession lasted only two months, marking the shortest contraction on record.[26]

Although reported growth in the second quarter of 2021 revenues is high, these numbers must be looked at with caution because of shifts in tax revenue collections in 2020. The pandemic-induced recession had a very uneven impact on states and localities, depending on their tax structures, industry mix, and population density. 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. Consequently, states with 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. During the pandemic, we have 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 taxation of these online sales transactions, which supported state sales tax revenues.

Earlier in the pandemic, states were forecasting steep revenue shortfalls for fiscal years 2021 and 2022 (Dadayan 2020a). But fiscal and monetary policies adopted by the federal government in response to the pandemic helped states and localities to keep their economies afloat. Overall state tax revenues were stronger during the pandemic than initially feared, in part because of generous federal stimulus packages that have injected trillions of dollars into the economy. Most states closed out state fiscal year 2021 with higher-than-expected revenues.

Despite a more positive fiscal and economic reality than initially feared, some underlying economic indicators are still troublesome: unemployment rates are still higher than prepandemic levels; labor force participation remains subdued, potentially because of health and child care concerns; and overall prices have grown substantially, resulting in a higher-than-usual inflation rate. Moreover, a significant share of the population is not vaccinated and COVID-19 caseloads continue to vary across places.

Looking forward, we expect to see less volatility and continued growth in state tax revenues in the coming months, absent any further external shocks. However, the longer-term outlook for state and local budgets could still be worrisome depending on state actions, especially as federal assistance programs end.

Appendix: Additional Tables

TABLE A1

Quarterly State Government Tax Revenue by Major Tax

	Nominal Y-O-Y Percentage Change					Inflation	Real Y-O-Y Percentage Change				
2010 Q1–2021 Q2	**PIT**	**CIT**	**Sales**	**MFT**	**Total**	**rate**	**PIT**	**CIT**	**Sales**	**MFT**	**Total**
average growth	***7.9***	***9.4***	***4.4***	***3.4***	***5.7***	***1.7***	***6.0***	***7.5***	***2.7***	***1.6***	***3.9***
2021 Q2	73.5	160.7	40.0	25.7	57.3	4.1	66.7	150.6	34.5	20.8	51.2
2021 Q1	18.4	30.8	3.2	(7.3)	9.7	2.1	15.9	28.0	1.0	(9.3)	7.4
2020 Q4	9.0	24.0	3.0	(7.4)	5.9	1.5	7.4	22.2	1.5	(8.7)	4.4
2020 Q3	42.7	63.8	2.9	(5.3)	18.9	1.3	40.8	61.7	1.6	(6.5)	17.4
2020 Q2	(32.1)	(44.3)	(13.2)	(17.9)	(24.5)	0.7	(32.6)	(44.7)	(13.8)	(18.5)	(25.1)
2020 Q1	5.0	(1.3)	3.8	5.2	4.0	1.7	3.2	(2.9)	2.1	3.4	2.3
2019 Q4	6.2	19.6	5.7	8.3	5.6	1.6	4.5	17.8	4.1	6.6	4.0
2019 Q3	4.3	11.6	7.1	6.0	5.5	1.7	2.6	9.8	5.4	4.3	3.8
2019 Q2	18.8	21.0	2.3	3.2	10.4	1.8	16.7	18.9	0.5	1.4	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	2.2	12.9	(8.5)	2.8	8.6	6.6
2017 Q4	14.9	10.5	4.5	9.7	9.1	2.1	12.6	8.3	2.4	7.5	6.9
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	(1.1)	(4.8)	0.2	(0.3)	(0.3)
2016 Q3	2.4	(9.0)	2.7	1.4	1.3	0.9	1.5	(9.8)	1.8	0.5	0.3
2016 Q2	(2.8)	(9.7)	1.2	0.3	(1.7)	0.9	(3.6)	(10.5)	0.3	(0.6)	(2.5)
2016 Q1	1.7	(5.9)	1.9	2.9	1.4	0.8	0.9	(6.6)	1.1	2.1	0.7
2015 Q4	5.1	(9.5)	2.7	3.5	2.4	0.8	4.3	(10.2)	1.9	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	1.4	5.9
2015 Q1	6.9	3.3	5.8	4.3	5.5	1.1	5.8	2.2	4.6	3.1	4.3
2014 Q4	8.4	10.1	6.5	2.4	5.7	1.5	6.8	8.5	4.9	0.9	4.1
2014 Q3	4.4	7.4	6.6	0.6	4.3	2.0	2.4	5.3	4.5	(1.4)	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	0.2	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	(3.5)	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	2.9	6.7	0.5	0.4	1.3
2012 Q2	4.7	1.5	2.1	1.7	3.2	1.7	2.9	(0.2)	0.4	0.0	1.5
2012 Q1	4.0	4.2	4.6	1.3	3.7	2.0	2.0	2.2	2.6	(0.7)	1.7
2011 Q4	3.7	(6.5)	3.5	0.7	3.2	1.9	1.7	(8.2)	1.6	(1.2)	1.3
2011 Q3	9.7	2.5	3.7	(0.3)	6.2	2.3	7.2	0.1	1.3	(2.5)	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	10.0	2.4	4.4	11.2	7.9
2010 Q4	10.5	19.8	4.8	11.8	8.4	1.7	8.7	17.8	3.1	10.0	6.6
2010 Q3	4.8	(0.9)	4.5	10.6	5.4	1.5	3.3	(2.3)	3.0	9.0	3.9
2010 Q2	2.2	(19.4)	4.8	4.0	2.6	1.2	1.0	(20.3)	3.6	2.8	1.4
2010 Q1	2.4	0.8	0.6	(0.2)	2.9	0.5	1.9	0.2	0.0	(0.7)	2.4

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 2 versus 2020 quarter 2

State/region	PIT	CIT	Sales	MFT	Total
US (median)	***48.5***	***112.9***	***32.2***	***23.0***	***41.4***
US (average)	***73.5***	***160.7***	***40.0***	***25.7***	***57.3***
New England	**20.0**	**71.6**	**45.9**	**6.7**	**29.5**
Connecticut	9.5	35.3	29.7	23.0	19.9
Maine	13.2	68.1	52.4	15.9	27.0
Massachusetts	20.2	107.3	62.0	(14.2)	35.0
New Hampshire	62.2	96.3	N/A	(13.2)	49.5
Rhode Island	98.9	(90.7)	43.1	32.9	46.3
Vermont	103.7	267.3	31.2	12.6	24.9
Mideast	**77.3**	**103.4**	**41.6**	**21.5**	**57.5**
Delaware	75.4	126.4	N/A	23.0	39.2
Maryland	14.9	51.5	47.4	23.0	20.3
New Jersey	13.0	57.0	38.9	(31.9)	31.5
New York	156.9	199.6	33.1	34.5	95.7
Pennsylvania	63.7	161.7	53.0	29.2	63.2
Great Lakes	**46.1**	**152.8**	**38.0**	**20.1**	**43.5**
Illinois	48.5	136.1	46.6	25.8	54.0
Indiana	57.4	200.2	33.8	31.8	55.9
Michigan	63.2	376.0	53.8	23.0	52.1
Ohio	67.7	NM	33.1	8.8	34.4
Wisconsin	6.9	108.0	21.5	18.4	18.9
Plains	**49.3**	**112.4**	**23.9**	**18.9**	**41.4**
Iowa	43.3	88.3	32.5	13.2	46.4
Kansas	83.4	197.5	25.1	21.3	49.2
Minnesota	34.2	94.2	21.6	19.2	31.5
Missouri	77.4	114.9	22.6	28.5	54.3
Nebraska	45.7	160.4	24.9	17.4	43.1
North Dakota	45.8	176.7	13.0	4.5	74.2
South Dakota	N/A	42.4	23.5	13.0	18.4
Southeast	**31.8**	**108.2**	**37.6**	**27.8**	**37.5**
Alabama	66.0	413.6	26.9	22.2	48.1
Arkansas	41.7	75.3	31.0	23.0	27.8
Florida	N/A	107.9	53.8	33.1	51.5
Georgia	18.3	79.4	38.1	(18.5)	25.4
Kentucky	15.1	51.6	31.4	24.5	24.5
Louisiana	38.1	235.0	32.2	23.0	41.5
Mississippi	42.8	109.6	15.3	23.0	28.8
North Carolina	62.4	164.6	21.0	52.0	49.0
South Carolina	4.8	112.9	37.6	34.2	23.8
Tennessee	90.3	76.9	37.3	20.7	40.6
Virginia	23.6	71.8	31.7	86.7	28.4
West Virginia	29.9	327.1	24.6	12.8	38.0
Southwest	**54.6**	**210.8**	**48.3**	**25.1**	**56.0**
Arizona	85.1	209.5	32.2	23.0	48.7
New Mexico	14.3	5.2	1.9	23.0	32.9
Oklahoma	42.0	432.5	21.4	23.6	41.4
Texas	N/A	N/A	57.7	26.6	65.3
Rocky Mountain	**66.9**	**237.4**	**29.3**	**33.3**	**53.0**
Colorado	64.9	387.9	29.1	23.5	60.4
Idaho	33.4	85.4	35.7	22.7	35.0
Montana	83.9	104.5	N/A	37.1	46.0
Utah	88.7	288.6	29.0	63.6	73.3
Wyoming	N/A	N/A	10.8	(1.0)	2.7

State/region	PIT	CIT	Sales	MFT	Total
Far West	**172.4**	**386.6**	**42.1**	**35.3**	**107.2**
Alaska	N/A	1,249.4	N/A	(8.5)	69.1
California	184.4	420.2	46.0	40.8	135.0
Hawaii	125.1	2,091.8	32.1	29.3	70.4
Nevada	N/A	N/A	46.1	23.0	33.7
Oregon	87.8	70.9	N/A	23.0	71.7
Washington	N/A	N/A	33.2	23.0	28.0

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 Personal Income Tax Withholding

Year-over-year nominal percentage change

State/region	State Fiscal Year 2020				State Fiscal Year 2021			
	2019 Q3	2019 Q4	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2
US (median)	*5.0*	*4.3*	*6.9*	*(0.1)*	*3.6*	*4.0*	*4.9*	*12.1*
US (average)	**4.3**	**4.8**	**5.8**	**(1.3)**	**5.1**	**6.2**	**6.5**	**15.4**
New England	**4.5**	**3.1**	**4.7**	**2.5**	**4.7**	**5.1**	**6.6**	**10.7**
Connecticut	5.5	2.8	2.0	1.9	4.0	6.6	2.3	10.5
Maine	7.4	6.7	7.6	2.8	9.2	7.8	10.7	14.3
Massachusetts	4.1	3.1	5.8	2.9	4.5	4.3	9.4	10.2
Rhode Island	3.8	2.0	6.9	1.1	3.4	4.0	0.2	12.1
Vermont	0.6	(0.3)	3.1	2.3	7.3	1.5	1.1	10.8
Mideast	**5.1**	**4.6**	**5.6**	**(2.1)**	**4.3**	**2.8**	**4.7**	**15.0**
Delaware	6.2	0.9	10.1	(2.3)	4.8	(39.8)	34.5	16.2
Maryland	6.7	5.5	8.9	2.7	5.4	7.8	0.7	13.7
New Jersey	6.2	3.2	7.0	(5.8)	7.5	9.5	7.3	21.2
New York	5.0	4.8	4.6	(1.8)	3.0	2.8	4.9	14.2
Pennsylvania	2.4	4.1	3.8	(6.7)	4.5	(6.7)	1.8	12.8
Great Lakes	**4.0**	**4.1**	**4.2**	**(2.8)**	**4.7**	**3.6**	**5.2**	**12.6**
Illinois	4.2	3.2	3.1	(0.0)	6.0	6.1	4.3	11.2
Indiana	1.4	4.8	7.3	(10.1)	9.6	2.3	6.0	19.7
Michigan	7.6	6.0	6.9	4.3	5.0	2.9	6.8	5.5
Ohio	2.5	1.9	1.6	(10.6)	1.3	0.4	1.6	21.0
Wisconsin	3.0	5.3	3.4	(1.3)	(0.0)	4.0	8.5	10.2
Plains	**3.4**	**3.3**	**4.4**	**(1.9)**	**(0.6)**	**3.4**	**3.2**	**11.5**
Iowa	(3.5)	(3.9)	3.0	0.8	3.6	1.2	3.2	3.9
Kansas	2.8	6.4	9.7	(4.0)	3.2	4.4	2.8	12.9
Minnesota	5.1	2.8	1.6	(2.2)	(6.0)	4.5	1.9	13.6
Missouri	6.0	6.4	4.7	(3.3)	0.1	1.9	5.5	13.0
Nebraska	2.1	6.5	10.9	2.3	8.2	6.2	5.4	11.5
North Dakota	10.2	3.7	13.3	(6.0)	2.5	(4.9)	(11.6)	2.8
Southeast	**2.1**	**1.8**	**5.4**	**(0.6)**	**4.2**	**3.9**	**6.0**	**9.8**
Alabama	1.7	5.4	9.0	(5.2)	1.9	3.9	4.8	10.7
Arkansas	1.9	5.7	9.3	(8.9)	(4.4)	(4.1)	(3.5)	7.8
Georgia	(2.4)	(2.3)	6.0	6.0	11.2	6.5	9.5	9.4
Kentucky	2.1	2.0	7.5	1.0	5.6	5.3	1.4	11.8
Louisiana	9.9	(4.7)	14.9	(7.9)	(11.0)	0.2	1.0	8.6
Mississippi	(1.0)	3.5	7.3	(4.7)	0.2	4.7	3.1	2.1
North Carolina	(1.0)	(0.2)	3.4	1.4	8.9	5.0	8.5	13.2
South Carolina	6.6	4.9	2.4	2.2	4.6	3.3	10.0	9.9
Virginia	5.8	5.8	2.9	(2.1)	2.4	3.4	5.1	8.1
West Virginia	(0.4)	1.2	4.1	(10.3)	(5.4)	(0.0)	1.9	11.9
Southwest	**7.3**	**7.9**	**7.3**	**(0.4)**	**3.4**	**5.5**	**4.8**	**12.2**
Arizona	7.1	8.7	10.3	2.5	2.4	8.5	7.6	13.6
New Mexico	13.2	13.9	12.8	(12.3)	3.2	5.3	2.2	21.2
Oklahoma	5.0	4.3	0.9	1.6	4.8	1.0	1.8	6.1
Rocky Mountain	**6.1**	**5.8**	**10.8**	**7.7**	**9.3**	**13.7**	**9.9**	**13.3**
Colorado	6.1	3.5	10.9	11.3	14.1	15.4	7.5	11.2
Idaho	3.2	9.7	12.1	8.0	11.5	14.9	18.9	20.9
Montana	7.6	4.2	9.7	0.7	2.8	11.2	9.7	17.2
Utah	6.5	9.0	10.3	3.3	1.6	10.9	11.3	13.6
Far West	**5.3**	**8.2**	**7.2**	**(2.3)**	**8.3**	**12.6**	**10.4**	**26.0**
California	5.1	8.2	7.5	(2.4)	9.2	14.2	11.1	27.9
Hawaii	4.1	5.6	4.4	(8.7)	(1.2)	(5.1)	(1.6)	15.4
Oregon	7.0	9.0	4.9	(0.1)	3.3	3.1	6.4	13.4

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.

TABLE A4

State Personal Income Tax: Estimated Payments/Declarations

Year-over-year nominal percentage change

State	Tax year 2019	Tax year 2020	Tax year 2021
	April 2019 - July 2019 1st & 2nd payments	April 2020 - July 2020 1st & 2nd payments	April 2021 - July 2021 1st & 2nd payments
Median	***14.9***	***(12.5)***	***38.7***
Average	**16.9**	**(18.0)**	**62.9**
Alabama	17.2	(13.4)	33.3
Arizona	11.1	3.1	53.3
Arkansas	1.2	8.2	19.6
California	2.4	(27.1)	115.4
Colorado	32.5	(22.3)	31.0
Connecticut	(25.9)	(28.6)	ND
Delaware	6.8	(2.7)	44.3
Georgia	6.0	(28.6)	59.4
Hawaii	44.4	(9.4)	66.2
Illinois	15.1	10.1	14.9
Indiana	14.6	(13.6)	38.7
Iowa	16.0	(6.5)	23.3
Kansas	16.6	(11.4)	32.3
Kentucky	4.2	(7.7)	24.9
Louisiana	24.3	(5.4)	2.7
Maine	18.0	(7.4)	45.0
Maryland	14.4	(11.6)	45.5
Massachusetts	2.4	(22.9)	74.5
Michigan	7.8	(17.8)	75.5
Minnesota	45.5	(15.8)	47.8
Mississippi	30.8	(13.7)	40.0
Missouri	6.0	24.2	(0.6)
Montana	12.2	(0.5)	27.1
Nebraska	18.0	(7.4)	19.8
New Jersey	4.6	(19.6)	37.3
New York	39.4	(14.4)	52.5
North Carolina	13.9	(11.5)	44.2
North Dakota	30.2	(5.4)	(2.9)
Ohio	9.5	(17.1)	38.8
Oklahoma	21.0	(34.9)	14.2
Oregon	37.4	(21.0)	45.7
Pennsylvania	13.0	(5.2)	13.7
Rhode Island	9.2	(22.5)	43.6
South Carolina	23.7	(21.9)	47.0
Vermont	16.6	(14.6)	45.8
Virginia	20.5	(7.6)	37.3
West Virginia	(0.8)	(7.7)	22.7
Wisconsin	29.0	(19.0)	19.3

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. ND = no data.

TABLE A5

State Personal Income Tax: Final Payments

Year-over-year nominal percentage change

State	Tax year 2019	Tax year 2020	Tax year 2021
	April 2019 - July 2019	April 2020 - July 2020	April 2021 - July 2021
Median	***36.9***	***(4.1)***	***24.0***
Average	**38.7**	**(5.7)**	**30.1**
Alabama	39.6	(24.1)	63.9
Arizona	51.8	(6.2)	37.4
Arkansas	34.0	7.1	23.3
California	29.8	7.5	24.0
Colorado	25.2	9.0	20.5
Connecticut	(5.3)	(2.4)	ND
Delaware	35.2	(7.1)	39.2
Georgia	51.7	(3.4)	23.8
Hawaii	21.5	5.8	40.2
Idaho	54.2	17.4	25.7
Illinois	51.9	(23.0)	41.8
Indiana	33.6	(3.3)	24.2
Iowa	64.3	(36.2)	59.8
Kansas	49.8	(23.2)	41.4
Kentucky	18.9	6.4	21.4
Louisiana	46.7	(9.3)	16.2
Maine	30.7	(4.1)	36.1
Maryland	49.6	(7.3)	12.9
Massachusetts	51.9	(2.6)	22.0
Michigan	45.2	(5.4)	44.3
Minnesota	27.7	(1.4)	22.0
Missouri	53.5	(35.8)	46.4
Montana	27.8	(9.0)	35.1
Nebraska	38.5	0.7	15.7
New Jersey	49.2	(7.0)	21.6
New Mexico	(39.5)	71.0	ND
New York	38.2	1.6	32.5
North Carolina	40.2	(5.9)	34.5
North Dakota	25.1	(8.2)	10.4
Ohio	52.6	(21.3)	48.0
Oklahoma	21.7	(5.0)	8.1
Pennsylvania	32.5	(6.3)	22.3
Rhode Island	31.8	(1.8)	1.9
South Carolina	24.8	(3.9)	35.2
Utah	59.4	(63.6)	295.8
Vermont	23.5	5.5	(0.5)
Virginia	60.9	(0.2)	23.6
West Virginia	36.9	(8.0)	9.9
Wisconsin	29.7	(1.2)	10.8

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.
ND = no data.

TABLE A6

States with Economic Nexus and Marketplace Laws

Economic Nexus threshold levels and effective dates

State	Current threshold levels for economic nexus	Economic nexus effective date	Marketplace nexus 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: Alaska, Delaware, Montana, New Hampshire, and Oregon do not have sales tax.
States are hyperlinked to respective economic nexus guidelines.

TABLE A7

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
	$4,563	$5,046	$2,095	$8,764	$45,215	$65,683
2010 Q1 – 2021 Q2 average growth	***2.1***	***(0.4)***	***0.8***	***1.8***	***1.7***	***1.5***
2021 Q2	4.6	0.7	5.3	7.2	7.1	6.3
2021 Q1	2.4	(0.4)	(5.3)	(2.1)	(5.9)	(4.2)
2020 Q4	3.0	0.8	(5.1)	(1.7)	(6.3)	(4.2)
2020 Q3	2.7	(1.2)	(3.4)	(2.9)	(7.1)	(5.1)
2020 Q2	0.3	(2.5)	(2.3)	(2.8)	(5.0)	(3.9)
2020 Q1	1.2	(3.2)	2.7	1.9	1.3	1.1
2019 Q4	0.3	(4.1)	2.8	1.2	1.4	0.9
2019 Q3	(0.3)	(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)	(0.6)	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	4.7
2018 Q2	3.6	5.2	1.3	4.7	3.6	3.8
2018 Q1	1.0	4.6	1.1	1.1	2.6	2.4
2017 Q4	(0.7)	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	2.3	1.5	(0.4)	0.2
2017 Q1	3.0	1.2	1.1	2.3	(1.7)	(0.4)
2016 Q4	2.4	1.4	0.5	2.7	(1.6)	(0.4)
2016 Q3	4.9	1.2	0.8	1.1	(2.5)	(1.0)
2016 Q2	4.2	0.7	1.6	2.6	(1.7)	(0.4)
2016 Q1	5.0	1.8	2.6	2.3	(1.3)	0.1
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	(2.2)	1.6	1.1	(0.7)	(0.1)
2015 Q1	4.3	(4.0)	(0.3)	1.2	(0.4)	(0.2)
2014 Q4	0.7	(4.7)	1.4	(0.7)	(1.9)	(1.7)
2014 Q3	3.1	(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	0.9	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)	(1.5)	(0.1)	0.3	2.5	1.3
2012 Q4	(4.8)	(2.5)	2.3	2.0	1.3	0.6
2012 Q3	(9.2)	(3.3)	3.5	3.1	2.2	1.0
2012 Q2	(10.5)	(2.2)	3.1	3.2	4.2	2.2
2012 Q1	(10.7)	(2.5)	0.7	2.1	7.6	4.0
2011 Q4	(11.0)	(1.8)	(0.5)	1.8	11.8	6.5
2011 Q3	(7.6)	(0.9)	0.5	0.3	12.8	7.3
2011 Q2	(3.8)	0.7	1.6	1.6	12.2	7.6
2011 Q1	2.5	2.8	3.2	3.3	10.1	7.4
2010 Q4	8.1	3.2	3.3	4.1	7.9	6.7
2010 Q3	13.4	2.3	3.1	5.7	5.1	5.5
2010 Q2	13.4	0.6	2.2	3.9	(0.8)	1.3
2010 Q1	10.0	(1.1)	0.8	1.6	(8.5)	(4.6)

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

TABLE A8

State Government Tax Revenue Trends in State Fiscal Year 2021, by State

Nominal percentage change, State Fiscal Year 2021 versus State Fiscal Year 2020

State/region	PIT	CIT	Sales	MFT	Total
US (median)	***27.4***	***51.2***	***12.7***	***(0.4)***	***15.1***
US (average)	***36.1***	***75.6***	***11.8***	***0.4***	***22.7***
New England	**13.8**	**37.7**	**14.7**	**(7.6)**	**14.4**
Connecticut	6.7	29.6	14.6	(0.6)	11.4
Maine	12.6	31.5	14.6	(4.4)	12.0
Massachusetts	13.0	45.0	14.4	(15.0)	14.9
New Hampshire	49.1	46.8	N/A	(25.3)	16.7
Rhode Island	41.6	20.9	15.4	32.3	22.3
Vermont	61.3	17.8	17.4	(5.9)	19.8
Mideast	**33.6**	**44.1**	**10.5**	**(5.1)**	**22.6**
Delaware	28.3	46.3	N/A	(6.8)	20.9
Maryland	9.4	39.0	7.0	(7.6)	6.6
New Jersey	6.2	25.7	15.6	(20.8)	16.9
New York	51.0	51.8	2.5	(3.1)	30.7
Pennsylvania	28.3	63.0	18.3	(2.5)	21.3
Great Lakes	**23.5**	**71.9**	**13.6**	**2.4**	**18.8**
Illinois	22.3	64.4	13.4	2.6	21.2
Indiana	27.4	90.0	12.5	4.0	21.3
Michigan	33.5	123.5	19.3	6.2	23.7
Ohio	28.7	NM	11.9	(0.1)	14.0
Wisconsin	6.2	59.2	9.2	1.2	10.8
Plains	**23.4**	**58.2**	**7.3**	**(2.6)**	**14.3**
Iowa	18.2	68.5	11.7	(5.1)	17.5
Kansas	37.6	68.9	10.4	(1.9)	20.6
Minnesota	16.5	50.6	4.7	(3.9)	11.4
Missouri	30.7	78.1	8.6	(1.8)	21.0
Nebraska	28.0	46.0	9.8	4.5	18.9
North Dakota	27.3	70.1	(12.1)	(10.6)	(9.4)
South Dakota	N/A	55.5	12.7	0.8	10.1
Southeast	**16.9**	**58.0**	**12.3**	**3.5**	**15.1**
Alabama	24.4	166.1	13.6	13.6	21.3
Arkansas	19.2	31.9	13.5	8.7	13.3
Florida	N/A	37.3	10.3	0.9	12.2
Georgia	14.6	42.0	12.7	(4.8)	13.3
Kentucky	7.9	38.1	12.0	0.5	9.7
Louisiana	14.6	179.4	7.9	(6.2)	14.3
Mississippi	22.8	53.9	13.3	5.0	15.2
North Carolina	27.4	128.8	15.6	8.7	23.2
South Carolina	8.0	46.6	14.9	5.1	11.3
Tennessee	211.2	48.7	14.1	0.1	18.5
Virginia	12.7	49.8	12.9	20.7	14.5
West Virginia	15.7	110.9	10.9	(6.5)	10.5
Southwest	**29.4**	**78.6**	**17.3**	**(0.0)**	**14.4**
Arizona	44.2	65.5	15.8	3.0	22.1
New Mexico	6.8	NM	(4.7)	4.1	6.4
Oklahoma	20.9	88.6	9.5	(2.5)	12.6
Texas	N/A	N/A	20.1	(0.8)	13.4
Rocky Mountain	**41.0**	**80.0**	**11.5**	**4.5**	**25.9**
Colorado	38.8	87.4	6.8	(2.8)	26.7
Idaho	28.5	42.9	19.9	7.9	21.7

State/region	PIT	CIT	Sales	MFT	Total
Montana	35.1	44.1	N/A	5.3	18.6
Utah	53.1	110.6	15.9	13.8	37.5
Wyoming	N/A	N/A	(4.7)	(6.5)	(4.9)
Far West	**69.2**	**155.1**	**7.6**	**(0.2)**	**40.2**
Alaska	N/A	(1.6)	N/A	(10.8)	(14.6)
California	73.3	165.8	6.8	0.4	49.9
Hawaii	42.2	339.0	(10.4)	(13.2)	5.0
Nevada	N/A	N/A	16.3	14.1	8.5
Oregon	35.6	43.8	N/A	0.6	30.9
Washington	N/A	N/A	10.4	(5.7)	10.4

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 A9

Preliminary State Government Tax Revenues in The Third Quarter of 2021, by State

Nominal percentage change, 2021 quarter 3 versus 2020 quarter 3

State/region	PIT	CIT	Sales	Total
US (median)	***(15.9)***	***23.5***	***15.6***	***0.9***
US (average)	***(16.7)***	***(3.5)***	***12.5***	***(3.2)***
New England	**8.2**	**45.3**	**18.5**	**15.2**
Connecticut	ND	ND	ND	ND
Maine	27.1	53.6	26.8	26.1
Massachusetts	16.1	48.1	17.8	20.7
New Hampshire	(46.2)	32.4	N/A	11.6
Rhode Island	(24.6)	25.5	14.5	(7.5)
Vermont	(41.2)	111.6	9.4	(14.4)
Mideast	**(18.3)**	**20.9**	**12.3**	**(5.1)**
Delaware	(17.1)	40.1	N/A	(5.4)
Maryland	5.3	55.2	19.9	7.6
New Jersey	28.6	57.5	9.6	30.4
New York	(25.3)	7.1	17.6	(14.6)
Pennsylvania	(25.5)	5.5	5.9	(6.5)
Great Lakes	**(12.8)**	**5.0**	**12.9**	**(0.8)**
Illinois	(14.4)	23.1	17.5	(3.0)
Indiana	(16.5)	(17.1)	14.2	(2.3)
Michigan	(21.5)	(0.8)	12.1	(3.5)
Ohio	(14.6)	N/A	10.1	0.9
Wisconsin	14.1	(1.1)	11.5	9.8
Plains	**(10.7)**	**13.3**	**14.9**	**0.3**
Iowa	(18.4)	(31.2)	21.0	(4.2)
Kansas	(22.8)	12.2	13.3	(6.4)
Minnesota	9.3	46.0	13.5	13.4
Missouri	(18.9)	(22.5)	22.9	(8.4)
Nebraska	(22.0)	25.9	4.5	(9.8)
North Dakota	(36.2)	98.5	15.2	12.7
South Dakota	N/A	N/A	8.3	12.0
Southeast	**(0.8)**	**10.4**	**24.7**	**9.1**
Alabama	(3.8)	(15.2)	11.7	0.2
Arkansas	(14.3)	38.7	10.4	(2.2)
Florida	N/A	24.0	30.8	20.6
Georgia	5.7	29.6	33.7	14.5
Kentucky	6.5	76.0	9.9	11.1
Louisiana	(12.3)	(56.6)	23.4	(5.0)
Mississippi	(2.1)	(23.1)	24.3	9.0
North Carolina	(11.9)	(3.7)	30.1	2.1
South Carolina	19.9	55.1	23.7	21.5
Tennessee	(96.4)	1.7	21.0	4.1
Virginia	7.6	36.5	16.8	11.6
West Virginia	(16.6)	(28.8)	5.5	(3.6)
Southwest	**(16.9)**	**(9.1)**	**(8.7)**	**0.4**
Arizona	(15.8)	23.5	15.6	0.5
New Mexico	ND	ND	ND	ND
Oklahoma	(19.3)	(39.7)	16.5	(2.8)
Texas	N/A	N/A	(13.2)	0.8
Rocky Mountain	**(22.8)**	**7.8**	**16.6**	**(9.4)**
Colorado	(21.7)	(9.8)	12.4	(13.5)
Idaho	0.2	33.6	20.3	12.8

Montana	(16.0)	33.8	N/A	(7.4)
Utah	(33.2)	24.4	22.2	(13.9)
Wyoming	N/A	N/A	7.3	ND
Far West	**(28.0)**	**(38.5)**	**13.1**	**(15.5)**
Alaska	N/A	(2.2)	N/A	29.7
California	(28.4)	(39.3)	8.6	(20.6)
Hawaii	(11.6)	18.6	42.2	20.3
Nevada	N/A	N/A	28.1	27.5
Oregon	ND	ND	N/A	ND
Washington	N/A	N/A	16.4	16.6

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 second 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 November 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: April 1 – April 26," California Legislative Analyst's Office, April 26, 2021, https://lao.ca.gov/LAOEconTax/Article/Detail/644.

[6] Thirty-seven of 41 states with a broad-based personal income tax extended their 2019 tax year 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 usually 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 November 5, 2021, https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=survey.

[10] See "Table 6.16D. Corporate Profits by Industry," US Bureau of Economic Analysis, accessed November 5, 2021, https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=3&isuri=1&1921=survey&1903=239#.

[11] 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.

[12] See US Bureau of Labor Statistics, "Labor Force Statistics from the Current Population Survey," accessed November 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 November 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.

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About the Author

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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