

RESEARCH REPORT

States Enjoyed Solid Revenue Growth in the First Quarter of 2020, Followed by a Freefall Drop

State Tax and Economic Review, 2020 Quarter 1

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Get Real-Time Data

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

Visit our [project page](#) to read previous *State Tax and Economic Review* reports and subscribe to gain direct access to the following datasets:

Monthly State Government Tax Revenue Data

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

Monthly State Government Personal Income Tax Data

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

Quarterly State Government Tax Revenue Data

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

Annual State Government Tax Revenue Collections versus Official Forecasts

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

Annual State and Local Government Gambling Revenue Data

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

Monthly State Government Marijuana Tax Revenue Data

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

Executive Summary

- **State and local government tax revenues** from major sources—personal income, corporate income, sales, and property taxes—were 3.5 percent higher in the first quarter of 2020 than in the prior year; this growth was substantially weaker than the 6.8 percent average annual growth rates for the prior four quarters. These numbers are in contrast to the declines in state and local government tax revenues reported in the second quarter of 2020 because of the COVID-19 pandemic and government responses.
- **State government tax revenues** from major sources showed year-over-year growth at 4.3 percent in the first quarter of 2020. The growth varied among major revenue sources:
 - » **State personal income tax revenues** have fluctuated substantially following the passage of the Tax Cuts and Jobs Act of 2017 (TCJA), which created incentives for some taxpayers to shift income between tax years and to delay estimated income tax quarterly payments into the extension and final payments period. However, growth in state personal income tax revenues was back to normal levels in the second half of 2019 and the first quarter of 2020.
 - » **State sales tax revenues** have experienced uninterrupted growth since the first quarter of 2010 through early 2020, but this growth has lagged the rates observed in previous economic expansions. State sales tax revenues had seen some boost before the COVID-19 pandemic spread to the US, mostly in response to the US Supreme Court's decision in *South Dakota v. Wayfair, Inc.* in June 2018 and subsequent changes in state tax rules.
 - » **State corporate income tax revenues** showed year-over-year declines in the first quarter of 2020 after experiencing double-digit percentage point growth rates for the prior seven consecutive quarters. State officials had cautioned that the double-digit growth was partially caused by the changes made in the TCJA and would level off in the coming quarters. Further, under the Coronavirus Aid, Relief, and Economic Security (CARES) Act passed in March 2020, net operating losses (NOLs) incurred in calendar years 2018, 2019, and 2020 can be carried back to each of the five tax years preceding the tax year of such loss. Therefore, corporate income tax revenues may be retrospectively lowered for prior fiscal years in those states that have rolling conformity with the Internal Revenue Service tax code and have NOL carryback provisions.
- Year-over-year growth in **local government tax revenues** from major sources was 2.7 percent in the first quarter of 2020, which was substantially weaker than the 6.4 percent average annual growth observed in the prior four quarters.

- » **Local property tax revenues** increased 2.2 percent year over year in the first quarter of 2020 compared with a year earlier, which is weaker than the 6.4 percent average growth in the prior four quarters. Local property tax revenues, just like state personal and corporate income tax revenues, fluctuated wildly in recent quarters, partially because TCJA changes led taxpayers to adjust the timing of payments.
- **Preliminary data for the second quarter of 2020** indicate double-digit percentage point rate declines from prior-year levels in overall state tax revenue collections as well as in the three major sources of tax revenues: personal income taxes, corporate income taxes, and sales taxes, which together account for around three-quarters of all state tax revenues. Declines were widespread across the states and are primarily due to the COVID-19 pandemic and subsequent business closings, which hit state coffers like an economic tsunami. States also delayed due dates for income tax returns, which pushed receipts out of the second quarter.
 - » **State personal income tax** revenues showed double-digit percentage point declines in most early reporting states (all but Idaho and Maine) in the second quarter of 2020 compared with the same period a year ago.
 - » **State corporate income tax** collections showed double-digit declines in all early reporting states in the second quarter of 2020.
 - » Year-over-year percentage rate declines in **state sales tax** collections were also in double digits in the second quarter of 2020, with 14 states reporting double-digit declines, 20 states reporting single-digit declines, and only 5 states reporting some growth. The steep declines in state sales tax collections are largely because of state and local government mandates to shut down economies to mitigate the spread of the virus and the ensuing economic drop-off.
- **Economic factors** driving revenue growth were all positive in the first quarter of 2020. However, states' economic performance has changed dramatically since then as the pandemic threw the economy into turmoil, and February 2020 marked the peak in monthly economic activity. Therefore, the growth in economic factors for the first quarter of 2020 must be viewed with extreme caution. Moreover, growth in some economic factors in some states had been weakening since mid-2019, well before the COVID-19 pandemic.
 - » **Real gross domestic product (GDP)** was 0.3 percent higher for the nation in the first quarter of 2020 than in the same quarter in 2019. However, real GDP declined 9.5 percent in the second quarter of 2020 compared with the same quarter in 2019, which is the steepest quarterly decline since the end of the World War II. The steep decline in real GDP

in the second quarter of 2020 was expected because of the massive economic disruptions caused by the COVID-19 pandemic and the government response.

- » The seasonally adjusted **unemployment rate** was 3.8 percent in the first quarter of 2020. Unemployment rates had seen steady declines since 2010, largely because of improved job prospects. However, over 50 million unemployment insurance claims have been filed since the COVID-19 pandemic spread to the US and the unemployment rate soared to 13 percent in the second quarter of 2020, marking the worst quarter on record since 1948.
- » Year-over-year growth in **employment** was 0.8 percent in the first quarter of 2020, with 14 states reporting outright declines. Overall employment growth had slowed even before the onset of the COVID-19 pandemic. Preliminary data for the second quarter of 2020 show a precipitous decline of 13 percent in nationwide employment, marking the largest decline on record.
- » **Personal consumption expenditures** had been rebounding after being hit hard by steep declines in oil and gas prices in 2014–15. However, consumer spending on both durable and nondurable goods was substantially weaker in 2019 than the growth rates observed throughout 2018. Spending on goods and services weakened further in the first quarter of 2020 relative to a year ago and showed sharp declines in the second quarter of 2020. Such declines were expected given that oil prices declined precipitously in April and that the COVID-19 pandemic has paralyzed large portions of the economy since mid-March.
- » **House prices** increased 5.0 percent in nominal terms in the first quarter of 2020 compared with a year earlier. Overall, growth in house prices was weaker throughout 2019 and the first quarter of 2020 than growth in the prior two years. Although average house prices have been rising since the declines that immediately preceded the Great Recession, as of the first quarter of 2020 they were still below their pre-Great Recession peaks in five states.

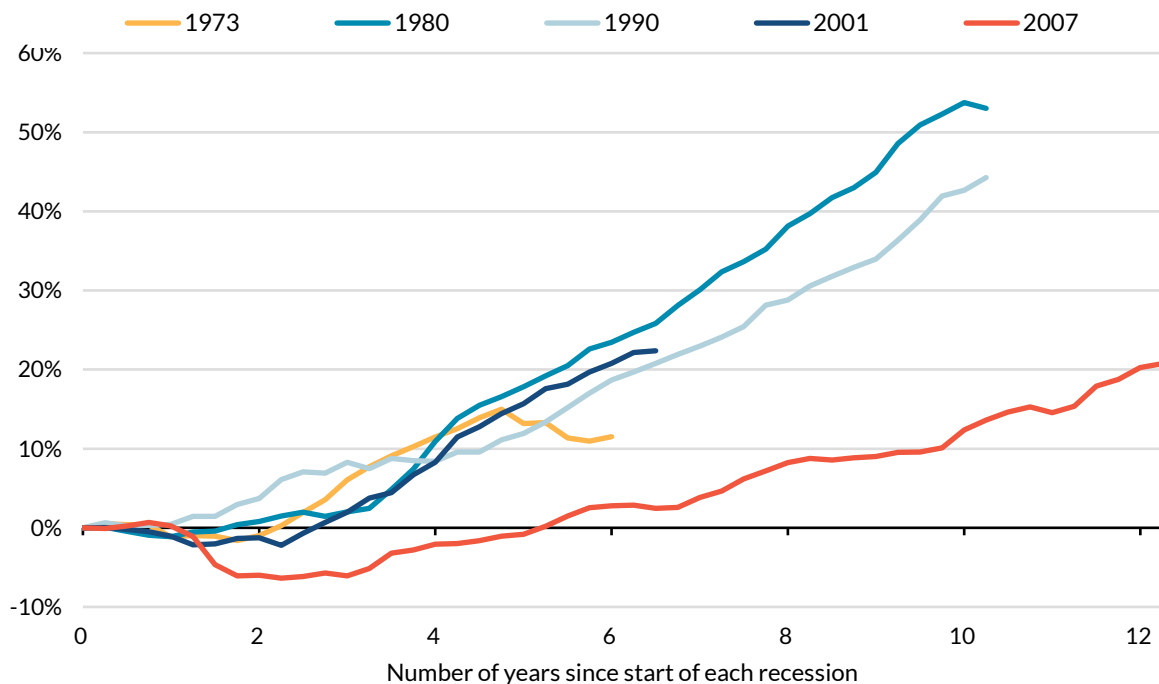
Trends in State and Local Revenues

The COVID-19 pandemic and government actions have caused an unprecedented economic shock and paralyzed economies worldwide. As a result, state and local government tax revenues saw steep declines in recent months. Some of the revenue losses were in response to government actions that deferred revenue collections to a later period; others are permanent and unrecoverable.

FIGURE 1

Declines and Recovery of State and Local Tax Revenues During the Past Five Recessions

Cumulative percent change in real state and local taxes from major sources since start of each recession



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

Notes: Cumulative percent 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.

In the past five decades, the US has seen five economic downturns. State and local government tax revenues declined in each economic downturn, but the declines in the Great Recession were steeper than others, and the recovery was prolonged and weak (Figure 1). Moreover, state and local tax revenues have become increasingly volatile and sensitive to economic, policy, and behavioral changes. Unfortunately, we expect the impact of the COVID-19 pandemic on state and local government tax revenues to be far more detrimental. Declines in state and local tax revenues will be far steeper than in prior recessions and may last far longer than in past economic downturns. The recovery path following

this recession will also likely be more volatile and uncertain than for past recessions because revenues will be affected by infection rates and spread of the virus as well as government reactions.

State and local government tax revenues have fluctuated wildly since the passage of the TCJA, which was the largest federal tax overhaul since 1986. Most states incorporated some of the TCJA provisions into their tax codes. Further, some taxpayers took advantage of some of the TCJA provisions to minimize their income tax liability. For example, some individual taxpayers adjusted their business affairs and employment status to take advantage of the provision that provides a federal income tax deduction of up to 20 percent of net business income to owners of domestic pass-through business entities. On the other hand, some businesses are still evaluating whether to change from a pass-through entity to a C corporation to take advantage of lower corporate income tax rates. The ambiguity about various provisions of the TCJA largely contributed to shifts in taxpayer behavior, which in turn increased volatility in state and local government tax revenues.

Growth in state and local government tax revenues had normalized in the second half of 2019. But that normality did not last long because the COVID-19 pandemic spread to the United States and governments and individuals changed behavior and closed parts of the economy, thus damaging state and local government budgets.

Table 1 shows state and local government tax revenues from major sources for the first quarter of 2019 and the first quarter of 2020 as well as the nominal percentage change between both quarters and the average quarterly year-over-year growth in the prior four quarters. All sources of revenue except corporate income taxes saw some growth in the first quarter of 2020. Major findings include the following:

- **State and local government revenues** from major sources increased 3.5 percent in the first quarter of 2020 compared with a year earlier; the average quarterly year-over-year growth rate in the prior four quarters was substantially stronger at 6.8 percent.
- **State government revenue** from major sources increased 4.3 percent in the first quarter of 2020 relative to a year earlier but was weaker than the average year-over-year growth rate for the prior four quarters, which was 6.9 percent. The growth in **state personal income tax** revenues was 5.0 percent in the first quarter of 2020 compared with the first quarter of 2019; in contrast, the average quarterly year-over-year growth rate in the prior four quarters was 6.7 percent. **State sales tax** collections showed growth of 4.0 percent in the first quarter of 2020 compared with the first quarter of 2019, weaker than the 5.2 percent average quarterly year-over-year growth rate in the prior four quarters. **State corporate income tax** revenues declined

1.2 percent in the first quarter of 2020 compared with a year earlier, ending double-digit percentage rate growth observed in the prior seven consecutive quarters.

- Local government revenue** from major sources increased 2.7 percent from a year earlier in the first quarter of 2020, which was substantially weaker than the 6.4 percent average quarterly year-over-year growth in the prior four quarters. **Local property taxes**, the single largest source of local government tax revenues, increased 2.2 percent from the prior year; the average quarterly year-over-year growth was 6.4 percent in the prior four quarters. Local property taxes saw some fluctuations in the past two years as some taxpayers shifted the timing of property tax payments in response to the TCJA. **Local sales taxes** grew 5.2 percent in the first quarter of 2020 compared to the prior-year level. Year-over-year growth in **local personal income taxes** was 6.5 percent, while **local corporate income taxes** declined 6.4 percent, but these constitute a relatively small share of local revenues and are concentrated in a few states.

TABLE 1

State and Local Government Tax Revenue Trends

Tax source	2019 Q1 (\$ millions)	2020 Q1 (\$ millions)	Y-O-Y percentage change	Average quarterly Y-O-Y growth rate, prior four quarters
Total state and local major taxes	\$372,308	\$385,392	3.5	6.8
State major taxes	\$193,437	\$201,748	4.3	6.9
Personal income tax	97,668	102,539	5.0	6.7
Corporate income tax	10,216	10,093	(1.2)	22.9
Sales tax	81,074	84,338	4.0	5.2
Property tax	4,479	4,778	6.7	1.9
Local major taxes	\$178,871	\$183,644	2.7	6.4
Personal income tax	9,785	10,425	6.5	6.0
Corporate income tax	2,712	2,539	(6.4)	8.5
Sales tax	22,439	23,605	5.2	5.6
Property tax	143,935	147,075	2.2	6.4

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

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

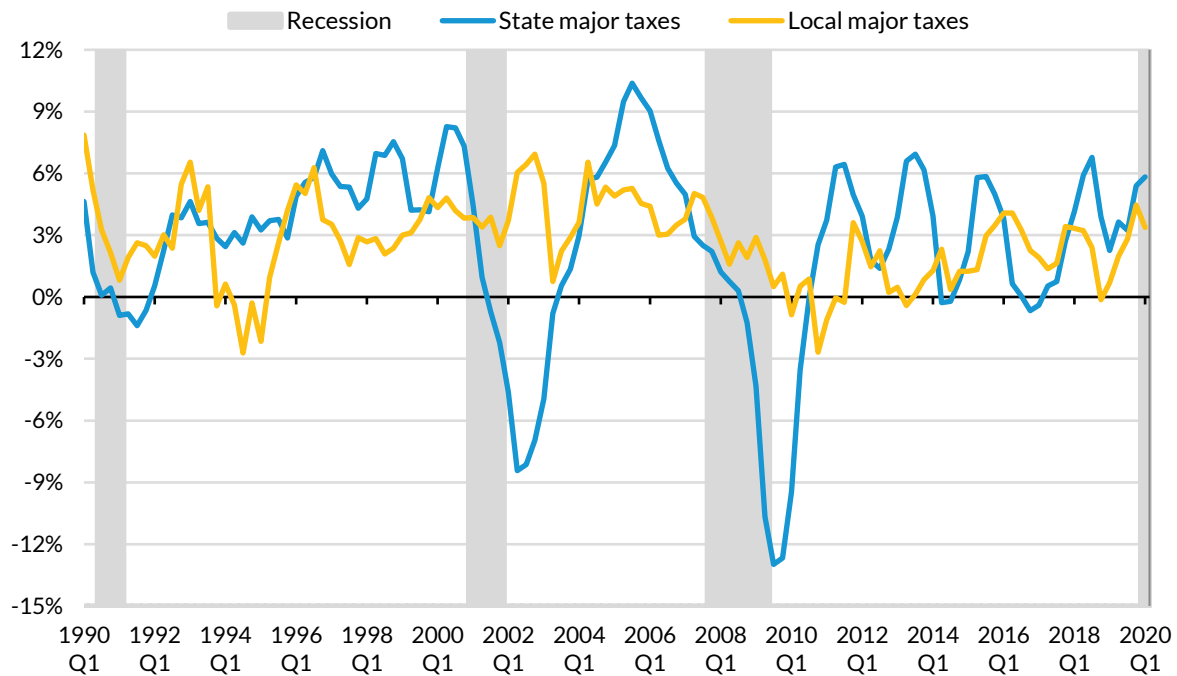
Error! Not a valid bookmark self-reference. shows longer-term trends in state and local tax collections, specifically, the year-over-year percentage change in the four-quarter moving average of inflation-adjusted state and local tax collections from major sources: personal income tax, corporate income tax, sales tax, and property tax. As shown in **Error! Not a valid bookmark self-reference.**, state tax revenues from major sources fluctuated greatly over the past few years, mostly driven by the impact 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. Growth in both state and local taxes from major sources was relatively stable in the first quarter of 2020. State taxes from major sources, adjusted for inflation, on average grew 5.8 percent in the past four quarters relative to the year earlier. The four-

quarter moving average of inflation-adjusted local taxes from major sources showed a 3.4 percent increase for the first quarter of 2020, which was weaker than the growth observed in the final quarter of 2019.

FIGURE 2

State and Local Major Tax Revenue Grew before the COVID-19 Pandemic

Year-over-year change in real 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.

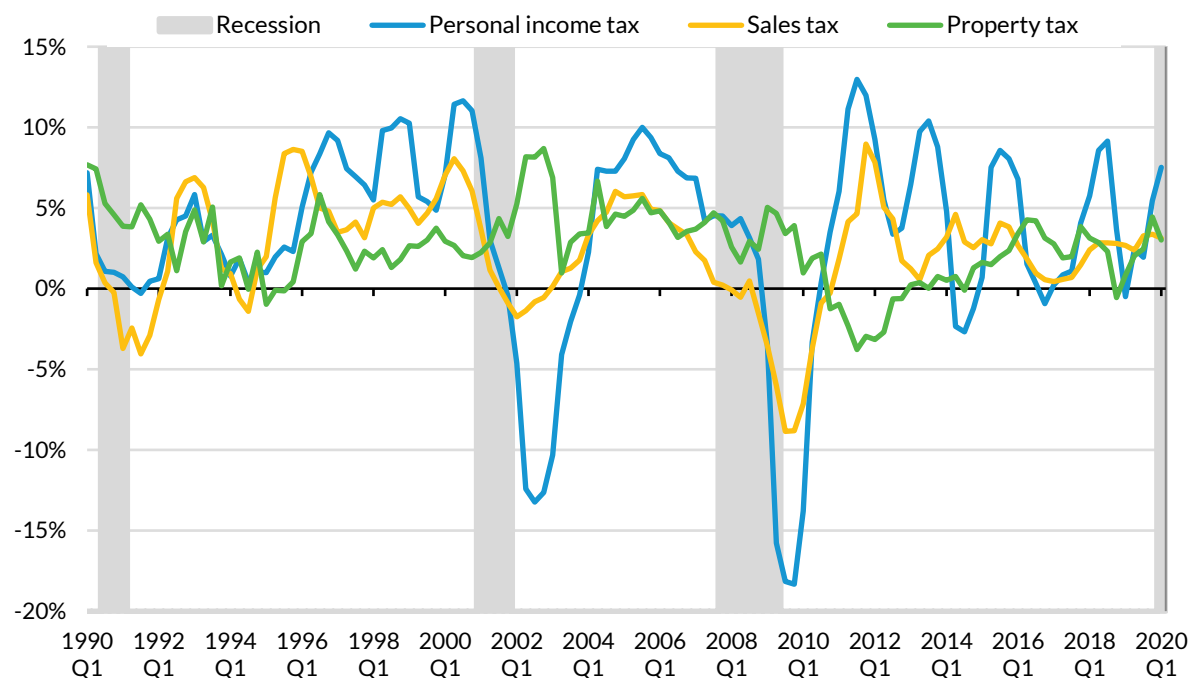
Most local governments rely heavily on property taxes, which are relatively stable and respond slowly to changes in property values. By contrast, the personal income, sales, and corporate taxes that states heavily rely on respond more rapidly to economic upticks and declines. Over the past two decades, property taxes have consistently made up at least two-thirds of total local tax collections. As noted, the recent fluctuations in property tax receipts were mostly caused by payment shifts in response to the TCJA. However, growth in house prices has been weakening in the past year and may weaken further because of the COVID-19 pandemic, which could then lead to weakness or even declines in local property taxes.

Figure 3 breaks out inflation-adjusted state and local personal income, sales, and property tax revenue over the past 30 years. The graph shows the large fluctuations in real (inflation-adjusted) state and local personal income tax collections in recent years. The year-over-year growth in state and local personal income tax revenues was 7.5 percent in the first quarter of 2020. Real state and local sales tax revenues showed a 3.1 percent year-over-year growth rate for the first quarter of 2020. State and local property taxes, nearly all of which are collected by local governments, showed a 3.0 percent growth rate from a year earlier in the first quarter of 2020.

FIGURE 3

Weaker Growth in State-Local Sales Tax Revenues Compared with Prior Expansion Periods

Year-over-year change in real major state-local taxes



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

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

Trends in State Tax Revenue in 2020 Quarter 1

Total state tax revenue grew 4.2 percent in nominal terms and 2.4 percent in inflation-adjusted terms in the first quarter of 2020 relative to a year earlier, according to US Census Bureau data adjusted by the author ([Table A1](#)).¹ Year-over-year growth in state personal income tax revenues was 5.0 percent in the first quarter of 2020 in nominal terms. After showing double-digit percentage point growth for seven

consecutive quarters, corporate income tax revenue collections declined 1.2 percent in the first quarter of 2020 compared with a year earlier (this was mostly attributable to changing rules under the TCJA). State sales tax collections grew 4.0 percent and motor fuel tax collections increased 5.2 percent relative to a year earlier. [Table A1](#) shows (1) nominal and inflation-adjusted growth in state government tax revenue collections from major sources and (2) average quarterly year-over-year growth between the first quarter of 2010 and the first quarter of 2020. Despite the prolonged economic expansion, the inflation-adjusted average annual growth rate in overall state tax revenues since 2010 was only 3.1 percent.

There were some regional disparities in terms of year-over-year growth in total state tax revenues in the first quarter of 2020 ([Table A2](#)). State tax revenues increased in all regions. The Rocky Mountain and Southeast regions had the strongest year-over-year growth at 8.0 and 4.8 percent, respectively, while the Great Lakes and New England regions had the weakest growth at 3.5 and 3.6 percent, respectively.²

Forty-two states reported growth in total state tax revenue collections for the first quarter of 2020 relative to a year prior, with 21 states reporting growth of over 5 percent. Growth in state tax revenues was particularly strong in Idaho. State tax revenues declined in Alaska, Connecticut, Michigan, Minnesota, New Mexico, Oklahoma, Oregon, and Wyoming.

Personal Income Taxes

As discussed in previous [State Tax and Economic Review](#) quarterly reports, the federal policy changes under the TCJA led to wild swings in personal income tax collections as some high-income taxpayers shifted income and deductions between tax years. Growth in personal income tax collections stabilized in the second half of 2019 and the first quarter of 2020. State personal income tax revenues increased 5.0 percent in nominal terms and 3.2 percent in inflation-adjusted terms in the first quarter of 2020 compared with the same period in 2019 ([Table A1](#)). The average quarterly year-over-year growth rate in state personal income tax collections since 2010 has been 6.1 percent in nominal terms and 4.4 percent in real terms.

Personal income tax collections declined in the Southwest and Great Lakes regions but increased across all other regions in the first quarter of 2020 compared with the same period in 2019 ([Table A2](#)). The Rocky Mountain region saw the largest growth at 11.7 percent.

Overall, personal income tax collections decreased in 14 states and increased in 29 states, with 10 states reporting double-digit percentage point growth. The largest decline in dollar value was in Oregon, mostly because of the refunds that the state returned to taxpayers because of requirements under the so-called “kicker” law. Oregon’s 2 percent kicker law requires the state to refund surplus revenue to taxpayers when actual general fund revenues exceed the forecast amount by more than 2 percent. The declines in several other states (Arizona, Arkansas, Iowa, Minnesota, Ohio, and Wisconsin) were mostly attributable to recently enacted tax rate reductions and other legislated changes. For example, officials in Wisconsin enacted legislative changes that “permit pass-through entities to elect to be taxed at the entity level, thereby shifting state tax revenues from the individual income tax to the corporate income/franchise tax.”³ Lawmakers in Wisconsin also reduced marginal tax rates for personal income tax.

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

TABLE 2

Growth in State Government Personal Income Tax Components

Year-over-year nominal percentage change

Personal income tax components	State fiscal year 2019				State fiscal year 2020		
	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1
Withholding	6.2	6.7	1.2	5.2	4.4	4.8	5.8
Estimated payments	18.2	(71.3)	(8.8)	16.3	2.4	9.1	9.7
Final payments	12.8	(1.5)	18.5	39.0	21.2	20.8	(10.3)
Refunds	14.4	16.9	(0.3)	(1.1)	8.2	7.4	9.9
Total	7.8	(10.4)	(0.2)	18.7	3.9	6.1	4.4

Source: Individual state data, analysis by the author.

Notes: 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 seven quarters, illustrating the volatility following enactment of the TCJA. Personal income tax collections declined in the fourth quarter of 2018 and first quarter of 2019 but soared in the second quarter of 2019 because of an increase in extension and final payments. The volatility in personal income tax revenues was mostly observed in estimated payments and final payments, which were shifted between tax years because of the TCJA. Growth in personal income tax collections moderated in the third and fourth quarters of 2019 as well as the first quarter of 2020. However, year-over-year growth in the first quarter of 2020 was weaker than the growth in the fourth quarter of 2019, possibly

because of the early impact of the COVID-19 pandemic. And early data indicate steep declines in personal income tax collections in the second quarter of 2020.

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 is less volatile than estimated payments or final settlements. [Table A3](#) shows year-over-year growth in withholding for the past seven quarters for all states with a broad-based personal income tax.

The annual growth rates in withholding for 2019 were weaker for all quarters than the growth rates for 2018. The same observation holds for the median growth rates in withholding. The strength in withholding in 2018 was partially driven by employers shifting the timing of bonus payments from one quarter to another. Year-over-year growth in withholding was weak in the first quarter of 2019, at 1.2 percent. Growth in withholding regained strength since then ([Table A3](#)) and was particularly strong in the first quarter of 2020, at 5.8 percent.

All regions showed year-over-year growth in withholding in the first quarter of 2020. The Rocky Mountain region had the strongest year-over-year growth rate for the first quarter of 2020 at 10.8 percent, while the Great Lakes region had the weakest year-over-year growth at 4.2 percent.

Year-over-year growth in withholding was widespread across states in the first quarter of 2020. All 41 states with a broad-based personal income tax reported growth in withholding in the first quarter of 2020 compared with a year earlier, with nine states reporting double-digit growth. The strong growth in withholding observed during the first quarter of 2020 was largely before the economic disruptions caused by the COVID-19 pandemic, which triggered mass layoffs and furloughs beginning in the second half of March.

[Figure 4](#) shows monthly and fiscal year-to-date growth rates in withholding between July 2019 and May 2020, which corresponds to the first eleven months of state fiscal year 2020 in 46 states. Withholding was lower in August 2019 than in August 2018 and lower in November 2019 than in November 2018. These declines were likely linked to personal income tax rate cuts in about a dozen states. Further, the lower withholding in November 2019 relative to November 2018 was mostly attributable to a single state, California, where withholding was lower than a year earlier by \$1.7 billion, or 24.9 percent. State officials interpreted November declines as a timing issue, because the large bonus day that usually follows Thanksgiving fell in December rather than November in 2019.⁴ Because of this California's withholding rebounded in December 2019 and increased by \$1.3 billion, or 19.1 percent,

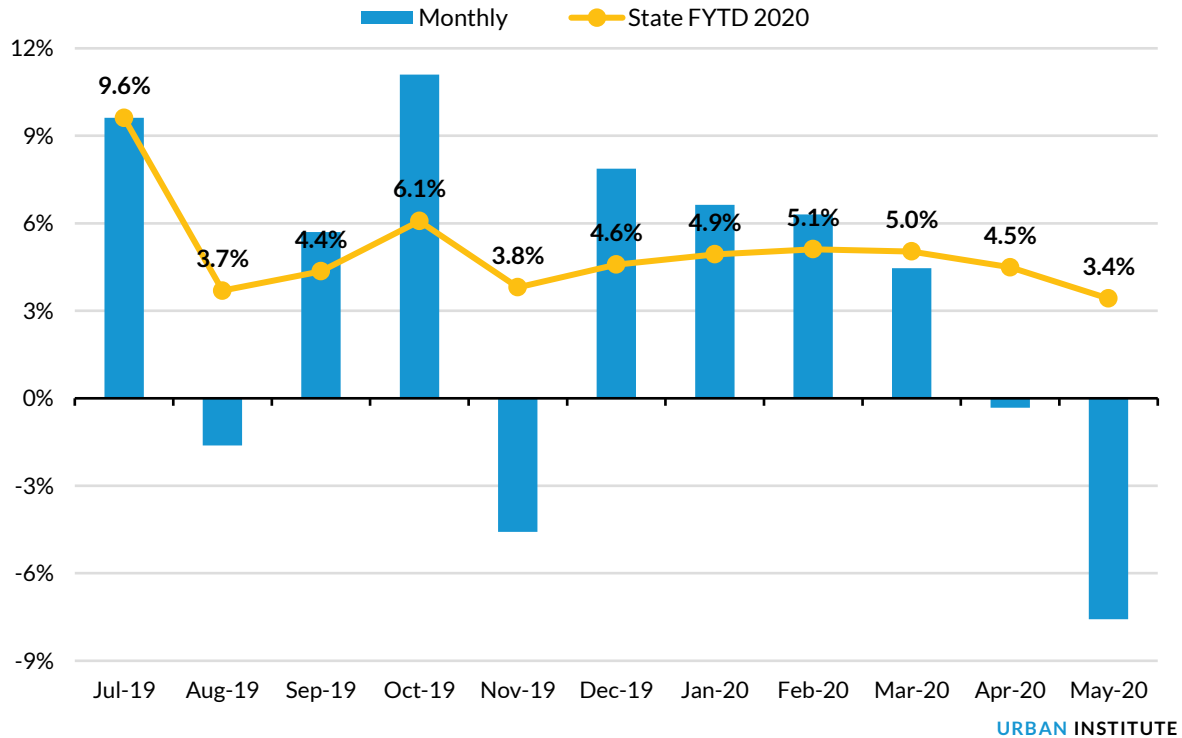
over the December 2018 level. Withholding showed solid growth in January through March before crashing in April and May as the COVID-19 pandemic spread across the nation and left millions of Americans jobless. Yet several states saw some growth in withholding despite job losses. There was one silver lining for withholding: the \$600 weekly federal supplement to unemployment benefits included some withholding for tax payments. There are preliminary indications that withholding for income tax in some states is up due to state income tax being withheld on unemployment benefits. The extra \$600 federal unemployment benefit on top of existing state-level benefits means that some recipients may have more income subject to withholding than they did while in the work force prior to the pandemic. Therefore, the additional \$600 weekly unemployment insurance benefit not only helped many Americans continue to pay for their everyday necessities, it also may have helped the 35 states with a broad-based income tax that tax unemployment compensation partially sustain their withholding revenues. (Among the 41 states with a broad-based income tax, only 6 do not impose tax on unemployment compensation: Alabama, California, Montana, New Jersey, Pennsylvania, and Virginia.)

This issue may be worth watching because the additional \$600 federal unemployment benefit supplement expired at the end of July and has not been extended yet by the Congress. Accordingly, we should expect some drop-off from this source of withholding in the coming months.

FIGURE 4

Withholding Declined in April and May Amid Steep Job Losses

Percentage change in withholding tax collections compared with the previous year, monthly and year-to date for state fiscal year 2020



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

Notes: FYTD = fiscal year to date.

Year-to-date growth in withholding for the first 11 months of fiscal year 2020 was 3.4 percent, which was weaker than the 4.7 percent growth rate observed during the same period in the prior year but stronger than what may have been expected. States collected around \$322 billion in withholding revenues from July 2019 through May 2020. Year-to-date growth in withholding was stronger before the pandemic hit the US, and it would have been stronger absent the income tax rate cuts in several states. The subsequent weakness in withholding in April and May was caused by millions of people losing jobs permanently or temporarily following the spread of COVID-19 across the states.

Estimated Payments

Higher-income taxpayers (and the self-employed) generally make estimated tax payments (also known as declarations) on their income not subject to withholding. This income often comes from investments, such as capital gains realized in the stock market, or from self-employment or business income.

Estimated payments normally represent a small share of overall income tax revenues, but because of

their volatility, they can have a large impact on the direction of overall collections. Estimated payments accounted for about 6.5 percent of total personal income tax revenues in the fourth quarter of 2019 and 24.4 percent in the first quarter of 2020.

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

As noted, because the first estimated payment contains a combination of payments related to the current and prior tax year, it is not a good indication for 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 this 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 personal income tax returns was extended from April 15 to July 15, the federal government extended the filing deadline for estimated tax payments for tax year 2020 that were due on April 15, and states have also delayed their filing deadlines.⁵ But 10 states (Arizona, Arkansas, Hawaii, Illinois, Iowa, Louisiana, Kansas, Minnesota, North Carolina, and Oregon) have not extended the April 15 and June 15 deadlines for the first and second estimated payments attributable to tax year 2020.⁶ (Louisiana and North Carolina have waived interest or penalties for late payments of estimated payments.) To make things even more confusing, some states 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 have filed first estimated payments for tax year 2020 with their 2019 income tax returns, even in the states where first estimated payments for tax year 2020 were due in April. That could be because of confusion caused by differences between federal and state due dates for filing estimated payments for tax year 2020. In addition, estimated payments may have declined for some self-employed individuals if they lost earnings.

As expected, because of delays in filing deadlines, all states but Arizona and Illinois reported double-digit percentage point declines in the first estimated payments for tax year 2020, those that were to be filed in April 2020. Estimated payments due in April declined by 82.3 percent on average compared with the prior year, but the decline in the median state was 72 percent ([Table A4](#)). Arizona and Illinois are among the 10 states that had not extended the deadline for the first quarterly estimated payments for tax year 2020. That is the likely reason that those two states, in contrast with the others, saw growth in estimated payments in April.

Personal income tax filing deadlines have now passed, and states are processing income tax payments received in July, which will help gauge the strength of estimated payments attributable to tax years 2019 and 2020. Furthermore, because of wide fluctuations in the performance of financial markets, possible declines in self-employment income, and other changes in the economy related to the COVID-19 pandemic, estimated payments are likely to be lower in 2020.

The median state's first estimated payments for tax year 2019 (filed in April 2019) were 18.0 percent higher than the median state's first estimated payments filed in April 2018 ([Table A4](#)). Most of the growth in terms of dollar amount was in New York, where first estimated payments were \$2.5 billion, or 57.1 percent larger in April 2019 compared with April 2018. The amount of first estimated payments increased in 33 states, with 25 states reporting double-digit percentage point growth relative to a year earlier. Most of the growth in first estimated payments for New York and elsewhere was likely attributable to tax year 2018 because some taxpayers opted to wait and pay a greater portion of their tax year 2018 liabilities through extensions.

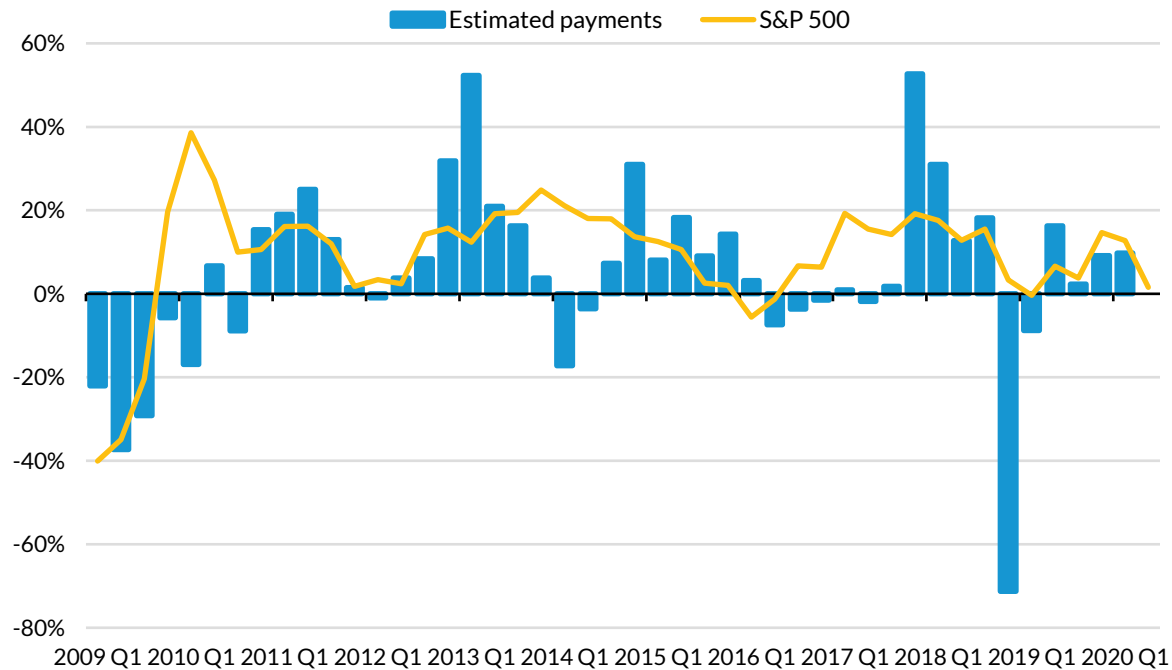
The median state's second and third estimated payments for tax year 2019 (filed in June 2019 and September 2019) were 10.4 and 11.1 percent larger, respectively, compared with the second and third estimated payments filed in June 2018 and September 2018. However, the national average growth for second and third estimated payments was only 1.3 and 0.4 percent, respectively, mostly because of large declines in dollar values in California and Connecticut.

Growth for the median state's fourth estimated payments for tax year 2019 (filed in December 2019/January 2020) was 11.0 percent compared to the prior-year level. Although 11 percent growth seems strong, it is relative to steep declines in estimated payments filed in December 2018 and January 2019 (the last payment for tax year 2018) because of the temporary impact of the TCJA. States collected \$26.1 billion in estimated payments in December 2019 and January 2020, which was weaker than the fourth estimated payments received for tax years 2015, 2016, and 2017.

FIGURE 5

Large Volatility in Estimated Payments

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



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

Figure 5 shows year-over-year percentage change by quarter in estimated payments and in the S&P 500 Index for the past 11 years. The longer-term trends indicate substantial volatility in estimated payments, which is partially caused by volatility in the stock market but is also affected by federal policy changes and taxpayers' subsequent behavioral changes related to tax timing. For example, growth in estimated payments in the final quarter of 2012 and the first quarter of 2013 was much larger than the growth rates in the S&P 500 Index because estimated payments were tied to the impact of the "fiscal cliff" budget deal as Congress raised top federal income tax rates for tax year 2013. Therefore, some high-income taxpayers accelerated income into tax year 2012 to avoid higher tax rates for future years. This led to large declines in the year-to-year comparisons for estimated payments the following year. Similarly, the substantial growth in estimated payments in the final quarter of 2017, as well as in the first quarter of 2018, and the steep declines in estimated payments in the final quarter of 2018 were mostly attributable to the passage of the TCJA. However, the further decline in estimated payments in the first quarter of 2019 was likely also driven by the weak stock market performance in December 2018 and January 2019. In response to declines in realized capital gains, some taxpayers may have reduced their December 2018 and January 2019 estimated payments. After two consecutive quarters of decline, estimated payments

rebounded and grew 16.3 percent in the second quarter of 2019, compared to the year-earlier level; growth in the stock market was weaker, at 6.6 percent year-over-year, for the same period. Estimated payments showed continued year-over-year growth for the third and fourth quarters of 2019, at 2.4 and 9.1 percent, respectively. Year-over-year growth in the stock market was stronger for the same period, at 3.8 and 14.7 percent, respectively, for the third and fourth quarters of 2019. Finally, estimated payments increased 9.7 percent year-over-year for the first quarter of 2020. However, growth in the stock market varied widely within the first quarter of 2020, significantly declining in March because of the pandemic.

In general, estimated payments as a share of overall personal income taxes have grown somewhat over time. In state fiscal year 2018, estimated payments made up 22.2 percent of total personal income tax collections, up from 17.7 percent in fiscal year 2010 and 19.9 percent in fiscal year 2014. However, estimated payments as a share of total personal income tax collections declined in state fiscal year 2019, representing around 19.1 percent of the total, mostly because of the TCJA and subsequent income tax-shifting behavior. The overall growth in estimated payments, as well as 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 return deadline.⁷ Final payments accounted for 26.3 percent of all personal income tax revenues in the second quarter of 2019 but less than 7 percent in the third and fourth quarters of 2019 as well as in the first quarter of 2020. Because this year most states have extended the filing deadline for income tax returns from April 15 to July 15, we expect final payments in the second quarter of 2020 to be much lower with these payments largely shifted into the third quarter of 2020.

[Table A5](#) shows year-over-year growth in final payments for the most recent seven quarters. Final payments declined 1.5 percent on average in the fourth quarter of 2018 compared to the previous year but showed double-digit percentage point year-over-year growth for all four quarters of 2019. Growth in average final payments was robust at 39 percent for the second quarter of 2019 compared with prior-year levels, reflecting changes in taxpayer behavior as some taxpayers filed for extensions and made final payments. Final payments on average declined 10.3 percent compared to the prior year for the first quarter of 2020, but the decline in the median state was only 0.7 percent.

Year-over-year growth rates in final payments varied widely across the states in the fourth quarter of 2019 and first quarter of 2020. (Because final amounts are relatively small as a share of total personal income tax revenues, small dollar changes can cause large variations in percentage changes.) Final payments year-over-year growth rates increased by double digits in 31 states for the fourth quarter of 2019. Connecticut, Missouri, and Virginia were the only states where final payments year-over-year growth rates declined for the fourth quarter of 2019. Declines in Connecticut were mostly because of legislated changes. Connecticut enacted income tax law changes that significantly changed the taxation of income earned by partnerships and S corporations. The most notable change was the creation of a new pass-through entity tax at 6.99 percent and provision of a corresponding individual income tax credit for 93.01 percent of the tax (Connecticut Department of Revenue Services 2018). These changes are estimated to decrease personal income tax revenues but increase corporate income tax revenues.

Declines in final payments were more widespread in the first quarter of 2020, with 21 states reporting declines compared to a year earlier. These declines are largely caused by the COVID-19 pandemic and the resulting shift in due dates for income tax returns and payments to July 15.

Refunds

By definition, personal income tax refunds represent a negative share of personal tax revenues and usually represent 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.

Refunds compared to the prior year declined 0.3 percent for the first quarter of 2019 and 1.1 percent for the second quarter of 2019 but increased 8.2 and 7.4 percent, respectively, for the third and fourth quarters of 2019 compared with a year earlier. Refunds increased further, at 9.9 percent for the first quarter of 2020 compared with the first quarter of 2019. In total, states paid out \$2.7 billion more in tax refunds in the first quarter of 2020 than in the first quarter of 2019. Overall, 33 states paid out more in refunds in the first quarter of 2020 than in the first quarter of 2019. California had the largest share of refund payouts (\$7.3 billion, or 24.2 percent of total refunds) followed by New York (\$2.5 billion, or 8.4 percent of total refunds) in the first quarter of 2020. Oregon had the largest increase in refunds in dollar value (\$574 million) in the first quarter of 2020, which is largely attributable to the state's "kicker" rebate. Oregon's "2 percent kicker" law requires the state to refund surplus revenue to taxpayers when actual general fund revenues exceed the forecast amount by more than 2 percent. Taxpayers in Oregon were expected to receive a credit on the 2019 income tax returns because the state had a \$1.6 billion tax surplus for the 2017–19 biennium.⁸

Actual versus Forecasted Income Tax Revenues

We collect data for states that provide actual and forecasted data on monthly personal income tax revenue. April is typically the most important month in the year with nearly 15 percent of all income tax revenues collected. Although monthly personal income tax forecast information isn't available for all states, it was for 23 states (Table 3). In this section, we present data for April 2020 for these states to give an early look at the most recent personal income tax revenue situation. As expected, this April was drastically different because of extended income tax filing deadlines and the impact of the COVID-19 pandemic.

Actual personal income tax collections in April 2020 were much lower than in April 2019 in 21 of the 23 states for which we have detailed data, with increases occurring only in Maine and New Mexico. Personal income tax collections declined more than 50 percent in April 2020 in 15 states. Although steep declines were largely expected because of the extension in income tax filing deadline, it still created a substantial budgetary gap for state officials in fiscal year 2020.

Actual personal income tax collections in April 2020 were also dramatically lower than forecasts in 18 states and above the forecasts in 5 states, with an average overestimate of 64.5 percent and a median overestimate of 50.5 percent. Most states prepared monthly forecasts well before the pandemic spread to the US, so large overestimations were inevitable. Among 23 states for which we have monthly forecasts, only five states (grey shaded cells in Table 3) had updated their forecasts since the pandemic was widely recognized. But even those states were unable to forecast revenues precisely.

TABLE 3

Actual versus Forecasted State Personal Income Tax Revenues for April 2020

Dollar amounts in millions

	April 2019 actual	April 2020 actual	April 2020 forecast	Percent change, April 2020 vs April 2019	Percentage variance, April 2020 actual from forecast	Forecast date
Median				(56.4)	(50.5)	
Average	\$46,736	\$15,296	\$43,086	(67.3)	(64.5)	
Arkansas	\$464	\$280	\$124	(39.7)	126.2	Mar-20
California	\$19,168	\$5,225	\$18,418	(72.7)	(71.6)	May-19
Colorado	\$1,531	\$667	\$768	(56.4)	(13.2)	May-20
Idaho	\$507	\$166	\$584	(67.4)	(71.6)	Jan-20
Indiana	\$1,233	\$477	\$1,146	(61.3)	(58.4)	Dec-19
Kansas	\$808	\$282	\$281	(65.0)	0.4	Apr-20
Maine	\$302	\$351	\$325	16.1	8.1	Mar-20
Massachusetts	\$3,200	\$1,122	\$3,017	(64.9)	(62.8)	Jan-20
Minnesota	\$2,456	\$980	\$978	(60.1)	0.2	May-20
Mississippi	\$305	\$163	\$289	(46.5)	(43.5)	Nov-19
Montana	\$264	\$104	\$248	(60.7)	(58.1)	Jun-19

Nebraska	\$359	\$105	\$367	(70.6)	(71.3)	Jul-19
New Mexico	\$133	\$139	\$135	4.0	2.4	Aug-19
New York	\$9,215	\$2,066	\$9,614	(77.6)	(78.5)	Jan-19
North Dakota	\$122	\$81	\$112	(34.0)	(28.3)	Mar-19
Ohio	\$1,330	\$622	\$1,258	(53.2)	(50.5)	Mar-19
Oklahoma	\$437	\$224	\$532	(48.8)	(57.9)	Feb-20
Pennsylvania	\$2,520	\$1,111	\$2,635	(55.9)	(57.8)	Nov-19
Rhode Island	\$229	\$77	\$232	(66.4)	(66.9)	Nov-19
South Carolina	\$397	\$239	\$422	(39.9)	(43.5)	Feb-20
Vermont	\$199	\$63	\$184	(68.2)	(65.7)	Jan-20
West Virginia	\$333	\$207	\$339	(37.9)	(39.1)	Jan-20
Wisconsin	\$1,222	\$545	\$1,077	(55.4)	(49.4)	May-19

Source: Individual state data, analysis by the author.

Notes: Grey shaded cells indicate forecasts were prepared after COVID-19 spread across the US.

In the prior two years, state revenue forecasters faced many uncertainties related to the passage of the TCJA and warned that forecasts were subject to higher-than-usual margins of error because forecasting taxpayers' behavioral responses to the federal tax policy changes would be difficult. State revenue forecasters are now facing even larger challenges in forecasting because of uncertainties about the length and severity of the pandemic and associated economic damage (Dadayan 2020b).

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 4.8 percent in nominal terms and 3.1 percent in real terms since 2010 (Table A1).

State corporate income tax revenue saw steep declines during the Great Recession and only recently approached or surpassed levels observed before the Great Recession, driven by strong growth in reported profits following enactment of the TCJA. This growth had been weakening and is almost surely going to fall as a result of the COVID-19 pandemic. 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 tax rates.

With the introduction of the new rules related to the NOL carryback provisions under the CARES Act, some states may see revisions in prior year state corporate income tax returns. More than half of the states (including states with large share of corporate income tax revenues, such as California, Illinois, New Jersey, and New York) have decoupled from the federal NOL carryback provisions. States that conform with the federal NOL carryback provisions may have state-specific restrictions on either the timing or the amount of the allowable carrybacks.

To mitigate the impact of the pandemic, the Internal Revenue Service extended the filing deadline for corporations from March 15, 2020 to July 15, 2020.⁹ Many states followed and extended corporate income tax return and payment due dates as well. Therefore, we expect substantial weakness or even declines in state corporate income tax revenues in the second quarter of 2020.

State corporate income tax revenues decreased 1.2 percent in nominal terms and 2.9 percent in inflation-adjusted terms for the first quarter of 2020 compared with a year earlier. Large disparities exist among states and regions ([Table A2](#)). Corporate income tax collections increased in the Southwest, Southeast, and Mideast regions, were largely unchanged in the Rocky Mountain region, and declined in the other regions. The Southwest region saw the largest year-over-year growth in corporate income tax revenues, at 50.4 percent, while the Great Lakes region saw the largest declines at 22.4 percent.

Overall, corporate income tax collections declined in 17 states but increased in 23 states for the first quarter of 2020 compared with the prior year, with 21 states reporting double-digit percentage point year-over-year growth.

The volatility in state corporate income tax collections is related to the TCJA, which included the most significant structural changes to the federal corporate income tax since 1986. (See prior [State Tax and Economic Review](#) reports for detailed discussions of the new provisions under the TCJA and its impact on state corporate income taxes.)

Many corporate taxpayers continue to assess the rules under the TCJA, making it hard to precisely evaluate taxpayer behavior. Therefore, state revenue forecasters may not fully understand how businesses are responding to the TCJA for a long time. Moreover, state revenue forecasters are now facing extraordinary challenges trying to evaluate the impact of the COVID-19 pandemic on state corporate income tax revenues.

Before the pandemic greatly affected the US economy, states were already forecasting lower corporate income tax collections for the rest of fiscal year 2020 and forthcoming fiscal year 2021, 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 weakness in business investment even before the pandemic,¹⁰ which would imply lower corporate income tax revenue collections. Now state corporate income tax revenues will likely see declines in the coming months because of the health crisis. Corporate income tax revenues have significant exposure to industries such as hospitality, travel, and oil and gas, all of which are significantly affected by the pandemic.

General Sales Taxes

General state sales tax collections grew 4.0 percent in nominal terms and 2.3 percent in real terms for the first quarter of 2020 compared with the same period in 2019 (Table A1). Sales tax collections have grown continuously since the first quarter of 2010 in nominal terms, and growth generally has been steady if unspectacular.

Year-over-year sales tax collections increased in all regions but the Far West for the first quarter of 2020 (Table A2). The New England region reported the strongest growth at 8.1 percent; the Far West reported declines of 0.5 percent. Sales tax declines in the Far West were caused by the declines in California. If we exclude California, sales tax collections for the rest of the Far West region showed growth of 4.7 percent.

All states except California, Louisiana, Oklahoma, and Wyoming reported increases in sales tax collections for the first quarter of 2020 compared with the prior year level. Twenty-nine states reported growth of over 5 percent.

The recovery in sales tax collections was slow following the Great Recession. Since 2010, the average quarterly year-over-year growth rate in state sales tax collections was 4.1 percent in nominal terms and 2.4 percent in real terms. The weak annual growth rates in sales tax collections was partially attributable to tax dollars lost by online retail sellers not collecting 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 *Wayfair* decision.

On June 21, 2018, the US Supreme Court ruled in favor of South Dakota in *South Dakota v. Wayfair*,¹¹ which ultimately gives 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. Since the Supreme Court's *Wayfair* ruling, 43 of 45 states with general sales taxes have enacted laws or regulations to require sales tax collections by remote sellers. The remaining two states,

Florida and Missouri, have bills under consideration that are likely to be enacted into law in the coming months. States have set different sales and volume thresholds for internet sales taxation ([Table A6](#)). Finally, 41 states have also enacted laws or regulations requiring marketplace facilitators to collect sales taxes on behalf of their sellers.

Implementing online sales taxation by states does not address if and how local jurisdictions that operate independently and have independent taxing authority will be able to collect sales taxes from remote sellers. However, some states (e.g., Alabama and Texas) have either passed or are debating regulations for creating a “single local use tax rate” that remote sellers can use to calculate the local tax due instead of applying local sales tax rates for the specific jurisdiction in which a sale is made.

Before the COVID-19 pandemic acutely hit the US, we had projected that growth in sales tax revenues would level off. The pandemic will have a detrimental impact on state sales tax revenue collections. Federally mandated travel restrictions and state- or region-mandated restrictions on a wide range of businesses and services means less business activity, less consumer spending, and therefore less sales tax revenue collections for states, particularly for the month of April and beyond. This also led to a spike in overall personal savings as many people stayed home and therefore reduced their spending. Further, because of mass layoffs and furloughs, many people likely tried to spend less and save more to weather the situation. The savings rate jumped from 9.5 percent in the first quarter of 2020 to 25.7 percent in the second quarter of 2020, the highest rate on record since 1948. However, this may be a temporary boost as individuals better understand the likelihood of job loss or reduced work hours. The higher savings rate, although beneficial for many individuals, means lower current demand. This is an indication of the depressed state sales tax revenue outlook during the pandemic. Our previous analysis of preliminary data indicated that sales tax revenues shrank by over \$6 billion in the month of May alone (Dadayan 2020c).

Motor Fuel Taxes

State motor fuel sales taxes grew 5.2 percent year-over-year for the first quarter of 2020, which is substantially stronger than the growth rates observed during the first half of 2019 ([Table A1](#)).

Motor fuel sales tax collections have fluctuated since the Great Recession. Average quarterly year-over-year growth in state motor fuel tax collections was 4.1 percent in nominal terms and 2.4 percent in real terms since 2010. Economic growth, changing fuel prices, general increases in fuel efficiency, and

changing driving habits all affect gasoline consumption and motor fuel taxes. Changes in state motor fuel tax rates also affect tax collections.

Growth rates from the first quarter of 2019 to the first quarter of 2020 varied widely across the states and the regions ([Table A2](#)). Motor fuel tax revenue collections increased in all regions but the Mideast, where revenues declined 0.3 percent. The largest growth was in the Great Lakes and Plains regions, at 22.3 and 6.0 percent, respectively. The strong growth in the Great Lakes region is mostly attributable to Illinois and Ohio; both states have raised their motor fuel tax rates. Illinois doubled its motor fuel tax rate from 19 cents a gallon to 38 cents a gallon, effective July 1, 2019.¹² Ohio increased its gasoline tax rate from 28 cents a gallon to 38.5 cents a gallon and increased the diesel and all other fuel tax rate from 28 cents a gallon to 47 cents a gallon.¹³

Fifteen states reported year-over-year declines in motor fuel sales tax collections for the first quarter of 2020; eight states reported double-digit growth. We expect to see steep declines in many state motor fuel tax revenue collections in the second quarter of 2020 because of stay-at-home orders across states earlier in spring and because many employees continue to work remotely, which has drastically reduced traffic.

Other Taxes

The US Census Bureau's quarterly data on state tax collections provide detailed information for some of the smaller revenue sources, including state property taxes, tobacco products 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 first quarter of 2020, states collected \$59.1 billion from all the smaller tax sources, which constituted 22 percent of total state tax collections.

Compared with major tax sources, revenues from smaller 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 2.0 percent in real terms since 2010.

Year-over-year growth for the four-quarter moving average in inflation-adjusted revenues from smaller tax sources was 1.3 percent in the first quarter of 2020. State property taxes, which represent a small portion of overall state tax revenues, increased 1.1 percent. Tax revenues from motor vehicle and operators' licenses increased 2.4 percent, and tax revenue from alcoholic beverage sales increased 2.2 percent. Revenue from tobacco product sales decreased 3.1 percent, marking the sixth consecutive

quarter of decline. Finally, revenues from all other smaller tax sources increased 1.6 percent in the first quarter of 2020 compared with levels a year earlier.

Overview of Tax Revenues in Fiscal Year-To-Date 2020

Through the first three quarters of state fiscal year 2020, states collected \$780.6 billion in total tax revenues, a gain of 5.6 percent from \$739.4 billion in the same period of state fiscal year 2019 ([Table A8](#)). All regions had growth in overall state tax collections in the first three quarters of fiscal year 2020. The Far West region had the strongest year-over-year growth at 7.2 percent, while the New England region had the weakest growth at 3.3 percent. Forty-five states reported year-over-year growth in overall state tax revenues for the first three quarters of fiscal year 2020, with 22 states reporting growth of over 5 percent. The strongest growth was reported in Nebraska and Idaho at 11.4 and 10.4 percent, respectively. Overall state tax revenues declined in Alaska, Michigan, New Hampshire, New Mexico, and West Virginia in the first three quarters of state fiscal year 2020 compared with the same period a year earlier. (Michigan's state fiscal year runs from October 1 to September 30. Therefore, the figures reflect the first two quarters for Michigan's fiscal year 2020.) All these states, except for Michigan and New Hampshire, have a high reliance on the oil and gas industry and thus on severance tax revenues (Dadayan and Boyd 2016). Severance tax revenues saw substantial declines in these states, as well as in other states that have reliance on oil and gas industry, because of declines in oil and natural gas prices; this subsequently led to declines or weaknesses in overall state tax revenues.

All major sources of state tax revenues had solid growth in the first three quarters of fiscal year 2020 compared with the same period a year earlier. Personal income tax revenues totaled \$297.7 billion, which was \$17.8 billion or 6.3 percent higher in the first three quarters of fiscal year 2020. Growth in the median state was 5.3 percent. Although some states faced lingering effects of income tax shifting caused by the TCJA, this generally occurred to a smaller extent than in the prior year, and personal income tax revenues fared well in most states over this period.

Corporate income tax revenues totaled \$36.9 billion, which was \$3.2 billion or 9.6 percent higher year-over-year for the first three quarters of fiscal 2020. Growth in the median state was stronger, at 11.7 percent. Overall, 32 states reported growth while 13 states reported declines in corporate income tax revenue collections for the first three quarters of fiscal year 2020 compared to year-earlier levels.

Sales tax revenues totaled \$245.3 billion, which was \$13.2 billion or 5.7 percent higher for the first three quarters of fiscal year 2020 than for same period a year earlier. Growth in the median state was

5.3 percent. All states but Louisiana and Oklahoma reported year-over-year growth in sales tax revenue for the first three quarters of fiscal year 2020.

Finally, motor fuel tax revenues totaled \$39.5 billion, which was \$2.4 billion or 6.5 percent higher for the first three quarters of fiscal year 2020 than for the same period in 2019. Growth in the median state was substantially weaker, at 2.1 percent. Forty states reported growth in motor fuel tax revenue collections; 10 states reported declines.

Unfortunately, the relatively strong revenue position of the states during the first three quarters of fiscal year 2020 abruptly reversed because of the impact of the COVID-19 pandemic.

Preliminary Review of State Revenue in 2020 Quarter 2

Preliminary data collected from 43 states for the April–June quarter of 2020 ([Table A9](#)) show widespread and steep declines in overall state tax collections as well as in personal income, corporate income, and sales tax collections compared with the second quarter of 2019.

Overall state tax collections declined 30.8 percent in the second quarter of 2020 compared with the same quarter in 2019. Thirty-six states reported double-digit declines. Quarterly declines of such magnitude and abruptness are unprecedented for a single quarter and reflect the economic disruptions caused by the COVID-19 pandemic. Government measures taken to mitigate the impact of the COVID-19 pandemic, such as statewide or regional stay-at-home mandates or income and sales tax filing and payment deadline extensions were necessary, but also contributed to the freefall of state tax revenues.

Personal income tax collections declined 40.4 percent in the second quarter of 2020 compared with a year earlier. All early reporting states except Idaho and Maine reported double-digit declines. These steep declines are partially due to the deferral of income tax filing and payment requirements, but also because of mass layoffs and furloughs.

State sales tax collections declined 14.5 percent for the second quarter of 2020 compared with the same quarter in 2019; decline in the median state was 8.5 percent. Thirty-four states reported declines in sales tax collections, with 14 states reporting double-digit declines. Among states that already released data for the second quarter of 2020, only five states (Arkansas, Idaho, Nebraska, South Dakota, and Utah) reported growth in sales tax collections in the second quarter of 2020, and all these except Nebraska impose sales tax on grocery food.

Finally, corporate income tax revenues declined 50.8 percent year-over-year for the second quarter of 2020. Declines were widespread across the states, again reflecting delayed filing and

payment requirements as well as declines in economic activity. All 39 early reporting states saw double-digit declines in corporate income tax collections, with 16 states reporting declines of over 50 percent in the second quarter of 2020 compared with the same quarter in 2019.

The abrupt decline in state tax revenues in the second quarter of 2020 is a harbinger of continued weakness in state revenues. Going forward, all state revenue sources will continue to fall, virtually all states will face revenue shortfalls. As a result, states are revising down their revenue forecasts. In 27 states with revised forecasts, officials estimate \$115 billion in revenue shortfalls for fiscal years 2020 and 2021 combined. If these forecasted declines are representative of all states, we estimate a total \$200 billion tax revenue shortfall in fiscal years 2020 and 2021 compared with tax revenue forecasts before the pandemic (Dadayan 2020a).

Factors Driving State Tax Revenues

State revenues vary across place and time because of three underlying forces: state-level changes in the economy (which often differ from national trends), 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.

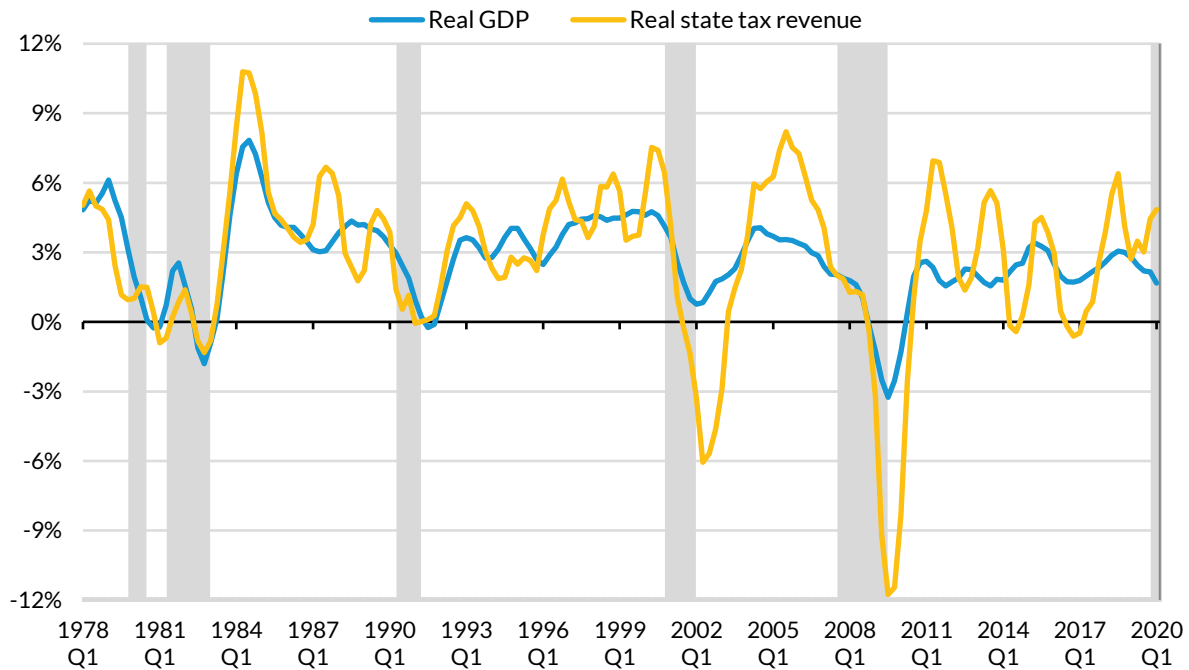
Economic Indicators

Most state tax revenue sources are heavily influenced by the economy. In general, state taxes 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 it declines, they tend to decline, though these changes have different patterns and timing. [Figure 6](#) shows year-over-year growth for four-quarter moving averages in real state tax revenue and GDP. We present moving averages to smooth short-term fluctuations and illustrate the interplay between the economy and state revenues. As shown in [Figure 6](#), real GDP showed uninterrupted growth since the second quarter of 2010. Real GDP growth weakened throughout 2019 and the first quarter of 2020. Moreover, Bureau of Economic Analysis already released the advanced estimate for GDP in the second of 2020, which showed an unprecedented 9.5 percent decline compared with a year earlier.¹⁴ The sharp decline in GDP is because of the global pandemic. Year-over-year growth in real state tax revenues was stronger in the first quarter of 2020 than in the prior five quarters, in part reflecting a lag between changing economic conditions and revenues.

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 very progressive and very dependent on volatile income sources such as stock options and capital gains.

FIGURE 6**State Tax Revenue Is More Volatile Than the Economy***Year-over-year change in real state taxes and real GDP*

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

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

States vary substantially in terms of the correlation between growth rates in real state tax revenues and state GDP. [Figure 7](#) shows growth for each state for four-quarter moving averages in real state tax revenue and in real state GDP in the first quarter of 2020 compared with the same quarter in 2019. By this measure, real state tax revenues increased in 45 states, and real state GDP increased in all states. (Alaska is an outlier state and is excluded from [Figure 7](#) to better display the overall relationship.) The year-over-year change in real state tax revenues ranged from negative 25.5 percent in Alaska to 10.9 percent in Nebraska; the change in real state GDP ranged from 0.1 percent in West Virginia to 3.8 percent in Texas. For the first quarter of 2020, year-over-year growth in real state tax revenues was lower than the national average of 4.9 percent in 27 states, and year-over-year growth in real state GDP was lower than the national average of 1.7 percent in 31 states.

FIGURE 7

Growth Disparity: State Tax Revenues versus State GDP

Year-over-year change in real state taxes and real GDP, 2020 quarter 1 versus 2019 quarter 1



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

Notes: Year-over-year change is the percentage change of four-quarter moving averages. Data are adjusted for inflation. Red lines are for US averages. Alaska is excluded from the figure.

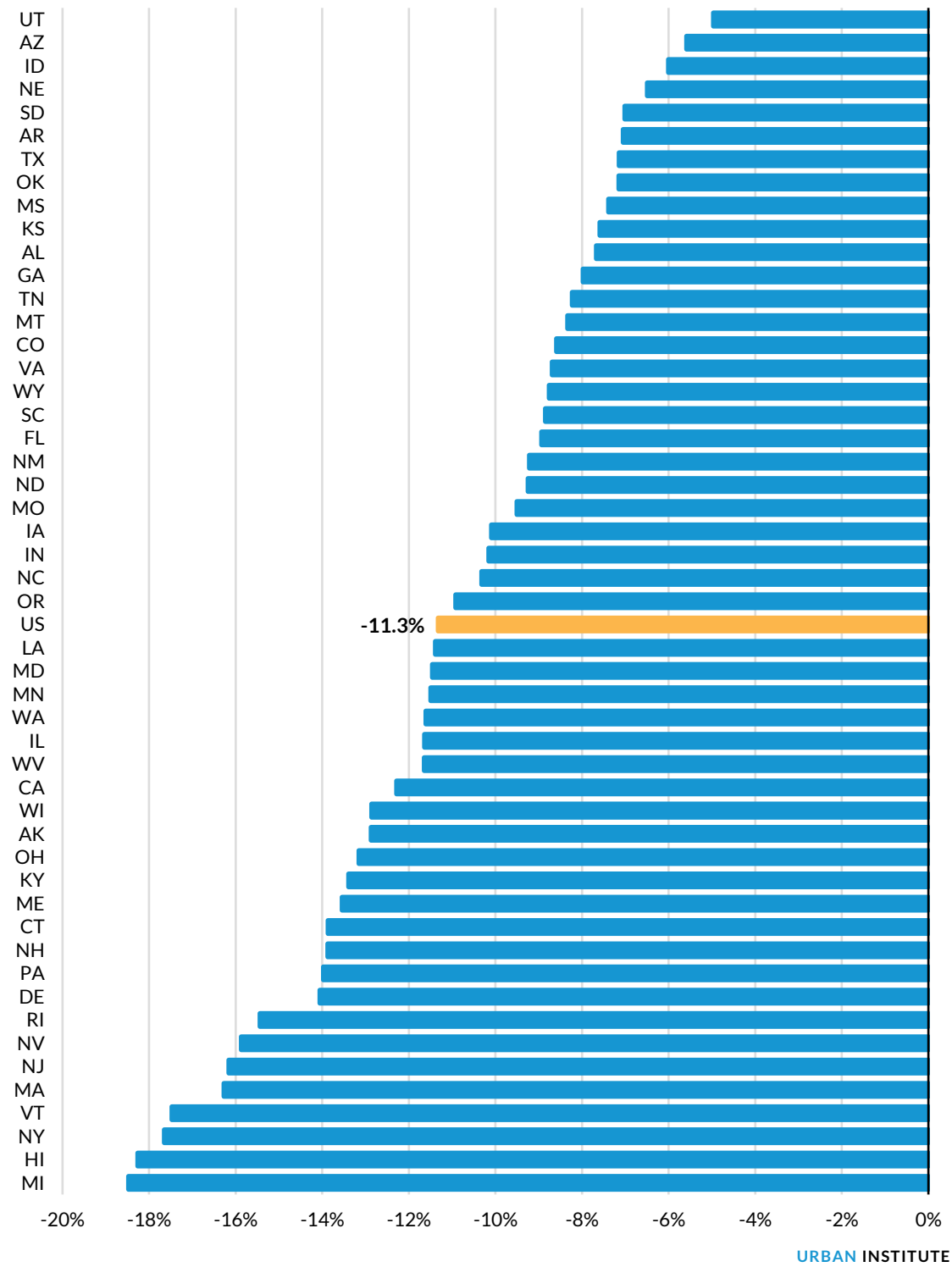
State Unemployment and Employment

The national unemployment rate climbed to 9.9 percent in the fourth quarter of 2009, which was the highest rate observed since 1982. Until very recently, the unemployment rate has seen nearly uninterrupted decline from that peak. The unemployment rate was 3.5 percent in the fourth quarter of 2019, which was a 50-year low.¹⁵ The unemployment rate increased to 3.8 percent in the first quarter of 2020. Shortly after the COVID-19 pandemic had spread to the US, economists surveyed by the *Wall Street Journal* forecasted double-digit unemployment rates.¹⁶ Those forecasts turned out to be accurate as preliminary figures from the US Bureau of Labor Statistics indicate that the national unemployment rate jumped to 13 percent in the second quarter of 2020, marking the highest level on record since 1948. Unemployment rates ranged from 6.9 percent in Nebraska to 23.5 percent in Nevada in the second quarter of 2020.

FIGURE 8

Steep Declines in Employment in the Second Quarter of 2020, by State

Year-over-year change in seasonally-adjusted employment, 2020 quarter 2 versus 2019 quarter 2



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

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Since mid-March, when the novel coronavirus began to spread more quickly across the US and with the resultant state-mandated restrictions, total weekly unemployment insurance claims have exceeded 50 million, surpassing levels seen during the Great Recession and prior three recessions (Dadayan and Charleston 2020).

Nationwide employment declined 11.3 percent in the second quarter of 2020 compared with the same quarter in 2019 (Figure 8). Employment declines were particularly steep in states with high reliance on hospitality and tourism industries such as Hawaii and Nevada as well as in states that experienced high numbers of COVID-19 cases in the early days of the pandemic, such as Michigan and New York. Employment declines year-over-year ranged from 5.0 percent in Utah to 18.5 percent in Michigan for the second quarter of 2020. Overall COVID-19 cases continue to spread across the nation, and the states that were hardest hit more recently, such as Florida and Texas, will likely see further declines in employment in the coming months.

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 sales taxes. Figure 9 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 state real sales tax collections. We also show trends in the consumption of energy goods and services.

Year-over-year spending on durable goods and services weakened considerably in the first quarter of 2020, while year-over-year spending on nondurable goods increased in the first quarter of 2020 compared with the year-over-year growth rates observed for the fourth quarter of 2019. 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 their prerecession peaks, although growth in sales tax revenues improved after the *Wayfair* decision as states started requiring remote sellers to collect and remit sales and use tax.

American consumers spend substantially more on services (70 percent) than on goods, and spending on services as a share of total personal consumption has grown steadily throughout the past four decades. Although some states have expanded their sales tax bases to include some services, many services are still not subject to sales tax. And some states, such as Arizona and Missouri, have banned taxing services.

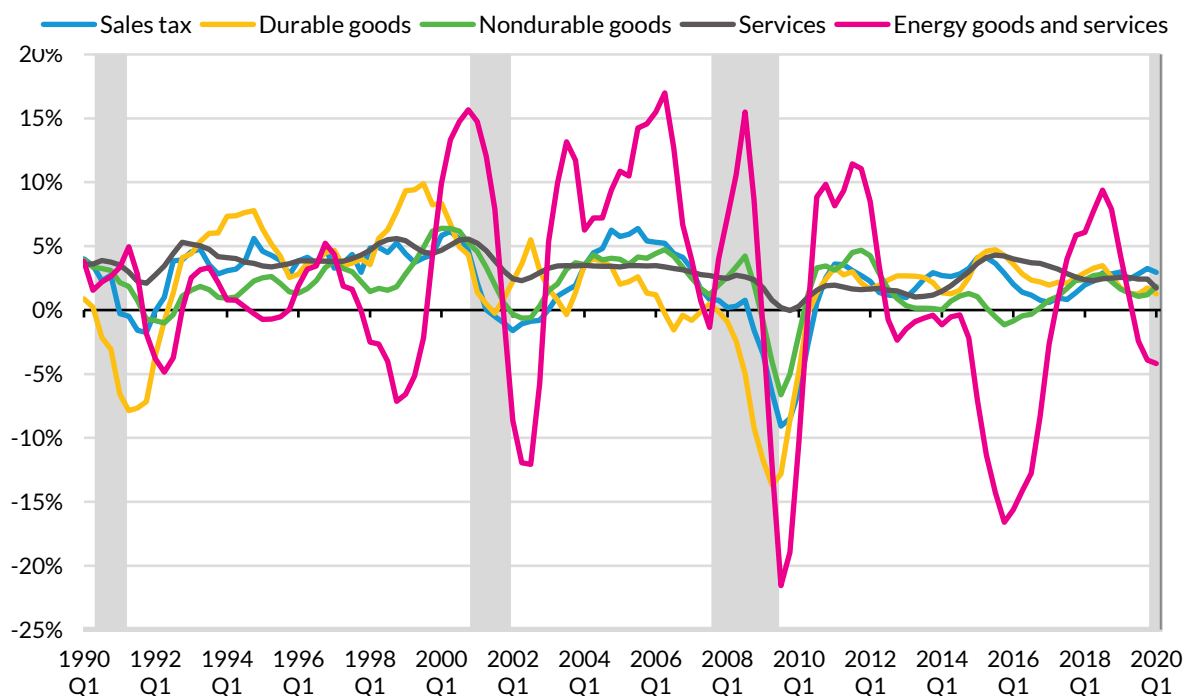
Growth in the consumption of durable goods, an important element of state sales tax bases, has been relatively volatile in recent years. Annual growth in durable goods spending was 3.1 percent in 2018 but dropped to 1.5 percent in 2019. Growth in durable goods spending weakened further and was only 1.3 percent in the first quarter of 2020 (as measured by the year-over-year percentage change in the four-quarter moving average of inflation-adjusted spending on goods).

Nondurable consumption spending declined between the third quarter of 2015 and third quarter of 2016 but has rebounded since then. Nondurable goods were largely affected by the declines in the consumption of gasoline and other energy goods, the latter of which represents over 20 percent of nondurable goods consumption. Growth in nondurable goods also weakened substantially in 2019 and the year-over-year growth rate for 2019 was 1.3 percent, which was substantially weaker than the 2.5 percent year-over-year growth for 2018. However, growth in nondurable goods was stronger, at 1.8 percent, in the first quarter of 2020, largely because of grocery sales increases as consumers bought more groceries both to eat more at home and to stock up out of fear of pandemic-related shortages.

FIGURE 9

Substantial Declines in Energy Goods and Services

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



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

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

As shown in [Figure 9](#), year-over-year spending on energy goods and services declined for 19 consecutive quarters, between the third quarter of 2012 and the first quarter of 2017. The decline was particularly dramatic throughout 2015 and 2016 in response to steep declines in oil and gas prices. The decline in total spending in the energy sector led to declines in overall general sales tax revenues, which are based on prices as well as quantity consumed. Overall consumption of energy goods and services had been recovering since the second quarter of 2017 and showed strong year-over-year growth through the first quarter of 2019, largely bouncing back from previously depressed levels. However, year-over-year growth in consumption of energy goods and services weakened substantially for the second quarter of 2019 and showed declines in the second half of 2019 and the first quarter of 2020. Because oil prices declined precipitously in April and because many people are commuting less and working remotely from home, spending on energy goods and services will continue to decline in the year ahead. Preliminary figures from US Bureau of Economic Analysis already indicate steep declines in spending on energy goods and services for the second quarter of 2020.

Housing Market

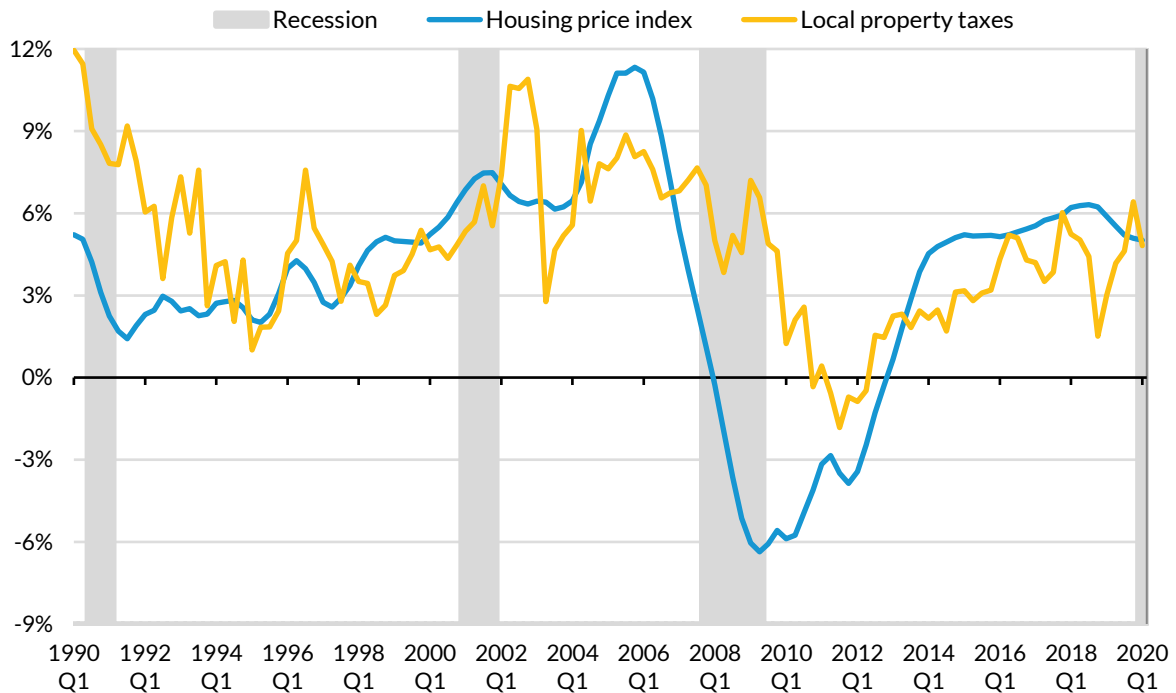
House prices are an important determinant of local property taxes, though property tax changes often lag property price changes. Assessment lags and assessment caps can affect how quickly house price changes translate into property tax revenue changes, but declines in house prices usually lead to declines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

[Figure 10](#) 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 2012.¹⁷ Growth in the house price index began weakening in mid-2005, and the price index actually declined for five straight years, between the first quarter of 2008 and the fourth quarter of 2012, though patterns varied across states and regions. The trend in the house price index has been generally upward between 2013 and 2018 but showed some weakness following the first quarter of 2019. National average house prices appreciated 5.0 percent for the first quarter of 2020 compared to one year earlier, while local property taxes grew 4.8 percent for the same period.

FIGURE 10

Slowing Growth in Housing Prices and in Local Property Taxes

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



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

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

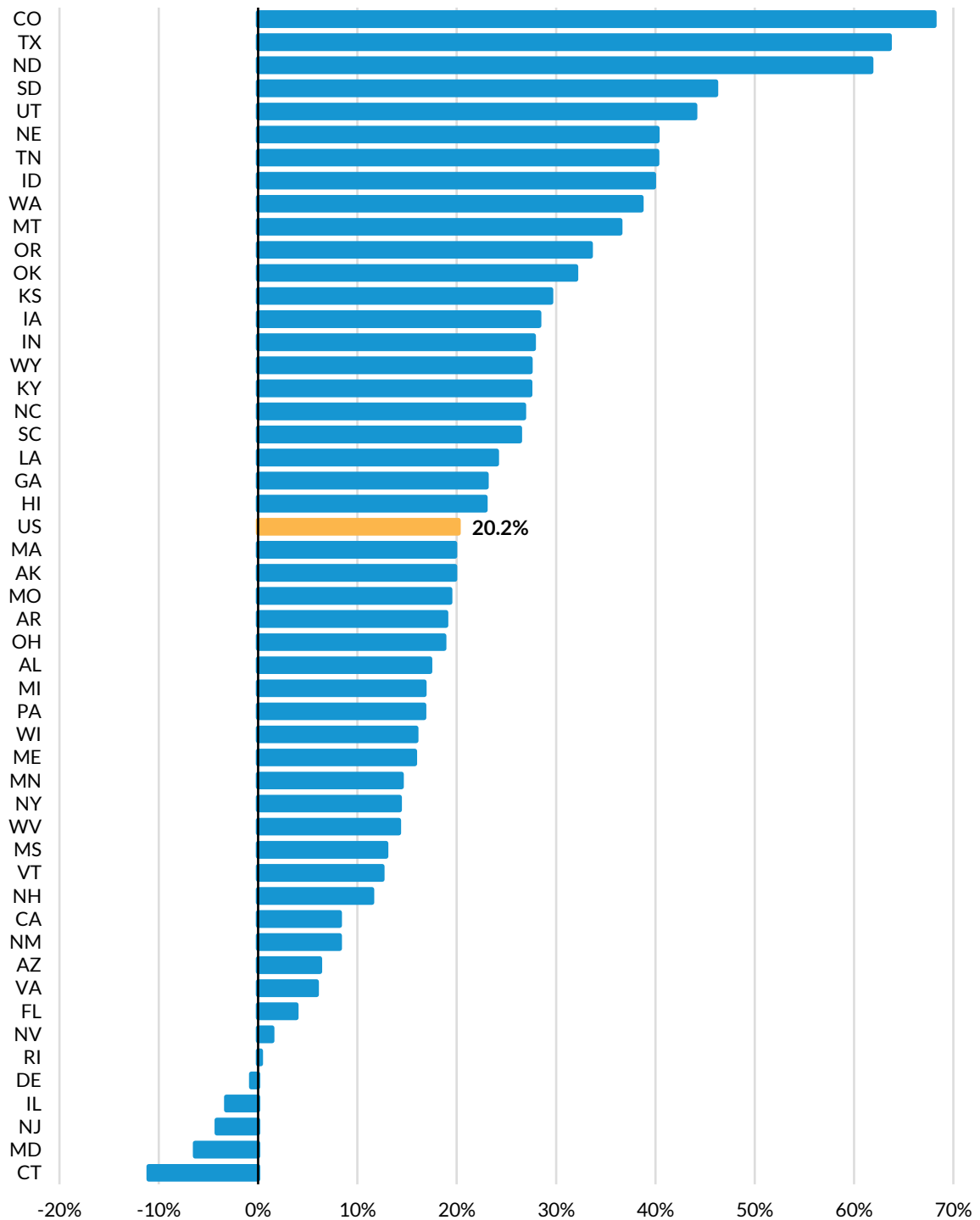
Statewide house price indexes increased in all states for the first quarter of 2020 compared with a year earlier, ranging from a 2.6 percent increase in Hawaii to a 10.6 percent increase in Idaho. Year-over-year growth was 5.0 percent for the nation. Despite continuous and strong nationwide growth in the housing market, prices are still below their prerecession peaks in some states. [Figure 11](#) shows the state-by-state nominal percentage change in house price indexes at the end of the first quarter of 2020 compared with the first quarter of 2007.

National average house prices grew 20.2 percent in nominal terms between the first quarter of 2007 and the first quarter of 2020. However, house price movements varied substantially across the states. House prices are above their prerecession peaks in 45 states in the first quarter of 2020 but are still lower in 5 states (in nominal terms). Housing prices in Connecticut were the hardest hit and are still on average 11.0 percent below their peak. On the other hand, statewide house price indexes increased by double digits in 38 states over this period. In 22 states, growth in statewide average house prices was over 20 percent, with Colorado, Texas, and North Dakota having the highest growth rates at 68.1, 63.6, and 61.7 percent, respectively.

FIGURE 11

Growth in House Price Indexes Since the Prerecession Peak

Percent change in house prices from pre-recession peak level, 2020 quarter 1 versus 2007 quarter 1



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Source: Federal Housing Finance Agency (house price indexes), analysis by the author.

Many states have raised concerns about tight housing supply and rising demand. In 2007, before the fall in house prices, the interest rates on 30-year fixed-rate mortgages averaged around 6.3 percent. Mortgage rates have declined substantially since then, and interest rates on 30-year fixed-rate mortgages are currently averaging around 2.9 percent.¹⁸ The low mortgage interest rates, widely available financing options, and stronger labor-market forces have raised the demand for housing, which pushed house prices higher. The growth in house prices poses a risk to affordability unless housing quantities increase. However, housing prices and the demand for home sales may drop in the coming months because of the economic impact of the COVID-19 pandemic. The Fannie Mae Home Purchase Sentiment Index shows declines in consumer confidence in the housing market, largely because of concerns related to the job market and housing prices.¹⁹

The Federal Reserve cut short-term interest rates in July 2019, which was the first cut in more than a decade. Between then and when the COVID-19 pandemic hit the US, the Federal Reserve cut rates twice more. Cutting interest rates at a time when the economy was expanding was unusual and was thought to be related to trade tensions with allies and increasing global economic uncertainty. In response to the negative economic impact of the pandemic, the Federal Reserve cut interest rates twice more, on March 3, 2020, and March 16, 2020. These were the largest one-time cuts since 2008. Because interest rates are now very low, there is virtually no room for further interest rate cuts to stimulate the economy.

Tax Law Changes Affecting the First Quarter of 2020

Anticipated and actual federal policy changes had a substantial impact on state tax revenues in the last few years. But changes in state tax laws also affect state tax revenue trends. Many states enacted tax changes for fiscal year 2020, partly responding to federal policy changes and partly reflecting policy preferences and strong balance sheets at the time. Most states also enacted tax changes in response to the Supreme Court's *Wayfair* decision to collect taxes on online sales. We present analysis here based on the data and information retrieved from the National Association of State Budget Officers' Fall 2019 Fiscal Survey of the States. However, the analysis is 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, it is likely that actual revenues raised will differ from expected tax revenues reported. Many states also revised enacted budgets to undo some of these changes.

During the first quarter of 2020, enacted tax increases and decreases produced an estimated gain of \$2.1 billion compared with the same period in 2019.²⁰ Overall, tax changes were expected to decrease personal income taxes by \$191 million, increase corporate income taxes by \$500 million, increase sales taxes by \$478 million, and increase motor fuel taxes by \$241 million in the first quarter of 2020 compared with a year earlier. Further, states enacted tax changes in other taxes and fees, which were expected to increase state tax and fee revenues by approximately \$1 billion (National Association of State Budget Officers 2019). Below, we discuss some of the major enacted tax changes for fiscal year 2020.

The estimated impact of enacted tax changes was a projected net increase of \$8.1 billion in state revenues in fiscal year 2020. By comparison, legislated tax actions in fiscal year 2019 were less substantial, with an estimated net revenue increase of \$3.3 billion. California and New York enacted the most substantial changes, with estimated net revenue increases of \$1.8 billion and \$1.0 billion, respectively, for fiscal year 2020. Legislated changes were also substantial in Connecticut and Illinois, with an estimated net revenue increase of over \$900 million in each.

Four states enacted personal income tax increases, while 13 states enacted decreases for fiscal year 2020. Legislated tax changes were estimated to increase aggregate personal income tax revenues by \$310 million in fiscal year 2020. The largest estimated increase was in California, where conformity to federal tax rules contained in the TCJA income tax overhaul and expansion of earned income tax credits were estimated to lead to a \$0.7 billion increase in personal income tax collections in fiscal year 2020.²¹ In New York, Governor Cuomo extended the “temporary” millionaire tax through 2024 (Office of New York Governor Andrew M. Cuomo 2019). The millionaire tax was first enacted in 2009, in response to the Great Recession. However, New York also lowered income tax rates for middle-class taxpayers. The net impact of these changes was estimated to lead to a \$0.6 billion increase in personal income tax collections in fiscal year 2020. Officials in Ohio enacted a 4 percent across-the-board personal income tax cut (among other changes), which was expected to reduce personal income tax collections by \$364 million in fiscal year 2020 (Ohio Legislative Service Commission 2019). Officials in Oregon slightly reduced personal income tax rates, which was estimated to reduce personal income tax revenues by \$175 million in fiscal year 2020 (Oregon Legislative Revenue Office 2019). Lawmakers in Wisconsin also reduced personal income tax rates by cutting the rates for the two lowest income tax brackets from 4.00 percent to 3.86 percent and from 5.21 percent to 5.04 percent.²² These tax rate reductions were estimated to decrease personal income tax collections by \$167 million in fiscal year 2020. Finally, lawmakers in Minnesota enacted several changes to its personal income tax system, including conforming to the federal tax overhaul embodied in the TCJA and a reduction in the personal income tax rate for the second-tier tax bracket (Minnesota Department of Fiscal Analysis 2019). These

changes were estimated to reduce Minnesota's personal income tax collections by \$171 million in fiscal year 2020.

Seven states enacted corporate income tax increases; another 7 states enacted decreases. Legislated tax changes were estimated to increase aggregate corporate income tax revenues by \$1.3 billion in fiscal year 2020. The largest corporate income tax change was in Oregon, where Governor Brown signed into law a new corporate tax activity tax that applies to all entities (i.e., individuals, partnerships, corporations, and others) with taxable commercial activity. The new tax was estimated to increase corporate income tax revenue collections by \$799 million in fiscal year 2020 (Oregon Legislative Revenue Office 2019). Legislated changes related to conformity to the federal tax law changes in the TCJA were expected to increase corporate income tax revenues by \$229 million in California and by \$170 million in Minnesota in fiscal year 2020. New Mexico more than doubled the annual cap on rebate payments for film and television productions,²³ which was estimated to decrease corporate income tax revenues collections by \$110 million in fiscal year 2020.

The National Association of State Budget Officers' Fall 2019 Fiscal Survey of the States reports sales tax changes in the wake of the Supreme Court's *Wayfair* decision related to state laws requiring remote sellers to collect and remit sales and use tax. To date, 43 of 45 states with a sales tax base have enacted economic nexus laws to collect sales and use taxes from remote sellers (Table A6). A few states, such as Massachusetts, Ohio, Pennsylvania, and Rhode Island, had adopted internet sales tax laws before the *Wayfair* ruling on June 21, 2018, and have since updated the laws or provided additional guidance for remote sellers. Florida and Missouri still have not enacted laws, but both states have proposed legislation on collecting sales and use tax from remote sellers. Legislated changes related to expansion of the sales tax base in response to the *Wayfair* decision were expected to increase state sales tax revenues by \$1.3 billion in fiscal year 2020. The largest increases were expected in states with the largest populations, such as California, New York, and Texas. Officials in California were estimating that online and remote sales tax collections will produce an additional \$616 million in fiscal year 2020.²⁴

Apart from legislated changes related to the *Wayfair* decision, 7 states enacted sales tax increases, and 10 states enacted decreases. Legislated tax changes were estimated to increase sales tax revenues by \$325 million in fiscal year 2020. The most significant legislative changes were in Connecticut and New Mexico. Lawmakers in Connecticut expanded the sales and use tax base and repealed several sales tax exemptions,²⁵ and these changes were estimated to increase sales tax revenues by \$145 million in fiscal year 2020. Officials in New Mexico enacted policy changes that include the repealing of hospital credits and subjecting hospitals to a gross receipts tax.²⁶ These changes were estimated to increase New Mexico's sales tax revenue collections by \$125 million in fiscal year 2020.

Four states enacted motor fuel tax increases, for an estimated overall increase of \$939 million in fiscal year 2020. The largest increase was in Ohio, where lawmakers increased the gasoline tax rate from 28 cents a gallon to 38.5 cents a gallon and increased diesel and all other fuel tax rate from 28 cents a gallon to 47 cents a gallon effective July 1, 2019.²⁷ These rate increases were estimated to increase motor fuel tax revenues by \$865 million in fiscal year 2020.

Fourteen states enacted changes for taxes on cigarettes, alcohol, and gaming, with an estimated overall increase of \$139 million in fiscal year 2020. The estimated impact of each state's changes was not significant except in Illinois, where Governor Pritzker signed a bill that raised the tax on video gaming terminals from 30 percent to 33 percent for fiscal year 2020,²⁸ which was expected to increase gaming tax revenues by \$89 million in fiscal year 2020.

Over half of the states enacted changes for some other taxes and fees, with an estimated overall increase of \$3.8 billion in fiscal year 2020. These changes were estimated to increase state revenues in 19 states but decrease revenue in 8 states. The largest estimated increases were in California and Illinois, mostly because of the managed care organization (MCO) tax. In California, officials urged an extension of the MCO tax that was set to expire on July 1, 2019.²⁹ Governor Newsom approved the bill to renew the MCO tax retroactively, subject to approval from the federal government.³⁰ The MCO tax, if approved by the federal government, would have increased state tax revenues by an estimated \$915 million in fiscal year 2020. However, the federal government rejected California's MCO tax on January 30, 2020.³¹ Officials in California continue discussions with the federal government, in the hopes of reaching an agreement on the MCO tax. Similarly, officials in Illinois also proposed a tax on MCOs, which would have increased state revenues by an estimated \$500 million in fiscal year 2020, subject to approval by the federal government.³²

Conclusion

State tax revenues showed continued growth in the first three quarters of fiscal year 2020. However, growth has been less robust than in prior years, mostly because of the waning impact of the TCJA. Moreover, growth in sales tax revenues has not materialized as substantially as states had hoped from the *Wayfair* decision, indicating that the implementation, administration, and collection of tax revenues from online sales is complex and that some online sellers had already been collecting these taxes. It will take some time for state administrators as well as online sellers and marketplace facilitators to figure out all the details of online sales taxation.

Despite overall concerns about an economic slowdown and despite weaknesses in some economic indicators before the COVID-19 pandemic fully hit the US, most states were on track to close state fiscal year 2020 budgets with no shortfalls. However, things have taken a dramatic turn since March.

Even before the pandemic reached the US, states had raised various concerns about conditions that could negatively impact state tax revenues. These related to the threat of instability in global markets, the nation's political climate, volatility in oil prices, political and economic risks associated with tariffs, the Federal Reserve Board's interest rate cuts in the second half of 2019, the changing consumption and spending habits of Americans, an aging workforce and long-term demographic changes, and anticipation of further tax policy changes at the federal level that could have direct impacts on state budgets. All these concerns still hold true, but the public health and economic conditions related to the COVID-19 pandemic pose a much bigger and more immediate threat to state budgets and to the overall economy.

States are facing unprecedented fiscal uncertainties because of the government-mandated shutdowns that weakened the economy this spring. Even as restrictions have loosened over the summer, increased infection rates mean lower economic activity and the potential need to reclose certain sectors. Governors in all states are facing the challenge of drastically falling revenues and rising spending. Although most states had robust rainy-day funds at the beginning of this fiscal year, they are nowhere near large enough to completely buffer state budgets given the current dire economic and fiscal conditions.

Looking at the next few months, states must address unforeseen revenue shortfalls and sudden increases in spending needs. Although most states had seen healthy growth in overall tax revenue collections during the first nine months of fiscal year 2020, state revenues declined abruptly in the final quarter of fiscal year 2020.

Because the Internal Revenue Service has delayed income tax deadlines from April 15 to July 15 and states have generally followed suit, states collected substantially less income tax revenue in April 2020. 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. This year, large shares of estimated and final payments were likely shifted to July.

The number of COVID-19 cases continue to grow across the states which means depressed business activity for a wide range of businesses and services across all states, less consumer spending, and therefore less sales tax revenue collections for states. Although all states have begun reopening their economies to some extent, business activity will not return to prior levels for a long time, with some activities and industries facing a very slow recovery ahead.

Finally, many businesses, especially restaurants, bars, gyms, hair salons, and other businesses not deemed essential have laid off employees. Recent unemployment insurance claims have spiked to over 50 million since March 14. Even if new claims stabilize, states will continue to see drastic increases in unemployment insurance and health care spending and reductions in state tax revenues in the coming months. There also are continuing delays in Congressional negotiations over future economic relief legislation and no sign of substantial federal aid to help offset state revenue shortfalls.

Most economic indicators, such as GDP, unemployment rate, employment, and personal consumption spending, reported the worst performance on record in the second quarter of 2020. State officials are now faced with a challenge of addressing large budget shortfalls in a dire economic environment.

The damage of the COVID-19 pandemic on state and local governments and their budgets is already substantial, and, sadly, this is just the beginning of the fiscal and economic pain ahead.

Appendix: Additional Tables

TABLE A1

Quarterly State Government Tax Revenue by Major Tax

2010 Q1–2020 Q1 average growth	Nominal Y-O-Y Percentage Change					Inflation rate	Real Y-O-Y Percentage Change				
	PIT	CIT	Sales	MFT	Total		PIT	CIT	Sales	MFT	Total
	6.1	4.8	4.1	4.1	4.8	1.7	4.4	3.1	2.4	2.4	3.1
2020 Q1	5.0	(1.2)	4.0	5.2	4.2	1.7	3.2	(2.9)	2.3	3.4	2.4
2019 Q4	6.2	18.4	5.6	7.8	5.6	1.6	4.5	16.5	3.9	6.1	3.9
2019 Q3	4.3	11.6	7.1	5.8	5.5	1.7	2.5	9.7	5.3	4.0	3.7
2019 Q2	18.8	21.0	2.5	3.5	10.5	1.8	16.8	18.9	0.7	1.7	8.6
2019 Q1	(2.4)	40.5	5.6	1.4	2.8	2.0	(4.3)	37.8	3.6	(0.6)	0.8
2018 Q4	(9.2)	12.0	4.5	6.0	0.0	2.3	(11.2)	9.5	2.2	3.6	(2.2)
2018 Q3	7.9	26.4	6.3	8.8	8.5	2.5	5.2	23.3	3.7	6.1	5.8
2018 Q2	10.6	17.5	5.3	8.8	8.9	2.6	7.7	14.5	2.6	6.1	6.2
2018 Q1	15.3	(6.5)	5.0	10.9	8.9	2.1	12.9	(8.5)	2.8	8.6	6.6
2017 Q4	14.9	10.5	4.5	9.7	9.1	2.0	12.6	8.3	2.4	7.5	7.0
2017 Q3	4.6	6.5	3.1	2.0	3.9	1.9	2.6	4.5	1.2	0.0	2.0
2017 Q2	(0.0)	11.7	3.2	5.2	2.3	1.7	(1.7)	9.8	1.5	3.5	0.6
2017 Q1	8.9	(28.1)	2.3	0.9	3.3	2.0	6.7	(29.5)	0.3	(1.1)	1.2
2016 Q4	0.3	(3.4)	1.7	1.2	1.2	1.5	(1.1)	(4.8)	0.2	(0.3)	(0.3)
2016 Q3	2.4	(9.0)	2.7	1.3	1.3	0.9	1.5	(9.8)	1.7	0.4	0.3
2016 Q2	(2.8)	(9.7)	1.2	0.3	(1.7)	0.9	(3.7)	(10.5)	0.3	(0.6)	(2.5)
2016 Q1	1.7	(5.9)	1.9	2.9	1.4	0.8	0.9	(6.7)	1.1	2.1	0.6
2015 Q4	5.1	(9.4)	2.7	3.5	2.4	0.9	4.2	(10.2)	1.8	2.6	1.5
2015 Q3	6.5	0.3	3.5	5.0	4.1	1.0	5.5	(0.7)	2.5	4.0	3.1
2015 Q2	14.0	6.0	3.6	2.5	7.1	1.1	12.7	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	3.2	4.3
2014 Q4	8.4	10.1	6.5	2.4	5.7	1.5	6.8	8.5	5.0	0.9	4.1
2014 Q3	4.4	7.4	6.6	0.6	4.3	2.0	2.4	5.3	4.5	(1.3)	2.2
2014 Q2	(6.7)	(0.3)	4.6	4.0	(1.0)	2.1	(8.6)	(2.4)	2.5	1.9	(3.0)
2014 Q1	(1.3)	7.9	3.0	2.8	0.5	1.8	(3.0)	6.0	1.2	1.0	(1.3)
2013 Q4	1.1	3.6	5.1	3.6	3.0	1.8	(0.7)	1.8	3.2	1.7	1.2
2013 Q3	4.9	1.8	5.5	2.8	5.3	1.7	3.1	0.1	3.7	1.1	3.5
2013 Q2	19.2	8.5	4.6	2.0	10.0	1.7	17.2	6.6	2.8	0.3	8.1
2013 Q1	18.2	9.6	3.9	(1.6)	8.9	1.9	16.0	7.6	2.0	(3.4)	6.9
2012 Q4	10.4	2.5	3.3	1.3	5.6	2.1	8.1	0.4	1.2	(0.8)	3.4
2012 Q3	4.7	8.6	2.3	2.2	3.1	1.8	2.8	6.7	0.5	0.4	1.3
2012 Q2	4.7	1.6	2.1	1.7	3.2	1.7	2.9	(0.2)	0.4	(0.1)	1.4
2012 Q1	4.0	4.2	4.6	1.3	3.7	2.1	1.9	2.1	2.5	(0.8)	1.6
2011 Q4	3.7	(6.5)	3.5	0.7	3.2	2.0	1.7	(8.3)	1.5	(1.2)	1.2
2011 Q3	9.7	2.5	3.7	(0.3)	6.2	2.4	7.2	0.1	1.3	(2.6)	3.7
2011 Q2	15.3	19.4	5.7	7.5	11.1	2.2	12.9	16.8	3.5	5.2	8.8
2011 Q1	12.1	4.4	6.3	13.3	10.0	1.9	10.1	2.5	4.4	11.2	8.0
2010 Q4	10.5	19.8	4.8	11.8	8.4	1.6	8.8	17.9	3.2	10.1	6.7
2010 Q3	4.8	(0.9)	4.5	10.6	5.4	1.4	3.4	(2.3)	3.1	9.1	3.9
2010 Q2	2.2	(19.4)	4.8	4.0	2.6	1.1	1.0	(20.3)	3.7	2.9	1.5
2010 Q1	2.4	0.8	0.6	(0.1)	2.9	0.6	1.9	0.2	0.0	(0.7)	2.3
2009 Q4	(5.0)	(1.9)	(4.3)	(1.5)	(3.1)	0.4	(5.3)	(2.3)	(4.7)	(1.9)	(3.5)
2009 Q3	(11.4)	(20.9)	(9.8)	2.6	(10.5)	0.3	(11.6)	(21.1)	(10.0)	2.3	(10.7)
2009 Q2	(27.4)	0.9	(8.8)	(1.5)	(16.2)	1.0	(28.1)	(0.1)	(9.7)	(2.4)	(17.1)
2009 Q1	(16.7)	(20.0)	(8.0)	(3.6)	(10.9)	1.5	(17.9)	(21.2)	(9.3)	(5.0)	(12.2)

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, 2020 quarter 1 versus 2019 quarter 1

State/region	PIT	CIT	Sales	MFT	Total
US (median)	5.0	12.9	6.0	3.4	4.3
US (average)	5.0	(1.2)	4.0	5.2	4.2
New England	1.5	(2.3)	8.1	1.9	3.6
Connecticut	(4.3)	(11.9)	11.1	3.9	(0.4)
Maine	6.2	38.0	8.3	(3.8)	7.5
Massachusetts	3.7	(9.1)	6.0	(0.9)	3.8
New Hampshire	7.3	15.8	N/A	(1.0)	2.0
Rhode Island	3.3	205.9	10.2	3.4	14.8
Vermont	13.0	73.5	5.8	35.4	16.5
Mideast	5.7	2.0	4.2	(0.3)	4.0
Delaware	10.3	(46.8)	N/A	4.1	1.8
Maryland	8.8	8.2	7.7	12.3	3.6
New Jersey	9.2	(14.0)	0.7	(3.4)	3.8
New York	5.0	14.0	3.9	(7.3)	5.2
Pennsylvania	1.9	(1.5)	6.2	(0.1)	2.0
Great Lakes	(0.6)	(22.4)	6.2	22.3	3.5
Illinois	5.5	(4.9)	5.6	91.3	11.5
Indiana	6.6	33.6	7.0	4.2	6.4
Michigan	(10.5)	NM	6.7	(39.2)	(13.8)
Ohio	(6.5)	NM	5.4	44.8	5.9
Wisconsin	(7.7)	21.0	7.4	3.4	1.0
Plains	1.0	(8.2)	6.7	6.0	3.9
Iowa	(6.6)	23.1	8.0	22.3	1.8
Kansas	15.3	8.4	6.5	4.0	10.6
Minnesota	(4.3)	(12.1)	5.4	(2.4)	(0.3)
Missouri	7.0	NM	1.7	4.3	2.3
Nebraska	8.7	(9.0)	18.2	5.2	11.2
North Dakota	(12.7)	(86.2)	4.9	6.6	11.3
South Dakota	N/A	65.7	8.4	11.7	6.1
Southeast	5.8	11.2	4.3	3.8	4.8
Alabama	10.0	(4.3)	3.6	31.8	6.3
Arkansas	(6.6)	(35.3)	5.3	19.2	1.3
Florida	N/A	(2.9)	4.2	3.6	4.3
Georgia	12.8	11.8	0.5	5.0	6.3
Kentucky	12.2	(57.7)	7.6	1.9	6.4
Louisiana	17.5	NM	(2.0)	(31.1)	3.8
Mississippi	8.6	24.1	4.1	3.1	4.2
North Carolina	2.1	77.5	1.4	3.8	2.8
South Carolina	(0.1)	35.5	6.6	3.0	4.4
Tennessee	(38.1)	20.3	7.4	8.1	11.7
Virginia	2.2	14.6	8.0	(1.3)	3.5
West Virginia	4.0	210.5	3.6	3.4	1.9
Southwest	(9.7)	50.4	5.5	1.6	3.9
Arizona	(7.6)	NM	11.0	3.4	7.1
New Mexico	(25.8)	66.6	9.9	3.4	(1.9)
Oklahoma	(2.8)	42.5	(3.8)	(0.8)	(1.6)
Texas	N/A	N/A	4.8	1.4	4.7
Rocky Mountain	11.7	0.1	7.3	2.9	8.0
Colorado	13.5	(6.3)	5.4	2.0	7.3
Idaho	38.3	(13.5)	13.8	2.4	18.2

State/region	PIT	CIT	Sales	MFT	Total
Montana	6.0	(11.7)	N/A	3.2	12.7
Utah	1.8	26.3	7.6	7.1	6.8
Wyoming	N/A	N/A	(1.1)	(8.8)	(9.0)
Far West	8.6	(1.3)	(0.5)	1.5	3.9
Alaska	N/A	114.5	N/A	(7.1)	(18.9)
California	11.4	(0.9)	(3.3)	7.9	4.6
Hawaii	6.8	NM	6.0	0.7	4.6
Nevada	N/A	N/A	7.8	(27.5)	3.8
Oregon	(23.2)	14.0	N/A	3.4	(16.8)
Washington	N/A	N/A	3.4	(24.2)	8.1

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 2019				State Fiscal Year 2020		
	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1
US (median)	6.7	6.5	2.7	5.3	5.0	4.2	6.9
US (average)	6.2	6.7	1.2	5.2	4.4	4.8	5.8
New England	4.0	6.6	5.7	3.2	4.7	2.8	4.7
Connecticut	8.8	9.4	6.4	7.3	5.5	2.8	2.0
Maine	4.9	8.5	3.6	5.3	10.0	2.0	7.6
Massachusetts	2.2	5.1	6.0	1.5	4.1	3.1	5.8
Rhode Island	(0.3)	5.4	3.9	1.2	3.8	2.0	6.9
Vermont	5.3	9.4	1.9	1.5	0.6	(0.3)	3.1
Mideast	4.1	3.3	0.5	5.0	5.1	4.6	5.6
Delaware	6.3	4.8	3.2	7.9	6.2	0.9	10.1
Maryland	3.0	4.9	0.9	4.0	6.7	5.5	8.9
New Jersey	3.0	3.9	4.8	4.5	6.2	3.2	7.0
New York	5.1	2.2	(1.5)	5.5	5.0	4.8	4.6
Pennsylvania	3.0	4.4	3.7	5.1	2.4	4.1	3.8
Great Lakes	8.3	4.4	1.6	5.3	4.0	4.1	4.2
Illinois	13.8	6.1	2.7	5.1	4.2	3.2	3.1
Indiana	7.0	2.9	(2.8)	8.7	1.4	4.8	7.3
Michigan	4.6	2.9	(2.5)	5.2	7.6	6.0	6.9
Ohio	5.5	5.9	2.3	3.5	2.5	1.9	1.6
Wisconsin	6.4	2.4	7.7	4.7	3.0	5.4	3.4
Plains	4.8	4.8	0.4	2.8	3.4	3.3	4.4
Iowa	6.6	10.8	(0.6)	(4.1)	(3.5)	(3.9)	3.0
Kansas	14.4	7.9	3.7	7.6	2.8	6.4	9.7
Minnesota	6.7	6.5	2.1	5.7	5.1	2.8	1.6
Missouri	(5.4)	(4.3)	(3.6)	(2.2)	6.0	6.4	4.7
Nebraska	9.6	6.8	(0.2)	8.2	2.1	6.5	10.9
North Dakota	12.4	12.2	13.3	5.5	10.2	3.7	13.3
Southeast	6.3	7.4	(0.4)	3.1	2.1	1.8	5.4
Alabama	11.3	7.6	3.9	8.3	1.7	5.4	9.0
Arkansas	5.7	5.4	1.3	8.2	1.9	5.7	9.3
Georgia	7.4	4.7	(4.0)	0.1	(2.4)	(2.3)	6.0
Kentucky	(2.5)	(0.8)	(2.4)	(4.0)	2.1	2.0	7.5
Louisiana	21.7	21.5	(2.8)	6.3	9.9	(4.7)	14.9
Mississippi	7.0	1.7	(0.4)	2.5	(1.0)	3.5	7.3
North Carolina	7.5	10.4	(1.6)	0.9	(1.0)	(0.2)	3.4
South Carolina	5.7	6.5	4.9	7.2	6.6	4.9	2.4
Virginia	1.1	7.7	1.2	4.5	5.8	5.8	2.9
West Virginia	15.9	9.9	6.6	6.8	(0.4)	1.2	4.1
Southwest	8.1	6.5	3.8	9.8	7.3	7.9	7.3
Arizona	9.1	6.6	2.3	8.4	7.1	8.7	10.3
New Mexico	4.8	2.4	3.5	20.1	13.2	13.9	12.8
Oklahoma	8.0	8.3	6.0	7.0	5.0	4.3	0.9
Rocky Mountain	6.7	5.6	4.6	2.8	6.1	5.8	10.8
Colorado	9.6	10.0	5.6	7.2	6.1	3.5	10.9
Idaho	(16.2)	(20.4)	(19.9)	(17.5)	3.2	9.7	12.1
Montana	6.8	10.6	3.1	5.6	7.6	4.2	9.7
Utah	12.4	9.2	15.5	3.3	6.5	9.0	10.3
Far West	7.7	12.0	0.9	8.4	5.3	8.2	7.2
California	7.4	12.3	0.2	9.4	5.1	8.2	7.5
Hawaii	10.3	5.1	17.8	(14.1)	4.1	5.6	4.4
Oregon	9.1	11.0	3.3	7.9	7.0	9.0	4.9

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

	Payments for Tax Year 2019				Payments for Tax Year 2020
State	April 2019, 1st payment	June 2019, 2nd payment	Sep. 2019, 3rd payment	Dec. 2019- Jan. 2020, 4th payment	April 2020, 1st payment
Median	18.0	10.4	11.1	11.0	(72.0)
Average	35.7	1.3	0.4	10.5	(82.3)
Alabama	30.1	11.5	12.7	13.3	(74.8)
Arizona	(25.1)	13.4	13.3	15.1	16.4
Arkansas	(3.2)	3.1	14.3	9.8	(16.8)
California	7.6	(3.6)	(14.2)	8.6	(83.2)
Colorado	62.9	(0.5)	1.7	6.1	(92.0)
Connecticut	(18.3)	(31.1)	(15.9)	(11.0)	(76.1)
Delaware	11.2	12.3	15.0	13.5	(58.0)
Georgia	2.8	6.1	4.3	4.7	(76.4)
Hawaii	138.6	22.9	48.1	41.9	(66.8)
Illinois	19.7	12.3	8.9	7.2	9.5
Indiana	19.2	10.0	8.8	13.0	(72.2)
Iowa	9.4	7.3	15.7	18.2	(20.4)
Kansas	12.4	13.3	19.0	22.0	(56.7)
Kentucky	4.6	(0.7)	(1.0)	11.0	(82.8)
Louisiana	17.7	20.9	20.3	25.2	(45.4)
Maine	18.3	15.6	6.2	9.3	(66.0)
Maryland	(1.0)	19.9	20.7	16.5	(75.9)
Massachusetts	7.6	0.3	3.4	3.2	(77.2)
Michigan	9.9	5.5	3.8	3.6	(73.5)
Minnesota	71.0	9.3	9.3	11.6	(75.4)
Mississippi	97.8	20.1	11.0	14.0	(79.1)
Missouri	135.6	(68.7)	(74.7)	NM	(52.5)
Montana	27.6	(0.8)	17.2	35.0	(66.1)
Nebraska	20.6	10.1	11.3	10.8	(63.7)
New Jersey	10.4	7.1	5.0	8.7	(75.0)
New York	57.1	7.5	2.8	7.3	(96.9)
North Carolina	15.1	13.2	11.8	16.2	(56.0)
North Dakota	40.6	12.7	16.0	9.6	(86.9)
Ohio	8.1	12.9	16.0	7.2	(66.0)
Oklahoma	31.6	3.6	(2.0)	(7.3)	(90.6)
Oregon	53.5	11.5	12.9	14.1	(77.1)
Pennsylvania	13.9	13.0	11.1	8.7	(70.0)
Rhode Island	5.3	10.6	9.9	16.6	(64.9)
South Carolina	157.4	18.2	11.1	16.8	(85.8)
Vermont	20.1	14.9	18.7	13.1	(71.8)
Virginia	30.3	13.7	20.5	24.7	(45.5)
West Virginia	(9.9)	10.0	5.2	5.3	(62.7)
Wisconsin	51.9	0.9	2.7	1.6	(86.7)

Source: Individual state data, analysis by the author.

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

NM = not meaningful.

TABLE A5

State Personal Income Tax Final Payments

Year-over-year nominal percentage change

State	State Fiscal Year 2019				State Fiscal Year 2020		
	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1
Median	7.9	8.3	11.2	37.0	18.3	24.0	(0.7)
Average	12.8	(1.5)	18.5	39.0	21.2	20.8	(10.3)
Alabama	20.7	3.1	(2.2)	40.7	18.3	28.4	17.7
Arizona	12.7	27.8	28.4	52.5	45.9	19.7	(22.9)
Arkansas	3.9	8.3	142.4	33.5	17.7	24.0	(55.0)
California	15.7	13.9	21.4	29.4	33.9	26.5	(12.1)
Colorado	12.0	7.1	0.7	26.5	4.0	9.1	(2.7)
Connecticut	2.6	(37.8)	(45.0)	(4.4)	(15.3)	(21.8)	(25.1)
Delaware	(11.6)	16.8	33.6	35.5	13.0	50.5	(39.1)
Georgia	32.2	15.8	22.0	51.6	46.9	40.9	38.6
Hawaii	25.0	(6.2)	33.8	22.1	4.5	48.2	7.9
Idaho	7.7	(45.5)	(48.7)	55.1	22.0	13.3	26.3
Illinois	53.7	25.5	25.8	52.8	25.7	41.3	18.1
Indiana	(1.4)	18.0	12.2	33.9	11.1	15.2	(4.6)
Iowa	16.3	30.3	(2.9)	65.6	26.8	77.8	15.5
Kansas	18.7	63.7	12.9	50.2	7.8	27.0	11.2
Kentucky	1.2	14.3	27.7	18.5	27.8	2.6	(0.7)
Louisiana	1.5	6.8	7.3	48.3	32.0	32.3	7.0
Maine	4.1	5.9	(2.9)	31.0	19.4	0.1	12.9
Maryland	7.5	6.2	21.1	49.7	24.7	24.4	(6.1)
Massachusetts	11.7	14.6	11.0	53.8	(0.2)	2.4	(0.7)
Michigan	21.2	19.1	(5.3)	46.4	6.6	13.3	0.6
Minnesota	7.1	(1.9)	3.1	28.4	17.3	24.7	7.3
Missouri	7.2	101.3	352.3	52.1	186.7	(55.0)	(47.1)
Montana	0.8	2.8	17.4	28.5	38.4	19.7	0.1
Nebraska	17.9	(4.9)	5.6	37.0	77.3	23.8	6.1
New Jersey	(21.7)	(42.8)	(13.4)	49.3	18.8	40.2	6.6
New Mexico	54.0	(47.2)	209.2	(43.6)	(2.8)	45.3	(53.3)
New York	20.5	19.6	15.4	38.3	15.9	18.9	(3.4)
North Carolina	1.7	(10.2)	2.8	41.5	15.5	21.6	(5.9)
North Dakota	(9.1)	5.3	14.6	26.1	0.0	10.0	0.0
Ohio	51.5	45.6	25.2	52.5	30.8	13.0	(27.5)
Oklahoma	13.5	16.6	12.0	20.9	25.7	28.5	1.0
Pennsylvania	50.2	19.3	8.0	32.4	32.5	25.0	(23.1)
Rhode Island	6.4	20.4	11.2	31.4	30.2	29.2	(0.9)
South Carolina	7.9	14.1	10.0	25.6	12.8	45.8	(2.4)
Utah	5.6	(71.6)	36.5	59.4	23.6	15.4	(21.6)
Vermont	(2.3)	13.2	9.9	23.6	18.2	14.1	(1.9)
Virginia	77.6	(120.2)	(16.6)	62.5	(55.1)	(63.7)	(15.3)
West Virginia	20.7	(1.0)	(7.2)	39.0	10.0	31.5	34.0
Wisconsin	2.0	(11.1)	(23.1)	29.7	13.5	25.7	16.1

Source: Individual state data, analysis by the author.

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

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	> \$150,000 in CY 2020, >\$100,000 in CY 2021	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
Georgia	>\$100,000 in CY 2020 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	TBD	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
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 or over 200 transactions	10/1/2018	1/1/2020
Wyoming	>\$100,000 or over 200 transactions	2/1/2019	7/1/2019

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

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

2020 Q1 collections (\$ millions)	Property tax	Tobacco product sales tax	Alcoholic beverage sales tax	Motor vehicle & operators' license taxes	Other taxes	Total nonmajor taxes
	\$4,778	\$4,348	\$1,739	\$8,530	\$39,684	\$59,079
2010 Q1 - 2020 Q1 average growth	2.1	(0.4)	1.1	2.4	2.4	2.0
2020 Q1	1.1	(3.1)	2.2	2.4	1.6	1.3
2019 Q4	0.2	(4.1)	2.2	3.1	1.6	1.2
2019 Q3	(0.4)	(6.1)	(0.2)	4.4	3.4	2.2
2019 Q2	5.3	(7.7)	(1.9)	5.0	4.6	3.3
2019 Q1	6.4	(5.5)	(0.6)	7.5	5.2	4.4
2018 Q4	9.0	(5.2)	(1.5)	9.3	5.3	4.9
2018 Q3	8.1	0.8	(0.0)	5.4	5.2	4.9
2018 Q2	3.6	5.2	1.3	4.7	3.6	3.8
2018 Q1	1.0	4.7	1.1	1.1	2.6	2.4
2017 Q4	(0.6)	6.1	2.9	(0.3)	1.9	1.8
2017 Q3	(1.2)	3.6	3.0	3.7	0.5	1.2
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	2.3	1.4	0.4	2.7	(1.7)	(0.4)
2016 Q3	4.9	1.2	0.7	1.0	(2.5)	(1.0)
2016 Q2	4.1	0.6	1.6	2.5	(1.8)	(0.4)
2016 Q1	5.0	1.7	2.6	2.2	(1.4)	(0.0)
2015 Q4	8.7	0.0	1.5	2.7	(1.1)	0.3
2015 Q3	6.1	(0.8)	1.3	1.6	(0.4)	0.4
2015 Q2	5.2	(2.1)	1.6	1.2	(0.7)	(0.1)
2015 Q1	4.3	(4.0)	(0.2)	1.2	(0.4)	(0.1)
2014 Q4	0.8	(4.6)	1.5	(0.7)	(1.9)	(1.7)
2014 Q3	3.2	(3.7)	1.3	0.6	(1.7)	(1.1)
2014 Q2	5.2	0.5	(0.1)	1.1	(0.4)	0.3
2014 Q1	5.1	1.8	1.3	0.8	0.4	1.0
2013 Q4	4.8	3.7	(0.7)	0.3	3.2	2.8
2013 Q3	3.2	3.6	(2.4)	(0.5)	3.6	2.8
2013 Q2	(0.3)	(1.0)	(1.9)	(0.9)	2.7	1.5
2013 Q1	(3.2)	(1.6)	(0.1)	0.2	2.5	1.3
2012 Q4	(4.8)	(2.6)	2.2	2.0	1.2	0.6
2012 Q3	(9.2)	(3.4)	3.4	3.1	2.2	0.9
2012 Q2	(10.6)	(2.3)	3.0	3.1	4.1	2.1
2012 Q1	(10.8)	(2.5)	0.6	2.1	7.6	4.0
2011 Q4	(11.0)	(1.9)	(0.5)	1.8	11.8	6.5
2011 Q3	(7.5)	(0.9)	0.5	0.4	12.8	7.3
2011 Q2	(3.8)	0.8	1.6	1.6	12.2	7.6
2011 Q1	2.5	2.8	3.2	3.4	10.1	7.4
2010 Q4	8.2	3.2	3.3	4.1	7.9	6.7
2010 Q3	13.4	2.3	3.1	5.7	5.0	5.5
2010 Q2	13.4	0.6	2.1	3.8	(0.9)	1.2
2010 Q1	9.9	(1.2)	0.7	1.5	(8.6)	(4.7)
2009 Q4	6.1	(1.5)	0.6	0.2	(12.7)	(7.9)
2009 Q3	(0.5)	0.4	0.1	(1.1)	(12.6)	(8.4)
2009 Q2	(2.0)	1.4	(0.0)	(0.9)	(6.3)	(4.2)
2009 Q1	(3.6)	2.7	0.5	(0.3)	3.0	1.9

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

TABLE A8

Fiscal Year-To-Date State Government Tax Revenue, by State

Nominal percentage change, state fiscal year to date 2020 versus state fiscal year to date 2019

State/region	PIT	CIT	Sales	MFT	Total
US. (median)	5.3	11.7	5.3	2.1	4.7
US (average)	6.3	9.6	5.7	6.5	5.6
New England	1.7	(0.3)	6.3	2.2	3.3
Connecticut	(5.6)	6.2	7.4	1.9	0.2
Maine	5.6	(9.5)	7.0	(0.5)	5.5
Massachusetts	4.0	(4.6)	5.3	(0.9)	4.0
New Hampshire	17.9	(12.8)	N/A	0.0	(1.8)
Rhode Island	3.8	60.0	8.2	2.1	8.1
Vermont	7.9	17.2	6.5	44.2	9.3
Mideast	9.7	9.5	4.8	(0.8)	6.8
Delaware	7.6	(6.0)	N/A	4.9	5.1
Maryland	7.3	6.0	6.3	9.5	4.7
New Jersey	7.1	7.7	5.0	(2.2)	5.5
New York*	11.6	13.8	4.8	(1.2)	8.9
Pennsylvania	4.2	3.9	4.0	(3.4)	3.2
Great Lakes	2.3	11.7	4.7	23.3	5.1
Illinois	5.9	12.4	3.6	79.3	9.3
Indiana	4.8	12.6	4.8	2.2	4.7
Michigan*	(4.5)	(54.1)	5.5	(19.4)	(3.3)
Ohio	(0.7)	NM	5.0	31.3	5.0
Wisconsin	(0.2)	46.1	5.3	2.3	4.5
Plains	3.6	10.2	6.6	3.3	4.6
Iowa	(2.3)	32.3	8.7	10.1	4.8
Kansas	9.1	16.6	4.7	3.8	7.0
Minnesota	2.4	0.0	6.5	(0.5)	3.7
Missouri	5.6	26.9	3.4	0.7	3.6
Nebraska	8.3	29.6	13.7	7.1	11.4
North Dakota	(0.8)	(31.3)	5.3	1.0	0.8
South Dakota	N/A	40.9	6.0	2.0	2.5
Southeast	4.4	9.7	4.1	4.2	4.3
Alabama*	9.1	5.3	3.2	29.6	7.3
Arkansas	1.7	(10.4)	4.0	11.4	3.2
Florida	N/A	4.7	3.7	2.9	3.7
Georgia	3.4	11.0	1.3	1.4	1.9
Kentucky	5.2	(15.9)	6.7	1.5	3.6
Louisiana	9.7	15.2	(2.1)	(6.8)	2.7
Mississippi	4.5	16.7	3.9	0.9	3.7
North Carolina	2.3	11.7	4.4	2.8	3.5
South Carolina	5.3	26.5	7.2	9.4	6.6
Tennessee	(3.4)	26.4	5.9	9.6	8.5
Virginia	5.3	18.3	7.7	4.8	6.7
West Virginia	2.0	14.6	2.3	2.0	(0.3)
Southwest	3.9	9.8	6.0	2.5	4.2
Arizona	5.9	42.0	8.6	2.1	7.1
New Mexico	(1.4)	(82.7)	9.2	2.1	(4.8)
Oklahoma	3.7	33.3	(2.5)	4.7	3.1
Texas*	N/A	N/A	5.9	2.1	4.9
Rocky Mountain	8.5	10.0	6.6	1.3	5.4
Colorado	7.4	26.4	4.6	1.2	3.2
Idaho	16.8	(1.6)	10.9	2.1	10.4

State/region	PIT	CIT	Sales	MFT	Total
Montana	10.0	14.6	N/A	2.2	7.9
Utah	7.2	(11.2)	7.0	1.0	7.0
Wyoming	N/A	N/A	3.4	(0.9)	0.6
Far West	8.1	14.1	8.2	8.2	7.2
Alaska	N/A	(29.2)	N/A	0.4	(25.5)
California	8.9	17.3	9.8	10.5	8.0
Hawaii	9.0	(57.4)	4.4	0.8	5.5
Nevada	N/A	N/A	8.0	(10.1)	5.9
Oregon	0.0	1.8	N/A	2.1	0.5
Washington	N/A	N/A	5.3	3.6	8.6

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.

*The state fiscal year runs from July 1 to June 30 in all states except Alabama, Michigan, New York, and Texas. Fiscal year-to-date data reported for Alabama, Michigan, New York, and Texas correspond to their own fiscal year quarters.

TABLE A9

Preliminary Quarterly State Government Tax Revenue, by State*Nominal percentage change, 2020 quarter 2 versus 2019 quarter 2*

State/region	PIT	CIT	Sales	Total
US (median)	(31.4)	(47.4)	(8.5)	(22.9)
US (average)	(40.4)	(50.8)	(14.5)	(30.8)
New England	(38.4)	(36.4)	(12.4)	(30.4)
Connecticut	(42.1)	(61.1)	(8.3)	(37.1)
Maine	12.4	(22.1)	(9.6)	0.4
Massachusetts	(41.6)	(23.8)	(16.3)	(34.8)
New Hampshire	(5.9)	(19.4)	N/A	(14.8)
Rhode Island	ND	ND	ND	ND
Vermont	(45.6)	(58.2)	(0.3)	(11.5)
Mideast	(44.2)	(44.2)	(23.6)	(36.7)
Delaware	(29.0)	(47.4)	N/A	(16.0)
Maryland	(28.7)	(65.0)	(33.6)	(30.6)
New Jersey	(48.7)	(41.7)	(18.7)	(36.2)
New York	(48.9)	(35.6)	(26.5)	(42.2)
Pennsylvania	(34.8)	(46.1)	(20.0)	(31.4)
Great Lakes	(28.8)	(47.8)	(12.4)	(22.9)
Illinois	(24.4)	(37.7)	(17.9)	(23.9)
Indiana	(29.3)	(56.0)	(7.0)	(24.9)
Michigan	(29.2)	(58.6)	(18.9)	(26.7)
Ohio	(33.4)	NM	(9.2)	(15.5)
Wisconsin	(34.0)	(52.3)	(7.1)	(24.9)
Plains	(34.8)	(36.0)	(5.0)	(24.2)
Iowa	(26.1)	(31.0)	(6.1)	(20.5)
Kansas	(42.2)	(48.1)	(4.3)	(30.1)
Minnesota	(34.3)	(16.8)	(8.5)	(24.7)
Missouri	(37.4)	(46.5)	(0.6)	(28.2)
Nebraska	(26.9)	(52.0)	2.9	(21.2)
North Dakota	(33.8)	(62.5)	(11.5)	1.5
South Dakota	N/A	N/A	1.9	0.2
Southeast	(17.3)	(41.7)	(13.3)	(18.8)
Alabama	(31.4)	(62.7)	(3.2)	(18.1)
Arkansas	(22.8)	(14.9)	0.8	(14.9)
Florida	N/A	(48.0)	(22.6)	(29.0)
Georgia	(1.8)	(19.8)	(9.4)	(6.1)
Kentucky	N/A	(16.5)	(5.9)	(5.8)
Louisiana	(31.8)	(60.8)	(13.8)	(28.7)
Mississippi	(25.7)	(44.6)	(1.1)	(15.6)
North Carolina	(22.5)	(39.8)	(11.8)	(18.8)
South Carolina	(17.2)	(72.2)	(8.7)	(19.8)
Tennessee	(79.9)	(22.3)	(6.8)	(21.9)
Virginia	ND	ND	ND	ND
West Virginia	(25.6)	(65.7)	(1.7)	(18.6)
Southwest	(36.9)	(48.0)	(26.7)	(30.6)
Arizona	(36.9)	(48.0)	(1.4)	(22.9)
New Mexico	ND	ND	ND	ND
Oklahoma	ND	ND	ND	ND
Texas	N/A	N/A	(29.4)	(32.2)
Rocky Mountain	(24.8)	(51.6)	(1.4)	(21.6)
Colorado	(31.7)	(64.5)	(9.5)	(29.5)
Idaho	12.0	(28.4)	6.6	2.2

State/region	PIT	CIT	Sales	Total
Montana	(16.5)	(14.0)	N/A	(25.1)
Utah	(31.0)	(58.2)	7.9	(22.5)
Wyoming	N/A	N/A	(12.4)	ND
Far West	(55.3)	(67.9)	(3.1)	(41.9)
Alaska	N/A	(96.5)	N/A	(58.8)
California	(56.5)	(69.5)	(0.7)	(46.1)
Hawaii	ND	ND	ND	ND
Nevada	N/A	N/A	ND	ND
Oregon	(41.8)	(26.0)	N/A	(39.8)
Washington	N/A	N/A	(10.2)	(4.0)

Source: Individual state data, analysis by the author.

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

Notes

- ¹ The author made several adjustments for the first quarter of 2020 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 Wisconsin Legislative Fiscal Bureau, “Revenue Estimates,” January 23, 2020, http://docs.legis.wisconsin.gov/misc/lfb/revenue_estimates/170_january_23_2020.pdf.
- ⁴ See Brian Uhler, Justin Garosi, Brian Weatherford, and Seth Kerstein, “November 2019 State Tax Collections,” California’s Legislative Analyst’s Office, December 18, 2019, <https://lao.ca.gov/LAOEconTax/Article/Detail/421>.
- ⁵ Thirty-seven of 41 states with broad-based personal income tax extended filing deadline to July 15. Among the remaining four states Idaho extended to June 15, Hawaii to July 20, Iowa to July 31, and Virginia to June 1.
- ⁶ See Katherine Loughead, “In Some States, 2020 Estimated Tax Payments Are Due before 2019 Tax Returns,” Tax Foundation, May 22, 2020, <https://taxfoundation.org/2020-quarterly-estimated-tax-payments-2019-tax-returns>.
- ⁷ Income tax returns are due on April 15 in 35 of 41 states that have a broad-based personal income tax. The remaining six states have individual income tax return due dates later than April 15. Those states are Arkansas (May 15), Delaware (April 30), Hawaii (April 20), Iowa (April 30), Louisiana (May 15), and Virginia (May 1).
- ⁸ See Oregon Department of Revenue, “2019 Kicker Credit,” last updated March 4, 2020, https://www.oregon.gov/dor/press/Documents/kicker_fact_sheet.pdf.
- ⁹ See US Internal Revenue Service, “IRS Extends More Tax Deadlines to Cover Individuals, Trusts, Estates, Corporations and Others,” news release, April 9, 2020, <https://www.irs.gov/newsroom/irs-extends-more-tax-deadlines-to-cover-individuals-trusts-estates-corporations-and-others>.
- ¹⁰ See US Bureau of Economic Analysis, “Section 5 – Saving and Investment, National Income and Product Accounts,” accessed August 7, 2020, <https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=survey>.
- 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%20Econo%20mists%20iso%20Petitioner.PDF](https://www.supremecourt.gov/DocketPDF/17/17-494/37603/20180305141434827_Brief%20of%20Amici%20Curiae%20Law%20Professors%20and%20Econ%20mists%20iso%20Petitioner.PDF).
- ¹² See Illinois Department of Revenue, “Motor Fuel Tax Rates and Fees,” accessed May 19, 2020, <https://www2.illinois.gov/rev/research/taxrates/Pages/motorfuel.aspx>.
- ¹³ See Ohio Department of Taxation, “Ohio Motor Fuel Tax Rates,” accessed May 19, 2020, https://www.tax.ohio.gov/excise/motor_fuel/tax_rates.aspx.
- ¹⁴ See US Bureau of Economic Analysis, “Gross Domestic Product, 2nd Quarter 2020 (Advance Estimate) and Annual Update,” accessed August 7, 2020, <https://www.bea.gov/news/2020/gross-domestic-product-2nd-quarter-2020-advance-estimate-and-annual-update>.
- ¹⁵ See US Bureau of Labor Statistics, “Labor Force Statistics from the Current Population Survey,” accessed November 11, 2019, https://www.bls.gov/web/empsit/cpsee_e08.htm.

- ¹⁶ See Wall Street Journal's Economic Forecasting Survey, <https://www.wsj.com/graphics/econsurvey>.
- ¹⁷ For more discussion of the relationship between property tax and house prices, see Dadayan (2012).
- ¹⁸ See Federal Reserve Bank of St. Louis, "30-Year Fixed Rate Mortgage Average in the United States," accessed May 19, 2020, <https://fred.stlouisfed.org/series/MORTGAGE30US>.
- ¹⁹ See "National Housing Survey," Fannie Mae, April 20, 2020, <https://www.fanniemae.com/portal/research-insights/surveys/national-housing-survey.html>.
- ²⁰ Author's analysis of data from NASBO (2019), table A-1 and table A-2.
- ²¹ See Gabriel Petek, "The 2019-20 Budget: Tax Conformity," California's Legislative Analyst's Office, March 6, 2019, <https://lao.ca.gov/reports/2019/3959/tax-conformity-030619.pdf>.
- ²² See Wisconsin Legislative Fiscal Bureau, "Updated Information on Tax Year 2019 Individual Income Tax Reductions Under Wisconsin Acts 9 and 10," November 4, 2019, https://docs.legis.wisconsin.gov/misc/lfb/misc/205_updated_information_on_tax_year_2019_individual_income_tax_reductions_under_wisconsin_acts_9_and_10_11_4_19.
- ²³ New Mexico Office of the Governor, "Gov. Lujan Grisham Recommits State to Film and Television Industry, Signs Legislation Aimed at Steadier Growth, Expansion," press release, March 29, 2019, <https://www.governor.state.nm.us/2019/03/29/gov-lujan-grisham-recommits-state-to-film-and-television-industry-signs-legislation-aimed-at-steadier-growth-expansion/>.
- ²⁴ See California Department of Finance, "Revenue Estimates, California Budget 2019-20," May Revision, <http://www.ebudget.ca.gov/2019-20/pdf/Revised/BudgetSummary/RevenueEstimates.pdf>.
- ²⁵ Connecticut Governor's Office, "Fact Sheet, 2019 Legislative Session," accessed May 19, 2020, <https://portal.ct.gov/-/media/Office-of-the-Governor/2019-Legislative-Proposals/SB-877--FS--An-Act-Concerning-Revenue-Items-to-Implement-the-Governors-Budget.pdf>.
- ²⁶ See New Mexico Legislative Finance Committee, "Fiscal Impact Report," accessed May 19, 2020, <https://www.nmlegis.gov/Sessions/19%20Regular/firs/HB0006.PDF>.
- ²⁷ See Ohio Department of Taxation, "Ohio Motor Fuel Tax Rates," accessed May 19, 2020, https://www.tax.ohio.gov/excise/motor_fuel/tax_rates.aspx.
- ²⁸ See Illinois Office of the Governor, "Gov. Pritzker Signs Historic Bipartisan \$45 Billion Rebuild Illinois Capital Plan," news release, June 28, 2019, <https://www2.illinois.gov/Pages/news-item.aspx?ReleaseID=20266>.
- ²⁹ See Gabriel Petek, "The 2019-20 Budget: Analysis of the Medi-Cal Budget," California Legislative Analyst's Office, February 13, 2019, <https://lao.ca.gov/Publications/Report/3935>.
- ³⁰ See California Department of Health Care Services, letter to Kristin Fan, Centers for Medicare and Medicaid Services, "California Request For Waiver For Manager Care Organization Tax," September 30, 2019, <https://www.dhcs.ca.gov/services/Documents/MCOTax09302019.pdf>.
- ³¹ See US Department of Health and Human Services' response letter addressed to the California Department of Health Care Services, January 30, 2020, <https://www.dhcs.ca.gov/services/Documents/CMS-Response-to-CA-Tax-Waiver-Request1-30-20.pdf>.
- ³² See Illinois Office of Management and Budget, "Illinois Budget in Brief, Fiscal Year 2020," February 20, 2019, <https://www2.illinois.gov/sites/budget/Documents/Budget%20Book/FY2020-Budget-Book/Fiscal-Year-2020-Budget-in-Brief.pdf>.

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