

RESEARCH REPORT

Turbulence Continues in State Tax Revenues in the First Half of 2019, Largely Related to TCJA Federal Tax Changes

State Tax and Economic Review, 2019 Quarter 1

Lucy Dadayan
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The Urban Institute's State and Local Finance Initiative regularly collects fiscal data from all 50 states and updates older official statistics to reflect actual state numbers. Visit our website [here](#) 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 the present (with a two-month time lag) 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 the present (with a two-month time lag) 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 the present (with a five-month time lag) on tax revenue from the individual income tax, corporate income tax, general sales tax, motor fuel tax.

Annual State Government Tax Revenue Collections versus Official Forecasts

Data from nearly all states from fiscal year 2015 onward (with a six-month time lag) for actual revenue collections and revenue forecasts for the individual income tax, corporate income tax, and general sales tax. Also includes forecast dates.

More datasets are coming soon, including data on gambling tax revenues and marijuana tax revenues.

Executive Summary

- **State and local government tax revenues** from major sources—personal income, corporate income, sales, and property taxes—increased 4.2 percent in the first quarter 2019 compared with the prior year. Growth was stronger than the 0.4 percent growth in the final quarter of 2018 but substantially weaker than in the earlier quarters of calendar year 2018.
- **State government tax revenues** from major sources rebounded in the first quarter of 2019 after experiencing declines in the final quarter of 2018. The growth varied among major revenue sources:
 - » **State personal income taxes** declined for the second consecutive quarter, reflecting a spike in state income tax payments in December 2017 and January 2018 in response to changes made in the Tax Cuts and Jobs Act (TCJA).
 - » **State sales taxes** have experienced uninterrupted growth since the first quarter of 2010, but this growth has lagged the rates in previous economic expansions. Following the US Supreme Court’s decision in *South Dakota v. Wayfair, Inc.* in June 2018 and consequent changes in state rules, we are expecting stronger increases in sales tax revenues going forward.
 - » **State corporate income taxes** soared in the first quarter of 2019, marking the fourth consecutive quarter of double-digit growth. However, state officials caution that this double-digit growth is also likely caused by the changes made in the TCJA, and corporate income taxes are likely to level off or even decline.
- Year-over-year growth in **local government tax revenues** from major sources was 5.9 percent in the first quarter of 2019, considerably higher than the growth observed throughout calendar year 2018.
 - » **Local property taxes** increased 6.8 percent in the first quarter of 2019 compared with the same quarter in 2018, which is substantially stronger than the 2.0 percent average growth in the prior four quarters. Local property taxes, just like state personal and corporate income taxes, fluctuated wildly in the recent quarters, partially in response to TCJA changes.
- **Preliminary data for the second quarter of 2019** indicate double-digit growth in overall state tax revenue collections, mostly driven by the surge in personal income tax revenues.

- » After declines in two consecutive quarters, **state personal income tax** revenues increased 18.9 percent in the second quarter of 2019, mostly because of higher final payments and delayed estimated payments filed in April. Windfall “April surprises” were highly anticipated and reflect a shift in income tax filing and payments. The surge in personal income tax revenues made up for earlier shortfalls in most states and put the revenues back on track for the states to close the budget books for fiscal year 2019 without shortfalls. The within-year volatility in personal income tax collections was caused by the TCJA because it significantly changed the timing of income tax payments.
 - » **State corporate income tax** collections showed double-digit year-over-year growth for the fifth consecutive quarter. However, corporate income tax revenues are still below their pre-recession peaks.
 - » Year-over-year growth in **state sales tax** collections in the second quarter of 2019 was solid in most states and above 5.0 percent in 23 states. The recent strength in sales tax collections is largely because of the *Wayfair* ruling and states’ responses to it.
- **Economic factors** driving revenue growth were all positive in the first quarter of 2019 despite overall concerns that the economic expansion, now the longest on record, may soon be over and that the US economy may be headed for a downturn. As always, growth in economic factors must be viewed with caution.
 - » Real **gross domestic product** was 2.7 percent higher for the nation in the first quarter of 2019 than in the same quarter in 2018. Overall, state economies have grown at a slower pace than have state tax revenues in the post–Great Recession period. The discrepancy in growth rates has become more common in the most recent years, heightening revenue volatility, and likely reflects timing decisions in personal income tax revenue payments in response to federal tax policy changes.
 - » The **unemployment rate** was 3.9 percent in the first quarter of 2019. Unemployment rates have seen steady declines since 2010, largely driven by improved job prospects.
 - » **Employment** grew 1.4 percent in the first quarter of 2019 compared with one year earlier. However, there were large disparities among the states, with 32 states reporting growth below the national average. Overall employment growth has slowed in the recent months.
 - » **Personal consumption expenditures** have been rebounding after being hit hard by steep declines in oil and gas prices in 2014–15. Spending on services was solid, while spending on both durable and nondurable goods has weakened in the first quarter of 2019 compared with the growth rates observed in the second half of 2018.

- » **Housing prices** increased 5.6 percent in nominal terms in the first quarter of 2019, which is weaker than the growth rates observed throughout calendar year 2018. Housing prices have been rising since the declines that immediately preceded the Great Recession. However, growth was not even across all 50 states, with housing prices still below their prerecession peaks in 9 states.

Trends in State and Local Tax Revenues

State and local government tax revenues have fluctuated wildly since the passage of the Tax Cuts and Jobs Act (TCJA) in late December 2017, which was the largest tax overhaul since 1986. The TCJA is very complex and includes over 100 new provisions. More than a year after its passage, the Internal Revenue Service (IRS) is still issuing guidance to clarify various provisions, and states continue to incorporate some of the new provisions of the federal tax code into their own tax codes. Further, some taxpayers are still learning about the implications of various provisions under the TCJA and exploring options for minimizing their tax liability. For example, some individual taxpayers continue adjusting 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 evaluating whether to change from a pass-through to a C-corporation to take advantage of lower corporate income tax rates.

State and local government tax revenues rebounded in the first quarter of 2019 after much weaker growth in the fourth quarter of 2018. However, year-over-year growth was substantially weaker in the first quarter of 2019 than in the final quarter of 2017 and the first three quarters of 2018. Most of the recent weakness was attributable to personal income tax declines following large prior increases shortly after the passage of the TCJA. This pattern reflected taxpayer shifting of state income tax payments and receipt of bonuses. In summary, because the TCJA placed a \$10,000 annual cap on the federal deduction for taxpayers' state and local taxes (SALT) from taxable income beginning in January 1, 2018, some high-income taxpayers prepaid their personal income and property taxes to take advantage of the uncapped SALT deduction in 2017. Firms also may have shifted nonwage income from 2018 to 2017 to claim a deduction at the higher corporate income tax rate. Individual taxpayers may have increased estimated payments or changed the time at which they realized capital gains or losses. (Thus, some of the revenue weakness in the fourth quarter of 2018 and the first quarter of 2019 is related to especially strong revenues in December 2017 and January 2018. For more discussion of these phenomena please see prior *State Tax and Economic Review* quarterly reports).

Table 1 shows state and local government tax revenues from major sources for the first quarter of 2018 and the first quarter of 2019 as well as the nominal percentage change between both quarters and the average quarterly year-over-year growth in the prior four quarters. Growth varied substantially by source of revenue and level of government. Major findings include the following:

- **State and local government revenues** from major sources increased 4.2 percent in the first quarter of 2019 compared with a year earlier, while the average quarterly growth rate in the prior four quarters was slightly stronger at 4.9 percent.
- **State government revenue** from major sources increased 2.7 percent in the first quarter of 2019 relative to a year ago, while the average quarterly year-over-year growth rate in the prior four quarters was 6.3 percent. After strong performance for four consecutive quarters, **state personal income tax** revenues declined in the final quarter of 2018 and the first quarter of 2019. The decline in state personal income tax revenues was 2.4 percent in the first quarter of 2019 compared with the first quarter of 2018; in contrast, the average quarterly year-over-year growth rate in the prior four quarters was 6.0 percent. **State sales tax** collections showed solid growth of 5.6 percent in the first quarter of 2019 compared with the first quarter of 2018, slightly stronger than the average quarterly year-over-year growth rate of 5.3 percent in the prior four quarters. **State corporate income tax** revenues soared 40.9 percent in the first quarter of 2019 compared with a year earlier, marking the fourth consecutive quarter of double-digit growth. However, state corporate income tax revenues remain below their pre-recession peaks.
- **Local government revenue** from major sources increased 5.9 percent from a year earlier in the first quarter of 2019, considerably stronger than the 2.7 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 6.8 percent from the prior year, which is stronger than the 2.0 percent average quarterly year-over-year growth in the prior four quarters. The weaker growth throughout 2018 likely reflects changes in the timing of payments and not underlying changes in the overall levels of local property tax revenues; the TCJA created incentives for high-income taxpayers to accelerate property tax payments from 2018 into 2017, which resulted in lower local property tax revenue growth rates throughout 2018. **Local sales taxes** grew 5.2 percent in the first quarter of 2019. Growth in **local corporate income taxes** was strong at 7.8 percent, while **local personal income taxes** declined 4.4 percent (again, likely affected by the timing of payments), but these constitute a very small share of local revenues.

TABLE 1

State and Local Government Tax Revenue Trends

Millions of dollars

Tax source	2018 Q1	2019 Q1	Y-O-Y percentage change	Average quarterly Y-O-Y growth rate, prior four quarters
Total state and local major taxes	\$354,243	\$369,170	4.2	4.9
State major taxes	\$188,169	\$193,245	2.7	6.3
Personal income tax	99,744	97,383	(2.4)	6.0
Corporate income tax	7,302	10,288	40.9	13.0
Sales tax	76,776	81,061	5.6	5.3
Property tax	4,346	4,513	3.8	11.6
Local major taxes	\$166,074	\$175,925	5.9	2.7
Personal income tax	10,233	9,785	(4.4)	6.1
Corporate income tax	2,516	2,712	7.8	2.4
Sales tax	21,328	22,439	5.2	5.4
Property tax	131,997	140,989	6.8	2.0

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

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

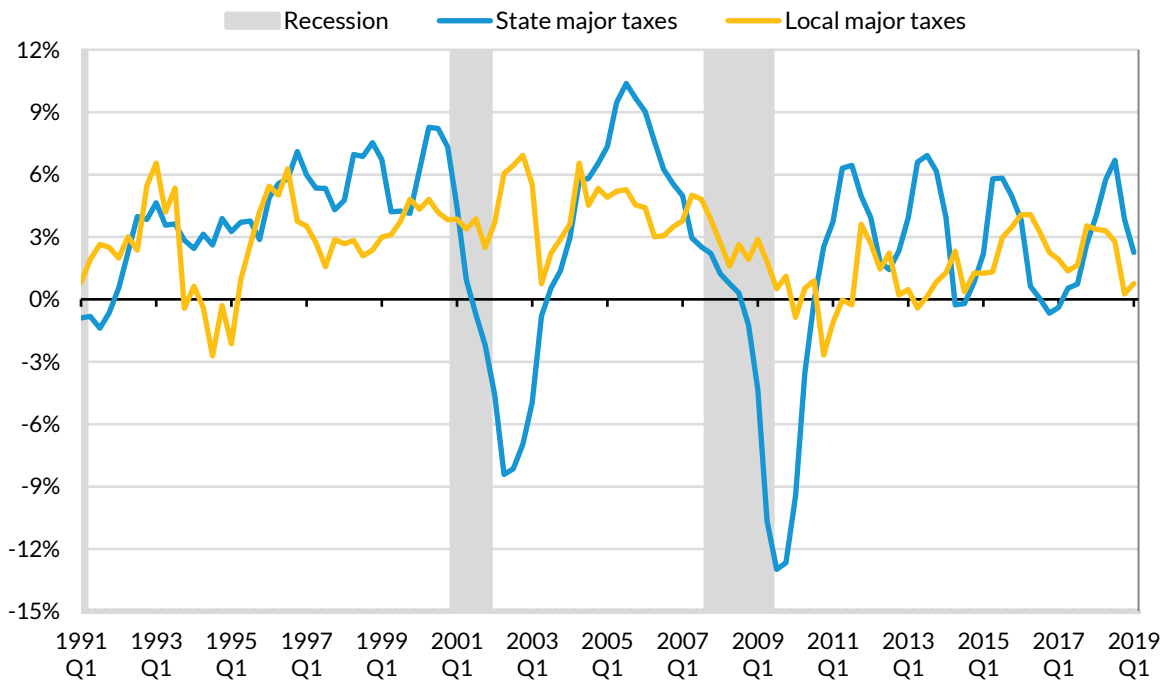
Figure 1 shows longer-term trends in state and local tax collections, specifically, the year-over-year percentage change in the four-quarter moving average of inflation-adjusted state and local tax collections from major sources: personal income tax, corporate income tax, sales tax, and property tax. As shown in Figure 1, state tax revenues from major sources 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, most recently, by the impact of taxpayer behavior in response to the passage of the TCJA. Growth in both state and local taxes from major sources was weak, marking the second consecutive quarter of subdued growth. State taxes from major sources, adjusted for inflation, grew 2.3 percent in the past four quarters relative to the year earlier, which is weaker than the growth in the prior five quarters. The four-quarter moving average of inflation-adjusted local taxes from major sources grew 0.8 percent in the first quarter of 2019, which is slightly stronger compared to 0.3 percent growth observed in the final quarter of 2018, but weaker compared to the rates observed since the fourth quarter of 2014.

Most local governments rely heavily on property taxes, which are relatively stable and respond slowly to declines in property value. 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 likely reflect the timing of payment shifts in response to the TCJA.

FIGURE 1

State and Local Major Tax Revenues Showed Subdued Growth

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



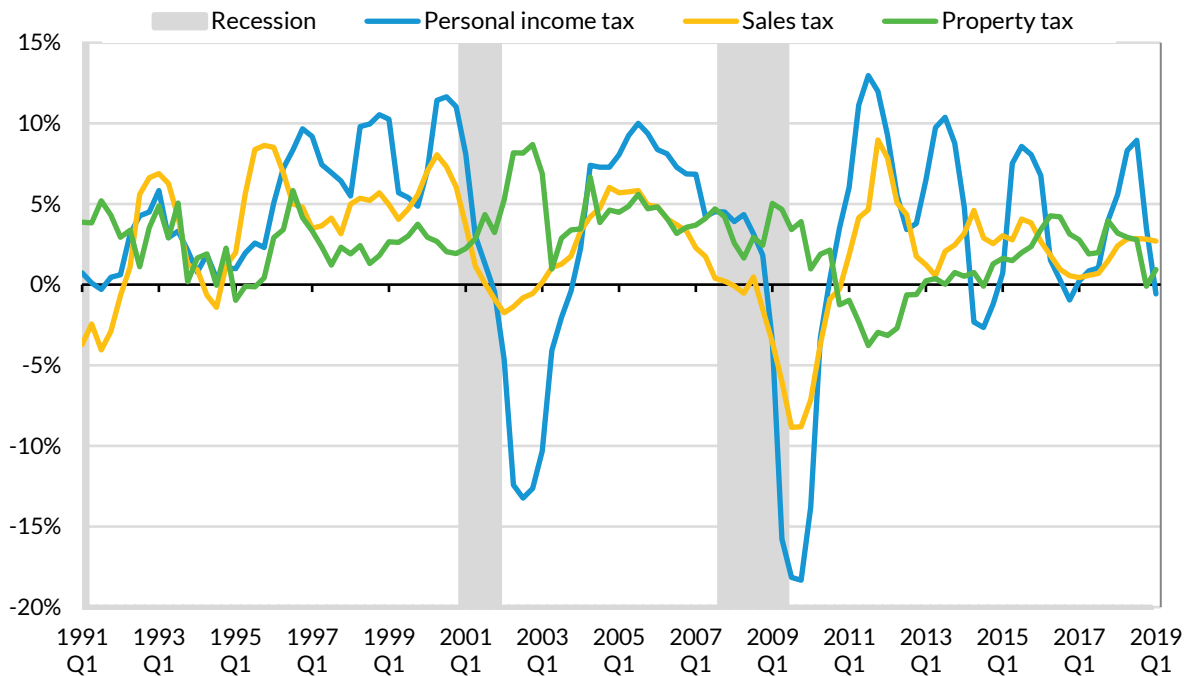
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Source: US Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP), analysis by the author.

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.

Figure 2 breaks out inflation-adjusted state and local personal income, sales, and property tax revenue over the same period. The graph shows the large fluctuations in state and local personal income tax collections in recent years. The year-over-year growth in state-local personal income tax revenues was negative 0.6 percent in the first quarter of 2019, which contrasts with strong growth observed in the first half of 2018. State and local sales tax revenues grew 2.7 percent in the first quarter of 2019, which is relatively steady compared with the growth observed in 2018. State and local property taxes, nearly all of which are collected by local governments, grew 0.9 percent from a year earlier in the first quarter of 2019.

FIGURE 2
Declines in State-Local Personal Income Tax Revenues
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 2019 Quarter 1

Total state tax revenue grew 2.6 percent in nominal terms and 0.6 percent in inflation-adjusted terms in the first quarter of 2019 relative to a year earlier, according to US Census Bureau data adjusted by the author.¹ The weakness in overall state tax revenues was mostly driven by the declines in personal income tax revenues; all other major sources of state tax revenues grew. Personal income tax revenues declined 2.4 percent in the first quarter of 2019 relative to a year earlier, marking the second consecutive quarter of decline. However, declines in personal income tax revenues in the fourth quarter of 2018 and the first quarter of 2019 compared to prior year levels were largely expected because state income tax revenues were artificially boosted in December 2017 and January 2018. Corporate income tax collections grew by double digits for the fourth consecutive quarter, while sales tax and motor fuel tax collections grew 5.6 and 1.3 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 rates for the past eight years, between the first quarter of 2010 and the first quarter of 2019. Despite the prolonged economic expansion, the inflation-adjusted average annual growth rate since 2010 was only 2.8 percent for overall state tax revenues.

There were large regional disparities in terms of year-over-year growth in total state tax revenues in the first quarter of 2019 (Table A2). Growth in the median state was 2.3 percent, compared with the national average of 2.6 percent growth. State tax revenues declined in the Plains and Rocky Mountain regions by 3.6 and 2.3 percent, respectively. The Southwest and Far West regions had the strongest growth at 7.7 and 7.3 percent, respectively.²

Even within regions there was variation in revenue growth, with all regions but the Southwest having states that experienced annual growth and declines in revenues. Thirty-two states reported growth in total state tax revenue collections for the first quarter of 2019 relative to a year prior, while 18 states reported declines. Growth in state tax revenues was particularly strong in Alaska and New Mexico, both of which are oil- and mineral-dependent states and rely heavily on severance taxes. The steep oil price declines throughout 2015 and early 2016 led to substantial declines in severance tax collections in these states and depressed states' overall economic activity, leading to prior weakness in overall state tax collections (Dadayan and Boyd 2016). Therefore, the strong growth in overall state tax collections in these states mainly reflects revenue bouncing back from depressed levels in previous years.

Personal Income Taxes

State personal income tax revenues declined 2.4 percent in nominal terms and 4.3 percent in inflation-adjusted terms for the first quarter of 2019 compared with the same period in 2018, marking the second consecutive quarter decline. Declines in personal income tax collections were anticipated because of earlier taxpayer income-shifting behavior. As cautioned in the previous *State Tax and Economic Review* quarterly report, the strong growth in personal income tax collections in the final quarter of 2017 and first half of 2018 was mostly attributable to the temporary impact of the federal policy changes that created strong incentives for some high-income taxpayers to shift income and deductions between tax years. Moreover, personal income tax collections in the fourth quarter of 2017 and first quarter of 2018 were boosted by extension payments related to tax year 2017. In addition to behavior changes related to the TCJA, some of these extension payments were also likely attributable to one-time payments related to the federal Emergency Economic Stabilization Act of 2008, which gave hedge fund managers until December 31, 2017, to repatriate foreign earnings. Therefore, it was

expected that personal income tax revenue would be weak in the final quarter of 2018 and first quarter of 2019. Average quarterly year-over-year growth rate in state personal income tax collections was 5.8 percent in nominal terms and 4.1 percent in real terms since 2010.

Personal income tax collections declined in all regions but the Rocky Mountain, Far West, and Southwest, where income tax revenues grew 0.3, 5.1, and 18.2 percent, respectively. The New England region saw the largest decline at 11.9 percent, largely driven by Connecticut, followed by the Plains region at 8.2 percent.

Overall, personal income tax collections declined in 23 states in the first quarter of 2019, with six states reporting double-digit year-over-year declines. Personal income tax revenues declined substantially in Idaho, mostly because of the reduction in its income tax rates. In dollar values, New York had the largest decline in personal income tax revenue collections at \$1.9 billion, followed by Connecticut at \$0.9 billion. Both states rely heavily on higher-income taxpayers and on nonwage income, and the declines were caused by income-shifting behavior. In Connecticut, declines were also attributable to legislative changes that changed the taxation of income (discussed below). New Mexico had the strongest growth in personal income tax collections, likely because of the rebounding oil and gas industry in the state.

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 individual components of personal income tax collections. The data presented here were collected by the author directly from the states. These data are more current than the Census Bureau data and thus provide a preliminary view of income tax collections for the second quarter of 2019.

Table 2 shows growth for each major component in the past eight quarters, illustrating the boost in personal income tax collections in the final quarter of 2017 and the first quarter of 2018 and the large declines in the fourth quarter of 2018. These changes were mostly observed in estimated payments and payments with final returns, which were artificially shifted between tax years as a result of the cap on SALT deductions under the TCJA. However, preliminary data show strong growth in personal income tax collections in the second quarter of 2019, mostly driven by growth in estimated and final payments.

TABLE 2

Growth in State Government Personal Income Tax Components*Year-over-year nominal percentage change*

Personal income tax components	State FY 2018				State FY 2019			
	2017 Q3	2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2
Withholding	5.2	7.2	8.9	7.4	6.2	6.7	1.2	5.3
Estimated payments	1.8	52.7	31.0	12.8	18.2	(70.8)	(6.1)	16.0
Final returns	1.4	15.1	15.2	8.4	12.8	(1.4)	18.5	40.5
Refunds	4.9	(7.1)	6.1	0.9	14.3	16.8	(0.3)	(1.2)
PIT total	4.5	15.9	14.8	10.3	7.8	(10.4)	0.5	18.6

Source: Individual state data, analysis by the author.

Notes: The percentage changes for total personal income tax differ from data reported by the US Census Bureau.

FY – fiscal year; PIT = personal income tax; Q = quarter. 2019 Q2 data is preliminary.

Withholding

Withholding is usually a good indicator of the current strength of personal income tax revenue 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 eight quarters for all states with a broad-based personal income tax.

The average quarterly year-over-year growth rate in withholding was 4.8 percent in state fiscal year 2019, compared with the average growth rate of 7.2 percent in state fiscal year 2018. However, the median growth rate in withholding was 5.2 percent in state fiscal year 2019, only slightly weaker than the 5.3 percent median growth rate in state fiscal year 2018.

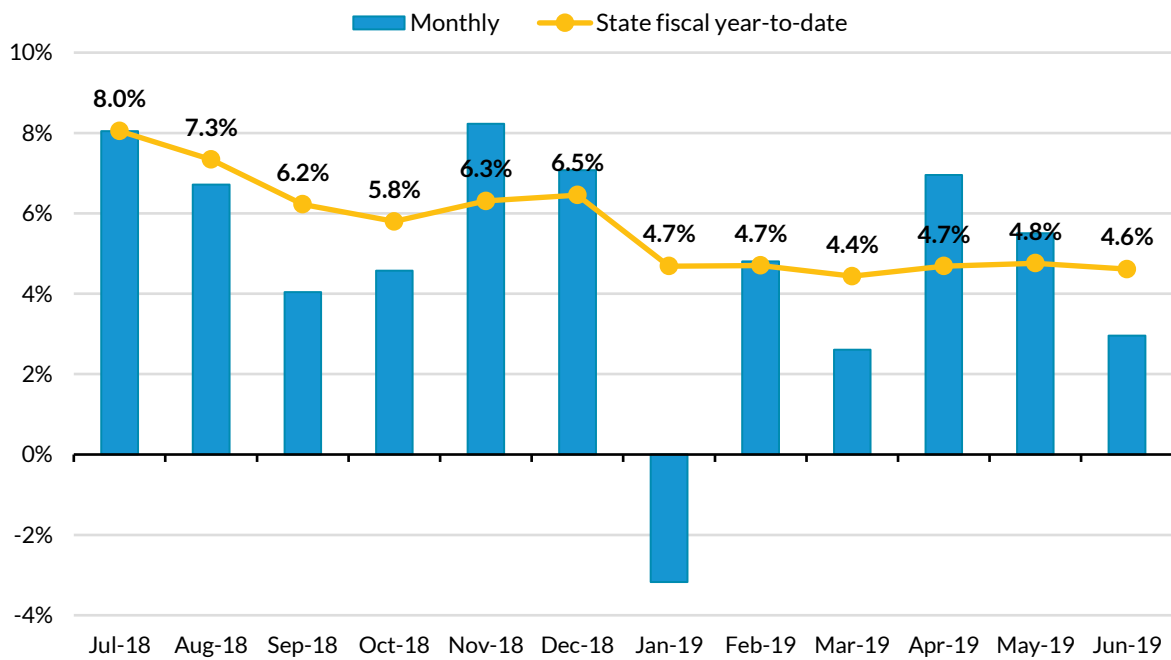
The average growth in withholding was substantially stronger in the final quarter of 2017 as well as in the first and second quarters of 2018. In the first quarter of 2018, year-over-year withholding increased 8.9 percent, which was the strongest growth since the first quarter of 2011, when withholding grew 8.1 percent. The strength in withholding, however, was partially driven by one-time bonuses paid by employers in response to the TCJA. In contrast, growth in year-over-year withholding was consequently weak in the first quarter of 2019, at 1.2 percent. However, preliminary data for the second quarter of 2019 indicate that growth in withholding was strong at 5.3 percent (Table A3).

All regions showed year-over-year growth in withholding in the second quarter of 2019. The Far West region had the strongest growth in the second quarter of 2019 at 9.3 percent, while the Plains and Rocky Mountain regions had the weakest growth at 2.8 percent each.

Year-over-year growth in withholding was widespread across states in the second quarter of 2019. Thirty-five of 39 states for which we have complete data reported growth in withholding in the second quarter of 2019 compared with a year earlier. Idaho, Iowa, Kentucky, and Missouri reported declines in

withholding in the second quarter of 2019. The declines in these states are likely attributable to reductions in their state income tax rates. Iowa's tax reform legislation reduced tax rates for all income brackets effective January 1, 2019.³ Missouri eliminated one of the top income tax brackets and reduced the top income tax rate to 5.4 percent effective January 1, 2019.⁴ Declines in withholding in Idaho and Kentucky are likely caused by ripple effects from the legislated changes last year. In 2018, lawmakers in Idaho passed tax reform legislation that included various changes, including a 0.475 percentage-point reduction for all tax brackets.⁵ Officials in Kentucky replaced its six-bracket graduated income tax system with a flat 5 percent rate effective January 1, 2018. Previously, the top income tax rate was 6 percent.⁶ As is often the case, tax rate reductions led to tax revenue reductions.

FIGURE 3
Withholding Declined in January of 2019 but Rebounded Since Then
Percentage change in withholding tax collections compared with the previous year, state fiscal year 2019 monthly and year-to-date



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

Figure 3 shows monthly and year-to-date growth rates in withholding through June 2019.⁷ Withholding declined in January 2019, likely because of higher levels of withholding in January 2018 caused by one-time shifting of bonus payments from December 2017 after Congress passed the TCJA. In the following months, growth in withholding resumed. However, growth in withholding was weak in

June 2019, at 3.0 percent. According to preliminary data, states collected around \$338 billion in withholding revenues from July 2018 through June 2019 (which corresponds to fiscal year 2019 for 46 states). This represents approximately 81 percent of overall personal income tax collections. Overall, withholding grew 4.6 percent over this period, highlighting that despite declines in income tax revenues at the end of 2018, withholding has been relatively strong for most states.

Estimated Payments

The highest-income taxpayers generally make estimated tax payments (also known as declarations) on their income not subject to withholding. This income often comes from investments, such as capital gains realized in the stock market, or from self-employment or business income. Estimated payments normally represent a small share of overall income tax revenues but due to their volatility can have a large impact on the direction of overall collections. Estimated payments accounted for only 6.5 percent of total personal income tax revenues in the fourth quarter of 2018 but accounted for 24.0 percent in the first quarter of 2019 and 25.6 percent in the second quarter of 2019.

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 (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 on 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 the timing in 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, using that payment as a harbinger for the current strength of the economy and income taxes is usually difficult. The second and third estimated payments are easier to interpret because they are almost always related to the current year. 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.

In the 38 states for which we have complete data, the median fourth estimated payment (attributable to tax year 2018) decreased by a steep 38.8 percent from last year, which contrasts with a 39.1 percent growth in the median fourth estimated payment for tax year 2017 ([Table A4](#)).

The declines were widespread across the states; estimated payments filed in the months of December 2018 and January 2019 (the last payment for tax year 2018) declined by double digits in all 38 states compared with levels a year earlier. Most of the declines reflected the large surge in estimated payments in December 2017 caused by the temporary impact of the TCJA.

The median estimated payment for December 2017 was unusually strong, mostly in response to the TCJA, which as noted led some high-income taxpayers to accelerate state income tax payments into December 2017 to take advantage of the uncapped SALT deduction for tax year 2017. Estimated payments grew from \$10 billion in December 2016 to \$16.9 billion in December 2017, an increase of 68.8 percent. Estimated payments in December 2018 were \$3.0 billion; this is a steep decline from December 2017 but is also below December 2016 estimated payments. Although state revenue forecasters projected declines in estimated income tax payments for December 2018, the actual declines were far greater than those forecasts, particularly in states with a larger share of high-income taxpayers. The largest declines in dollar amounts were in California and New York, where estimated payments declined by \$6.6 billion (or 85.8 percent) and by \$2.7 billion (or 88.3 percent), respectively, in December 2018 compared with December 2017. Steep declines in California and New York are not surprising because the two states have the largest share of taxpayers with income over \$1 million. Taxpayers in California and New York constitute about 12 and 6 percent of all US taxpayers but are the home states for about 17 and 12 percent, respectively, of all millionaire taxpayers. Estimated state income tax payments in California and New York made up approximately 48 percent of the total estimated payments for the nation in December 2018 and 64 percent of estimated payments in December 2017.

The median first estimated payment for tax year 2019 (filed in April 2019) was 18.0 percent higher than the median first estimated payment filed in April 2018. Most of the growth in terms of dollar amount was in New York, where first estimated payments grew by \$2.5 billion or 57.1 percent in April 2019 compared with April 2018. The first estimated payment increased in 33 states, with 25 states reporting double-digit growth relative to a year earlier. Most of the growth in the first estimated payment in New York and elsewhere is likely attributable to tax year 2018 because some taxpayers opted to wait and pay a greater percentage of their tax year 2018 liabilities through extensions. First estimated tax payments declined in Arizona, Arkansas, Connecticut, Maryland, and West Virginia. The largest decline was in Arizona, at 25.1 percent, mostly because of processing delays that pushed a significant amount of deposit payments into May 2019.⁸

The median second estimated payment for tax year 2019 (filed in June 2019) was 10.1 percent higher than the second estimated payment filed in June 2018. However, the national average growth for the

second estimated payment was only 1.2 percent, mostly because of large declines in dollar values in California and Connecticut.

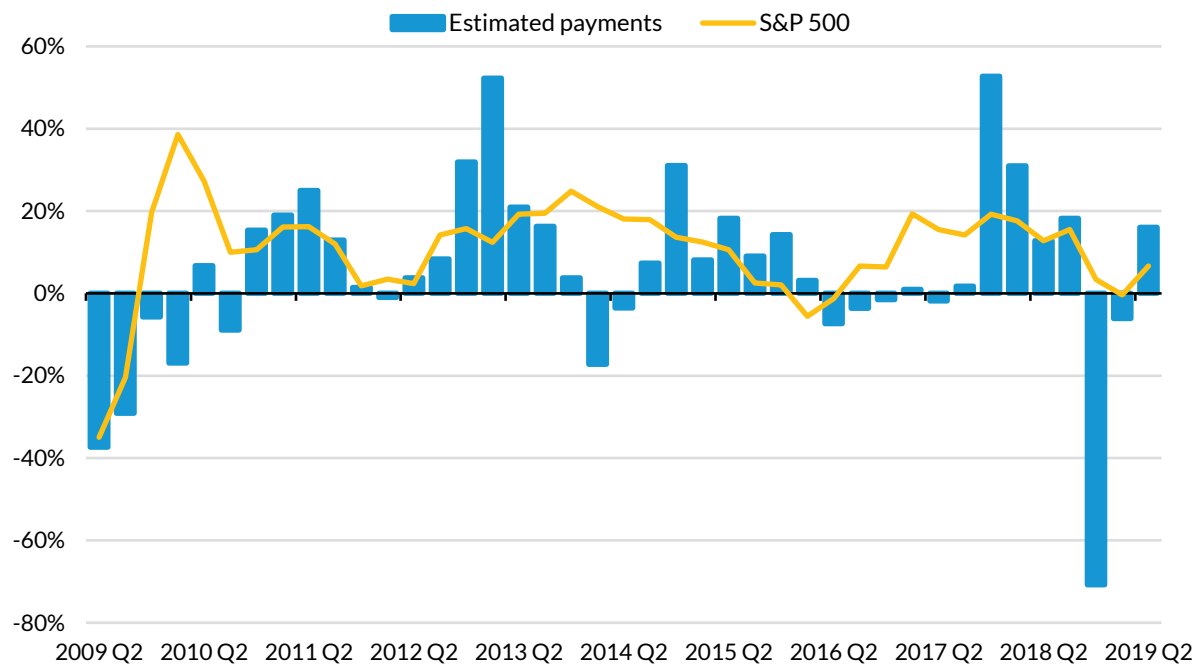
Figure 4 shows year-over-year percentage change by quarter in estimated payments and in the S&P 500 Index for the past 10 years. The longer-term trends indicate large volatility in estimated payments, which is partially caused by volatility in the stock market but is also affected by various federal policy changes and taxpayers' subsequent behavioral changes in 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 later years. This led to large declines in the year-to-year comparison 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 are 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 the months of December 2018 and January 2019. The stock market saw large fluctuations, with the S&P 500 Index declining an average of 3.6 percent in December 2018 compared with December 2017. The S&P 500 Index further declined an average of 6.5 percent in January 2019 compared with January 2018 before rebounding later in the year. In response to declines in realized capital gains, some taxpayers may have reduced their December and January estimated payments. After two consecutive quarter declines, estimated payments rebounded and grew 16.0 percent in the second quarter of 2019; growth in the stock market was weaker, at 6.6 percent, in the same period.

In general, estimated payments as a share of overall personal income taxes have grown over time. In state fiscal year 2018, estimated payments made up 22.3 percent of total personal income tax collections, up from 17.9 percent in fiscal year 2010 and 20.0 percent in fiscal year 2014. Estimated payments as share of total personal income tax collections have declined slightly in state fiscal year 2019, representing around 19.4 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.

FIGURE 4

Large Volatility in Estimated Payments

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



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

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 income tax return deadline.⁹ Final payments accounted for 6.7 percent of all personal income tax revenues in the first quarter of 2019 and 26.7 percent in the second quarter of 2019.

Table A5

shows year-over-year growth in final payments for the most recent eight quarters. Total final payments showed strong growth in the final quarter of 2017 and the first quarter of 2018 compared with levels a year earlier. The strong growth was likely attributable to the passage of the TCJA as discussed above. Final payments declined 1.4 percent in the fourth quarter of 2018 but resumed growth in first and second quarters of 2019. Growth in final payments was robust at 40.5 percent in the second quarter of 2019 compared with the prior-year levels.

Growth rates in final payments was widespread across the states. In the 37 states for which we have complete data, final payments increased by double digits in 36 states in the second quarter of 2019, with 12 states reporting over 50 percent growth relative to a year earlier. Connecticut was the only state where final payments declined in the second quarter of 2019, mostly because of legislated changes as discussed below.

Refunds

Personal income tax refunds usually represent a small share of total personal income tax revenues in the third and fourth quarters of the tax year and a much larger share in the first and second quarters of the tax year.

Refunds declined 0.3 percent in the first quarter of 2019 and 1.2 percent in the second quarter of 2019. In total, states paid out \$296 million less in refunds in the second quarter of 2019 than in the same quarter in 2018. Overall, 22 states paid out less in refunds in the second quarter of 2019 than in the first quarter in 2018. California had the largest share of refund payouts (\$5.2 billion, or 22.4 percent of total refunds) followed by New York (\$4.3 billion, or 18.3 percent of total refunds) in the second quarter of 2019.

Declines in refund payouts in the first and second quarters of 2019 are partially caused by income tax cuts under the TCJA, which effectively reduced 2018 federal income tax obligations for average taxpayers. Shortly after the passage of TCJA, the IRS published guidelines for tax withholding. However, many taxpayers didn't update their W-4 forms (employees withholding certificate), which essentially meant larger paychecks for most taxpayers throughout the year, but it also meant lower prepayment of taxes. As a result, some taxpayers saw reductions in their refunds when they filed their income tax returns for tax year 2018. Further, some states delayed processing individual tax returns. While volatility is typical during the income tax filing season, it appears that refunds are down, even though total tax liability has dropped in tax year 2018 for most taxpayers.

Actual versus Forecasted Income Tax Revenues During the Tax Filing Season

We collected data for those states that provide actual and forecasted data of monthly personal income tax revenue. Such information was available and easily retrievable for 24 states, and the data are presented in [Table 3](#) for the months of April 2019 and May 2019 combined, which are the two most important months in the year because of the income tax return filing due date.

In 23 states, actual personal income tax collections in April/May 2019 were substantially higher than in April/May 2018. The strong growth in personal income tax collections in April/May 2019 should be viewed in conjunction with the lower collections in December 2018 and January 2019. As noted in prior *State Tax and Economic Review* quarterly reports, personal income tax revenues saw steep declines in December 2018 and January 2019, largely observed in nonwage income and as a result of the TCJA, which affected taxpayer filing behavior. The substantial growth in April/May 2019 indicates that many taxpayers likely shifted estimated payments from December 2018 and January 2019 to extension and final payments in April/May 2019.

TABLE 3

Actual versus Forecasted State Personal Income Tax Revenues for April and May

Dollar amounts in millions

	April/May 2018 actual	April/May 2019 actual	Percent change, 2019 vs 2018	April/May 2019 forecast	April/May 2019 actual	Percentage variance, April/May 2019 actual from forecast
Median (24 states)			20.4			12.5
Average (24 states)	\$51,187.8	\$65,434.0	27.8	\$56,579.3	\$65,434.0	15.6
Arizona	932.7	1,342.2	43.9	1,053.1	1,342.2	27.5
Arkansas	563.1	647.7	15.0	556.6	647.7	16.4
California	18,992.9	24,354.5	28.2	19,842.4	24,354.5	22.7
Colorado	1,601.6	2,087.1	30.3	2,035.7	2,087.1	2.5
Idaho	441.5	594.4	34.7	580.1	594.4	2.5
Illinois	4,579.1	5,552.4	21.3	4,293.7	5,552.4	29.3
Indiana	1,389.7	1,606.0	15.6	1,527.8	1,606.0	5.1
Kansas	829.8	1,086.0	30.9	948.3	1,086.0	14.5
Maine	355.9	425.5	19.5	375.4	425.5	13.3
Massachusetts	3,463.0	4,328.0	25.0	3,538.0	4,328.0	22.3
Mississippi	435.8	477.1	9.5	454.8	477.1	4.9
Montana	286.4	352.5	23.1	320.5	352.5	10.0
Nebraska	515.8	634.0	22.9	579.5	634.0	9.4
New Mexico	390.2	325.1	(16.7)	294.8	325.1	10.3
New York	8,039.0	11,700.0	45.5	11,462.0	11,700.0	2.1
North Dakota	119.8	135.5	13.2	117.1	135.5	15.8
Ohio	1,624.6	2,003.5	23.3	1,604.4	2,003.5	24.9
Oklahoma	514.5	578.4	12.4	605.4	578.4	(4.5)
Pennsylvania	3,008.5	3,486.1	15.9	3,197.8	3,486.1	9.0
Rhode Island	270.0	317.1	17.4	289.8	317.1	9.4
South Carolina	676.0	854.1	26.3	674.6	854.1	26.6
Vermont	209.8	238.8	13.8	201.2	238.8	18.7
West Virginia	424.7	489.4	15.2	438.3	489.4	11.7
Wisconsin	1,523.3	1,818.6	19.4	1,588.2	1,818.6	14.5

Source: Individual state data, analysis by the author.

April revenues are always critical when it comes to understanding what state tax revenues will look like and how personal income tax collections relate to underlying economic conditions. Although April

surprises are not uncommon, growth in income tax collections this April was the largest in the past 10 years. The surge in April personal income collections should be viewed as one-time in nature and reflects individuals postponing filing taxes and learning about how filing works under the new federal rules. Income tax collections will likely continue to fluctuate in the coming months as individuals who filed for extensions file their taxes and states continue to evaluate and adjust their tax codes to the provisions of the TCJA. This will include incorporating provisions of the TCJA into their own tax codes and examining potential changes to their income tax systems. Thus, while annual and quarterly income tax revenues are driven by the economy, the timing, especially after changes in policy, can vary.

Personal income tax collections grew by double digits in April/May 2019 in 22 of 24 states for which we have detailed data, with an average growth of 27.8 percent and a median growth of 20.4 percent. The largest growth in terms of dollar amounts were in California and New York, where income tax collections grew by \$5.4 billion and \$3.7 billion, respectively, in April/May 2019 compared with April/May 2018.

In 23 states, actual personal income tax collections in April/May 2019 were above the forecasts, with an average underestimate of 15.6 percent and a median underestimate of 12.5 percent. Some states prepared revenue forecasts for April/May 2019 before the steep declines in income tax collections in December 2018 and January 2019; others updated revenue forecasts in February through April. Ultimately, most states underestimated personal income tax revenues. The opposite was true for December 2018 and January 2019: most states overestimated personal income tax collections. Although state revenue forecasters in most states factored in taxpayers' behavioral responses to the federal tax policy changes, they warned that forecasts were subject to higher-than-usual margins of error. When income tax revenue collections declined steeply in December 2018 and January 2019, some state officials expressed concern about real declines in revenues; others held out hope and correctly anticipated rebounding income tax revenues later in the filing season in April/May 2019 and, hence, finishing the state fiscal year 2019 on target without needing to revise forecasts downward. Some states did revise forecasts and subsequently ended up ahead of their revised forecast after April/May revenues were received. The shifting of income tax revenues from December and January to April/May was especially problematic for New York because the state's fiscal year runs from April 1 to March 31, which means the revenue shifting over the tax season fell across two fiscal years. Thus, after New York had passed its new budget with lower-than-expected revenues and shortfalls, these revenues showed up in April and May. New York saw a surge in income tax collections in April 2019, which eased the fear that some high-income taxpayers might have changed their residency to avoid higher state income tax payments.

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 of corporate income taxes with little overall budgetary impact. Average quarterly year-over-year growth rates in state corporate income tax collections were 4.1 percent in nominal terms and 2.3 percent in real terms since 2010 (Table A1).

Corporate income tax revenue saw steep declines during the Great Recession and are still below the peak levels observed before the Great Recession, despite the strong growth observed in the post-TCJA period. Corporate income tax receipts grew by double digits in the first quarter of 2019, marking the fourth consecutive quarter of double-digit growth. Corporate income tax revenues soared 40.9 percent in nominal terms and 38.2 percent in inflation-adjusted terms in the first quarter of 2019 compared with a year earlier. However, the strong growth observed in the past year is likely temporary and attributable to the TCJA, which created an incentive for corporations to shift profits from tax year 2017 into tax year 2018 because of the lower federal corporate tax rates. Moreover, growth in the median state was only 12.1 percent in the first quarter of 2019.

Despite overall growth, large disparities exist among states and regions. Corporate income tax collections increased in all regions except the Rocky Mountain, where collections declined 29.9 percent. The Mideast region saw the largest growth at 91.4 percent, followed by the New England region at 75.6 percent. The strong growth in the New England region is attributable to Connecticut and Massachusetts, while in the Mideast region it is attributable to New Jersey and New York. The surge in corporate income tax revenues in these states is likely caused by extension payments for tax year 2018. In addition, strong corporate income tax growth in Connecticut is largely attributable to legislative changes (discussed below).

Overall, corporate income tax collections declined in 13 states but increased in 28 states in the first quarter of 2019, with 24 states reporting double-digit year-over-year growth.

The TCJA included the most significant structural changes to the federal corporate income tax since 1986, and the IRS is still issuing guidance for various key provisions. Therefore, many corporate taxpayers are still waiting to react, and it is unclear how taxpayer behavior will evolve.

State corporate income tax revenues are expected to fluctuate further in the coming months because of the passage of the TCJA, which reduced the federal corporate income tax rate from 35 percent to 21 percent and substantially modified the corporate income tax base. The TCJA also

eliminated the corporate alternative minimum tax. With all these changes, states are anticipating that some pass-through businesses will find it beneficial to restructure as C-corporations and take advantage of lower corporate income tax rates. However, some businesses may not restructure if they are worried about whether future Congresses might raise tax rates. State revenue forecasters may not fully understand how businesses are responding to the TCJA for a long time.

Immediately after the passage of the TCJA, state corporate income tax collections saw strong year-over-year increases, particularly in the states where tax bases conform to federal tax law but not rates. The strong corporate income revenue performance in the recent months is also driven by the one-time taxation of deemed repatriated foreign corporate earnings. The TCJA provisions included a one-time tax on profits held overseas at a special low tax rate which raised revenue and freed corporations to repatriate income back to the United States parent firm.

Despite the strong growth in corporate income tax collections throughout state fiscal year 2019, states are forecasting lower corporate income tax collections for state fiscal year 2020, mostly because of higher costs for business inputs and a weaker global economy.

General Sales Taxes

General state sales tax collections grew 5.6 percent in nominal terms and 3.5 percent in real terms in the first quarter of 2019 compared with the same period in 2018. Sales tax collections have grown continuously since the first quarter of 2010 in nominal terms, but growth generally has been sluggish.

Sales tax collections increased in all regions in the first quarter of 2019. The Far West region reported the strongest growth at 12.3 percent, while the New England and Plains regions had the weakest growth at less than 1.0 percent. The strong growth in the Far West region was mostly attributable to California, which delayed recognition of some sales tax revenues in the fourth quarter of 2018 and pushed them into the first quarter of 2019.

Thirty-seven states reported increases in sales tax collections in the first quarter of 2019, with four states reporting double-digit growth. Sales tax collections declined in eight states, with Louisiana reporting the largest decline at 9.2 percent. The decline in Louisiana is partially attributable to legislated changes; Louisiana decreased its state sales tax rate from 5.0 percent to 4.45 percent effective July 1, 2018.¹⁰

The recovery in sales tax collections was slow in the post-Great Recession period. Since 2010, the average quarterly year-over-year growth rate in state sales tax collections was 4.0 percent in nominal

terms and only 2.3 percent in real terms. The prior weak annual growth rates in sales tax collections are partially attributable to tax dollars lost by online retail sellers not collecting sales tax on some or all sales. Similarly, recent gains are largely attributable to the expansion of the sales tax base in several states and their 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 proposed legislation, and it is only a matter of time before they are enacted. Moreover, 37 states have also enacted laws or regulations requiring marketplace facilitators (such as Amazon Marketplace entities that are not direct sellers but that make it easier for buyers and sellers to enter into transactions) to collect sales taxes on behalf of their sellers.

Coordinating 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.

Growth in sales tax collections markedly improved in the past year mostly for two reasons. First, states' responses to the US Supreme Court's *Wayfair* decision certainly improved the compliance with the online sales taxation and likely boosted sales tax collections from remote sellers. Second, the TCJA effectively reduced the income tax for many taxpayers and thus put money back into consumer pockets, which likely was put back into the economy in the form of taxable spending.

However, there are several reasons to expect the growth in sales tax revenue to level off. As a growing number of baby boomers retire, they will likely have less disposable income to spend. Second, many services and goods (for example digital goods such as streaming music and digital subscriptions) remain untaxed despite their growing popularity and growing share of consumption. Thus, to capture this activity states would have to expand their sales tax base. Third, the Great Recession tightened consumers' wallets, and many Americans have been saving at higher levels in the expansion period. In 2018, personal savings as a percentage of disposable personal income was 7.7 percent, which is substantially higher than the saving rates observed in the late 1990s and early 2000s.¹² The higher savings rate, while good for individuals as preparation before the next recession, does mean lower current demand. These factors make the longer-term sales tax revenue outlook somewhat gloomy.

Motor Fuel Taxes

State motor fuel sales taxes grew 1.3 percent in the first quarter of 2019, which is substantially weaker than the growth rates observed throughout 2018.

Motor fuel sales tax collections have fluctuated after the Great Recession. Average quarterly year-over-year growth in state motor fuel tax collections was 3.6 percent in nominal terms and only 1.9 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 rates also affect tax collections.

Growth rates from the first quarter of 2018 to the first quarter of 2019 varied widely across the states and the regions. Motor fuel sales tax collections declined in the Plains, Far West, and New England regions, but they grew in the other regions. The largest decline was in the Plains region at 7.5 percent; the largest growth was in the Southeast region at 4.3 percent. Seventeen states reported declines in motor fuel sales tax collections in the first quarter of 2019; four states reported double-digit growth. Oklahoma had the strongest growth at 23.9 percent in the first quarter of 2019 compared with the same quarter in 2018. The strong growth in Oklahoma is mostly attributable to legislated changes because the state increased gasoline and diesel tax rates.

Other Taxes

Census Bureau quarterly data on state tax collections provide detailed information for some of the smaller taxes, including state property taxes, tobacco products excise taxes, alcoholic beverage excise taxes, and motor vehicle and operators' license taxes. In [Table A6](#), we show year-over-year growth rates for four-quarter average inflation-adjusted revenue for the nation as a whole. In the first quarter of 2019, states collected \$56.9 billion from all the smaller tax sources, which constituted 22.1 percent of total state tax collections.

Compared with major tax sources, revenues from smaller taxes have been growing at a slower pace after 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.

Inflation-adjusted year-over-year growth in revenues from smaller tax sources was 3.7 percent in the first quarter of 2019. State property taxes, which represent a small portion of overall state tax revenues, grew 6.3 percent. Tax revenues from motor vehicle and operators' licenses increased 7.3

percent, while tax revenue from tobacco product sales and alcoholic beverage sales both showed declines, at 4.8 and 0.6 percent, respectively. Finally, revenues from all other smaller tax sources increased 4.0 percent in the first quarter of 2019 compared with a year earlier.

Overview of Tax Revenues in State Fiscal Year-To-Date 2019

Through the first three quarters of state fiscal year 2019, states collected \$742.9 billion in total tax revenues, a gain of 3.5 percent from \$718.0 billion in the same period of state fiscal year 2018 (Table A7). All regions but the Mideast had growth in overall state tax collections in the first three quarters of fiscal year 2019. The Southwest region had the strongest year-over-year growth at 10.9 percent, while state total tax revenues declined in the Mideast region by 0.1 percent. Forty-six states reported growth in overall state tax revenues in the first three quarters of fiscal year 2019, with six states reporting double-digit growth. The strongest growth was reported in Alaska and New Mexico at 56.2 and 32.8 percent, respectively, reflecting rebounds from weaker prior-year levels.

Despite the growth in overall state tax revenues, personal income tax revenues declined 1.7 percent in the first three quarters of fiscal year 2019 compared with the same a period of fiscal year 2018. The declines in state personal income tax revenues are largely because of declines in California and New York. In any quarter of the year, personal income tax revenues in California and New York combined represent well above one-third of nationwide personal income tax revenue collections. New York and Connecticut saw relatively steep declines, while New Jersey and California also experienced declines in personal income tax revenues in the fourth quarter of 2018, attributable to the temporary impact of the TCJA. While other states also faced income tax shifting caused by the TCJA, this was to a smaller extent, and personal income tax revenues fared well in most other states over this period. Personal income tax revenues grew 1.9 percent in the median state, with 29 states reporting growth in the first three quarters of fiscal 2019 compared with the same period a year earlier.

All other major sources of state government tax revenues had solid growth: corporate income tax revenues grew 25.9 percent, sales tax revenues grew 5.5 percent, and motor fuel tax grew 4.3 percent.

Preliminary Review of State Tax Revenue in 2019

Quarter 2

Preliminary data collected for the April–June quarter of 2019 (Table A8) shows double-digit growth in overall state tax collections as well as in personal and corporate income tax collections. Growth in state sales tax collections, however, was more modest, at 2.6 percent in the second quarter of 2019 compared with the same quarter in 2018.

Overall state tax collections grew 13.0 percent in the second quarter of 2019 compared with the same quarter in 2018. Growth in the median state was slightly weaker, at 11.2 percent. Total state tax collections increased in 45 states, with 28 states reporting double-digit growth. The largest growth was in California, New York, and Oregon; all three states have high reliance on personal income tax revenues and in part this reflected some of the shifting of revenues during the tax season.

Personal income tax collections soared 18.9 percent in the second quarter of 2019 compared with a year earlier, with 17 states reporting growth of over 20 percent. The robust growth in the second quarter of 2019 was mostly the result of taxpayer behavior as they delayed estimated and final income tax payments rather than underlying economic conditions. The largest growth in terms of dollar value were in California (\$5.4 billion) and New York (\$3.9 billion); both states rely substantially on income tax payments from higher-income taxpayers who seemed to delay payments. However, some of the gains may reflect strong economic conditions. According to California’s Legislative Analyst’s Office, wages and salaries will likely continue strong growth throughout 2019 and 2020, mostly because of the historically high number of initial public offerings, which will ultimately increase both withholding and nonwage income (i.e., capital gains). That is because “the state receives withholding from newly public companies due to the vesting of California-based employees’ restricted stock units (which are a common form of deferred compensation), which become taxable at the offering.”¹³ Officials in California warn that the effect of initial public offerings on income tax revenues is unique to 2018–19 and 2019–20; it won’t continue to be part of the state’s tax base.

Sales tax collections showed modest growth of 2.6 percent in the second quarter of 2019 (compared with a year earlier), but growth in the median state was strong at 5.4 percent. Forty-one states reported growth in sales tax collections, while four states reported declines. California had the largest decline at 15.9 percent, followed by Louisiana at 9.9 percent. The large declines in California are a timing issue related to a new information technology system under which sales tax payments made at the end of the month are not validated until the next month. In June 2019, there was a major delay in sales tax processing that resulted in nearly a billion dollars being pushed to July 2019, causing large

declines in the second quarter of 2019 revenues. However, the overall annual sales tax revenues are likely to show growth similar to that found in other states. The declines in Louisiana, as discussed above, are mostly because of the cut in the state's sales tax rate.

Finally, corporate income tax revenues grew 20.7 percent, marking the fifth consecutive quarter of double-digit growth. Growth was widespread across the states. Thirty-eight states reported growth in corporate income tax collections, with 21 states reporting growth of over 20 percent compared with a year earlier. Despite the strong growth observed in corporate income tax collections, state revenue forecasters are warning that the steep growth in corporate income tax collections is likely temporary and mostly driven by the taxpayer responses to the TCJA, which created incentives for corporations to shift profits from 2017 into 2018 because of lower corporate tax rates. Therefore, many corporations likely tried to recognize as much income as possible during the 2018 tax year, artificially boosting corporate income tax revenues. In addition, corporate tax bases likely broadened in some states because of the federal tax overhaul, which includes a one-time tax on profits held overseas. Therefore, some corporations recognized more of their global income streams in the US without facing additional federal taxes but having to pay the applicable state taxes on recognized foreign profits.

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 income goes up, sales taxes generate more revenue when consumers increase their purchases of taxable items, property taxes increase when housing prices go up, and so on.

State Gross Domestic Product

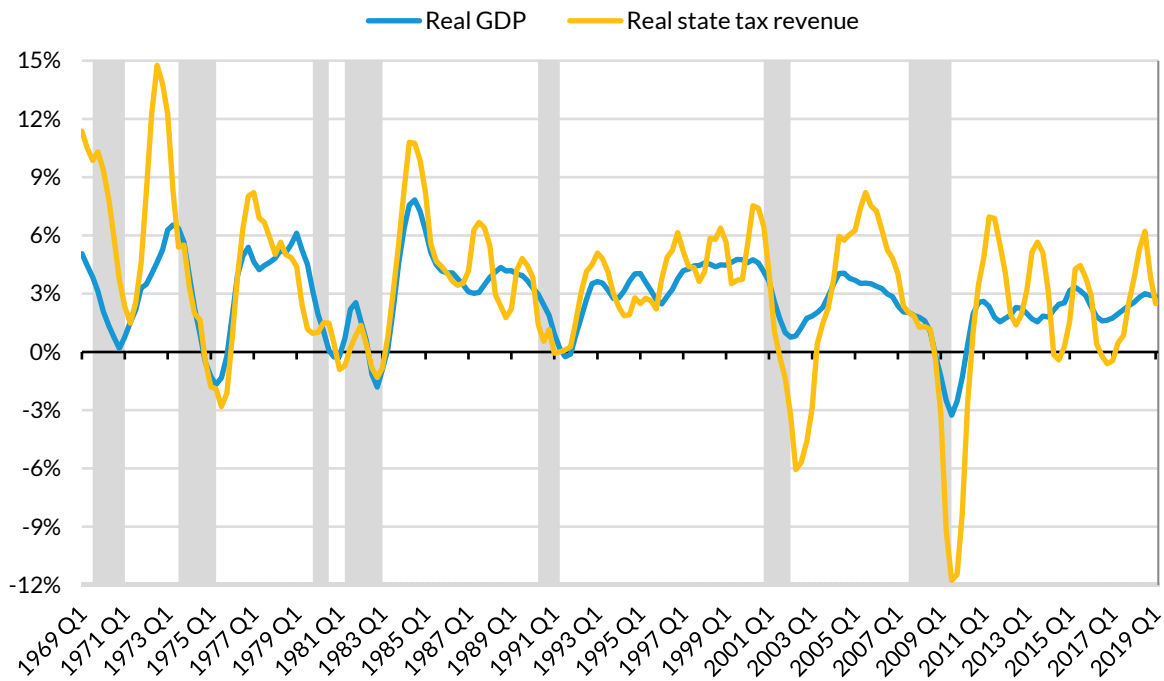
When the economy booms, tax revenues tend to rise rapidly, and when it declines, they tend to decline, though these changes have different patterns and timing. Figure 5 shows year-over-year growth for four-quarter moving averages in real state tax revenue and gross domestic product (GDP). We present moving averages to smooth short-term fluctuations and illustrate the interplay between the economy and state revenues. As shown in Figure 5, real GDP showed uninterrupted growth since the second quarter of 2010. By contrast, real state tax revenues showed declines in 2014, 2016, and 2017 and stronger growth than GDP for most of 2018. These differences are largely related to changes in state tax rates and, as noted, changes in federal policy.

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 were more progressive.

FIGURE 5

State Tax Revenue is More Volatile than the Economy

Year-over-year change in real state taxes and real GDP



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

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

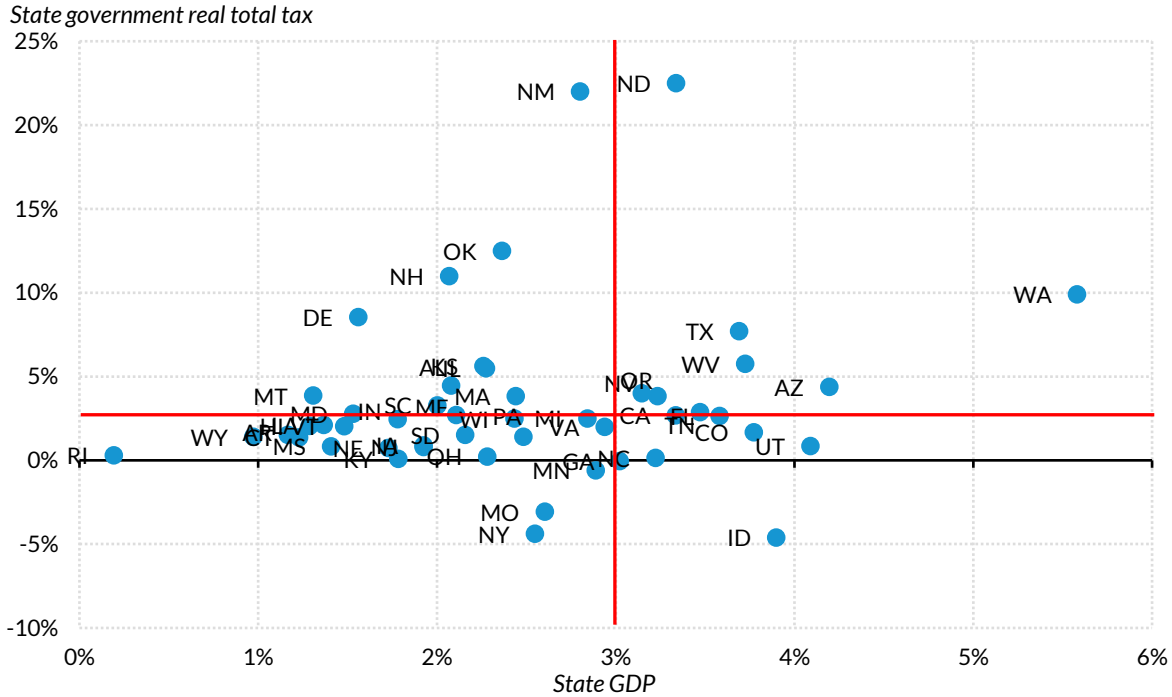
States vary substantially in terms of the correlation between growth rates in real state tax revenues and state GDP. Figure 6 shows growth for each state for four-quarter moving averages in real state tax revenue and in real state GDP in the first quarter of 2019 compared with the same quarter in 2018. By this measure, real state tax revenues increased in 45 states, and real state GDP increased in all 50 states in the first quarter of 2019. (Alaska is an outlier state and is excluded from Figure 6 to better display the overall relationship). The percentage change in real state tax revenues ranged from negative 4.6 percent in Idaho to 50.3 percent in Alaska and 22.5 percent in North Dakota; the percentage change in real state GDP ranged from 0.2 percent in Rhode Island to 5.6 percent in Washington. In the first quarter of 2019, growth in real state tax revenues was lower than the national average of 2.5 percent in 26 states, and growth in real state GDP was lower than the national average of 3.0 percent in 35 states.

In general, states with the strongest growth in real state tax revenues were oil-dependent states. Strong growth in oil-dependent states was caused by state revenue bouncing back from depressed levels the previous year that were caused by lower oil and natural gas prices.

FIGURE 6

Growth Disparity: State Tax Revenues versus State GDP

Year-over-year change in real state taxes and real GDP, 2019 Q1 versus 2018 Q1



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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.

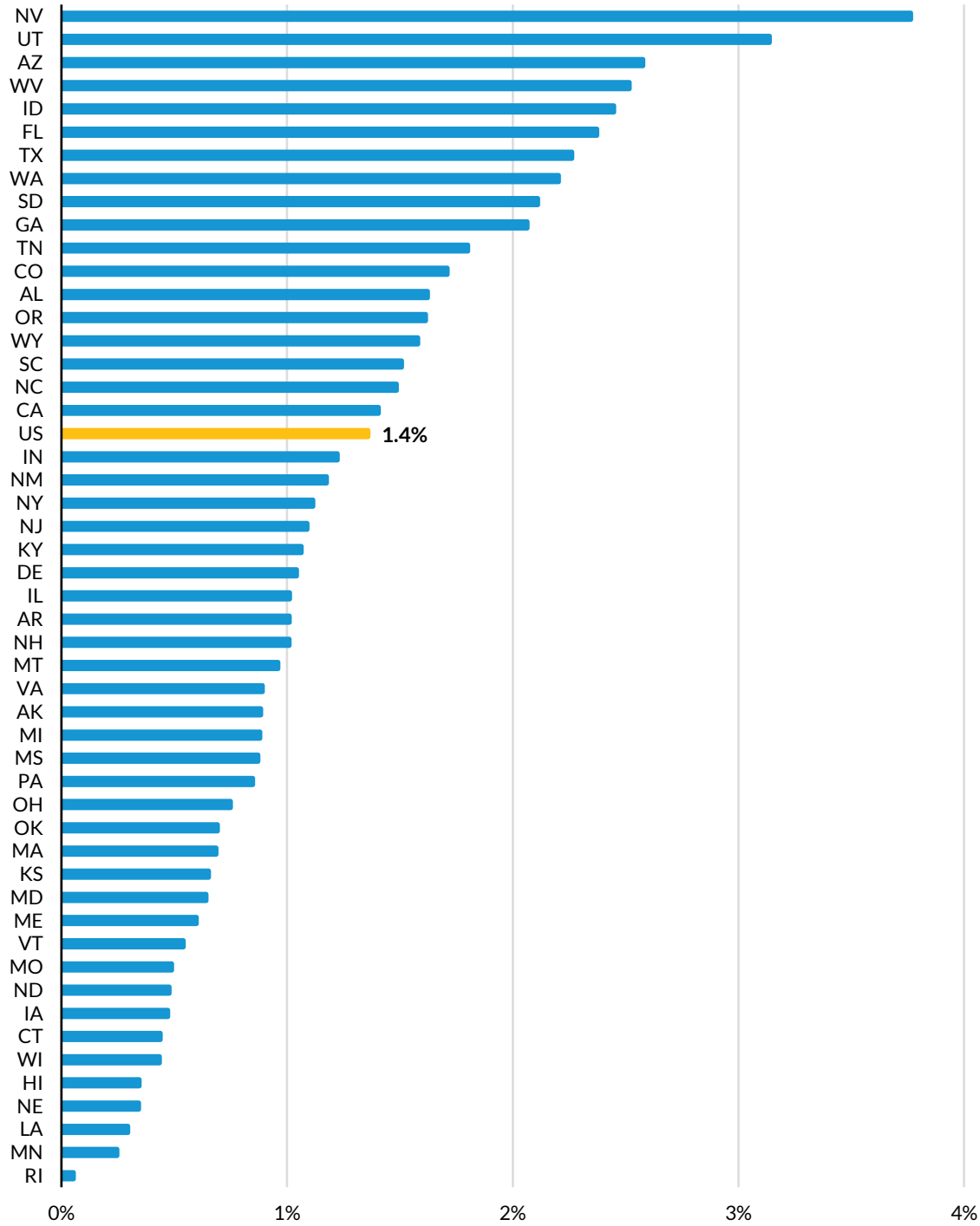
State Unemployment and Employment

The national unemployment rate climbed to 9.9 percent in the fourth quarter of 2009, which was the highest rate observed since 1982. However, the unemployment rate declined steadily since then until the fourth quarter of 2018. The unemployment rate was 3.9 percent in the first quarter of 2019, which was slightly higher than the 3.8 percent unemployment rate in the fourth quarter of 2018. However, preliminary figures indicate that the unemployment rate was down to 3.6 percent in the second quarter of 2019. Unemployment rates ranged from 2.4 percent in Iowa, New Hampshire, North Dakota, and Vermont to 6.5 percent in Alaska in the first quarter of 2019. Although low unemployment rates are generally good for the economy, the decline in the unemployment rate since 2011 has been driven by both improved job prospects for those seeking employment as well as by a decline in labor force participation as the population ages and baby boomers retire. Further, the unemployment rate excludes involuntary part-time workers (those who would prefer full-time work) as well as people who have stopped looking for a job but wanted and were available for work.¹⁴

FIGURE 7

Growth in Employment for the First Quarter of 2019, by State

Year-over-year change in seasonally-adjusted employment, 2019 Q1 versus 2018 Q1



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

Nationwide employment grew 1.4 percent in the first quarter of 2019 compared with the same quarter in 2018 (Figure 7). Employment growth was weaker than the national average in 32 states, but all states reported growth on a year-over-year basis. Employment growth ranged from 0.1 percent in Rhode Island to 3.8 percent in Nevada in the first quarter of 2019. Overall employment growth has slowed in the recent months, which is likely a sign of a slowdown in hiring and tighter labor markets.

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 8 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.

Spending on services was solid, while spending on both durable and nondurable goods has weakened in the first quarter of 2019 compared with the growth rates observed in the second half of 2018. Moreover, current growth rates in both nondurable goods and services are weaker than growth rates observed before the Great Recession. Current growth rates in state sales tax revenues are also substantially weaker than 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.

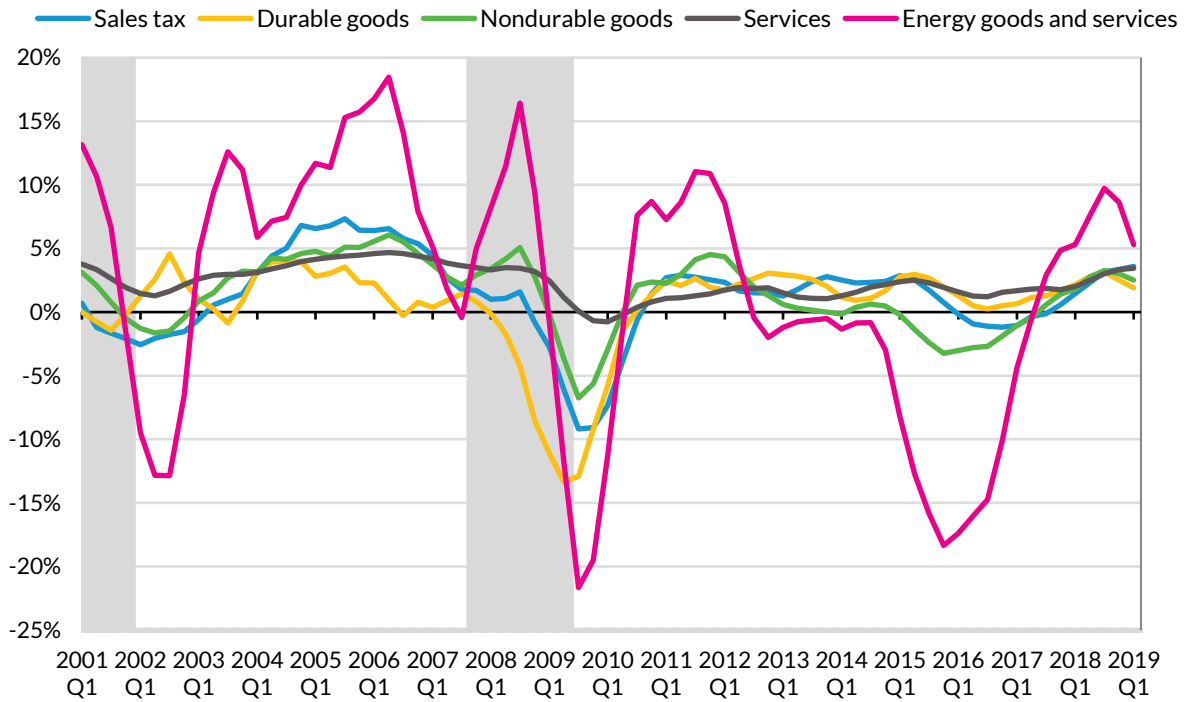
American consumers spend substantially more on services (70 percent) than on goods, and spending on services as a share of total personal consumption has grown steadily throughout the past four decades.

Growth in the consumption of durable goods, an important element of state sales tax bases, has been relatively volatile in recent quarters, trending downward throughout most of 2015 and 2016 and upward since the first quarter of 2017. However, growth in durable goods trended downward both in the fourth quarter of 2018 and first quarter of 2019.

Nondurable consumption spending declined between the first quarter of 2015 and second quarter of 2017 but has increased since then. Nondurable goods were largely affected by the declines in gasoline and other energy goods consumption, which represent over 20 percent of nondurable goods consumption.

As shown in Figure 8, spending on energy goods and services declined for 20 consecutive quarters, between the third quarter of 2012 and the second quarter of 2017. The decline was particularly dramatic throughout 2015 and 2016 in response to steep declines in oil and gas prices. The steep decline in total spending in the energy sector led to declines in general sales tax revenues, which are based on prices as well as quantity consumed. Energy goods and services have been recovering since the third quarter of 2017 and showed strong growth since then, mostly bouncing back from previously depressed levels.

FIGURE 8
Weakness in Goods Consumption; Continued Growth in 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.

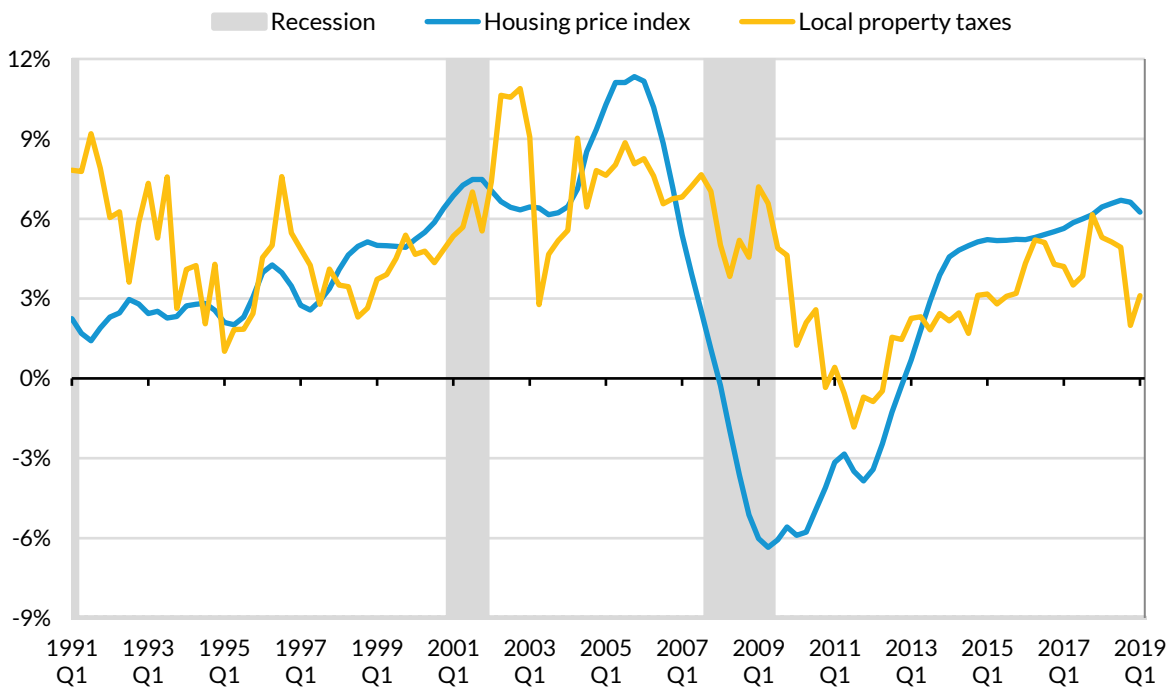
Notes: Year-over-year change is the percentage change of four-quarter moving averages. Data are adjusted for inflation.

Housing Market

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

Figure 9 shows year-over-year percentage changes in the four-quarter moving average of the housing price index and local property taxes in nominal terms. Housing 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 2012.¹⁵ The housing price index began declining in mid-2005, with steep negative movements from the last quarter of 2005 through the second quarter of 2009, though actual patterns varied across states and regions. The trend in the housing price index and local property taxes has been generally upward over the past seven years. National average housing prices appreciated 6.3 percent in the first quarter of 2019 from one year earlier, while local property taxes grew 3.1 percent during the same period.

FIGURE 9
Continued Growth in Housing Prices and in Local Property Taxes
 Year-over-year percentage change in housing prices versus local property taxes



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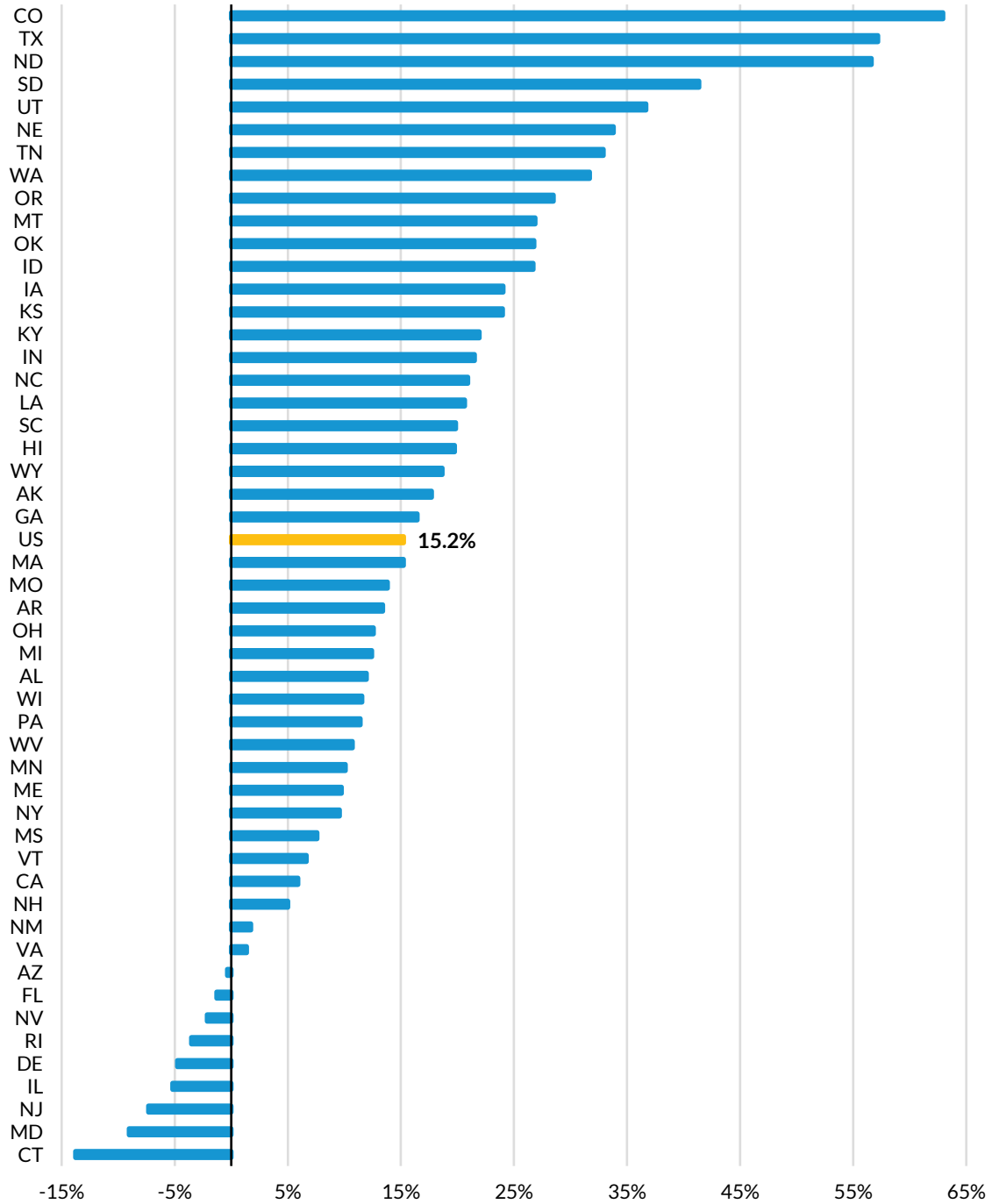
Sources: US Census Bureau (property taxes) and Federal Housing Finance Agency (house price indexes), analysis by the author.

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

FIGURE 10

Changes in Housing Price Indexes Since the Pre-recession Peak

Percent change in housing prices from pre-recession peak level, 2019 Q1 versus 2007 Q1



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

Statewide housing price indexes increased in all states in the first quarter of 2019 (compared with a year earlier), ranging from a 0.6 percent increase in Wyoming to 12.3 percent in Idaho. Growth in 29 states was below the national average of 5.6 percent.

Despite continuous and strong nationwide growth in the housing market, prices are still below their prerecession peaks in several states. [Figure 10](#) shows the state-by-state nominal percentage change in housing price indexes at the end of the first quarter of 2019 compared with the first quarter of 2007, when housing prices were at their peaks.

National average housing prices grew 15.2 percent in nominal terms between the first quarter of 2007 and the first quarter of 2019. However, housing prices varied substantially across the states. Housing prices are above their prerecession peaks in 41 states in the first quarter of 2019 but are still lower in 9 states. The three hardest-hit states—Connecticut, Maryland, and New Jersey—all still have average house prices that are 7 percent or more below their prerecession peaks. Connecticut prices are still on average 13.8 percent below their peak. On the other hand, statewide housing price indexes increased by double digits in 33 states over this period. In 18 states, growth in statewide average housing prices was over 20 percent, with Colorado, Texas, and North Dakota having the highest growth rates at 63.0, 57.2, and 56.6 percent, respectively.

Many states have raised concerns about tight housing supply and rising demand. In 2007, before the fall in housing prices, the 30-year fixed-rate mortgage averaged around 6.3 percent. Mortgage rates have declined substantially since then, and 30-year fixed-rate mortgages currently are averaging around 4 percent.¹⁶ The low mortgage rate, widely available financing options, and stronger labor market forces have raised the demand for housing, which in turn will continue to push housing prices higher. The growth in house prices will eventually pose a risk to affordability unless housing quantities increase.

The Federal Reserve cut short-term interest rates in July 2019, which was the first cut in more than a decade. Cutting interest rates at a time when the economy is expanding is unusual. However, many economists believe that the interest rate cut is a strategic move to help prevent the US economy from entering a recession despite the possibility of a trade war with traditional allies and China and increasing global economic uncertainty.

Tax Law Changes Affecting the First Quarter of 2019

Anticipated and actual federal policy changes had a substantial impact on state tax revenues in the most recent quarters. But changes in state tax laws also affect state tax revenue trends. Many states enacted tax changes for fiscal year 2019, partly responding to federal tax policy changes and partly reflecting policy preferences. We present analysis here based on the data and information retrieved from the National Association of State Budget Officer's Fall 2018 Fiscal Survey of the States. During the first quarter of 2019, enacted tax increases and decreases produced an estimated gain of \$552 million compared with the same period in 2017.¹⁷ State-enacted tax changes substantially increased corporate income taxes (by \$713 million in the first quarter of 2019) compared with a year earlier. Tax changes decreased personal income taxes by \$381 million, increased sales taxes by \$195 million, and increased some other taxes by approximately \$24 million. Below, we discuss some of the major enacted tax changes for fiscal year 2019.

Nine states enacted personal income tax increases, while 16 states enacted decreases. Legislated tax changes are estimated to decrease aggregate personal income tax revenues by \$1 billion in fiscal year 2019. The largest estimated increase is in Georgia, where conformity to federal tax reform is estimated to lead to a \$251 million increase in personal income tax collections in fiscal year 2019. Lawmakers in New Jersey enacted several income tax changes, which are estimated to increase personal income tax collections by \$157 million in fiscal year 2019. First, officials in New Jersey increased the maximum marginal income tax rate from 8.97 percent to 10.75 percent for taxpayers with income over \$5 million, which is estimated to increase income tax revenues by \$280 million in fiscal year 2019.¹⁸ Other changes included increasing the state earned income tax credit and increasing the maximum gross income deduction allowed for homestead property taxes paid from \$10,000 to \$15,000. These changes are estimated to decrease personal income tax revenues by \$123 million. 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 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 by \$600 million but increase corporate income tax revenues by the same amount in fiscal year 2019. Officials in Missouri reduced the top personal income tax rate with an estimated impact of \$238 million reduction in personal income tax revenues in fiscal year 2019.¹⁹ Lawmakers in Iowa enacted income tax rate reductions for all income tax brackets that are estimated to decrease state personal income tax revenues by \$186 million in fiscal year 2019 (Iowa Legislative Services Agency 2018).

Ten states enacted corporate income tax increases; nine states enacted decreases. The largest corporate income tax change is in New York, where state officials amended the definition of exempt controlled foreign corporation income to reflect federal tax changes and to prevent a \$2 billion loss of revenue as a result of the federal provisions under the TCJA (New York Department of Taxation and Finance 2018). Other key corporate income tax legislative changes occurred in Connecticut and in New Jersey. As discussed, the introduction of a new pass-through entity tax in Connecticut is estimated to increase corporate income tax revenues by \$600 million in fiscal year 2019. Lawmakers in New Jersey imposed a temporary 2.5 percent tax on business taxpayers with allocated net income over \$1 million (New Jersey Department of the Treasury 2018). This measure is estimated to increase corporate income tax revenues by \$425 million in fiscal year 2019.

Thirteen states enacted tax changes for some other nonmajor taxes, with an estimated overall increase of \$324 million in fiscal year 2019. The estimated impact of each state's changes is not significant except in Oklahoma and Washington. Lawmakers in Oklahoma increased the gasoline excise tax by 3 cents, the diesel tax by 6 cents, and the incentive rate on oil and gas production from 2 percent to 5 percent.²⁰ These legislative changes are estimated to bring in an additional \$272 million in revenues in fiscal year 2019. Officials in Washington reduced the second state property tax levy rate, which is estimated to reduce state property tax revenues by \$206 million in fiscal year 2019.²¹

Eight states enacted sales tax increases, and nine states enacted decreases. Legislated tax changes are estimated to increase sales tax revenues by \$676 million in fiscal year 2019. The most significant legislative changes were in Kentucky and Louisiana. Lawmakers in Kentucky expanded the sales and use tax base, which is estimated to increase sales tax revenues by \$208 million in fiscal year 2019 (Kentucky Department of Revenue 2018). Louisiana's Governor extended the expiring 1 percent sales tax enacted in 2016 but did so at a lower rate (0.45 percent); this is estimated to increase sales tax revenues by \$463 million in fiscal 2019.²²

The National Association of State Budget Officer's Fall 2018 Fiscal Survey of the States does not fully capture 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. Most states enacted these types of laws after the completion of the survey by the National Association of State Budget Officers. 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 A9). 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 updated the laws or provided additional guidance for remote sellers since. Florida and Missouri still have not

enacted laws, but both states have already proposed legislation on collecting sales and use tax from remote sellers.

As of August 2019, 37 states are already enforcing sales tax collections by remote sellers. In five states, the effective date is set for October 1, 2019; Louisiana still needs to determine the effective date. States have set different sales and volume thresholds for the internet sales taxation. Moreover, a few states have already updated their legislation to revise the threshold levels. In 22 states, the threshold is set to sales of more than \$100,000 or over 200 transactions, and in 10 states the threshold is set to sales of more than \$100,000 regardless of the number of transactions. The remaining 11 states have other threshold levels. In four states, the threshold level is much higher, at \$500,000 or above (Table A9). Finally, 37 states have also enacted laws or regulations requiring marketplace facilitators to collect sales taxes on behalf of their sellers. Other states will likely follow suit. In some states, marketplace sales are excluded from the threshold for individual sellers.

States are expecting some boost in sales tax revenues in post-*Wayfair* period because of ensuing state actions. For example, officials in California are estimating that online and remote sales tax collections will result in additional \$174 million in fiscal year 2019.²³

Overall, states enacted various legislative changes, some of which are in response to federal tax policy changes. The estimated impact of net enacted tax changes is a net increase of \$2.8 billion in revenues in fiscal year 2019. Legislated tax actions in fiscal year 2018 were more substantial, with an estimated net impact of \$8.8 billion. One potential explanation is that states enacted substantial legislative changes for fiscal year 2018 because of budget shortfalls that they faced in fiscal year 2017.

Conclusion

State and local government tax revenues have fluctuated substantially in the recent past, mostly driven by taxpayers anticipating and then reacting to federal tax changes. The TCJA had complex and hard-to-predict effects on state and local government budgets. The SALT deduction cap affected the timing and flow of state tax receipts across fiscal years, creating substantial challenges for predictable tax revenue receipt. It led to windfall income tax revenues in the final quarter of 2017 and first half of 2018, helping states end fiscal year 2018 on a positive note. Income tax revenues continued to fluctuate substantially in the first 10 months of state fiscal year 2019, dropping steeply in December 2018 and January 2019 but soaring in April 2019. The surge in April 2019 personal income tax collections largely made up for earlier shortfalls and helped states close their fiscal 2019 budget book with no deficits.

States continue to face large fiscal uncertainties, particularly because of the unclear longer-term impact of federal tax policy changes and other actions on state economies and budgets. State revenue forecasters across the nation are not certain how the subsequent rounds of taxpayer responses will play out in the coming months and years, and the IRS is still finalizing many regulations about how these changes should be interpreted.

The TCJA's repatriation provisions have complicated implications for state corporate tax revenues. US corporate offshore earnings were estimated to be around \$3.0 trillion in 2017, and for a long time, US income taxes on these earnings was deferred. The new provisions under the TCJA deemed these earnings to be repatriated and subject to US tax at preferential tax rates, and these overseas profits will be taxed at 8.0 percent for illiquid holdings or at 15.5 percent for cash and cash equivalents. This provision will raise federal revenues while reducing constraints on multinational firms using these previously untaxed foreign earnings. Repatriated income is also subject to state income taxation in some states, which is likely one cause of boosted state corporate income tax revenues observed since the passage of the TCJA.

The US Supreme Court's decision in *South Dakota v. Wayfair* has encouraged state governments to explore expanding their authority over online sales taxation and to require that remote sellers collect sales tax, which will subsequently increase state sales tax revenues.

International trade uncertainty continues to have a negative impact on both state trade and overall state economic stability. This is especially true for those states with industries that could be most affected by tariffs imposed by the US and its trading partners, including agriculture and certain manufacturing industries. Overall, US exports of goods and services increased substantially in the first

quarter of 2019 compared with the prior quarter, while imports of goods and services decreased. The growth in exports and the decline in imports resulted in a net positive boost to GDP. However, recent trade tensions between the US and major trade partners, including Canada, China, and Mexico, may lead to lower global demand for US goods.

In July 2019, the US economy marked 10 years of expansion. We are now in the longest economic expansion on record. However, both economic and revenue growth in the current expansion has been weaker than previous expansions. Despite the strong growth in the overall economy, revenue forecasts for state fiscal year 2020 are less optimistic except for state sales tax revenues, which are likely to increase, primarily because of the *Wayfair* decision. State revenues showed heightened volatility in the past year as a result of the TCJA as well as recent fluctuations in the stock market. The stock market fragility and volatility throughout the past seven months stems from several factors, including the weakening global economy, the federal government shutdown, volatility in oil prices, and world trade tensions. Although the near-term economic outlook remains positive, many economists worry that the current expansion is subject to unforeseen risk. However, the expansion period might continue longer because of the Federal Reserve's cut of the interest rate in July, which is the first cut in a decade and is largely a measure for preventing the US economy from entering a recession. Revenue forecasters in most states are maintaining a cautious revenue outlook for state fiscal year 2020 because of uncertainties on the horizon.

Appendix: Additional Tables

TABLE A1

Quarterly State Government Tax Revenue by Major Tax

2010 Q1–2019 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
	5.8	4.1	4.0	3.6	4.6	1.7	4.1	2.3	2.3	1.9	2.8
2019 Q1	(2.4)	40.9	5.6	1.3	2.6	2.0	(4.3)	38.2	3.5	(0.6)	0.6
2018 Q4	(9.2)	12.0	4.5	4.7	(0.4)	2.3	(11.3)	9.5	2.2	2.3	(2.6)
2018 Q3	7.8	28.5	6.4	7.0	8.5	2.5	5.2	25.3	3.8	4.4	5.8
2018 Q2	10.3	17.4	5.3	6.8	8.6	2.6	7.5	14.4	2.6	4.0	5.8
2018 Q1	14.9	(6.1)	5.0	8.5	8.8	2.1	12.5	(8.0)	2.8	6.2	6.5
2017 Q4	14.6	10.2	4.5	8.4	9.0	2.0	12.3	8.0	2.4	6.2	6.9
2017 Q3	4.3	6.2	3.1	1.1	3.8	1.9	2.4	4.2	1.2	(0.8)	1.9
2017 Q2	0.0	11.7	3.2	4.2	2.3	1.7	(1.7)	9.8	1.5	2.5	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	(2.6)	1.7	1.2	1.2	1.5	(1.2)	(4.1)	0.2	(0.3)	(0.3)
2016 Q3	2.4	(8.9)	2.7	1.2	1.3	0.9	1.5	(9.7)	1.7	0.3	0.3
2016 Q2	(2.8)	(9.7)	1.1	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	0.8	(6.7)	1.1	2.0	0.6
2015 Q4	5.1	(9.9)	2.7	3.5	2.3	0.9	4.2	(10.7)	1.8	2.6	1.4
2015 Q3	6.5	0.2	3.5	4.8	4.1	1.0	5.5	(0.8)	2.5	3.8	3.1
2015 Q2	13.9	6.0	3.6	3.1	7.0	1.1	12.7	4.9	2.5	2.0	5.9
2015 Q1	7.0	3.3	5.8	4.3	5.5	1.1	5.8	2.2	4.7	3.2	4.3
2014 Q4	8.4	9.8	6.5	2.4	5.7	1.5	6.8	8.2	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	(1.4)	2.2
2014 Q2	(6.6)	(0.3)	4.6	4.0	(0.9)	2.1	(8.5)	(2.4)	2.5	1.9	(2.9)
2014 Q1	(1.3)	7.9	3.0	2.8	0.5	1.8	(3.0)	5.9	1.2	1.0	(1.3)
2013 Q4	1.1	3.7	5.1	3.5	3.0	1.8	(0.7)	1.8	3.2	1.7	1.2
2013 Q3	4.9	1.8	5.5	2.9	5.3	1.7	3.1	0.2	3.7	1.2	3.5
2013 Q2	19.2	8.5	4.6	2.1	10.0	1.7	17.1	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	(0.7)	3.4
2012 Q3	4.7	8.7	2.3	2.1	3.1	1.8	2.9	6.7	0.5	0.3	1.3
2012 Q2	4.7	1.6	2.2	1.7	3.2	1.7	2.9	(0.2)	0.4	(0.1)	1.4
2012 Q1	4.1	4.3	4.6	1.3	3.8	2.1	2.0	2.1	2.5	(0.8)	1.7
2011 Q4	3.7	(6.3)	3.5	0.7	3.2	2.0	1.7	(8.1)	1.5	(1.2)	1.2
2011 Q3	9.7	2.6	3.7	(0.2)	6.1	2.4	7.2	0.2	1.3	(2.5)	3.7
2011 Q2	15.3	19.4	5.7	7.4	11.1	2.2	12.9	16.9	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	11.3	8.0
2010 Q4	10.5	19.7	4.8	11.8	8.4	1.6	8.8	17.8	3.2	10.1	6.7
2010 Q3	4.8	(1.0)	4.5	10.7	5.4	1.4	3.4	(2.3)	3.1	9.1	3.9
2010 Q2	2.1	(19.4)	4.8	4.1	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	0.3	0.0	(0.7)	2.3
2009 Q4	(5.0)	(2.0)	(4.3)	(1.5)	(3.1)	0.4	(5.3)	(2.4)	(4.7)	(1.9)	(3.5)
2009 Q3	(11.4)	(20.9)	(9.8)	2.3	(10.5)	0.3	(11.6)	(21.1)	(10.0)	2.0	(10.7)
2009 Q2	(27.4)	0.9	(8.8)	(1.5)	(16.2)	1.0	(28.1)	(0.1)	(9.7)	(2.5)	(17.1)
2009 Q1	(16.7)	(20.1)	(8.0)	(3.6)	(10.9)	1.5	(17.9)	(21.3)	(9.3)	(5.0)	(12.2)
2008 Q4	(0.6)	(20.1)	(5.5)	(5.0)	(3.4)	1.9	(2.4)	(21.5)	(7.3)	(6.8)	(5.2)
2008 Q3	1.3	(12.1)	3.2	(5.0)	2.5	2.1	(0.7)	(13.9)	1.1	(6.9)	0.4
2008 Q2	6.2	(7.1)	3.0	(3.1)	4.5	1.7	4.4	(8.7)	1.3	(4.7)	2.7
2008 Q1	3.0	(4.2)	0.3	1.1	1.8	2.0	1.0	(6.0)	(1.6)	(0.8)	(0.2)

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, 2019 Q1 versus 2018 Q1

State / Region	PIT	CIT	Sales	MFT	Total
US (median)	(0.6)	12.1	4.1	1.5	2.3
US (average)	(2.4)	40.9	5.6	1.3	2.6
New England	(11.9)	75.6	0.8	(0.4)	0.1
Connecticut	(30.3)	264.5	(6.5)	(2.7)	(8.4)
Maine	1.3	5.5	5.2	2.0	2.4
Massachusetts	0.4	53.2	4.1	(0.2)	6.2
New Hampshire	16.6	(27.6)	N/A	1.6	(0.2)
Rhode Island	(2.9)	(12.5)	6.1	1.5	0.4
Vermont	(2.9)	13.2	3.1	(2.9)	(0.1)
Mideast	(6.8)	91.4	5.1	3.5	0.2
Delaware	4.4	181.7	N/A	8.9	16.2
Maryland	(0.6)	44.6	2.3	(1.5)	4.0
New Jersey	0.3	400.5	6.4	2.4	9.8
New York	(10.9)	96.6	4.1	5.7	(4.9)
Pennsylvania	1.1	10.7	6.6	4.0	2.1
Great Lakes	(2.0)	47.6	1.8	1.0	2.0
Illinois	(3.3)	(3.5)	2.2	(2.2)	(0.9)
Indiana	(5.5)	81.0	1.8	1.5	(0.6)
Michigan	(0.7)	533.8	(2.1)	(0.2)	2.8
Ohio	(5.8)	NM	4.7	3.9	2.3
Wisconsin	8.3	178.6	0.9	1.5	10.9
Plains	(8.2)	26.6	0.9	(7.5)	(3.6)
Iowa	(8.5)	(21.1)	5.4	(23.6)	(4.8)
Kansas	(8.1)	4.1	(1.2)	(4.6)	(6.5)
Minnesota	(8.0)	41.8	(1.6)	(2.6)	(2.2)
Missouri	(10.5)	NM	(2.0)	(4.0)	(5.8)
Nebraska	(4.5)	34.2	3.2	(1.9)	0.3
North Dakota	7.4	(46.8)	13.7	1.8	(2.3)
South Dakota	N/A	(14.2)	0.4	(11.9)	0.6
Southeast	(2.9)	21.3	3.1	4.3	1.7
Alabama	3.0	22.3	3.6	10.7	4.9
Arkansas	7.8	132.8	(0.1)	1.5	5.3
Florida	N/A	13.1	3.3	0.6	1.6
Georgia	(9.1)	65.0	3.2	2.2	(2.5)
Kentucky	(2.2)	2.4	7.9	(0.6)	3.9
Louisiana	(8.5)	NM	(9.2)	10.4	(6.7)
Mississippi	(0.7)	9.7	3.5	8.7	4.1
North Carolina	(10.1)	(36.3)	5.1	6.7	(3.2)
South Carolina	0.9	107.3	6.3	19.2	7.5
Tennessee	(70.3)	17.3	5.0	7.9	6.9
Virginia	6.6	(2.9)	1.8	1.5	5.7
West Virginia	3.4	NM	6.1	1.5	3.6
Southwest	18.2	5.8	8.0	3.4	7.7
Arizona	(0.2)	(100.6)	3.6	1.5	1.0
New Mexico	166.7	41.1	11.5	1.5	38.0
Oklahoma	6.0	213.6	6.7	23.9	12.7
Texas	N/A	N/A	8.8	1.4	5.9
Rocky Mountain	0.3	(29.9)	5.4	1.1	(2.3)
Colorado	(1.4)	(31.6)	4.8	1.2	(5.9)
Idaho	(32.1)	(10.8)	4.9	(1.9)	(9.6)

State / Region	PIT	CIT	Sales	MFT	Total
Montana	3.4	33.0	N/A	0.9	(0.0)
Utah	21.7	(44.3)	4.9	2.1	6.1
Wyoming	N/A	N/A	10.7	6.6	9.2
Far West	5.1	14.0	12.3	(1.6)	7.3
Alaska	N/A	NM	N/A	(4.0)	53.3
California	5.1	11.0	15.8	(2.0)	7.4
Hawaii	3.1	20.2	(4.5)	1.1	(1.0)
Nevada	N/A	N/A	6.2	4.7	8.2
Oregon	5.9	(7.0)	N/A	1.5	5.4
Washington	N/A	N/A	9.2	(2.3)	7.7

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 FY 2018				State FY 2019			
	2017 Q3	2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2
US (median)	4.5	5.4	5.5	5.8	6.7	6.4	2.3	5.3
US (average)	5.2	7.2	8.9	7.4	6.2	6.7	1.2	5.3
New England	4.5	5.7	5.8	6.6	4.0	6.6	5.7	3.2
Connecticut	2.2	3.4	6.2	4.5	8.8	9.4	6.4	7.3
Maine	5.8	7.1	5.2	7.5	2.2	5.1	6.0	1.5
Massachusetts	3.3	5.8	5.2	8.7	4.9	8.5	3.6	5.3
Rhode Island	4.2	4.4	3.9	6.0	(0.3)	5.4	3.9	1.2
Vermont	3.5	3.4	21.4	4.2	5.3	9.4	1.9	1.5
Mideast	3.7	6.2	8.1	4.8	4.1	3.3	0.4	5.0
Delaware	4.7	4.8	5.9	2.3	6.3	4.8	1.6	7.9
Maryland	(2.9)	4.4	4.6	5.5	3.0	4.9	0.9	4.0
New Jersey	7.3	5.2	7.0	5.0	3.0	3.9	4.8	4.5
New York	4.6	7.8	10.3	4.6	5.1	2.2	(1.5)	5.5
Pennsylvania	4.4	4.4	4.3	4.5	3.0	4.4	3.7	5.1
Great Lakes	8.8	12.1	14.5	13.1	8.4	4.4	1.7	5.3
Illinois	26.3	29.3	36.6	37.3	13.8	6.1	2.7	5.1
Indiana	5.6	7.0	11.1	9.6	7.0	2.9	(2.8)	8.7
Michigan	(3.0)	3.8	2.1	1.1	4.6	2.9	(2.5)	5.2
Ohio	3.1	5.0	4.9	5.1	5.5	5.9	2.3	3.5
Wisconsin	4.6	6.0	4.6	3.5	6.5	2.4	7.9	4.7
Plains	5.3	5.8	6.4	6.8	4.8	4.8	0.4	2.8
Iowa	5.4	3.4	4.8	11.0	6.6	10.8	(0.6)	(4.1)
Kansas	13.4	20.0	19.2	23.6	14.4	7.9	3.7	7.6
Minnesota	3.7	4.8	6.0	4.4	6.7	6.5	2.1	5.7
Missouri	5.5	3.6	3.2	1.3	(5.4)	(4.3)	(3.6)	(2.2)
Nebraska	1.7	5.5	5.5	5.9	9.6	6.8	(0.2)	8.2
North Dakota	5.9	0.7	0.8	13.3	12.4	12.2	13.3	5.5
Southeast	2.1	3.0	5.1	6.1	6.3	7.4	(0.4)	3.1
Alabama	5.3	4.1	5.5	8.6	11.3	7.6	3.9	8.3
Arkansas	5.9	4.7	3.8	4.1	5.7	5.4	1.3	8.2
Georgia	2.9	5.6	4.7	2.8	7.4	4.7	(4.0)	0.1
Kentucky	3.9	3.3	2.5	3.5	(2.5)	(0.8)	(2.4)	(4.0)
Louisiana	(4.2)	11.7	(0.9)	15.5	21.7	21.5	(2.8)	6.3
Mississippi	3.1	3.4	2.2	3.8	7.0	1.7	(0.4)	2.5
North Carolina	(1.8)	(3.1)	7.3	5.8	7.5	10.4	(1.6)	0.9
South Carolina	1.7	5.3	5.8	2.5	5.7	6.5	4.9	7.2
Virginia	4.0	2.0	6.5	9.0	1.1	7.7	1.2	4.5
West Virginia	4.5	5.4	4.5	9.1	15.9	9.9	6.6	6.8
Southwest	4.6	6.9	8.0	8.3	7.9	6.4	3.6	7.7
Arizona	5.4	5.7	7.3	5.0	8.8	6.4	2.0	8.1
New Mexico	0.9	10.7	9.9	28.9	4.8	2.4	3.5	ND
Oklahoma	5.2	6.9	8.2	5.3	8.0	8.3	6.0	7.0
Rocky Mountain	6.7	8.8	6.2	10.0	6.7	5.6	4.6	2.8
Colorado	6.8	7.7	8.5	6.7	9.6	10.0	5.6	7.2
Idaho	8.6	15.1	8.8	7.7	(16.2)	(20.4)	(19.9)	(17.5)
Montana	3.9	10.0	5.0	5.9	6.8	10.6	3.1	5.6
Utah	6.6	7.7	0.8	18.4	12.4	9.2	15.5	3.3
Far West	6.9	8.8	11.3	7.3	7.7	12.0	0.9	9.3
California	7.4	9.0	12.2	6.8	7.4	12.3	0.2	9.4
Hawaii	(0.9)	7.9	(11.6)	32.9	10.3	5.1	17.8	ND
Oregon	5.4	7.7	9.5	4.6	9.1	11.0	3.3	7.9

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. ND = no data.

TABLE A4

State Personal Income Tax Estimated Payments/Declarations

Year-over-year nominal percentage change

State	Tax year 2018				Tax year 2019	
	April 2018, 1st payment	June 2018, 2nd payment	Sep. 2018, 3rd payment	Dec. 2018-Jan. 2019, 4th payment	April 2019, 1st payment	June 2019, 2nd payment
Median	12.6	9.3	9.6	(38.8)	18.0	10.1
Average	9.3	17.2	18.2	(39.4)	35.7	1.2
Alabama	42.5	7.2	23.9	(42.5)	30.1	11.5
Arizona	8.3	11.8	14.9	(58.3)	(25.1)	13.4
Arkansas	3.9	3.3	1.9	(36.8)	(3.2)	3.1
California	13.2	20.9	33.5	(22.6)	7.6	(3.6)
Colorado	(7.1)	13.3	11.3	(47.5)	62.9	(0.5)
Connecticut	14.0	36.8	8.7	(71.5)	(18.3)	(31.1)
Delaware	12.2	(4.2)	(1.8)	(32.3)	11.2	12.3
Georgia	13.5	6.9	6.1	(58.1)	2.8	6.1
Hawaii	71.8	(19.5)	6.5	(33.5)	138.6	ND
Illinois	46.6	41.7	29.3	(42.8)	19.7	12.3
Indiana	41.3	5.6	7.8	(33.6)	19.2	10.0
Iowa	(0.0)	(6.2)	(4.6)	(48.1)	9.4	7.3
Kansas	186.7	162.0	80.6	(54.0)	12.4	13.3
Kentucky	8.0	10.3	4.6	(43.9)	4.6	(0.7)
Louisiana	34.5	7.0	5.7	(39.8)	17.7	20.9
Maine	6.8	(11.7)	2.3	(18.0)	18.3	15.6
Maryland	36.5	5.5	11.2	(32.7)	(1.0)	19.9
Massachusetts	17.0	14.9	16.5	(49.8)	7.6	0.3
Michigan	23.2	9.9	12.3	(43.3)	9.9	5.5
Minnesota	(0.3)	9.4	5.8	(52.2)	71.0	9.3
Mississippi	(42.2)	(7.0)	2.6	(28.0)	97.8	20.1
Missouri	(5.5)	2.5	13.8	(21.9)	135.6	(68.7)
Montana	7.8	16.2	2.1	(36.1)	27.6	(0.8)
Nebraska	6.1	7.9	6.2	(35.6)	20.6	10.1
New Jersey	7.5	20.2	23.3	(32.5)	10.4	7.1
New York	4.5	15.9	15.2	(54.5)	57.1	7.5
North Carolina	30.7	1.0	2.7	(44.4)	15.1	13.2
North Dakota	12.5	11.3	7.4	(43.5)	40.6	12.7
Ohio	39.5	36.7	18.7	(43.3)	8.1	12.9
Oklahoma	14.5	9.2	9.9	(29.4)	31.6	3.6
Oregon	6.6	7.9	13.2	(46.9)	53.5	11.5
Pennsylvania	16.4	9.7	14.8	(33.2)	13.9	13.0
Rhode Island	14.5	(1.6)	12.8	(37.8)	5.3	10.6
South Carolina	(65.3)	1.8	5.3	(35.4)	157.4	18.2
Vermont	12.7	14.8	14.9	(25.5)	20.1	14.9
Virginia	28.3	16.3	8.8	(37.0)	30.3	13.7
West Virginia	9.7	4.3	10.0	(22.7)	(9.9)	10.0
Wisconsin	4.8	12.5	9.2	(42.8)	51.9	0.9

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. ND = no data.

TABLE A5

State Personal Income Tax Final Payments

Year-over-year nominal percentage change

State	State FY 2018				State FY 2019			
	2017 Q3	2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2
Median	(3.9)	6.8	11.2	5.5	7.9	10.8	11.2	39.0
Average	1.4	15.1	15.2	8.4	12.8	(1.4)	18.5	40.5
Alabama	(4.9)	6.4	13.3	2.9	20.7	3.1	(2.2)	40.7
Arizona	2.8	(4.2)	8.3	5.0	12.7	27.8	28.4	52.5
Arkansas	(13.2)	(7.1)	11.3	(1.8)	3.9	8.3	142.4	33.5
California	(1.9)	(0.6)	11.2	11.0	15.7	13.9	21.4	29.4
Colorado	9.3	12.7	46.2	9.9	12.0	7.1	0.7	26.5
Connecticut	(1.3)	54.5	15.2	9.7	2.6	(37.8)	(45.0)	(4.4)
Delaware	7.5	5.1	7.7	8.1	(11.6)	16.8	33.6	35.5
Georgia	25.1	(3.3)	11.8	(0.2)	32.2	15.8	22.0	51.6
Hawaii	(7.4)	6.5	14.6	21.1	25.0	(6.2)	33.8	ND
Idaho	8.4	10.1	52.1	(4.0)	7.7	(45.5)	(48.7)	55.2
Illinois	(13.3)	13.1	29.8	53.0	53.7	25.5	25.8	52.8
Indiana	40.1	(13.6)	0.2	3.4	(1.4)	18.0	12.2	33.9
Iowa	(15.9)	(7.5)	2.1	(8.6)	16.3	30.3	(2.9)	65.6
Kansas	30.0	(13.2)	(17.3)	99.1	18.7	63.7	12.9	50.2
Kentucky	(9.7)	(3.6)	4.6	4.6	1.2	14.3	27.7	18.5
Louisiana	(12.7)	26.5	(1.3)	3.1	1.5	6.8	7.3	48.3
Maine	(5.1)	2.7	(5.9)	0.9	4.1	5.9	(2.9)	31.0
Maryland	1.2	8.3	12.3	1.6	7.5	6.2	21.1	49.7
Massachusetts	0.6	31.4	33.1	8.3	11.7	14.6	11.0	53.8
Michigan	(7.8)	(4.1)	16.3	9.9	21.2	19.1	(5.3)	46.4
Minnesota	1.8	7.7	17.3	4.1	7.1	(1.9)	3.1	28.4
Missouri	(3.9)	4.9	1.8	4.3	7.2	104.6	352.2	52.1
Montana	(9.0)	11.8	(2.2)	10.9	0.8	2.8	17.4	28.5
Nebraska	(13.8)	16.9	(2.3)	5.5	17.9	(4.9)	5.6	107.6
New Jersey	48.8	97.7	32.0	2.7	(21.7)	(42.8)	(13.4)	49.3
New Mexico	9.5	41.6	4.1	14.4	54.0	(47.2)	209.2	ND
New York	(10.8)	(2.0)	25.2	4.2	20.5	19.6	15.4	38.3
North Carolina	(4.7)	29.6	8.3	0.9	1.7	(10.2)	2.8	41.5
North Dakota	0.0	(14.9)	4.7	15.6	(9.1)	5.3	14.6	26.1
Ohio	(27.4)	(6.7)	(0.0)	20.5	51.5	45.6	25.2	52.5
Oklahoma	(9.0)	(3.5)	5.7	11.1	13.5	16.6	12.0	20.9
Pennsylvania	(0.0)	17.8	14.6	(1.0)	50.2	19.3	8.0	32.4
Rhode Island	(7.8)	(5.5)	50.1	14.7	6.4	20.4	11.2	31.4
South Carolina	31.1	30.4	15.7	18.4	7.9	14.1	10.0	25.6
Utah	16.1	72.3	9.6	(7.1)	5.6	(71.6)	36.5	59.4
Vermont	13.0	10.6	15.3	31.5	(2.3)	13.2	9.9	23.6
Virginia	(19.8)	NM	110.2	6.6	77.6	NM	(16.6)	62.5
West Virginia	(9.2)	16.5	(6.4)	0.5	20.7	(1.0)	(7.2)	39.0
Wisconsin	(4.5)	7.1	(16.1)	6.9	2.0	(11.1)	(23.1)	29.7

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. ND = no data.

TABLE A6

Quarterly State Government Tax Revenue for Nonmajor Tax Revenue Sources

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

2019 Q1 collections (\$ millions)	Property tax	Tobacco product sales tax	Alcoholic beverage sales tax	Motor vehicle & operators' license taxes	Other taxes	Total nonmajor taxes
	\$4,513	\$4,255	\$1,701	\$8,443	\$37,992	\$56,904
2010Q1-2019Q1 average growth	2.1	0.2	1.1	2.2	2.3	2.0
2019 Q1	6.3	(4.8)	(0.6)	7.3	4.0	3.7
2018 Q4	8.6	(4.7)	(1.7)	9.1	4.7	4.5
2018 Q3	7.9	1.3	(0.2)	5.3	5.2	4.9
2018 Q2	3.6	5.2	1.2	4.6	3.7	3.9
2018 Q1	1.0	4.6	1.1	1.1	3.1	2.7
2017 Q4	(0.6)	6.1	2.9	(0.3)	2.1	1.9
2017 Q3	(1.2)	3.6	3.0	3.7	0.6	1.2
2017 Q2	0.4	1.8	2.3	1.5	(0.3)	0.3
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	(1.5)	(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	(0.5)	0.3
2015 Q2	5.2	(2.1)	1.6	1.2	(0.8)	(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	(1.6)	(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	2.1	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	(8.5)	(4.7)
2009 Q4	6.1	(1.5)	0.6	0.2	(12.6)	(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
2008 Q4	(2.8)	3.2	0.5	(1.1)	6.3	4.0
2008 Q3	1.8	3.5	(0.1)	(0.5)	8.1	5.6
2008 Q2	3.4	5.9	0.5	(0.4)	5.6	4.4
2008 Q1	4.0	6.2	0.6	(1.0)	2.4	2.3

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

TABLE A7

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

Nominal percentage change, July 2017-March 2018 versus July 2018-March 2019

State / Region	PIT	CIT	Sales	MFT	Total
US (median)	1.9	28.1	5.2	2.7	4.4
US (average)	(1.7)	25.9	5.5	4.3	3.5
New England	(6.5)	51.0	4.8	1.2	2.5
Connecticut	(19.3)	136.4	3.5	1.0	(2.8)
Maine	2.7	54.0	5.8	2.8	5.2
Massachusetts	(1.3)	33.0	5.1	0.5	4.4
New Hampshire	6.6	17.7	N/A	0.9	7.1
Rhode Island	(2.0)	44.6	6.1	3.1	3.5
Vermont	1.5	57.6	4.1	1.6	4.5
Mideast	(7.1)	39.1	4.8	2.7	(0.1)
Delaware	2.8	91.7	N/A	7.4	11.7
Maryland	2.4	21.2	3.5	3.4	5.0
New Jersey	(3.9)	101.2	3.1	0.1	5.0
New York	(11.7)	24.7	3.8	4.9	(5.1)
Pennsylvania	1.9	22.1	7.9	1.6	3.8
Great Lakes	2.7	33.4	4.6	1.1	4.4
Illinois	4.9	8.8	5.7	(0.4)	4.6
Indiana	0.6	65.7	4.2	3.3	4.1
Michigan	1.6	80.2	4.3	(3.4)	5.3
Ohio	2.0	NM	4.7	3.8	3.0
Wisconsin	2.5	56.6	3.5	1.6	4.9
Plains	(1.9)	24.7	3.0	0.2	2.3
Iowa	1.1	24.8	2.9	(1.6)	2.4
Kansas	2.7	28.1	0.4	(0.1)	2.0
Minnesota	(2.8)	26.6	2.2	(0.5)	1.2
Missouri	(6.4)	(4.8)	1.6	1.8	(2.5)
Nebraska	1.9	27.3	2.1	2.5	2.8
North Dakota	8.0	67.8	20.1	2.1	23.0
South Dakota	N/A	(11.2)	3.9	(2.3)	3.2
Southeast	1.6	17.0	4.5	4.4	3.8
Alabama	5.3	14.8	5.6	8.1	5.6
Arkansas	5.1	40.6	2.8	1.6	4.3
Florida	N/A	33.7	5.3	2.4	4.4
Georgia	(0.2)	28.1	5.7	2.4	2.5
Kentucky	(2.3)	(2.7)	8.4	1.1	2.3
Louisiana	10.7	125.8	(8.8)	2.7	2.9
Mississippi	1.3	7.9	4.3	3.5	3.8
North Carolina	(1.1)	(1.8)	5.2	5.3	1.8
South Carolina	3.0	35.0	3.8	13.5	5.7
Tennessee	(75.0)	(6.6)	5.9	7.4	5.9
Virginia	2.5	0.3	3.8	4.6	3.1
West Virginia	7.5	70.6	10.3	12.2	9.7
Southwest	6.0	97.3	9.2	3.9	10.9
Arizona	0.4	48.6	5.9	3.0	6.9
New Mexico	23.5	334.4	15.2	2.7	32.8
Oklahoma	6.9	165.6	9.0	21.4	14.8
Texas	N/A	N/A	9.5	1.9	9.2
Rocky Mountain	(1.4)	14.5	6.4	3.2	1.3
Colorado	3.5	14.3	5.7	2.4	2.1
Idaho	(25.3)	17.8	6.7	3.8	(5.2)

State / Region	PIT	CIT	Sales	MFT	Total
Montana	4.3	(3.2)	N/A	3.0	4.7
Utah	(1.4)	21.3	5.4	3.3	0.6
Wyoming	N/A	N/A	11.8	5.3	9.7
Far West	(0.2)	6.9	6.0	11.4	3.6
Alaska	N/A	222.7	N/A	8.9	56.2
California	(0.8)	2.9	5.3	20.0	1.9
Hawaii	5.1	38.5	(0.4)	(0.6)	2.4
Nevada	N/A	N/A	5.5	3.8	5.5
Oregon	4.5	34.2	N/A	3.2	5.8
Washington	N/A	N/A	9.5	(10.7)	10.2

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 A8

Preliminary Quarterly State Government Tax Revenue, by State

Nominal percentage change, 2019 Q2 versus 2018 Q2

State / Region	PIT	CIT	Sales	Total
US (median)	18.4	18.5	5.4	11.2
US (average)	18.9	20.7	2.6	13.0
New England	11.2	21.3	5.6	7.8
Connecticut	(2.6)	96.1	4.8	2.1
Maine	14.6	16.1	4.8	10.5
Massachusetts	20.0	0.8	6.3	13.3
New Hampshire	25.2	(14.4)	N/A	(4.9)
Rhode Island	18.9	374.9	9.8	16.6
Vermont	12.7	4.8	1.9	5.0
Mideast	24.1	33.9	4.4	16.9
Delaware	17.6	1.2	N/A	0.1
Maryland	18.8	30.7	3.9	11.2
New Jersey	21.5	79.6	4.5	18.5
New York	30.2	10.7	3.5	22.7
Pennsylvania	13.1	13.2	5.6	9.3
Great Lakes	14.8	22.4	5.1	9.8
Illinois	17.2	21.4	9.6	14.5
Indiana	14.8	25.8	2.6	8.8
Michigan	8.3	7.8	3.1	5.5
Ohio	15.4	NM	4.4	7.9
Wisconsin	13.6	38.5	6.5	10.1
Plains	21.6	18.7	6.2	12.9
Iowa	22.4	29.5	6.6	14.7
Kansas	26.3	(5.4)	2.4	10.7
Minnesota	24.1	12.9	10.2	17.1
Missouri	15.6	23.2	(0.1)	9.4
Nebraska	21.1	45.6	8.9	18.1
North Dakota	15.5	25.4	2.6	(14.4)
South Dakota	N/A	N/A	3.9	3.7
Southeast	18.6	20.5	4.7	11.0
Alabama	18.4	15.9	6.7	12.6
Arkansas	15.2	30.8	(0.1)	11.2
Florida	N/A	29.7	4.7	7.2
Georgia	18.7	24.8	4.2	12.2
Kentucky	1.1	8.7	11.5	6.7
Louisiana	34.0	(9.3)	(9.9)	6.3
Mississippi	17.4	13.1	6.4	9.2
North Carolina	20.7	22.9	7.3	15.3
South Carolina	19.1	31.5	6.3	13.9
Tennessee	14.1	(4.8)	5.8	8.6
Virginia	20.9	21.6	3.3	14.2
West Virginia	13.6	91.7	7.3	14.0
Southwest	18.4	(24.7)	6.3	6.6
Arizona	33.5	27.6	6.2	16.5
New Mexico	(16.7)	(393.8)	23.8	(7.7)
Oklahoma	9.8	12.7	3.8	12.0
Texas	N/A	N/A	5.9	5.0
Rocky Mountain	24.6	0.8	3.8	14.2
Colorado	20.8	(11.8)	3.0	13.0
Idaho	28.0	19.0	6.4	12.8

State / Region	PIT	CIT	Sales	Total
Montana	29.8	23.1	N/A	14.3
Utah	28.8	7.7	0.5	16.8
Wyoming	N/A	N/A	11.7	ND
Far West	17.8	17.8	(8.7)	17.2
Alaska	N/A	16.4	N/A	(23.5)
California	16.8	18.0	(15.9)	19.4
Hawaii	6.3	57.2	34.3	16.9
Nevada	N/A	N/A	7.9	6.6
Oregon	31.9	8.5	N/A	27.9
Washington	N/A	N/A	5.4	1.7

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. Data for Hawaii, New Mexico, and Rhode Island are preliminary and exclude June revenues.

TABLE A9

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	>\$200,000 in CY 2019, > \$150,000 in CY 2020	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	>\$250,000 in CY 2019, >\$100,000 in CY 2020	1/1/2019	
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	10/1/2019
Kentucky	>\$100,000 or over 200 transactions	10/1/2018	7/1/2019
Louisiana	>\$100,000 or over 200 transactions	TBD	
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	
Minnesota	>\$100,000 or over 200 transactions effective 10/1/2019	10/1/2018	10/1/2018
Mississippi	>\$250,000	9/1/2018	
Nebraska	>\$100,000 or over 200 transactions	4/1/2019	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	
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	4/26/2019
South Dakota	>\$100,000 or over 200 transactions	11/1/2018	3/1/2019
Tennessee	>\$500,000	10/1/2019	
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	10/1/2019
Wyoming	>\$100,000 or over 200 transactions	2/1/2019	7/1/2019

Source: Individual state information, compiled by the author.

Notes: TBD = to be determined. Alaska, Delaware, Montana, New Hampshire, and Oregon do not have sales tax. Florida and Missouri have not yet enacted legislations on economic nexus. States are hyperlinked to respective economic nexus guidelines.

Notes

- ¹ The author made several adjustments for the first quarter of 2019 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 Bureau of Economic Analysis regions as the basis of analysis.
- ³ See Iowa Department of Revenue, “IDR Announces 2019 Interest Rates, Standard Deductions, Income Tax Brackets,” October 30, 2018, <https://tax.iowa.gov/news-release/release-idr-announces-2019-interest-rates-standard-deductions-income-tax-brackets>.
- ⁴ See Missouri Department of Revenue, “2019 Withholding Tax and MO W-4 Changes,” <https://dor.mo.gov/business/withhold>.
- ⁵ See Idaho State Tax Commission, “Changes for 2018 Idaho Income tax Returns,” June 21, 2018, <https://tax.idaho.gov/i-2019.cfm>.
- ⁶ See Commonwealth of Kentucky, Department of Revenue, “2018 Kentucky Individual Income Tax Forms,” <https://revenue.ky.gov/Forms/740%20Packet.pdf>.
- ⁷ The state fiscal year runs from July 1 to June 30 in all states except Alabama, Michigan, New York, and Texas.
- ⁸ See Arizona Joint Legislative Budget Committee, “May 2019 Monthly Fiscal Highlights,” <https://www.azleg.gov/jlbc/mfh-may-19.pdf>.
- ⁹ Individual income tax returns are due on April 15 in 35 out of 41 states that have broad-based personal income tax. The remaining six states have individual income tax return due dates later than the usual April 15. Those states are: Arkansas (May 15), Delaware (April 30), Hawaii (April 20), Iowa (April 30), Louisiana (May 15), and Virginia (May 1).
- ¹⁰ See Louisiana Department of Revenue, “Revenue Information Bulletin No. 18-016,” June 24, 2018, <http://revenue.louisiana.gov/LawsPolicies/RIB%2018-016%20Decrease%20in%20State%20Sales%20Tax%20Rate%20to%20be%20Effective%20July%201%202018.pdf>.
- ¹¹ See *South Dakota v. Wayfair*, Brief of Amici Curiae Law Professors and Economists in Support of Petitioner, No. 17-494, March 5, 2018, https://www.supremecourt.gov/DocketPDF/17/17-494/37603/20180305141434827_Brief%20of%20Amici%20Curiae%20Law%20Professors%20and%20Economists%20iso%20Petitioner.PDF.
- ¹² For more information, see Bureau of Economic Analysis, Table 2.1. Personal Income and Its Disposition, <https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step>.
- ¹³ See California’s Legislative Analyst’s Office, “LAO Revenue Outlook, The 2019-20 May Revision,” May 12, 2019, <https://lao.ca.gov/Publications/Report/4037>.
- ¹⁴ For more information, see Bureau of Labor Statistics, “How the Government Measures Unemployment,” last modified October 8, 2015, https://www.bls.gov/cps/cps_htgm.htm#unemployed.
- ¹⁵ For more discussion of the relationship between property tax and housing prices, see Dadayan (2012).
- ¹⁶ See Federal Reserve Bank of St. Louis, “30-Year Fixed Rate Mortgage Average in the United States,” <https://fred.stlouisfed.org/series/MORTGAGE30US>.

- ¹⁷ Author's analysis of data from NASBO (2018), Table A-1.
- ¹⁸ See *Gross Income Tax* (New Jersey Department of the Treasury), last updated February 28, 2019, <https://www.state.nj.us/treasury/taxation/git2018TaxRates.shtml>.
- ¹⁹ See Missouri Office of the Governor, "Governor Mike Parson Signs Income Tax Cut for Missourians," press release, July 12, 2018, <https://governor.mo.gov/press-releases/archive/governor-mike-parson-signs-income-tax-cut-missourians>.
- ²⁰ See Oklahoma Tax Commission, "Gross Production and Petroleum Excise Tax," <https://www.ok.gov/tax/documents/Summary%20of%202017%20Second%20Special%20Session%20GP%20Tax%20Legislation.pdf>.
- ²¹ See Washington State Department of Revenue, "State School Levy Property Tax Tip Sheet," FS0026, May 2018, https://dor.wa.gov/sites/default/files/legacy/Docs/Pubs/Prop_Tax/SchoolLevy.pdf.
- ²² See Louisiana Department of Revenues, "New State Sales Tax Rate Goes into Effect July 1," press release, June 24, 2018, <https://revenue.louisiana.gov/NewsAndPublications/NewsReleaseDetails/11467>.
- ²³ 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>.

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About the Author

Lucy Dadayan is a senior research associate with the Urban-Brookings Tax Policy Center at the Urban Institute.

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

Dadayan holds an MA in public policy and affairs and a PhD in informatics, both from the State University of New York at Albany.

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