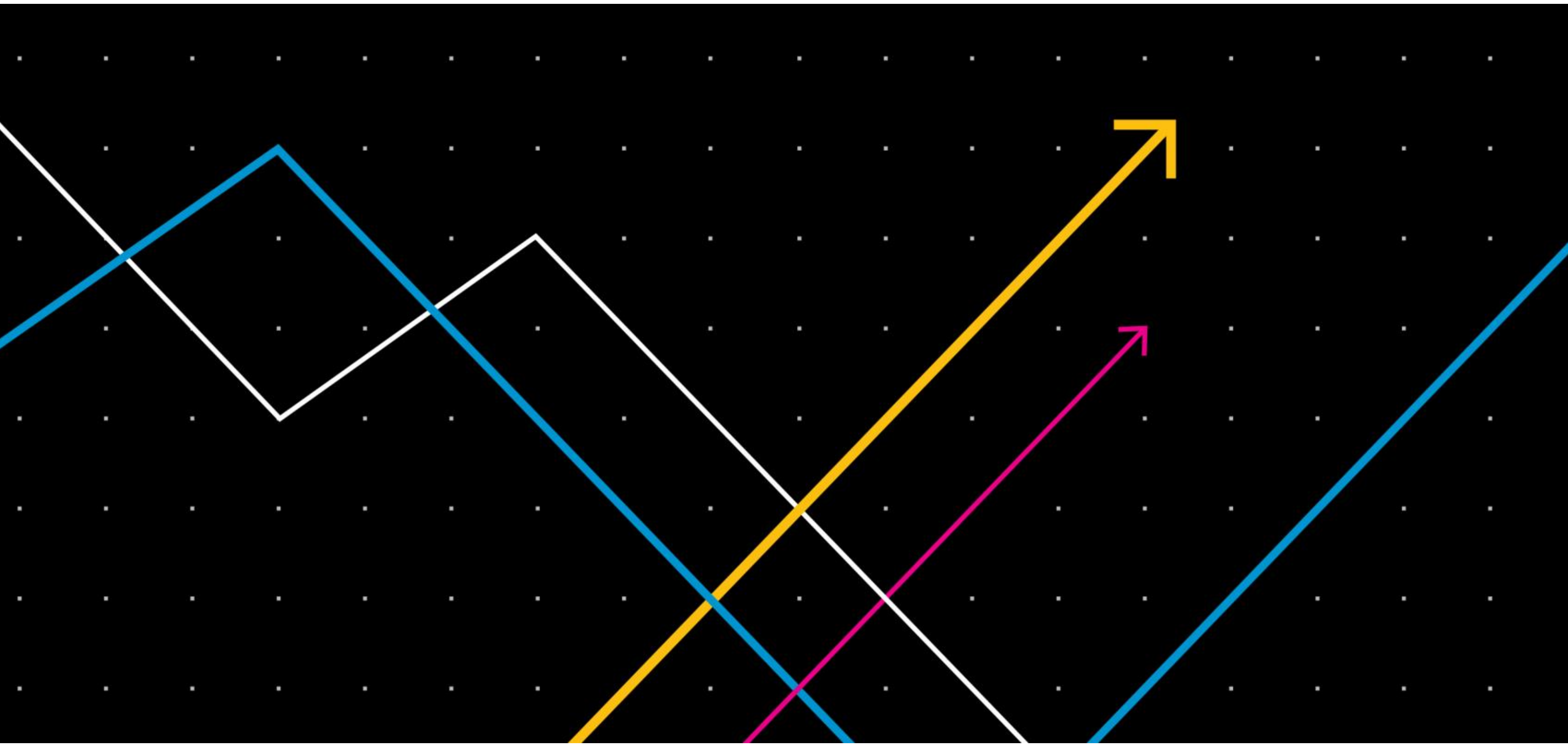

RESEARCH REPORT

Windfall "April Surprises" Made Up for Earlier Shortfalls; State Taxes Returned to Normal Levels in the Third Quarter

State Tax and Economic Review, 2019 Quarter 2

Lucy Dadayan

November 2019

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Thanks to Kim Rueben and Mark Mazur for their thoughtful review of and feedback on the report.

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Executive Summary

- **State and local government tax revenues** from major sources—personal income, corporate income, sales, and property taxes—were 11.1 percent higher in the second quarter of 2019 compared with the prior year. Growth was substantially stronger than the 4.2 percent average growth in the prior four quarters.
- **State government tax revenues** from major sources showed strong year-over-year growth at 12.9 percent in the second quarter of 2019. The growth varied among major revenue sources:
  - After two consecutive quarters of decline, **state personal income taxes** soared in the second quarter of 2019, mostly because of shifts in timing of estimated tax and final payments 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 observed in previous economic expansions. Following the US Supreme Court's decision in *South Dakota v. Wayfair, Inc.* in June 2018 and subsequent changes in state tax rules, we are expecting continued improvement in sales tax revenues going forward.
  - **State corporate income taxes** once again showed strong year-over-year growth in the second quarter of 2019, marking the fifth 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 tax revenues are likely to level off or even decline in the near future.
- Year-over-year growth in **local government tax revenues** from major sources was 7.9 percent in the second quarter of 2019, considerably higher than the growth observed in the prior four quarters.
  - **Local property taxes** increased 7.3 percent year-over-year in the second quarter of 2019 compared with a year earlier, which is stronger than the 3.2 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 the TCJA's changes.
- **Preliminary data for the third quarter of 2019** indicate growth in overall state tax revenue collections has largely returned to normal levels, mostly because the TCJA's impact has waned.
  - After highly anticipated "April surprises," growth rates for **state personal income tax** revenues are back to single digits in most states in the third quarter of 2019.

- State corporate income tax collections showed double-digit year-over-year growth for the sixth consecutive quarter. However, there was wide variation across the states, and the revenue growth experienced in the median state was much weaker.
- Year-over-year growth in **state sales tax** collections in the third quarter of 2019 was strong 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 second 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. Moreover, growth in some of the economic factors weakened in the second quarter of 2019.

  - Real **gross domestic product** was 2.3 percent higher for the nation in the second quarter of 2019 than in the same quarter in 2018. Growth in real gross domestic product was weaker than the growth in the first quarter. 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 3.6 percent in the second quarter of 2019. Unemployment rates have seen steady declines since 2010, largely driven by improved job prospects.
  - **Employment** grew 1.4 percent in the second quarter of 2019 compared with one year earlier. However, there were large disparities among the states, with 31 states reporting growth below the national average. Overall employment growth has slowed in 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 remained solid, while spending on both durable and nondurable goods weakened substantially in the second quarter of 2019 compared with the growth rates observed in the second half of 2018.
  - **Housing prices** increased 5.0 percent in nominal terms in the second quarter of 2019, which is weaker than the growth rates observed throughout calendar year 2018 and in the first quarter of 2019. 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 8 states.

Trends in State and Local Tax Revenues

State and local government tax revenues fluctuated wildly throughout state fiscal year 2019, which ended on June 30th in 46 states.[1] The fluctuations were largely related to income tax receipts and caused by the Tax Cuts and Jobs Act (TCJA), which was the largest federal tax overhaul since 1986. The TCJA is very complex and includes over 100 new provisions. Nearly two years 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 income tax liability. For example, some individual taxpayers continue to adjust 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. The ambiguity about various provisions of the TCJA and the uncertainty about the economy and political climate contribute to shifts in taxpayer behavior. The result is increased volatility in state tax revenues.

State and local government tax revenues showed robust growth in the second quarter of 2019 after much weaker growth in the fourth quarter of 2018 and modest growth in the first quarter of 2019. Most of the growth in the second quarter of 2019 was fueled by a large increase in income tax collections caused by shifts in the timing of income tax payments by some taxpayers. 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 (e.g., bonus payments) from 2018 to 2017 to claim a deduction at the higher corporate income tax rate. Individual taxpayers also 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 was 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 second quarter of 2018 and the second 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 11.1 percent in the second quarter of 2019 compared with a year earlier; the average quarterly growth rate in the prior four quarters was substantially weaker at 4.2 percent.
- **State government revenue** from major sources increased 12.9 percent in the second quarter of 2019 relative to a year ago, while the average quarterly year-over-year growth rate in the prior four quarters was 4.6 percent. After declines for two consecutive quarters, **state personal income tax** revenues soared in the second quarter of 2019. The growth in state personal income tax revenues was 19.1 percent in the second quarter of 2019 compared with the second quarter of 2018; in contrast, the average quarterly year-over-year growth rate in the prior four quarters was only 1.6 percent. **State sales tax** collections showed growth of 2.3 percent in the second quarter of 2019 compared with the second quarter of 2018, weaker than the average quarterly year-over-year growth rate of 5.5 percent in the prior four quarters. **State corporate income tax** revenues rose 21.5 percent in the second quarter of 2019 compared with a year earlier, marking the fifth consecutive quarter of double-digit growth. However, state corporate income tax revenues remain below their prerecession peaks.
- **Local government revenue** from major sources increased 7.9 percent from a year earlier in the second quarter of 2019, considerably stronger than the 3.2 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 7.3 percent from the prior year, which is stronger than the 3.2 percent average quarterly year-over-year growth in the prior four quarters. The weaker growth in the prior four quarters 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 5.9 percent in the second quarter of 2019. Growth in **local corporate income taxes** was strong at 8.8 percent, while **local personal income taxes** increased 17.8 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 Q2	2019 Q2	Y-O-Y percentage change	Average quarterly Y-O-Y growth rate, prior four quarters
Total state and local major taxes	**$369,923**	**$410,927**	**11.1**	**4.2**
State major taxes	***$236,532***	***$267,015***	***12.9***	***4.6***
Personal income tax	120,917	143,963	19.1	1.6
Corporate income tax	22,160	26,926	21.5	24.8
Sales tax	89,190	91,251	2.3	5.5
Property tax	4,264	4,874	14.3	9.3
Local major taxes	***$133,391***	***$143,912***	***7.9***	***3.2***
Personal income tax	10,438	12,293	17.8	1.8
Corporate income tax	2,621	2,852	8.8	0.2
Sales tax	21,532	22,798	5.9	4.1
Property tax	98,800	105,969	7.3	3.2

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

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

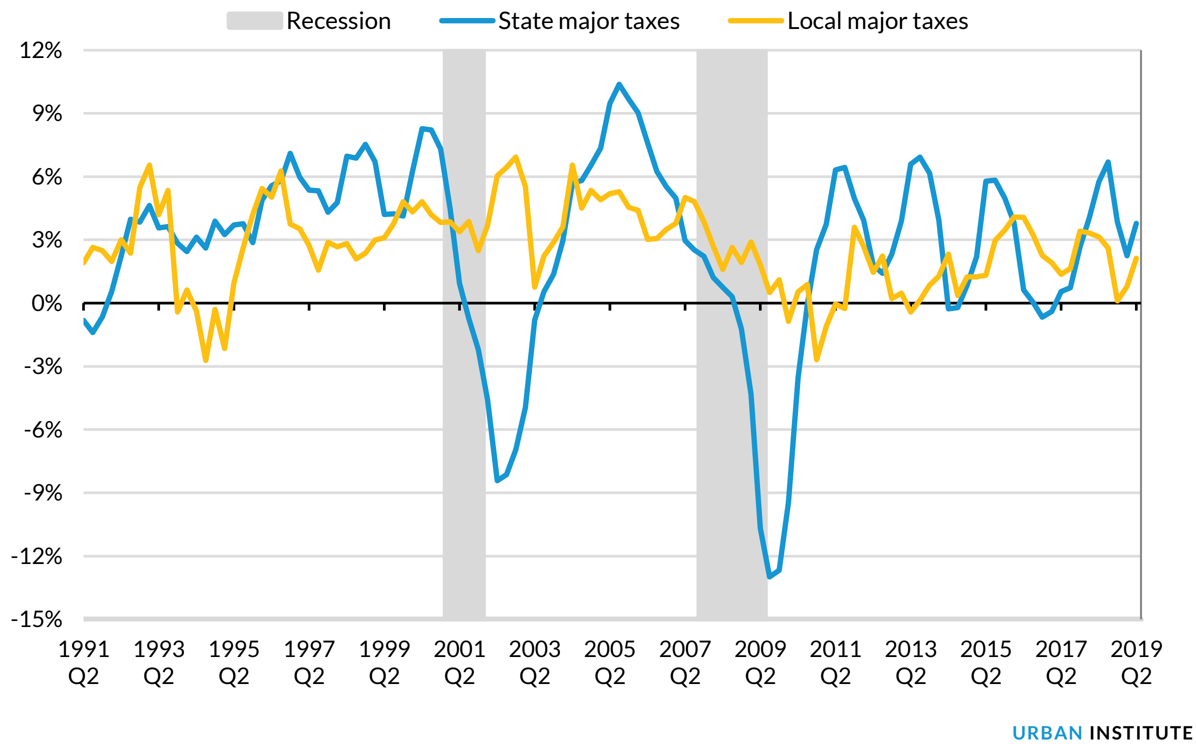
Figure 1 shows longer-term trends in state and local tax collections, specifically, the year-over-year percentage change in the four-quarter moving average of inflation-adjusted state and local tax collections from major sources: personal income tax, corporate income tax, sales tax, and property tax. 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 ticked upward in the second quarter of 2019. State taxes from major sources, adjusted for inflation, grew 3.8 percent in the past four quarters relative to the year earlier, which is weaker than the growth observed throughout 2018. The four-quarter moving average of inflation-adjusted local taxes from major sources grew 2.1 percent in the second quarter of 2019, which is slightly stronger than the growth observed in the prior two quarters, but weaker than the rates observed in the first half of 2018.

Most local governments rely heavily on property taxes, which are relatively stable and respond slowly to changes in property values. By contrast, the personal income, sales, and corporate taxes that states heavily rely on respond more rapidly to economic upticks and declines. Over the past two decades, property taxes have consistently made up at least two-thirds of total local tax collections. As noted, the recent fluctuations in property tax receipts likely reflect the timing of payment shifts in response to the TCJA.

FIGURE 1

State and Local Major Tax Revenue Growth Ticked Upward

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



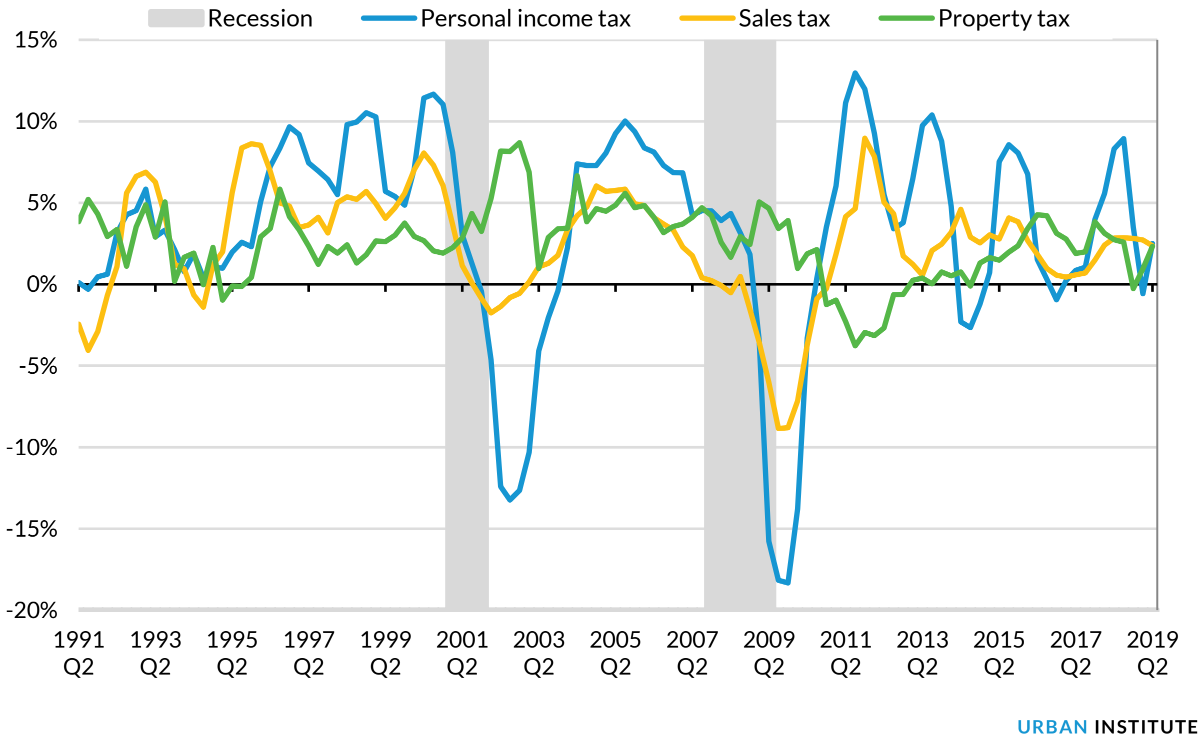
Source: US Census Bureau (tax revenue) and Bureau of Economic Analysis (GDP), analysis by the author.
Notes: Year-over-year change is the percentage change of four-quarter moving averages. Data are adjusted for inflation. Data are for four major tax categories only: personal income, corporate income, 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 2.5 percent in the second quarter of 2019, which is substantially weaker than the strong growth observed throughout 2018. However, strong growth rates in 2018 were largely attributable to the implications of the TCJA. State and local sales tax revenues grew 2.4 percent in the second quarter of 2019, which is relatively steady compared with the growth observed in the prior five quarters. State and local property taxes, nearly all of which are collected by local governments, grew 2.3 percent from a year earlier in the second quarter of 2019.

FIGURE 2

State-Local Personal Income Tax Revenues Rebounded in the Second Quarter of 2019

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



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

Trends in State Tax Revenue in 2019 Quarter 2

Total state tax revenue grew 10.7 percent in nominal terms and 8.7 percent in inflation-adjusted terms in the second quarter of 2019 relative to a year earlier, according to US Census Bureau data adjusted by the author (Table A1).[2] The strength in overall state tax revenues was mostly driven by the strong growth in personal income tax revenues. After two consecutive quarters of decline, personal income tax revenues soared 19.1 percent in the second quarter of 2019 relative to a year earlier. Declines in personal income tax revenues in the fourth quarter of 2018 and the first quarter of 2019 compared with prior-year levels were largely expected because state income tax revenues were artificially boosted in December 2017 and January 2018. In addition, states anticipated stronger growth in personal income tax revenues in the second quarter of 2019 because of timing strategies for estimated income tax payments by some taxpayers. Corporate income tax collections grew by double digits for the fifth consecutive quarter, sales tax collections grew 2.3 percent, and motor fuel tax collections increased 2.8 percent relative to a year earlier. Table A1 shows (1) nominal and inflation-adjusted growth in state government tax revenue collections from major sources and (2) average quarterly year-over-year growth between the first quarter of 2010 and the second quarter of 2019. Despite the prolonged economic expansion, the inflation-adjusted average annual growth rate in overall state tax revenues since 2010 was only 3.0 percent.

There were large regional disparities in terms of year-over-year growth in total state tax revenues in the second quarter of 2019 (Table A2). Growth in the median state was 10.0 percent, compared with the national average of 10.7 percent growth. State tax revenues increased in all regions. The Mideast and Plains regions had the strongest growth at 15.7 and 13.0 percent, respectively, while the Southwest and New England regions had the weakest growth at 7.1 and 7.7 percent, respectively.[3]

Forty-eight states reported growth in total state tax revenue collections for the second quarter of 2019 relative to a year prior, with 25 states reporting double-digit growth. Growth in state tax revenues was particularly strong in Oregon, New York, and New Jersey, all of which rely heavily on personal income taxes. Revenue growth was also very strong in Wyoming, which is heavily dependent on activity in the oil and gas sector.

Personal Income Taxes

After declines in two consecutive quarters, state personal income tax revenues increased 19.1 percent in nominal terms and 17.0 percent in inflation-adjusted terms for the second quarter of 2019 compared with the same period in 2018. Declines in personal income tax collections in the fourth quarter of 2018 and first quarter of 2019 were anticipated because of taxpayer income-shifting behavior. As cautioned in the previous *State Tax and Economic Review* quarterly reports, the federal policy changes under the TCJA created strong incentives for some high-income taxpayers to shift income and deductions between tax years. More specifically, 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 but would pick up in the second quarter of 2019. The average quarterly year-over-year growth rate in state personal income tax collections since 2010 was 6.2 percent in nominal terms and 4.4 percent in real terms.

Personal income tax collections increased by double digits in all regions for the second quarter of 2019 compared with the same period in 2018. The Mideast region saw the largest growth at 24.1 percent, while the New England region saw the weakest growth at 11.1 percent.

Overall, personal income tax collections increased in all states but Connecticut and New Mexico. In Connecticut, declines were mostly attributable to legislative changes that changed the taxation of income (discussed below). In dollar values, California had the largest year-over-year increase in personal income tax revenue collections at $5.4 billion, followed by New York at $3.9 billion. Both states rely heavily on higher-income taxpayers and on nonwage income, and the substantial growth was largely attributable to income-shifting behavior.

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 third quarter of 2019.

Table 2 shows the growth for each major component in the past nine 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. Personal income tax collections increased substantially in the second quarter of 2019, again mostly driven by strong growth in estimated and final payments. Preliminary data show that growth in personal income tax collections has normalized in the third quarter of 2019 and is estimated to be 3.7 percent.

TABLE 2

Growth in State Government Personal Income Tax Components

Year-over-year nominal percentage change

Personal income tax components	2017 Q3	2017 Q4	2018 Q1	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3
Withholding	5.2	7.2	8.9	7.4	6.2	6.7	1.2	5.3	4.3
Estimated payments	1.8	52.7	31.0	12.8	18.2	(70.8)	(6.1)	16.0	2.1
Final returns	1.4	15.1	15.2	8.4	12.8	(1.4)	18.5	40.5	22.4
Refunds	4.9	(7.1)	6.1	0.9	14.3	16.8	(0.3)	(1.2)	(4.6)
PIT total	**4.5**	**15.9**	**14.8**	**10.3**	**7.8**	**(10.4)**	**0.5**	**18.6**	**3.7**

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 Q3 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. Growth in withholding regained strength and was 5.1 percent in the second quarter of 2019 (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 8.4 percent, while the Plains and Rocky Mountain regions had the weakest growth at 2.8 percent each.

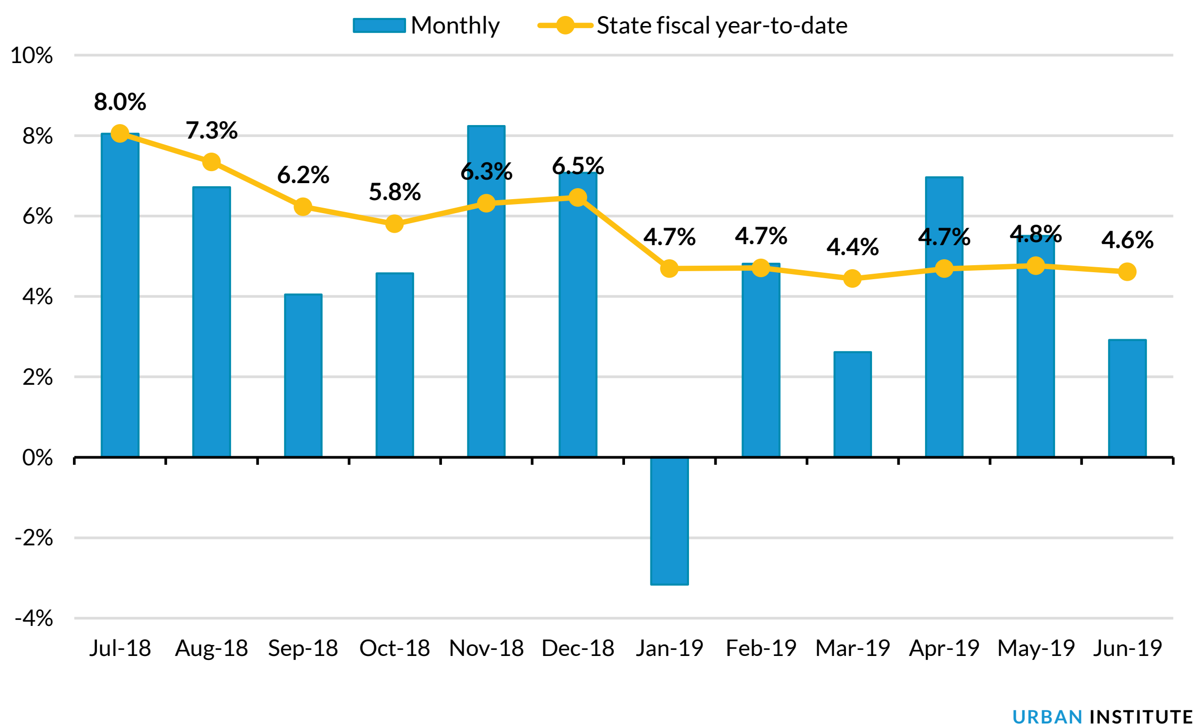
Year-over-year growth in withholding was widespread across states in the second quarter of 2019. Thirty-five of 41 states with a broad-based personal income tax reported growth in withholding in the second quarter of 2019 compared with a year earlier. Hawaii, Idaho, Iowa, Kentucky, Missouri, and New Mexico reported declines in withholding in the second quarter of 2019. The declines in Idaho, Iowa, Kentucky, and Missouri are 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.[4] Missouri eliminated one of the top income tax brackets and reduced the top income tax rate to 5.4 percent effective January 1, 2019.[5] 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.[6] 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.[7] As is often the case, tax rate reductions led to tax revenue reductions.

Figure 3 shows monthly and year-to-date growth rates in withholding through June 2019. Withholding declined in January 2019 compared to January 2018, likely caused by one-time shifting of bonus payments after Congress passed the TCJA. In the following months, growth in withholding resumed. However, growth in withholding was weak in June 2019, at 2.9 percent above the prior year level. 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 81.4 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.

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



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

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 6.4 percent of total personal income tax revenues in the fourth quarter of 2018 but accounted for 23.4 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 41.1 percent from last year (Table A4), which contrasts with a 39.1 percent growth in the median fourth estimated payment for tax year 2017.

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 $2.9 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. These millionaire taxpayers are usually able to shift income and expenses across tax years to minimize tax liability. Estimated state income tax payments in California and New York made up approximately 49.5 percent of the total estimated payments for the nation in December 2018 and 63.7 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]

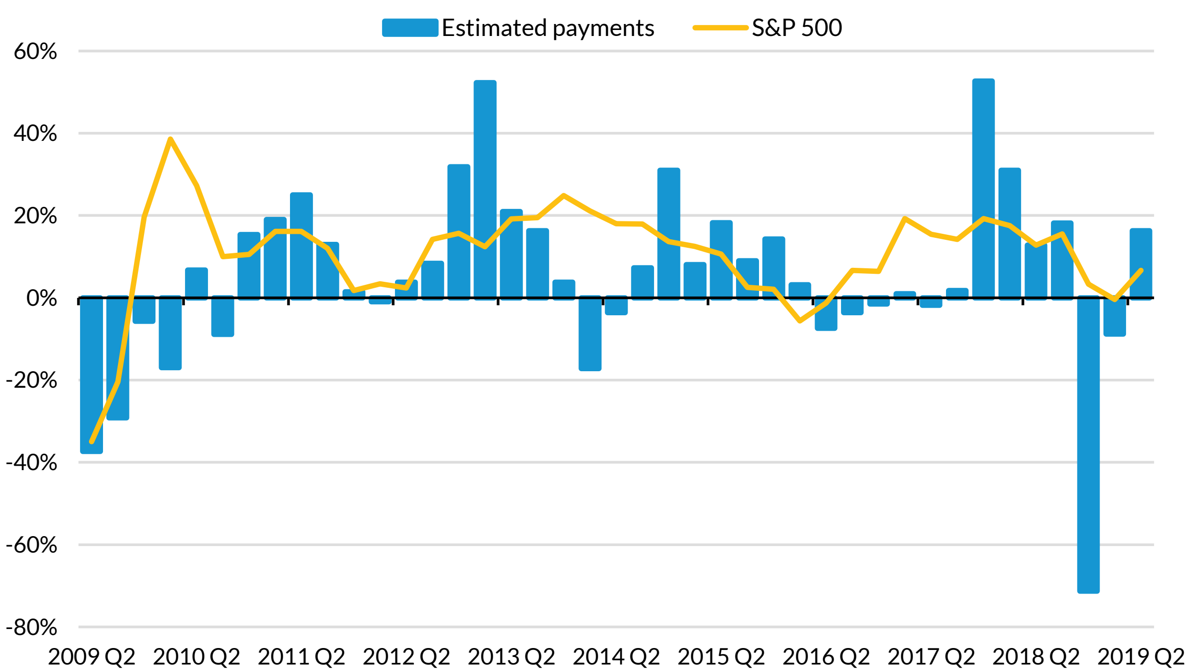
The median second estimated payment for tax year 2019 (filed in June 2019) was 10.4 percent higher than the second estimated payment filed in June 2018. However, the national average growth for the second estimated payment was only 1.3 percent, mostly because of large declines in dollar values in California 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 16.3 percent in the second quarter of 2019; growth in the stock market was weaker, at 6.6 percent, in the same period.

FIGURE 4

Large Volatility in Estimated Payments

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



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

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 a share of total personal income tax collections declined slightly in state fiscal year 2019, representing around 19.3 percent of the total, mostly because of the TCJA and subsequent income tax-shifting behavior. The overall growth in estimated payments, as well as the volatility of estimated payments, adds more uncertainty to state income tax revenues and makes them harder to forecast.

Final Payments

Final tax payments normally represent a small share of total personal income tax revenues in the first, third, and fourth quarters of the tax year and a much larger share in the second quarter of the tax year because of the April 15 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 26.5 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 a year earlier. The strong growth was likely attributable to the passage of the TCJA as discussed above. Final payments declined 1.5 percent in the fourth quarter of 2018 but resumed growth in the first and second quarters of 2019. Growth in final payments was robust at 38.9 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 39 states for which we have complete data, final payments increased by double digit rates in 37 states in the second quarter of 2019, with 11 states reporting over 50 percent growth relative to a year earlier. Connecticut and New Mexico were the only states where final payments declined in the second quarter of 2019. Declines in Connecticut were mostly because of legislated changes as discussed below.

Refunds

Personal income tax refunds usually represent a small (and negative) 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 $277 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 22.2 percent of total refunds) followed by New York ($4.3 billion, or 18.1 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 less 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 income tax returns. While volatility is typical during the income tax filing season, it appears that refunds are down, even though total tax liability 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 second quarter of 2019, which is the most important quarter in the year because of the April deadline for income tax return filing. (Personal income tax revenues presented in Table 3 are mostly for general fund revenues only; they therefore may differ from figures presented in Table A2, which are for all fund revenues).

In 23 states, actual personal income tax collections in the second quarter of 2019 were substantially higher (9 percent or more) than in the same quarter in 2018. The strong growth in personal income tax collections in the second quarter of 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 the second quarter of 2019 indicates that many taxpayers likely shifted estimated payments from December 2018 and January 2019 to extension and final payments in April-June 2019.

TABLE 3

Actual versus Forecasted State Personal Income Tax Revenues

Dollar amounts in millions

State	2018 Q2 actual	2019 Q2 actual	Percent change, 2019 Q2 vs 2018 Q2	2019 Q2 forecast	2019 Q2 actual	Percentage variance, 2019 Q2 actual from forecast
Median (24 states)			***16.3***			***11.1***
Average (24 states)	***$79,231.5***	***$94,455.0***	***19.2***	***$85,414.1***	***$94,500.0***	***10.6***
Arizona	1,353.2	1,805.8	33.4	1,526.7	1,805.8	18.3
Arkansas	833.4	960.3	15.2	848.5	960.3	13.2
California	31,564.8	36,913.0	16.9	32,657.8	36,913.0	13.0
Colorado	2,304.7	2,783.2	20.8	2,775.0	2,783.2	0.3
Idaho	556.0	712.5	28.2	717.9	712.5	(0.7)
Illinois	6,307.9	7,387.2	17.1	6,140.9	7,387.2	20.3
Indiana	1,870.3	2,210.5	18.2	2,122.7	2,210.5	4.1
Kansas	1,166.7	1,474.0	26.3	1,293.3	1,474.0	14.0
Maine	509.4	583.7	14.6	534.9	583.7	9.1
Massachusetts	5,054.0	6,046.0	19.6	5,164.0	6,046.0	17.1
Mississippi	660.4	719.8	9.0	680.0	719.8	5.8
Montana	422.1	494.2	17.1	469.4	494.2	5.3
Nebraska	731.5	885.7	21.1	812.8	885.7	9.0
New Mexico	618.4	530.3	(14.2)	457.5	575.3	25.7
New York	12,990.8	16,909.9	30.2	16,520.0	16,909.9	2.4
North Dakota	135.1	156.1	15.5	133.4	156.1	17.0
Ohio	2,453.6	2,837.7	15.7	2,423.8	2,837.7	17.1
Oklahoma	706.0	775.7	9.9	819.5	775.7	(5.3)
Pennsylvania	4,148.4	4,689.6	13.0	4,397.1	4,689.6	6.7
Rhode Island	412.5	473.9	14.9	443.8	473.9	6.8
South Carolina	1,144.7	1,363.9	19.1	1,160.2	1,363.9	17.6
Vermont	290.3	327.1	12.7	281.7	327.1	16.1
West Virginia	607.6	689.9	13.6	641.6	689.9	7.5
Wisconsin	2,390.1	2,724.8	14.0	2,391.7	2,724.8	13.9

Source: Individual state data, analysis by the author.

April revenues are always critical when it comes to understanding what total annual 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 largely driven by the economy, the timing, especially after changes in policy, can vary.

Personal income tax collections grew by double digits in the second quarter of 2019 in 21 of 24 states for which we have detailed data, with an average growth of 19.2 percent and a median growth of 16.3 percent. The largest growth in terms of dollar amounts were in California and New York, where income tax collections grew by $5.3 billion and $3.9 billion, respectively, in the second quarter of 2019 compared with the same quarter of 2018.

In 22 states, actual personal income tax collections in the second quarter of 2019 were above the forecasts, with an average underestimate of 10.6 percent and a median underestimate of 11.1 percent. Some states prepared revenue forecasts for the second quarter of 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. For those months, 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 2019. New York's surge in income tax collections 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 4.5 percent in nominal terms and 2.8 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 second quarter of 2019, marking the fifth consecutive quarter of double-digit growth. Corporate income tax revenues increased 21.5 percent in nominal terms and 19.4 percent in inflation-adjusted terms in the second 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.

Despite overall growth, large disparities exist among states and regions. Corporate income tax collections increased in all regions except the Southwest, where collections declined 2.7 percent. The Mideast region saw the largest growth at 33.4 percent, followed by the Great Lakes region at 25.0 percent. The strong growth in the Mideast region is attributable to New Jersey. The surge in corporate income tax revenues in New Jersey was likely caused by extension payments made for tax year 2018. Strong corporate income tax growth is also attributable to legislative changes (discussed below).

Overall, corporate income tax collections declined in five states but increased in 40 states in the second quarter of 2019, with 32 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 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 that 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 2.3 percent in nominal terms and 0.5 percent in real terms in the second 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 but the Far West in the second quarter of 2019. The Southwest and New England regions reported the strongest growth at 5.6 and 5.5 percent respectively, while sales tax collections decreased 6.6 percent in the Far West region. The decline in the Far West region was attributable to California, largely because of a timing issue related to a new information technology system that caused a delay in sales tax processing in June 2019. If we exclude California, sales tax collections for the rest of the nation would show stronger growth, at 4.8 percent.

Forty-two states reported increases in sales tax collections in the second quarter of 2019, with three states reporting double-digit growth. Sales tax collections declined in California, Louisiana, and South Carolina. 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 states' efforts to capture tax revenues from a larger share of online sales following the *Wayfair* decision.

On June 21, 2018, the US Supreme Court ruled in favor of South Dakota in *South Dakota v. Wayfair*,[11] which ultimately gives states the authority to require out-of-state sellers with at least a specified amount of sales within the state to collect sales taxes and transfer the revenues to state governments. Since the Supreme Court's *Wayfair* ruling, 43 of 45 states with general sales taxes have enacted laws or regulations to require sales tax collections by remote sellers. The remaining two states —Florida and Missouri—have proposed legislation, and it is only a matter of time before these new laws 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.

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

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 compliance with online sales taxation rules 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 was likely 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, states would have to expand their sales tax bases to capture this activity. 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 beneficial for individuals as preparation before the next recession, does mean lower current demand. These factors make the longer-term sales tax revenue outlook less promising.

Motor Fuel Taxes

State motor fuel sales taxes grew 2.8 percent in the second quarter of 2019, which is substantially weaker than the growth rates observed throughout 2018.

Motor fuel sales tax collections have fluctuated since the Great Recession. Average quarterly year-over-year growth in state motor fuel tax collections was 3.9 percent in nominal terms and 2.2 percent in real terms since 2010. Economic growth, changing fuel prices, general increases in fuel efficiency, and changing driving habits all affect gasoline consumption and motor fuel taxes. Changes in state motor fuel rates also affect tax collections.

Growth rates from the second quarter of 2018 to the second quarter of 2019 varied widely across the states and the regions. The largest growth was in the Southeast region at 4.7 percent; the weakest growth was in the Rocky Mountain region at 0.1 percent. Twelve states reported declines in motor fuel sales tax collections in the second quarter of 2019; five states reported double-digit growth. South Carolina had the strongest growth at 19.9 percent followed by South Dakota at 15.0 percent in the second quarter of 2019 compared with the same quarter in 2019. The strong growth in South Carolina is mostly attributable to legislated changes because the state increased gas taxes 2 cents per gallon.[13]

Other Taxes

Census Bureau quarterly data on state tax collections provide detailed information for some of the smaller revenue sources, including state property taxes, tobacco products excise taxes, alcoholic beverage excise taxes, and motor vehicle and operators' license taxes. In Table A6, we show year-over-year growth rates for four-quarter average inflation-adjusted revenue for the nation as a whole. In the second quarter of 2019, states collected $61.2 billion from all the smaller tax sources, which constituted 18.2 percent of total state tax collections.

Compared with major tax sources, revenues from smaller taxes have been growing at a slower pace since the Great Recession. The average quarterly year-over-year growth rate in state tax revenues from smaller sources was 2.0 percent in real terms since 2010.

Inflation-adjusted year-over-year growth in revenues from smaller tax sources was 3.1 percent in the second quarter of 2019. State property taxes, which represent a small portion of overall state tax revenues, grew 8.5 percent. Tax revenues from motor vehicle and operators' licenses increased 4.9 percent, while tax revenue from tobacco product sales and alcoholic beverage sales both showed declines, at 7.7 and 0.9 percent, respectively. Finally, revenues from all other smaller tax sources increased 3.7 percent in the second quarter of 2019 compared with a year earlier.

Overview of Tax Revenues in State Fiscal Year 2019

According to preliminary figures for state fiscal year 2019, states collected $1,077 billion in total tax revenues, a gain of 5.4 percent from $1,021 billion in state fiscal year 2018 (Table A7). All regions had growth in overall state tax collections in fiscal year 2019. The Southwest region had the strongest year-over-year growth at 9.8 percent, while the Mideast region had the weakest growth at 3.0 percent. Forty-eight states reported growth in overall state tax revenues in fiscal year 2019, with eight states reporting double-digit growth. The strongest growth was reported in New Mexico, Alaska, North Dakota, Wyoming, and Oklahoma, all of which have high dependence 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.

Despite the strong growth in personal income tax revenues in the second quarter of 2019, the overall growth in fiscal year 2019 was only 4.0 percent compared with state fiscal year 2018. Personal income tax revenues grew 6.5 percent in the median state, with 38 states reporting growth in state fiscal year 2019 compared with state fiscal year 2018.

Growth varied across the regions and the states. Personal income tax revenues increased in all regions except the Mideast and New England in state fiscal year 2019. Declines in the Mideast region reflected personal income tax declines in New York, while declines in New England reflected declines in Connecticut.

Personal income tax revenues saw large monthly fluctuations during state fiscal year 2019, which runs from July 1 to June 30 in 46 states. The large fluctuations were mostly around estimated and final payments, predominantly because of income tax shifting caused by the TCJA. Most states saw significant declines in payments during the months of December and January, followed by a surge during the tax filing season, in the months of April and May. New York's state fiscal year runs from April 1 to March 31; therefore, the declines in personal income tax revenues in New York's fiscal year 2019 are mostly due to not capturing the growth in the second quarter of 2019, unlike in other states. The declines in Connecticut are largely caused by the impact of the state's legislated changes discussed below.

All other major sources of state government tax revenues had solid growth in fiscal year 2019: corporate income tax revenues grew 24.0 percent, while sales tax revenues and motor fuel tax revenues grew 4.6 percent each.

Preliminary Review of State Tax Revenue in 2019 Quarter 3

Preliminary data collected from 45 states for the July–September quarter of 2019 (Table A8) show back to normal growth rates in overall state tax collections as well as in personal income tax collections. Growth in state sales tax collections, however, was stronger, at 7.3 percent in the third quarter of 2019 compared with the same quarter in 2018, likely driven by states' efforts to collect taxes from online sales.

Overall state tax collections grew 5.7 percent in the third quarter of 2019 compared with the same quarter in 2018. Growth in the median state was somewhat weaker, at 4.5 percent. Total state tax collections increased in 41 states, with three states reporting double-digit growth.

After wild swings since the passage of TCJA, growth in personal income tax revenues has largely normalized in the third quarter of 2019. Personal income tax collections increased 4.4 percent in the third quarter of 2019 compared with a year earlier, with four states reporting declines. Despite solid growth in personal income tax collections in the third quarter of 2019, there are some indications of possible weakness ahead. According to California's Legislative Analyst's Office, personal income tax collections fell short of expectations by $420 million, partially because of lower than expected estimated payments.[14] California's Legislative Analyst's Office created a State Fiscal Health Index based on 10 key data points to track the strength of economic conditions relevant to the state's fiscal health. According to the most recent report, the index has declined for six straight months. Analysts from the office write that "declines of this duration and magnitude have not been observed since the last recession."[15] Officials in California warn that state tax revenues could see declines if economic conditions continue to decline or remain stagnant.

State sales tax collections showed stronger growth of 7.3 percent in the third quarter of 2019 (compared with a year earlier), but growth in the median state was weaker at 5.4 percent. Forty states reported growth in sales tax collections, with 23 states reporting growth of over 5 percent. California had the largest growth at 24.4 percent, which is mostly because of 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 the recognition of nearly a billion dollars being pushed to July 2019, causing large declines in the second quarter of 2019 revenues and a corresponding increase for the third quarter.

Finally, corporate income tax revenues grew 11.5 percent in the third quarter of 2019, marking the sixth consecutive quarter of double-digit growth. Growth in the median state was substantially weaker at 5.9 percent. Growth varied substantially across the states. Twenty-nine states reported growth in corporate income tax collections and 12 states reported declines in the third quarter of 2019 compared with the same quarter in 2018. Despite the overall strong growth observed in corporate income tax collections, large growth rates observed in corporate income tax collections in the past six quarters are likely coming to an end because of the waning impact of the TCJA, which created incentives for corporations to shift profits from 2017 into 2018 through lower corporate tax rates. 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 have been broadened in some states because of the federal tax overhaul, which includes a one-time tax on profits held overseas. Some corporations therefore may have recognized more of their global income streams in the US because they did not face additional federal taxes, but they had to pay the applicable state taxes on these 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 incomes go 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

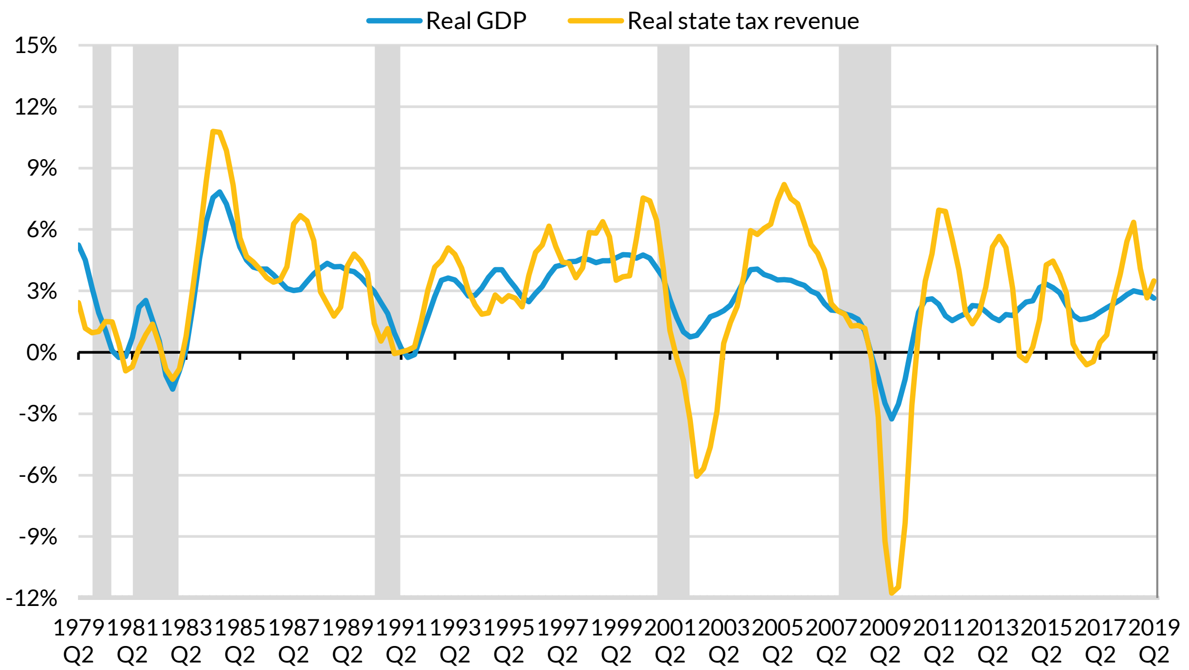
When the economy booms, tax revenues tend to rise rapidly, and when it declines, they tend to decline, though these changes have different patterns and timing. Figure 5 shows year-over-year growth for four-quarter moving averages in real state tax revenue and gross domestic product (GDP). We present 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. Real GDP weakened in the second quarter of 2019 compared with the first quarter of 2019, while growth in real state tax revenues was stronger in the second quarter of 2019 than in the previous quarter, but substantially weaker than the growth rates observed throughout 2018.

Volatility in state tax revenue is not fully explained by changes in real GDP, a broad measure of the economy. State tax revenues became far more volatile in the past two decades, mostly because of changes in state tax rates and states' growing reliance on income taxes, some of which are very progressive.

FIGURE 5

State Tax Revenue is More Volatile than the Economy

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



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

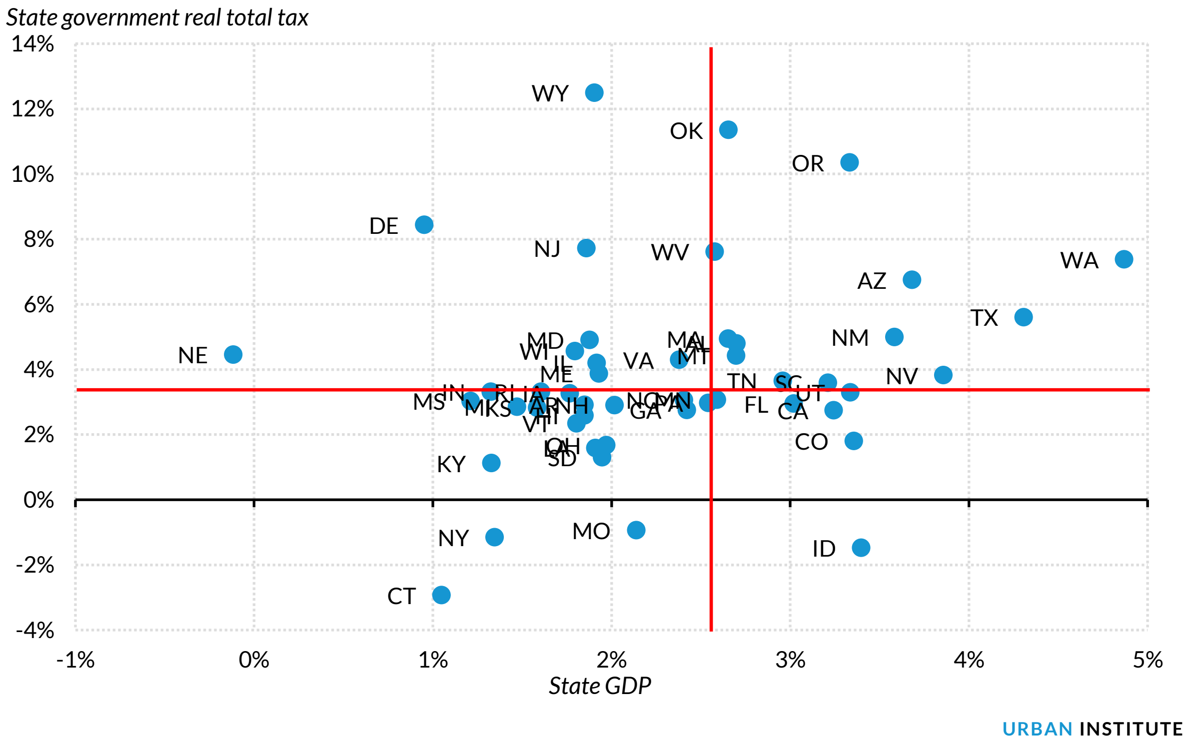
States vary substantially in terms of the correlation between growth rates in real state tax revenues and state GDP. Figure 6 shows growth for each state for four-quarter moving averages in real state tax revenue and in real state GDP in the first quarter of 2019 compared with the same quarter in 2018. By this measure, real state tax revenues increased in 46 states, and real state GDP increased in all states but Nebraska in the second quarter of 2019. (Alaska and North Dakota are outlier states and are excluded from Figure 6 to better display the overall relationship). The change in real state tax revenues ranged from negative 2.9 percent in Connecticut to 22.4 percent in Alaska and 15.7 percent in North Dakota; the change in real state GDP ranged from negative 0.1 percent in Nebraska to 4.9 percent in Washington. In the second quarter of 2019, growth in real state tax revenues was lower than the national average of 3.4 percent in 26 states, and growth in real state GDP was lower than the national average of 2.6 percent in 32 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 Q2 versus 2018 Q2



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 and North Dakota are excluded from the figure.

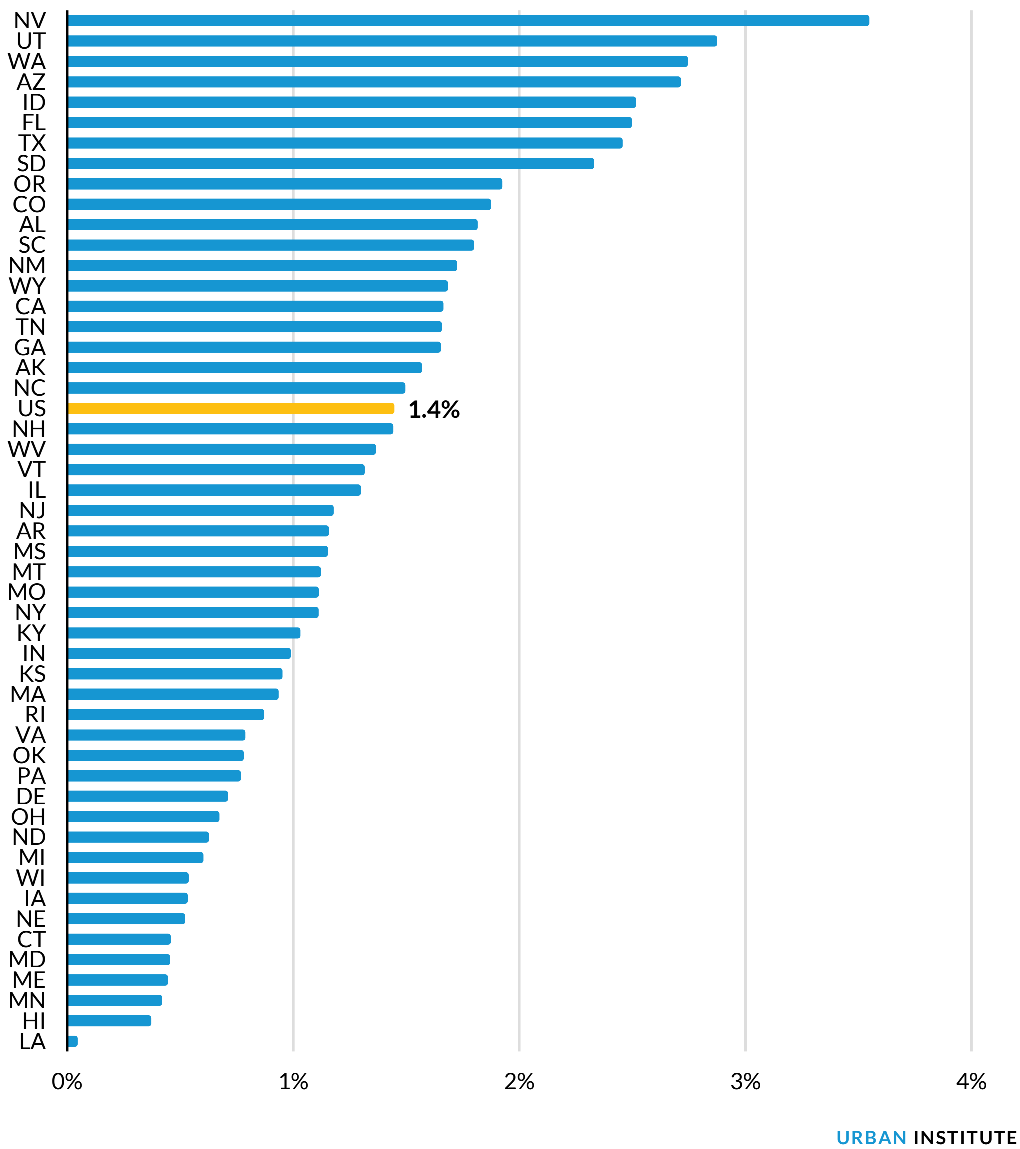
State Unemployment and Employment

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, the unemployment rate dropped to 3.6 percent in the second quarter of 2019 and remained at the same level in the third quarter of 2019, according to preliminary figures released by the US Bureau of Labor Statistics.[16] Unemployment rates ranged from 2.1 percent in Vermont to 6.4 percent in Alaska in the second 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 (which is good for state revenues) as well as by a decline in labor force participation as the population ages and baby boomers retire (which tends to lower state revenues). 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.[17]

FIGURE 7

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

Year-over-year change in seasonally-adjusted employment, 2019 Q2 versus 2018 Q2



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

Nationwide employment grew 1.4 percent in the second quarter of 2019 compared with the same quarter in 2018 (Figure 7). Employment growth was weaker than the national average in 31 states, but all states reported growth on a year-over-year basis. Employment growth ranged from less than 0.1 percent in Louisiana to 3.5 percent in Nevada in the second quarter of 2019. Overall employment growth has slowed in 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 weakened slightly in the second quarter of 2019, while spending on both durable and nondurable goods weakened more noticeably in the second quarter of 2019 compared with the growth rates observed in the prior four quarters. 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. Although some states have expanded sales tax bases to include some services, many services are still not subject to sales tax. And then there are states like Arizona and Missouri, both of which banned taxing services.

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 in the fourth quarter of 2018 and the first and second quarters of 2019.

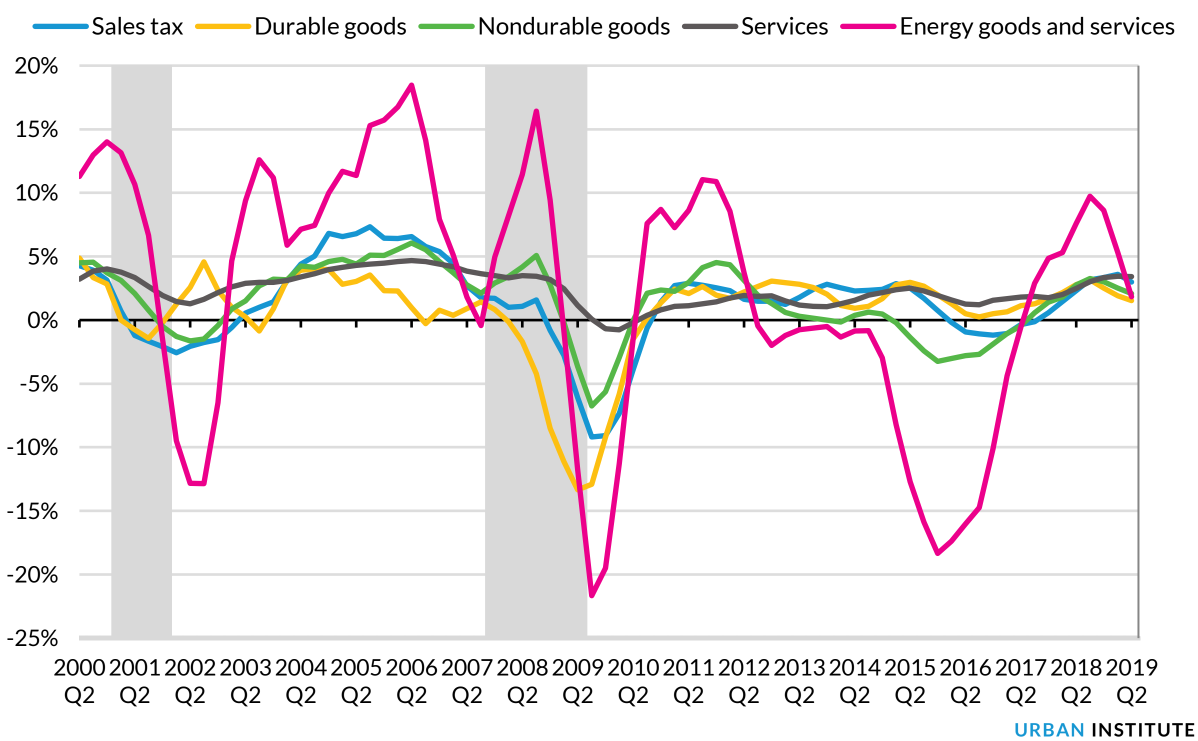
Nondurable consumption spending declined between the first quarter of 2015 and second quarter of 2017 but has increased since then. Nondurable goods were largely affected by the declines in gasoline and other energy goods consumption, which represent over 20 percent of nondurable goods consumption.

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 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 through the first quarter of 2019, mostly bouncing back from previously depressed levels. However, growth in energy goods and services weakened substantially in the second quarter of 2019.

FIGURE 8

Substantial Weakness in Energy Goods and Services

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



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

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

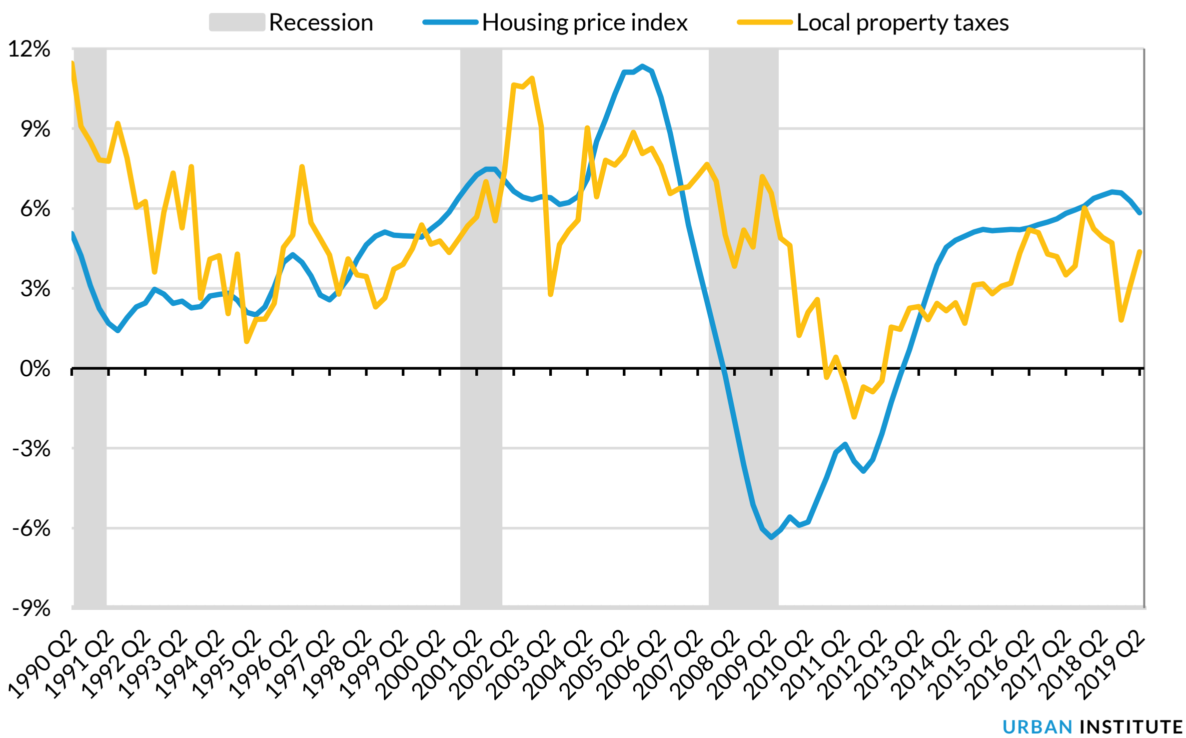
Housing Market

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

FIGURE 9

Continued Growth in Housing Prices and in Local Property Taxes

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



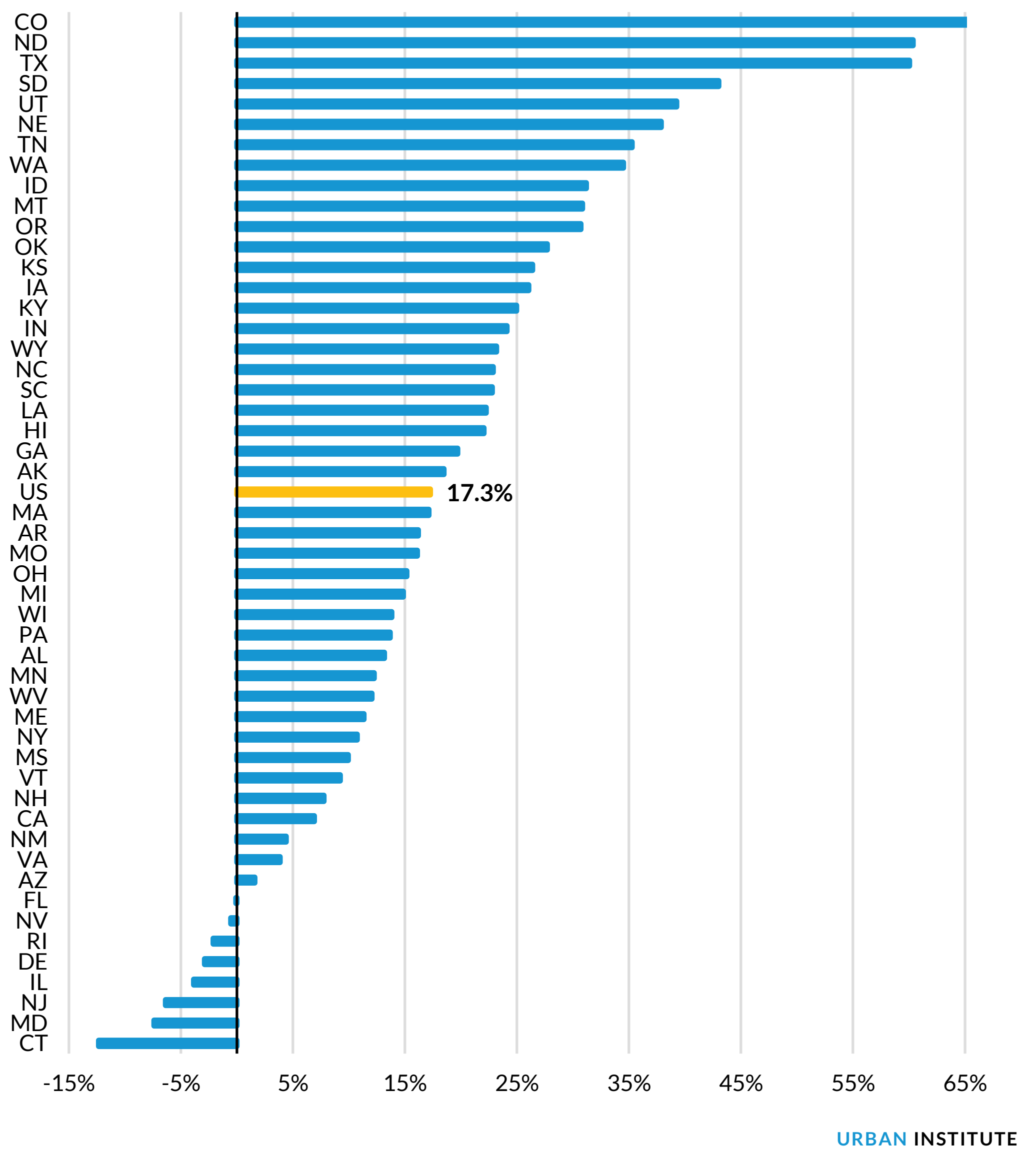
Sources: US Census Bureau (property taxes) and Federal Housing Finance Agency (house price indexes), analysis by the author.
Notes: Year-over-year change is the percentage change of four-quarter moving averages.

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.[18] Growth in 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 5.8 percent in the second quarter of 2019 from one year earlier, while local property taxes grew 4.4 percent during the same period.

FIGURE 10

Changes in Housing Price Indexes Since the Prerecession Peak

Percent change in housing prices from pre-recession peak level, 2019 Q2 versus 2007 Q1



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

Statewide housing price indexes increased in all states in the second quarter of 2019 (compared with a year earlier), ranging from a 2.4 percent increase in West Virginia to 10.7 percent in Idaho. Growth in 29 states was below the national average of 5.0 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 second quarter of 2019 compared with the first quarter of 2007, when housing prices were at their peaks.

National average housing prices grew 17.3 percent in nominal terms between the first quarter of 2007 and the second quarter of 2019. However, housing price movements varied substantially across the states. Housing prices are above the prerecession peaks in 42 states in the second quarter of 2019 but are still lower in 8 states. The three hardest-hit states—Connecticut, Maryland, and New Jersey—all still have average house prices that are 6.4 percent or more below their prerecession peaks. Connecticut housing prices are still on average 12.4 percent below their peak. On the other hand, statewide housing price indexes increased by double digits in 35 states over this period. In 21 states, growth in statewide average housing prices was over 20 percent, with Colorado, North Dakota, and Texas having the highest growth rates at 65.4, 60.4, and 60.1 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 3.7 percent.[19] 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. Since then, the Federal Reserve cut rates twice more. 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 concerns of a possible trade war with traditional allies and China and increasing global economic uncertainty.

Tax Law Changes Affecting the Second 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 Officers' Fall 2018 and Spring 2019 Fiscal Survey of the States. During the second quarter of 2019, enacted tax increases and decreases produced an estimated gain of $692 million compared with the same period in 2018.[20] State-enacted tax changes substantially increased corporate income taxes (by $627 million in the second quarter of 2019) compared with a year earlier. Tax changes decreased personal income taxes by $281 million, increased sales taxes by $322 million, and increased some other taxes by approximately $24 million. Below, we discuss some of the major enacted tax changes for fiscal year 2019.

Ten states enacted personal income tax increases, while 16 states enacted decreases. Legislated tax changes were estimated to decrease aggregate personal income tax revenues by $619 million in fiscal year 2019. The largest estimated increase is in Virginia, where conformity to federal tax reform is estimated to lead to a $421 million increase in personal income tax collections in fiscal year 2019. Georgia's conformity to federal tax reform is estimated to increase personal income tax collections by $251 million. 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.[21] 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.[22] 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).

Eleven states enacted corporate income tax increases; while another 11 states enacted decreases. Legislated tax changes were estimated to increase aggregate corporate income tax revenues by $2.8 billion in fiscal year 2019. 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.

Fifteen 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.[23] These legislative changes are estimated to bring in an additional $272 million in revenues in fiscal year 2019. Officials in Washington reduced the state property tax levy rate, which is estimated to reduce state property tax revenues by $206 million in fiscal year 2019.[24]

Nine states enacted sales tax increases, and ten states enacted decreases. Legislated tax changes were estimated to increase sales tax revenues by $864 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.[25]

The National Association of State Budget Officers' Fall 2018 and Spring 2019 Fiscal Survey of the States reports do 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 proposed legislation on collecting sales and use tax from remote sellers.

As of November 2019, 42 states are already enforcing sales tax collections on sales by remote sellers. Louisiana still needs to determine the effective date for their legislation. 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 23 states, the threshold is set on sales of more than $100,000 or over 200 transactions, and in 10 states the threshold is set on sales of more than $100,000 regardless of the number of transactions. The remaining 10 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 following the *Wayfair* decision because of ensuing state actions. For example, officials in California are estimating that online and remote sales tax collections will result in an additional $174 million in fiscal year 2019.[26]

Overall, states enacted various legislative changes, some of which are in response to federal tax policy changes. The estimated impact of enacted tax changes is a net increase of $3.3 billion in revenues in fiscal year 2019. Legislated tax actions in fiscal year 2018 were more substantial, with an estimated net revenue increase 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 SALT deduction cap under the TCJA affected the timing and flow of state tax receipts across fiscal years, creating substantial challenges for forecasting tax revenues and making budgetary decisions. 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 throughout state fiscal year 2019, dropping steeply in December 2018 and January 2019 but soaring in April 2019. The volatility in personal income tax collections throughout state fiscal year 2019 again was caused by the TCJA because it led taxpayers to change the timing of income tax payments. The surge in April 2019 personal income tax collections largely made up for earlier shortfalls in most states and put revenues back on track for most states to close their budget books for fiscal year 2019 without shortfalls.

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.

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 in previous expansions. Despite the continued 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. Although the near-term economic outlook remains positive, many economists worry that the current expansion is subject to unforeseen risk. Some economic factors, such as housing prices or spending on durable and nondurable goods, seem to have weakened in the most recent months. However, this weakness might be temporary, and the expansion period might continue because of the Federal Reserve's interest rate cuts beginning in July 2019. These cuts are largely seen as a measure for stimulating the national economy and preventing it from entering a recession.

Preliminary data for July-September 2019, which corresponds to the first quarter of state fiscal year 2020 in 46 states, indicate that growth in state tax revenue collections returned to normal levels. We will continue monitoring and reporting state tax revenues and associated economic indicators on a timely basis and will report any warning signs of an economic slowdown or downturn.

Appendix: Additional Tables

TABLE A1

Quarterly State Government Tax Revenue by Major Tax

	Nominal Y-O-Y Percentage Change					Inflation	Real Y-O-Y Percentage Change				
2010 Q1–2019 Q2	**PIT**	**CIT**	**Sales**	**MFT**	**Total**	**rate**	**PIT**	**CIT**	**Sales**	**MFT**	**Total**
average growth	***6.2***	***4.5***	***4.0***	***3.9***	***4.8***	***1.7***	***4.4***	***2.8***	***2.3***	***2.2***	***3.0***
2019 Q2	19.1	21.5	2.3	2.8	10.7	1.8	17.0	19.4	0.5	1.0	8.7
2019 Q1	(2.4)	41.0	5.6	1.3	2.7	2.0	(4.3)	38.2	3.6	(0.6)	0.7
2018 Q4	(9.2)	12.0	4.5	5.8	(0.2)	2.3	(11.3)	9.5	2.2	3.5	(2.5)
2018 Q3	7.8	28.9	6.4	8.7	8.6	2.5	5.2	25.7	3.8	6.0	6.0
2018 Q2	10.3	17.2	5.3	8.7	8.9	2.6	7.5	14.2	2.6	6.0	6.1
2018 Q1	14.9	(6.1)	5.0	10.9	8.9	2.1	12.5	(8.0)	2.8	8.6	6.6
2017 Q4	14.6	10.2	4.5	9.7	9.0	2.0	12.3	8.0	2.4	7.5	6.8
2017 Q3	4.3	6.2	3.1	2.3	3.8	1.9	2.4	4.2	1.2	0.4	1.9
2017 Q2	0.0	11.7	3.2	4.2	2.3	1.7	(1.7)	9.8	1.5	2.4	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)	1.2	0.4	(1.7)	0.9	(3.7)	(10.5)	0.3	(0.5)	(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	3.4	7.0	1.1	12.7	4.9	2.5	2.3	5.9
2015 Q1	7.0	3.3	5.8	4.3	5.5	1.1	5.8	2.2	4.6	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	2.1	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	3.7	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

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 Q2 versus 2018 Q2

State / Region	PIT	CIT	Sales	MFT	Total
US (median)	***18.7***	***19.0***	***4.7***	***2.3***	***10.0***
US (average)	***19.1***	***21.5***	***2.3***	***2.8***	***10.7***
New England	**11.1**	**21.1**	**5.5**	**0.8**	**7.7**
Connecticut	(2.6)	96.1	4.8	(0.8)	2.1
Maine	14.4	16.1	4.4	1.2	8.3
Massachusetts	19.8	0.6	6.0	1.2	13.1
New Hampshire	24.3	(13.5)	N/A	2.1	(0.3)
Rhode Island	16.2	58.7	8.8	2.3	10.7
Vermont	11.8	3.1	2.3	3.2	4.4
Mideast	**24.1**	**33.4**	**4.7**	**2.8**	**15.7**
Delaware	17.6	1.2	N/A	10.4	8.9
Maryland	18.8	30.7	3.9	2.3	11.2
New Jersey	21.5	79.6	4.5	2.3	18.5
New York	30.2	9.1	3.5	6.1	19.4
Pennsylvania	13.1	12.1	6.9	1.1	8.7
Great Lakes	**16.3**	**25.0**	**4.7**	**0.7**	**8.5**
Illinois	16.9	24.3	6.7	(3.8)	10.8
Indiana	14.8	25.8	2.6	2.3	8.8
Michigan	19.8	11.9	3.1	(0.9)	5.5
Ohio	15.4	NM	4.4	2.9	6.0
Wisconsin	13.6	38.5	6.5	2.3	10.1
Plains	**23.1**	**22.6**	**4.3**	**1.5**	**13.0**
Iowa	22.4	29.5	6.6	(2.1)	14.7
Kansas	25.5	(5.4)	2.4	(0.4)	11.6
Minnesota	24.6	25.3	5.6	1.1	14.9
Missouri	20.0	23.2	0.3	(1.3)	10.7
Nebraska	21.0	45.6	7.9	12.0	16.6
North Dakota	23.0	8.8	2.6	(0.7)	6.2
South Dakota	N/A	79.9	3.3	15.0	4.5
Southeast	**18.7**	**21.1**	**3.5**	**4.7**	**9.5**
Alabama	18.4	16.0	6.7	1.5	11.1
Arkansas	15.2	30.8	0.3	(1.2)	7.0
Florida	N/A	29.7	4.7	4.2	7.2
Georgia	18.7	24.8	4.2	2.3	12.0
Kentucky	1.1	8.5	11.5	1.1	6.0
Louisiana	34.1	(9.3)	(9.2)	4.8	6.0
Mississippi	17.3	13.1	6.4	(1.8)	8.5
North Carolina	21.5	23.2	6.9	9.1	13.9
South Carolina	19.1	31.5	(14.5)	19.9	6.1
Tennessee	14.1	14.9	5.8	7.3	5.7
Virginia	20.9	21.6	3.3	2.3	14.2
West Virginia	12.4	91.7	7.3	2.3	10.1
Southwest	**17.3**	**(2.7)**	**5.6**	**2.2**	**7.1**
Arizona	33.5	27.6	3.9	2.3	13.9
New Mexico	(14.3)	(93.2)	7.6	2.3	8.9
Oklahoma	15.0	4.5	3.4	12.2	11.3
Texas	N/A	N/A	5.9	0.9	4.5
Rocky Mountain	**22.7**	**1.6**	**3.7**	**0.1**	**12.7**
Colorado	20.8	(11.8)	3.0	(6.4)	8.4
Idaho	28.0	19.0	6.2	5.1	15.2

State / Region	PIT	CIT	Sales	MFT	Total
Montana	17.1	21.9	N/A	3.2	11.1
Utah	25.7	10.7	0.5	2.6	16.5
Wyoming	N/A	N/A	11.7	9.5	24.9
Far West	**17.7**	**17.6**	**(6.6)**	**3.1**	**10.3**
Alaska	N/A	15.4	N/A	(18.1)	(21.3)
California	16.8	18.0	(15.9)	3.4	9.9
Hawaii	6.8	28.4	21.3	(0.4)	11.2
Nevada	N/A	N/A	7.9	2.3	6.6
Oregon	31.9	8.5	N/A	2.3	27.9
Washington	N/A	N/A	5.4	3.3	8.1

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

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

TABLE A3

State Personal Income Tax Withholding

Year-over-year nominal percentage change

	State FY 2018				State FY 2019			
State / Region	**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***	***6.5***	***2.3***	***5.2***
US (average)	***5.2***	***7.2***	***8.9***	***7.4***	***6.2***	***6.7***	***1.2***	***5.1***
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	3.3	5.8	5.2	8.7	4.9	8.5	3.6	5.3
Massachusetts	5.8	7.1	5.2	7.5	2.2	5.1	6.0	1.5
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**	**8.3**	**4.4**	**1.6**	**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	6.4	2.4	7.7	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**	**6.8**	**8.0**	**8.2**	**8.1**	**6.5**	**3.8**	**6.2**
Arizona	5.3	5.6	7.3	4.9	9.1	6.6	2.3	8.4
New Mexico	0.9	10.7	9.9	28.9	4.8	2.4	3.5	(2.2)
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**	**7.2**	**7.7**	**12.0**	**0.9**	**8.4**
California	7.4	9.0	12.2	6.8	7.4	12.3	0.2	9.4
Hawaii	(0.9)	7.9	(11.6)	31.3	10.3	5.1	17.8	(14.1)
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.

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***	***(41.1)***	***18.0***	***10.4***
Average	***9.3***	***17.2***	***18.2***	***(41.1)***	***35.7***	***1.3***
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	22.9
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	NM	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. NM = not meaningful.

TABLE A5

State Personal Income Tax Final Payments

Year-over-year nominal percentage change

	State FY 2018				State FY 2019			
State	**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***	***37.0***
Average	***1.4***	***15.1***	***15.2***	***8.4***	***12.8***	***(1.5)***	***18.5***	***38.9***
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	22.1
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	101.3	352.3	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	37.0
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	(54.8)
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. NM = not meaningful.

TABLE A6

Quarterly State Government Tax Revenue for Nonmajor Tax Revenue Sources

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

2019 Q2 collections ($ millions)	Property tax	Tobacco product sales tax	Alcoholic beverage sales tax	Motor vehicle & operators' license taxes	Other taxes	Total nonmajor taxes
	$4,874	$4,940	$1,956	$9,035	$40,428	$61,233
2010Q1–2019Q2 average growth	***2.3***	***(0.1)***	***1.1***	***2.3***	***2.4***	***2.0***
2019 Q2	8.5	(7.7)	(0.9)	4.9	3.7	3.1
2019 Q1	6.4	(5.2)	(0.4)	7.3	4.8	4.2
2018 Q4	8.8	(5.1)	(1.4)	9.1	5.3	4.9
2018 Q3	8.0	0.9	0.1	5.3	5.6	5.1
2018 Q2	3.6	5.3	1.3	4.6	3.9	4.0
2018 Q1	1.0	4.6	1.1	1.1	2.8	2.5
2017 Q4	(0.6)	6.1	2.9	(0.3)	1.9	1.8
2017 Q3	(1.2)	3.6	3.0	3.7	0.5	1.2
2017 Q2	0.4	1.8	2.3	1.5	(0.3)	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)	(0.1)
2015 Q4	8.7	0.0	1.5	2.7	(1.2)	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

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

TABLE A7

Fiscal Year State Government Tax Revenue, by State

Nominal percentage change, State Fiscal Year 2018 versus State Fiscal Year 2019

State / Region	PIT	CIT	Sales	MFT	Total
US. (median)	***6.5***	***26.0***	***4.9***	***2.5***	***5.5***
US (average)	***4.0***	***24.0***	***4.6***	***4.6***	***5.4***
New England	**(0.7)**	**39.8**	**5.0**	**1.1**	**4.3**
Connecticut	(13.1)	118.5	4.0	0.4	(0.9)
Maine	6.5	36.1	5.5	2.5	6.1
Massachusetts	5.3	22.2	5.3	0.7	7.2
New Hampshire	15.9	5.3	N/A	1.2	5.0
Rhode Island	3.4	49.5	6.8	2.9	5.6
Vermont	5.0	35.2	3.7	2.0	4.4
Mideast	**(1.2)**	**36.8**	**5.1**	**2.8**	**3.0**
Delaware	7.0	38.2	N/A	8.3	10.7
Maryland	8.0	25.8	3.6	3.0	7.1
New Jersey	5.3	90.2	3.6	0.9	10.0
New York	(6.6)	19.5	4.5	5.5	(2.2)
Pennsylvania	5.4	18.1	7.6	1.4	5.2
Great Lakes	**6.8**	**29.9**	**4.7**	**1.4**	**5.5**
Illinois	8.5	15.2	6.0	(1.3)	6.4
Indiana	5.0	41.9	3.7	3.1	5.5
Michigan*	6.5	55.0	4.0	(1.0)	5.1
Ohio	5.9	(5.0)	4.6	3.5	3.9
Wisconsin	6.1	49.7	4.5	1.8	6.8
Plains	**5.4**	**23.8**	**3.3**	**0.5**	**5.4**
Iowa	5.6	27.3	3.9	(1.7)	5.5
Kansas	10.6	11.1	0.9	(0.2)	5.0
Minnesota	5.4	26.1	3.2	(0.1)	5.3
Missouri	1.2	10.6	1.2	1.1	1.2
Nebraska	7.8	35.1	3.5	4.8	6.7
North Dakota	13.0	36.6	15.6	1.4	18.1
South Dakota	N/A	32.8	3.7	1.2	3.5
Southeast	**6.4**	**19.0**	**4.2**	**4.5**	**5.4**
Alabama*	8.8	15.4	5.9	6.3	7.0
Arkansas	8.0	36.6	2.2	0.9	5.1
Florida	N/A	31.8	5.1	2.9	5.1
Georgia	4.6	26.6	5.3	2.4	5.0
Kentucky	(1.3)	1.7	9.2	1.1	3.3
Louisiana	16.9	15.2	(8.9)	3.3	3.8
Mississippi	6.2	10.5	4.9	2.1	5.2
North Carolina	5.1	12.6	5.6	6.3	5.3
South Carolina	7.2	33.1	(1.9)	15.1	5.8
Tennessee	(18.1)	3.2	5.9	7.4	5.8
Virginia	7.9	9.5	3.6	3.9	6.5
West Virginia	9.1	79.9	9.9	9.7	9.9
Southwest	**9.6**	**31.7**	**8.1**	**3.4**	**9.8**
Arizona	10.2	37.9	5.8	2.7	9.0
New Mexico	8.2	16.3	12.8	2.5	24.9
Oklahoma	9.3	29.0	7.6	19.0	13.7
Texas*	N/A	N/A	8.3	1.7	7.8
Rocky Mountain	**6.2**	**8.5**	**5.7**	**2.4**	**4.7**
Colorado	8.8	1.5	5.0	0.1	4.0
Idaho	(9.2)	18.3	6.6	4.1	0.7

State / Region	PIT	CIT	Sales	MFT	Total
Montana	8.4	6.3	N/A	3.0	6.6
Utah	7.5	16.3	4.2	3.1	5.5
Wyoming	N/A	N/A	11.8	6.2	14.9
Far West	**5.8**	**12.2**	**2.6**	**12.0**	**6.0**
Alaska	N/A	71.9	N/A	2.2	24.7
California	5.2	10.4	(0.4)	18.8	4.9
Hawaii	5.7	33.2	4.3	(0.6)	4.8
Nevada	N/A	N/A	6.4	3.2	6.0
Oregon	12.7	22.1	N/A	2.9	12.7
Washington	N/A	N/A	8.4	(7.3)	9.7

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.
The state fiscal year runs from July 1 to June 30 in all states except Alabama, Michigan, New York, and Texas. Data reported for Alabama, Michigan, and Texas is only partial state fiscal year 2019 data.

TABLE A8

Preliminary Quarterly State Government Tax Revenue, by State

Nominal percentage change, 2019 Q3 versus 2018 Q3

State / Region	PIT	CIT	Sales	Total
US (median)	***5.1***	***5.9***	***5.4***	***4.5***
US (average)	***4.4***	***11.5***	***7.3***	***5.7***
New England	**1.9**	**0.4**	**8.4**	**2.9**
Connecticut	(9.5)	34.1	20.3	3.4
Maine	7.7	(5.9)	5.8	5.1
Massachusetts	4.5	(7.9)	5.3	2.9
New Hampshire	9.8	(14.1)	N/A	(5.9)
Rhode Island	4.1	(5.3)	7.1	3.5
Vermont	7.7	(22.2)	7.6	4.9
Mideast	**4.8**	**8.2**	**4.7**	**4.4**
Delaware	7.4	45.3	N/A	9.7
Maryland	11.4	1.1	4.9	10.0
New Jersey	3.8	11.1	8.3	6.8
New York	3.8	9.7	6.4	3.6
Pennsylvania	5.4	3.2	0.6	1.4
Great Lakes	**3.6**	**12.5**	**3.7**	**4.0**
Illinois	5.9	6.9	3.5	4.1
Indiana	2.6	12.1	4.1	3.8
Michigan	1.7	2.8	0.6	2.3
Ohio	3.1	NM	5.8	4.5
Wisconsin	1.9	38.8	5.4	6.2
Plains	**3.6**	**5.2**	**5.3**	**6.0**
Iowa	(3.0)	5.9	8.1	4.7
Kansas	4.4	6.0	2.1	4.3
Minnesota	6.0	0.1	2.6	2.4
Missouri	1.9	26.6	6.5	3.3
Nebraska	6.5	26.1	6.8	7.1
North Dakota	9.3	(52.3)	14.6	56.2
South Dakota	N/A	N/A	3.4	2.3
Southeast	**4.1**	**15.2**	**3.4**	**4.4**
Alabama	2.5	33.5	0.5	4.9
Arkansas	5.1	2.8	1.5	2.4
Florida	N/A	24.5	3.3	4.8
Georgia	(0.5)	0.8	1.5	(0.1)
Kentucky	1.6	(10.5)	7.8	1.1
Louisiana	12.5	265.5	(5.9)	8.1
Mississippi	(0.8)	2.9	2.9	2.1
North Carolina	ND	ND	ND	ND
South Carolina	6.9	3.8	10.0	7.3
Tennessee	NM	7.9	5.3	7.4
Virginia	7.2	8.5	7.2	8.2
West Virginia	0.2	6.8	0.9	(1.8)
Southwest	**12.3**	**11.9**	**4.6**	**4.1**
Arizona	9.7	9.5	6.9	8.3
New Mexico	ND	ND	ND	ND
Oklahoma	17.4	16.5	8.0	5.1
Texas	N/A	N/A	4.0	3.2
Rocky Mountain	**5.9**	**13.1**	**5.7**	**5.6**
Colorado	3.8	49.5	4.0	7.2
Idaho	5.8	(9.5)	9.6	5.9

State / Region	PIT	CIT	Sales	Total
Montana	12.3	(4.2)	N/A	6.2
Utah	8.1	(29.5)	4.3	2.6
Wyoming	N/A	N/A	7.4	ND
Far West	**4.8**	**20.8**	**20.3**	**10.4**
Alaska	N/A	(54.8)	N/A	(41.3)
California	4.3	28.4	24.4	12.3
Hawaii	ND	ND	ND	ND
Nevada	N/A	N/A	ND	ND
Oregon	9.0	(9.5)	N/A	6.5
Washington	N/A	N/A	7.3	4.3

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.

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	7/1/2019
Georgia	>$250,000 in CY 2019 or over 200 transactions	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	10/1/2018	10/1/2018
Mississippi	>$250,000	9/1/2018	
Nebraska	>$100,000 or over 200 transactions	1/1/2019	4/1/2019
Nevada	>$100,000 or over 200 transactions	11/1/2018	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	11/1/2018
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: CY = calendar year; TBD = to be determined. Alaska, Delaware, Montana, New Hampshire, and Oregon do not have sales tax. Florida and Missouri have not yet enacted legislations on economic nexus. States are hyperlinked to respective economic nexus guidelines.

Notes

[1] The state fiscal year runs from July 1 to June 30 in all states except Alabama, Michigan, New York, and Texas.

[2] The author made several adjustments for the second 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.

[3] In this report, the author uses Bureau of Economic Analysis regions as the basis of analysis.

[4] 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.

[5] See Missouri Department of Revenue, "2019 Withholding Tax and MO W-4 Changes," https://dor.mo.gov/business/withhold.

[6] See Idaho State Tax Commission, "Changes for 2018 Idaho Income tax Returns," June 21, 2018, https://tax.idaho.gov/i-2019.cfm.

[7] See Commonwealth of Kentucky, Department of Revenue, "2018 Kentucky Individual Income Tax Forms, https://revenue.ky.gov/Forms/740%20Packet.pdf.

[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 South Carolina's Department of Revenue, "Motor Fuel User Fee," https://dor.sc.gov/tax/motor-fuel.

[14] See California's Legislative Analyst's Office, "September 2019 State Tax Collections," October 18, 2019, https://lao.ca.gov/LAOEconTax/Article/Detail/405.

[15] See California's Legislative Analyst's Office, "State Fiscal Health Index: September 2019," November 4, 2019, https://lao.ca.gov/LAOEconTax/Article/Detail/410.

[16] See US Bureau of Labor Statistics, "Labor Force Statistics from the Current Population Survey," accessed November 11, 2019, https://www.bls.gov/web/empsit/cpsee_e08.htm.

[17] For more information, see US Bureau of Labor Statistics, "How the Government Measures Unemployment," last modified October 8, 2015, https://www.bls.gov/cps/cps_htgm.htm#unemployed.

[18] For more discussion of the relationship between property tax and housing prices, see Dadayan (2012).

[19] See Federal Reserve Bank of St. Louis, "30-Year Fixed Rate Mortgage Average in the United States," https://fred.stlouisfed.org/series/MORTGAGE30US.

[20] Author's analysis of data from NASBO (2018), Table A-1 and NASBO (2019), Table A-3.

[21] See *Gross Income Tax* (New Jersey Department of the Treasury), last updated February 28, 2019, https://www.state.nj.us/treasury/taxation/git2018TaxRates.shtml.

[22] 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.

[23] 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.

[24] 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.

[25] 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.

[26] 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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