

# Total state and local business taxes

State-by-state  
estimates for FY21

December 2022



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# Executive summary

This study presents detailed state-by-state estimates of state and local taxes paid by businesses. It is the 20th annual report prepared by Ernst & Young LLP in conjunction with the Council on State Taxation (COST) and the State Tax Research Institute (STRI). The estimates presented in this study are for fiscal year 2021 (FY21), which ran from July 2020 through June 2021 for most states.<sup>1</sup>

Businesses paid \$951.4 billion in state and local taxes in FY21, which was 43.6% of all tax revenue at the state and local level. Businesses paid \$493.7 billion in state taxes in FY21, which was 17.0% higher than the prior fiscal year, and \$457.6 billion in local taxes, which was 10.2% higher, for a combined year-over-year growth rate of 13.6% over FY20. Both corporate income and individual income tax collections experienced higher than normal growth rates in FY21, in part because the filing deadline was extended from April 15 to July in 2020, which shifted revenues from FY20 to FY21.

Business taxes include property taxes paid by businesses; sales and excise taxes on intermediate inputs and capital expenditures purchased by businesses; business entity taxes, such as the corporate income tax, gross receipts tax, franchise tax and license taxes on businesses and corporations; the share of individual income taxes paid by owners of noncorporate businesses (pass-through entities); unemployment insurance taxes, and all other state and local taxes that are the statutory liability of business taxpayers.



The following are key findings of the study:

- ▶ Revenue collections from taxing business property grew by 11.9% in FY21 to \$368.8 billion. Property taxes account for 38.8% of all state and local taxes paid by businesses, the most of any tax category. Businesses primarily pay property taxes at the local level, where they make up 77.8% of all business tax revenue, while they make up only 2.6% of business tax revenue at the state level.
- ▶ Sales tax collections from business purchases of intermediate inputs and capital expenditures are the second largest source of business tax revenue for state and local governments, accounting for 20.4% of all taxes paid by businesses in FY21. The \$194.5 billion in tax collections was 7.8% higher than FY20.<sup>2</sup> The sales tax is the largest source of business tax revenue at the state level, accounting for 30.3% of all taxes paid by businesses. Although they are the second largest source of business tax revenue for local governments, sales tax collections only make up 9.8% of business tax revenue at the local level.
- ▶ Corporate income tax collections grew 53.3% in FY21 to \$111.0 billion, in part because many states extended the filing deadline for businesses and individuals in the spring of 2020 in response to the COVID-19 pandemic, which shifted collections from FY20 to FY21. Although corporate tax revenues declined in FY20, growth averaged 20.5% in FY20 and FY21, which was above FY19's 16.0% growth rate, as well as the average growth rate of 0.9% for the five-year period ending in FY18. Corporate income taxes were the third largest source of business tax revenue for state and local governments in FY21, making up 11.7% of tax collections. They were the second largest source at the state level, accounting for 20.9% of business taxes. Certain statewide gross receipts taxes levied in lieu of corporate income taxes were also included in this category.
- ▶ Individual income taxes paid on pass-through income was the fourth largest source of business tax revenue at 6.2% of total state and local business tax collections. Revenues grew 31.4% in FY21 to \$59.1 billion, in part because the filing deadline was extended from April 15 to July in 2020 due to the COVID-19 pandemic. This shifted tax collections that should have been received in the spring of FY20 into FY21. Growth in individual income tax collections averaged 10.5% over the past two fiscal years, which was higher than the average of 5.5% over the five-year period ending in FY19. Individual income taxes on business income are the third largest source of business tax revenue at the state level, at 11.1% of taxes paid by businesses.
- ▶ Total state and local taxes paid by businesses in FY21 equaled 4.9% of US private-sector gross state product (GSP), which measures the value of private-sector production of goods and services in a state. There was substantial variation across states with business taxes accounting for as little as 3.6% of private-sector GSP and as high as 8.6%.
- ▶ An alternative measure of the tax burden on businesses is the "business tax-to-benefit" ratio, which is how much businesses pay in taxes to receive \$1.00 in benefits from government spending. The ratio is sensitive to estimates of the benefit received from spending on education, which is the largest category of expenditures by state and local governments. Businesses paid on average \$2.55 in taxes per dollar of government expenditures, assuming that in-state education spending does not benefit in-state businesses. Under an alternate assumption, businesses paid on average \$1.07 in taxes for every dollar of government spending, assuming that businesses benefit 50% from in-state educational expenditures.

# Total state and local business taxes in FY21

This section summarizes state and local business tax collections in FY21.<sup>3</sup> Table 1 compares tax collections in FY21 to FY20 by tax type. The table also reports the share of total state and local business tax collections by tax type. Figures 1a and 1b report the share of state and local tax collections by tax type as well. Figure 1a reports shares of total state and local taxes paid by both businesses and households, while Figure 1b reports shares of total state and local taxes paid by businesses only. Figure 2 reports the amount and share of state and local taxes paid by either businesses or households for total tax collections, as well as general sales tax collections, and property tax collections:

- ▶ Table 1 reports that businesses paid \$951.4 billion in state and local taxes in FY21, which was 13.6% higher than the prior fiscal year. According to Figure 2, this was 43.6% of total state and local tax collections, while households paid 56.4%, or \$1,231.4 billion. Year-over-year growth in consumer price inflation did not begin to accelerate until the spring of 2021, reaching 5.3% in June. As a result, the impact of inflation on state and local tax revenue will not be fully felt until FY22.
- ▶ Businesses paid \$368.8 billion in state and local property taxes in FY21, which was 11.9% higher than FY20 (Table 1). Taxes on both real and personal property are the largest source of state and local tax revenue according to Figures 1a and 1b. They were 30.8% of total state and local taxes paid by both businesses and households in FY21 (Figure 1a), while they were an even higher 38.8% of business tax collections (Figure 1b). Businesses paid 54.9% of state and local property taxes (Figure 2), while households paid the remaining \$302.5 billion, or 45.1% of state and local property tax collections.
- ▶ Businesses paid \$194.5 billion in general sales taxes to state and local governments in FY21 for a year-over-year growth rate of 7.8% (Table 1). Sales tax collections are 21.4% of all state and local taxes paid by businesses and households (Figure 1a) and 20.4% of state and local taxes paid by businesses (Figure 1b). The \$194.5 billion paid by businesses is 41.7% of total state and local sales tax collections. Households paid \$272.4 billion in sales taxes, which made up the remaining 58.3% of collections (Figure 2). The estimate of the business share of sales tax collections is based on prior research.<sup>4</sup>

**Table 1. Total state and local business taxes, FY20-FY21 (\$ billions)**

Business tax	FY20*	FY21	2021 % total taxes	One-year change
Property taxes on business property	\$329.6	\$368.8	38.8%	11.9%
General sales taxes on business inputs	180.4	194.5	20.4%	7.8%
Corporate income tax	72.4	111.0	11.7%	53.3%
Individual income tax on business income	45.0	59.1	6.2%	31.4%
Excise taxes	52.5	53.8	5.7%	2.3%
Business and corporate license	42.3	45.1	4.7%	6.7%
Unemployment insurance	34.8	36.1	3.8%	3.7%
Insurance premium taxes	25.7	27.4	2.9%	6.6%
Public utility taxes	27.6	27.1	2.8%	-1.8%
Severance taxes	11.6	11.8	1.2%	2.4%
Other business taxes	15.4	16.5	1.7%	7.5%
<b>Total state and local business taxes</b>	<b>\$837.3</b>	<b>\$951.4</b>	<b>100.0%</b>	<b>13.6%</b>

\*FY20 business tax estimates are revised from the COST FY20 study because of newly released data from the U.S. Census Bureau. See Appendix for more information.

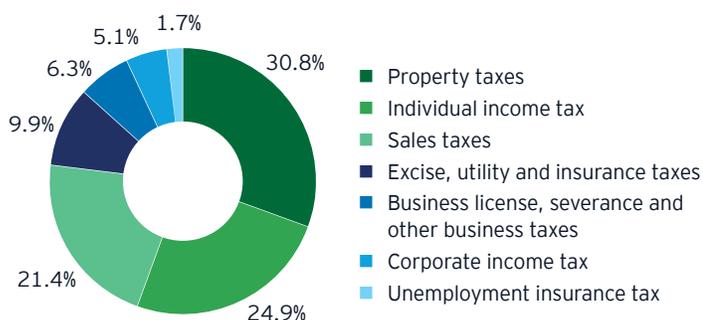
Note: Amounts may not sum because of rounding.

Source: Ernst & Young LLP estimates based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

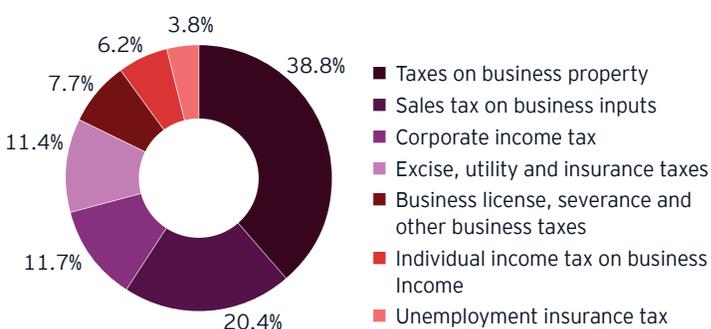


- ▶ Businesses paid \$111.0 billion in state and local corporate income taxes in FY21, an increase of 53.3% over FY20 (Table 1). The filing deadline was temporarily extended from April 15 until July in 2020 because of the COVID-19 pandemic, which shifted tax collections from FY20 to FY21. Data from the Census Bureau's Quarterly Summary of State and Local Tax Revenue indicated that at least half of the growth in FY21 collections was attributable to the filing deadline extension. Corporate income tax collections fell 43.2% year-over-year in the second quarter of 2020 (FY20) but grew 60.4% year-over-year in the third quarter (FY21).<sup>5</sup>
- ▶ Although corporate income tax collections grew 53.3% in FY21, they declined 5.3% in FY20. As a result, revenues grew an average of 20.5% over the past two fiscal years, which was higher than the 16.0% growth rate of FY19 and well above the average growth rate of 0.9% for the five-year period ending in FY18.
- ▶ Corporate income taxes, at 5.1%, were the fourth largest source of total state and local tax revenue (Figure 1a), but the third largest source of state and local business tax revenue, at 11.7% (Figure 1b). Corporate income tax collections include gross receipts or modified gross receipts taxes such as Nevada's Commerce Tax, Ohio's Commercial Activity Tax, Oregon's Corporate Activity Tax, Texas' Margin Tax, and Washington's Business & Occupation tax.
- ▶ Business owners paid an estimated \$59.1 billion in individual income taxes on their income from pass-through entities in FY21 (e.g., partnerships, sole proprietorships, limited liability companies and S corporations), which was 31.4% more than the prior fiscal year (Table 1). Individual income tax collections were also affected by the extension of the filing deadline, which shifted tax revenue from FY20 to FY21. Individual income taxes on pass-through business income represented 6.2% of total state and local business tax collections, which was the fourth largest source of revenue (Table 1), except in Figure 1b when excise tax collections were combined with public utility and insurance tax collections. At the federal level, taxpayers reporting certain types of pass-through income are entitled to a deduction equal to 20% of their pass-through income. However, most states do not conform to this provision.
- ▶ The 31.4% growth in individual income tax collections in FY21 followed a 7.0% decline in FY20 for an average growth rate of 10.5% over the past two years. Although individual income tax collections did grow 7.5% in FY18, growth averaged 5.5% over the five-year period ending in FY19.

**Figure 1a. Composition of total state and local taxes on businesses and households, FY21**



**Figure 1b. Composition of total state and local taxes on businesses, FY21**



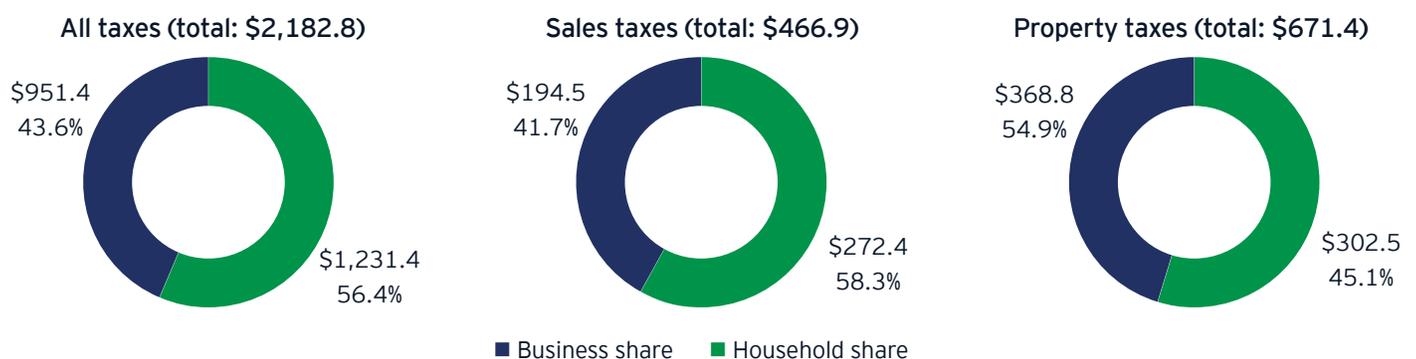
Note: Figures may not sum due to rounding.

Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.



- ▶ Businesses paid \$53.8 billion in excise taxes to state and local governments in FY21, an increase of 2.3% over the prior fiscal year (Table 1). Only a portion of excise tax collections are attributed to businesses, since both businesses and households consume these goods. Excise taxes attributed to businesses include a portion of motor fuel taxes and other excise taxes, such as taxes on hotel and rental car expenditures by businesses, as well as health care provider taxes on the revenue of hospitals and other providers of health services. Table 1 reports that excise taxes were 5.7% of total state and local business tax collections. However, Figure 1b combined excise, utility and insurance premium taxes, which were 11.4% of state and local business tax collections.
- ▶ Business and corporate license taxes and fees grew 6.7% in FY21 to \$45.1 billion (Table 1), which was 4.7% of total state and local business tax collections. Figure 1b combined business and corporate license taxes with severance taxes and other business taxes, which were 7.7% of state and local business tax collections.
- ▶ Employer contributions to unemployment insurance grew 3.7% in FY21 to \$36.1 billion (Table 1), which was 3.8% of total state and local business tax collections (Figure 1b).
- ▶ Insurance premium taxes grew 6.6% in FY21 to \$27.4 billion, which was 2.9% of state and local business tax collections (Table 1). They were combined with excise and utility taxes in Figure 1b, which were 11.4% of state and local business tax collections.
- ▶ Public utilities paid \$27.1 billion in state and local business taxes in FY21, a decline of 1.8% from the prior year (Table 1). Taxes on public utilities are generally based on gross receipts and are allocated solely to businesses because they are often levied in lieu of property or corporate income taxes. Utility tax collections were combined with excise and insurance premium taxes in Figure 1b, which were 11.4% of state and local business tax collections in FY21.
- ▶ Severance taxes grew 2.4% in FY21 to \$11.8 billion, which was 1.2% of state and local business tax collections (Table 1). They were combined with business and corporate license taxes and other business taxes in Figure 1b, which were 7.7% of state and local business tax collections.
- ▶ Other state and local business taxes, which include items such as motor vehicle license taxes and documentary and stock transfer taxes, totaled \$16.5 billion in FY21, which was 7.5% higher than the prior year (Table 1). Other state and local business taxes were combined with business and corporate license taxes and severance taxes in Figure 1b, which were 7.7% of total state and local tax collections.

**Figure 2. Total state and local taxes (\$ billions) and business and household taxes as a share of total tax collections, FY21**



Note: Figures may not sum due to rounding.

Source: Ernst & Young LLP estimates based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

# Classifying business taxes

This study generally defines business taxes as those that are the legal liability of businesses. Certain taxes, such as excise taxes on tobacco and alcohol, are not counted as business taxes because businesses are statutorily required to collect them on behalf of the individuals consuming them. Similarly, sales tax collections are separated into those that are levied on final goods purchased by individuals, which are not included, from those that are levied on intermediate inputs and capital equipment, which are included because they are purchased by businesses. The share of individual income taxes that arise from taxing pass-through business income is included as a business tax. The business taxes included in the analysis are as follows:

- ▶ Property taxes paid by businesses on real and personal property, including taxes paid on income-generating residential rental property
- ▶ General sales taxes paid by businesses on purchases of intermediate inputs and capital equipment that are used in the production of goods and services; sales taxes on final goods consumed by households are not included
- ▶ The business share of excise taxes on goods such as motor fuels and hotel and rental car expenditures
- ▶ Business entity taxes such as the corporate income tax, gross receipts tax and franchise tax
- ▶ Taxes on insurance premiums and the gross receipts of public utility companies, which are often levied in lieu of other business entity taxes
- ▶ Individual income taxes on pass-through business income; taxes withheld on employee earnings are not considered business taxes
- ▶ Unemployment insurance taxes paid by employers
- ▶ Business licenses, including general business licenses, specific industry and occupational licenses, and commercial motor vehicle licenses
- ▶ Severance taxes on mining, natural gas, oil and other natural resources

The corporate income tax is the primary business entity tax in most states. However, several states such as Nevada, Ohio, Oregon, Texas and Washington levy a gross receipts tax in lieu of the traditional corporate income tax. The gross receipts tax is categorized as corporate income tax revenue for these states since it is the primary business entity tax.

As shown in Table 1 and Figures 1a and 1b, businesses pay more in property taxes and sales taxes than they do in business entity taxes such as the corporate income tax or the gross receipts tax.



# State vs. local business taxes in FY21

Business taxes are separated into state tax collections (Table 2-A) and local tax collections (Table 2-B) and reported by major tax category. Each table reports business tax collections for FY20 and FY21, as well as the year-over-year growth rate and the share of total business tax collections in FY21.

State business tax collections were 17.0% higher than the prior fiscal year in FY21, reaching a total of \$493.7 billion according to Table 2-A. Corporate net income tax collections were 59.4% higher, while individual income tax collections on pass-through business income were 34.0% higher. Many state governments extended the filing deadline from April 15 to July in 2020 because of the COVID-19 pandemic, which shifted both corporate and individual income tax collections from FY20 to FY21.

State business tax collections from sales and use taxes grew 8.4% in FY21, while other business taxes were 8.3% higher, and business license tax revenue was 8.1% higher. Insurance premiums tax collections grew 6.8% in FY21, while business property tax revenues were 6.3% higher. The year-over-year growth rates for the remaining taxes were in the 2.0% to 4.0% range in FY21, except for public utility taxes, which declined by 2.4%.

Local business tax collections (Table 2-B) reached \$457.6 billion in FY21, which was 10.2% higher than the prior fiscal year. Property taxes, which were the largest source of business tax revenue at the local level, were 12.1% higher than in FY20, while sales taxes on business purchases, the second largest source of local business taxes, were 5.8% higher.

The composition of business taxes differs significantly between state and local levels. According to Table 1, the four largest sources of state and local tax collections from businesses were the property tax (38.8%), general sales tax (20.4%), corporate income tax (11.7%) and the individual income tax (6.2%). However, according to Table 2-A, businesses paid very little in real and personal property taxes at the state level, with property taxes making up only 2.6% of total state business tax collections. The sales and use tax, at 30.3%, was the largest source of business tax collections at the state level, followed by the corporate net income tax, at 20.9%, and individual income taxes on business income, at 11.1%.

Property taxes were the largest source of business tax collections at the local level, at 77.8%. The shares of the remaining tax types were in the single digits. Local sales taxes on intermediate input purchases by businesses were second highest at 9.8%. Local corporate income taxes and individual income taxes on business income were included in the other business taxes category, which was 7.2% of local business tax collections.





**Table 2-A. State business taxes, FY20-FY21 (\$ billions)**

Business tax	State business taxes FY20*	State business taxes FY21	% total state business taxes	One-year growth, state business taxes
General sales and use tax on inputs	\$138.2	\$149.7	30.3%	8.4%
Corporate net income	64.7	103.1	20.9%	59.4%
Individual income tax	41.1	55.0	11.1%	34.0%
Excise taxes on business inputs	43.7	44.6	9.0%	2.0%
Unemployment insurance	34.8	36.1	7.3%	3.7%
Business license tax	26.4	28.5	5.8%	8.1%
Insurance premium tax	24.6	26.3	5.3%	6.8%
Property tax on business property	12.2	13.0	2.6%	6.3%
Public utility tax	12.4	12.1	2.4%	-2.4%
Severance taxes	11.5	11.8	2.4%	2.4%
Other business taxes	12.4	13.4	2.7%	8.3%
<b>Total state business taxes</b>	<b>\$422.0</b>	<b>\$493.7</b>	<b>100.0%</b>	<b>17.0%</b>

\* FY20 business tax estimates are revised from the COST FY20 study because of newly released data from the U.S. Census Bureau.

Note: Amounts may not appear to sum because of rounding.

Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

**Table 2-B. Local business taxes, FY20-FY21 (\$ billions)**

Business tax	Local business taxes FY20*	Local business taxes FY21	% total local business taxes	One-year growth, local business taxes
Property taxes on business property	\$317.3	\$355.8	77.8%	12.1%
General sales taxes on business inputs	42.3	44.8	9.8%	5.8%
Public utility taxes	15.2	15.0	3.3%	-1.2%
Excise taxes on business inputs	8.8	9.2	2.0%	4.1%
Other business taxes**	31.6	32.9	7.2%	3.9%
<b>Total local business taxes</b>	<b>\$415.2</b>	<b>\$457.6</b>	<b>100.0%</b>	<b>10.2%</b>

\* FY20 business tax estimates are revised from the COST FY20 study because of newly released data from the U.S. Census Bureau.

\*\* Includes local corporate income taxes.

Note: Amounts may not appear to sum because of rounding.

Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

# State-by-state business tax collections

State and local business tax collections were 13.6% higher in FY21. Figure 3 shows the year-over-year growth rates in total state and local business tax collections by state in FY21. States with significant tax changes in FY21 are described below:

- ▶ Oregon had the largest year-over-year growth rate, at 25.3%, in state and local tax collections in FY21. The sharp increase in tax collections is in part because the state's modified gross receipts tax, the Corporate Activity Tax (CAT), went into effect on January 1, 2020. According to the state's Annual Comprehensive Financial Report (AFCR) for FY21, the CAT raised \$1.179 billion in revenue in FY21 compared to \$419.2 million in FY20.
- ▶ The extension of the April 15 filing deadline in 2020 until July shifted significant amounts of tax revenue from FY20 to FY21 and helps to explain why corporate income tax collections were 53.3% higher in FY21. The three states with the highest year-over-year corporate income tax growth rate were Hawaii (338.3%), California (165.8%) and North Carolina (128.8%). All three states extended their filing deadline, and none of the states changed their corporate income tax rate schedule in FY21. Quarterly state tax collections were analyzed using the Census Bureau's Quarterly Summary of State and Local Tax Revenue. The data indicates that corporate income tax collections in the second quarter of 2020 (FY20) were 43.2% lower than the prior year, while they were 60.4% higher year-over-year in the third quarter (FY21). As a result, the extension of the filing deadline, along with the subsequent shift of revenues into FY21, is estimated to account for at least half of the growth in FY21 collections.
- ▶ Individual income tax collections on business income in FY21 were similarly boosted by the filing deadline extension with collections 31.4% higher year-over-year. Growth was led by Utah (78.7%), followed by California (73.3%) and Vermont (61.7%). All three states, as well as many others, extended their filing deadline in the spring of 2020, and none of the three states changed their individual income tax rate schedule in FY21. Quarterly tax collections data from the Census Bureau's Quarterly Summary of State and Local Tax Revenue indicate that revenues were 33.0% lower year-over-year in the second quarter of 2020 (FY20) but were 40.7% higher year-over-year in the third quarter of 2020 (FY21).
- ▶ Sales tax collections on business inputs and capital expenditures grew 7.8% year-over-year in FY21 primarily because of strong consumer demand since inflation did not begin to accelerate until the spring of 2021. Total state sales tax collections from spending by both businesses and households ranged from a 13.9% decline in North Dakota to 21.3% growth in Michigan. The majority of states experienced double-digit growth in state sales tax collections, with Idaho not far behind at 19.9%.
- ▶ Several states lowered their corporate income tax rates in FY21. Indiana reduced its rate from 5.5% to 5.25% effective July 1, 2020, or at the start of FY21. Arkansas lowered its rate from 6.5% to 6.2%, while Iowa lowered its top marginal rate from 12.0% to 9.8%, both effective January 1, 2021. Florida temporarily lowered its corporate income tax rate to 3.535% in tax year 2021, but it will revert back to 5.5% in tax year 2022.

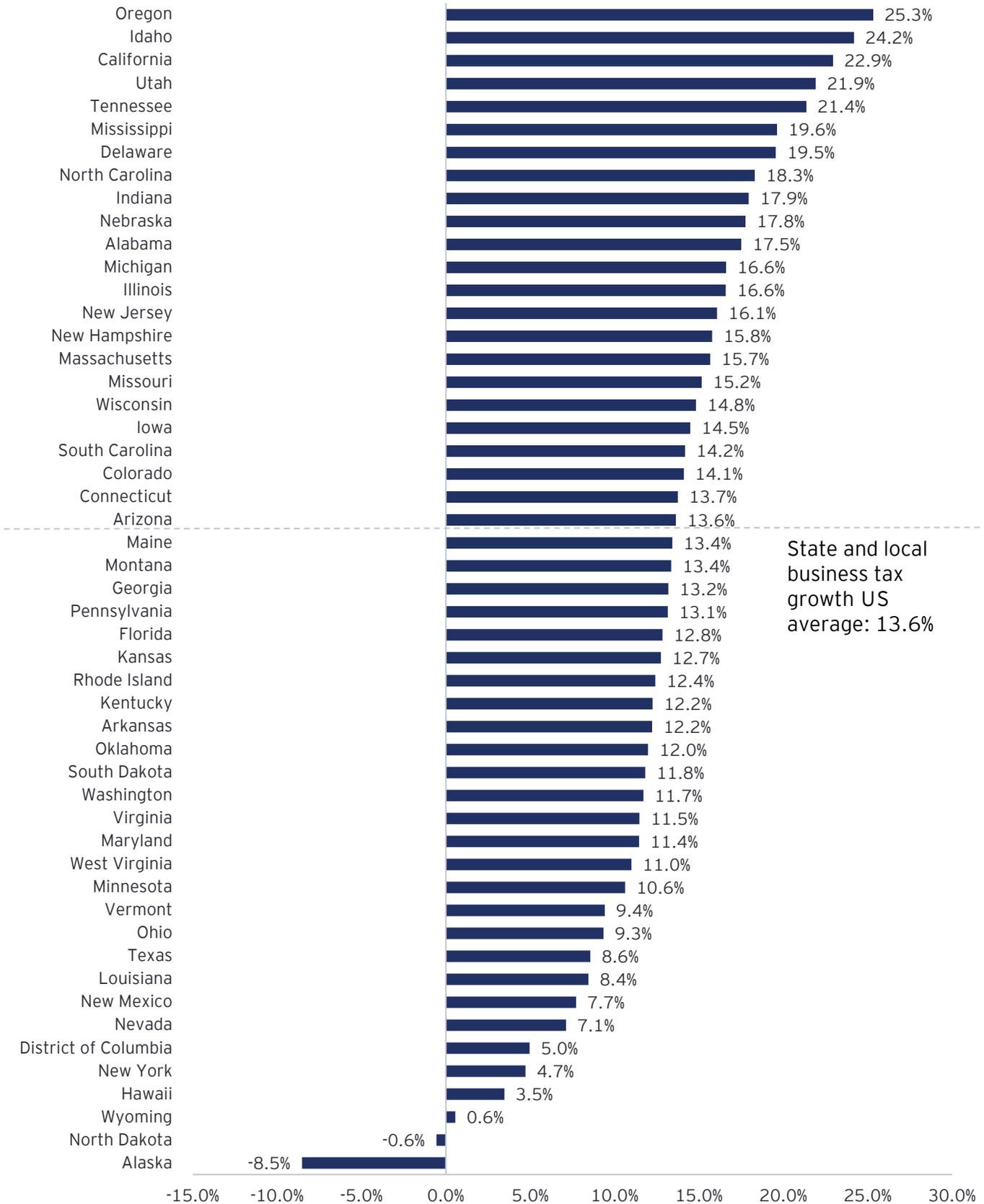




- ▶ New York raised its corporate income tax rate from 6.5% to 7.25% effective January 1, 2021. The tax rate increase was estimated to raise an additional \$750.0 million in tax collections, according to the state.
- ▶ Two states changed their individual income tax rate schedule in 2021. Arkansas repealed the top marginal individual income tax bracket for high earners, which made the 5.9% rate the top rate. New Mexico added a fifth income tax bracket with a rate of 5.9% on income in excess of \$210,000.
- ▶ Arizona voters passed Proposition 208, which raised the top marginal income tax rate to 8.0% by imposing a 3.5% surcharge on income above \$250,000 for single filers and \$500,000 for joint filers effective January 1, 2021. Senate Bill 1827, which was signed into law on June 30, 2021, capped the top marginal income tax rate at 4.5%, effective January 1, 2021, by lowering the top statutory rate to 1.0% if the surcharge applied. However, Proposition 208 was ruled unconstitutional in March 2022, thus causing the top statutory marginal tax rate to revert back to 4.5% for tax year 2021.
- ▶ States continue to implement optional pass-through entity taxes, with the following states joining the ranks in 2021: Alabama, California, Connecticut, Idaho, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, Oklahoma, Rhode Island, South Carolina, Virginia and Wisconsin. Previously, the income of a pass-through entity would be distributed to its owners, who then report the income on their individual income tax return and pay taxes at both the federal and state level. Under an optional pass-through entity tax, the pass-through business pays taxes at the state level, which are then deductible at the federal level because the \$10,000 cap on state and local tax deductions only applies to individuals. The pass-through entity is then able to provide a credit for state income taxes paid to the owners of the business, who then use it to offset their pass-through business income on their state tax returns.

Table 3 presents state and local business tax collections by tax type and state. The results show that states vary widely in the composition of their business tax structures, which has implications for revenue growth and stability in each state. Appendix Table A3 presents the percentage composition by tax type for each of the 50 states and the District of Columbia.

**Figure 3. Change in state and local business taxes by state, FY20-FY21  
(percentage change in total state and local business taxes)**



Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

**Table 3. State and local business taxes by type, FY21 (\$ billions)**

	Property tax	Sales tax	Excise tax, including public utilities and insurance	Corporate income tax	Unemployment insurance tax	Individual income tax on business income	License and other taxes*	Total business taxes
Alabama	\$2.7	\$2.5	\$2.0	\$1.1	\$0.6	\$0.5	\$0.9	\$10.3
Alaska	1.1	-	0.2	0.1	0.1	-	0.5	2.1
Arizona	5.8	4.3	1.4	0.9	0.5	0.5	0.8	14.2
Arkansas	1.7	2.1	0.8	0.6	0.1	0.3	0.4	6.1
California	46.4	22.2	13.8	26.1	5.9	16.5	12.2	143.2
Colorado	8.3	3.9	1.6	1.3	0.6	1.3	0.6	17.6
Connecticut	3.5	2.0	1.3	2.6	0.7	1.3	0.3	11.7
Delaware	0.4	-	0.3	0.3	0.3	0.2	2.1	3.6
Florida	22.6	14.4	8.0	3.4	0.6	-	3.6	52.6
Georgia	9.2	5.2	2.6	1.8	0.5	1.7	0.9	21.9
Hawaii	1.5	1.3	0.7	0.2	0.2	0.4	0.2	4.5
Idaho	1.3	0.8	0.3	0.4	0.3	0.3	0.3	3.8
Illinois	18.2	6.3	6.7	5.7	1.5	2.4	2.2	43.0
Indiana	6.0	3.0	1.9	1.4	0.6	1.7	0.3	14.8
Iowa	3.8	2.1	0.8	0.8	0.4	0.6	0.6	9.0
Kansas	3.4	2.0	0.8	0.7	0.3	-	0.4	7.6
Kentucky	3.2	2.0	1.8	1.1	0.4	0.7	0.5	9.7
Louisiana	3.5	3.7	1.5	0.6	0.2	0.6	0.8	10.9
Maine	3.3	0.7	0.3	0.3	0.1	0.2	0.2	5.1
Maryland	4.1	2.3	2.8	1.8	0.5	1.5	1.1	14.1
Massachusetts	8.4	3.7	1.4	3.7	1.8	2.0	0.9	22.0
Michigan	7.3	4.1	1.8	1.5	1.1	1.1	1.2	18.1
Minnesota	5.1	3.3	2.2	2.4	0.7	1.6	0.9	16.3
Mississippi	3.0	1.5	0.8	0.6	0.4	0.3	0.5	7.0
Missouri	4.2	3.0	1.2	0.8	0.5	0.8	0.9	11.4
Montana	1.4	-	0.3	0.3	0.1	0.3	0.4	2.8
Nebraska	3.0	1.3	0.4	0.6	0.1	0.6	0.4	6.2
Nevada	1.9	3.2	1.3	0.2	0.6	-	1.7	8.9
New Hampshire	1.9	-	0.4	1.0	0.1	0.0	0.4	3.9
New Jersey	16.4	5.6	2.8	6.0	2.1	2.0	1.7	36.5
New Mexico	1.1	2.6	0.5	0.2	0.1	0.1	2.1	6.7
New York	42.8	13.9	7.9	11.6	2.6	8.2	3.3	90.3
North Carolina	6.3	5.6	2.2	1.5	0.4	1.4	2.0	19.5
North Dakota	0.9	0.6	0.3	0.2	0.4	0.1	1.8	4.2
Ohio	9.1	6.1	3.9	2.3	1.1	1.7	1.8	26.0
Oklahoma	2.2	2.7	0.9	0.6	0.3	0.7	1.4	9.0
Oregon	3.8	-	0.9	2.5	0.9	1.1	2.5	11.7
Pennsylvania	13.2	6.3	4.3	4.7	2.5	2.5	3.1	36.6
Rhode Island	1.3	0.5	0.4	0.3	0.2	0.2	0.1	2.9
South Carolina	5.0	2.0	1.1	0.7	0.3	0.5	1.2	10.8
South Dakota	1.0	1.0	0.3	0.1	0.1	-	0.2	2.6
Tennessee	3.9	5.4	2.1	2.6	0.3	0.0	2.2	16.6
Texas	42.9	23.8	10.1	4.5	2.1	-	7.4	90.9
Utah	2.8	1.9	0.9	0.7	0.2	0.6	0.3	7.4
Vermont	1.4	0.3	0.4	0.2	0.1	0.1	0.1	2.5
Virginia	10.9	3.3	3.5	1.6	0.4	1.2	1.9	22.8
Washington	6.9	7.4	4.0	5.0	1.3	-	1.9	26.5
West Virginia	1.5	0.7	0.7	0.3	0.2	0.2	0.6	4.2
Wisconsin	5.3	2.9	1.3	2.5	0.6	0.8	0.9	14.2
Wyoming	1.0	0.5	0.1	-	0.1	-	0.6	2.2
District of Columbia	2.5	0.5	0.4	0.9	0.1	0.4	0.2	5.0
<b>United States</b>	<b>\$368.8</b>	<b>\$194.5</b>	<b>\$108.3</b>	<b>\$111.0</b>	<b>\$36.1</b>	<b>\$59.1</b>	<b>\$73.5</b>	<b>\$951.4</b>

\* Gross receipts tax collections for Nevada, Ohio, Oregon, Texas and Washington have been shifted into the "Corporate Income tax" category. The "License and other taxes" category includes death and gift taxes, documentary and stock transfer taxes, severance taxes, and local gross receipts taxes. Certain Ohio localities impose a net profits tax, which is reflected in the state's "Corporate income tax" amount. The small amount of corporate profits taxes at the local level in Michigan is reflected in the state's "License and other taxes" amount.

Note: Note: "-" indicates the state does not impose a given tax. Collections less than \$50 million have been rounded to "0.0."

Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

# Comparing state business tax levels



It is possible to measure a state's business tax burden in a variety of ways since state and local taxes are imposed on a number of different tax bases such as property value, net income, gross receipts, value of goods or services purchased (ad valorem sales taxes) or the quantity of goods or services purchased (excise taxes). This analysis measures the aggregate business tax burden of a state by comparing the level of business taxes to the level of economic activity subject to taxation, or private-sector gross state product (GSP). GSP is the total value of a state's annual production of goods and services, with private-sector GSP representing the value created by the private sector. The resulting ratio of business taxes to private-sector GSP is a state's total effective business tax rate (TEBTR).

Table 4 reports the amount of state taxes, local taxes and state and local taxes paid by businesses, as well as the total amount paid by businesses and households. In addition, Table 4 reports the TEBTR for each state. Figure 4 is a map of the United States with each state shaded according to its TEBTR range. The average TEBTR across all states was 4.9% in FY21.

There were four states in FY21 that had TEBTRs that were less than 4.0%. North Carolina had the lowest at 3.6%, followed by Michigan (3.7%), Missouri (3.8%) and Georgia (3.8%). The taxes imposed on businesses, as a share of economic activity, were lowest in these four states.

New Mexico had the highest TEBTR at 8.6%, followed by Vermont (8.4%), North Dakota (8.1%) and Maine (8.0%). Mississippi had a TEBTR of 7.1%, while four states had a TEBTR in the 6.0% range: Wyoming, Hawaii, New Jersey and West Virginia. The remaining 38 states had TEBTRs that ranged between 4.0% and 5.9%.

There does not appear to be a strong relationship between geographic region and TEBTR. For instance, North Carolina had the lowest TEBTR at 3.6%, but South Carolina had a TEBTR of 4.9%. Similarly, New Mexico had the highest TEBTR at 8.6%, but Arizona had one of the lowest at 4.1%.

Massachusetts had the fifth lowest TEBTR at 4.0%, but its northeast neighbors of Pennsylvania (5.0%) and New York (5.6%) all had substantially higher effective tax rates.

TEBTRs provide a starting point for comparing business tax burdens across states,<sup>6</sup> but there are additional factors that determine a state's tax competitiveness, which are not captured by the metric. TEBTR does not capture economic incidence, which is the ability of businesses to shift the burden of taxes onto consumers. TEBTRs are also not able to measure the administrative burden companies face when filing their tax returns. States have different definitions of net income that may or may not conform to the federal definition. As a result, different states require companies to make different adjustments such as addbacks or subtractions when calculating their net income.

It is also important to note that the TEBTR measures the average tax burden on existing companies. Therefore, two states with similar TEBTRs may differ significantly in how they tax certain industries, which is not considered in this analysis. In addition, because the TEBTR is an average tax rate, it does not measure the marginal tax liability that a company bears when investing in a new or expanded facility. For this reason, the TEBTR is not a comprehensive measure of how competitive a state's business tax structure is in terms of attracting new investment.

There are many features to a state's corporate income tax structure that affect a business's tax liability beyond the statutory tax rate. Many states have adopted a single-sales factor apportionment formula, as well as market-based sourcing for services. Because these two rules allow a business to source income to their customer's location, businesses benefit when out-of-state customers reside in lower tax jurisdictions. Although the TEBTR is a reasonable measure of the level of business taxation in a state as a share of private-sector economic activity, it was not designed to evaluate how the structure of a state's corporate income tax affects the effective tax burden of a company.

**Table 4. State and local business taxes and business taxes as a share of private-sector gross state product (GSP), FY21 (\$ billions)**

State	State taxes		Local taxes		State and local taxes		TEBTR*	Business taxes per employee (\$ thousands)**
	Business	Total	Business	Total	Business	Total		
Alabama	\$6.0	\$14.8	\$4.3	\$7.7	\$10.3	\$22.5	5.2%	\$6.3
Alaska	0.9	1.2	1.1	2.1	2.1	3.3	5.1%	8.9
Arizona	7.0	21.3	7.2	13.3	14.2	34.6	4.1%	5.7
Arkansas	4.4	11.8	1.7	3.2	6.1	15.0	5.1%	6.0
California	82.9	254.1	60.2	114.5	143.2	368.6	5.1%	10.0
Colorado	6.2	19.4	11.3	19.5	17.6	38.9	5.0%	7.8
Connecticut	8.2	22.8	3.5	13.1	11.7	35.9	4.5%	8.4
Delaware	3.1	5.7	0.5	1.4	3.6	7.0	5.1%	9.5
Florida	22.9	49.9	29.7	49.4	52.6	99.3	5.0%	6.9
Georgia	9.2	28.3	12.6	22.3	21.9	50.6	3.8%	5.7
Hawaii	2.6	8.3	1.9	3.5	4.5	11.8	6.6%	10.0
Idaho	2.4	6.8	1.5	2.6	3.8	9.4	4.9%	6.0
Illinois	21.0	57.0	22.0	40.1	43.0	97.2	5.3%	8.6
Indiana	8.4	27.2	6.4	10.7	14.8	37.9	4.1%	5.6
Iowa	4.7	12.2	4.4	7.7	9.0	19.9	4.9%	7.0
Kansas	3.9	11.9	3.7	6.3	7.6	18.2	4.7%	6.7
Kentucky	5.7	15.1	4.0	6.7	9.7	21.8	5.0%	6.2
Louisiana	5.1	12.4	5.8	10.1	10.9	22.5	5.0%	7.0
Maine	1.8	5.6	3.3	4.4	5.1	10.0	8.0%	10.0
Maryland	8.8	25.7	5.3	19.2	14.1	45.0	4.2%	6.6
Massachusetts	13.1	38.2	8.9	21.7	22.0	59.8	4.0%	7.2
Michigan	11.4	35.5	6.7	16.5	18.1	52.1	3.7%	5.1
Minnesota	10.9	32.4	5.3	11.5	16.3	44.0	4.6%	6.7
Mississippi	3.9	9.8	3.1	4.1	7.0	13.9	7.1%	7.8
Missouri	4.7	15.6	6.7	13.2	11.4	28.8	3.8%	4.8
Montana	1.6	4.0	1.2	2.0	2.8	5.9	5.9%	7.2
Nebraska	2.7	7.1	3.6	6.0	6.2	13.0	5.0%	7.6
Nevada	5.9	11.0	3.0	5.9	8.9	17.0	5.5%	7.8
New Hampshire	2.1	3.3	1.8	4.8	3.9	8.1	4.7%	6.9
New Jersey	19.8	45.8	16.7	35.9	36.5	81.7	6.3%	11.0
New Mexico	4.7	7.6	2.0	3.6	6.7	11.2	8.6%	10.8
New York	29.3	96.1	61.0	114.3	90.3	210.4	5.6%	12.1
North Carolina	11.1	35.1	8.4	17.8	19.5	52.9	3.6%	5.2
North Dakota	3.1	4.3	1.1	1.7	4.2	6.0	8.1%	12.6
Ohio	14.4	36.0	11.6	29.2	26.0	65.2	4.1%	5.7
Oklahoma	5.3	11.6	3.7	6.7	9.0	18.4	5.5%	7.0
Oregon	6.6	18.7	5.1	10.3	11.7	29.0	5.3%	7.4
Pennsylvania	20.2	52.1	16.4	34.2	36.6	86.3	5.0%	7.2
Rhode Island	1.6	4.6	1.3	3.1	2.9	7.6	5.4%	7.3
South Carolina	4.4	13.5	6.4	10.2	10.8	23.7	4.9%	6.2
South Dakota	1.3	2.2	1.3	2.2	2.6	4.4	5.1%	7.4
Tennessee	11.2	20.3	5.4	10.2	16.6	30.4	4.7%	6.3
Texas	40.2	67.4	50.7	85.7	90.9	153.2	5.4%	8.6
Utah	3.6	12.8	3.8	6.8	7.4	19.6	4.0%	5.6
Vermont	1.9	4.2	0.6	0.8	2.5	5.0	8.4%	10.3
Virginia	9.1	32.7	13.7	22.3	22.8	55.0	4.9%	7.2
Washington	17.1	33.9	9.4	20.8	26.5	54.7	4.7%	9.5
West Virginia	2.4	6.2	1.9	2.5	4.2	8.7	6.2%	8.0
Wisconsin	8.5	22.9	5.7	12.1	14.2	35.0	4.5%	5.8
Wyoming	1.4	2.0	0.9	1.2	2.2	3.2	6.9%	10.9
District of Columbia	5.0	9.1	0.0	0.0	5.0	9.1	5.0%	9.8
<b>United States</b>	<b>\$493.7</b>	<b>\$1,307.5</b>	<b>\$457.6</b>	<b>\$875.3</b>	<b>\$951.4</b>	<b>\$2,182.8</b>	<b>4.9%</b>	<b>\$7.8</b>

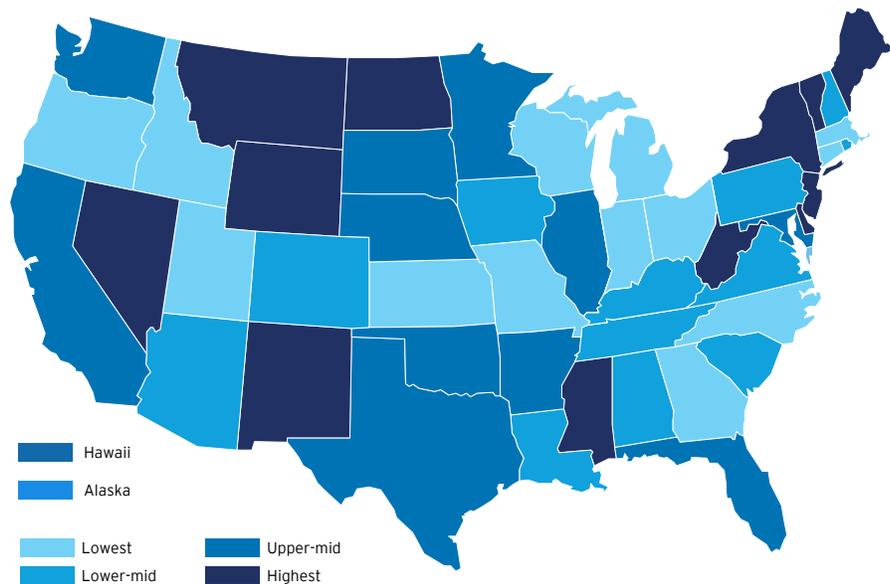
\* TEBTR equals state and local tax collections as a percentage of private-sector gross state product (GSP). GSP for FY21 is calculated as the average of calendar years 2020 and 2021.

\*\* "Business taxes per employee" calculated using 2020 private-sector employment from Bureau of Labor Statistics Quarterly Census of Employment and Wages and FY21 total state and local business tax collections.

Note: Amounts may not sum because of rounding.

Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

**Figure 4. Total effective business tax rate (TEBTR) by state, FY21**  
**(state and local business taxes divided by private-sector gross state product in each state)**



Source: Ernst & Young LLP estimates based on data from the Bureau of Economic Analysis and the U.S. Census Bureau Annual Survey of State and Local Government Finances.

Table 5 reports the share of taxes paid by businesses at each level of government in each state: local taxes, state taxes and state and local taxes. Although businesses paid 43.6% of state and local taxes in FY21, they only paid 37.8% of state tax collections, while paying 52.3% of local tax collections. The disparity can be explained by the type of taxes levied at each level. According to Table 2-A, the sales tax was the largest source of business tax collections at the state level, at 30.3% of revenues, but Figure 2 reported that businesses only paid 41.7% of state and local sales taxes, or less than half. Table 2-B reported that property taxes, at 77.8%, were the largest source of business tax collections at the local level, and Figure 2 showed that businesses paid the majority of state and local property tax collections, at 54.9%.

Appendix Table A1 reports historical state and local business tax collections for FY17 to FY21. The business share of state and local tax collections has been fairly stable during this period, averaging 43.8%. It reached a high of 44.1% in FY20, but otherwise has remained between 43.6%, which is the FY21 figure, and 43.9%. Although business income is taxed under the individual income tax, it is a small portion relative to overall individual income tax collections, and was estimated to only be 11.2% in FY21. As a result, the majority of the individual income tax burden falls on households. Individual income taxes on nonbusiness income (i.e., households) accounted for 22.2% of total state and local tax collections in FY21, slightly above the five-year average of 20.9%.

The business share of state and local tax collections varies significantly by state. North Dakota had the highest business share value at 70.9%, while Maryland had the lowest at 31.3%. Businesses paid at least 60% of state and local tax collections in three other states besides North Dakota: Wyoming (69.3%), Alaska (61.6%) and New Mexico (60.1%). South Dakota was not far behind

at 59.6%. In total there were 12 states, as well as the District of Columbia, where businesses paid at least half of state and local tax collections.

Connecticut, at 32.6%, and Michigan, at 34.7%, joined Maryland as the three states where businesses paid the lowest share of total state and local tax collections. There were ten other states that had business shares in the 30% to 40% range, topping out at Ohio at 39.8%. The remaining states, which was 25 in total, had business shares in the 40% range, from Oregon's 40.4% business share to Vermont's 49.9% business share.

The structure of the tax system within each state helps explain whether businesses pay the majority of state and local taxes or not. North Dakota, Alaska, New Mexico and Wyoming rely heavily on severance taxes at the state level, which are the responsibility of businesses. Alaska, North Dakota, Texas and Wyoming also rely more heavily on property taxes at the local level than the national average, and businesses typically pay the majority of property taxes. Lastly, Alaska, South Dakota, Texas and Wyoming do not have an individual income tax, which is predominantly borne by households, which means these states have to rely more heavily on business taxes.

On the other hand, Maryland, Connecticut, Michigan, Massachusetts and North Carolina, which have the lowest share of business taxes, rely on the individual income tax and the sales tax for between three-fifths and three-fourths of their total state and local tax collections. Households pay the majority of individual income tax collections, pass-through income from businesses was approximately 11.2% of adjusted gross income in FY21, and they also pay the majority of sales tax collections.



**Table 5. Business share of total state and local taxes, FY21**

	Business share of state taxes	Business share of local taxes	Business share of total state and local taxes
Alabama	40.7%	56.3%	46.1%
Alaska	77.2%	53.0%	61.6%
Arizona	33.0%	53.7%	41.0%
Arkansas	37.6%	52.8%	40.8%
California	32.6%	52.6%	38.8%
Colorado	32.2%	58.1%	45.2%
Connecticut	35.8%	27.0%	32.6%
Delaware	55.0%	35.4%	51.1%
Florida	45.8%	60.2%	53.0%
Georgia	32.6%	56.6%	43.2%
Hawaii	31.5%	53.6%	38.1%
Idaho	35.1%	55.9%	40.9%
Illinois	36.9%	54.8%	44.3%
Indiana	30.8%	60.1%	39.1%
Iowa	38.1%	57.2%	45.4%
Kansas	33.0%	58.2%	41.7%
Kentucky	38.1%	59.0%	44.6%
Louisiana	40.8%	57.5%	48.3%
Maine	32.1%	73.7%	50.6%
Maryland	34.1%	27.5%	31.3%
Massachusetts	34.3%	40.8%	36.7%
Michigan	32.0%	40.5%	34.7%
Minnesota	33.7%	46.3%	37.0%
Mississippi	40.2%	75.8%	50.7%
Missouri	30.4%	50.8%	39.8%
Montana	39.2%	61.8%	46.6%
Nebraska	37.6%	60.1%	47.9%
Nevada	53.3%	50.2%	52.3%
New Hampshire	62.7%	37.9%	47.9%
New Jersey	43.2%	46.5%	44.7%
New Mexico	61.6%	56.9%	60.1%
New York	30.5%	53.3%	42.9%
North Carolina	31.6%	47.0%	36.8%
North Dakota	72.5%	66.7%	70.9%
Ohio	40.0%	39.6%	39.8%
Oklahoma	45.2%	55.2%	48.8%
Oregon	35.2%	49.9%	40.4%
Pennsylvania	38.8%	47.8%	42.4%
Rhode Island	35.4%	43.1%	38.5%
South Carolina	32.6%	62.6%	45.5%
South Dakota	59.0%	60.2%	59.6%
Tennessee	55.3%	52.8%	54.5%
Texas	59.6%	59.1%	59.3%
Utah	28.3%	55.9%	37.9%
Vermont	46.0%	70.3%	49.9%
Virginia	27.8%	61.4%	41.5%
Washington	50.5%	44.9%	48.4%
West Virginia	38.2%	75.7%	48.8%
Wisconsin	37.1%	46.8%	40.5%
Wyoming	68.7%	70.3%	69.3%
District of Columbia	54.3%	n/a	54.3%
<b>United States</b>	<b>37.8%</b>	<b>52.3%</b>	<b>43.6%</b>

Note: District of Columbia taxes are treated as state taxes in this analysis. Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

# Governmental benefits received by businesses vs. taxes paid

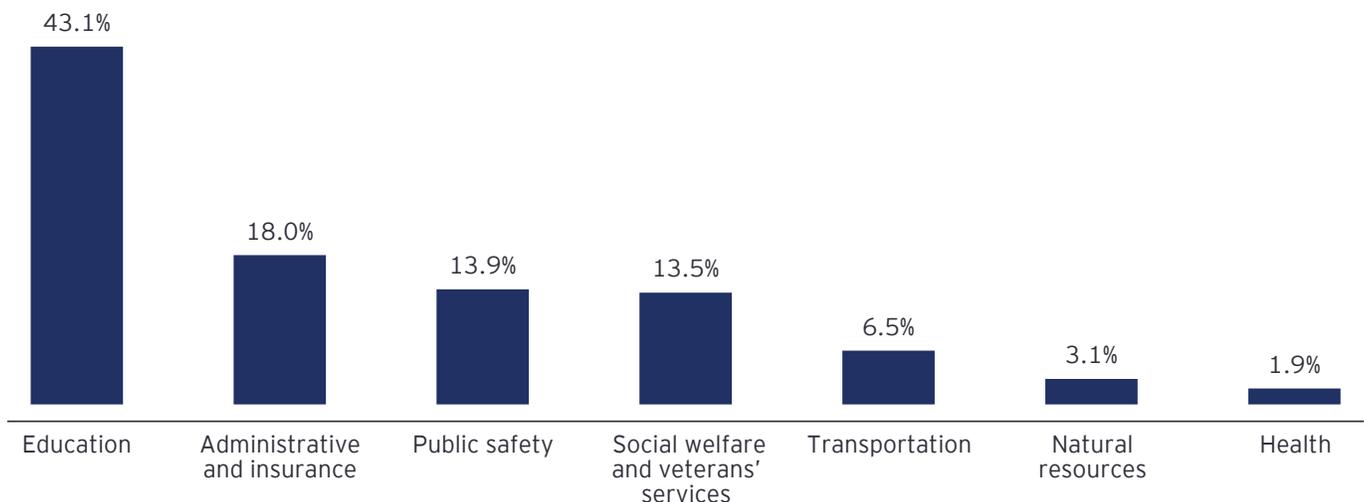
Another method to evaluate the business tax burden is to measure the benefit that businesses receive from government spending. Two identical businesses that pay the same amount of taxes do not face the same tax burden if one receives larger benefits from government spending than the other. Therefore, a “business tax-to-benefit ratio” is estimated as an alternative way of measuring the business tax burden.

Figure 5 shows the share of state and local government spending by major expenditure category in FY21. Education was the largest expenditure category for state and local governments at 43.1% of total spending. Administrative and insurance was the second largest expenditure category, accounting for 18.0% of spending by state and local governments. This category includes spending on standard government services such as public buildings, libraries and sanitation. It also includes spending on social insurance items such as unemployment insurance and workers’ compensation. Spending on public safety accounted for 13.9% of total expenditures, while spending on social welfare and veterans’ services accounted for 13.5%. The latter category includes functions such as veterans’ services, housing and community development, and welfare, which includes Medicaid spending.

The analysis follows a methodology that was developed by researchers at the Federal Reserve Bank of Chicago to allocate expenditures between businesses and households, as well as estimate the extent to which each group benefits from the different types of expenditures.<sup>7</sup> Certain expenditures, such as health and human services, were assigned entirely to households because that is where the benefit lay. The benefits from other categories, such as highway infrastructure (transportation) and public safety, were allocated evenly between businesses and households. The business tax-to-benefit ratio was calculated by dividing the amount of business taxes in each state by the estimated amount of government expenditures that benefits businesses.

Because spending on education is by far the largest expenditure category, estimates of the business tax-to-benefit ratio are sensitive to how the benefits of education are allocated between businesses and households. Although economic theory suggests that individuals are the primary beneficiaries of education spending, business owners also benefit because an educated workforce generates higher returns to capital by improving the productivity of that capital. A review of the literature finds that a 1% increase in the share of workers with a college degree in a city

**Figure 5. Net state and local government expenditures by category, FY21 (for both households and businesses)**



Source: Ernst & Young LLP estimates of tax-funded revenue are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances and the National Association of State Budget Officers.

increases output by 0.5 to 0.6 percentage points.<sup>8</sup> To the extent that businesses are able to capture some or all of the additional productivity from higher education levels, they are deriving benefits from governmental spending on education.

Higher levels of education can also indirectly impact a business's profitability. For example, a more educated populace may result in lower levels of property crime, which would then lower business costs and increase the return to capital. One study on the social returns of an educated workforce finds that the social benefits, in the form of lower spending on police services and incarceration costs, are equal to between 14% and 26% of the private return to education that accrues to individuals in the form of higher wages.<sup>9</sup>

Given the uncertainty to the degree to which businesses benefit from education spending, and the sensitivity of the business tax-to-benefit ratio to this assumption, the analysis presents a range of estimates for the share of educational expenditures that benefit local businesses. The business tax-to-benefit ratio is estimated assuming that the benefit of education spending to businesses is either 0%, 25% or 50%.<sup>10</sup>

The results are summarized in Table 7 and Figure 6. The national average business tax-to-benefit ratio was 2.55 under the assumption that businesses did not directly benefit from state and local spending on education; businesses paid \$2.55 in taxes to receive \$1.00 in benefits. Wyoming, at 8.5, and New Hampshire, at 7.5, had the highest business tax-to-benefit ratios. Delaware, at 5.4, and New Jersey, at 4.2, were the other states that had ratios above 4.0. Alaska had the lowest ratio, at 1.0, followed by the District of Columbia at 1.3, and Hawaii at 1.4. There were three other states with a ratio under 2.0. The majority of states, 29 in

total, had a business tax-to-benefit ratio in the 2.0 range, while an additional 12 states had a ratio in the 3.0 range. For these 41 states, businesses had to pay between \$2.00 and \$4.00 in taxes in order to receive \$1.00 in benefits from government spending.

The national average business tax-to-benefit ratio was 1.50 under the assumption that businesses received 25% of the benefit from state and local spending on education. Although New Hampshire and Wyoming again had the highest ratios, they were substantially lower under this assumption. New Hampshire had the highest ratio, at 2.6, while Wyoming was next, at 2.5. Maine and Delaware, at 2.2, and New Jersey and Texas, at 2.0, were the only other states that had ratios of 2.0, or higher. Alaska, at 0.8, was the only state with a ratio less than 1.0, which meant that businesses in the state only needed to pay 80 cents to receive a dollar in benefits from government spending. Businesses in the remaining 44 states had to pay at least \$1.00 in taxes in order to receive \$1.00 in benefits from government spending since they all had ratios of at least 1.0.

Maine and New Hampshire, at 1.6, had the highest business tax-to-benefit ratios under the assumption that businesses received 50% of the benefit from government spending on education. Wyoming, at 1.5, had the third highest ratio, while North Dakota, Delaware and Texas all had a ratio of 1.4. There were 12 states with a ratio less than one ranging from Alaska, at 0.6 to multiple states at 0.9. Businesses paid less than \$1.00 in taxes to receive \$1.00 in benefits from government spending in these states. On average across the 50 states and the District of Columbia, businesses paid \$1.07 in taxes to receive \$1.00 in benefits when half of education spending is assumed to benefit businesses.



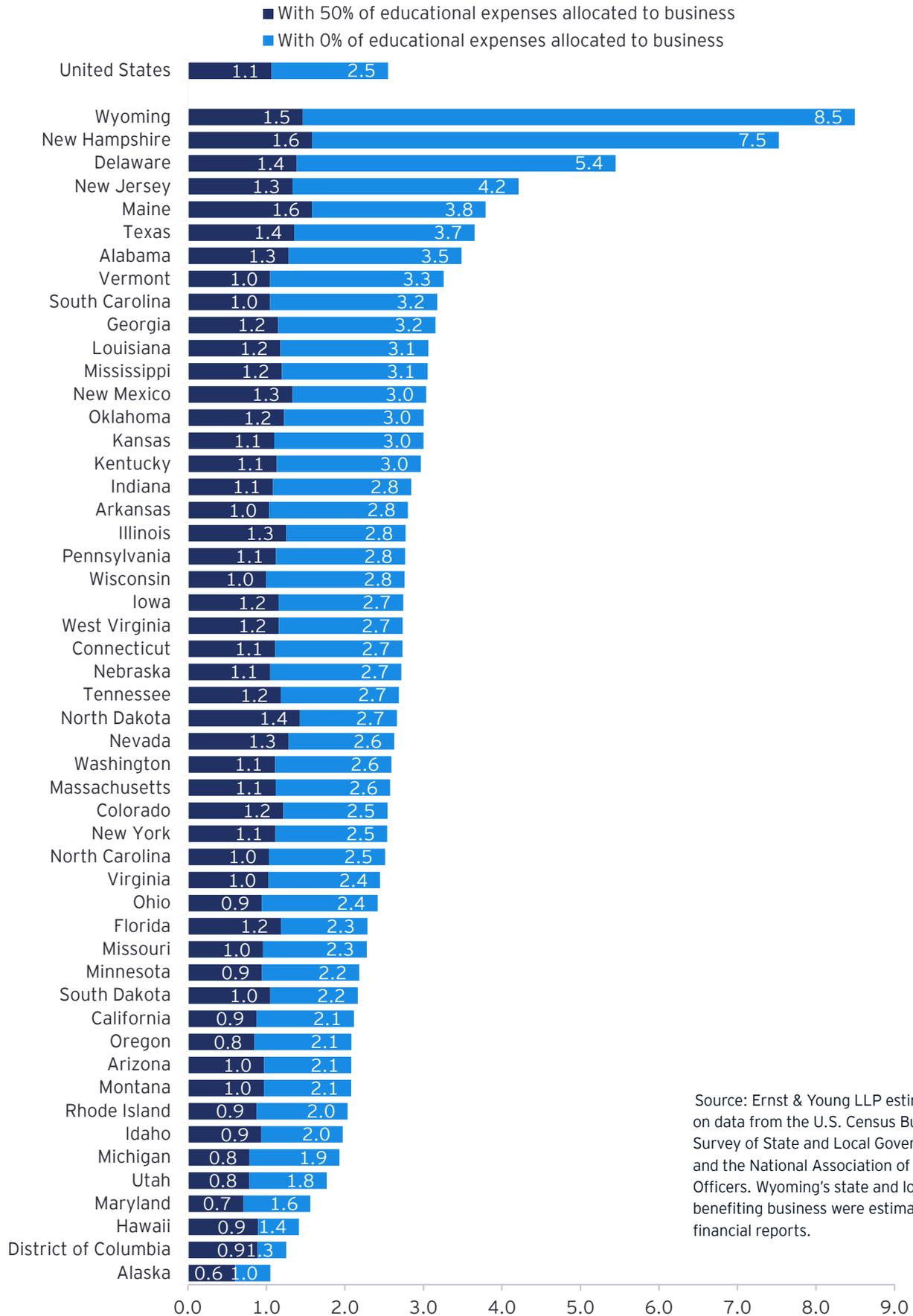
**Table 6. Ratio of business taxes to government expenditures benefiting businesses, FY21 (\$ billions)**

State	State and local business taxes	0% of education spending benefiting business		25% of education spending benefiting business		50% of education spending benefiting business	
		Total state and local spending benefiting business	Tax-benefit ratio	Total state and local spending benefiting business	Tax-benefit ratio	Total state and local spending benefiting business	Tax-benefit ratio
Alabama	\$10.3	\$3.0	3.5	\$5.5	1.9	\$8.1	1.3
Alaska	2.1	2.0	1.0	2.7	0.8	3.4	0.6
Arizona	14.2	6.8	2.1	10.7	1.3	14.7	1.0
Arkansas	6.1	2.2	2.8	4.0	1.5	5.9	1.0
California	143.2	67.7	2.1	115.6	1.2	163.5	0.9
Colorado	17.6	6.9	2.5	10.7	1.6	14.5	1.2
Connecticut	11.7	4.3	2.7	7.4	1.6	10.5	1.1
Delaware	3.6	0.7	5.4	1.6	2.2	2.6	1.4
Florida	52.6	23.0	2.3	33.7	1.6	44.4	1.2
Georgia	21.9	6.9	3.2	13.0	1.7	19.0	1.2
Hawaii	4.5	3.2	1.4	4.1	1.1	5.0	0.9
Idaho	3.8	1.9	2.0	3.0	1.3	4.1	0.9
Illinois	43.0	15.5	2.8	24.9	1.7	34.3	1.3
Indiana	14.8	5.2	2.8	9.4	1.6	13.7	1.1
Iowa	9.0	3.3	2.7	5.6	1.6	7.8	1.2
Kansas	7.6	2.5	3.0	4.7	1.6	6.9	1.1
Kentucky	9.7	3.3	3.0	5.9	1.6	8.6	1.1
Louisiana	10.9	3.5	3.1	6.4	1.7	9.2	1.2
Maine	5.1	1.3	3.8	2.3	2.2	3.2	1.6
Maryland	14.1	9.0	1.6	14.4	1.0	19.8	0.7
Massachusetts	22.0	8.5	2.6	14.1	1.6	19.6	1.1
Michigan	18.1	9.4	1.9	16.2	1.1	23.0	0.8
Minnesota	16.3	7.5	2.2	12.3	1.3	17.2	0.9
Mississippi	7.0	2.3	3.1	4.1	1.7	5.9	1.2
Missouri	11.4	5.0	2.3	8.5	1.3	12.0	1.0
Montana	2.8	1.3	2.1	2.1	1.3	2.9	1.0
Nebraska	6.2	2.3	2.7	4.1	1.5	5.9	1.1
Nevada	8.9	3.4	2.6	5.1	1.7	6.9	1.3
New Hampshire	3.9	0.5	7.5	1.5	2.6	2.5	1.6
New Jersey	36.5	8.7	4.2	18.0	2.0	27.3	1.3
New Mexico	6.7	2.2	3.0	3.6	1.9	5.1	1.3
New York	90.3	35.6	2.5	58.3	1.5	81.0	1.1
North Carolina	19.5	7.7	2.5	13.3	1.5	18.8	1.0
North Dakota	4.2	1.6	2.7	2.3	1.9	3.0	1.4
Ohio	26.0	10.7	2.4	19.2	1.4	27.6	0.9
Oklahoma	9.0	3.0	3.0	5.2	1.7	7.3	1.2
Oregon	11.7	5.6	2.1	9.7	1.2	13.8	0.8
Pennsylvania	36.6	13.2	2.8	22.9	1.6	32.6	1.1
Rhode Island	2.9	1.4	2.0	2.4	1.2	3.4	0.9
South Carolina	10.8	3.4	3.2	6.8	1.6	10.3	1.0
South Dakota	2.6	1.2	2.2	1.9	1.4	2.5	1.0
Tennessee	16.6	6.2	2.7	10.1	1.6	14.0	1.2
Texas	90.9	24.9	3.7	45.9	2.0	67.0	1.4
Utah	7.4	4.2	1.8	6.8	1.1	9.5	0.8
Vermont	2.5	0.8	3.3	1.6	1.6	2.4	1.0
Virginia	22.8	9.3	2.4	15.8	1.4	22.2	1.0
Washington	26.5	10.2	2.6	17.0	1.6	23.8	1.1
West Virginia	4.2	1.5	2.7	2.6	1.6	3.7	1.2
Wisconsin	14.2	5.1	2.8	9.7	1.5	14.2	1.0
Wyoming	2.2	0.3	8.5	0.9	2.5	1.5	1.5
District of Columbia	5.0	4.0	1.3	4.8	1.0	5.6	0.9
<b>United States</b>	<b>\$951.4</b>	<b>\$373.3</b>	<b>2.6</b>	<b>\$632.4</b>	<b>1.5</b>	<b>\$891.6</b>	<b>1.1</b>

Note: Amounts may not sum because of rounding.

Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances and the National Association of State Budget Officers.

**Figure 6. Business taxes per dollar of net government spending that benefits businesses, FY21 (values shown are equal to business taxes divided by government spending that benefits businesses)**



Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances and the National Association of State Budget Officers. Wyoming's state and local expenditures benefiting business were estimated using state financial reports.

A photograph of the Chicago skyline at dusk. The Willis Tower is the most prominent building on the right, illuminated with blue lights. To its left are several other skyscrapers, some with warm yellow lights. In the foreground, a bridge with a red railing spans across a river. The sky is a mix of blue and purple, with some clouds. The overall scene is a vibrant cityscape.

# Conclusion

Businesses paid more than \$951 billion in state and local taxes in FY21, representing a 13.6% increase over the previous year. The strong growth in corporate income taxes and individual income taxes on business income is in part due to the extension of the April 15 filing deadline to July, which shifted revenues from FY20 to FY21. The business share of state and local tax collections was 43.6%, which was in line with historical years. The overall total effective business tax rate was 4.9% in FY21.

# Appendix



## Appendix Table A1. Total state and local taxes, FY17-FY21 (\$ billions)

State and local taxes	2017	2018	2019	2020	2021
Total business taxes	\$742.6	\$784.6	\$829.8	\$837.3	\$951.4
Individual income taxes on nonbusiness income	340.5	379.0	399.3	379.8	484.9
Other taxes	606.8	636.5	667.0	681.8	746.6
<b>Total state and local taxes</b>	<b>\$1,689.8</b>	<b>\$1,800.2</b>	<b>\$1,896.1</b>	<b>\$1,898.8</b>	<b>\$2,182.8</b>

Composition of state and local taxes	2017	2018	2019	2020	2021
Total business taxes	43.9%	43.6%	43.8%	44.1%	43.6%
Individual income taxes on nonbusiness income	20.2%	21.1%	21.1%	20.0%	22.2%
Other taxes	35.9%	35.4%	35.2%	35.9%	34.2%
<b>Total state and local taxes</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Note: Amounts may not sum because of rounding. FY20 tax estimates are revised from the COST FY20 study because of newly released data from the U.S. Census Bureau.

Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

## Appendix Table A2. Composition of state and local business taxes, FY17-FY21 (\$ billions)

Business tax	2017	2018	2019	2020	2021
Property tax on business property	\$285.9	\$300.0	\$317.0	\$329.6	\$368.8
General sales and use tax on inputs	158.6	167.4	176.6	180.4	194.5
Corporate net income	61.8	65.9	76.5	72.4	111.0
Unemployment compensation	40.1	38.1	36.2	34.8	36.1
Business license tax	37.3	38.5	41.1	42.3	45.1
Excise taxes on business inputs	43.7	49.0	51.4	52.5	53.8
Public utility tax	27.2	27.9	27.4	27.6	27.1
Individual income tax	43.4	46.7	48.4	45.0	59.1
Severance taxes	8.9	12.7	15.0	11.6	11.8
Insurance premium tax	21.9	23.5	24.6	25.7	27.4
Other business taxes	13.8	15.0	15.7	15.4	16.5
<b>Total business taxes</b>	<b>\$742.6</b>	<b>\$784.6</b>	<b>\$829.8</b>	<b>\$837.3</b>	<b>\$951.4</b>

Note: Amounts may not sum because of rounding. FY20 tax estimates are revised from the COST FY20 study because of newly released data from the U.S. Census Bureau.

Source: Ernst & Young LLP estimates are based on the most recent data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

**Appendix Table A3. Composition of state and local business taxes by type, FY21**

State	Property tax	Sales tax	Excise tax	Corporate income tax	Unemployment insurance tax	Individual income tax on business income	License and other taxes*	Total business taxes
Alabama	26.3%	24.5%	19.4%	11.0%	5.3%	4.4%	9.1%	100.0%
Alaska	54.8%	–	8.2%	6.1%	6.5%	–	24.4%	100.0%
Arizona	41.0%	30.4%	9.7%	6.4%	3.2%	3.7%	5.5%	100.0%
Arkansas	28.3%	35.0%	13.9%	10.1%	1.2%	5.3%	6.2%	100.0%
California	32.4%	15.5%	9.7%	18.2%	4.1%	11.5%	8.5%	100.0%
Colorado	47.3%	22.4%	9.3%	7.3%	3.3%	7.3%	3.2%	100.0%
Connecticut	29.8%	17.4%	10.9%	22.3%	6.1%	11.3%	2.3%	100.0%
Delaware	12.0%	–	8.3%	9.5%	7.1%	5.7%	57.3%	100.0%
Florida	42.9%	27.4%	15.1%	6.5%	1.2%	–	6.9%	100.0%
Georgia	42.2%	23.8%	12.1%	8.0%	2.1%	7.7%	4.1%	100.0%
Hawaii	32.8%	28.9%	15.6%	4.3%	4.8%	8.2%	5.4%	100.0%
Idaho	35.1%	21.3%	9.1%	9.1%	8.9%	8.9%	7.6%	100.0%
Illinois	42.4%	14.5%	15.5%	13.3%	3.5%	5.6%	5.2%	100.0%
Indiana	40.5%	19.9%	12.7%	9.4%	3.8%	11.4%	2.2%	100.0%
Iowa	42.4%	23.3%	8.4%	8.8%	4.6%	6.4%	6.2%	100.0%
Kansas	45.1%	26.4%	10.4%	9.6%	3.6%	–	4.8%	100.0%
Kentucky	33.3%	20.4%	18.7%	11.3%	4.6%	6.8%	4.9%	100.0%
Louisiana	31.8%	34.3%	13.5%	5.4%	1.7%	5.5%	7.7%	100.0%
Maine	64.8%	13.2%	5.7%	5.6%	2.5%	3.9%	4.4%	100.0%
Maryland	29.2%	16.1%	19.7%	13.1%	3.6%	10.5%	7.7%	100.0%
Massachusetts	38.3%	17.0%	6.2%	16.7%	8.3%	9.1%	4.3%	100.0%
Michigan	40.4%	22.6%	9.9%	8.3%	6.1%	5.9%	6.8%	100.0%
Minnesota	31.6%	20.2%	13.4%	14.9%	4.5%	9.7%	5.6%	100.0%
Mississippi	42.6%	21.6%	11.1%	7.8%	6.1%	4.0%	6.8%	100.0%
Missouri	36.6%	26.6%	10.7%	6.8%	4.3%	7.2%	7.9%	100.0%
Montana	49.9%	–	11.7%	9.7%	4.1%	9.5%	15.1%	100.0%
Nebraska	48.2%	20.0%	5.6%	9.1%	1.4%	9.3%	6.3%	100.0%
Nevada	21.0%	35.8%	15.2%	2.5%	6.7%	–	18.7%	100.0%
New Hampshire	49.7%	–	10.9%	26.0%	1.5%	0.4%	11.4%	100.0%
New Jersey	45.0%	15.2%	7.7%	16.3%	5.7%	5.5%	4.5%	100.0%
New Mexico	17.0%	39.0%	7.7%	2.3%	2.2%	1.4%	30.5%	100.0%
New York	47.4%	15.4%	8.7%	12.8%	2.9%	9.1%	3.7%	100.0%
North Carolina	32.6%	28.7%	11.5%	7.8%	1.8%	7.4%	10.2%	100.0%
North Dakota	22.3%	13.2%	6.7%	3.7%	9.8%	2.3%	42.1%	100.0%
Ohio	35.2%	23.6%	14.9%	8.7%	4.2%	6.4%	7.0%	100.0%
Oklahoma	24.9%	30.5%	10.0%	6.7%	3.8%	8.3%	15.9%	100.0%
Oregon	32.3%	–	7.6%	21.4%	8.0%	9.2%	21.5%	100.0%
Pennsylvania	36.1%	17.1%	11.8%	12.7%	6.9%	6.9%	8.5%	100.0%
Rhode Island	43.9%	16.4%	14.1%	8.8%	7.1%	5.3%	4.4%	100.0%
South Carolina	46.8%	18.4%	10.3%	6.9%	2.4%	4.5%	10.8%	100.0%
South Dakota	38.0%	37.1%	10.5%	2.0%	3.5%	–	8.9%	100.0%
Tennessee	23.6%	32.8%	12.8%	15.5%	1.7%	0.2%	13.4%	100.0%
Texas	47.2%	26.2%	11.1%	5.0%	2.3%	–	8.2%	100.0%
Utah	37.1%	25.9%	12.2%	10.0%	2.3%	8.5%	3.9%	100.0%
Vermont	55.8%	10.7%	14.0%	6.7%	4.2%	5.2%	3.4%	100.0%
Virginia	47.9%	14.5%	15.5%	6.9%	1.6%	5.3%	8.2%	100.0%
Washington	25.9%	28.0%	15.0%	19.0%	4.7%	–	7.4%	100.0%
West Virginia	36.4%	16.8%	17.0%	7.6%	4.3%	5.0%	13.0%	100.0%
Wisconsin	37.1%	20.2%	8.9%	17.7%	4.3%	5.5%	6.2%	100.0%
Wyoming	44.2%	21.4%	4.8%	–	4.3%	–	25.2%	100.0%
District of Columbia	50.6%	10.1%	7.2%	17.4%	3.0%	7.2%	4.6%	100.0%
<b>United States</b>	<b>38.8%</b>	<b>20.4%</b>	<b>11.4%</b>	<b>11.7%</b>	<b>3.8%</b>	<b>6.2%</b>	<b>7.7%</b>	<b>100.0%</b>

\* Gross receipts tax collections for Nevada, Ohio, Oregon, Texas and Washington have been shifted into the "Corporate Income tax" category. "Excise tax" includes insurance premiums and public utilities. "License and other taxes" include death and gift taxes, documentary and stock transfer taxes, severance taxes, and local gross receipts taxes. Certain Ohio localities impose a net profits tax, which is included in the "Corporate income tax" column. The small amount of corporate profits taxes at the local level in Michigan is included in "License and other taxes."

Note: Amounts may not sum because of rounding. "--" indicates the state does not impose a given tax. "0.0%" indicates a value less than 0.05%.

Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

Appendix Table A4. Composition of total state and local taxes by type, FY21

State	Property tax	Sales tax	Excise tax	Corporate income tax	Unemployment insurance tax	Individual income tax	License and other taxes*	Total business taxes
Alabama	15.7%	32.1%	16.0%	5.0%	2.5%	22.5%	6.2%	100.0%
Alaska	54.2%	7.5%	13.1%	3.7%	4.0%	–	17.4%	100.0%
Arizona	28.6%	37.6%	7.2%	2.6%	1.3%	18.9%	3.8%	100.0%
Arkansas	17.9%	38.1%	12.0%	4.1%	0.5%	23.2%	4.2%	100.0%
California	23.7%	15.4%	6.9%	7.1%	1.6%	39.7%	5.6%	100.0%
Colorado	32.6%	24.2%	8.7%	3.3%	1.5%	26.3%	3.4%	100.0%
Connecticut	36.1%	14.6%	8.1%	7.3%	2.0%	28.6%	3.4%	100.0%
Delaware	16.4%	–	8.7%	4.9%	3.7%	31.4%	35.0%	100.0%
Florida	38.0%	34.3%	13.3%	3.4%	0.6%	–	10.4%	100.0%
Georgia	31.6%	23.4%	9.5%	3.5%	0.9%	28.1%	3.0%	100.0%
Hawaii	22.3%	30.4%	9.8%	1.6%	1.8%	28.5%	5.6%	100.0%
Idaho	25.8%	27.0%	7.7%	3.7%	3.6%	26.1%	6.0%	100.0%
Illinois	33.1%	17.3%	14.2%	5.9%	1.5%	22.5%	5.4%	100.0%
Indiana	23.3%	24.5%	12.7%	3.7%	1.5%	31.5%	2.9%	100.0%
Iowa	33.5%	22.5%	9.2%	4.0%	2.1%	22.1%	6.7%	100.0%
Kansas	30.9%	26.9%	7.7%	4.0%	1.5%	25.4%	3.6%	100.0%
Kentucky	21.0%	20.9%	15.6%	5.0%	2.0%	31.6%	3.7%	100.0%
Louisiana	20.5%	40.5%	13.8%	2.6%	0.8%	17.5%	4.3%	100.0%
Maine	44.4%	19.1%	7.3%	2.8%	1.2%	20.7%	4.5%	100.0%
Maryland	26.1%	12.1%	13.4%	4.1%	1.1%	36.9%	6.2%	100.0%
Massachusetts	34.7%	13.0%	5.2%	6.1%	3.0%	32.9%	5.0%	100.0%
Michigan	34.0%	21.5%	9.5%	2.9%	2.1%	24.2%	5.8%	100.0%
Minnesota	25.8%	16.0%	10.6%	5.5%	1.7%	34.5%	5.8%	100.0%
Mississippi	28.1%	30.4%	11.2%	4.0%	3.1%	18.1%	5.0%	100.0%
Missouri	26.8%	27.0%	8.4%	2.7%	1.7%	28.3%	5.1%	100.0%
Montana	37.4%	–	13.2%	4.5%	1.9%	31.8%	11.2%	100.0%
Nebraska	36.5%	21.9%	5.6%	4.4%	0.7%	24.0%	6.9%	100.0%
Nevada	23.6%	40.6%	18.5%	1.3%	3.5%	–	12.6%	100.0%
New Hampshire	63.3%	–	12.2%	12.5%	0.7%	1.8%	9.5%	100.0%
New Jersey	43.3%	15.7%	6.4%	7.3%	2.5%	20.6%	4.2%	100.0%
New Mexico	18.9%	38.8%	8.6%	1.4%	1.3%	10.7%	20.3%	100.0%
New York	33.0%	15.8%	6.6%	5.5%	1.2%	33.1%	4.8%	100.0%
North Carolina	24.3%	25.7%	10.0%	2.9%	0.7%	30.1%	6.3%	100.0%
North Dakota	22.5%	19.5%	9.1%	2.6%	6.9%	7.5%	31.9%	100.0%
Ohio	29.4%	23.2%	12.4%	3.5%	1.7%	25.9%	4.0%	100.0%
Oklahoma	20.6%	31.4%	10.9%	3.3%	1.9%	20.5%	11.5%	100.0%
Oregon	28.4%	–	6.8%	8.7%	3.2%	38.8%	14.2%	100.0%
Pennsylvania	27.4%	17.2%	13.1%	5.4%	2.9%	25.6%	8.4%	100.0%
Rhode Island	39.4%	17.5%	10.8%	3.4%	2.7%	23.0%	3.1%	100.0%
South Carolina	32.4%	22.6%	10.0%	3.1%	1.1%	23.0%	7.7%	100.0%
South Dakota	37.1%	37.8%	12.7%	1.2%	2.1%	–	9.0%	100.0%
Tennessee	22.0%	44.3%	13.5%	8.4%	0.9%	0.6%	10.3%	100.0%
Texas	47.1%	29.7%	12.4%	3.0%	1.4%	–	6.5%	100.0%
Utah	23.3%	26.4%	8.4%	3.8%	0.9%	34.1%	3.1%	100.0%
Vermont	39.2%	10.5%	15.0%	3.3%	2.1%	24.6%	5.3%	100.0%
Virginia	32.0%	14.9%	12.0%	2.9%	0.7%	31.0%	6.4%	100.0%
Washington	28.0%	37.0%	13.0%	9.2%	2.3%	–	10.5%	100.0%
West Virginia	23.5%	18.5%	17.4%	3.7%	2.1%	25.9%	8.9%	100.0%
Wisconsin	32.1%	19.7%	8.5%	7.2%	1.7%	25.8%	5.1%	100.0%
Wyoming	42.3%	25.4%	6.9%	–	3.0%	–	22.4%	100.0%
District of Columbia	32.8%	13.2%	4.9%	9.5%	1.6%	29.0%	9.1%	100.0%
<b>United States</b>	<b>30.8%</b>	<b>21.4%</b>	<b>9.9%</b>	<b>5.1%</b>	<b>1.7%</b>	<b>24.9%</b>	<b>6.3%</b>	<b>100.0%</b>

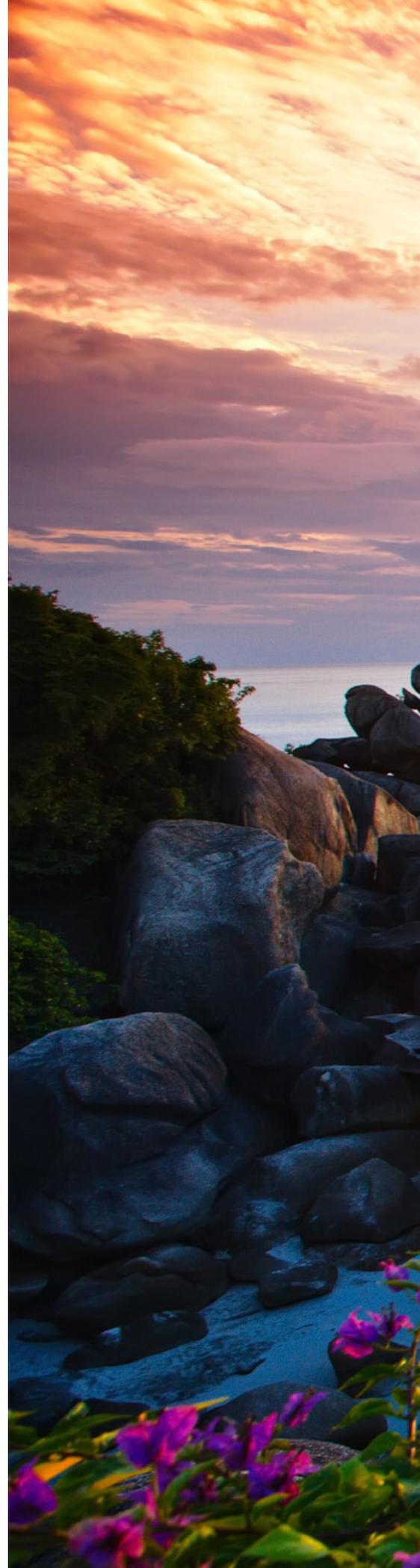
\* Taxes in the "License and other taxes" column include death and gift taxes, documentary and stock transfer taxes, severance taxes, and local gross receipts taxes.

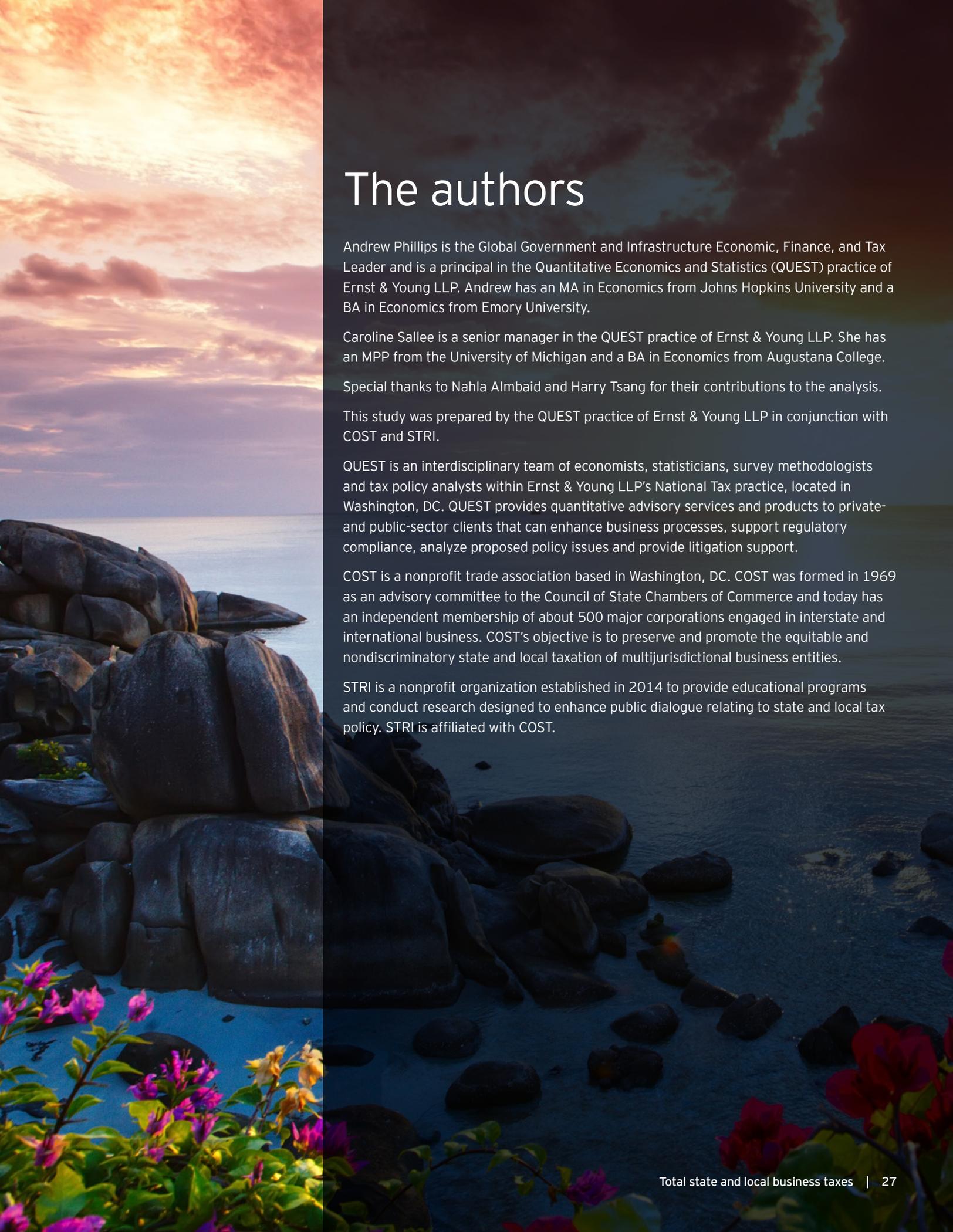
Note: Amounts may not sum because of rounding. "--" indicates the state does not impose a given tax. "0.0%" indicates a value less than 0.05%.

Source: Ernst & Young LLP estimates are based on data from the U.S. Census Bureau Annual Survey of State and Local Government Finances.

# Endnotes

1. The fiscal year runs from July 1 to June 30 for 46 states. States that follow a different fiscal year are New York (ends March 31), Texas (ends August 31), Alabama (ends September 30), and Michigan (ends September 30). The data presented in this study is for each state's fiscal year.
2. The EY sales tax model used to estimate business shares was updated for all 50 states in FY17. As a result, prior year estimates for sales taxes paid by businesses were updated and are shown in the historical appendix tables. See Andrew Phillips and Muath Ibaid, *The Impact of Imposing Sales Taxes on Business Inputs*, prepared for the State Tax Research Institute and Council On State Taxation, Ernst & Young LLP, May 2019.
3. The general methodology used to estimate state and local business taxes is described in detail in the appendix of the EY/COST 50-state business tax study for FY05 (published in March 2006 and available at [cost.org](http://cost.org)). Note that business tax estimates for prior years have been revised from earlier editions of this study because of revisions to Census Bureau data. All references to prior fiscal year estimates of business taxes refer to the updated estimates in this study rather than previously published estimates.
4. Andrew Phillips and Muath Ibaid, *The Impact of Imposing Sales Taxes on Business Inputs*, prepared for the State Tax Research Institute and Council On State Taxation, Ernst & Young LLP, May 2019.
5. The impact of the filing deadline extension on corporate net income tax collections was estimated using several different methods, including assuming counterfactual growth rates for both quarterly tax collections and annual tax collections, as well as imputing counterfactual tax collections for the second quarter of 2020 using historical shares. The estimate of the amount shifted from the second quarter of 2020 (FY20) into the third quarter of 2020 (FY21) ranged from \$8.4 billion to \$19.7 billion, which would explain between half and almost all of the growth in FY21 collections.
6. Robert Cline, Andrew Phillips, Joo Mi Kim and Tom Neubig, "The Economic Incidence of Additional State Business Taxes," *State Tax Notes*, January 11, 2010.
7. The methodology used to allocate state and local government expenditures between businesses and households is described in detail in William H. Oakland and William A. Testa, "State-local business taxation and the benefits principle," *Economic Perspectives*, January/February 1996, as well as Richard H. Mattoon and William A. Testa, "How Closely Do Business Taxes Conform to the Benefits Principle?" Future State Business Tax Reforms: Perspectives from the Business, Government and Academic Communities Conference, Federal Reserve Bank of Chicago (September 17, 2007). Businesses benefit from various government expenditures such as general government "overhead" (e.g., legislative, administrative and judicial services), police and fire protection, and transportation and water and sewer infrastructure.
8. Enrico Moretti, "Workers' Education, Spillovers, and Productivity: Evidence from Plant-Level Production Functions," *American Economic Review*, June 2004.
9. Lance Lochner and Enrico Moretti, "The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports," *American Economic Review*, March 2004.
10. The tax-benefit ratios constructed in this study follow the general methodology of Mattoon and Testa and Oakland and Testa to allocate expenditures between businesses and households. Expenditure data from the U.S. Census Bureau's State and Local Government Finances survey was used to estimate state and local spending for different major categories. Ernst & Young LLP added additional expenditure categories to the analysis. The general principles of Mattoon and Testa and Oakland and Testa were followed in allocating expenditures to these new categories.





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QUEST is an interdisciplinary team of economists, statisticians, survey methodologists and tax policy analysts within Ernst & Young LLP's National Tax practice, located in Washington, DC. QUEST provides quantitative advisory services and products to private- and public-sector clients that can enhance business processes, support regulatory compliance, analyze proposed policy issues and provide litigation support.

COST is a nonprofit trade association based in Washington, DC. COST was formed in 1969 as an advisory committee to the Council of State Chambers of Commerce and today has an independent membership of about 500 major corporations engaged in interstate and international business. COST's objective is to preserve and promote the equitable and nondiscriminatory state and local taxation of multijurisdictional business entities.

STRI is a nonprofit organization established in 2014 to provide educational programs and conduct research designed to enhance public dialogue relating to state and local tax policy. STRI is affiliated with COST.

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