

State-by-state estimates for fiscal year 2009 March 2010





#### The authors

Andrew Phillips is a senior manager in the Quantitative Economics and Statistics group of Ernst & Young LLP. He has extensive experience working on state and local tax issues for both public and private sector clients. He has a B.A. in Economics from Emory University.

Robert Cline is the National Director of State and Local Tax Policy Economics of Ernst & Young LLP. Robert is the former director of tax research for the States of Michigan and Minnesota. He has a Ph.D. in Economics from the University of Michigan.

Thomas Neubig is the National Director of Quantitative Economics and Statistics group of Ernst & Young LLP. He is the former Director and Chief Economist of the U.S. Treasury Department's Office of Tax Analysis. Tom is a former President of the National Tax Association. He has a Ph.D. in Economics from the University of Michigan.

Julia Thayne is an analyst for the Quantitative Economics and Statistics group of Ernst & Young LLP. She has a B.A. in Economics from Emory University.

This study was prepared by the Quantitative Economics and Statistics Practice (QUEST) of Ernst & Young LLP in conjunction with the Council On State Taxation (COST).

QUEST is a group of economists, statisticians, and tax policy researchers within Ernst & Young LLP's National Tax practice, located in Washington, D.C. QUEST provides quantitative advisory services to private and public sector clients that enhance business processes, support regulatory compliance, analyze proposed policy issues and provide litigation support.

COST is a nonprofit trade association based in Washington, D.C. COST was formed in 1969 as an advisory committee to the Council of State Chambers of Commerce and today has an independent membership of nearly 600 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.

### **Executive summary**

This study presents detailed, state-by-state estimates of the state and local taxes paid by businesses for fiscal year 2009, and is the eighth annual report prepared by Ernst & Young LLP in conjunction with the COST. In addition to presenting tax estimates for the most recent fiscal year, the study also examines business taxes over the past business cycle and describes the impact of the recession on state and local business tax collections.

The level of tax collections in FY2009 reflects the impact of the recession on businesses and individuals. Businesses paid US\$590 billion of state and local taxes in FY2009, a decline of 3.5% compared to FY2008 attributable to the recession that started in December 2007 rather than legislated tax reductions. Income-based taxes led the decline: corporate income taxes, which decreased 4.7% in FY2008, fell by 13.0% in FY2009, and individual income taxes on pass-through income declined by 14.1% in FY2009. In many states, the decline in tax collections has left gaping budget deficits and forced legislators to make tough choices between raising taxes and reducing government spending.

This study estimates the current level of total taxes paid by businesses to state and local governments. These include business property taxes, sales and excise taxes paid by businesses on their input purchases, gross receipts taxes, corporate income and franchise taxes, business and corporate license taxes, unemployment insurance taxes, individual income taxes paid by owners of noncorporate (pass-through) businesses and other state and local taxes that are the statutory liability of business taxpayers.

The state-by-state business tax estimates reveal significant variation in the level of state and local taxes paid by business across the states relative to economic activity and government services benefiting businesses.

Key findings of the study include:

- After growing by 3.4% in FY2008, state and local business taxes decreased by 3.5% in FY2009. Total state and local taxes fell by 4.2%.
- Property taxes on business property increased 2.7% this year, totaling US\$215.3 billion in FY2009, which is equivalent to 36.5% of total state and local business taxes. Sales tax on business inputs and capital equipment totaled US\$126.9 billion, or 21.5% of business taxes, which is a decrease of 4.7% from FY2008. The property tax and a significant portion of sales taxes paid by business are taxes on capital invested within a state.
- Although the corporate income tax has been the focus of significant debate in a number of state legislatures during recent years, FY2009 collections were US\$50.6 billion, only 8.6% of total state and local business taxes or 14.2% of state taxes on business.
- Due to the decline in income taxes, indirect taxes (taxes not based on income) represent a larger share of the total state and local tax burden than in recent years.
- The estimated value of public services directly benefiting businesses is, on average, 59% of the total state and local business tax burden. In other words, businesses paid an estimated 1.7 times more in taxes than they received in government services.

## Total state and local business taxes in FY2009

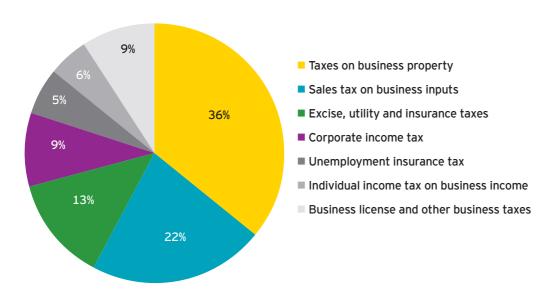
Businesses paid US\$590 billion in total state and local taxes in FY2009, as presented in Table 1.<sup>1</sup> This section describes the business taxes in more detail and highlights the results.

Table 1. Total state and local business taxes, FY2008-FY2009, (US\$billions)

Business tax	2008	2009	% Total Taxes	One-Year Change
Property taxes on business property	\$209.6	\$215.3	36.5%	2.7%
General sales taxes on business inputs	133.2	126.9	21.5	-4.7
Corporate income tax	58.1	50.6	8.6	-13.0
Unemployment insurance	32.5	30.7	5.2	-5.5
Business and corporate license	37.5	38.3	6.5	2.3
Individual income tax on business income	37.6	32.3	5.5	-14.1
Public utility taxes	28.0	28.8	4.9	2.9
Excise taxes	29.2	26.3	4.5	-9.9
Insurance premiums taxes	16.4	15.6	2.6	-5.2
Other business taxes	29.1	25.2	4.3	-13.3
Total business taxes	\$611.1	\$590.0	100.0%	-3.5%

Figures may not appear to sum due to rounding.

Figure 1. Composition of total state and local business taxes, FY2009





The following taxes are included in business tax estimates to the extent each tax is determined to be the statutory liability of businesses and their owners:

- Property taxes on real, personal and utility property owned by business account for the largest share of total state and local business taxes, 36.5% or US\$215.3 billion. Property taxes increased 2.7% in FY2009, after growing 4.8% in FY2008 and 6.4% in FY2007. Property taxes as a share of total state and local business taxes increased by 2.2% points in FY2009.
- Sales and use taxes paid by businesses on purchases of inputs, including capital equipment, totaled US\$126.9 billion. The business sales tax represents 21.5% of all state and local business taxes. Sales and use taxes collected on sales to final consumers are not included; only the taxes paid on businesses' operating inputs and capital equipment purchases are included in the total business tax estimates.<sup>2</sup>
- Corporate income taxes were U\$\$50.6 billion in FY2009, accounting for 8.6% of total state and local business taxes. The 13.0% decline in corporate income tax receipts in FY2009 follows a decrease of 4.7% in FY2008, reflecting the cumulative impact of the recession on business profits and corporate income taxes. Corporate income taxes' share of total state and local business taxes decreased by almost one percentage point in FY2009.
- Employer contributions to unemployment insurance (unemployment taxes) were US\$30.7 billion in FY2009. As described in more detail below, unemployment taxes typically rise three to four years after a recession begins. In FY2009, despite rising unemployment and dwindling state unemployment insurance trust fund balances, state unemployment insurance taxes actually declined from FY2008 levels.
- Excise taxes imposed on business purchases accounted for U\$\$26.3 billion in FY2009. Although businesses are generally responsible for collecting and remitting all excise taxes, the estimates only include taxes paid on purchases by businesses. Excise taxes attributed to business include a portion of motor fuel taxes and other selected excise taxes, such as hotel and rental car taxes. Motor fuel taxes increased 1.0% in FY2009, and other selective sales taxes decreased 18.9%. Taxes on tobacco, alcoholic beverages, amusements and pari-mutuels are allocated to households.

- ► Taxes on insurance premiums and public utility gross receipts totaled US\$44.4 billion in FY2009. These taxes are generally based on business gross receipts, and because they are often levied in lieu of property or corporate income taxes, they are allocated solely to business.
- Business and corporate license and other business taxes totaled U\$\$63.5 billion in FY2009. Of this total, U\$\$19.1 billion were general business and occupation license taxes, and U\$\$6.5 billion were motor vehicle taxes. License taxes and other business taxes decreased by 4.5% in FY2009, but their share of total state and local business taxes stayed relatively constant. State severance taxes, which are included in this category, fell by 45% in Alaska and 27% in Texas, contributing to the decline in license taxes and other business taxes receipts in FY2009.
- Individual income taxes paid by owners of pass-through entities (e.g., partnerships, sole proprietorships and S-corporations) totaled an estimated US\$32.3 billion in FY2009. Individual income taxes on pass-through business income were nearly twothirds as large as corporate income taxes and represent 5.5% of total state and local business taxes.
- Business entity taxes based on a "pure" or modified gross receipts tax base have been adopted recently by three states, Ohio, Michigan and Texas. Two other states, Washington and New Hampshire, have levied gross receipts or value-added taxes for many years and an increasing number of states levy minimum taxes based on gross receipts. As shown in Table 2, these taxes are classified as either corporate income or corporate license taxes in this study consistent with the Census Bureau classification. If each of these taxes were combined into a single gross-receipts-based business tax category, the collections would total US\$10.1 billion, 20% as large as reported corporate income taxes. Not shown in the table are minimum taxes based on gross receipts levied in several states as part of their corporate income tax system. For taxpayers subject to these taxes, the minimum taxes function as gross receipts taxes but are generally included in the corporate income tax statistics.

Table 2. Gross receipts and value-added based business entity taxes<sup>3</sup> (US\$billions)

Business tax	Census bureau tax classification	FY2009
Michigan business tax	Corporate income tax	\$ 1.9
New Hampshire business enterprise tax	Corporate income tax	0.2
Ohio commercial activity tax	Corporate income tax	1.2
Texas margin tax	Corporate license tax	4.3
Washington Business & Occupation Tax	Sales tax	2.7
Total gross receipts and value-added taxes		\$10.1

Figures may not appear to sum due to rounding. Source: U.S. Census Bureau and Ernst & Young LLP calculations.

# State vs. local business taxes in FY2009

Negative growth rates in state business taxes and only slightly positive growth rates in local business taxes provide insight into differences in the recession's impacts on state business taxes and local business taxes. Tables 3-A and 3-B provide the dollar amounts, percentage distributions and growth rates in FY2009 for total business taxes at the state and local levels of government.

Total state and local business taxes decreased by U\$\$21.2 billion in FY2009 – the first time annual business tax collections have dropped in this decade. As shown in Table 5-A, state business taxes decreased by 8.2%, or U\$\$27.7 billion, in FY2009, while local business taxes increased by 2.4% (Table 5-B).

At the state level, declines in corporate income taxes, general sales taxes on business inputs, unemployment insurance taxes, excise taxes, and individual income taxes on business income were partially offset by increases in public utility and state property taxes. State business taxes grew by US\$26.8 billion, or 1.9% annually, from

FY2005 to FY2009. General sales tax on business inputs accounted for 28.2% of this growth, but, in FY2009, this tax fell 4.6%.

At the local level, the increase in the local business property tax accounted for 85.4% of the overall growth in local business taxes in FY2009. However, the 2.8% growth rate of the local business property tax in FY2009 was lower than the 4.9% growth in business property taxes during FY2008.

Table 3-A and 3-B illustrate the significant difference in the composition of state and local business taxes. Table 3-A shows the percentage distribution of state taxes by tax type; Table 3-B shows the distribution for local business taxes. While sales taxes on business inputs compose a large share of total business taxes at the state level (31.9%), they account for a relatively small share of local taxes (10.7%). Property taxes are the largest local business tax (74.1% of total local business taxes), but a very minor share of state taxes (2.7%).



Table 3A. State business taxes, FY2009 (US\$billions)

Business Tax	State Business Taxes 2008	State Business Taxes 2009	% Total State Business Taxes	One-year growth State Business Taxes
General sales taxes on business inputs	\$104.1	\$99.3	31.9%	-4.6%
Corporate income tax	51.0	44.1	14.2	-13.5
Unemployment insurance	32.5	30.7	9.9	-5.5
Individual income tax on business income	37.6	32.3	10.4	-14.1
Corporate and business license	26.2	25.9	8.3	-1.2
Excise taxes	23.9	20.2	6.5	-15.7
Insurance premiums taxes	15.8	14.9	4.8	-5.6
Public utility taxes	14.7	14.8	4.7	0.3
Property taxes on business property	8.2	8.3	2.7	1.4
Other business taxes	25.1	21.0	6.7	-16.4
Total business taxes	\$339.2	\$311.5	100.0%	-8.2%

Figures may not appear to sum due to rounding. Source: Ernst & Young LLP calculations.

Table 3B. Local business taxes, FY2009 (US\$billions)

Business tax	Local business taxes 2008	Local business taxes 2009	% total local business taxes	One-year growth local business taxes
Property taxes on business property	\$201.4	\$207.0	74.1%	2.8%
General sales taxes on business inputs	29.1	27.5	10.7	-5.3
Public utility taxes	13.2	14.0	4.9	5.9
Excise taxes	5.2	6.1	1.9	16.7
Other business taxes	23.0	23.8	8.5	3.6
Total business taxes	\$271.9	\$278.4	100.0%	2.4%

Figures may not appear to sum due to rounding. Source: Ernst & Young LLP calculations.

# An alternative measure of business taxation

This study provides estimates of the taxes paid by businesses in each state, an important first step in any evaluation of short-run business tax changes or longer-run tax reform. To enable comparisons across states, the study also expresses business taxes as an effective tax rate on private sector economic activity (taxes as a share of gross state product).

This comparative measure was developed to answer questions from legislators asking, "Are businesses paying their fair share of taxes?" Increasing economic competition among states and around the globe has transformed the initial question into a more fundamental query: "What is the basis or rationale for business taxation at the state or local level?" Another recent analysis by Ernst & Young LLP professionals has shown that businesses do not ultimately bear the burden of business taxes.<sup>4</sup> The analysis shows the way in which taxes that are the legal liability of business are ultimately passed forward to individuals through higher prices or backward to labor (employees) and owners of capital through lower income. By analyzing the economic incidence of taxes, the product of the shifting of taxes to consumers, labor and capital, it becomes clear that taxes levied on business are ultimately borne by consumers, employees, and owners of capital. What, then, is the rationale for taxing businesses?

The basic rationale for business taxes, recognizing that the economic burden of business taxes are ultimately borne by consumers or owners of factors of production (including workers), is to pay for government services that directly benefit businesses. This section provides a comparison of business taxes to these benefits in each state.

If state and local business taxes were equal to the value of the benefits business received from state and local public services, they could be considered a payment for services and taxes would not influence business location decisions or impact competitiveness. However, if state and local business taxes exceed the value of the benefits received from government services, the difference

represents an excess cost to business that will reduce profitability in the absence of shifting the tax through higher prices or lower payments to labor. When such excess costs exist, they can affect a company's choice of locations.

To estimate these excess costs, the estimates begin with state-by-state estimates of state and local spending that directly benefits business, which were developed by economists at the Federal Reserve Bank of Chicago with an adjustment to the education spending component to reflect the uncertainty about who benefits from education expenditures, business or households. Due to the large expenditures for education in every state, the ratio of business taxes to government expenditures for services benefiting business is sensitive to assumptions about who benefits from public spending for education. The estimates presented in this study present a range of estimates, assuming that 0%, 25% or 50% of education expenditures directly benefit business.

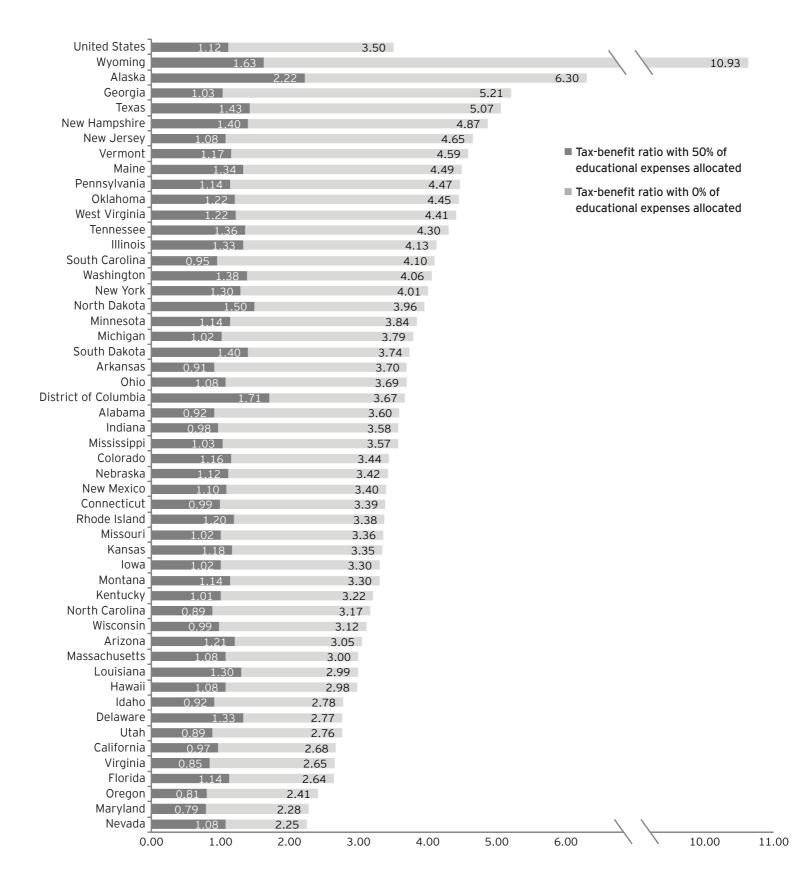
Table 4 summarizes the results of these three assumptions for FY2007, the most recent year for which detailed state and local expenditure data are available and indicates how greatly the benefit ratios differ when education expenditures are partially included or excluded from the benefits calculation. Figure 2 shows the sensitivity of the ratio to varying assumptions about the extent to which businesses benefit from education spending. For example, if one assumes that education spending does not directly benefit business, the ratio of business taxes paid to government services received by business is 3.5, indicating that businesses are taxed US\$3.5 for each dollar of government services they receive. This ratio drops to 1.7 when one-quarter of education spending is assumed to benefit business and 1.1 when half of education spending is assumed to benefit business. In nearly every state, the business tax burden exceeds the value of government services that directly benefit business, regardless of the assumption made about education spending.

Table 4. Ratio of business taxes to government expenditures benefiting businesses, FY2007 (US\$Billions)

State         SS. Journal Dunners (Schol)         Tax benefitting benefitting benefitting benefitting benefitting business         Tax benefitting benefitting business         Tax b			0% of education benefiting bu		25% of education benefiting bu	n spending usiness	50% of spending benefiting business		
Alaska         4.2         0.7         6.3         1.3         3.3         1.9           Arkona         11.1         3.7         3.1         6.4         1.7         9.2           Arkansas         3.5         0.9         3.7         2.4         1.5         3.8           California         6.84         25.6         2.7         48.2         1.4         70.8           Connecticut         6.8         2.0         3.4         4.4         1.5         6.8           Connecticut         6.8         2.0         3.4         4.4         1.5         6.8           Ceorgia         13.4         2.6         5.2         7.8         1.7         13.0           Hawaii         2.5         0.8         3.0         1.6         1.6         2.3           Idaho         1.8         0.6         2.8         1.3         1.4         1.9           Illinois         1.8         0.6         2.8         1.3         1.4         1.9           Illinois         1.8         1.5         8.4         1.5         8.4           Iowa         4.8         1.5         3.3         3.1         1.7         4.5	State	business	benefiting		benefiting		Total S&L spending benefiting business	Tax-benefit Ratio	
Arizona 11.1 3.7 3.1 6.4 1.7 9.2 Arixansa 3.5 0.9 3.7 2.4 1.5 3.8 Colorado 7.9 2.3 3.4 4.5 1.7 6.8 Colorado 7.9 2.3 3.4 4.5 1.7 6.8 Colorado 7.9 2.3 3.4 4.5 1.7 6.8 Colorado 1.9 0.7 2.8 1.0 1.8 1.5 6.8 Delaware 1.9 0.7 2.8 1.0 1.8 1.4 1.5 6.8 Delaware 1.9 0.7 2.8 1.0 1.8 1.4 1.5 6.8 Georgia 35.4 13.4 2.6 5.2 7.8 1.7 13.0 Hawaii 2.5 0.8 3.0 1.6 1.6 2.3 Hawaii 2.5 0.8 3.0 1.6 1.6 2.3 Hawaii 2.5 0.8 3.0 1.6 1.6 2.3 Hawaii 2.5 0.8 3.0 1.6 1.6 1.6 2.3 Hillonds 3.8 1.5 3.3 3.1 1.4 1.9 Hillonds 2.6 1 6.3 4.1 13.0 2.0 19.6 Indiana 8.2 2.3 3.6 5.4 1.5 8.4 Howa 4.8 1.5 3.3 3.1 1.6 4.7 Kansas 5.3 1.6 3.3 3.1 1.6 4.7 Kansas 5.3 1.6 3.3 3.1 1.7 4.5 Kansas 1.3 1.4 1.9 3.2 4.0 1.5 6.0 Louislana 10.3 3.4 3.0 5.7 1.8 7.9 Maine 2.5 0.6 4.5 1.2 2.1 1.9 Maine 3.0 3.3 3.1 1.7 4.5 Mascabustis 12.2 4.1 3.0 7.7 1.6 1.14 Massachustis 12.2 4.1 3.0 7.7 1.6 1.14 Massachustis 12.2 4.1 3.0 7.7 1.6 1.14 Massachustis 12.2 4.1 3.0 7.7 1.6 1.14 Michigan 16.2 4.3 3.8 5.3 1.8 8.2 Minesouri 7.7 2.3 3.4 4.9 1.6 7.6 Montana 1.6 0.5 3.3 1.0 1.7 1.4 Notebrasia 3.3 1.0 3.1 1.7 1.4 Notebrasia 3.3 1.0 3.4 1.9 1.7 2.9 Nowada 5.3 2.4 2.3 3.6 1.5 4.9 Now Hampshire 2.7 0.5 4.9 1.2 2.2 1.9 Nowada 5.3 2.4 2.3 3.6 1.5 4.9 Now Horlorol 1.8 5.1 3.7 11.2 1.7 1.3 Now Modico 4.0 1.2 3.4 2.4 2.3 3.6 1.5 4.9 Now Horlorol 1.8 5.1 3.7 11.2 1.7 1.3 Now Modico 4.0 1.2 3.4 2.4 3.8 3.1 1.0 1.7 1.4 1.4 North Gardina 5.8 1.3 4.5 3.0 1.9 1.7 2.9 1.4 Now Modico 4.0 1.2 3.4 2.3 3.6 1.5 1.5 4.9 Now Horlorol 1.8 5.1 3.7 11.2 1.7 1.7 3.7 Now Modico 4.0 1.2 3.4 2.3 3.6 1.5 1.5 4.9 Now Horlorol 1.8 5.1 3.7 11.2 1.7 1.7 3.7 Now Modico 4.0 1.2 3.4 2.4 2.3 3.6 1.5 1.5 4.9 North Gardina 5.8 1.3 4.5 3.0 1.9 4.8 North Gardina 5.8 1.3 4.5 3.0 1	Alabama	\$6.0	\$1.7	3.6	\$4.1	1.5	\$6.5	0.9	
Arkansas 3.5 0.9 3.7 2.4 1.5 3.8 California 68.4 25.6 2.7 48.2 1.4 70.8 Colorado 7.9 2.3 3.4 4.5 1.7 6.8 Colorado 7.9 2.3 3.4 4.5 1.7 6.8 Connecticut 6.8 2.0 3.4 4.4 1.5 6.8 1.4 Connecticut 6.8 1.4 1.4 1.5 1.8 1.4 1.4 1.9 Connecticut 6.8 3.4 1.3 1.4 1.9 Connecticut 6.8 3.0 1.6 1.6 2.3 1.4 1.9 Connecticut 6.8 3.4 1.1 1.3 0.2 0.1 1.6 1.6 2.3 1.4 1.9 Connecticut 6.8 1.8 1.5 3.3 3.1 1.4 1.9 Connecticut 6.8 1.5 3.3 3.1 1.6 1.6 4.7 1.9 Connecticut 6.8 1.5 3.3 3.1 1.6 1.6 4.7 1.5 1.4 1.9 Connecticut 6.8 1.5 3.3 3.1 1.6 1.6 4.7 1.5 1.4 1.9 Connecticut 6.8 1.5 3.3 3.1 1.6 1.6 4.7 1.5 1.4 1.9 Connecticut 6.8 1.5 3.3 3.1 1.7 4.5 1.5 1.4 1.9 Connecticut 6.8 1.5 1.5 1.5 1.4 1.5 1.4 1.9 Connecticut 6.8 1.5 1.5 1.4 1.5 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.5 1.4	Alaska	4.2	0.7	6.3	1.3	3.3	1.9	2.2	
California         68.4         25.6         2.7         48.2         1.4         70.8           Colorado         7.9         2.3         3.4         4.5         1.7         6.8           Colorado         7.9         2.3         3.4         4.5         1.7         6.8           Connecticut         6.8         2.0         3.4         4.4         1.5         6.8           Delaware         1.9         0.7         2.8         1.0         1.8         1.4           Florida         35.4         13.4         2.6         22.2         1.6         31.2           Georgia         13.4         2.6         5.2         7.8         1.7         13.0           Idaha         1.8         0.6         2.8         1.3         1.4         1.9           Illinois         26.1         6.3         4.1         13.0         2.0         19.6           Illinois         26.1         6.3         4.1         13.0         2.0         19.6           Illinois         26.1         6.3         3.3         3.1         1.6         4.7           Illinois         26.1         1.9         3.2         4.0         1.5	Arizona	11.1	3.7	3.1	6.4	1.7	9.2	1.2	
Cotoraclo         7.9         2.3         3.4         4.5         1.7         6.8           Connecticut         6.8         2.0         3.4         4.4         1.5         6.8           Delaware         1.9         0.7         2.8         1.0         1.8         1.4           Florida         35.4         13.4         2.6         22.3         1.6         31.2           Georgia         13.4         2.6         52.2         7.8         1.7         13.0           Hawaii         2.5         0.8         3.0         1.6         1.6         2.3           Idaho         1.8         0.6         2.8         1.3         1.4         1.9           Illinois         2.6.1         6.3         4.1         13.0         2.0         19.6           Indiana         8.2         2.3         3.6         5.4         1.5         8.4           Iowa         4.8         1.5         3.3         3.1         1.6         4.7           Kansas         5.3         1.6         3.3         3.1         1.7         4.5           Kentucky         6.1         1.9         3.2         4.0         1.5         6.0	Arkansas	3.5	0.9	3.7	2.4	1.5	3.8	0.9	
Connecticut         6.8         2.0         3.4         4.4         1.5         6.8           Delaware         1.9         0.7         2.8         1.0         1.8         1.4           Ficrida         35.4         13.4         2.6         22.2         1.6         31.2           Georgia         13.4         2.6         5.2         7.8         1.7         13.0           Hawaii         2.5         0.8         3.0         1.6         1.6         2.3           Idaho         1.8         0.6         2.8         1.3         1.4         1.9           Illinois         26.1         6.3         4.1         13.0         2.0         19.6           Indiana         8.2         2.3         3.6         5.4         1.5         8.4           Iowa         4.8         1.5         3.3         3.1         1.7         4.5           Kentucky         6.1         1.9         3.2         4.0         1.5         6.0           Louisiana         10.3         3.4         3.0         5.7         1.8         7.7           Maryand         8.0         3.5         2.3         6.8         1.2         10.1	California	68.4	25.6	2.7	48.2	1.4	70.8	1.0	
Delaware         1.9         0.7         2.8         1.0         1.8         1.4           Florida         35.4         13.4         2.6         22.3         1.6         31.2           Georgia         13.4         2.6         5.2         7.8         1.7         13.0           Hawaii         2.5         0.8         3.0         1.6         1.6         2.3           Idiano         1.8         0.6         2.8         1.3         1.4         1.9           Illinois         26.1         6.3         4.1         13.0         2.0         19.6           Ilolana         8.2         2.3         3.6         5.4         1.5         8.8           Iowa         4.8         1.5         3.3         3.1         1.6         4.7           Kansas         5.3         1.6         3.3         3.1         1.7         4.5           Kentucky         6.1         1.9         3.2         4.0         1.5         6.0           Louisiana         10.3         3.4         3.0         5.7         1.8         7.9           Maryland         8.0         3.5         2.3         6.8         1.2         10.1	Colorado	7.9	2.3	3.4	4.5	1.7	6.8	1.2	
Florida	Connecticut	6.8	2.0	3.4	4.4	1.5	6.8	1.0	
Georgia         13.4         2.6         5.2         7.8         1.7         13.0           Hawaii         2.5         0.8         3.0         1.6         1.6         2.3           Idaho         1.8         0.6         2.8         1.3         1.4         1.9           Illinois         26.1         6.3         4.1         13.0         2.0         19.6           Indiana         8.2         2.3         3.6         5.4         1.5         8.4           Iowa         4.8         1.5         3.3         3.1         1.6         4.7           Kansas         5.3         1.6         3.3         3.1         1.7         4.5           Kentucky         6.1         1.9         3.2         4.0         1.5         6.0           Louisiana         10.3         3.4         3.0         5.7         1.8         7.9           Maine         2.5         0.6         4.5         1.2         2.1         1.9           Maryland         8.0         3.5         2.3         6.8         1.2         1.1         1.9           Maryland         8.0         3.5         2.3         6.5         1.2 <th< td=""><td>Delaware</td><td>1.9</td><td>0.7</td><td>2.8</td><td>1.0</td><td>1.8</td><td>1.4</td><td>1.3</td></th<>	Delaware	1.9	0.7	2.8	1.0	1.8	1.4	1.3	
Georgia         13.4         2.6         5.2         7.8         1.7         13.0           Hawaii         2.5         0.8         3.0         1.6         1.6         2.3           Idlaho         1.8         0.6         2.8         1.3         1.4         1.9           Illinois         26.1         6.3         4.1         13.0         2.0         19.6           Indianal         8.2         2.3         3.6         5.4         1.5         8.4           Iowa         4.8         1.5         3.3         3.1         1.7         4.5           Kansas         5.3         1.6         3.3         3.1         1.7         4.5           Kentucky         6.1         1.9         3.2         4.0         1.5         6.0           Louisiana         10.3         3.4         3.0         5.7         1.8         7.9           Maine         2.5         0.6         4.5         1.2         2.1         1.9           Maryland         8.0         3.5         2.3         6.8         1.2         1.1           Massatusetts         12.2         4.1         3.0         7.7         1.6         11.4	Florida	35.4	13.4	2.6	22.3	1.6	31.2	1.1	
Hawaii	Georgia						13.0	1.0	
Idaho         1.8         0.6         2.8         1.3         1.4         1.9           Illinois         26.1         6.3         4.1         13.0         2.0         19.6           Indiciana         8.2         2.3         3.6         5.4         1.5         8.4           Iowa         4.8         1.5         3.3         3.1         1.6         4.7           Kansas         5.3         1.6         3.3         3.1         1.7         4.5           Kentucky         6.1         1.9         3.2         4.0         1.5         6.0           Louisiana         10.3         3.4         3.0         5.7         1.8         7.9           Maine         2.5         0.6         4.5         1.2         2.1         1.9           Maryand         8.0         3.5         2.3         6.8         1.2         1.1         1.9           Maryand         8.0         3.5         2.3         6.8         1.2         2.1         1.9           Maryand         8.0         3.5         2.3         6.8         1.2         2.1         1.9           Maryand         8.0         2.2         4.1								1.1	
Illinois   26.1   6.3   4.1   13.0   2.0   19.6   Indiana   8.2   2.3   3.6   5.4   1.5   8.4   4.7   4.8   4.8   1.5   3.3   3.1   1.6   4.7   4.5								0.9	
Indiana         8.2         2.3         3.6         5.4         1.5         8.4           lowa         4.8         1.5         3.3         3.1         1.6         4.7           Kansas         5.3         1.6         3.3         3.1         1.7         4.5           Kentucky         6.1         1.9         3.2         4.0         1.5         6.0           Louisiana         10.3         3.4         3.0         5.7         1.8         7.9           Maryland         8.0         3.5         2.3         6.8         1.2         10.1           Massachusetts         12.2         4.1         3.0         7.7         1.6         11.4           Mississpin         6.1         1.2         3.3         10.0         1.6         15.8           Mississippi         4.1         1.2         3.6         2.6         1.6         4.0           Mississippi         4.1         1.2         3.6         2.6         1.6         4.0           Missippi         4.1         1.2         3.6         2.6         1.6         4.0           Missippi         4.1         1.2         3.6         2.6         1.6 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1.3</td></t<>								1.3	
lowa         4,8         1,5         3,3         3,1         1,6         4,7           Kansas         5,3         1,6         3,3         3,1         1,7         4,5           Kentucky         6,1         1,9         3,2         4,0         1,5         6,0           Louisiana         10,3         3,4         3,0         5,7         1,8         7,9           Maine         2,5         0,6         4,5         1,2         2,1         1,9           Maryland         8,0         3,5         2,3         6,8         1,2         10,1           Maryland         8,0         3,5         2,3         6,8         1,2         10,1           Maryland         1,6         4,1         3,0         7,7         1,6         11,4           Michan         16,2         4,3         3,8         10,0         1,6         15,8           Minssori         7,7         2,3         3,4         4,9         1,6         4,0           Missori         7,7         2,3         3,4         4,9         1,6         4,6           Missori         7,7         2,3         3,4         4,9         1,6         4,6 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1.0</td>								1.0	
Kansas         5.3         1.6         3.3         3.1         1.7         4.5           Kentucky         6.1         1.9         3.2         4.0         1.5         6.0           Louislana         10.3         3.4         3.0         5.7         1.8         7.9           Maine         2.5         0.6         4.5         1.2         2.1         1.9           Maryland         8.0         3.5         2.3         6.8         1.2         10.1           Massachusetts         12.2         4.1         3.0         7.7         1.6         11.4           Michigan         16.2         4.3         3.8         10.0         1.6         15.8           Minssistipi         4.1         1.2         3.6         2.6         1.6         4.0           Missistipi         4.1         1.2         3.6         2.6         1.6         4.0           Missistipi         4.1         1.2         3.6         2.6         1.6         4.0           Missistipi         4.1         1.2         3.4         4.9         1.7         2.9           Mevada         3.3         1.0         3.4         1.9         1.7								1.0	
Kentucky         6.1         1.9         3.2         4.0         1.5         6.0           Louislana         10.3         3.4         3.0         5.7         1.8         7.9           Manyland         2.5         0.6         4.5         1.2         2.1         1.9           Maryland         8.0         3.5         2.3         6.8         1.2         10.1           Massachusetts         12.2         4.1         3.0         7.7         1.6         11.4           Michigan         16.2         4.3         3.8         10.0         1.6         15.8           Minnesota         9.4         2.4         3.8         5.3         1.8         8.2           Missouri         7.7         2.3         3.4         4.9         1.6         4.0           Missouri         7.7         2.3         3.4         4.9         1.6         7.6           Montana         1.6         0.5         3.3         1.0         1.7         1.4           Nebraska         3.3         1.0         3.4         1.9         1.7         2.9           New Hampshire         2.7         0.5         4.9         1.2         2.2								1.2	
Louisiana         10.3         3.4         3.0         5.7         1.8         7.9           Maine         2.5         0.6         4.5         1.2         2.1         1.9           Maryland         8.0         3.5         2.3         6.8         1.2         10.1           Massachusetts         12.2         4.1         3.0         7.7         1.6         11.4           Michigan         16.2         4.3         3.8         10.0         1.6         15.8           Minnesota         9.4         2.4         3.8         5.3         1.8         8.2           Mississippi         4.1         1.2         3.6         2.6         1.6         4.0           Missouri         7.7         2.3         3.4         4.9         1.6         4.0           Mortana         1.6         0.5         3.3         1.0         1.7         1.4           Nebraska         3.3         2.4         2.3         3.6         1.5         4.9           Nevada         5.3         2.4         2.3         3.6         1.5         4.9           New Jersey         18.6         4.0         4.7         10.6         1.8								1.0	
Maine         2.5         0.6         4.5         1.2         2.1         1.9           Maryland         8.0         3.5         2.3         6.8         1.2         10.1           Massachusetts         12.2         4.3         3.8         10.0         1.6         11.8           Michigan         16.2         4.3         3.8         10.0         1.6         15.8           Minnesota         9.4         2.4         3.8         5.3         1.8         8.2           Missouri         7.7         2.3         3.4         4.9         1.6         7.6           Montana         1.6         0.5         3.3         1.0         1.7         1.4           Newtada         3.3         1.0         3.4         1.9         1.7         2.9           New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Mexico         4.0         1.2         3.4         2.4         1.7         3.7           New York         54.3         13.5         4.0         27.7         2.0         41.8           North Dakota         1.6         0.4         4.0         0.7         2.2	,							1.3	
Maryland         8.0         3.5         2.3         6.8         1.2         10.1           Massachusetts         12.2         4.1         3.0         7.7         1.6         11.4           Minnesota         16.2         4.3         3.8         10.0         1.6         15.8           Minnesota         9.4         2.4         3.8         5.3         1.8         8.2           Missori         7.7         2.3         3.4         4.9         1.6         4.0           Missori         7.7         2.3         3.4         4.9         1.6         7.6           Montana         1.6         0.5         3.3         1.0         1.7         1.4           Nebraska         3.3         1.0         3.4         1.9         1.7         2.9           Nevada         5.3         2.4         2.3         3.6         1.5         4.9           New Herson         1.6         4.0         4.7         10.6         1.8         17.2         1.9           New Jersey         1.8.6         4.0         4.7         10.6         1.8         17.2         1.9           New Jersey         1.8.6         4.0         4.7									
Massachusetts         12.2         4.1         3.0         7.7         1.6         11.4           Michigan         16.2         4.3         3.8         10.0         1.6         15.8           Minnesota         9.4         2.4         3.8         5.3         1.8         8.2           Mississippi         4.1         1.2         3.6         2.6         1.6         4.0           Mississippi         4.1         1.2         3.6         2.6         1.6         4.0           Montana         1.6         0.5         3.3         1.0         1.7         1.4           Nebraska         3.3         1.0         3.4         1.9         1.7         2.9           New Adada         5.3         2.4         2.3         3.6         1.5         4.9           New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Mexico         4.0         1.2         3.4         2.4         1.7         3.7           New York         54.3         3.5         4.0         2.7         2.0         41.8           North Carolina         11.6         3.7         3.2         8.3 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1.3</td></td<>								1.3	
Michigan         16.2         4.3         3.8         10.0         1.6         15.8           Minnesota         9.4         2.4         3.8         5.3         1.8         8.2           Mississippi         4.1         1.2         3.6         2.6         1.6         4.0           Missouri         7.7         2.3         3.4         4.9         1.6         7.6           Montana         1.6         0.5         3.3         1.0         1.7         1.4           Nebraska         3.3         1.0         3.4         1.9         1.7         2.9           Nevada         5.3         2.4         2.3         3.6         1.5         4.9           New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Jersey         18.6         4.0         4.7         10.6         1.8         17.2           New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Horico         4.0         1.2         3.4         2.4         1.7         3.7           New Hampshire         2.7         3.2         8.3         1.4         13.0 </td <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.8</td>	•							0.8	
Minnesota         9.4         2.4         3.8         5.3         1.8         8.2           Missispipi         4.1         1.2         3.6         2.6         1.6         4.0           Missouri         7.7         2.3         3.4         4.9         1.6         7.6           Montana         1.6         0.5         3.3         1.0         1.7         1.4           Newaka         3.3         1.0         3.4         1.9         1.7         2.9           Newada         5.3         2.4         2.3         3.6         1.5         4.9           New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Jersey         18.6         4.0         4.7         10.6         1.8         17.2           New Horkic         4.0         4.7         10.6         1.8         17.2           New Horkic         54.3         13.5         4.0         27.7         2.0         41.8           North Carolina         11.6         3.7         3.2         8.3         1.4         13.0           North Carolina         1.6         0.4         4.0         0.7         2.2								1.1	
Mississippi         4.1         1.2         3.6         2.6         1.6         4.0           Missouri         7.7         2.3         3.4         4.9         1.6         7.6           Montana         1.6         0.5         3.3         1.0         1.7         1.4           Nebraska         3.3         1.0         3.4         1.9         1.7         2.9           Newada         5.3         2.4         2.3         3.6         1.5         4.9           New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Jersey         18.6         4.0         4.7         10.6         1.8         17.2           New Work         4.0         1.2         3.4         2.4         1.7         3.7           New York         54.3         13.5         4.0         2.7         2.0         41.8           North Dakota         1.6         3.7         3.2         8.3         1.4         13.0           North Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Oregon         4.4         1.8         2.4         3.6         1.2								1.0	
Missouri         7.7         2.3         3.4         4.9         1.6         7.6           Montana         1.6         0.5         3.3         1.0         1.7         1.4           Nevada         3.3         1.0         3.4         1.9         1.7         2.9           Nevada         5.3         2.4         2.3         3.6         1.5         4.9           New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Jersey         18.6         4.0         4.7         10.6         1.8         17.2           New Mexico         4.0         1.2         3.4         2.4         1.7         3.7           New York         54.3         13.5         4.0         27.7         2.0         41.8           North Carolina         1.6         3.7         3.2         8.3         1.4         13.0           North Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Ohio         18.8         5.1         3.7         11.2         1.7         17.3           Oklahoma         5.8         1.3         4.5         3.0         1.9								1.1	
Montana         1.6         0.5         3.3         1.0         1.7         1.4           Nevada         5.3         2.4         2.3         3.6         1.5         4.9           New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Jersey         18.6         4.0         4.7         10.6         1.8         17.2           New Mexico         4.0         1.2         3.4         2.4         1.7         3.7           New York         54.3         13.5         4.0         27.7         2.0         41.8           North Carolina         11.6         3.7         3.2         8.3         1.4         13.0           Nolth Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Rhode Island         2.2         0.7         3.4         1.3								1.0	
Nebraska         3.3         1.0         3.4         1.9         1.7         2.9           New Idangshire         5.3         2.4         2.3         3.6         1.5         4.9           New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Jersey         18.6         4.0         4.7         10.6         1.8         17.2           New Mexico         4.0         1.2         3.4         2.4         1.7         3.7           New York         54.3         13.5         4.0         27.7         2.0         41.8           North Carolina         11.6         3.7         3.2         8.3         1.4         13.0           North Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Ohio         18.8         5.1         3.7         11.2         1.7         17.3           Oklahoma         5.8         1.3         4.5         3.0         1.9         4.8           Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0								1.0	
Nevada         5.3         2.4         2.3         3.6         1.5         4.9           New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Jersey         18.6         4.0         4.7         10.6         1.8         17.2           New Mexico         4.0         1.2         3.4         2.4         1.7         3.7           New York         54.3         13.5         4.0         27.7         2.0         41.8           North Carolina         11.6         3.7         3.2         8.3         1.4         13.0           North Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Ohio         18.8         5.1         3.7         11.2         1.7         17.3           Oklahoma         5.8         1.3         4.5         3.0         1.9         4.8           Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0         1.8         19.1           Rhode Island         2.5         0.7         3.4         1.3 <t< td=""><td>Montana</td><td></td><td></td><td></td><td></td><td></td><td></td><td>1.1</td></t<>	Montana							1.1	
New Hampshire         2.7         0.5         4.9         1.2         2.2         1.9           New Jersey         18.6         4.0         4.7         10.6         1.8         17.2           New Mexico         4.0         1.2         3.4         2.4         1.7         3.7           New York         54.3         13.5         4.0         27.7         2.0         41.8           North Carolina         11.6         3.7         3.2         8.3         1.4         13.0           North Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Ohio         18.8         5.1         3.7         11.2         1.7         17.3           Oklahoma         5.8         1.3         4.5         3.0         1.9         4.8           Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0         1.8         19.1           Rhode Island         2.2         0.7         3.4         1.3         1.8         1.8           South Carolina         5.9         1.4         4.1         3.8	Nebraska							1.1	
New Jersey         18.6         4.0         4.7         10.6         1.8         17.2           New Mexico         4.0         1.2         3.4         2.4         1.7         3.7           New York         54.3         13.5         4.0         27.7         2.0         41.8           North Carolina         11.6         3.7         3.2         8.3         1.4         13.0           North Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Ohio         18.8         5.1         3.7         11.2         1.7         17.3           Oklahoma         5.8         1.3         4.5         3.0         1.9         4.8           Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0         1.8         19.1           Rhode Island         2.2         0.7         3.4         1.3         1.8         1.8           South Carolina         5.9         1.4         4.1         3.8         1.5         6.1           South Dakota         1.5         0.4         3.7         0.7								1.1	
New Mexico         4.0         1.2         3.4         2.4         1.7         3.7           New York         54.3         13.5         4.0         27.7         2.0         41.8           North Carolina         11.6         3.7         3.2         8.3         1.4         13.0           North Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Ohio         18.8         5.1         3.7         11.2         1.7         17.3           Oklahoma         5.8         1.3         4.5         3.0         1.9         4.8           Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0         1.8         19.1           Rhode Island         2.2         0.7         3.4         1.3         1.8         1.8           South Carolina         5.9         1.4         4.1         3.8         1.5         6.1           South Dakota         1.5         0.4         3.7         0.7         2.0         1.1           Texas         50.7         10.0         5.1         22.8	New Hampshire							1.4	
New York         54.3         13.5         4.0         27.7         2.0         41.8           North Carolina         11.6         3.7         3.2         8.3         1.4         13.0           North Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Ohio         18.8         5.1         3.7         11.2         1.7         17.3           Oklahoma         5.8         1.3         4.5         3.0         1.9         4.8           Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0         1.8         19.1           Rhode Island         2.2         0.7         3.4         1.3         1.8         1.8           South Carolina         5.9         1.4         4.1         3.8         1.5         6.1           South Dakota         1.5         0.4         3.7         0.7         2.0         1.1           Tennessee         9.6         2.2         4.3         4.6         2.1         7.1           Texas         50.7         10.0         5.1         22.8         <	New Jersey	18.6	4.0	4.7	10.6	1.8	17.2	1.1	
North Carolina         11.6         3.7         3.2         8.3         1.4         13.0           North Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Ohio         18.8         5.1         3.7         11.2         1.7         17.3           Oklahoma         5.8         1.3         4.5         3.0         1.9         4.8           Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0         1.8         19.1           Rhode Island         2.2         0.7         3.4         1.3         1.8         1.8           South Carolina         5.9         1.4         4.1         3.8         1.5         6.1           South Dakota         1.5         0.4         3.7         0.7         2.0         1.1           Tennessee         9.6         2.2         4.3         4.6         2.1         7.1           Texas         50.7         10.0         5.1         22.8         2.2         35.6           Utah         3.3         1.2         2.8         2.5         1.4<	New Mexico	4.0	1.2	3.4	2.4	1.7	3.7	1.1	
North Dakota         1.6         0.4         4.0         0.7         2.2         1.1           Ohio         18.8         5.1         3.7         11.2         1.7         17.3           Oklahoma         5.8         1.3         4.5         3.0         1.9         4.8           Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0         1.8         19.1           Rhode Island         2.2         0.7         3.4         1.3         1.8         1.8           South Carolina         5.9         1.4         4.1         3.8         1.5         6.1           South Dakota         1.5         0.4         3.7         0.7         2.0         1.1           Tennessee         9.6         2.2         4.3         4.6         2.1         7.1           Texas         50.7         10.0         5.1         22.8         2.2         35.6           Utah         3.3         1.2         2.8         2.5         1.4         3.7           Vermont         1.3         0.3         4.6         0.7         1.9		54.3	13.5	4.0	27.7	2.0	41.8	1.3	
Ohio         18.8         5.1         3.7         11.2         1.7         17.3           Oklahoma         5.8         1.3         4.5         3.0         1.9         4.8           Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0         1.8         19.1           Rhode Island         2.2         0.7         3.4         1.3         1.8         1.9           South Carolina         5.9         1.4         4.1         3.8         1.5         6.1           South Dakota         1.5         0.4         3.7         0.7         2.0         1.1           Tennessee         9.6         2.2         4.3         4.6         2.1         7.1           Texas         50.7         10.0         5.1         22.8         2.2         35.6           Utah         3.3         1.2         2.8         2.5         1.4         3.7           Vermont         1.3         0.3         4.6         0.7         1.9         1.2           Virginia         11.1         4.2         2.7         8.6         1.3	North Carolina	11.6	3.7	3.2	8.3	1.4	13.0	0.9	
Oklahoma         5.8         1.3         4.5         3.0         1.9         4.8           Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0         1.8         19.1           Rhode Island         2.2         0.7         3.4         1.3         1.8         1.8           South Carolina         5.9         1.4         4.1         3.8         1.5         6.1           South Dakota         1.5         0.4         3.7         0.7         2.0         1.1           Tennessee         9.6         2.2         4.3         4.6         2.1         7.1           Texas         50.7         10.0         5.1         22.8         2.2         35.6           Utah         3.3         1.2         2.8         2.5         1.4         3.7           Vermont         1.3         0.3         4.6         0.7         1.9         1.2           Virginia         11.1         4.2         2.7         8.6         1.3         13.1           West Virginia         3.2         0.7         4.4         1.7         1.9	North Dakota	1.6	0.4	4.0	0.7	2.2	1.1	1.5	
Oregon         4.4         1.8         2.4         3.6         1.2         5.4           Pennsylvania         21.9         4.9         4.5         12.0         1.8         19.1           Rhode Island         2.2         0.7         3.4         1.3         1.8         1.8           South Carolina         5.9         1.4         4.1         3.8         1.5         6.1           South Dakota         1.5         0.4         3.7         0.7         2.0         1.1           Tennessee         9.6         2.2         4.3         4.6         2.1         7.1           Texas         50.7         10.0         5.1         22.8         2.2         35.6           Utah         3.3         1.2         2.8         2.5         1.4         3.7           Vermont         1.3         0.3         4.6         0.7         1.9         1.2           Virginia         11.1         4.2         2.7         8.6         1.3         13.1           Washington         14.9         3.7         4.1         7.2         2.1         10.7           West Virginia         3.2         0.7         4.4         1.7         1.9 </td <td>Ohio</td> <td>18.8</td> <td>5.1</td> <td>3.7</td> <td>11.2</td> <td>1.7</td> <td>17.3</td> <td>1.1</td>	Ohio	18.8	5.1	3.7	11.2	1.7	17.3	1.1	
Pennsylvania       21.9       4.9       4.5       12.0       1.8       19.1         Rhode Island       2.2       0.7       3.4       1.3       1.8       1.8         South Carolina       5.9       1.4       4.1       3.8       1.5       6.1         South Dakota       1.5       0.4       3.7       0.7       2.0       1.1         Tennessee       9.6       2.2       4.3       4.6       2.1       7.1         Texas       50.7       10.0       5.1       22.8       2.2       35.6         Utah       3.3       1.2       2.8       2.5       1.4       3.7         Vermont       1.3       0.3       4.6       0.7       1.9       1.2         Virginia       11.1       4.2       2.7       8.6       1.3       13.1         Washington       14.9       3.7       4.1       7.2       2.1       10.7         West Virginia       3.2       0.7       4.4       1.7       1.9       2.6         Wisconsin       9.2       2.9       3.1       6.1       1.5       9.2         Wyoming       2.4       0.2       10.9       0.9       2	Oklahoma	5.8	1.3	4.5	3.0	1.9	4.8	1.2	
Rhode Island       2.2       0.7       3.4       1.3       1.8       1.8         South Carolina       5.9       1.4       4.1       3.8       1.5       6.1         South Dakota       1.5       0.4       3.7       0.7       2.0       1.1         Tennessee       9.6       2.2       4.3       4.6       2.1       7.1         Texas       50.7       10.0       5.1       22.8       2.2       35.6         Utah       3.3       1.2       2.8       2.5       1.4       3.7         Vermont       1.3       0.3       4.6       0.7       1.9       1.2         Virginia       11.1       4.2       2.7       8.6       1.3       13.1         Washington       14.9       3.7       4.1       7.2       2.1       10.7         West Virginia       3.2       0.7       4.4       1.7       1.9       2.6         Wisconsin       9.2       2.9       3.1       6.1       1.5       9.2         Wyoming       2.4       0.2       10.9       0.9       2.8       1.5	Oregon	4.4	1.8	2.4	3.6	1.2	5.4	0.8	
South Carolina         5.9         1.4         4.1         3.8         1.5         6.1           South Dakota         1.5         0.4         3.7         0.7         2.0         1.1           Tennessee         9.6         2.2         4.3         4.6         2.1         7.1           Texas         50.7         10.0         5.1         22.8         2.2         35.6           Utah         3.3         1.2         2.8         2.5         1.4         3.7           Vermont         1.3         0.3         4.6         0.7         1.9         1.2           Virginia         11.1         4.2         2.7         8.6         1.3         13.1           Washington         14.9         3.7         4.1         7.2         2.1         10.7           West Virginia         3.2         0.7         4.4         1.7         1.9         2.6           Wisconsin         9.2         2.9         3.1         6.1         1.5         9.2           Wyoming         2.4         0.2         10.9         0.9         2.8         1.5	Pennsylvania	21.9	4.9	4.5	12.0	1.8	19.1	1.1	
South Dakota         1.5         0.4         3.7         0.7         2.0         1.1           Tennessee         9.6         2.2         4.3         4.6         2.1         7.1           Texas         50.7         10.0         5.1         22.8         2.2         35.6           Utah         3.3         1.2         2.8         2.5         1.4         3.7           Vermont         1.3         0.3         4.6         0.7         1.9         1.2           Virginia         11.1         4.2         2.7         8.6         1.3         13.1           Washington         14.9         3.7         4.1         7.2         2.1         10.7           West Virginia         3.2         0.7         4.4         1.7         1.9         2.6           Wisconsin         9.2         2.9         3.1         6.1         1.5         9.2           Wyoming         2.4         0.2         10.9         0.9         2.8         1.5	Rhode Island	2.2	0.7	3.4	1.3	1.8	1.8	1.2	
Tennessee         9.6         2.2         4.3         4.6         2.1         7.1           Texas         50.7         10.0         5.1         22.8         2.2         35.6           Utah         3.3         1.2         2.8         2.5         1.4         3.7           Vermont         1.3         0.3         4.6         0.7         1.9         1.2           Virginia         11.1         4.2         2.7         8.6         1.3         13.1           Washington         14.9         3.7         4.1         7.2         2.1         10.7           West Virginia         3.2         0.7         4.4         1.7         1.9         2.6           Wisconsin         9.2         2.9         3.1         6.1         1.5         9.2           Wyoming         2.4         0.2         10.9         0.9         2.8         1.5	South Carolina	5.9	1.4	4.1	3.8	1.5	6.1	1.0	
Tennessee         9.6         2.2         4.3         4.6         2.1         7.1           Texas         50.7         10.0         5.1         22.8         2.2         35.6           Utah         3.3         1.2         2.8         2.5         1.4         3.7           Vermont         1.3         0.3         4.6         0.7         1.9         1.2           Virginia         11.1         4.2         2.7         8.6         1.3         13.1           Washington         14.9         3.7         4.1         7.2         2.1         10.7           West Virginia         3.2         0.7         4.4         1.7         1.9         2.6           Wisconsin         9.2         2.9         3.1         6.1         1.5         9.2           Wyoming         2.4         0.2         10.9         0.9         2.8         1.5	South Dakota	1.5	0.4					1.4	
Texas         50.7         10.0         5.1         22.8         2.2         35.6           Utah         3.3         1.2         2.8         2.5         1.4         3.7           Vermont         1.3         0.3         4.6         0.7         1.9         1.2           Virginia         11.1         4.2         2.7         8.6         1.3         13.1           Washington         14.9         3.7         4.1         7.2         2.1         10.7           West Virginia         3.2         0.7         4.4         1.7         1.9         2.6           Wisconsin         9.2         2.9         3.1         6.1         1.5         9.2           Wyoming         2.4         0.2         10.9         0.9         2.8         1.5								1.4	
Utah       3.3       1.2       2.8       2.5       1.4       3.7         Vermont       1.3       0.3       4.6       0.7       1.9       1.2         Virginia       11.1       4.2       2.7       8.6       1.3       13.1         Washington       14.9       3.7       4.1       7.2       2.1       10.7         West Virginia       3.2       0.7       4.4       1.7       1.9       2.6         Wisconsin       9.2       2.9       3.1       6.1       1.5       9.2         Wyoming       2.4       0.2       10.9       0.9       2.8       1.5								1.4	
Vermont         1.3         0.3         4.6         0.7         1.9         1.2           Virginia         11.1         4.2         2.7         8.6         1.3         13.1           Washington         14.9         3.7         4.1         7.2         2.1         10.7           West Virginia         3.2         0.7         4.4         1.7         1.9         2.6           Wisconsin         9.2         2.9         3.1         6.1         1.5         9.2           Wyoming         2.4         0.2         10.9         0.9         2.8         1.5								0.9	
Virginia       11.1       4.2       2.7       8.6       1.3       13.1         Washington       14.9       3.7       4.1       7.2       2.1       10.7         West Virginia       3.2       0.7       4.4       1.7       1.9       2.6         Wisconsin       9.2       2.9       3.1       6.1       1.5       9.2         Wyoming       2.4       0.2       10.9       0.9       2.8       1.5								1.2	
Washington     14.9     3.7     4.1     7.2     2.1     10.7       West Virginia     3.2     0.7     4.4     1.7     1.9     2.6       Wisconsin     9.2     2.9     3.1     6.1     1.5     9.2       Wyoming     2.4     0.2     10.9     0.9     2.8     1.5								0.8	
West Virginia       3.2       0.7       4.4       1.7       1.9       2.6         Wisconsin       9.2       2.9       3.1       6.1       1.5       9.2         Wyoming       2.4       0.2       10.9       0.9       2.8       1.5								1.4	
Wisconsin       9.2       2.9       3.1       6.1       1.5       9.2         Wyoming       2.4       0.2       10.9       0.9       2.8       1.5	-							1.4	
Wyoming 2.4 0.2 10.9 0.9 2.8 1.5								1.0	
District of Columbia 2.4 0.7 3.7 1.0 2.3 1.4								1.6	
United States \$555.4 \$158.6 3.5 \$326.8 1.7 \$495.1								1.7	

Figures may not appear to sum due to rounding. Source: Ernst & Young LLP calculations.

Figure 2. Ratio of business taxes to government expenditures benefiting businesses, FY2007



# State-by-state business tax estimates

This section presents state and local business taxes by type of tax for each of the 50 states plus the District of Columbia. Table 5 presents the different business taxes by state. Appendix Table A-3 presents the composition by tax type for each of the 50 states. Origin-based taxes, such as the property tax and sales tax on business input purchases, which are more important in businesses' location decisions than destination-based taxes, vary significantly as a share of total business tax. Arizona, Maine, Michigan, South Dakota and Washington generate more than 70% of business taxes from the sales and property taxes, resulting in significant taxes on business capital located in the state.

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Table 5. State and local business taxes, by major tax type, FY2009 (US\$billions)

State	Property tax	Sales tax	Excise and gross receipts	Corporate income	Individual income tax on business income	Unemp. insurance tax	License and other	Tota business tax		
Alabama	\$1.5	\$1.3	\$1.5	\$0.5	\$0.3	\$0.2	\$1.1	\$6.5		
Alaska	0.6		0.1	0.6		0.1	3.9	5.4		
Arizona	4.1	3.5	1.0	0.6	0.2	0.3	0.6	10.3		
Arkansas	1.0	1.2	0.5	0.3	0.3	0.3	0.3	3.9		
California	18.8	18.4	8.2	12.3	6.7	4.7	8.1	77.2		
Colorado	3.5	2.4	0.6	0.3	0.7	0.4	0.7	8.6		
Connecticut	3.1	1.5	0.7	0.4	0.6	0.6	0.2	7.2		
Delaware	0.3		0.2	0.2	0.1	0.1	1.1	2.0		
Florida	14.4	6.6	8.4	1.8		0.9	2.3	34.5		
Georgia	5.6	4.0	1.4	0.7	1.0	0.5	0.8	13.9		
Hawaii	0.8	0.8	0.5	0.1	0.1	0.1	0.2	2.6		
Idaho	0.7	0.3	0.2	0.1	0.2	0.1	0.2	1.9		
Illinois	10.7	3.7	4.4	2.8	1.1	1.7	2.1	26.4		
Indiana	4.4	2.0	0.5	0.8	0.6	0.5	0.4	9.3		
lowa	2.8	1.0	0.5	0.8	0.6	0.5	0.4	9.3 5.6		
								5.6		
Kansas	2.5	1.3	0.5	0.4	0.4	0.2	0.3			
Kentucky	1.6	1.3	1.3	0.5	0.5	0.4	0.7	6.3		
Louisiana	2.4	4.2	0.8	0.6	0.5	0.2	1.4	10.1		
Maine	1.6	0.4	0.2	0.1	0.2	0.1	0.2	2.8		
Maryland	2.4	1.6	1.7	0.8	0.9	0.4	1.5	9.3		
Massachusetts	5.9	1.5	0.8	1.9	1.2	1.5	0.5	13.3		
Michigan	8.8	3.2	1.2	0.7	0.7	1.4	0.8	16.9		
Minnesota	3.6	1.9	1.4	0.8	0.8	0.8	0.7	10.1		
Mississippi	1.8	1.1	0.4	0.3	0.2	0.1	0.4	4.4		
Missouri	2.8	2.1	1.2	0.3	0.6	0.6	0.8	8.4		
Montana	0.8		0.2	0.2	0.1	0.1	0.5	1.9		
Nebraska	1.6	0.9	0.3	0.2	0.3	0.1	0.3	3.7		
Nevada	1.8	1.2	0.9			0.3	1.5	5.8		
New Hampshire	1.6		0.3	0.5	0.0	0.1	0.2	2.7		
New Jersey	8.3	3.2	1.9	2.4	1.1	1.9	1.2	20.0		
New Mexico	0.6	1.5	0.4	0.3	0.1	0.1	1.1	3.9		
New York	21.9	11.6	4.2	10.5	4.8	2.4	1.6	56.9		
North Carolina	3.7	2.6	1.8	0.9	1.0	0.9	1.1	12.0		
North Dakota	0.5	0.3	0.2	0.1	0.1	0.1	0.9	2.2		
Ohio	8.4	3.8	2.7	1.2	1.4	1.1	2.5	21.2		
Oklahoma	1.2	2.0	0.6	0.3	0.4	0.1	1.5	6.2		
Oregon	2.0		0.5	0.3	0.6	0.6	0.9	4.9		
Pennsylvania	8.0	3.4	3.0	1.7	1.5	2.1	3.1	22.8		
Rhode Island	1.2	0.4	0.3	0.1	0.1	0.2	0.1	2.3		
South Carolina	3.0	0.9	0.6	0.2	0.3	0.3	0.7	6.0		
South Dakota	0.7	0.5	0.1	0.0		0.0	0.1	1.6		
Tennessee	3.1	2.8	1.1	0.8	0.0	0.4	1.2	9.5		
Texas	23.1	14.0	6.4			1.1	9.2	53.7		
Utah	1.2	0.8	0.4	0.3	0.2	0.1	0.3	3.5		
Vermont	0.8	0.3	0.3	0.3	0.2	0.1	0.0	1.4		
Virginia	4.8	1.6	2.0	0.6	0.1	0.1	1.5	11.7		
Washington	3.2	7.1	2.0	0.6	0.6	1.0	0.9	14.7		
							0.9			
West Virginia	1.0	0.3	0.7	0.4	0.2	0.1		3.5		
Wisconsin	4.5	1.6	0.8	0.7	0.5	0.7	1.0	9.7		
Wyoming District of	1.0	0.5 0.4	0.1	0.4	0.2	0.1	1.3 0.1	3.0 2.8		
Columbia										



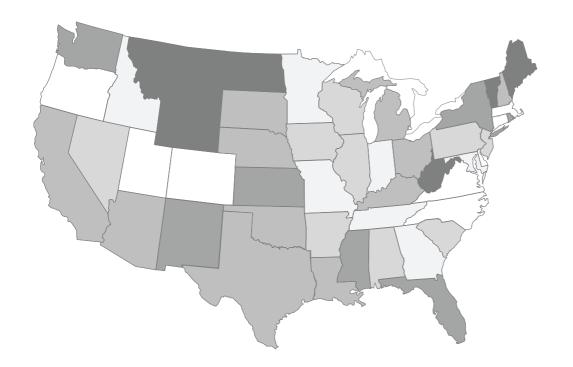
A state's competitiveness depends upon many factors, including the level of business taxes compared to the level of economic activity that is being taxed and the final incidence of business taxes, after they have been shifted to consumers or owners of factors of production, including workers. Because state business tax bases include a diverse mixture of receipts, net income, input purchases, payroll, property and other tax bases, a broad measure of a state's overall economic activity should be used to determine the measure of aggregate business tax burden that can be compared across states.

The last column in Table 6 presents a state-by-state measure of the total effective business tax rate "TEBTR" imposed on business activity by state and local governments, which is mapped in Figure 3. The TEBTR is measured as the ratio of state and local business taxes to private-sector gross state product (GSP), the total value of a state's annual production of goods and services by the private sector. The average TEBTR across all states is 4.7%; TEBTRs range from 3.5% in North Carolina to 13.8% in Alaska. Note that the states with the highest TEBTRs tend to be the states with significant severance taxes on natural resources.

While the business TEBTRs provide a starting point for comparing burdens across states, they do not provide sufficient information to fully evaluate a state's competitiveness. For example, Indiana has a TEBTR slightly below the national average, but derives nearly 70% of its business tax revenue from sales and property taxes, which are origin-based taxes on business capital that may negatively impact competitiveness. More generally, a state with an average overall TEBTR may impose relatively high taxes on capital-intensive manufacturers, while imposing relatively low taxes on labor-intensive service industries. As a result, a state with such a tax structure and composition may create disincentives for locating new plant and equipment in the state. State legislators and policymakers must look closely at the structure and composition of business taxes and the composition of economic activities when evaluating their state's business tax competitiveness.

Table 7 shows the state-by-state increase in total state and local business taxes between FY2005 and FY2009 and the business share of total state and local tax increases during that period. Nationwide, businesses paid 46.7% of the increase in all state and local taxes over this five-year period.

Figure 3. State and local business tax as a share of private sector GSP, FY2009



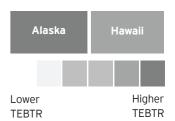


Table 6. State vs. local business taxes and business taxes as a share of private sector GSP, FY2009 (US\$billions)

	State t	axes	Local	taxes	Sta	te and local tax	es
State	Business	Total	Business	Total	Business	Total	Percent of GSP*
Alabama	\$3.9	\$8.9	\$2.7	\$4.9	\$6.5	\$13.8	4.6%
Alaska	4.8	5.1	0.6	1.4	5.4	6.5	13.8
Arizona	5.1	11.1	5.2	8.8	10.3	19.9	4.8
Arkansas	2.9	7.7	1.0	1.8	3.9	9.6	4.6
California	48.3	110.5	28.9	62.5	77.2	173.0	4.7
Colorado	3.3	9.0	5.3	9.9	8.6	18.9	3.9
Connecticut	4.0	12.5	3.2	8.9	7.2	21.4	3.7
Delaware	1.7	2.9	0.3	0.8	2.0	3.7	3.5
Florida	15.2	32.8	19.3	36.6	34.5	69.4	5.3
Georgia	5.6	16.6	8.3	15.2	13.9	31.9	4.1
Hawaii	1.5	4.8	1.1	1.6	2.6	6.4	5.3
Idaho	1.1	3.3	0.8	1.3	1.9	4.6	4.2
Illinois	13.0	29.4	13.4	31.5	26.4	60.9	4.6
Indiana	4.7	15.2	4.6	7.6	9.3	22.8	4.1
lowa	2.4	6.9	3.2	4.9	5.6	11.7	4.6
Kansas	2.4	6.9	3.1	4.9	5.6	11.7	5.4
Kentucky	4.3	10.2	2.0	4.0	6.3	14.3	4.8
Louisiana	5.2	10.2	4.9	6.4	10.1	16.5	5.1
Maine	1.2	3.5	1.6	2.2	2.8	5.7	6.5
Maryland	5.6	16.3	3.7	12.7	9.3	29.0	4.2
Massachusetts	7.2	21.0	6.1	12.7	13.3	33.4	4.2
Michigan	9.1	25.7	7.7	14.2	16.9	39.9	5.0
Minnesota	6.5	18.0	3.5	6.4	10.1	24.3	4.3
Mississippi	2.5	6.4	1.9	2.5	4.4	9.0	5.8
Missouri	3.9	10.9	4.6	9.0	8.4	19.9	4.0
Montana	1.2	2.5	0.7	1.0	1.9	3.5	6.3
Nebraska	1.6	4.0	2.1	3.4	3.7	7.4	5.1
Nevada	3.1	6.2	2.7	4.5	5.8	10.7	4.9
New Hampshire	1.3	2.2	1.4	2.8	2.7	4.9	5.0
New Jersey	11.5	29.1	8.5	23.7	20.0	52.8	4.7
New Mexico	2.8	4.7	1.1	2.0	3.9	6.8	5.9
New York	21.0	59.5	35.9	72.9	56.9	132.4	5.5
						31.8	
North Carolina	7.2	21.4	4.8	10.4	12.0		3.5
North Dakota	1.6	2.5	0.6	0.9	2.2	3.4	8.2
Ohio	11.0	26.7	10.2	21.4	21.2	48.2 12.2	5.1
Oklahoma	3.8	8.2	2.3	4.1	6.2		5.0
Oregon	2.1	8.0	2.7	5.4	4.9	13.4	3.5
Pennsylvania	13.4	32.1	9.4	22.7	22.8	54.8	4.6
Rhode Island	1.1	2.8	1.2	2.2	2.3	5.0	5.7
South Carolina	2.5	7.7	3.6	5.5	6.0	13.2	4.7
South Dakota	0.7	1.4	0.8	1.2	1.6	2.6	4.9
Tennessee -	5.2	11.0	4.3	7.5	9.5	18.4	4.2
Texas	25.8	43.4	27.8	45.0	53.7	88.4	4.9
Utah	1.9	5.6	1.7	3.2	3.5	8.7	3.7
Vermont	1.1	2.4	0.2	0.4	1.4	2.8	6.3
Virginia 	4.5	16.8	7.2	14.7	11.7	31.5	3.6
Washington	9.6	17.8	5.2	11.0	14.7	28.7	5.3
West Virginia	2.1	4.9	1.4	1.7	3.5	6.6	6.9
Wisconsin	5.0	14.0	4.7	9.5	9.7	23.6	4.6
Wyoming	2.0	2.6	1.0	1.3	3.0	3.9	9.7
District of Columbia	2.8	5.3	0.0	0.0	2.8	5.3	4.2
United States	\$311.5	\$748.4	\$278.4	\$550.7	\$590.0	\$1,299.1	4.7%

<sup>\*</sup>Percent of calendar year 2008 private industry GSP equivalent to a total effective business tax rate on economic activity occurring within the state.

Table 7. Change in state and local business taxes, FY2005 to FY2009 (US\$billions)

	T	otal S&L bu	usiness taxe	es	Total S&L	. taxes	Business
State	FY2005	FY2009	\$Change	%Change	\$Change	%Change	share of tax growth
Alabama	\$5.6	\$6.5	\$1.0	17.3%	\$1.8	15.1%	53.1%
Alaska	2.3	5.4	3.1	136.7	3.4	109.6	92.7
Arizona	9.1	10.3	1.2	13.3	1.4	7.4	88.1
Arkansas	3.3	3.9	0.6	17.2	1.3	15.1	45.6
California	66.3	77.2	10.9	16.5	21.1	13.9	51.8
Colorado	7.5	8.6	1.1	14.8	2.8	17.1	40.1
Connecticut	7.0	7.2	0.2	2.4	1.9	9.5	9.2
Delaware	1.8	2.0	0.2	13.1	0.3	10.1	67.4
Florida	28.4	34.5	6.0	21.2	8.4	13.8	71.9
Georgia	12.1	13.9	1.8	15.0	3.6	12.8	50.0
Hawaii	2.2	2.6	0.4	16.7	0.7	12.7	51.6
Idaho	1.8	1.9	0.1	4.9	0.3	7.1	29.3
Illinois	24.6	26.4	1.8	7.4	9.3	18.0	19.6
Indiana	8.2	9.3	1.2	14.2	2.8	14.2	41.0
Iowa	4.7	5.6	0.9	19.1	1.8	17.8	50.5
Kansas	4.8	5.6	0.8	16.9	1.9	19.6	42.8
Kentucky	5.7	6.3	0.6	10.6	1.7	13.3	35.9
Louisiana	8.9	10.1	1.2	13.4	2.0	14.1	58.1
Maine	2.6	2.8	0.2	8.3	0.4	6.6	60.2
Maryland	8.5	9.3	0.2	9.4	4.6	18.8	17.5
Massachusetts	12.0	13.3	1.2	10.2	2.9	9.7	41.7
Michigan	15.9	16.9	1.0	6.2	3.1	8.5	31.5
Minnesota	9.1	10.9	0.9	10.0	2.5	11.6	36.0
Mississippi	3.8	4.4	0.9	17.0	1.3	17.5	47.8
Missouri	7.5	8.4	0.8	11.8	2.0	11.5	43.3
Montana	1.4	1.9			0.7		
	3.3	3.7	0.5	31.2	0.7	25.5 10.4	63.1
Nebraska Nevada			0.4	11.6 26.9			54.3 89.2
	4.5 2.4	5.8 2.7	1.2		1.4	14.7	
New Hampshire	17.2	20.0	0.3	11.6 15.9	0.5 8.6	11.9 19.4	54.1
New Jersey							32.0
New Mexico New York	3.3	3.9	0.6	18.5	0.6	10.0	98.8
	49.1	56.9	7.8	16.0	18.6	16.4	42.1
North Carolina	11.3	12.0	0.7	6.6	3.4	11.8	22.3
North Dakota	1.3	2.2	0.9	66.8	1.2	55.1	73.5
Ohio	18.1	21.2	3.1	17.0	5.5	12.8	56.2
Oklahoma	5.2	6.2	0.9	17.9	1.9	18.1	50.2
Oregon	4.5	4.9	0.4	8.1	1.5	12.5	24.6
Pennsylvania	21.1	22.8	1.7	8.2	6.2	12.7	27.9
Rhode Island	2.1	2.3	0.2	10.2	0.3	5.9	79.1
South Carolina	5.4	6.0	0.7	12.5	1.1	9.5	58.3
South Dakota	1.3	1.6	0.3	20.7	0.4	20.9	61.6
Tennessee	8.4	9.5	1.1	12.6	2.0	12.0	53.5
Texas	43.4	53.7	10.2	23.6	17.6	24.8	58.3
Utah	3.0	3.5	0.6	19.5	1.2	16.5	46.4
Vermont	1.3	1.4	0.1	10.5	0.2	7.8	64.2
Virginia	10.6	11.7	1.1	10.3	3.3	11.7	32.9
Washington	12.8	14.7	1.9	15.2	4.3	17.6	45.1
West Virginia	3.1	3.5	0.4	14.3	0.9	16.7	46.1
Wisconsin	8.9	9.7	0.9	9.8	1.6	7.1	55.7
Wyoming	2.0	3.0	1.0	47.0	1.2	45.0	78.3
District of Columbia	2.2	2.8	0.6	25.0	0.8	19.2	65.2
United States	\$510.9	\$590.0	\$79.1	15.5%	\$169.2	15.0%	46.7%

Figures may not appear to sum due to rounding. Source: Ernst & Young LLP calculations.

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## State and local business taxes by industry

The results of this study highlight the importance of evaluating the overall level of state and local business taxes in the tax policy debate. Table 8 adds another dimension to the total business tax results, presenting estimates of total state and local taxes paid by major industries in FY2009. The results indicate that the composition of total state and local business taxes varies significantly among industries.

Table 9 presents a comparison of the composition of total state and local business taxes by major industry group. The figures show that corporate income tax as a percentage of total business taxes has declined for many industries in FY2009 as the overall level of corporate profits decreased during the recession. For example, in FY2008 corporate income taxes accounted for the largest share of taxes paid by firms in the "management of companies" industry, which comprises three primary types of companies and activities: bank holding companies; non financial holding companies; and corporate, subsidiary and regional managing offices. These activities, which include the profits of holding company entities that have no employees, typically generate significant corporate income tax liability relative to other state and local business taxes,

making the corporate income tax a primary tax consideration when contemplating a corporate or regional headquarters relocation. However, in FY2009, corporate income taxes declined significantly for the "management of companies" industry.

As a result of declining corporate income tax collections across many industries, the level of indirect taxes, such as property taxes, has risen in importance to state and local governments, which rely on tax receipts to fund government programs. Property taxes in FY2009 accounted for more than 40% of the state and local taxes paid by the utility, nondurable manufacturing, transportation and real estate industries and for more than 20% in all other industries except "management of companies." Gross receipts taxes constituted more than a quarter of taxes on regulated industries, including the utility, communications and insurance industries, because they often pay taxes based on gross receipts or premiums in many states instead of corporate income taxes and other taxes. Particularly during periods of economic recession, the composition of business taxes is essential to determining levels of business capital, jobs and investment possible in a state.

Table 8. Total state and local business taxes by industry, FY2009 (US\$billions)

			General	Excise	Individual income tax on		Business	Total
	Corporate income	Property	sales taxes	and gross receipts	pass-thru income	Unemployment isurance	license and other taxes	business tax
Electric & gas	\$1.7	\$20.6	\$3.4	\$20.1	\$0.0	\$0.2	\$2.7	\$48.8
Manufacturing	18.0	32.8	22.0	0.2	1.7	8.1	5.7	88.3
Non-durable	7.0	15.7	9.7	0.2	0.0	2.7	3.6	38.7
Durable mfg.	11.0	17.1	12.3	0.0	1.7	5.4	2.1	49.6
Wholesale trade	3.6	10.2	10.9	15.7	2.1	1.7	3.9	48.2
Retail trade	5.6	13.2	17.5	5.6	1.6	5.3	4.6	53.5
Transportation	1.4	10.2	6.9	1.4	0.8	1.1	1.5	23.4
Communications	4.5	6.5	5.8	7.4	0.4	0.4	1.2	26.3
Finance and insurance	5.1	17.7	12.2	15.6	1.9	1.4	7.0	61.0
Real estate	0.6	58.4	1.5	0.0	2.2	0.4	2.2	65.3
Services	6.5	22.4	23.8	4.6	10.9	9.6	14.6	92.3
Mgmt of companies	4.6	0.7	0.5	0.0	0.7	0.1	7.5	14.1
Business services	0.8	5.8	13.2	0.0	5.7	2.7	1.1	29.3
Other services	1.1	15.8	10.1	4.6	4.5	6.9	5.9	48.9
Other	3.5	23.4	22.9	0.0	10.8	2.5	20.1	83.1
Total business taxes	\$50.6	\$215.3	\$126.9	\$70.7	\$32.3	\$30.9	\$63.5	\$590.0

Figures may not appear to sum due to rounding.



Table 9. Distribution of total state and local business taxes by industry, FY2009

			Conoral	Excise	Individual income		Business	Total
	Corporate income	Property	General sales taxes	and gross receipts	tax on pass-thru income	Unemployment isurance	Business license and other taxes	business tax
Electric & gas	3.5%	42.3%	6.9%	41.2%	0.0%	0.5%	5.6%	100%
Manufacturing	20.3	37.1	24.9	0.2	1.9	9.2	6.4	100
Non-durable	18.0	40.5	25.0	0.5	0.0	6.9	9.2	100
Durable mfg.	22.2	34.4	24.8	0.0	3.4	10.9	4.2	100
Wholesale trade	7.5	21.2	22.7	32.6	4.3	3.6	8.2	100
Retail trade	10.5	24.7	32.7	10.6	2.9	10.0	8.6	100
Transportation	6.1	43.6	29.7	5.9	3.3	4.8	6.6	100
Communications	17.2	24.8	22.1	28.3	1.5	1.5	4.6	100
Finance and insurance	8.4	29.0	20.0	25.6	3.2	2.3	11.5	100
Real estate	1.0	89.4	2.2	0.0	3.4	0.7	3.3	100
Services	7.0	24.2	25.7	5.0	11.8	10.4	15.8	100
Mgmt of companies	32.5	5.1	3.7	0.0	4.9	0.4	53.3	100
Business services	2.8	19.9	44.9	0.0	19.6	9.1	3.8	100
Other services	2.2	32.3	20.6	9.4	9.1	14.2	12.2	100
Other	4.2	28.2	27.5	0.0	13.0	3.0	24.2	100
Total business taxes	8.6%	36.5%	21.5%	12.0%	5.5%	5.2%	10.8%	100%

Figures may not appear to sum due to rounding.

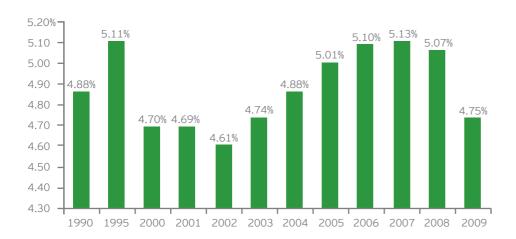
## Impact of the recession

The recession that began in December 2007 had a relatively small effect on state and local business taxes in FY2008 since nearly half of that fiscal year occurred before the recession. As shown in this study, the effect of the recession was evident in FY2009, with corporate income taxes and individual income taxes on business income dropping by more than 10% each. While the corporate and individual income taxes have already been significantly affected by the recession, major changes in the property and unemployment taxes may occur in FY2010 and 2011. This section looks at the impact of recession in more detail.

## State and local business taxes over the past business cycle

As shown in Figure 4, state and local business taxes are more volatile than state economic activity, as measured by business taxes as a share of private sector economic activity (gross product). As shown in the figure, business taxes have declined as a share of total economic activity during the last two recessions, in 2001 and in 2007 to 2009. In 2002, one year following the 2001 recession, business taxes dropped to the lowest level relative to economic activity (4.61%) in the last ten years. After several years of steadily increasing business taxes relative to economic activity, the state and local business tax ratio declined to 4.75% in FY2009 - nearly the same ratio observed in the last recession. The implication for business tax payers is that, despite lower business taxes in FY2009, business tax relative to economic activity may rise significantly over the coming fiscal years as the economy recovers.

Figure 4. State and local business taxes as a percentage of gross state product, FY1990 to FY2009





#### Unemployment insurance taxes

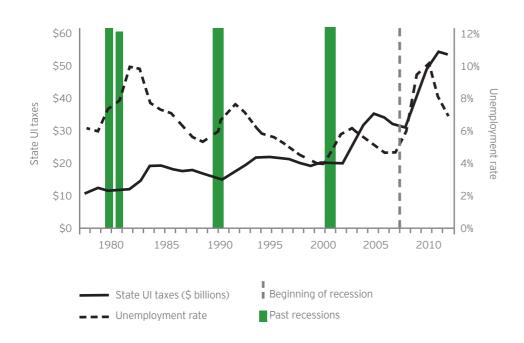
Although unemployment taxes actually fell in FY2009, these taxes are expected to increase significantly in the near future. During the steep and prolonged recession, the US economy has lost a total of 8.4 million jobs. The largest job declines were posted from November 2008 to April 2009 with monthly losses averaging 645,000 jobs over this period. This surge in unemployment has depleted state unemployment insurance (UI) funds, increased state borrowing from the federal government, and set the stage for substantial increases in state UI taxes over the next several years.

A recent report by Ernst & Young LLP's Quantitative Economics and Statistics group and Employment Tax group shows that the timing and magnitude of UI tax increases after the last three recessions can be used to project the likely change in UI taxes expected as a result of the recent recession. Figure 5 shows actual annual state UI tax collections and unemployment rates over the last three decades (1978 through 2009) and projections for 2010 through 2012.<sup>7</sup>

As shown in the figure, state UI taxes increased from US\$11 billion in 1978 to US\$31 billion in 2009 and are projected to reach more than US\$50 billion by 2011.

The comparison shows that, while the national unemployment rate has typically peaked two to three years following the onset of a recession, UI tax collections peak even later. For example, UI taxes peaked in the fourth year following the 2001 recession, increasing by 77% from the beginning of the recession; UI taxes also peaked in the fourth year following the 1981 recession, increasing by 66%. Based on these historical patterns, UI tax collections are expected to begin rising significantly in FY2010 and peak in FY2011. In many states, taxable wage bases and tax rates have already begun to rise significantly as states try to restore balances in depleted UI trust funds. If UI taxes rise to more than US\$50 billion in FY2011, these taxes would be roughly equivalent in size to the state corporate income tax in FY2009.

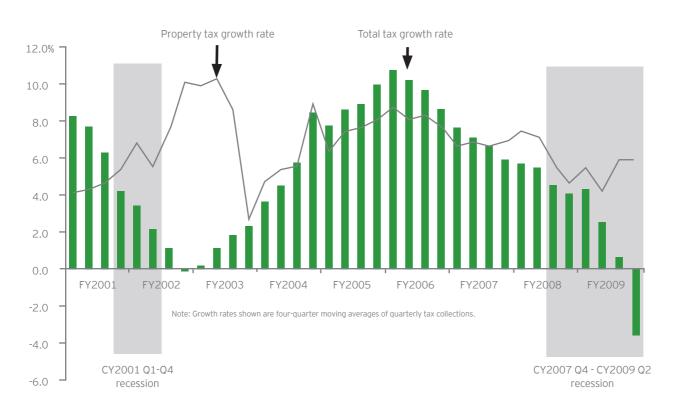
Figure 5. State unemployment insurance taxes vs. unemployment rate



#### Property tax challenges

As discussed earlier there is a divergence in the pattern of business property tax and other state and local business taxes in this recession: business property taxes continue to rise, while other business taxes are falling significantly. This pattern was also evident over the last economic cycle, as shown in Figure 6. Figure 6 compares the growth rates for total state and local taxes (based on four quarter sums) and for property (both business and residential) taxes. In the period ending in the fourth quarter of 2009, total state and local taxes fell 3.6%, while property taxes increased by almost 6%. Note that this was in line with the general pattern seen coming out of the 2001 recession.

Figure 6. Growth in total state and local tax collections vs. growth in property taxes





The increasing property tax has resulted in less severe tax shortfalls for local governments. However, this situation is not expected to continue. The unexpectedly strong performance of the property tax is due more to the lag in the property tax assessment process than actual growth in market values. In many states, there are two-to three-year lags between changes in market values and adjustments in assessed values for tax purposes. Once assessments are adjusted to reflect significant decreases in market values of residential and business property market values, local governments will face more severe tax shortfalls. This will result in increased pressure on state legislators to help fund the local shortfalls.

As described above, property tax revenues have continued to grow through FY2009 in most states. However, as assessments are updated to reflect recent market conditions, property tax revenue can be expected to decline in FY2010 and FY2011. In California and Florida, large increases in property values over the past decade gave way to significant declines in assessments over the past two years, although in both states limitations on annual assessment increases have moderated the decline in the downturn. In Texas and Indiana, significant property tax reforms have affected the overall level and distribution of property taxes between business and residential property owners. Although the recession has affected each of these states' property tax collections differently, business taxpayers might see tax rates increase as local governments search for additional revenue to make up the gap left by falling residential property values.

P California: Despite the state's housing market's dramatic decline, property tax bills in California over the past few years have risen. The overall value of state- and county-assessed property in 2010 is projected to decline by 2.4% – the first time since the passage of Proposition 13 assessment limitations that property tax assessments have fallen so widely. However, California's limitation on the annual increase in assessments during periods of property appreciation has moderated the effect of the real estate collapse because many properties are still capped at well below their market value.

- Florida: Foreclosures and low property values have greatly affected Florida's fiscal status, in part because property tax revenues account for 36.8% of total tax revenues in the state—the 9th highest percentage in the United States. After annual increases between 10% and 30% between 2005 and 2007, total real property assessments decreased by nearly 4% statewide in 2008. In 2009, school property taxes in Florida, which make up the majority of the property tax levy, decreased by nearly 7%.
- Texas: After the Texas Supreme Court ruled the state's property tax system unconstitutional in 2006, property tax rates in Texas were decreased significantly as a portion of education funding was provided by the franchise tax, tobacco and alcoholic beverage taxes, and other tax revenues. Although business taxpayers saw an average property tax reduction of 18% after the reform, the economic recession hit Texas late and property tax rate increases due to falling assessments may be yet to come.
- ▶ Indiana: 2007 marked a period of property tax crisis for Indiana. Residential property tax bills skyrocketed as new assessment rules changed the values and classifications of properties statewide. Responding to public outcry, the Indiana state legislature passed a law in 2008, to be fully implemented by 1 Janurary, 2010, that limited residential property tax bills to 1% of assessed value. Business taxpayers did not benefit from this change, as their assessed values increased by almost 2% from 2008 to 2009 while many residential property assessments held constant.

As taxable values are adjusted, the share of local property taxes paid by business is likely to increase. This can occur, for example, if taxable values for homes are adjusted downward faster than taxable values for business property. Even if both categories face higher property tax rates, the business share of property taxes will increase. In this fiscal environment, business taxpayers can expect increased pressure for property tax rate increases at both the state and local level over the next several years.

#### State fiscal outlook

Total state taxes, taxes on both businesses and households, declined by 8.6% in FY 2009. Compared to FY2007, states collected 5.5% less in taxes, the last full fiscal year before the recession began. This US\$39 billion reduction in state taxes is equivalent in size to 20% of current state personal income tax collections. As a result of the continuing impact of the recession, states are estimating that FY2010 tax collections will be even lower.

To put the severity of the state's tax situation in perspective, Table 10 shows how much FY2010 taxes have declined since the prerecession peak level of taxes (adjusted for inflation).<sup>8</sup> The following table shows the percentage and dollar amounts of the tax shortfalls in FY2010 for states with the largest shortfalls.

Table 10. State tax shortfalls, selected states

Ctata	Tax shortfalls	from prior peak
State	Percent	Amount (mil.)
Alaska	81.9%	\$3,946
Arizona	38.9	4,359
Delaware	36.9	822
Florida	33.3	10,282
Louisiana	26.5	2,399
Illinois	26.1	6,873
South Carolina	23.7	1,764
Texas	21.9	8,353
Virginia	20.1	3,309
California	19.8	20,158
Georgia	18.7	3,069
New York	18.2	10,490
Ohio	18.2	4,231

Figures may not appear to sum due to rounding.

Source: Tax estimates for FY2010 general fund budgets, as adopted, from *The Fiscal Survey of the States*, National Governors Association and National Association of State Budget Officers, December 2009; supplemented with additional state tax forecasts from state budget agencies.

States are addressing the shortfalls through a combination of spending cuts, one-time revenue sources and legislated tax changes including federal stimulus aid and accumulated cash balances. Note that the 2010 estimates of taxes include temporary and permanent taxes already adopted in response to the recession. Going forward, the expiration of stimulus payments and temporary tax increases will widen the gap, while economic recovery will generate built-in growth that closes the gap. During this period, business taxpayers need to stay engaged in discussions about the sources of this additional revenue.

### Conclusion

State and local taxes paid by business in FY2009 totaled US\$590 billion, a decrease of 3.5% from FY2008. Given historical trends, there will be significant upward pressure on UI taxes over the next two fiscal years. States experienced significant revenue shortfalls in FY2009 and FY2010 and may face even greater shortfalls in FY2011. When faced with deficits in the past, many states saw business tax reforms only in the context of their short-term objectives to raise revenue. In an economic environment affected significantly by increased global competition, the growing importance of intangible assets, and increasingly mobile labor and capital, it is important for policymakers to understand the level and composition of their state's total state and local business taxes and the potential long-term impacts of business tax reforms designed to meet short-term objectives.

# Appendix: supplemental tables

## Appendix Table A-1. Total state and local business taxes, FY1990-FY2009 (US\$billions)

State and local taxes	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total business taxes*	\$229.4	\$303.2	\$382.4	\$395.3	\$401.8	\$424.2	\$459.9	\$510.9	\$553.3	\$591.2	\$611.1	\$590.0
Individual income taxes on non-business income	99.1	128.3	196.5	209.7	188.0	185.5	197.7	210.5	234.0	253.6	266.9	234.6
Other taxes	185.5	244.9	313.7	324.3	336.2	356.5	383.6	408.5	439.8	466.6	477.4	474.5
Total state and local taxes	\$514.0	\$676.4	\$892.6	\$929.4	\$926.1	\$966.2	\$1,041.2	\$1,130.0	\$1,227.0	\$1,311.3	\$1,355.5	\$1,299.1
Composition of state and local taxes	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total business taxes*	44.5%	45.1%	42.8%	43.5%	44.1%	44.8%	44.7%	45.2%	45.1%	45.1%	45.1%	45.4%
Individual income taxes on non-business income	19.4	18.7	22.1	21.6	19.5	18.3	18.4	18.6	19.1	19.3	19.7	18.1
Other taxes	36.1	36.2	35.1	34.9	36.3	36.9	36.8	36.2	35.8	35.6	35.2	36.5
Total state and local	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

<sup>\*</sup>Includes individual income taxes on pass-through business income.

Figures may not appear to sum due to rounding.

Source: Ernst & Young LLP calculations.



## Appendix Table A-2. Composition of state and local business taxes, FY1990-FY2009 (US\$billions)

Business tax	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Property tax on business property	\$84.7	\$110.7	\$136.8	\$142.6	\$152.9	\$160.9	\$169.7	\$176.6	\$187.9	\$199.9	\$209.6	\$215.3
General sales and use tax on inputs	\$53.4	\$70.2	\$94.4	\$97.6	\$97.9	\$100.9	\$107.3	\$115.2	\$123.8	\$131.5	\$133.2	\$126.9
Corporation net income	\$23.7	\$31.7	\$36.4	\$35.8	\$28.5	\$31.9	\$34.1	\$43.5	\$53.3	\$60.9	\$58.1	\$50.6
Unemployment comp.	\$12.4	\$15.8	\$20.9	\$20.8	\$21.0	\$23.9	\$31.9	\$35.5	\$36.4	\$35.8	\$32.5	\$30.7
Business license tax	\$7.3	\$11.4	\$14.8	\$15.0	\$17.0	\$16.8	\$18.9	\$29.5	\$32.9	\$34.4	\$37.5	\$38.3
Public utility tax	\$11.4	\$15.0	\$17.7	\$17.9	\$20.3	\$21.2	\$21.3	\$22.6	\$23.6	\$26.8	\$28.0	\$28.8
Individual income tax	\$6.6	\$9.6	\$15.1	\$16.3	\$14.8	\$14.8	\$17.5	\$30.4	\$33.1	\$35.8	\$37.6	\$32.3
Excise tax	\$10.6	\$16.0	\$20.1	\$20.2	\$20.8	\$21.9	\$23.4	\$23.9	\$25.1	\$28.3	\$29.2	\$26.3
Insurance premium tax	\$7.4	\$8.6	\$9.8	\$10.3	\$11.2	\$12.6	\$14.0	\$14.9	\$15.6	\$16.1	\$16.4	\$15.6
Other business taxes	\$11.8	\$14.1	\$16.5	\$18.9	\$17.4	\$19.5	\$21.8	\$18.8	\$21.6	\$21.6	\$29.1	\$25.2
Total business taxes	\$229.4	\$303.2	\$382.4	\$395.3	\$401.8	\$424.2	\$459.9	\$510.9	\$553.3	\$591.2	\$611.1	\$590.0

 ${\it Figures \ may \ not \ appear \ to \ sum \ due \ to \ rounding.}$ 

Source: Ernst & Young LLP calculations.

## Appendix Table A-3. Composition of state and local business taxes, by type, FY2009

			Excise and gross	Corporate	Unemployment	Individual	License and	Total business
State	Property Tax	Sales Tax	receipts	income	Insurance tax	income tax	other	taxes
Alabama	23.5%	19.8%	23.1%	7.6%	3.4%	5.2%	17.4%	100.0%
Alaska	11.5	0.0	2.3	11.7	2.3	0.0	72.3	100.0
Arizona	39.7	34.3	9.3	5.8	2.6	2.1	6.2	100.0
Arkansas	25.0	30.1	14.0	8.9	6.8	8.4	6.8	100.0
California	24.3	23.8	10.7	15.9	6.1	8.7	10.5	100.0
Colorado	40.4	28.1	7.0	3.8	4.4	8.0	8.4	100.0
Connecticut	43.4	20.4	9.7	5.8	8.4	8.8	3.5	100.0
Delaware	14.4	0.0	11.5	10.5	4.6	5.2	53.9	100.0
Florida	41.9	19.1	24.4	5.3	2.5	0.0	6.8	100.0
Georgia	40.4	28.5	10.1	5.0	3.6	7.0	5.4	100.0
Hawaii	32.5	31.1	19.9	3.0	2.2	5.2	6.1	100.0
Idaho	38.5	17.8	10.1	7.5	5.8	10.3	10.0	100.0
Illinois	40.5	14.0	16.6	10.4	6.3	4.1	8.0	100.0
Indiana	47.6	21.4	5.9	9.0	5.4	6.0	4.6	100.0
Iowa	50.0	18.2	6.9	4.3	6.5	7.9	6.2	100.0
Kansas	44.9	23.8	8.3	6.6	3.9	6.9	5.7	100.0
Kentucky	25.5	21.0	20.7	7.5	6.3	7.9	11.1	100.0
Louisiana	23.9	41.6	8.1	5.8	1.6	5.2	13.7	100.0
Maine	57.4	13.5	8.9	5.2	3.4	5.8	5.9	100.0
Maryland	26.1	16.7	18.2	8.7	4.4	9.9	16.0	100.0
Massachusetts	44.2	11.4	5.8	14.4	11.5	8.9	3.9	100.0
Michigan	52.0	18.7	7.1	4.2	8.6	4.4	5.0	100.0
Minnesota	36.2	19.2	13.9	7.8	7.9	7.9	7.1	100.0
Mississippi	40.8	25.6	9.3	7.4	2.4	4.8	9.7	100.0
Missouri	33.2	25.4	13.9	3.3	6.9	7.6	9.7	100.0
Montana	42.8	0.0	10.9	8.7	4.0	6.3	27.4	100.0
Nebraska	44.7	24.9	7.7	5.4	2.8	7.1	7.5	100.0
Nevada	30.9	21.2	15.4	0.0	5.7	0.0	26.8	100.0
New Hampshire	58.2	0.0	11.9	18.1	2.6	0.4	8.8	100.0
New Jersey	41.3	15.9	9.4	12.1	9.5	5.6	6.1	100.0
New Mexico	14.4	37.3	9.5	6.6	2.2	2.0	28.0	100.0
New York	38.5	20.4	7.3	18.4	4.2	8.4	2.8	100.0
North Carolina	30.9	21.9	15.3	7.5	7.1	8.0	9.4	100.0
North Dakota	24.8	13.9	8.3	5.9	2.3	3.7	41.1	100.0
Ohio	39.9	18.0	12.8	5.6	5.1	6.6	12.0	100.0
Oklahoma	20.1	32.3	9.2	5.6	2.3	7.1	23.5	100.0
Oregon	41.3	0.0	10.4	5.9	11.6	12.4	18.5	100.0
Pennsylvania	34.8	14.9	13.1	7.6	9.1	6.7	13.7	100.0
Rhode Island	51.2	16.0	12.6	4.6	7.9	4.3	3.4	100.0
South Carolina	49.9	15.6	9.7	4.0	4.4	4.2	12.2	100.0
South Dakota	42.4	34.2	9.4	3.1	1.7	0.0	9.3	100.0
Tennessee	32.8	29.6	11.2	8.6	4.7	0.4	12.6	100.0
Texas	42.9	26.0	11.9	0.0	2.0	0.0	17.1	100.0
Utah	34.0	22.1	14.6	9.8	3.6	6.2	9.6	100.0
Vermont	58.7	9.3	12.7	6.3	5.0	4.7	3.4	100.0
Virginia	41.3	13.5	17.0	5.4	2.8	7.0	13.0	100.0
Washington	21.7	48.2	17.0	0.0	7.0	0.0	6.1	100.0
West Virginia	29.6	9.2	20.2	12.0	4.1	5.0	19.9	100.0
Wisconsin	46.5	16.2	8.1	6.7	6.7	5.6	10.2	100.0
Wyoming	34.4	17.9	3.0	0.0	1.8	0.0	42.9	100.0
District of Columbia	47.4	12.9	10.4	13.8	4.3	8.6	2.7	100.0
United States	36.5%	21.5%	12.0%	8.6%	5.2%	5.5%	10.8%	100.0%

Figures may not appear to sum due to rounding. Source: Ernst & Young LLP calculations.

### **Endnotes**

<sup>1</sup>The general methodology used to estimate state and local business taxes is described in detail in the Appendix to the EY/COST FY2005 50-state business tax study published in March 2006. Note that business tax estimates for prior years have been revised from those published in earlier editions of this study due to feedback from state tax agencies, the use of updated and more detailed information on local business taxes, and refinements to the property tax estimation methodology to reflect the rapid rise in the value of residential property since 2002. All references to business taxes in prior fiscal years refer to the updated estimates rather than the previously published estimates.

<sup>2</sup>A more detailed analysis of state and local sales taxation of business inputs was done by Robert Cline, John Mikesell, Tom Neubig and Andrew Phillips in the COST study, "Sales Taxation of Business Inputs: Existing Tax Distortions and the Consequences of Extending the Sales Tax to Business Services," 25 January 2005. (Also in *State Tax Notes*, 28 January 2005.)

<sup>3</sup>Tax amounts for Michigan and Ohio are tax liability estimates, rather than actual tax collections.

<sup>4</sup>Robert Cline, Andrew Phillips, Joo Mi Kim and Tom Neubig, "The Economic Incidence of Additional State Business Taxes," *State Tax Notes* (13 January 2010)

<sup>5</sup>Richard H. Mattoon and William A. Testa, "How Closely Do Business Taxes Conform to the Benefits Principle?" presentation at the Future State Business Tax Reforms: perspectives from the Business, Government and Academic Communities conference, Federal Reserve Bank of Chicago (17 September 2007). The authors distributed state and local government expenditures between businesses and households. Services benefiting business include shares of expenditures for transportation, water and sewer infrastructure, police and fire protection, general government "overhead" (e.g., legislative, administrative and judicial services), interest and regulatory activities. The methodology used 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). The authors also note that selective excise taxes, such as the severance tax, impact a small portion of businesses and could be removed from the business tax numerator to provide a measure of the tax to benefit ratio generally applicable to most firms.

<sup>6</sup>The estimated ratios of business taxes to services benefiting businesses presented in this study are based on expenditure estimates derived by Mattoon and Testa for FY2005, adjusted to reflect state and local expenditure growth from FY2005 to FY2007. The general methodology used by Mattoon and Testa allocates expenditures net of user charges to businesses and households. The estimates assume that 25% of net education expenses benefit business. Prior analyses have incorporated a range of estimates, assuming that businesses receive between 0% and 50% of the benefit from education expenditures; the baseline estimates by Mattoon and Testa assumed a 0% share of education directly benefiting business. The ratio of business benefit to business tax is calculated as estimated FY2007 state and local business taxes divided by estimated FY2007 expenditures that benefit business, with a range of assumptions regarding the percentage of education spending that benefits business: 0%, 25%, and 50%.

<sup>7</sup>Actual state UI tax collections are from the Department of Labor Employment and Training Administration (DOLETA); the projections of collections for 2008 are based on growth estimates from the Division of Fiscal and Actuarial Services (DFAS) of the Office of Workforce Security (OWS) updated on 6 May 2009; the projections of tax collections for 2009-2012 are based on the historical pattern of unemployment tax collection increases following the 2001 recession. The US unemployment rate is from the Bureau of Labor Statistics; the projected unemployment rates for 2009 and 2010 are from the *Blue Chip Economic Indicators* August, 2009 forecasts. The 2011 and 2012 unemployment rate projections are from the Congressional Budget Office. Unemployment tax collections include taxes paid by employers, contributions from employees in states that tax workers, and penalties and interest used to pay benefits.

<sup>8</sup>The fiscal year 2010 estimates are based on state estimates reported in The Fiscal *Survey of the States*, National Governors Association and National Association of State Budget Officers, December 2009, supplemented with additional state tax forecasts. The percent changes are calculated relative to each state's peak fiscal year, either 2007 or 2008. The peak year taxes have been inflated by 2% each year to recognize inflation. In other words, the percentage increases indicate the tax increases needed to ensure the same level of real revenues states had in the peak years.

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