LOCATION MATTERS 2021

THE STATE TAX COSTS OF DOING BUSINESS

TAX FOUNDATION | KPMG

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Tax Foundation
1325 G Street, N.W. Suite 950
Washington, D.C. 20005
202.464.6200
taxfoundation.org

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INTRODUCTION: A COMPARATIVE ANALYSIS OF STATE TAX COSTS ON BUSINESS

State and local taxes represent a significant business cost for corporations operating in the United States and can have a material impact on net operating margins. Consequently, business location decisions for new manufacturing facilities, corporate headquarter relocations, and the like are often influenced by assessments of relative tax burdens across multiple states.[1]

Widespread interest in corporate tax burdens has resulted in a range of studies produced by think tanks, media organizations, and research groups. None of these other studies, however, provide comparisons of actual state business tax costs faced by real-world businesses.

Some studies compare total tax collections or business tax collections per capita or as a percent of total tax revenue. The shortcoming of this approach is that collections are not burdens: many business taxes are collected in one state but paid by companies in other states. Comparing state collections thus does not accurately portray the relative tax burden that real-world businesses would incur in each state.

Some studies assess the relative value of tax incentives available for different types of businesses, such as new job tax credits, new investment tax credits, sales tax exemptions, and property tax abatements. However, these studies can give the incorrect impression that all businesses in a state enjoy such incentives. They also do not typically account for increased tax rates for mature businesses that may be required to support such incentives.

Some studies, including the Tax Foundation's widely cited annual State Business Tax Climate Index, *define model tax structure principles and measure the state's tax code relative to those principles*. The *State Business Tax Climate Index* is a useful tool for lawmakers to understand how neutral and efficient their state's tax system is compared to other states and to identify areas where their system can be improved. However, this does not address the bottom line question asked by many business executives: "How much will our company pay in taxes?"

An individual firm considering expansion frequently calculates its tax bill in various states, but these calculations are not often released publicly and are usually confined to a small number of states.

To fill the void left by these studies, the Tax Foundation collaborated with U.S. audit, tax, and advisory firm KPMG LLP to develop and publish a landmark, apples-to-apples comparison of corporate tax costs in the 50 states. Tax Foundation economists designed eight model firms—a corporate headquarters, a research and development facility, a technology center, a data center, a capital-intensive manufacturer, a labor-intensive manufacturer, a shared services center, and a distribution center—and KPMG tax professionals calculated each firm's tax bill in each state. This study accounts for all business taxes, including corporate income taxes, property taxes, sales taxes, unemployment insurance taxes, capital stock taxes, inventory taxes, and gross receipts taxes. Additionally, each firm was modeled twice in each state: once as a new firm eligible for tax incentives and once as a mature firm not eligible for such incentives.

1 See Sanja Gupta & Mary Ann Hoffman, "The Effect of State Income Tax Apportionment and Tax Incentives on New Capital Expenditures," *Journal of the American Taxation Association*, Supplement 2003, 1-25; Timothy Bartik, "Business Location Decisions in the United States: Estimates of the Effects of Unionization, Taxes, and Other Characteristics of States," *Journal of Business and Economics Statistics* 3:1 (January 1985), 14-28; James Papke and Lesie Papke, "Measuring Differential State-Local Tax Liabilities and Their Implications for Business Investment Location," *National Tax Journal* 39:3 (1986), 357-366.

Tax Foundation economists then used the raw model results to perform the ensuing industry and state comparisons. The result is a comprehensive calculation of real-world tax burdens, now in its third edition, that we designed as a valuable resource for a variety of stakeholders, to ensure that:

- Governors, legislators, and state officials can better understand and address their states' competitive positions among the 50 states;
- CEOs, CFOs, and other corporate stakeholders can better evaluate the relative competitiveness of states in which they operate or states in which they are contemplating business investments;
- Businesses and trade organizations can better identify policy improvements for each state;
- Site-selection experts can screen states more quickly and accurately for consideration by their clients; and
- National, state, and local media organizations can more effectively report on the tax competitiveness of the 50 states.

The *Location Matters* study, together with our annual *State Business Tax Climate Index*, provides the tools necessary to understand each state's business tax system and the burdens it imposes, offering a road map for improvement.

Study Overview and Key Findings

Chapter 1 outlines the objectives and scope of the study. This chapter describes the eight model firms that were analyzed, the specific taxes that were included in the study, the locations that were chosen in each state, and the other factors that could influence the results.

Chapter 2 presents an overview of the effective tax rates experienced by both new and mature operations for each of our eight model firm types and summarizes how various components and features of state tax systems contribute to the overall tax burdens these firms experience.

Chapter 3 summarizes the results for each state. The chapter is aimed at legislators and reporters seeking insight into states' business tax systems, as well as at business owners and location consultants investigating the effects of states' tax systems. The chapter outlines the major factors contributing to the effective tax rates experienced by our model firms in each state.

The Appendices provide further detail on the components comprising effective tax rates for each state and firm type and compare states' incentives for new businesses. They also detail the study's methodology and assumptions. The Appendices are valuable for conducting 50-state comparisons, understanding our modeling, and reviewing our source data.

For many readers, *Location Matters* will serve as a reference guide, not a book to read from cover to cover. As such, it may be valuable to summarize a few key findings:

- *Statutory tax rates only tell part of the story.* While topline rates are important and high rates may provide "sticker shock" for corporations considering locating within a given state, they are just one component of effective tax burdens. Tax incentives, apportionment, throwback rules, and other factors can have a dramatic impact on effective tax burdens. In some cases, states with low statutory tax rates can impose high effective tax burdens, and *vice versa*.

- *Corporate income taxes are just one part of the corporate tax burden.* Corporate income taxes only account for more than one-fifth the average corporate tax burden for five of the 16 new and mature iterations of the eight firm models. Sales, property, and unemployment insurance taxes are highly significant components of a firm's overall tax burden as well.

- *Incentives disproportionately benefit new firms, often to the detriment of established operations.* Because most tax incentives are developed to convince firms to relocate to, or increase hiring in, a given state, they disproportionately benefit new firms, often to the detriment of mature firms which experience higher tax burdens to subsidize these incentives. Businesses with longer time horizons may have cause to be wary of states which too substantially prioritize attracting new industries over maintaining modest rates for established operations.

- *Incentive-heavy tax structures can undermine tax equity even among newly-established firms.* While incentives overwhelmingly favor new firms over mature operations, they often discriminate among firm types as well, with the sort of incentives that favor one operation but do little or nothing to help another. As such, they tend to pick winners and losers and, while potentially making the state highly attractive to specific industries or firm profiles, can limit the state's broader economic appeal across diversified business types.

- *Different firm types experience dramatically different effective tax rates.* Both because different firm types will vary in their exposure to major state and local taxes—distribution centers will be more sensitive to property taxes burdens, for instance, while retail establishments may be more significantly impacted by the sales tax—and because of differential treatment of different firm types under the tax code, businesses can experience dramatically different effective tax rates. The median effective tax rate for new shared service centers (which rarely receive tax incentives) is 26.1 percent, while the median rate for highly favored new R&D centers is 12.0 percent. The median rate for a mature labor-intensive manufacturing firm is 10.3 percent; the median mature distribution center, by contrast, experiences a 34.6 percent tax burden.

- *The impact of corporate income and gross receipts taxes depends heavily on structure and firm type.* Although gross receipts taxes generally have much lower statutory rates than traditional corporate income taxes, they are assessed on firms' total receipts (sometimes less certain subtractions), not just net income. Some firm types benefit from this structure, while others are penalized by it. The relative impact of these two approaches to business taxation for any given firm type can also depend heavily on how nexus or, in the case of corporate income taxes, apportionment is treated.

Tax structure and ease of compliance are also important considerations for many firms but are not the subject of this study, which focuses exclusively on effective tax burdens. Our annual *State Business Tax Climate Index* takes tax structure into account and includes further analysis of the impact of tax structure on business decision-making and economic growth.

OBJECTIVES AND SCOPE

Study Objectives

The overarching objective of *Location Matters* was to develop a bottom-line measure of the tax cost of each of the 50 U.S. states for a select number of model corporations. One of the more unique results of this study is a measure of the total state and local tax burden borne by both mature firms and new investments, which allows us to understand the effects of state tax incentives compared to a state's core tax system.

The study presents four different but equally important ways of looking at the tax competitiveness of each state:

The tax burden (i.e., effective tax rates): This study answers the question most frequently asked by business owners and corporate executives: "How much am I going to pay in total state and local taxes in each state?" The model calculates the total state and local tax burden for each firm type in every state and compares it to the firm's pretax profits to determine the effective tax rate on net income. Here the effective tax rate includes corporate income taxes, capital taxes, unemployment insurance taxes, sales taxes, property taxes, gross receipts taxes, and other general business taxes. Throughout this study, rankings are given for mature firms, with a lower rank indicating a lower overall tax burden.

The impact of incentives: This study makes an important contribution to our understanding of tax neutrality by measuring how much each state's generally available incentive programs affect the tax burden on new investments. This measure allows us to do two things: (1) calculate an effective tax rate for new investments in each state and (2) compare the effective tax rates for mature firms against the effective tax rates for new investments to test the neutrality of each state's tax system for new and existing businesses.

While many state officials view tax incentives as a necessary tool for their states to be competitive, others are beginning to question the costs and benefits of incentives and whether they are fair to mature firms that are paying full freight. Indeed, many existing business owners and executives have reason to object to the generous tax incentives enjoyed by some of their direct competitors, and even firms looking to relocate may have cause to be wary of the rates they will ultimately pay once economic development incentives are no longer available.

A measure of tax burdens faced by different industries and firms: In addition to measuring the different tax burdens faced by existing and new firms, another way of looking at the neutrality of a state's tax system is to measure the effective tax rates faced by firms in different industries. In an ideal world, the tax code should not favor one industry or firm type over another.

As a practical matter, of course, this is very difficult because firms in different industries have very different cost structures, income streams, and profitability. For example, businesses that have more property will and should pay more in property tax. Still, comparing the effective tax rates faced by different firm types can give us an indication of how a tax system favors one industry over another or how neutral the system is to firms of all types.

Chapter 2 looks at which states are most competitive for the eight types of firms. The results show that even among the most or least competitive states, there are wide variations in the tax burdens faced by these eight firm types. Chapter 3 summarizes the results for each state across all of the firm types, for both mature and newly established firms. The Appendices contain additional comparison tables as well as the methodology and assumptions used to perform the calculations.

Study Scope

Location Matters, now in its third edition, is one of the most extensive comparisons of state corporate tax costs ever undertaken. The scope of the study includes:

- All 50 U.S. states, including 99 cities: 50 major urban locations and 49 smaller metropolitan regions. (Due to its small size, all Rhode Island analysis relates to the Providence metropolitan area. The District of Columbia is also included, but only for Tier 1 firm types, and the federal district does not affect state rankings.)

- Eight model firm types representing a range of sectors—a corporate headquarters, a research and development facility, a technology center, a data center, a capital-intensive manufacturer, a labor-intensive manufacturer, a shared services center, and a distribution center.

- Both mature firms and new investment.

- The most variable business tax costs in each state: corporate income taxes, gross receipts taxes, capital and other general business taxes, sales taxes, property taxes, and unemployment insurance taxes.

Locations

This study recognizes that different industries have different location needs. Corporate offices, for example, tend to be located in the largest metropolitan areas with access to airports and financial centers. By contrast, manufacturing facilities tend to be located in or near smaller communities with lower land costs.

Thus, the study divides the locations into two tiers. Tier 1 is a major city in the state while Tier 2 is a mid-size city in the state, generally with a population of less than 500,000. We then locate the model corporate headquarters and research and development facility in Tier 1, and the technology center in the suburbs surrounding the Tier 1 city. The data center, distribution center, shared services center, and manufacturing facilities are all located in a Tier 2 city. Appendix D lists the locations selected as Tier 1 and Tier 2 for each state and discusses the tax characteristics of these locations in greater detail.

Firm Types

The study includes eight firm types that represent a broad cross section of industries that are highly sought by states competing for jobs and investment dollars. These firms are all corporate entities, not S corporations, LLCs, or partnerships that may be taxed under state individual income tax systems. We recognize that flow-through businesses are an important part of the business landscape, but in order to keep the study as manageable as possible, we have limited the analysis to corporate entities.

These eight firm types are:[2]

- A corporate headquarters or regional managing office;
- A scientific research and development facility;
- A technology center offering software, programing, and systems design services;
- A data center providing cloud computing services;
- A shared services center handling operations like accounting, payroll, or compliance;
- A capital-intensive manufacturer such as a steel company;
- A labor-intensive manufacturer such as a bus or truck manufacturer; and
- A distribution warehouse.

These firm types are also very mobile, which means the owners and investors have considerable flexibility in where to locate or relocate based on factors ranging from taxes to labor force. This makes them frequent targets for economic development subsidies and tax incentives.

For each of these firm types, the study assesses the tax costs borne by a mature operation—one that is at least 10 years old—versus those borne by a new facility. Mature operations are typically no longer eligible for any tax incentive programs while new facilities would be eligible for most incentives.

Each of these firms except the corporate headquarters are assumed to have out-of-state customers or clients. Thus, how each state apportions a firm's income is a critical factor in determining a state's effective tax rate for that industry.

Tax Scope

Types of Taxes Included

Businesses collect and remit all kinds of taxes, from employee payroll taxes and property taxes to excise taxes and income taxes. But the scope of this study is limited to taxes that directly impact a business's costs, not taxes that a business collects from third parties and remits to the government.[3] These are also the taxes that vary most across locations.[4] They include:

- ***Corporate net income taxes:*** Forty-four states and the District of Columbia levy a tax on the net income of corporations. South Dakota and Wyoming do not have a corporate income tax or other business-level tax, while the remaining four states—Nevada, Ohio, Texas, and Washington—levy a gross receipts tax rather than a corporate income tax. Delaware, Tennessee, and Oregon impose both. Massachusetts and Nevada also impose payroll taxes as a general business tax. Of the states with a corporate income tax, 30 and the District of Columbia levy a single, flat rate on all corporate income. The remaining 14 states have graduated, or multi-bracket, rate structures.

2 Detail on the structure and financial characteristics of these firm types can be found in Chapter 2 and in Appendix D.
3 This means, for instance, that we calculate a company's sales tax burden as the sales taxes it pays on the purchase of goods and services (business inputs), not the sales taxes it collects from customers on sales of its own goods and services.
4 For more detail on the types of taxes included in this study, see the methodology section of Appendix D.

- ***Gross receipts and franchise taxes:*** Nevada, Ohio, Texas, and Washington do not have a corporate income tax but do have a business tax that is levied on the gross receipts of the firm or, in the case of Texas, on the business's gross margins. Delaware, Oregon, and Tennessee have state-level gross receipts taxes in addition to corporate income taxes, while gross receipts taxes may be levied at the local level in Pennsylvania, Virginia, and West Virginia. New Hampshire has an alternative minimum tax in addition to the corporate income tax; a firm must pay the greater of the income tax or the business enterprise tax, which is a variant of an addition-method value-added tax (VAT). Fifteen states levy some sort of capital stock tax, often called franchise taxes. Compared to corporate income taxes, gross receipts taxes have the advantage of a low rate on a broad base, but also lead to economic distortions such as tax pyramiding, high effective rates on low-margin businesses, and firms experiencing losses still face corporate tax liability.

- ***Property taxes:*** Property taxes are especially important to businesses because commercial property is frequently taxed at a higher rate than residential property. Additionally, localities and states often levy taxes on the personal property or equipment owned by a business. Since property taxes can be a large burden on businesses, they can have a significant effect on location decisions.

- ***Unemployment insurance (UI) taxes:*** Unemployment insurance taxes are paid by employers into the UI program to finance benefits to workers recently unemployed. Unemployment insurance tax rates in each state are based on a schedule of rates which, for any particular business, is determined by the business's experience rating, or history of claims. The rate is then applied to a taxable wage base (a predetermined portion of an employee's wages) to determine UI tax liability. Competitive states tend to have rate structures with lower minimum and maximum rates and a modest wage base.

- ***Sales taxes on business equipment or inputs:*** In addition to levying sales taxes on consumer goods, many states extend their sales taxes to some business services, equipment, machinery, and other inputs. These taxes can add considerably to the cost of new investment and the final price of products as the sales tax cascades through the supply chain (tax pyramiding). Highly competitive states tend to tax fewer business inputs, which greatly reduces the cost of doing business in the state, especially for capital- or equipment-intensive firms. Note that the retail sales tax collected by businesses on sales to their customers is not included in this analysis, as that tax burden is primarily borne by their customers, not the business itself.

Who Bears the Burden of the Tax?

For the purposes of this study it is assumed that the business bears the entire burden of the tax, which is why the owners are so sensitive to the costs and why states compete to offer tax incentives.

In this study, taxes are considered a cost of doing business, not just a factor to be passed on to consumers or shared with workers. A good example is the sales tax on business equipment which, theoretically, could be absorbed into the price of the product. However, this tax can substantially increase the cost of building a multimillion-dollar manufacturing facility and, thus, make a state with no sales tax on equipment a far more attractive location. In an increasingly interconnected economy, moreover, companies must compete with rivals in other states or even across the world, many of which do not bear these burdens, limiting their ability to pass these costs along to consumers.

Economists, however, typically look at business taxes in terms of who bears the actual economic burden of the tax, not just the legal burden. In economic terms, the real burden (or incidence) of business taxes is borne by customers through higher prices, workers through lower wages, or owners and shareholders through lower returns on their investment.

The Tax Foundation's *State-Local Tax Burden Rankings* report does attempt to account for the shifting of business tax burdens by allocating these costs to customers, workers, and shareholders based on various demographic and geographic factors. By contrast, *Location Matters* measures only the legal incidence of these direct business taxes. The effective tax rates calculated in this study are based on the firm's pretax income and the total amount of tax that impacts the firm's direct costs.

Other Tax Factors

Nexus and Apportionment

Nexus is the legal term for whether a state has the power to tax a business. Most states rely on economic—not physical—nexus standards, meaning that they tax companies which do business in the state regardless of whether they have a physical presence there. This authority is, however, limited by federal law, and states cannot assert corporate income tax nexus against businesses which only solicit the sale of tangible goods—not services—into a state without having payroll and property there. In recent years, states have become increasingly aggressive in asserting nexus with out-of-state companies.

Firms with nexus in more than one state must use state rules to *apportion* their profits, determining how much of their income each state may tax. Historically, profits were apportioned among states in the ratio of the company's property and payroll in each state. For example, if 50 percent of a firm's payroll was based in Colorado and 50 percent of a firm's property was in Colorado, Colorado would be able to tax 50 percent of the firm's profits. Long the historical standard, this property-and-payroll formula was unsuccessfully recommended by the congressional Willis Commission to be the uniform national standard in 1959.

States resisted this recommendation and instead as a whole adopted the Uniform Division of Income for Tax Purposes (UDITPA), also known as the "three-factor formula." This formula apportions profits based on each state's share of the firm's overall property, payroll, and sales (each of the three "factors" is averaged equally). For example, if 50 percent of a firm's payroll was based in Kansas and 50 percent of the firm's property was in Kansas, but only 1 percent of the firm's sales were in the state, then Kansas would be able to tax approximately 34 percent of the firm's profits if it used a three-factor formula.

Over the past few years, many states have increased the weight of the sales factor, with 29 states relying on it completely. This change has had the effect of *reducing* tax burdens for businesses that have most of their property and payroll in the state but only a small proportion of their national sales in the state, while *increasing* tax burdens for out-of-state companies that have minimal property or payroll in the state but a large proportion of their national sales in the state. For example, if 50 percent of a firm's payroll is based in Colorado and 50 percent of the firm's property is in Colorado, but only 1 percent of the firm's sales were in Colorado, Colorado would be able to tax 1 percent of the firm's profits because it uses a single sales factor formula.

Since many businesses make sales into states where they do not have nexus, businesses can end up with "nowhere income," income that is not taxed by any state. To counter this phenomenon, many states have adopted what are called "throwback" or "throwout" rules to identify and tax profits earned in other states but not taxed by those states. In addition to throwback and throwout rules for sales of tangible property, many states have throwout rules for services.

Under "throwback" rules, such profits are taxed by the state where the sale originated. Under "throwout" rules, such profits are ignored in calculating the state's share of total profits, by subtracting them from the apportionment denominator. For example, since Colorado has a single sales factor formula and a throwback rule, a firm with only 1 percent of its sales in Colorado and 75 percent of its sales in a state where it is not subject to an income tax would see those sales "thrown back" to the state. Colorado would thus be able to tax 76 percent of the firm's profits.

Our study's model firms (except for the corporate headquarters) each have all their property and payroll located in one state, while sales in each state, or, where applicable, the benefits of services received, are in proportion to the relative population of each state. In addition, we assume that each model firm has the right to apportion its income. While this may be a simplified approach for multistate firms, it still permits more detailed and accurate analysis than any previous study. However, readers should be cautioned that our assumptions can sometimes lead to results that may be uncommon in the real world. For example, firms in states with a single sales factor and no throwback face an extremely low tax burden due to the assumptions we make about the business activities of our model firms, including their lack of nexus with other states into which they have sales.

Incentives: What Is Included and How Do They Affect Certain Firms?

Many states provide tax credits or tax incentives with the goal of attracting new investment or encouraging large out-of-state firms to relocate to their states. These credits vary widely in size and scope. Some are aimed at incentivizing the hiring of new workers, while others are meant to offset the investment costs of new plants and equipment. While tax incentives may reduce these costs for some taxpayers, they can be a windfall for a firm that would have expanded anyway, can leave out or even drive up tax costs for existing firms, and can complicate the tax system.

The major tax incentives that are measured in this study are:

New Job Tax Credits: These credits offer specific dollar amounts for each new job a company creates over a specified period of time. To receive the credit, the job must generally be considered "qualified" by state officials, with credits typically only available to certain types of industries. Job tax credits could encourage some firms to hire new employees even if they would be better off spending more on new equipment.

For instance, Arizona offers $3,000 per net new job to approved businesses that create jobs within three years, while New Mexico offers credits worth 8.5 percent of new payroll, up to $12,750 per job, for qualifying new employees. Credits in 19 states and the District of Columbia were considered applicable to one or more of the model firms in this study.

Investment Tax Credits: Investment tax credits offer an offset against tax liability if the company invests in new property, plants, equipment, or machinery in the state offering the credit. Sometimes, the new investment will have to be "qualified" and approved by the state's economic development office.

To cite one example, Indiana offers a tax credit worth 10 percent of eligible capital investment, while Florida offers a credit worth 5 percent of eligible investment for up to 20 years. Each of this study's model firms is eligible for Indiana's incentive. In most states, however, investment incentives are not as broadly available, often being targeted at manufacturing investment. Twenty-four states' credits were considered applicable to one or more of the model firms in this study.

Research and Development (R&D) Tax Credits: R&D tax credits reduce the tax burden of companies that invest in "qualified" research and development activities. The theoretical argument for R&D tax credits is that they encourage basic research that may be good for society in the long run but not necessarily profitable in the short run. Opponents argue that much of the R&D work supported by the credits would have occurred anyway, and that state-level R&D credits are less effective than federal credits because benefits of successful R&D are not limited to just that state.[5]

As one example, Arizona offers a 24 percent tax credit for the first $2.5 million of in-state R&D expenses, and 15 percent for expenses beyond that level.[6] Thirty-five states' credits were considered applicable to one or more of the model firms in this study.

Payroll Withholding Tax Rebates: These rebates return to a company a portion of state income taxes withheld from employees' wages for new hires. These rebates must generally be pre-approved by state officials and are usually measured by job creation over a period of years. These rebate programs are often difficult to administer efficiently, creating a compliance burden for the taxpayer.

As one example, Maine typically rebates 60 percent of new employees' withholding for five years, subject to certain conditions. Sixteen states' payroll withholding tax rebates were considered applicable to one or more of the model firms in this study.

Property Tax Abatements: State and local abatements reduce property tax liability for certain types of industries or in certain areas by applying credits to the tax that would otherwise be due. While some abatements are broadly available, many are awarded to certain projects as part of economic development packages designed to increase investment or attract new employers. Critics argue that abatements merely shift the location of investment and jobs rather than inducing new investment and new jobs. Abatements can also strain local resources by growing the level of services while keeping new facilities off the property tax rolls.

As one example, Kansas waives property taxes on property associated with new or expanding manufacturing, research and development, and distribution companies for 10 years.[7] Property tax abatements in 27 states were considered applicable to one or more of the model firms in this study.

Other: Other discretionary tax incentives such as financing programs, zone-based benefits (such as enterprise zones and economic development zones), "deal-closing funds," and the like are not included in this analysis. Assumptions were made to compute benefits if incentive programs had discretionary components, such as a sliding scale of benefits based on project parameters.

Other Factors Affecting New Firms Differently from Mature Firms

While the availability of targeted tax incentives to new firms is a major reason some new firms in many states pay lower tax bills than otherwise equivalent mature firms, two other factors we identified can also produce significant differences.

5 See Daniel Wilson, "Beggar Thy Neighbor? The In-State, Out-of-State, and Aggregate Effects of R&D Tax Credits," *The Review of Economics and Statistics* 91:2 (May 2009), 431-436.

6 Arizona Commerce Authority, "Research and Development," https://www.azcommerce.com/incentives/research-development.

7 Kansas Department of Revenue, "Property Tax Abatements," https://www.ksrevenue.org/prtaxincentives-proptaxabate.html.

Sales Taxes on Equipment: Public finance scholars agree that a properly designed sales tax should only tax final retail sales and exempt so-called "business-to-business" transactions. When firms must pay sales tax on their purchases of raw materials, machinery, and other inputs, these taxes become part of the price of the final product sold to consumers. Different products will then have different hidden taxes on taxes (pyramiding), a source of economic distortion.

Most states have sought to minimize this distortion by specifically exempting some (but not all) new manufacturing machinery and equipment from the sales tax. In these states, our study shows new firms purchasing equipment face lower sales tax obligations than in states without such a sales tax exemption.

Depreciation and Property Taxes on Machinery and Inventory: While virtually all local governments and many states levy property taxes on a company's land and building improvements, 38 states also impose property tax on the value of a company's machinery, and 10 states impose property tax on the value of a company's inventory. These taxes especially impact large manufacturing operations, retail stores, and other businesses with large amounts of machinery or merchandise.

Unlike land, buildings and machinery lose their value over time. This asset depreciation results in many mature firms in our study paying less in property taxes than new firms.

Caveats and Limitations

Information limitations: The study was based on the applicable tax law and available data as of January 1, 2021. We understand that a number of states have tax changes that are being phased in over multiple years, but because those future changes can be revoked at any time, they have not been considered in this study. We do, however, note any interim or forthcoming rate changes on state-specific pages.

Model firm limitations: This study measures the tax burden faced by only eight model corporations and, as such, cannot represent the universe of industries for which states compete. However, the eight firms included in this report are highly mobile—meaning they can be located in almost any state—and are highly sought after by all 50 states. So while the results in this study may not be representative of all industries, they do represent a good sample of competitive firm types.

Business tax burdens don't necessarily reflect the quality of state tax systems: Indeed, the study frequently shows that different states can impose the same tax burdens on the same firm type but achieve that result in very different ways. For example, according to our cost model, Massachusetts and Missouri have virtually identical effective tax rates for mature corporate headquarters (18.0 and 18.1 percent respectively). Nevertheless, Massachusetts achieves this result with an 8 percent corporate income tax rate while Missouri's rate is half that at 4 percent. Missouri's sales and property tax burden for this type of firm, however, is higher than the burden the firm would face in Massachusetts.

Similarly, the tax systems in Wyoming and Virginia produce similar effective tax rates for mature labor-intensive manufacturing operations, respectively 5.3 and 6 percent, even though Virginia imposes a 6 percent corporate income tax while Wyoming forgoes one entirely. However, despite its 6 percent statutory corporate income tax rate, Virginia offers a significantly lower unemployment insurance tax burden and lower sales tax obligations for this firm type, yielding relatively similar effective rates.

This study does not reward or penalize states for how they achieve their rankings, even if a state's tax measures cause distortions, unintended economic consequences, or high compliance costs for firms. Issues of this nature are addressed by the Tax Foundation's *State Business Tax Climate Index*.

Assumptions matter: Like any study of this magnitude, the assumptions can influence the results. For example, in order to keep the study as tractable as possible, we generally assumed that our model firms do business in all 50 states, but only have significant (or material) nexus—employees, property, and facilities—in their home state. In other words, they make something in their home state and ship it to third parties in all other states. However, it is also assumed that the businesses have a nominal nexus in one or more other states, thus qualifying them as interstate corporations eligible to apportion their income between states.

This highly simplified assumption probably does not reflect the operations of most multistate businesses. Most multistate firms have sales personnel or subsidiaries in other states to market and distribute their products. This assumption greatly favors states that have single sales factor apportionment over those that have traditional three-factor formulas. Thus, it is possible that a state with a very high corporate tax rate and a single sales factor—such as Pennsylvania, which has a 9.99 percent corporate rate—can score relatively well because only a fraction of the firm's total sales will be allocated to the home state based on each state's share of the national population.

Under different assumptions, that same state may not score as favorably. For example, if we compare the tax burdens of firms that have no out-of-state sales, as is the case in our model corporate headquarters, the apportionment factor is not an issue because all of the income is taxed at the in-state rate. Thus, assuming that property and sales taxes are equal factors in the apportionment formula, the in-state firm facing Pennsylvania's 9.99 corporate tax rate almost certainly ends up having a higher tax burden than a similar firm in neighboring Maryland, which has an 8.25 percent corporate tax rate.

District of Columbia: Because the District of Columbia is a highly dense urban city, the model only measured the tax burden for Tier 1 firms: a corporate headquarters, an R&D facility, and a technology center. These effective tax rates are shown in summary tables, but D.C. is not included in state rankings.

FIRM OVERVIEWS AND EFFECTIVE TAX RATES

This chapter presents lawmakers, development officials, and business leaders with an overview of the effective tax rates imposed on each of our eight model firm types and a summary of how different elements of state tax systems contribute to the aggregate tax burdens experienced by each of the model firms.

Our eight model firm types—a corporate headquarters, a research and development (R&D) facility, a technology center, a data center, a shared service center, a distribution center, a capital-intensive manufacturer, and a labor-intensive manufacturer—are very mobile, which means the owners or investors have considerable discretion on where they locate the firm based on factors ranging from taxes to labor force. This makes them frequent targets for economic development subsidies and tax incentives.

For each firm type, our model assesses the tax costs borne by a mature firm—one that is at least 10 years old—versus those borne by a new facility. Mature firms are typically no longer eligible for any tax incentive programs while new facilities would be eligible for most incentives. Except for the corporate headquarters, these firms are assumed to have customers or clients out of state. Thus, how each state apportions a firm's income can be a critical factor in determining a state's effective tax rate for that industry.

The following pages enumerate the effective tax burdens for both new and mature firms in each state. The total tax burden includes corporate income taxes, unemployment insurance (UI) taxes, sales taxes, property taxes, and any sundry business taxes such as capital stock and gross receipts taxes that exist in certain states and cities. For ease of comparison, we translate the tax burden into an effective tax rate on net income so that business leaders can understand how much pretax income would go to pay all state and local tax costs.[8]

These pages also provide a short synopsis of the attributes of state tax systems that matter most for each firm type. For some firms, statutory corporate income tax rates are highly significant; for others, effective property tax rates may comprise a major part of the overall tax burden. Certain apportionment rules are crucial to some firm types but less important to others. And incentive-heavy tax structures can have dramatically distinct impacts on different firm types.

One of the more interesting aspects of this study is the comparison of a state's effective tax rates for mature firms with its effective rates for new operations after we take incentive programs into account. Some states perform well on both measures while others do poorly on both. On the other hand, some states will produce favorable outcomes by one measure but less desirable outcomes by the other because of the complex interaction of the myriad tax variables.

8 See the methodology section, Appendix D, for a full explanation.

CORPORATE HEADQUARTERS

	Mature Rank	Mature Rate	New Rate	New Rank
WY	1	6.8%	8.6%	3
MT	2	9.4%	11.0%	5
NC	3	10.4%	7.1%	1
NV	4	10.8%	13.3%	12
ND	5	11.2%	12.7%	9
SD	6	11.3%	13.1%	10
OK	7	12.0%	8.1%	2
VA	8	12.1%	15.0%	21
AK	9	12.2%	13.5%	13
IN	10	13.2%	13.8%	14
HI	11	13.2%	14.2%	16
ID	12	13.3%	15.0%	21
NH	13	13.3%	14.0%	15
FL	14	14.0%	16.9%	28
AZ	15	14.2%	15.3%	23
NM	16	14.4%	14.6%	18
KY	17	14.5%	12.7%	8
DE	18	14.7%	13.1%	11
AR	19	15.0%	11.8%	6
AL	20	15.1%	9.1%	4
MD	21	15.9%	18.8%	33
UT	22	16.0%	18.1%	31
TX	23	16.0%	20.0%	36
TN	24	16.2%	18.0%	30
GA	25	16.6%	17.6%	29
VT	26	16.7%	16.4%	26
OH	27	16.7%	16.6%	27
MS	28	17.4%	14.8%	19
WA	29	17.6%	21.0%	39
CA	30	17.6%	19.9%	35
LA	31	17.9%	12.2%	7
MA	32	18.0%	21.1%	41
CO	33	18.0%	21.0%	40
MO	34	18.1%	15.2%	22
ME	35	18.8%	21.0%	38
NE	36	18.8%	14.3%	17
SC	37	19.3%	15.9%	25
KS	38	19.4%	15.7%	24
WI	39	19.4%	18.8%	32
WV	40	19.7%	19.0%	34
OR	41	20.2%	22.1%	42
RI	42	20.5%	23.2%	43
IL	43	21.8%	20.4%	37
CT	44	21.9%	23.9%	44
MI	45	22.1%	25.6%	46
NJ	46	22.7%	24.6%	45
PA	47	24.4%	26.0%	47
MN	48	25.7%	28.1%	49
IA	49	26.7%	27.6%	48
NY	50	31.3%	33.5%	50
DC	(35)	18.5%	21.8%	(42)

For this firm type, we modeled a high-wage regional corporate office with 200 employees, including management, financial operations, IT, sales, and administrative personnel. Our model firm has capital investment of $10 million and leases 60,000 square feet of Class A downtown office space. Its revenue is approximately $45 million with a gross profit ratio of 17 percent and earnings before tax of 14 percent. The equity ratio is assumed to be 100 percent. Our apportionment methodology assumes 50 percent of property and payroll to be located in the state. The income-producing activities of the office are assumed to occur in state and relate exclusively to the marketplace of the state.

Many of the states with the lowest total tax costs for mature corporate headquarters do without one or more of the major taxes, such as a corporate income or sales tax. Wyoming, which forgoes corporate income taxes, offers the lowest effective tax rate for mature corporate headquarters at 6.8 percent, and Montana, which does without a state sales tax, has the second lowest burden at 9.4 percent. A highly competitive business tax structure and favorable legal and regulatory environment combine to make Wyoming one of the most popular states in which to incorporate. Conversely, high statutory corporate tax rates are responsible for the preponderance of the tax burdens experienced by these firms; five of the 10 highest tax cost states for mature corporate headquarters have statutory corporate income tax rates above 9.0 percent, led by New Jersey's 11.5 percent top marginal rate.

The majority of the lowest tax burden states for new corporate headquarters offer generous tax incentive programs to minimize these firms' tax burdens. Six of the 10 states with the lowest tax costs for new corporate headquarters offer generous withholding tax credits that greatly reduce the corporate income tax burden for these operations. Conversely, high tax cost states for new firms tend to combine high tax rates with few incentive programs.

Unemployment insurance taxes tend to comprise a relatively modest share of the overall tax burden for high-wage firms like a regional corporate headquarters, while sales and property tax burdens can account for a substantial share of firms' total liability, especially for new firms receiving generous income tax incentives.

RESEARCH AND DEVELOPMENT FACILITY

Our model research and development (R&D) facility is a pharmaceutical R&D facility for product development. The facility is assumed to have 50 employees, including management, business and financial, computer and math, science, and administrative positions. We assume capital investment of $8 million and the lease of 30,000 square feet of Class A suburban commercial space. Annual revenue is approximately $14 million with earnings before tax of 14 percent and an equity ratio of 100 percent. The apportionment methodology assumes 100 percent of property and payroll are in state. While all income-producing activities are assumed to be performed in state, those activities are also assumed to serve clients nationally and therefore generate benefits and relate to the marketplaces of all 50 states in proportion to the relative population of each state.

State economic development policies tend to prize R&D facilities and heavily incentivize them through the tax code. As such, while some states (like Arkansas and Wyoming) offer a highly competitive tax environment for mature R&D facilities even in the absence of R&D tax credits, most low tax cost states for these firms provide substantial R&D incentives which limit, or even eliminate, income tax liability. This is particularly true for new R&D operations but can apply to mature operations as well.

New R&D facilities experience a negative overall tax liability in three states (Hawaii, New York, and Nebraska). In Hawaii, available credits are so generous that they even exceed the mature firm's total tax liability. With income tax burdens likely to be low, property taxes—especially where they fall on equipment—typically represent the largest share of an R&D firm's total tax liability by a substantial margin.

Since an R&D facility's income is assumed to be mostly outside the home state, these firms' income tax burdens are greatly reduced in states which use single sales factor apportionment in combination with market-based sourcing rules. Such sourcing has become increasingly common in recent years, but states which have retained traditional cost of performance or income-producing activity (IPA) rules are at a disadvantage.

States that impose above-average tax costs on R&D firms tend to (1) offer few incentives, (2) have sourcing rules that expose 100 percent of the firm's income to in-state taxation, and (3) impose heavy unemployment insurance, sales, or property tax burdens.

	Mature Rank	Mature Rate	New Rate	New Rank
HI	1	-13.0%	-18.2%	1
GA	2	5.1%	5.4%	7
WY	3	6.5%	11.8%	18
PA	4	7.1%	9.5%	12
ND	5	7.4%	11.4%	15
IN	6	7.5%	10.2%	14
MD	7	7.6%	10.2%	13
CA	8	8.5%	14.3%	26
AR	9	8.7%	9.4%	10
DE	10	8.8%	5.6%	8
NC	11	8.8%	3.5%	5
SD	12	8.9%	13.1%	21
OR	13	9.5%	14.7%	29
AZ	15	9.6%	15.7%	33
UT	15	9.6%	13.4%	22
KY	16	10.1%	12.1%	19
OK	17	10.2%	2.1%	4
NE	18	10.4%	-0.6%	3
NV	19	10.5%	17.8%	38
ME	20	10.6%	16.5%	35
VT	21	10.7%	11.5%	16
ID	22	11.1%	13.7%	24
TN	23	11.7%	15.4%	31
WI	24	11.9%	13.9%	25
NM	25	12.0%	5.9%	9
MT	26	12.0%	14.9%	30
VA	27	12.4%	19.8%	40
CO	28	12.7%	20.7%	43
AK	29	12.9%	15.5%	32
NJ	30	13.2%	16.3%	34
MO	31	13.3%	14.7%	27
TX	32	13.5%	21.8%	47
FL	33	13.6%	19.4%	39
OH	34	13.6%	13.4%	23
IA	35	13.7%	17.8%	37
WA	36	13.8%	20.1%	41
MA	37	14.3%	21.2%	44
LA	38	14.4%	9.4%	11
RI	39	14.7%	25.9%	50
NH	40	14.7%	16.7%	36
CT	41	15.3%	25.6%	49
MN	42	15.4%	20.4%	42
MS	43	15.4%	13.0%	20
NY	44	15.6%	-2.4%	2
AL	45	15.9%	5.1%	6
MI	46	16.0%	25.4%	48
IL	47	16.4%	14.7%	28
SC	48	17.5%	21.7%	46
WV	49	19.4%	21.5%	45
KS	50	20.4%	11.7%	17
DC	(23)	11.7%	22.4%	(48)

TECHNOLOGY CENTER

	Mature Rank	Mature Rate	New Rate	New Rank
WY	1	4.87%	10.26%	8
IN	2	6.68%	12.17%	11
PA	3	7.69%	13.49%	15
SD	4	8.11%	13.81%	16
NC	5	8.17%	5.41%	3
CA	6	8.37%	16.36%	24
KY	7	8.41%	10.37%	9
NV	8	8.63%	16.66%	26
AZ	9	8.78%	18.06%	31
GA	10	8.80%	12.23%	12
UT	11	8.93%	16.27%	23
ME	12	9.29%	17.26%	28
MD	13	9.63%	19.63%	36
OK	14	9.90%	6.88%	5
NE	15	10.08%	0.46%	2
WI	16	10.57%	14.34%	18
ND	17	10.59%	15.82%	21
TN	18	10.74%	17.76%	30
OR	19	10.84%	15.88%	22
HI	20	10.96%	13.89%	17
MT	21	11.23%	15.72%	20
CO	22	11.76%	23.22%	43
VA	23	11.85%	22.76%	40
AR	24	12.21%	9.59%	6
RI	25	12.42%	25.92%	48
NM	26	12.52%	12.12%	10
TX	27	12.70%	24.50%	45
WA	28	12.75%	23.12%	41
CT	29	12.85%	24.39%	44
NJ	30	12.87%	20.24%	37
MO	31	12.94%	13.25%	14
VT	32	12.95%	16.59%	25
FL	33	13.09%	18.18%	32
ID	34	13.29%	18.48%	33
OH	35	13.63%	17.08%	27
AL	36	14.13%	6.49%	4
DE	37	14.56%	13.02%	13
AK	38	14.69%	18.67%	34
NH	39	14.69%	17.50%	29
MS	40	14.74%	15.46%	19
NY	41	15.06%	9.81%	7
MN	42	15.49%	24.68%	46
MI	43	16.01%	27.39%	50
LA	44	16.61%	-26.15%	1
IA	45	16.71%	25.61%	47
SC	46	17.00%	22.60%	39
MA	47	17.95%	27.29%	49
WV	48	18.48%	23.18%	42
KS	49	18.83%	19.49%	35
IL	50	19.34%	21.07%	38
DC	(10)	8.78%	19.26%	(35)

Our model technology center has 150 employees in management, financial, sales, administrative, and, chiefly, computer and mathematical occupations. This firm leases 50,000 square feet of Class A downtown space. With a capital investment of $25 million, the firm has $39 million in revenue with a gross profit ratio of 70 percent and earnings before tax of 8 percent. The equity ratio is assumed to be 75 percent, and the apportionment methodology assumes 100 percent of property and payroll are in state. The income-producing activities of the technology center are assumed to occur in state, with the benefit of those activities relating to the marketplaces of all 50 states in proportion to the relative population of each state, since the technology center is assumed to serve clients nationally.

The mature technology center's overall tax burden is substantially driven by income and property taxes, with apportionment and sourcing rules playing a substantial role, along with the inclusion of equipment in the property tax base.

Seven of the 10 states with the lowest overall tax burdens on technology centers use market-based sourcing for service income, which significantly reduces income tax burdens by limiting the amount of income exposed to the income tax. The other three—Nevada, South Dakota, and Wyoming—forgo a corporate income tax altogether. All 10 also have average to below-average property tax burdens.

Except for South Carolina, all 10 of the lowest-ranked states impose a corporate income tax rate above 6 percent, but South Carolina has an unfavorable sourcing rule, which drives up the effective tax rate despite the moderate statutory income tax rate. High property taxes and unfavorable sourcing rules characterize most states in the bottom 10 for this operation.

Due to job creation credits, offered by 18 states, and investment credits, offered by 17 states, new technology centers enjoy a negative average effective income tax rate in many states. In five of the 10 states with the lowest tax burdens on new technology centers, incentives are offered at or above $4,500 per job. Low effective tax rates due to incentives can yield large differences in the treatment according to firm maturity by the same state. By way of example, New York ranks seventh for new firms due to generous incentives, but ranks 41st for mature firms, which do not derive a similar benefit.

In addition to a lack of incentives, new technology centers tend to experience high overall effective rates in states which include equipment in the property tax base and have high property tax rates.

DATA CENTER

Our model data center is an independent operation with 50 employees in management, finance, computer and mathematics, sales, and office and administrative support occupations. This firm owns 250,000 square feet of suburban industrial space and has $500 million in capital investment. The firm has revenues of $170 million with a gross profit ratio of 82 percent and earnings before tax of 15 percent. The equity ratio is assumed to be 30 percent, and the apportionment methodology assumes 100 percent of property and payroll are in state, as are income-producing activities. However, those activities are assumed to serve clients nationally and therefore generate benefits and relate to the marketplaces of all 50 states in proportion to the relative population of each state.

Of all firms in our study, mature data centers have the greatest sales tax exposure as a percentage of overall tax liability, with sales taxes responsible for an average of 41 percent of the overall tax burden. Nevertheless, both income and property taxes play important roles as well.

If data center equipment is exposed to the sales tax, this dramatically drives up the firm's tax costs. Consequently, states which exclude equipment (including electronics) from the sales tax base tend to be more favorable to data centers. For mature firms, seven of the top 10 states mostly avoid taxing business inputs. Of the remaining states in the top 10, Oregon does not levy a sales tax, and South Dakota makes up for an overly broad base with low property and income tax burdens, while Hawaii compensates with extremely generous tax incentives.

In addition to Oregon, four other states—Alaska, Delaware, Montana, and New Hampshire—forgo a statewide sales tax. While the lack of a sales tax is beneficial to data centers in these states, all four feature income tax burdens at least twice the average rate, and, as a result, rank in the middle of the pack.

Single sales factor apportionment and market sourcing are extremely beneficial to data centers, and nine of the 10 states with the lowest overall tax burden either forgo a corporate income tax altogether or use market-based sourcing and single sales apportionment, with Hawaii again the exception.

At the other end of the scale, the 10 states with the highest tax burdens for mature data centers all tax an above average share of business inputs and have apportionment and sourcing rules that expose 100 percent of the data center's income to the state's corporate income tax.

States frequently offer incentives to new data centers, with investment credits available in 16 states, property tax abatements in 15, withholding credits in 14, and job creation credits in 13.

While these incentives lower the overall tax burden for new firms, they can be short-lived. For instance, West Virginia offers extremely generous investment credits and property tax abatements worth almost $110,000 per data center employee, which yields an overall effective tax rate significantly below average. However, mature firms of the same type and in the same state experience an overall effective tax rate 60 percent higher than the new firm and well above the national average because the state's incentives, while still generous, are attenuated from those offered to new firms.

	Mature Rank	Mature Rate	New Rate	New Rank
NE	1	1.01%	3.08%	2
WY	2	1.88%	7.70%	10
NY	3	2.16%	6.20%	6
UT	4	2.76%	6.28%	7
AZ	5	2.98%	12.06%	22
OR	6	3.00%	13.36%	24
MO	7	4.20%	9.31%	14
SD	8	4.93%	18.19%	30
MI	9	4.96%	21.00%	31
HI	10	5.11%	7.39%	9
TN	11	5.25%	6.81%	8
WA	12	5.30%	17.46%	28
IN	13	5.75%	10.09%	17
OK	14	5.94%	12.13%	23
MT	15	6.28%	5.47%	5
PA	16	6.88%	22.55%	33
OH	17	7.46%	2.14%	1
NJ	18	7.50%	27.12%	35
IA	19	7.91%	17.20%	27
NH	20	8.10%	9.65%	16
WI	21	8.65%	32.16%	36
MN	22	8.73%	4.21%	3
VA	23	8.75%	15.04%	26
ND	24	8.92%	21.03%	32
DE	25	8.93%	5.19%	4
AK	26	9.21%	9.29%	13
ME	27	9.22%	37.62%	41
MD	28	9.53%	35.65%	38
NV	29	9.81%	11.25%	20
GA	30	10.12%	8.52%	11
CA	31	10.14%	36.75%	40
KY	32	10.63%	14.25%	25
CT	33	11.06%	45.06%	44
NC	34	11.12%	11.62%	21
TX	35	11.61%	24.43%	34
CO	36	12.44%	50.52%	46
NM	37	12.94%	34.27%	37
ID	38	13.29%	10.46%	18
VT	39	13.67%	42.70%	43
RI	40	13.68%	57.17%	49
FL	41	14.12%	17.81%	29
WV	42	14.34%	8.90%	12
MS	43	14.65%	11.11%	19
AL	44	14.87%	35.95%	39
AR	45	16.28%	45.77%	45
IL	46	16.68%	9.62%	15
LA	47	18.67%	52.61%	47
MA	48	18.77%	53.02%	48
SC	49	19.05%	40.40%	42
KS	50	21.00%	64.42%	50

SHARED SERVICES CENTER

	Mature Rank	Mature Rate	New Rate	New Rank
WY	1	12.01%	17.20%	8
CA	2	13.76%	20.11%	12
AL	3	15.04%	6.17%	4
NC	4	15.07%	21.21%	13
AZ	5	15.42%	22.99%	17
KY	6	17.22%	3.91%	3
OR	7	17.50%	23.97%	21
TN	8	17.52%	23.08%	18
OK	9	17.67%	3.84%	2
ID	10	18.16%	22.15%	16
VA	11	18.39%	24.09%	23
MT	12	18.43%	23.37%	19
NM	13	18.47%	23.59%	20
SD	14	18.50%	24.02%	22
NE	15	18.95%	25.32%	24
DE	16	19.39%	15.66%	6
AR	17	19.65%	9.39%	5
GA	18	20.13%	3.53%	1
MO	19	21.06%	21.33%	15
ND	20	21.25%	26.46%	27
WI	21	21.46%	18.27%	10
HI	22	21.72%	26.06%	26
MD	23	21.74%	32.36%	31
IL	24	22.05%	15.85%	7
ME	25	22.11%	30.22%	30
MS	26	22.34%	17.32%	9
OH	27	22.53%	21.25%	14
FL	28	24.18%	33.17%	32
NV	29	24.84%	34.25%	34
TX	30	25.34%	36.22%	37
AK	31	25.69%	29.64%	29
VT	32	26.12%	26.06%	25
WA	33	26.50%	36.02%	36
UT	34	26.66%	34.93%	35
LA	35	27.55%	18.73%	11
RI	36	28.04%	42.06%	45
MI	37	28.11%	39.43%	42
IN	38	28.30%	37.44%	41
CO	39	28.44%	40.97%	43
NH	40	28.64%	33.68%	33
PA	41	28.95%	37.23%	39
CT	42	29.32%	41.56%	44
SC	43	30.38%	29.16%	28
WV	44	30.79%	37.04%	38
MN	45	33.93%	44.03%	46
IA	46	35.23%	45.33%	47
NJ	47	37.27%	47.74%	48
MA	48	38.36%	51.27%	50
NY	49	39.89%	51.18%	49
KS	50	42.10%	37.38%	40

Our model shared services center provides sales and administrative support to other corporations. It has 500 employees, most of whom are in sales or office and administrative support occupations. The business has a capital investment of $10 million and leases 100,000 square feet of suburban office space. It brings in $40 million in annual revenue with earnings before tax of 7 percent. The equity ratio is assumed to be 100 percent, and the apportionment methodology assumes that payroll and property are in state, as are income-producing activities. However, those activities are assumed to serve clients nationally and therefore generate benefits and relate to the marketplaces of all 50 states in proportion to the relative population of each state.

Unemployment insurance (UI) taxes play an outsized role in this firm's tax burden because shared services centers represent a labor-intensive business. As unemployment insurance taxes are paid on a per-employee basis, state UI tax rates take on considerable salience for low-wage employers. Consequently, UI taxes tend to outstrip corporate income taxes and rank second only to property taxes as a share of a shared services center's overall tax burden. Property taxes represent, on average, the single largest tax expenditure for both new and mature shared services centers.

The impact of corporate income taxes, meanwhile, is heavily dependent upon sourcing rules. For instance, California imposes the second-lowest effective tax rate on mature shared services centers despite the state's high statutory corporate income tax rate since, due to a favorable benefits-received sourcing rule, very little of the firm's income is taxed in California. Alabama and Oregon also stand out as states with dramatically lighter tax burdens on this firm due to market sourcing rules.

For new firms, tax incentives—especially those aimed at lowering employment costs—are an important factor. Seven of the 14 states that offer withholding tax rebates to new shared services centers also impose among the 10 lowest burdens overall. In some cases, these incentives (often refundable) are sufficient to yield a negative income tax burden. The costs of such generosity are, of course, borne by mature firms, including mature shared services centers in these states.

DISTRIBUTION CENTER

Our model distribution center is a warehouse facility operated by an independent third-party logistics provider for a large company. This firm has 95 employees in transportation and material handling, administrative, and management occupations, and leases 350,000 square feet of Class B suburban industrial space. With a capital investment of $11 million, the firm has $18 million in revenue with a gross profit ratio of 68 percent and earnings before tax of 12 percent. The equity ratio is assumed to be 50 percent, and the apportionment methodology assumes 100 percent of property and payroll are in state. The income-producing activities of the distribution center are assumed to occur in state, with the benefit of those activities also being received in state. However, the sole customer contracting for the operation of the distribution center is assumed to be located out of state.

Property taxes are far and away the most significant tax type for both new and mature distribution centers, frequently responsible for more than two-thirds of a firm's overall tax burden. Predictably, the 10 mature operations with the lowest overall tax burdens all experience property tax burdens among the lowest third nationwide, and the states that impose the highest property tax burdens rank among the worst for aggregate tax burden. Of the 10 states with the highest property tax burden on distribution centers, only Colorado does not have an overall tax burden among the 10 highest. Policies which eliminate all income tax liability mean that the state ranks 40th—just outside the top 10.

At the extreme, property taxes account for an astonishing 93 percent of the state and local tax burden experienced by the mature distribution center in New York. This phenomenon is largely the result of favorable apportionment that essentially wipes out the firm's income tax burden.

For these firms, property taxes are about more than just millages. Equally important is whether a state's property tax burden extends to inventory, business equipment, or both. For instance, states like Indiana, Kansas, Massachusetts, Michigan, Rhode Island, and South Carolina impose unusually high property tax burdens on mature operations in significant part because their property taxes extend beyond land and buildings.

Fourteen states offer property tax abatements to new distribution centers, which substantially lower these firms' effective tax rates, although in many cases these benefits may be short-lived, exposing firms to heavy tax burdens once the abatements expire. Corporate income taxes can also be a significant component of distribution centers' effective tax rates, albeit not on par with property taxes. Consequently, many new distribution centers benefit from investment tax credits which reduce corporate income tax liability.

	Mature Rank	Mature Rate	New Rate	New Rank
WY	1	15.40%	20.94%	6
OR	2	18.28%	24.41%	12
AL	3	19.25%	18.61%	2
NC	4	20.59%	22.81%	9
ID	5	22.09%	25.28%	15
DE	6	22.11%	19.04%	4
MT	7	23.07%	27.53%	18
NV	9	23.42%	31.81%	25
OK	9	23.42%	24.61%	14
VA	10	23.69%	29.16%	20
WA	11	23.74%	31.78%	24
HI	12	23.84%	26.51%	16
KY	13	24.37%	26.98%	17
NM	14	25.41%	31.28%	22
TN	15	25.69%	21.50%	7
IL	16	26.72%	27.73%	19
CA	17	26.92%	32.89%	26
AR	18	27.29%	29.38%	21
AZ	19	28.19%	34.31%	27
UT	20	29.00%	24.29%	11
ND	21	29.20%	21.96%	8
SD	22	30.75%	37.14%	28
MS	23	33.16%	19.87%	5
MO	24	33.53%	24.41%	13
MD	25	33.96%	47.92%	36
AK	26	35.20%	37.82%	29
GA	27	36.14%	22.86%	10
OH	28	37.32%	15.41%	1
FL	29	37.32%	47.63%	35
WI	30	37.40%	42.05%	30
NE	31	37.44%	43.91%	32
WV	32	38.69%	43.23%	31
LA	33	40.95%	47.33%	34
TX	34	41.27%	54.35%	39
ME	35	41.50%	50.55%	37
NH	36	41.87%	46.11%	33
VT	37	41.97%	51.06%	38
CT	38	45.74%	60.25%	42
PA	39	45.82%	55.14%	40
CO	40	47.61%	63.15%	45
SC	41	48.62%	61.48%	43
RI	42	50.06%	65.10%	47
IN	43	50.19%	31.28%	23
MI	44	50.34%	62.39%	44
MN	45	54.95%	57.65%	41
NJ	46	56.59%	64.60%	46
MA	47	58.63%	73.11%	49
IA	48	62.81%	70.87%	48
KS	49	65.77%	18.67%	3
NY	50	66.04%	79.17%	50

CAPITAL-INTENSIVE MANUFACTURING OPERATION

	Mature Rank	Mature Rate	New Rate	New Rank
DE	1	1.41%	1.97%	1
WY	2	5.85%	11.25%	21
SD	3	6.03%	12.10%	25
OH	4	6.31%	3.72%	3
PA	5	6.57%	8.48%	12
MN	6	6.74%	8.20%	9
VA	7	6.78%	9.01%	15
MD	8	7.10%	6.31%	5
NJ	9	7.76%	9.98%	18
NC	10	7.89%	13.14%	29
TN	11	8.18%	9.37%	16
IA	12	8.21%	11.08%	19
NY	13	8.41%	7.08%	7
AZ	14	9.02%	17.56%	34
NM	15	9.86%	19.54%	36
NV	16	9.98%	25.39%	44
WI	17	10.25%	8.34%	10
ND	18	10.45%	6.29%	4
NE	19	10.63%	22.16%	40
GA	20	10.96%	11.17%	20
MI	21	11.28%	12.71%	28
MO	22	11.38%	12.27%	27
WA	23	11.68%	19.88%	37
FL	24	11.77%	24.46%	42
AL	25	13.44%	8.97%	14
TX	26	13.44%	28.33%	48
NH	27	13.46%	8.58%	13
LA	28	13.67%	24.55%	43
KY	29	13.72%	26.20%	46
OK	30	14.19%	6.74%	6
ID	31	14.57%	12.16%	26
UT	32	14.71%	11.61%	24
AK	33	14.89%	7.39%	8
IN	34	15.02%	15.66%	31
RI	35	15.03%	9.92%	17
CT	36	15.14%	19.90%	38
MT	37	15.42%	18.41%	35
IL	38	16.92%	8.35%	11
HI	39	17.16%	13.57%	30
MS	40	17.51%	17.45%	33
MA	41	17.79%	11.48%	23
WV	42	18.29%	16.57%	32
CA	43	19.08%	25.41%	45
AR	44	19.75%	11.38%	22
SC	45	20.49%	22.15%	39
CO	46	20.51%	33.53%	50
OR	47	20.83%	23.82%	41
ME	48	22.30%	29.41%	49
VT	49	22.75%	27.86%	47
KS	50	28.13%	2.95%	2

Our model capital-intensive manufacturing operation is a steel company with 200 positions, including management, administrative, installation and maintenance, production, transportation, and materials employees. The scenario assumes $320 million in capital investment, including a 250,000 square foot suburban industrial building owned by the firm. Revenue is assumed to be approximately $200 million with a gross profit ratio of 25 percent, earnings before tax of 10 percent, and an equity ratio of 50 percent. The apportionment methodology assumes 100 percent of property and payroll is in the state in which the manufacturer is located, while sales are assumed to be distributed among all 50 states in proportion to the relative population of each state.

Interestingly, many of the states with the lowest overall tax burdens for this firm have high corporate statutory income tax rates. For these firms, favorable apportionment factors and an absence of throwback rules are often more important. Eight of the 10 lowest tax cost states for mature operations have either no corporate income tax or use single sales factor apportionment, meaning that the amount of the firm's sales subject to home-state taxation is very low. A state's decision not to tax "nowhere income"—income attributable to states with which a firm lacks nexus—through throwback rules similarly lightens overall tax burdens for this firm type. Conversely, nine of the 10 highest tax cost states for mature operations employ throwback or throwout rules.[9]

Many high tax cost states either have high property tax rates on land, buildings, and equipment, or have broader property tax bases that include inventories, while more competitive states frequently avoid taxing equipment and inventory. These burdens are frequently offset in part by property tax abatements (and occasionally freeport exemptions), which can be substantial for new firms. Twenty-seven states offer some degree of property tax abatement for new capital-intensive manufacturers, a few of which significantly decrease overall tax liability for this firm type.

Finally, due to the effect of tax incentives, income tax burdens tend to be much more substantial for mature manufacturers than for new operations. Given that capital-intensive manufacturers tend to have long time horizons, however, many manufacturers that initially benefit from modest income tax burdens in incentive-heavy states can anticipate significantly higher taxes down the line.

9 See the discussion of apportionment and throwback rules on page 8.

LABOR-INTENSIVE MANUFACTURING OPERATION

Our model labor-intensive manufacturing operation is a manufacturer of trucks or buses, employing 400 people in management, installation, maintenance, and, chiefly, production and assembly. The model assumes capital investment of $100 million, including a 300,000 square foot suburban industrial building owned by the business. Revenue is approximately $240 million with a gross profit ratio of 20 percent and earnings before tax of 7 percent. The equity ratio is assumed to be 30 percent. The apportionment methodology assumes 100 percent of property and payroll is in the state in which the manufacturer is located, while sales are assumed to be distributed among all 50 states in proportion to the relative population of each state.

Labor-intensive manufacturers with the lowest overall tax burdens tend to experience relatively light corporate income tax burdens, either due to low statutory tax rates or apportionment rules that limit the income subject to tax. Of the 10 mature manufacturing operations with the lowest combined tax burdens, eight employ single sales factor apportionment for this firm type, and the two states that do not—South Dakota and Wyoming—completely forgo a corporate income tax. Favorable apportionment rules are how a state like Maryland, despite its 8.25 percent corporate income tax rate, can still look attractive for manufacturing. The state uses a three-factor formula with sextuple weighted sales in 2021 and will move to single sales factor beginning in 2022.

All 10 states with the highest overall tax burden impose a throwback or throwout rule, which subjects out-of-state income to the corporate income tax if it cannot be taxed in the destination state.

Property taxes are less important to labor-intensive manufacturing operations than they are to capital-intensive operations, as the former have less equipment potentially subject to tax. Still, states which limit their property tax base to land and buildings offer a lower tax environment for these firms, all else being equal.

Similarly, while unemployment insurance tax burdens have the potential to be more significant to labor-intensive manufacturing, corporate income tax burdens are by far the most significant. Fifteen states offer withholding tax rebates, 24 states offer investment tax credits, and 18 states offer job tax credits to new labor-intensive manufacturers, all holding down—and in some cases eliminating—income tax burdens, at least for the first few years of operations. New manufacturing operations in states with high income taxes, unfavorable apportionment rules, and limited incentives tend to experience the highest aggregate tax costs.

	Mature Rank	Mature Rate	New Rate	New Rank
DE	1	1.92%	2.96%	2
WY	2	5.31%	8.65%	16
VA	3	6.04%	7.56%	12
NC	4	6.79%	6.01%	8
AZ	5	7.28%	12.29%	25
NE	6	7.29%	7.51%	11
SD	7	7.42%	11.74%	24
KY	8	7.75%	9.37%	17
GA	9	7.80%	5.16%	6
WI	10	8.03%	6.97%	9
MO	11	8.12%	4.99%	4
TN	12	8.21%	9.96%	20
MD	13	8.30%	10.25%	22
OH	14	8.32%	5.03%	5
NM	15	8.51%	12.61%	27
MI	16	8.82%	10.07%	21
PA	17	8.87%	13.13%	30
TX	18	9.11%	17.03%	40
NV	19	9.21%	16.16%	38
LA	20	9.47%	8.52%	15
MN	21	9.50%	13.16%	31
IN	22	9.64%	10.69%	23
SC	23	9.95%	7.47%	10
ND	24	10.21%	9.93%	18
FL	25	10.21%	14.81%	36
MT	26	10.28%	12.97%	29
CT	27	10.90%	17.22%	41
NJ	28	11.03%	15.65%	37
OK	29	11.25%	2.19%	1
IA	30	11.64%	17.30%	42
AL	31	11.71%	5.34%	7
NY	32	11.87%	9.96%	19
WA	33	11.88%	17.60%	43
ID	34	12.13%	12.85%	28
NH	35	12.67%	13.91%	35
UT	36	12.98%	13.85%	34
MS	37	13.25%	8.41%	14
AK	38	13.56%	13.85%	33
AR	39	14.24%	7.85%	13
CO	40	14.27%	21.91%	49
WV	41	14.57%	12.58%	26
CA	42	15.18%	18.70%	45
RI	43	15.45%	16.34%	39
IL	44	15.98%	13.36%	32
ME	45	16.23%	20.73%	47
VT	46	16.39%	19.24%	46
MA	47	17.02%	18.50%	44
OR	48	17.38%	21.42%	48
HI	49	19.44%	22.01%	50
KS	50	20.11%	3.03%	3

EFFECTIVE TAX RATES BY STATE

For lawmakers and business leaders seeking greater detail on the business taxes in their state, this chapter contains profiles of each of the 50 states plus the District of Columbia. Each state page includes a short explanation of the factors affecting effective tax rates imposed on key firm types. Typically, we identify the areas in which the state performed best and worst and explain which factors in the state's tax system produced those results.

These points are supported by an explanation of key components of the state's tax system that factored into the Tax Foundation/KPMG model, along with summary charts showing effective tax rates across both new and mature firms. The charts also display the degree to which each major tax component contributes to the overall burden. However, when a firm experiences negative tax liabilities in one or more categories, we omit such stratification, though the full component breakdown for all firms can be found in Appendix C. States' mature firm rankings are indicated on the charts beneath each firm type.

Each state's corporate income, individual income, state sales, and local sales tax rates are also enumerated for ease of reference. These rates are accurate as of our study's January 1, 2021 snapshot date.

Additional data relevant to those wishing to dig deeper—including apportionment and sourcing rules, sales and property taxes, unemployment insurance tax rates, gross receipts taxes, and the incentive programs offered by states—have been moved to the Appendices, where they are displayed in tables for ease of comparison with other states.

ALABAMA

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.50%	5.00%	4.00%	5.22%

Alabama is one of the top five states for new firms, while mature firms tend to experience average overall tax burdens. However, the mature technology center and labor-intensive manufacturer face burdens slightly higher than average, and the research and development (R&D) facility and data center see very high comparative tax burdens.

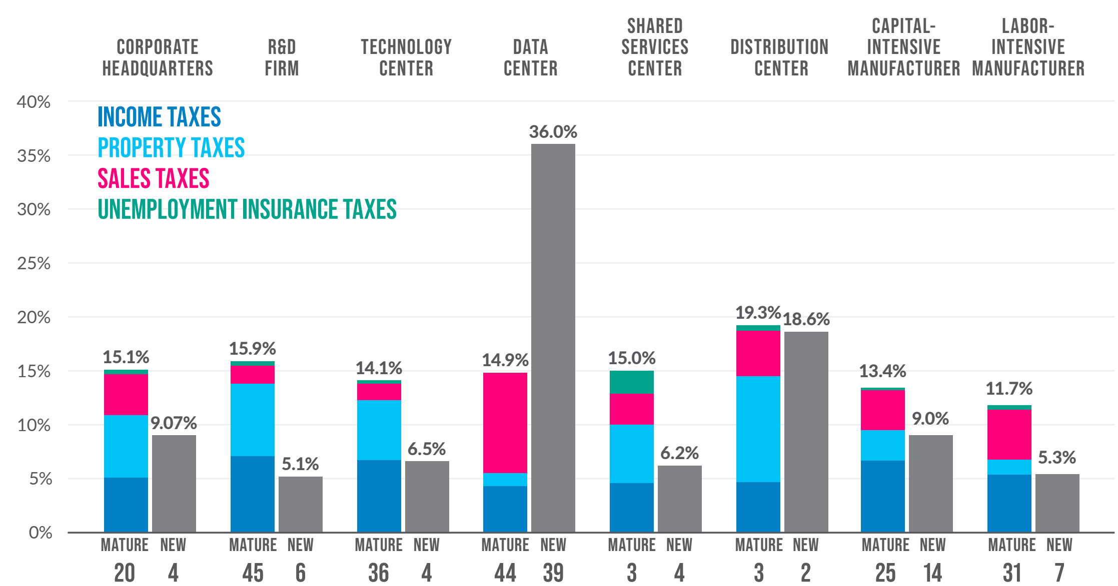
This general advantage comes despite the state's throwback rule, as well as its throwout rule on service receipts. Notably, Alabama changed its apportionment formula to single sales factor in 2021, relieving some of the burden on firms that do business primarily outside the state.

Alabama generally imposes a below-average income tax burden on the firm types we modeled. However, mature R&D facilities are a notable exception, and the difference between new and mature firms of that category is stark. New facilities face the seventh lowest effective income tax rate of -8.0 percent (reflecting incentives exceeding tax liability), while mature firms rank 50th with a 7.1 percent effective rate. While the state does not provide any tax credits specifically aimed at R&D activities, Alabama provides many general incentives that would apply to a new R&D facility but would not apply to a mature firm.

Manufacturing machinery and R&D equipment is subject to the sales tax in Alabama, which is a detriment to capital-intensive firms, but manufacturing machinery is taxed at a reduced sales tax rate.

Distribution centers fare particularly well in Alabama, with mature operations ranking third nationwide. The state's lowest-in-the-country property taxes of 9.8 percent for mature distribution centers yield a property tax bill 64 percent below the national median of 27.5 percent. Low property tax burdens are also an important contributing factor in the low tax burdens experienced by shared service centers.

Alabama is one of 15 states with an antiquated capital stock tax, hindering capital formation.



Gray bars indicate that tax type breakdowns are unavailable due to negative effective tax rates for one or more tax types.

ALASKA

TOP RATES

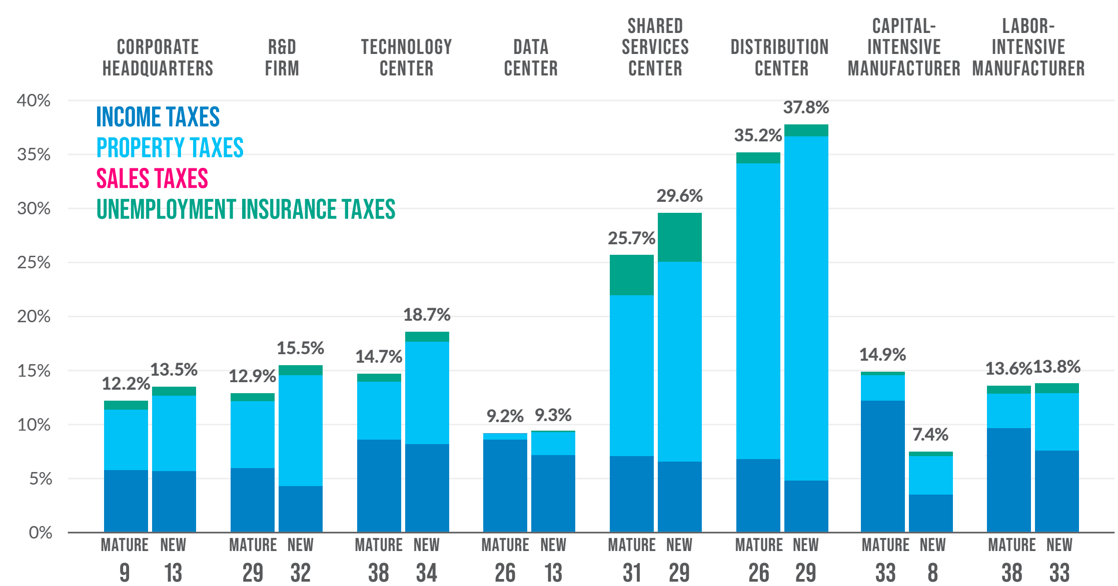
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
9.40%	--	--	1.76%

Alaska's high 9.4 percent top corporate income tax rate is exacerbated for most firms by the state's evenly weighted three-factor apportionment formula. The state also imposes a throwback rule on the sale of goods into states with which a firm lacks nexus, and sources service income to the location of the income-producing activity, subjecting most service income to in-state taxation. Alaska forgoes an individual income tax, which can be of significance to individuals and pass-through entities, although it has no bearing on the firms in our study.

By also doing without a state-level sales tax, Alaska benefits data centers, which often see their equipment subject to sales tax in other states. Given Alaska's location, data processing will mainly serve Alaska-centric companies, but even that smaller number of data centers will reap the benefits of not having a sales tax.

Conversely, high corporate income tax and unemployment insurance tax burdens drive up tax costs for many firms, including manufacturing operations, R&D facilities, and call centers. The mature labor-intensive manufacturer ranks 38th nationwide with a 13.6 percent effective tax rate.

Alaska's property tax base varies by locality, but can include equipment and inventory, increasing costs for many firms. Alaska largely eschews incentives for newly established operations, which yields relatively similar tax burdens for new and mature firms for all companies except the capital-intensive manufacturer, where the new firm faces far lower income tax burdens due to its ability to expense new investments.



ARIZONA

TOP RATES

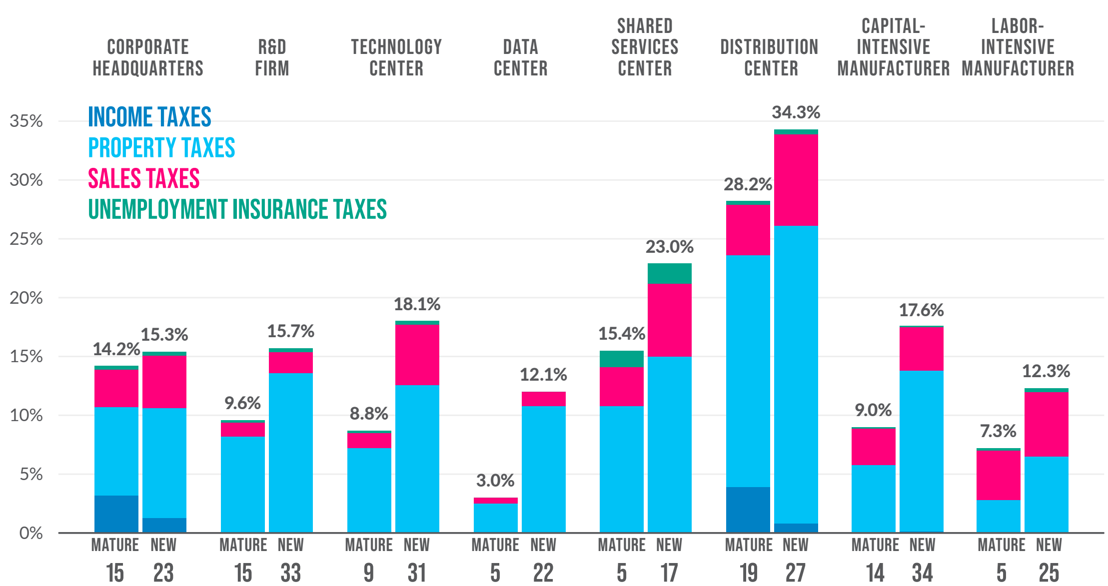
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
4.90%	8.00%	5.60%	2.80%

All of our model firms experience below-average tax costs for mature operations in Arizona. The state's apportionment formula provides a choice between single sales factor and double-weighted sales factor apportionment. The state does not impose a throwback rule but does have unfavorable sourcing rules for Arizona firms selling services out of state.

Arizona is one of only a handful of states not to offer property tax abatements to new firms, which helps drive the above-average effective tax burdens for new manufacturing operations but also enables the state to have lower, more neutral taxes over the course of a firm's existence. Mature manufacturing firms experience low tax burdens in Arizona—9.0 percent for mature capital-intensive manufacturing operations, compared to 17.6 percent for new operations—despite a property tax that includes equipment. The new firm's higher tax burden is driven by initial expenses and acquisitions that are subject to tax.

Even given the relative dearth of incentives (such as property tax abatements and investment credits), new operations tend to see near-average tax burdens. Mature operations, many of which experience a low corporate income tax burden in particular, see below-average burdens.

The state offers both a job creation credit and a research and development (R&D) incentive. Furthermore, manufacturing machinery and R&D equipment are exempt from the sales tax, which also assists in keeping tax costs modest for these firms, and particularly for new firms with more upfront equipment costs.



ARKANSAS

TOP RATES

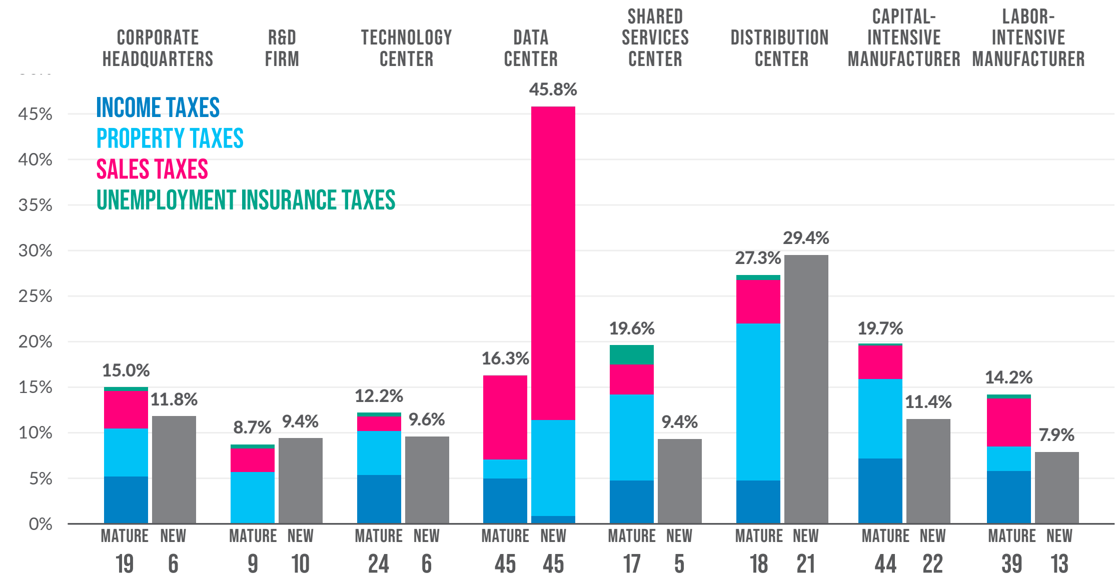
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.20%	5.90%	6.50%	3.01%

While many mature firms in Arkansas experience lower-than-average tax burdens, data centers and manufacturing firms see high burdens, as the state has high sales taxes, unfavorable service sourcing rules for most firms, and a throwback rule.

Arkansas is one of the few states to tax both equipment and inventories under its property tax, though property tax rates in the state tend to be fairly low, keeping the effective property tax burden modest. However, new manufacturing firms receive a generous abatement of their property tax burden. New data centers do not receive the same benefit, which contributes to their 45th-place ranking.

Manufacturing firms experience particularly high tax burdens in Arkansas, which can be attributed to a high combined state and local sales tax rate, an antiquated capital stock tax, and an above-average corporate income tax burden on manufacturing. The mature labor-intensive manufacturing operation ranks 39th nationwide with an effective tax rate of 14.2 percent, while the mature capital-intensive operation experiences a 19.7 percent tax burden, ranking 44th nationwide.

Arkansas offers sizable withholding tax rebates and generous investment and job tax credits for newly established businesses, and manufacturing machinery is exempt from the sales tax for new or expanded facilities. In fact, all newly-established model firms except for data centers receive tax incentives that more than offset income tax liability, yielding refunds that can be used to offset other tax liabilities as well.



Gray bars indicate that tax type breakdowns are unavailable due to negative effective tax rates for one or more tax types.

CALIFORNIA

TOP RATES

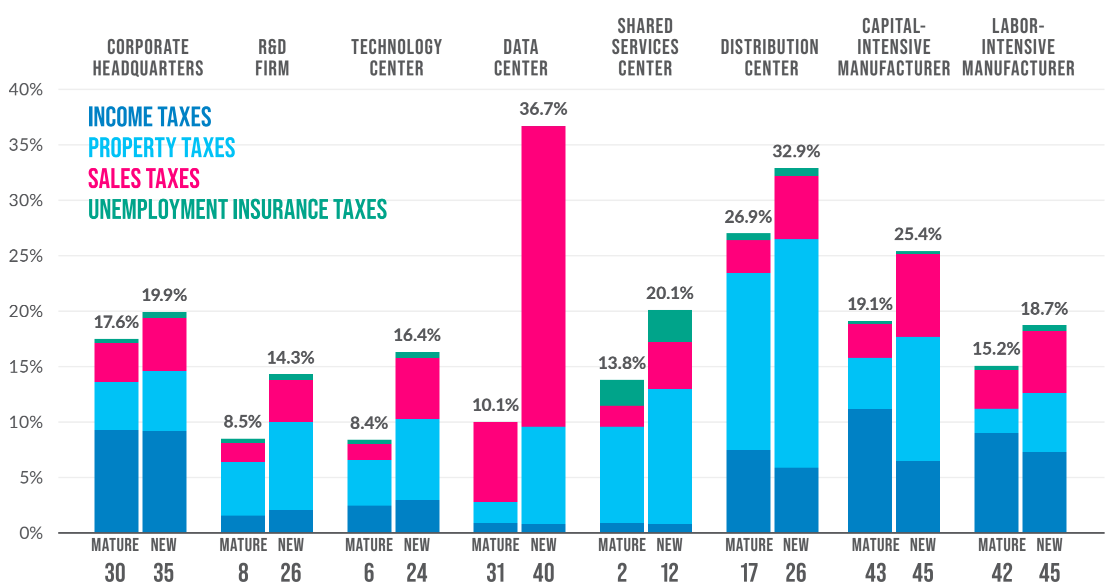
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
8.84%	13.30%	7.25%	1.43%

California imposes high tax burdens on mature manufacturing centers and above-average burdens on mature corporate headquarters and data centers. However, most other mature businesses see lower-than-average tax burdens. Mature research and development (R&D) centers and technology centers each rank within the top 10 for their firm types, and the shared services center ranks second in its category with an effective rate of 13.8 percent.

The state's high income and sales taxes drive up tax costs for firms whose employees and sales are within the state's borders, which is why, despite the state's single sales factor apportionment, both capital- and labor-intensive manufacturing operations perform poorly, ranking in the bottom 10 for both new and mature operations. The new corporate headquarters, hit particularly hard by the state's high corporate income tax, ranks 35th with a 19.9 percent effective tax rate.

Conversely, the state's favorable benefits-received sourcing rules, along with relatively low property and unemployment insurance tax burdens, help the mature shared service center rank second-best in the nation for its firm type. Due to these sourcing rules, very little of these firms' income is exposed to California's high statutory tax rates. The mature distribution center similarly benefits from these provisions, ranking 17th.

Generous incentives lower the corporate income tax burden for new research and development (R&D) facilities in the state, but they and all other firm types that do business primarily in-state see corporate income tax burdens that are significantly above the national average. Beyond R&D credits, however, California is notable for having very few tax incentives for newly established operations. Although incentives can lower costs for new firms, that cost is shifted to mature operations, which could result in prohibitive tax burdens in a state that already imposes unusually high taxes.



COLORADO

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
4.55%	4.55%	2.90%	4.82%

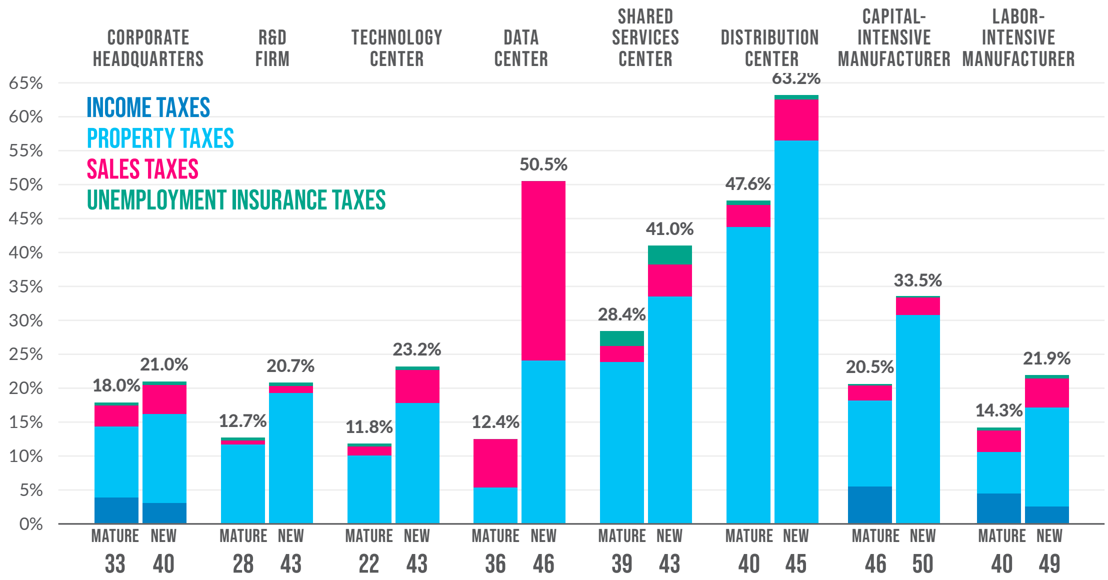
Despite its low, single-rate corporate income tax and modest unemployment insurances taxes, Colorado imposes higher-than-average tax burdens on all firm types except mature technology centers, with the state ranking last overall for new firms. These high effective tax rates are driven in large part by the state's high commercial property taxes. Even where lower taxes elsewhere are successful in mitigating property tax impacts, as with mature distribution centers, the state still ranks 40th. The benefit of a low corporate rate is also diminished by a throwback rule, exposing more income to in-state taxation.

Colorado's property taxes are consistently high across firm types, due to a split roll system of taxation under which commercial properties are taxed using an assessment ratio that is more than four times higher than the assessment ratio that applies to residential property. These high property tax rates are further exacerbated by the inclusion of equipment in the property tax base.

This tax structure is particularly burdensome to manufacturing firms. The new capital-intensive manufacturing operation sees effective property tax rates nearly three times the national average, while the mature capital-intensive manufacturing operation and both labor-intensive manufacturing operations see effective property tax rates around twice the national average.

Colorado offers both job creation and investment incentives for qualifying new firms, but such incentives provide relatively little benefit to the firms we modeled. The state does not offer research and development (R&D) tax credits, so consequently, the mature R&D firm sees a slightly above-average tax burden, while the new R&D firm experiences a significantly higher-than-average tax burden, ranking 43rd among states.

Colorado's sales tax is unique, with its low state rate far outstripped by local rates. Consequently, the location a firm chooses within Colorado can be highly significant in terms of sales tax liability.



CONNECTICUT

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
7.50%	6.99%*	6.35%	--

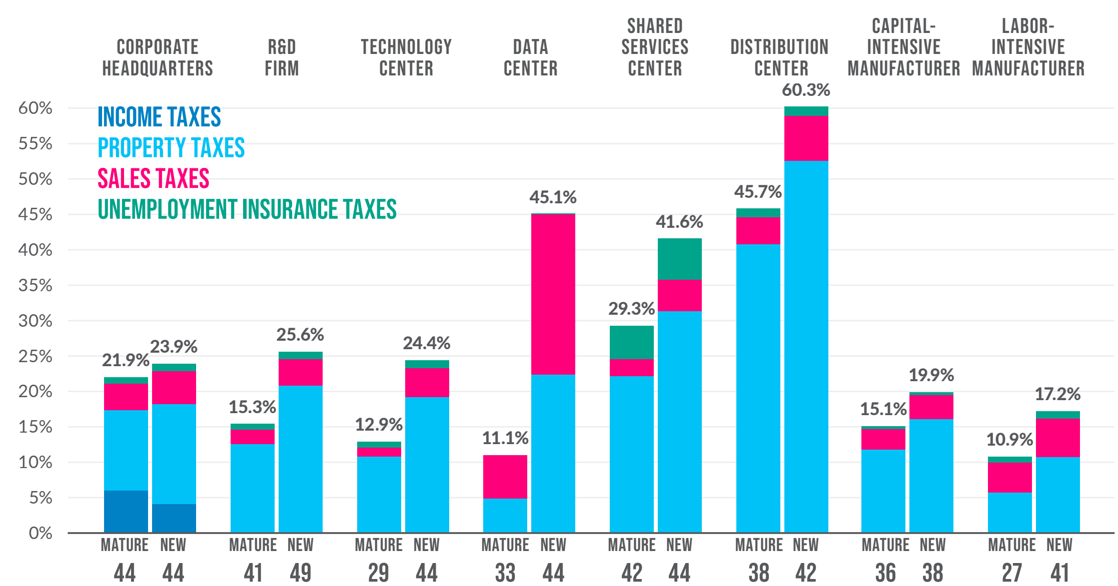
Connecticut imposes an above-average tax burden on all model firms except mature labor-intensive operations, due in large part to the state's high corporate income tax rate. A 10 percent corporate surtax, bringing the effective rate to 8.25 percent, expired at the start of 2021, though lawmakers were debating its extension at the time of this writing.

The state's investment credit and research and development (R&D) credit cannot overcome the state's high statutory tax rates for new R&D facilities, leading to their rank of 49th in the category. Mature R&D facilities fare marginally better but still rank in the bottom 10.

Connecticut ranks 27th for mature labor-intensive manufacturing firms, which have a total effective tax rate of 10.9 percent, just under the 11.1 percent national average. These comparatively lighter tax costs are assisted by Connecticut's single sales factor income apportionment formula and the lack of a throwback rule. The state does, however, extend its property tax base to include equipment, which leads to above-average tax burdens on capital-intensive manufacturers. Connecticut ranks 38th for mature capital-intensive manufacturing with an above-average effective rate of 19.9 percent, and the new labor-intensive firm ranks 41st.

The inclusion of equipment in the property tax base, in addition to high unemployment insurance tax burdens, drives the state's 44th place ranking for new shared services centers, and 42nd for mature operations. Finally, Connecticut has begun phasing out its capital stock tax but still currently imposes the second-highest capital stock tax in the country. It is one of only 15 states imposing such a tax, which can greatly hinder capital formation.

* Connecticut has an income "recapture" provision whereby the benefit of lower tax brackets is removed for the top bracket.



DELAWARE

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
8.70%*	6.60%	--	--

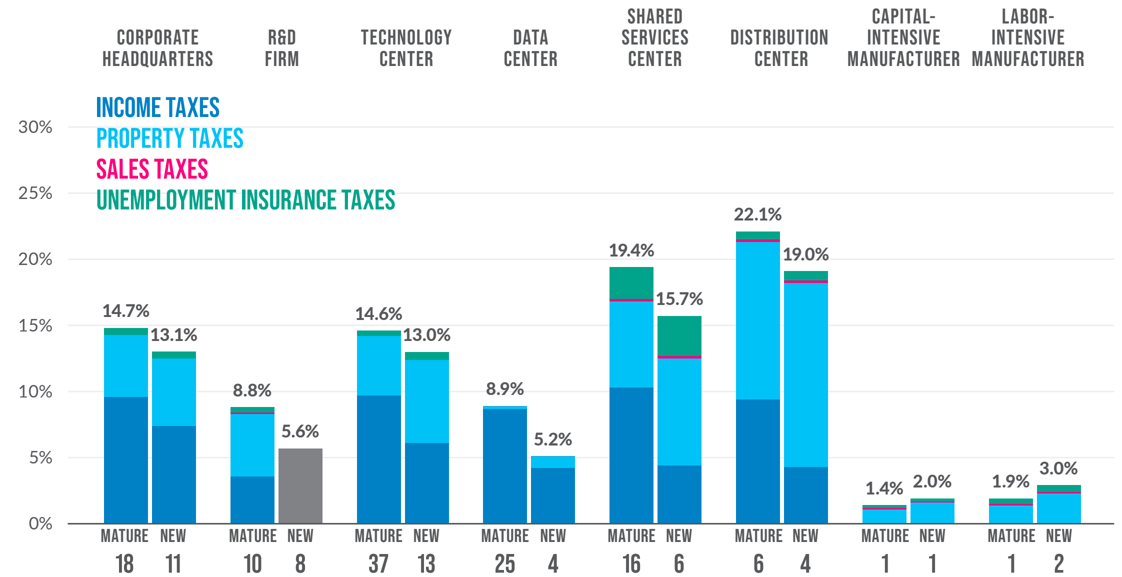
As a state with modest property taxes and no sales tax, combined with generous incentives for some operations, Delaware imposes tax burdens that are highly competitive for both new and mature firms. Delaware ranks second overall for new firms and third overall for mature firms.

Mature labor- and capital-intensive manufacturers, along with new capital-intensive manufacturers, rank first in their categories, while new labor-intensive manufacturers rank second nationwide. A low property tax that does not include equipment or inventory and the lack of a state sales tax—which significantly reduces the cost of inputs—also contributes to the low tax burden on manufacturers.

New research and development (R&D) operations in Delaware benefit from above-average R&D and investment tax credits, ranking eighth in the country for the firm type. These credits help compensate for the fact that Delaware is one of only a handful of states with a gross receipts tax, which penalizes technology centers and R&D operations more than the other firms in our study. However, even mature firms benefit from low property taxes, yielding a highly competitive 10th place ranking despite the state's unusual combination of a corporate income and a gross receipts tax.

Single sales factor apportionment and the lack of a throwback rule also benefit many firms in our study. However, Delaware's sourcing of services based on the location of the income-producing activity works to the detriment of in-state firms selling goods or services out of state.

* Delaware also levies a gross receipts tax which varies by industry, ranging from 0.0945 – 1.9914 percent.



Gray bars indicate that tax type breakdowns are unavailable due to negative effective tax rates for one or more tax types.

EFFECTIVE TAX RATES BY STATE

FLORIDA

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
4.458%	--	6.00%	1.08%

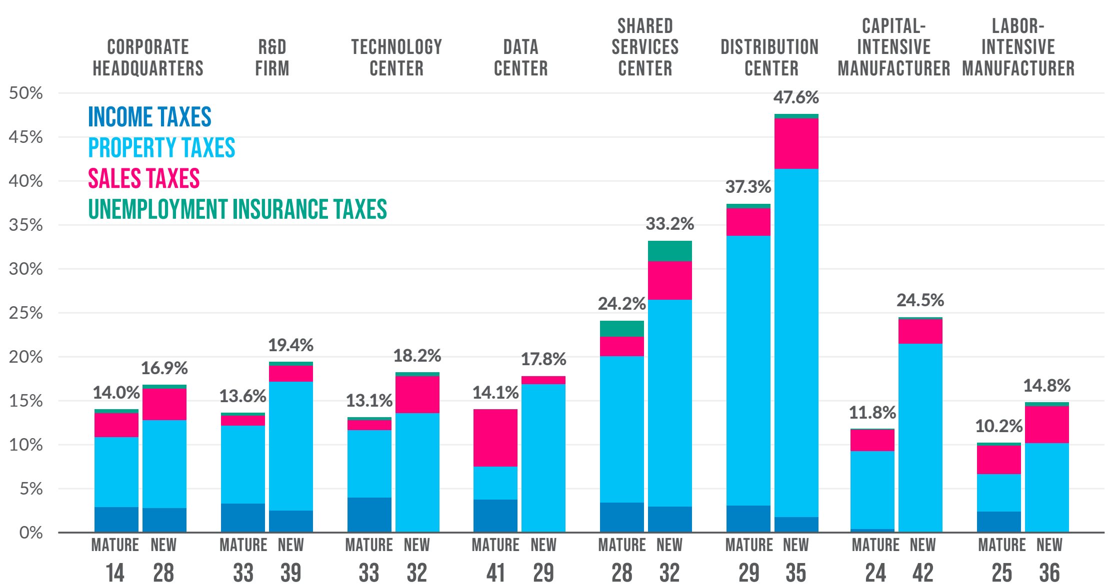
Florida features a low corporate income tax and is competitive on many metrics, but several aspects of its tax code--high property taxes and a sales tax base that includes many business-to-business transactions--work against corporations, including several of our study's model firms.

Florida's sourcing rules for service income, which allow the income to be sourced where the benefit of the service is received, favor firms such as shared services centers, which sell many of their services outside the state. The state also ranks well (14th) for mature corporate headquarters with an effective tax rate of 14.0 percent. This firm benefits from the state's double-weighted sales factor apportionment, though it works to the detriment of many other firms in the study. Also contributing to this comparatively modest tax cost is a low unemployment insurance tax burden.

However, the state ranks 42nd for newly established capital-intensive manufacturing firms with an above-average effective tax rate of 24.5 percent, despite the fact that Florida has the most generous investment tax credit in the nation—more than 13 times the national average, to the point of zeroing out the corporate income tax rate. Counteracting the low income tax burden is a property tax burden on manufacturing equipment that is twice the national average, plus a sales tax that similarly includes many business inputs.

The state also ranks 41st for established data centers with a 14.1 percent effective tax rate. New data centers benefit from an investment incentive that is 20 times the national average for its category, while still ending up with middle-of-the-road effective rates, and mature data centers, which are denied these generous incentives, pay the price for this tax structure.

Florida forgoes an individual income tax, which can be highly significant to individuals and pass-through entities but does not affect the firms considered in our study.



GEORGIA

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
5.75%	5.75%	4.00%	3.32%

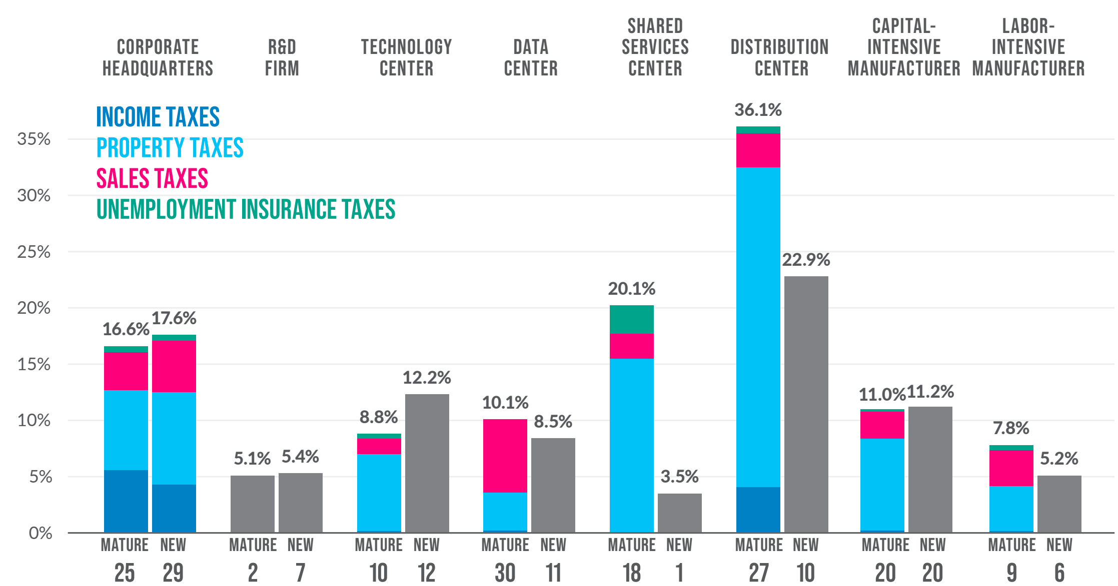
Georgia offers a generally attractive tax environment for all firm types, ranking fourth overall for new firms and 13th for mature firms.

Research and development (R&D) operations see especially light tax burdens, with the mature firm ranking second nationwide with a 5.1 percent effective rate and the new firm ranking seventh with a 5.4 percent effective rate, largely due to a friendly income apportionment approach—single sales factor with no throwback rule—and relatively low income and unemployment insurance tax burdens.

The state's sourcing rules for services similarly favor operations such as shared services centers that have many out-of-state customers, yielding a below-average tax on new and mature centers. New shared services centers also benefit from generous tax incentives, yielding an effective rate of only 3.5 percent, ranking first in the category.

Georgia's property tax applies to equipment and inventory in addition to land and buildings, though property tax rates are generally low, and new manufacturing operations benefit from a generous property tax abatement plus a local option "freeport exemption" for manufacturing inventory.

The firm types that perform the worst in Georgia compared to peers in other states—the mature corporate headquarters and the mature data center—rank 29th and 30th and experience effective tax rates of 16.6 percent and 10.1 percent, respectively. The data center sees extremely low corporate income taxes, but the sales and property tax burdens on relevant equipment counteract this benefit. Georgia exempts manufacturing machinery from the sales tax but imposes the tax on research and development (R&D) equipment. However, new R&D firms do receive incentives valued at 10 percent of in-state R&D expenses.



Gray bars indicate that tax type breakdowns are unavailable due to negative effective tax rates for one or more tax types.

HAWAII

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.40%	11.00%	4.00%	0.44%

Manufacturing faces exceedingly high rates of taxation in Hawaii, but some other firms benefit from generous incentives, reducing tax costs or even yielding negative rates of tax. The state sources service income to the site of the income-producing activity, exposing all service income from operations like shared services centers and distribution centers to in-state taxation.

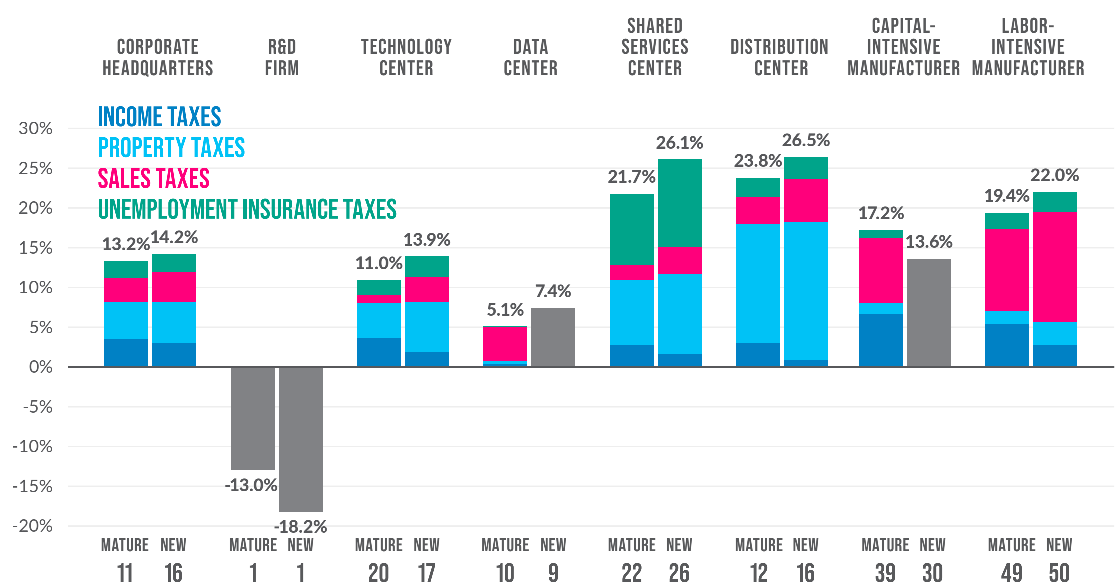
Despite relatively modest corporate income tax rates, Hawaii's sourcing rules drive up costs for both shared services centers and distribution centers. Distribution centers, however, benefit from very low property taxes, substantially lowering their overall tax burden.

A generous tax credit for research activities yields negative effective rates for both new and mature research and development (R&D) firms, with the new operation facing an effective rate of -18.2 percent and the mature operation having a -13.0 percent tax burden. The credit, which covers 20 percent of in-state R&D expenses, is refundable, though refundability is capped at $5 million.

More than in other states, Hawaii's sales tax (called the General Excise Tax) applies to sales between businesses rather than just to the end consumer. As such, manufacturing machinery is taxed in Hawaii, so the cost of equipment and other inputs for manufacturing firms is significantly higher in Hawaii than in other states, as are inputs for data centers.

Hawaii imposes some of the nation's highest tax costs on labor-intensive manufacturing, with new and mature firms facing the highest and second-highest effective tax rates, respectively. The sales tax on manufacturing machinery is a significant factor, and Hawaii's three-factor apportionment formula, which equally weights sales, property, and payroll, works against firms with sales largely out of state. These operations also experience a high unemployment insurance tax burden.

Hawaii's unique tax structure produces highly disparate tax burdens across firms, with effective tax rates ranging from 5.1 to 23.8 percent for mature operations and 7.4 percent to 26.5 percent for new operations, not counting the highly subsidized R&D firms with their negative effective rates. While few states achieve anything close to tax neutrality across firm types, Hawaii stands out as particularly lacking in this regard.



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IDAHO

TOP RATES

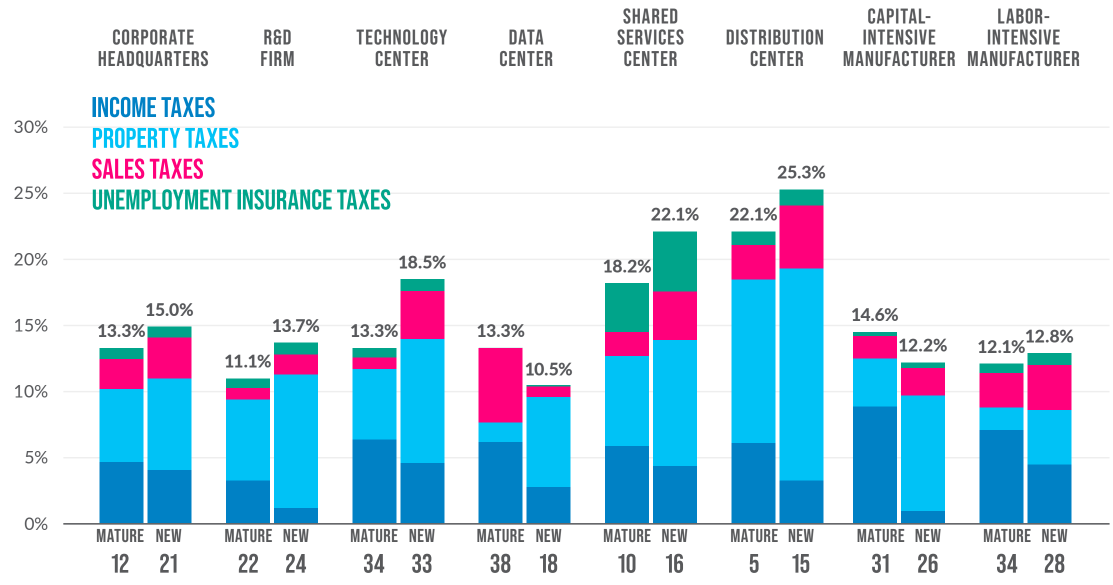
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.925%	6.925%	6.00%	0.03%

Idaho offers both an investment tax credit and a modest nonrefundable new jobs credit, but a moderately high corporate income tax and sourcing rules that expose all in-state income-producing activity to Idaho taxes yield middle-of-the-road tax burdens for most firms, both new and mature.

Mature shared services centers experience the 10th best effective rate in the county, at 18.2 percent. While the state has a throwback rule and sources services to the site of the income-producing activity, a low property tax burden combined with lower-than-average sales taxes and middle-of-the-road unemployment insurance costs serve to bring down the effective tax rate on such facilities.

The state's double-weighted sales factor apportionment formula works to the detriment of manufacturing operations and data centers. The state's property tax also extends to equipment, although manufacturing machinery and research and development (R&D) equipment are exempt from sales taxes. Data centers see their equipment subject to the sales tax, although new centers benefit from an investment tax credit.

Idaho ranks fifth for mature distribution centers with an effective tax rate of 22.1 percent, benefiting from low sales and property tax burdens.



EFFECTIVE TAX RATES BY STATE

ILLINOIS

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
9.50%	4.95%	6.25%	2.57%

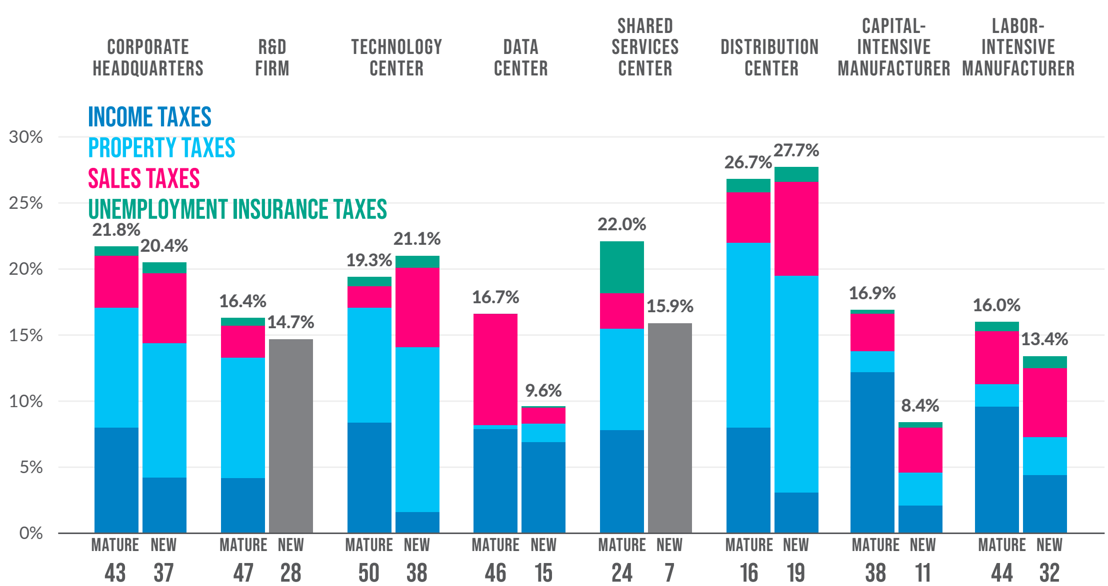
Illinois ranks in the bottom third of states for six out of the eight mature firm types, driven by high corporate income and property taxes, while new firms face middle-of-the-road tax burdens. Illinois offers one of the more generous withholding tax credits in the nation, but incentives are rarely a substitute for a competitive, structurally sound tax system.

Illinois' corporate income tax rate combines both the traditional corporate income tax of 7.0 percent and a second tax of 2.5 percent on the same base, known as the "personal property replacement tax" for the repealed tax for which it was intended as a revenue replacement.

The state's high income tax rates lead to an above-average corporate income tax burden for all mature firm types. These firms also experience a high combined state and local sales tax rate, and the corporate headquarters, R&D operation, and technology center see higher-than-average property taxes that contribute to their low ranks.

Mature shared services centers see middle-of-the-road effective tax rates despite the state's favorable benefits-received sourcing rule. Much of the advantage of benefits sourcing is eliminated because the firm is subject to a throwout rule for service receipts attributable to a state where the taxpayer is not taxable.

The state's throwback rule also works to the detriment of research and development (R&D) facilities, with the mature firm facing a 16.5 percent effective tax rate, which is high for that firm type and ranks 47th nationwide.



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INDIANA

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
5.25%*	3.23%	7.00%	--

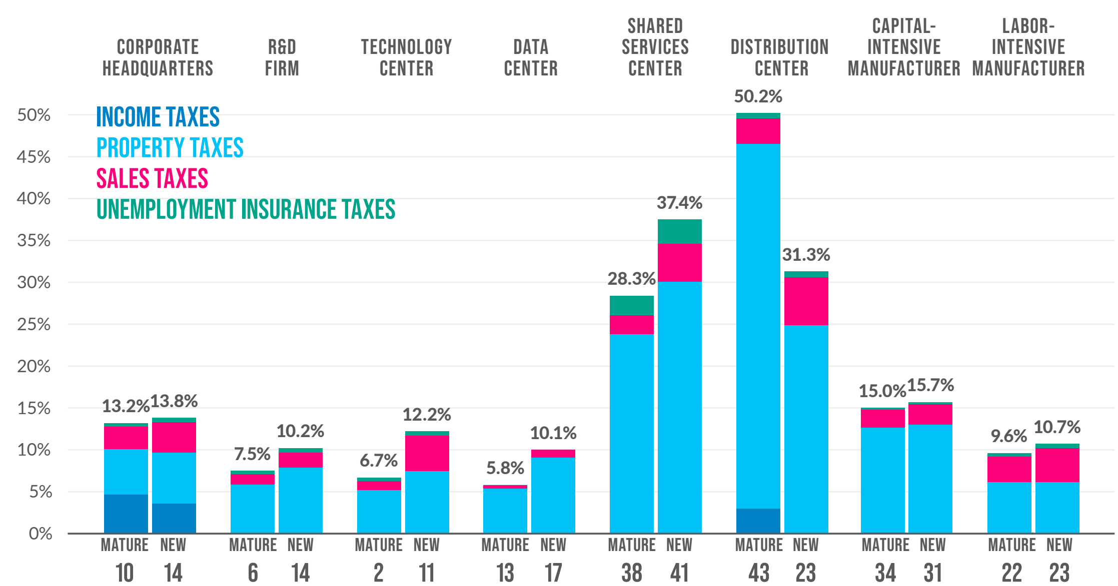
Indiana generally offers lighter-than-average tax burdens for both new and mature operations. Firms of all types have benefited from the state's reduction in the corporate income tax rate from 8.5 percent in 2012 to 5.25 percent today, with rates scheduled to drop further to 4.9 percent on July 1, 2021, the culmination of a decade of rate reductions. Indiana has adopted other reforms during this period as well, enhancing the state's overall tax competitiveness.

All mature Tier 1 firms—corporate headquarters, research and development (R&D) companies, and technology centers—rank among the top 10 nationwide. These model firms are aided by average or lower-than-average burdens across all tax types, partially due to the state's single sales factor apportionment and market-based sourcing of services, in addition to its competitive tax rates. Research and development firms additionally benefit from related tax credits.

While new distribution centers receive a generous property tax abatement that is almost seven times the national average, mature firms bear the full weight of high property taxes on a base that includes equipment and sees sales taxes slightly above average, contributing to their rank of 43rd.

New manufacturing operations fare slightly better due to some of the most generous property tax abatements in the country but still experience above-average overall tax burdens. The business personal property tax on equipment also hinders manufacturers, although manufacturing machinery is exempt from the sales tax. The mature capital-intensive manufacturing operation, without access to these property tax abatements, ranks 34th in the nation. Our model firms experience a broad range of effective tax rates in Indiana, ranging from 5.8 percent for the mature data center to 50.1 percent for the mature distribution center.

* The corporate income tax rate will decrease to 4.9 percent in July 2021.



IOWA

TOP RATES

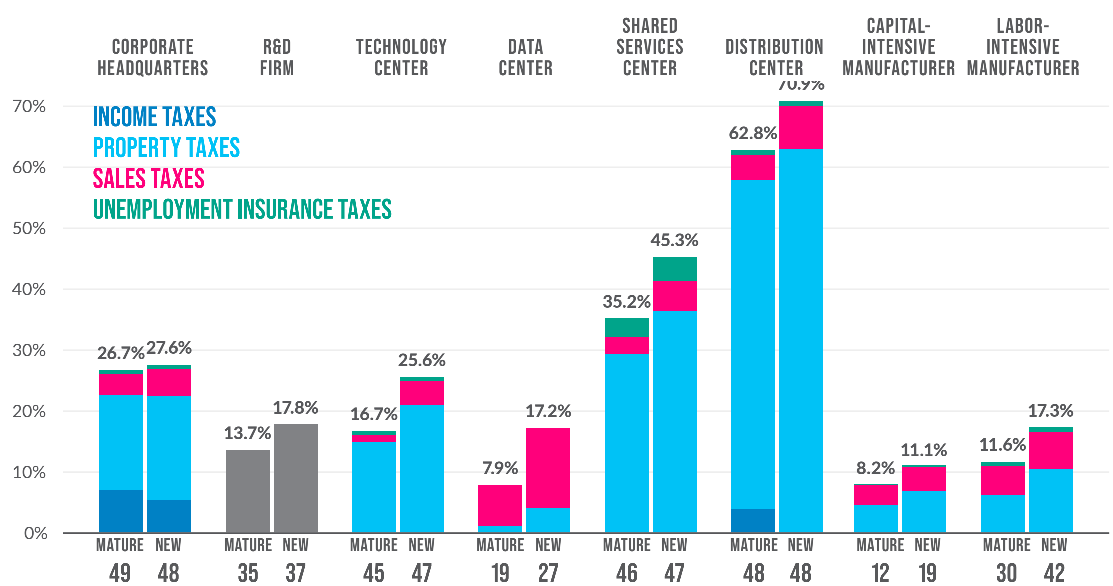
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
9.80%	8.35%	6.00%	0.94%

Until recently, Iowa had the nation's highest top marginal corporate income tax rate (12 percent), though recent reforms have reduced the top rate to 9.8 percent while repealing the state's deduction for federal taxes paid, known as "federal deductibility." Even with this positive change, however, firms in Iowa generally see high overall tax burdens.

The mature capital-intensive manufacturing operation experiences Iowa's most competitive effective rate of 8.2 percent, 11th best in the nation, due in large part to Iowa's single sales factor apportionment formula and the lack of a throwback rule, which have the effect of exempting nearly all of a firm's income from in-state taxation. The operation also experiences a relatively low property tax burden due to the lack of property taxes on equipment and inventory. In addition to its favorable apportionment factors for businesses selling goods out of state, Iowa's benefits-based sourcing rules work to the advantage of Iowa-based firms selling services out of state.

However, effective property tax rates can be exceedingly high for some firms—nearly double the national median for mature distribution centers, for instance, which rank 48th—greatly increasing overall tax costs. Property tax abatements tend to be highly discretionary, with Iowa relying to an unusual degree on tax increment financing to abate high commercial real estate costs driven by "rollback" provisions which keep residential property taxes in check by shifting an expanding share of overall property tax burdens to businesses.

Manufacturing machinery and research and development (R&D) equipment are exempt from the state sales tax, and the R&D facility receives other incentives as well. Iowa also offers generous investment and job creation tax incentives to new firms, though due to the state's high tax rates, most new firms continue to experience above-average tax burdens.



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KANSAS

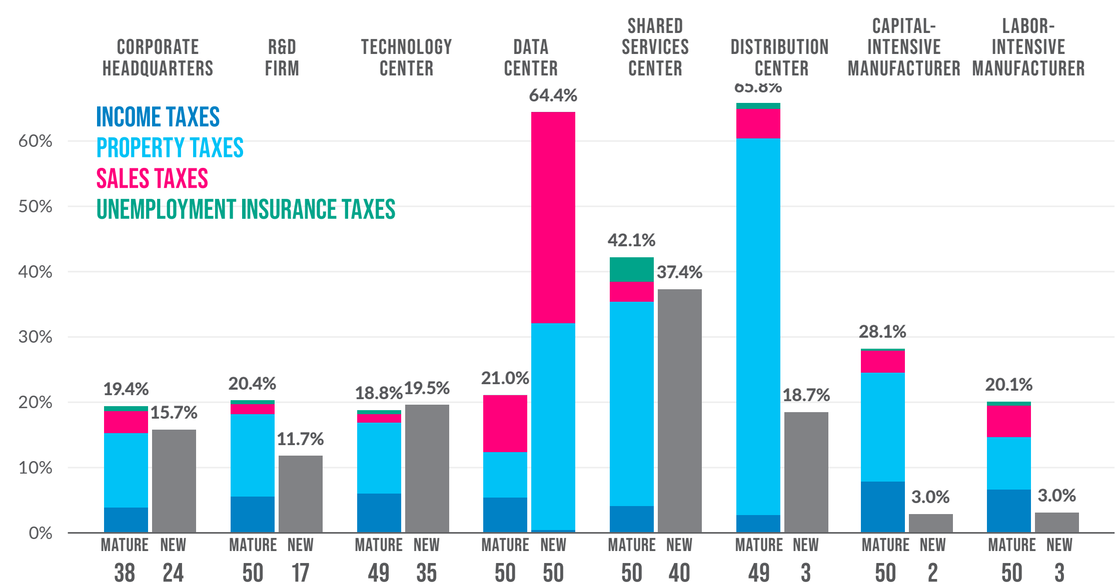
TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
7.00%	5.70%	6.50%	2.19%

Tax burdens in Kansas are slightly below average for new firms—and among the lowest in the nation for new manufacturers and distribution centers—but Kansas ranks worst in the nation for mature firms. Kansas offers very low tax costs for new capital- and labor-intensive manufacturing operations and new corporate headquarters due to the Promoting Employment Across Kansas (PEAK) incentive program. Such generous incentives, however, keep tax costs for mature firms much higher than they would be if the tax burden were distributed more equitably. The state ranks 49th or 50th for all mature firm types except corporate headquarters, which rank 38th.

The new data center ranks 50th among states with an effective tax rate of 64.4 percent, almost three times the national average. This is the result of average corporate income and unemployment insurance taxes combined with some of the highest sales and property taxes in the nation for firms of this type, as data center equipment is included in both tax bases. The state uses evenly-weighted three factor apportionment, sources service income based on the cost of performance, and imposes a throwback rule.

Tax burdens in Kansas fall very unequally on different firm types and on new versus mature operations. For example, the new data center's 64.4 percent tax rate, or the mature distribution center's 65.7 percent rate, contrasts with a 2.9 percent effective tax rate on new capital-intensive manufacturing. Meanwhile, the mature capital-intensive manufacturing firm experiences a 28.1 percent effective tax rate (worst in the nation), which is almost 10 times the burden on the new firm, which experiences the second-best effective rate in the nation.



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KENTUCKY

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
5.00%	5.00%	6.00%	--

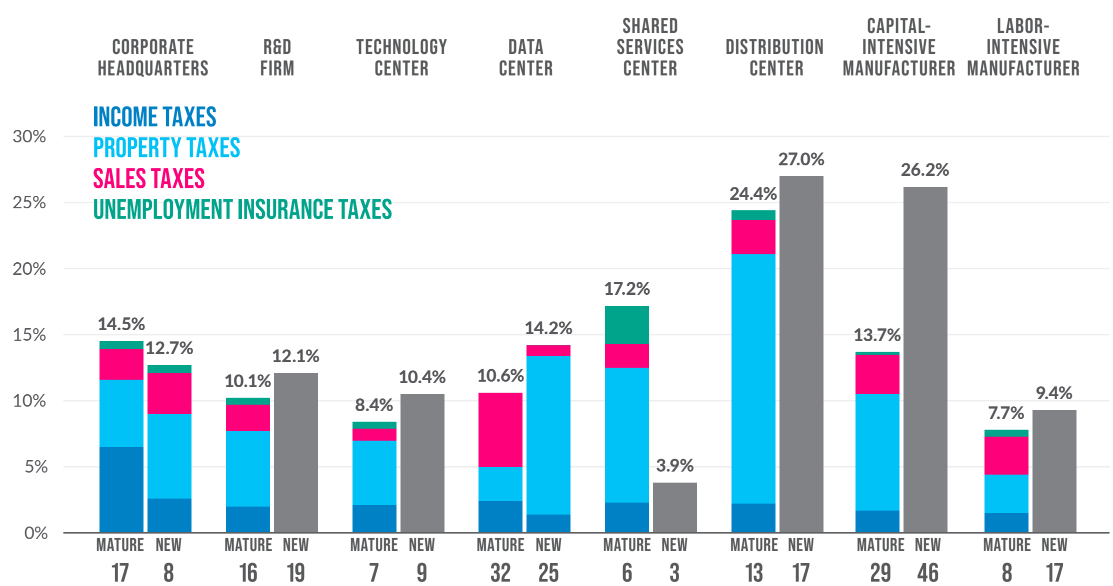
Kentucky imposes relatively moderate income and sales tax burdens, low unemployment insurance taxes, and low property taxes. The state offers few incentives for new businesses other than withholding tax rebates, allowing the state to impose below-average tax burdens on most mature firm types and to provide relatively equitable tax treatment across new and mature firms. Kentucky ranks 13th in the country for new firms and 14th for mature firms.

The state's worst performance compared to other states is in its tax treatment of the new capital-intensive manufacturer, which faces an effective rate of 26.2 percent, ranking 46th in the country. Capital-intensive manufacturers are penalized by Kentucky's extension of the property tax to equipment and inventory, with the new firm seeing an effective property tax rate of 26.2 percent, more than twice the national median. Kentucky is one of only nine states to broadly tax business inventory.

Manufacturing machinery is exempt from the sales tax. Research and development (R&D) equipment is only exempt subject to certain conditions and state approval, though one of the state's few non-withholding incentives is an investment credit for new R&D firms.

The state's relatively low corporate income tax rate—the result of recent reforms—contributes to below-average income tax burdens for most firms, while the single sales factor apportionment formula captures profits based on the volume of sales made inside the state, relieving firms like distribution centers that see sales largely out of state.

This apportionment formula, in addition to the market-based sourcing of services, helps drive the particularly low tax burden on the new shared service center, with an effective tax rate of 3.9 percent, ranking third among states. This operation is also helped by a generous withholding tax rebate, moderate unemployment insurance tax burdens, and a low property tax burden, despite the fact that the state levies property taxes on equipment and inventory in addition to land and buildings.



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LOUISIANA

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
8.00%	6.00%	4.45%	5.07%

Louisiana's tax structure is characterized by high rates and partially offsetting incentives. These incentives generally favor new businesses, leaving all mature operations except labor-intensive manufacturers with above-average tax burdens.

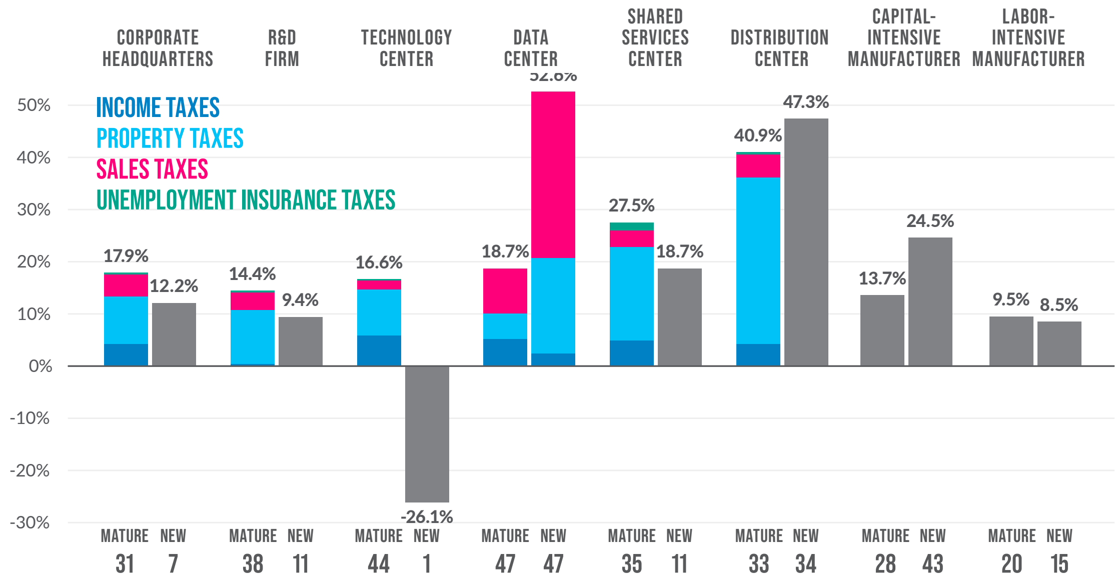
Louisiana offers the lowest overall tax burden in the country for new technology centers, due less to its overall tax structure than to its unusually generous incentives programs. The applicable jobs tax credit is 23 times the national average for that category, resulting in the only negative tax burden for new technology centers in the nation. The mature technology center, on the other hand, experiences a 16.6 percent effective rate, the seventh highest in the country due to high income and property tax burdens.

The new capital-intensive manufacturing firm receives generous tax incentives but still ranks 43rd in overall effective rates because of a property tax burden that is more than three times the national median. Louisiana taxes both equipment and inventory at the local level, though the state provides a credit against inventory tax liability.

For the new corporate office establishment, Louisiana provides the largest withholding tax rebate of the 13 states offering such incentives, yielding a low 12.2 percent effective tax rate. However, the state's high income tax rate is further exacerbated by a throwout rule. While service income is taxed at the location where the service is received, service companies must use a two-factor payroll and sales apportionment formula rather than the single sales factor apportionment formula available to other operations.

Tax burdens for both new and mature data centers rank 47th in their categories. In addition to the property taxes faced by other firms, data centers experience a heavier capital stock (franchise) tax burden. The inclusion of data equipment in the sales tax base results in a sales tax burden that is one-and-a-half times the national median.

Non-neutrality—across firms, maturity, and tax types—is a prevalent theme throughout Louisiana's tax code.



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EFFECTIVE TAX RATES BY STATE

MAINE

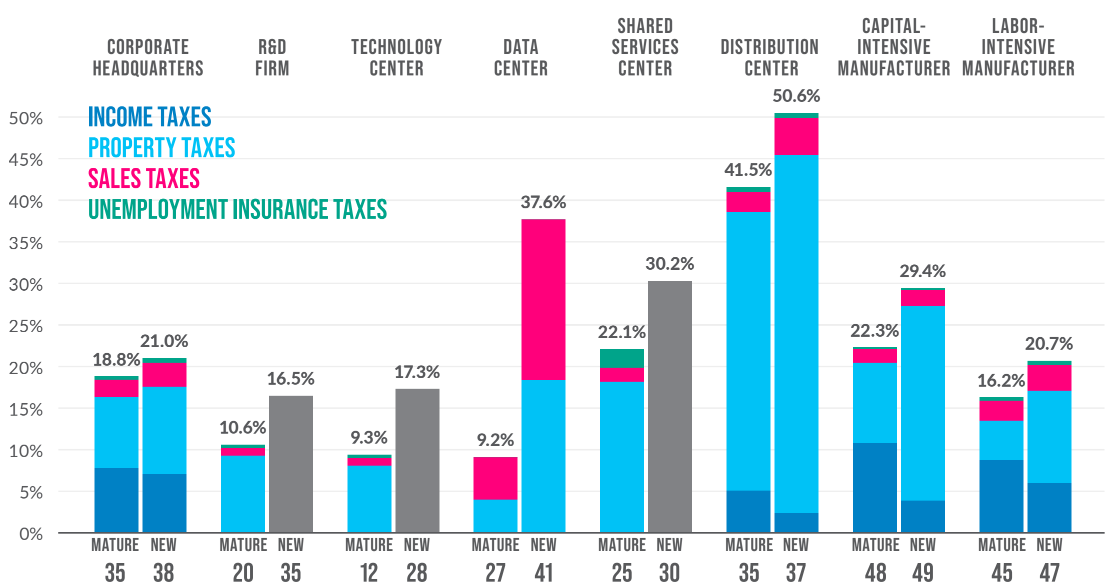
TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
8.93%	7.15%	5.50%	--

Maine's corporate income tax rate is high, but the state employs sourcing rules that tax service income where the benefits are received, ameliorating the rate's impact for firms that sell services out of state. The state also uses single sales factor apportionment. In contrast to the experience of most other states, mature businesses in Maine tend to see better overall tax burdens than new companies, since the state offers few tax incentives and is thus more neutral across new and mature firms, to the benefit of mature firms which often suffer by comparison.

Maine's most competitive ranking is in its tax treatment of mature technology centers, ranking 12th. The firm benefits from the state's relatively low 5.5 percent sales tax and a single sales factor apportionment formula that gives it one of the lowest income tax costs for this type of operation. The same factors help the state provide better-than-average tax treatment of the mature research and development (R&D) facility.

However, Maine includes equipment in its property tax base, contributing to high property tax burdens for capital-intensive manufacturers. The inclusion of equipment in the property tax base, combined with the state's high income tax rate and throwout rule, are substantial contributors to Maine's ranking among the six worst states in terms of total effective tax rates on new and mature capital- and manufacturing-intensive manufacturers.



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MARYLAND

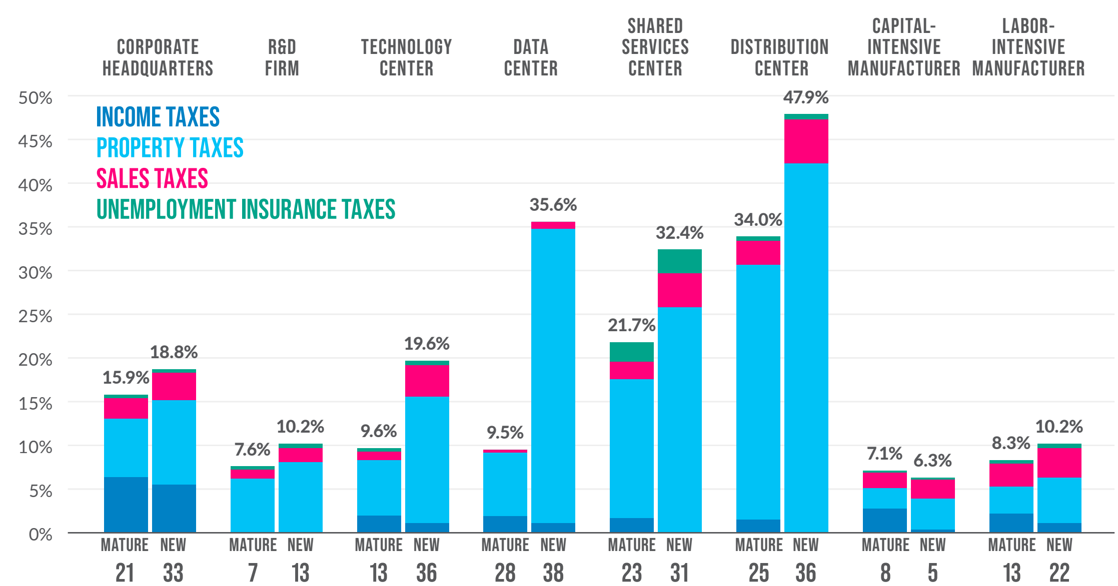
TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
8.25%	5.75%	6.00%	--

By largely forgoing withholding and investment credits, Maryland is among a small number of states offering lower effective rates for mature, rather than new, firms. These mature firms are also helped by benefits sourcing and the lack of a throwback or throwout rule. Furthermore, the state uses three-factor apportionment with sales weighted six times as much as property and payroll, as part of a phase-in of single sales factor apportionment, which will commence in 2022. Manufacturing firms already enjoy the benefit of single sales factor apportionment.

However, the state's high property tax rate on equipment contributes to the higher-than-average property tax burdens experienced by most of the new firms in our study, as well as some of the mature firms. New and existing data centers each see the second-highest property tax burden in the country for their firm types, as relevant equipment is included in the property tax base. However, lower-than-average income, unemployment insurance, and sales taxes partially offset this burden, and the mature firm ranks 27th among such operations nationwide. The property tax burden is substantially higher on new firms, ranking 38th in the country.

The new capital-intensive manufacturing firm performs well in Maryland with an effective rate of 6.3 percent, fifth among this firm type. It benefits from a favorable apportionment formula—special single sales factor apportionment applies to manufacturing—which compensates for the state's high 8.25 percent corporate income tax rate. New firms of this kind receive a generous property tax abatement, but mature firms of the same type also perform well due to low income, unemployment insurance, and sales tax burdens. Mature capital-intensive manufacturers rank seventh with an effective rate of 7.1 percent.



EFFECTIVE TAX RATES BY STATE

MASSACHUSETTS

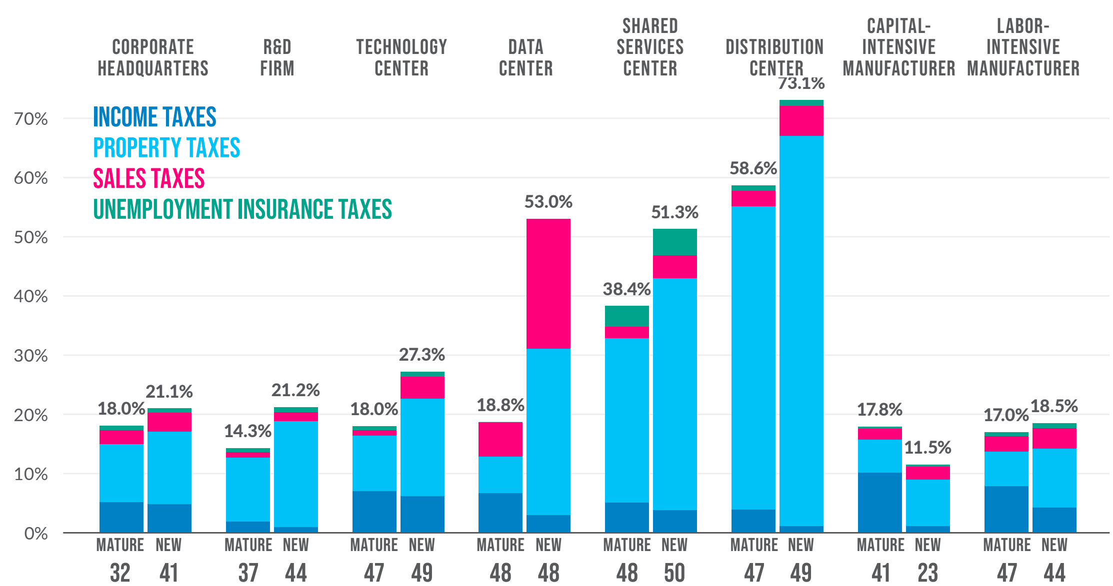
TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
8.00%	5.00%	6.25%	--

Massachusetts employs double-weighted sales factor apportionment, sources service income where the income-producing activity takes place, and imposes a throwback rule, all combining to exacerbate the burden of the state's already high 8 percent corporate income tax rate. In addition to high income taxes, high property taxes contribute to the state's consistently poor rankings for our model firms. As a result, Massachusetts ranks 49th overall for both new and mature firms.

Most firms in our study, which sell largely out of state, are disadvantaged by Massachusetts' apportionment rules, although manufacturers enjoy the benefit of being able to use single sales factor apportionment. Generous property tax abatements and investment tax credits reduce income and property tax liability for select new firms like the new capital-intensive manufacturer, resulting in the only below-average effective tax rate experienced by any of our model firms in Massachusetts. Conversely, the mature capital-intensive manufacturer, which does not benefit from investment tax credits, experiences an effective rate 32 percent above the national median due to the high income tax burden.

The state's high property tax rates—which extend to equipment—disadvantage in-state firms, especially distribution centers. Massachusetts ranks 49th and 47th for new and mature distribution centers, respectively. High burdens and a lack of incentives combine to mean new distribution centers pay an effective property tax rate equal to 266 percent of the national median. This results in an overall effective rate of 73.1 percent—almost twice the national average. Similar factors impact the new shared services center, which experiences the highest rate in the country, and data centers, which pay the third-highest effective rate.



MICHIGAN

TOP RATES

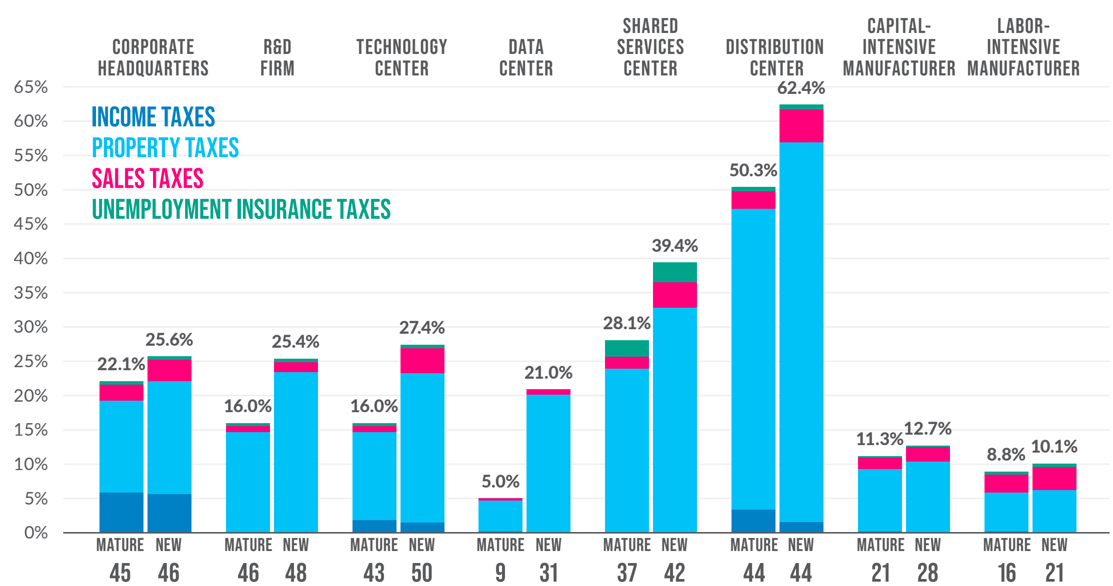
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.00%	4.25%	6.00%	--

Michigan ranks among the states with the highest effective tax rates on new firms due to high property taxes, moderate income taxes, and the lack of incentives for firms other than manufacturers. For instance, the state ranks 50th for new technology centers, which experience the nation's highest effective property tax rate for that firm type and a total effective rate 72 percent above than the average.

The state is slightly more attractive for businesses with long time horizons or wishing to make a substantial investment in the state, but five of the eight mature firms in our study face an above-average tax burden as well. One of the exceptions is the mature data center, which pays a relatively low effective rate of just over half that national average, despite the new data center experiencing an average effective rate.

The lack of a throwback rule, combined with single sales factor apportionment and benefits sourcing, works to the advantage of firms with clients or sales largely out of state, like the shared services center. On the other hand, high property tax burdens, and the application of the property tax to equipment, keep effective rates high for most of the model firms. New manufacturing operations receive the benefit of a generous property tax abatement, but similar incentives are not available to mature firms or to other firm types.

Michigan imposes high effective tax rates on new and mature corporate office operations, which experience an effective tax rate of 25.6 percent and 22.1 percent, respectively. These are 56 percent and 32 percent higher than the median effective tax rate on such firms nationwide. Research and development (R&D) facilities and distribution centers also fare poorly, all burdened by high property taxes.



MINNESOTA

TOP RATES

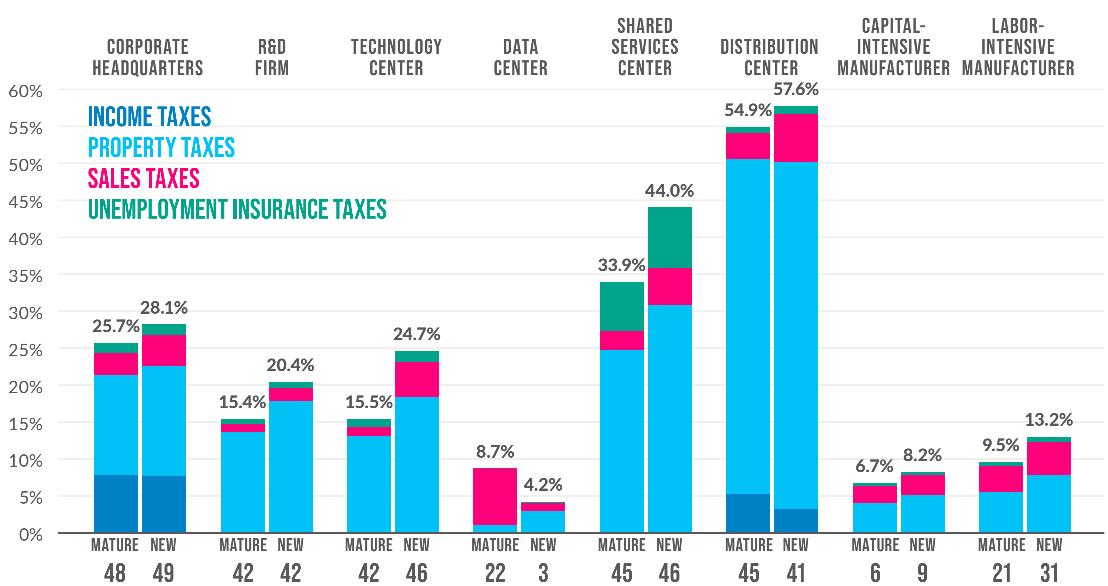
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
9.80%	9.85%	6.875%	0.59%

Minnesota's high corporate income, unemployment insurance (UI), and property tax burdens are responsible for an effective tax rate of 25.7 percent for the mature corporate headquarters, ranking 48th nationwide. The firm receives no meaningful tax incentives. Conversely, the state ranks sixth for the mature capital-intensive manufacturing operation, which experiences a low 6.7 percent effective tax rate. The burden of the state's 9.8 percent corporate income tax rate is largely avoided by this firm due to single sales factor apportionment and the lack of a throwback rule.

The state ranks 42nd for the mature research and development (R&D) operation with an effective tax rate of 15.4 percent. Despite benefiting from the favorable apportionment rules, this operation faces the second-highest property tax burden in the nation for this firm type. The state offers a modest R&D tax credit.

Although Minnesota's sourcing rules, which locate income where the benefit is received, are favorable to operations like shared services centers and result in a low income tax burden for the mature operation, favorable sourcing rules cannot overcome the above-average unemployment insurance and sales taxes experienced by this firm. The state's UI tax burden is above average for all firms in our study, which drives up tax costs for all firms, but particularly those that tend to be labor-intensive.

Minnesota offers few incentives, which, combined with high unemployment insurance and property taxes (and high income taxes for firms that sell in-state), yield substantially above-average tax burdens for most new operations. The data center and capital-intensive manufacturer are the only exceptions, as these firms benefit from generous property tax abatements and the lack of equipment in the property tax base.



MISSISSIPPI

TOP RATES

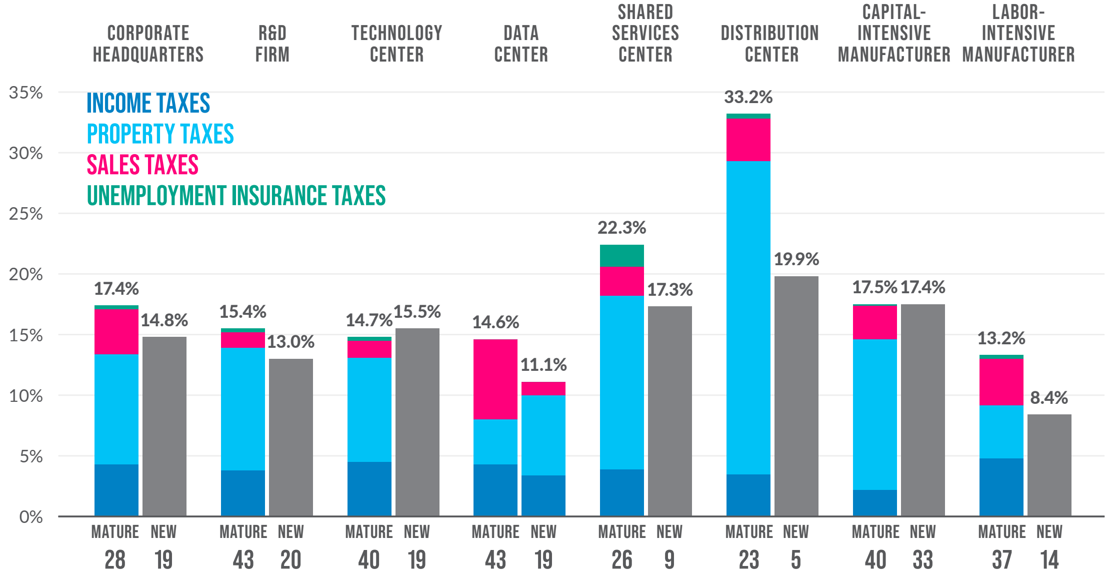
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
5.00%	5.00%	7.00%	0.07%

Despite a modest corporate income tax rate, Mississippi imposes relatively high tax costs on manufacturing operations and about-average costs on most other mature firms. The state offers job creation tax credits, withholding rebates, property tax abatements, capital investment incentives, and other tax credits to qualifying firms, which can substantially reduce tax burdens for many firms. Partially due to these incentives, new distribution centers in Mississippi face the fifth-lowest effective rate nationwide, with every other new firm in our study except the capital-intensive manufacturer also experiencing a below-average total effective tax rate. Overall, Mississippi ranks 12th for new firms but 39th for mature firms.

The state's property tax applies to inventory and equipment as well as buildings and land. Mississippi also imposes an antiquated capital stock tax, although it is scheduled to be fully phased out by 2028. Taken together, these factors penalize capital-intensive businesses, which is why the mature capital-intensive manufacturing operation ranks 40th nationwide with an effective tax rate of 17.5 percent.

Moreover, while most firms in Mississippi are subject to single sales factor apportionment, which benefits firms that sell out of state, manufacturing operations are subject to either three-factor apportionment or a two-factor formula that uses the average of the property and payroll factors plus the sales factor, to the detriment of these operations. Few states offer different apportionment factors to distinct firm types, and when they do, they tend to offer manufacturing a more favorable formula, not a less advantageous one as Mississippi does.

The state's sourcing rules, which levy tax burdens where the income-producing activity takes place, and a moderately high sales tax work against firms like the mature data center and mature technology center, and the throwback rule increases tax costs for all firms that do business in states with which they lack nexus.



Gray bars indicate that tax type breakdowns are unavailable due to negative effective tax rates for one or more tax types.

MISSOURI

TOP RATES

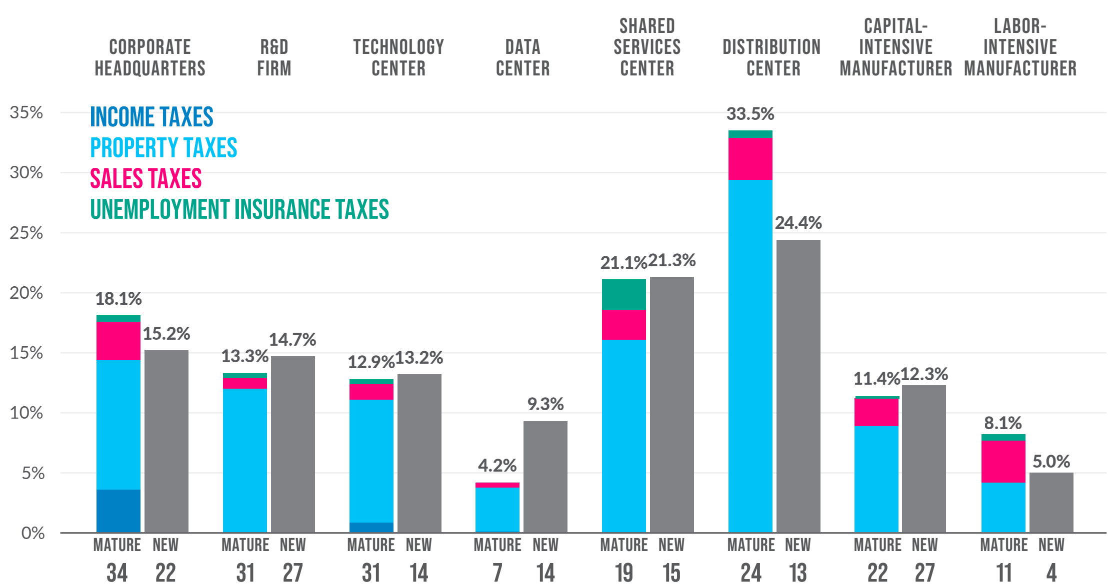
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
4.00%	5.40%	4.23%	4.03%

Corporate tax reforms implemented in 2020 cut Missouri's corporate income tax rate from 6.25 to 4.0 percent, the nation's second-lowest rate. Additionally, Missouri allows 50 percent of federal income tax payments to be deducted when calculating taxable income. While this deduction creates certain distortions and is less simple than a lower overall rate, the combined effect of a low rate and federal deductibility leads to low overall corporate tax burdens. As a result, the state ranks 10th best for new firms and 18th for mature firms.

As part of this broader corporate tax reform package, Missouri now uses single sales factor apportionment, having previously given firms a choice of three-factor or single sales factor. The state's apportionment formula works to the advantage of firms basing their operations in-state. The state's throwback rule, which increased burdens for firms that primarily sell out of state, was also repealed, to the benefit of several model firms in our study.

Missouri ranks 4th for new labor-intensive manufacturing operations and 11th nationwide for mature operations. The new firm benefits from extremely generous job tax credits and property tax abatements, in addition to structural provisions that favor all firms.

Missouri sources services where the benefits are received, which is to the advantage of firms like shared services centers, and the state exempts manufacturing machinery from the sales tax, which lowers tax costs for both capital- and labor-intensive manufacturing companies. The state sales tax rate is above-average, however, which offsets some of the benefit provided by modest income taxes.



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MONTANA

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.75%	6.90%	--	--

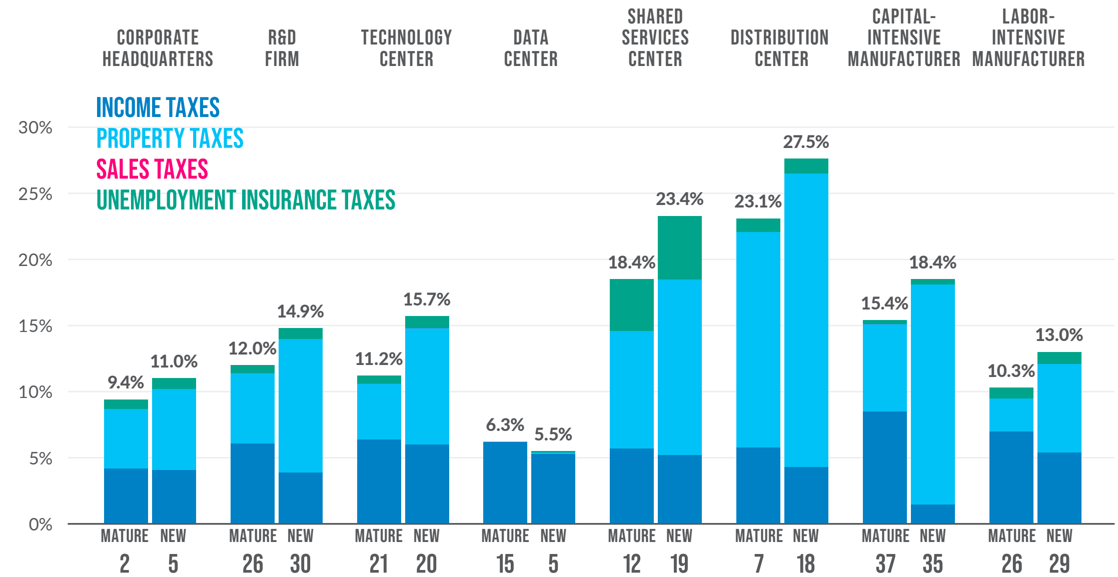
Montana ranks second for mature corporate headquarters, with an effective rate just over half the median nationwide. The lack of a state sales tax and relatively low property taxes are the contributing factors in this ranking. The operation also has a modest income tax burden due to the state's three-factor apportionment formula.

Conversely, three-factor apportionment works to the detriment of manufacturing operations. Montana ranks 37th for mature capital-intensive manufacturing, with an effective tax rate of 15.4 percent. This firm type bears tax burdens above the national median across all the major tax categories—income, unemployment insurance, and property—except the sales tax. For instance, unemployment insurance taxes are 50 percent higher than the median and 9th highest nationwide.

The lack of a sales tax benefits all firms and reduces the cost of purchasing equipment and machinery. Montana does, however, extend its property tax to equipment, which results in capital-intensive manufacturers paying property tax rates above the national median.

The state's market-based sourcing rules for services are beneficial to some firms, like shared services centers, which face a below-average total effective tax rate despite high unemployment insurance tax burdens.

The mature distribution center benefits from a low property tax and the lack of a state sales tax, which results in an effective rate 33 percent below the national median. Data centers are in a similar situation, although they also receive generous property tax abatement, which means they experience an effective rate well below the median. In fact, new data centers enjoy a rate that is a quarter of the national average.



NEBRASKA

TOP RATES

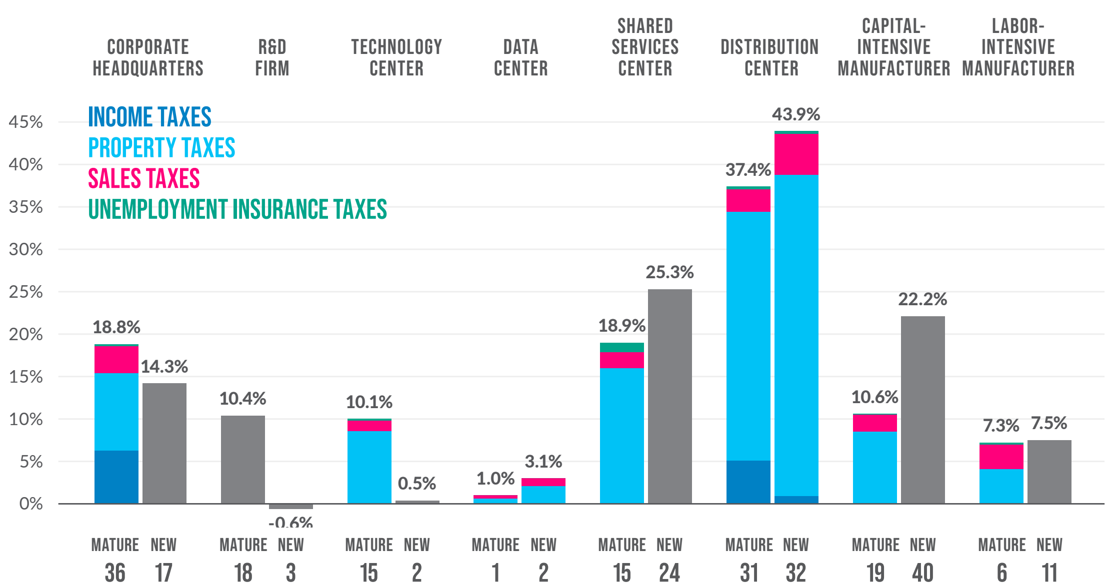
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
7.81%	6.84%	5.50%	1.44%

Nebraska has low overall tax burdens for both mature and new firms, which rank 8th and 9th nationwide, respectively. Taking both new and mature iterations into account, seven of the model firm iterations in our study experience a negative effective income tax rate and six experience a zero percent effective income tax rate, leaving only three firms with a positive income tax burden. This is largely attributable to the ImagiNE Nebraska Act incentives program—one of the most generous incentives programs in the country—which provides investment credits, jobs credits, and research and development (R&D) credits, as well as property and other tax abatements to qualifying firms. For many firms, these incentives more than offset the state's high corporate income tax rate of 7.81 percent.

Mature data centers benefit from generous property tax abatements and the lowest unemployment insurance taxes for that firm type nationwide, resulting in the lowest total effective rate nationwide for this firm type. New data centers enjoy the second-lowest rate nationwide—just over a fifth of the national median. Many new and mature firms also benefit from the state's favorable apportionment and sourcing rules.

The state's tax code deviates sharply from tax neutrality across both firm types and maturity. The mature R&D facility faces an effective tax rate of 10.4 percent, while the new firm experiences negative tax liability of -0.6 percent.

The state's apportionment system also contributes to Nebraska's 6th place ranking for mature labor-intensive manufacturing. This operation has an effective tax rate 29 percent below the median even though it has an above-average property tax liability. Conversely, the new capital-intensive manufacturer pays a high total effective tax rate—despite low unemployment insurance taxes and a negative income tax burden—due to high property taxes that extend to business equipment.



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NEVADA

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
--	--	6.85%	1.38%

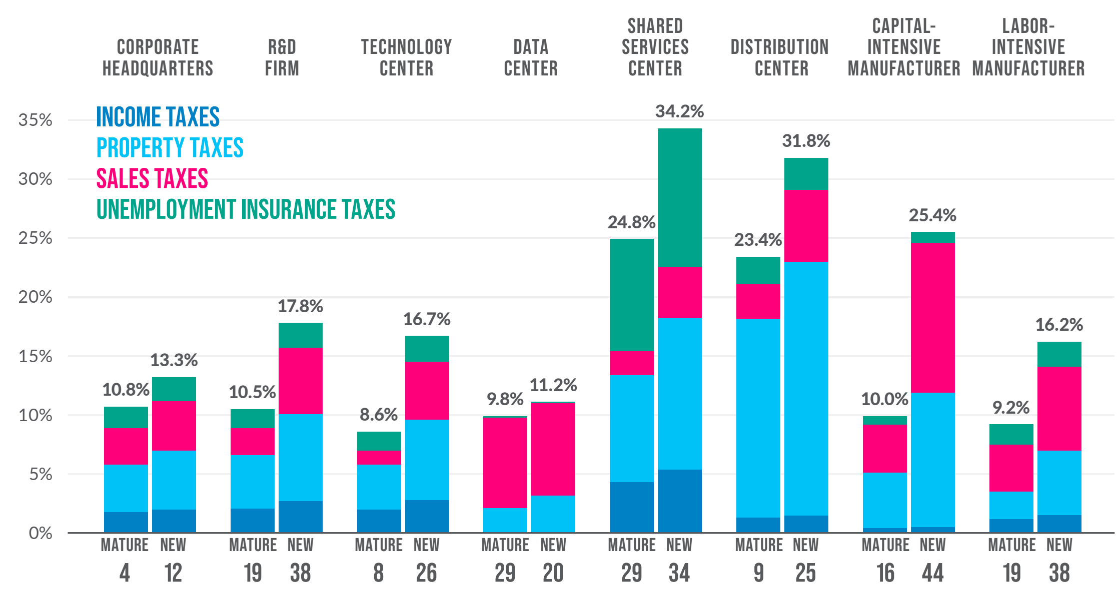
Nevada's decision to forgo a corporate income tax is highly beneficial to many of the mature firms in our study, as are generally low property taxes. The state does, however, impose a modest payroll tax and a gross receipts tax, called the Commerce Tax. Rates under the Commerce Tax are generally low but vary by industry. Manufacturers pay some of the lowest rates while data and tech centers pay higher rates.

Gross receipts are inherently nonneutral and penalize firms with low profit margins or long production chains, though the adverse impact of Nevada's tax is minimized by its low rates. Burdens under the Commerce Tax are highly uneven, but rarely high.

The absence of a corporate income tax and low property taxes are instrumental in the state's 9th place ranking for mature distribution centers and 4th place rank for mature corporate headquarters, though these operations are burdened with very high unemployment insurance taxes.

Nevada ranks 38th for the new labor-intensive manufacturing operation and 44th for the new capital-intensive manufacturing operation, hindered chiefly by the fact that manufacturing equipment is subject to sales and property taxes. In addition, Nevada offers no meaningful incentives for new manufacturers.

Mature tech centers enjoy very low gross receipts and property taxes, and while unemployment insurance taxes are the 4th highest nationwide, the total effective rate is 31 percent below the national median. Conversely, a lack of incentives that are offered by many other states means that the new technology center experiences an above-average effective rate. On the other hand, despite generous incentives valued at $38,187 per job, new data centers pay a rate only 23 percent below the national median.



EFFECTIVE TAX RATES BY STATE

NEW HAMPSHIRE

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
7.70%	5.00%*	--	--

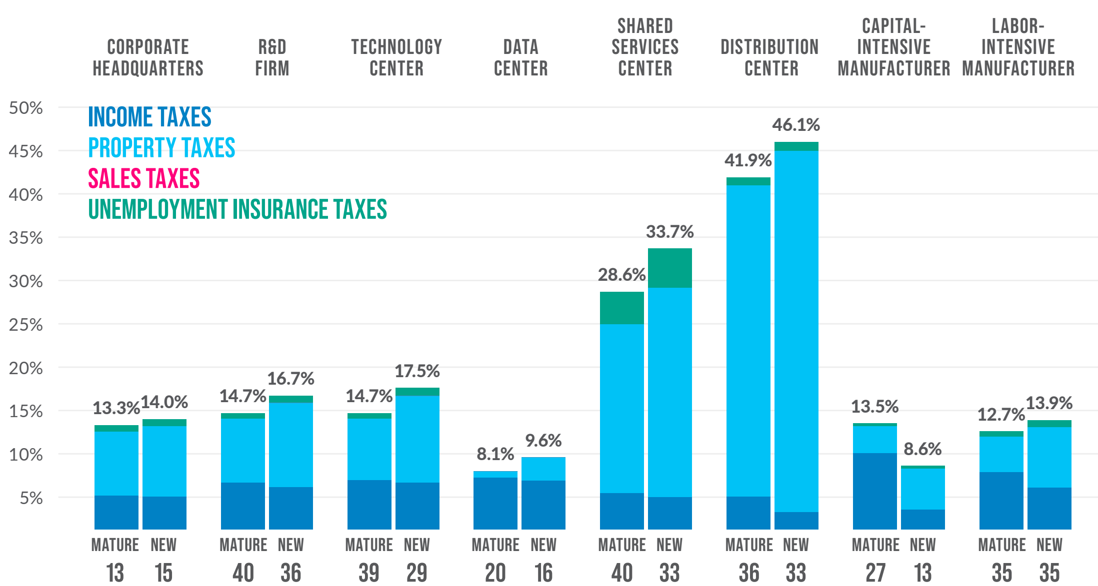
New Hampshire forgoes individual income taxes (except on interest and dividend income) and sales taxes but compensates in part with two business taxes: the Business Profits Tax—a high-rate corporate income tax—and the Business Enterprise Tax, which is essentially a value-added tax. The lack of an individual income tax benefits many small businesses but does not aid the C corporations represented in our model firms.

The state's high corporate income tax rate is further exacerbated by a throwback rule and the use of double-weighted sales factor apportionment, and sources service income to the location where the services are performed, not where their benefit is received. (The state is set to shift to single sales factor apportionment in 2022.) These tax provisions yield high tax burdens for most of the mature firms in our study. The new data center faces an effective rate nearly 14 times the national median.

The absence of a state sales tax and moderate property tax burdens benefit new and mature capital-intensive manufacturers, as well as the corporate headquarters, although these firms do experience high income and unemployment insurance tax burdens.

The same factors are at work for the state's new labor-intensive manufacturing operation, which experiences the 6th highest income tax burden in the nation for its firm type. This results in New Hampshire ranking 35th for this firm type despite average unemployment insurance tax burdens and the absence of a sales tax. Similarly, new research and development (R&D) facilities in New Hampshire are burdened by the 2nd highest effective income tax rate nationwide. The rate is a full 28.3 percentage points higher than nearby New York's. Mature R&D facilities pay an effective income tax more than 10 times the national median.

* New Hampshire's individual income tax applies to interest and dividend income only.



NEW JERSEY

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
11.50%*	10.75%	6.625%	-0.03%†

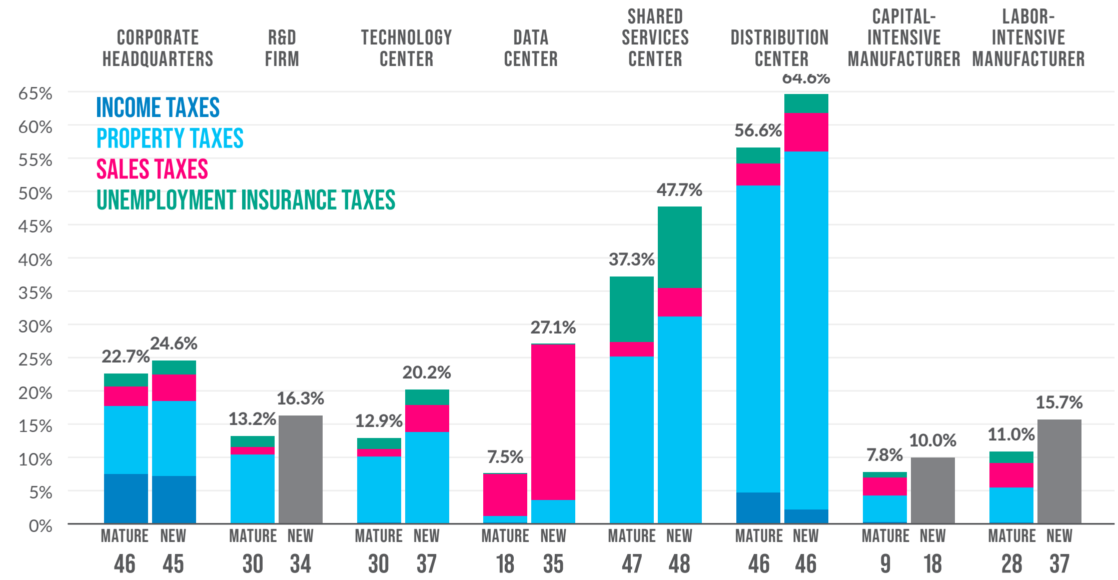
New Jersey's anomalously high corporate income tax contributes to the state's above-average tax burdens for most model firms, as do high property and unemployment insurance taxes. For instance, New Jersey ranks 46th for both mature and new distribution centers due to some of the nation's highest unemployment insurance, income, and property tax burdens for this firm type, along with above-average sales tax burdens. This tax trifecta is also responsible for high taxes on corporate headquarters, with the new corporate headquarters facing effective income tax rates twice the national median, along with high property and unemployment insurance tax burdens.

Manufacturing firms benefit from the state's single sales factor apportionment, with the mature capital-intensive manufacturing firm facing an effective income rate 71 percent below the national median despite the high corporate rate, and the new capital-intensive manufacturer paying a negative effective income tax rate of -0.1 percent. Capital-intensive manufacturers and the mature data center also enjoy modest property tax burdens, since, while property taxes in New Jersey are high, equipment is not included in the tax base.

Despite single sales factor apportionment and the lack of a throwback rule, the new shared services center experiences the 3rd highest effective rate in the country due to high property taxes and the nation's 2nd highest unemployment insurance taxes. For the same reason, and despite the 2nd lowest effective income tax rate, New Jersey ranks 47th for mature shared services centers.

* In New Jersey, the rates indicated apply to a corporation's entire net income rather than just income over the threshold. A temporary and retroactive surcharge is in effect from 2020 to 2023, bringing the rate to 11.5 percent for businesses with income over $1 million.

† New Jersey permits Salem County and Urban Enterprise Zones to levy a lower sales tax rate on select transactions. We reflect this as a negative local rate.



Gray bars indicate that tax type breakdowns are unavailable due to negative effective tax rates for one or more tax types.

EFFECTIVE TAX RATES BY STATE

NEW MEXICO

TOP RATES

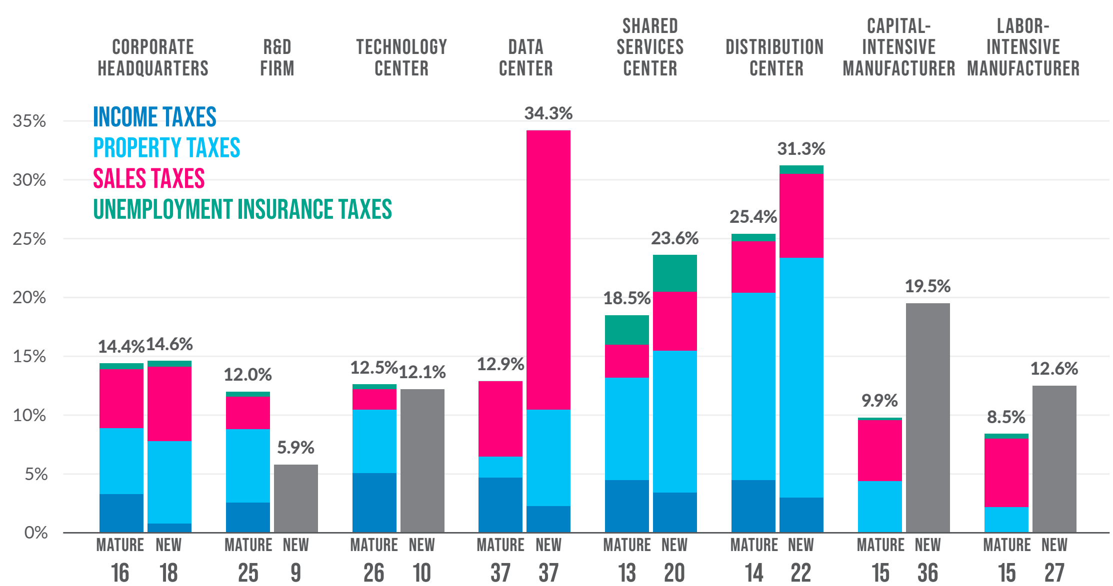
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
5.90%	5.90%	5.13%	2.71%

New Mexico phased in a reduction in its corporate income tax rate over several years, reducing it from 7.6 percent in 2013 to 5.9 percent in 2018. The state uses three-factor apportionment for most firms, although manufacturers and corporations headquartered in the state can elect to use single sales factor apportionment. There is also a throwback rule, but with an exemption for manufacturers that use single sales factor apportionment. New Mexico uses a market-based sourcing system, which is beneficial to service firms like shared services centers, and both the new and mature model firms of this type pay below-average rates.

Although equipment is included in the state's property tax base, overall property tax burdens in New Mexico are generally light. However, manufacturing machinery and research and development (R&D) equipment is also subject to the sales tax, which results in high sales tax burdens for affected firms.

Unfavorable apportionment and high sales taxes drive up costs for new data centers in New Mexico, which experience an effective sales tax rate 20 times greater than the national median and an income tax rate more than 4.5 times greater than the national median. Mature data centers experience an income tax burden 224 percent above the national median. Manufacturers in New Mexico also experience some of the highest sales tax burdens in the country for their firm type. For example, the mature labor-intensive manufacturing operation has the 8th lowest property tax burden but the 2nd highest sales tax burden for its firm type.

New R&D facilities enjoy a low effective tax rate of 5.9 percent in New Mexico due to a generous R&D tax credit, which results in a negative income tax rate of -10.8 percent. The firm also experiences moderate property and unemployment insurance tax burdens. The mature firm, by contrast, experiences a rate more than twice as high. New technology centers also benefit from incentives that result in a negative income tax rate of -3.1 percent.



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NEW YORK

TOP RATES

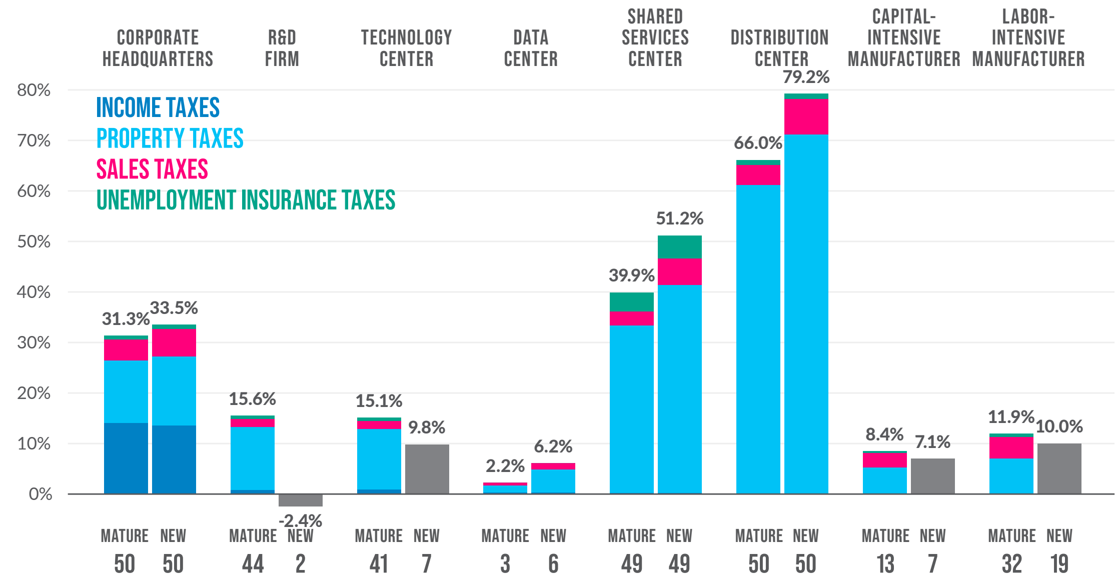
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.50%*	8.82%*	4.00%	4.52%

New York's single sales factor apportionment and lack of a throwback reduce the impact of corporate income taxes for many firms, though the tax's multiple bases add to complexity, and sometimes tax costs. The state sources service income to the location of the customer, which benefits service sector firms working for out-of-state clients. The mature shared services center, which is subject to this favorable sourcing rule, enjoys an effective income tax rate 89 percent below the nationwide median. Despite this, both mature and new firms of this type pay the 2nd highest effective rate due to effective property tax rates twice the national median.

The state ranks 50th in two firm categories: corporate headquarters and distribution centers. Mature corporate headquarters have total burdens nearly twice the median, and they face income tax rates nearly three times the national median, the highest income tax burdens for this firm type. Similarly, new corporate headquarters experience a total effective rate more than double the national median. Distribution centers also see anomalously high tax burdens, as do some manufacturers. New distribution centers, for instance, experience a property tax rate almost three times greater than the national median, while manufacturing operations experience high sales and property taxes on their activities, with the mature labor-intensive manufacturing operation facing the 2nd highest property tax burden nationwide for that firm type.

This stands in stark contrast to the new research and development (R&D) facility, which enjoys a negative total effective tax rate. Due to the Excelsior tax credits program, New York's new R&D facility has the 2nd lowest total effective rate in the country at -2.4 percent. New York's heavy reliance on incentives for certain firms leads to much higher effective rates for mature firms. While the state is highly competitive in its treatment of the new R&D facility, the state ranks 44th for the mature R&D facility. New technology centers also benefit from incentives, resulting in a negative income tax rate of -13.4 percent. Furthermore, favorable apportionment and moderate property and sales taxes result in the state ranking 3rd for mature data centers and 6th for new data centers.

* Lawmakers increased the corporate income tax rate to 7.25%, and the top individual income tax rate to 10.9%, in April 2021, after the January 1 snapshot date of our study, and reversed the full phasout of the state's alternative capital stock base. These changes are not reflected in our analysis.



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NORTH CAROLINA

TOP RATES

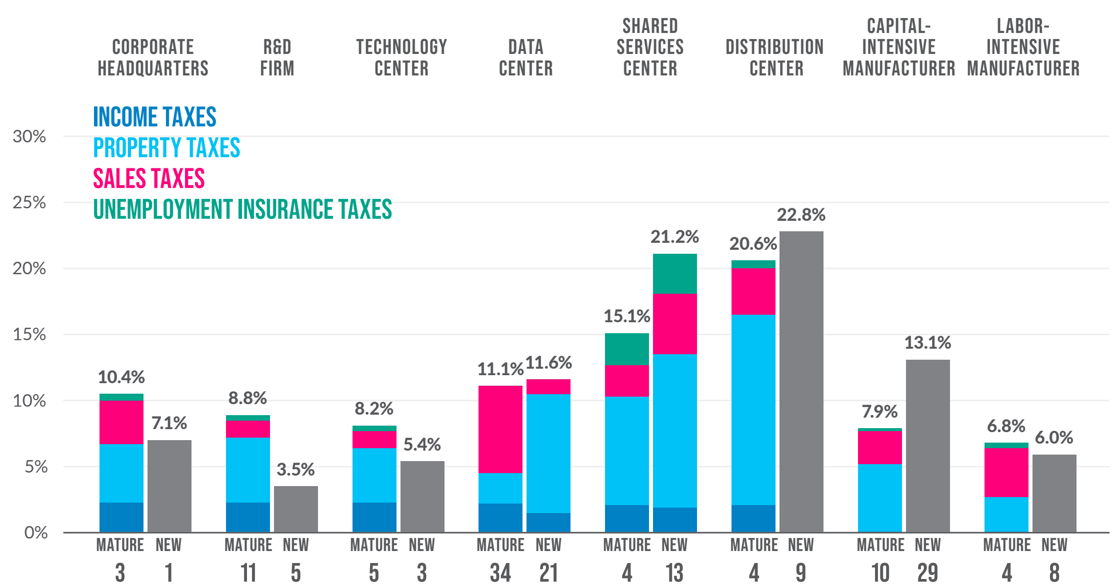
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
2.50%	5.25%	4.75%	2.23%

Over the past decade, North Carolina has implemented historic tax reforms which involved, among other provisions, reductions in the state's corporate income tax rate and paring back targeted tax incentives. The state now ranks 3rd overall for new firms and 5th for mature firms and boasts the lowest corporate income tax rate in the country at 2.5 percent.

All mature model firms in North Carolina except the mature data center experience below-average tax rates. North Carolina ranks 3rd for the mature corporate headquarters with an effective rate of 10.4 percent, based on a very low property tax burden and low income tax burdens. North Caroli-na's low property taxes are also enjoyed by the mature technology center, which experiences the 5th lowest total effective rate for its firm type, as well as the mature distribution center, labor-in-tensive manufacturing operation, and shared services center, which all experience the 4th lowest total effective rates for their firm types.

New firms generally experience below-average effective tax rates as well. The new research and development (R&D) facility, for instance, faces average sales and unemployment insurance tax rates, and property taxes are notably lower than in most other states. The state has reduced reliance on incentives but still offers a withholding tax rebate that benefits most new firms. New corporate offices enjoy very low income and property taxes, resulting in an effective rate of 7.1 percent, the lowest such rate in the country and 57 percent below the national median.

Of all the firm types, data centers and new capital-intensive manufacturers experience the highest rates in North Carolina relative to other states. The property tax base's inclusion of machinery and equipment and the state's capital stock tax (the franchise tax), which is uncapped and imposed in addition to the corporate income tax, both contribute to these tax burdens.



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EFFECTIVE TAX RATES BY STATE

NORTH DAKOTA

TOP RATES

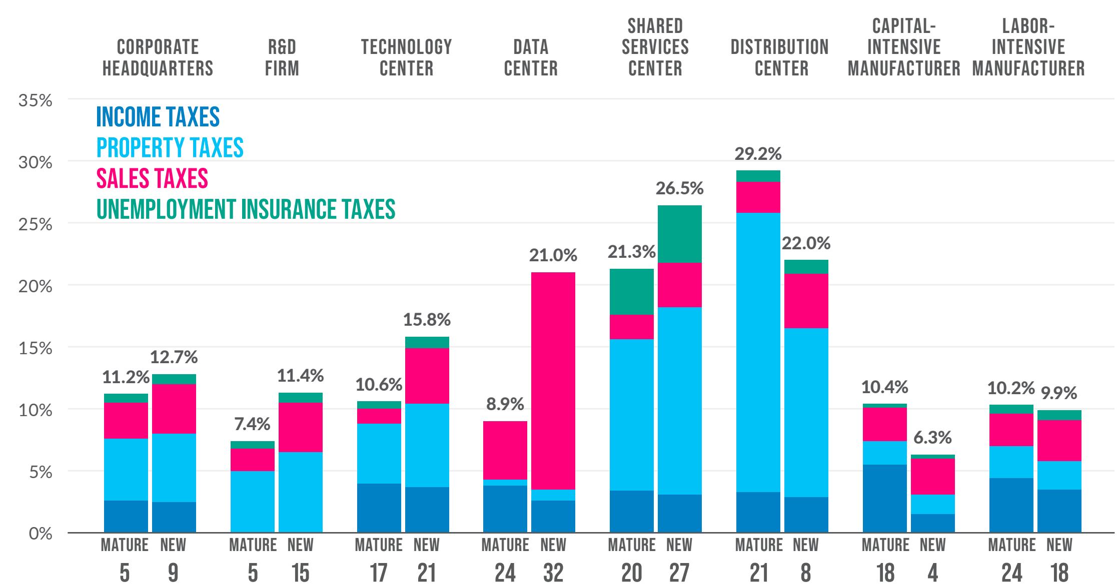
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
4.31%	2.90%	5.00%	1.96%

North Dakota's low corporate income tax rate benefits firms operating largely or entirely in-state, like the corporate headquarters and research and development (R&D) facilities. However, its throwback rule and unfavorable sourcing rules disadvantage firms selling goods or services out of state, like the new labor-intensive manufacturing firm, with an effective tax rate of 9.9 percent. These factors, combined with relatively low reliance on incentives, result in North Dakota's income tax burdens being above average for 13 of the 16 model firms.

Throwback and sourcing rules turn a low-rate tax into a substantial tax burden for some firms, but North Dakota's very low property taxes help to compensate for high effective income tax rates. All firms in our study experience below-average property taxes. As a result, North Dakota ranks 10th overall for mature firms and 11th for new firms. All 16 model firm iterations face below-average total effective tax rates, and all but two—the new shared services center and the new data center—are also below the median. Unfavorable sourcing rules result in some of the highest income tax burdens nationwide for these types of firms.

All firms benefit from North Dakota's low property taxes, which are levied at low rates and do not apply to equipment or inventory. Additionally, several new firms—including the new data center, new distribution center, new capital-intensive manufacturer, and new labor-intensive manufacturer—qualify for property tax abatements that further reduce their tax liability. North Dakota ranks among the top seven states for lowest effective property tax rates for these new firm types.

North Dakota's sales tax burdens tend to be above-average due in large part to the inclusion of manufacturing, R&D, and data center machinery in the sales tax base. Ten of the 16 model firms in our study face above-average sales tax burdens.



EFFECTIVE TAX RATES BY STATE

OHIO

TOP RATES

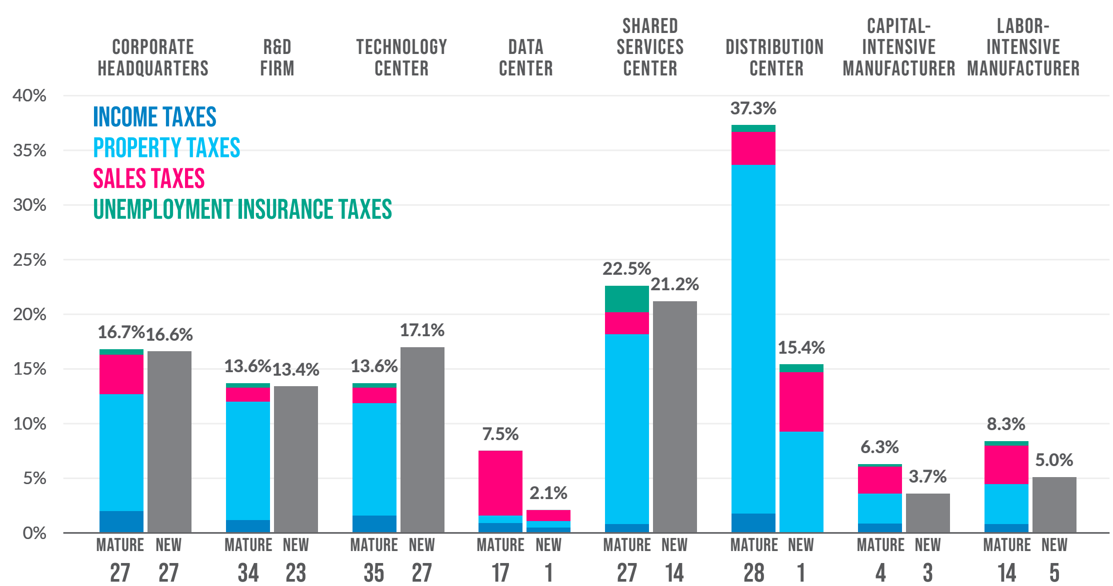
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
--	4.797%	5.75%	1.48%

Although Ohio lacks a traditional corporate income tax, it does have the Commercial Activity Tax (CAT), a gross receipts tax. Due to the effects of tax pyramiding, effective tax rates can understate the full economic costs imposed on firms by the state's tax system. Additionally, tax burdens in Ohio also differ widely across firms due to tax incentives, including property tax abatements, withholding tax rebates, and research and development (R&D) credits, which are offered to select new firms.

Ohio ranks 28th for the mature distribution center, which has an effective tax rate of 37.3 percent. Although this firm has a low corporate tax cost, this light burden is combined with above-average property tax costs. Due to a generous property tax abatement, however, Ohio ranks first for the new distribution center. Similarly, the CAT falls heavily on manufacturing, but those burdens are offset by property tax abatements as well as withholding tax rebates for new firms. The new capital-intensive manufacturer's total effective tax rate is 3.7 percent, ranking 3rd overall. A low property tax burden also means that the mature capital-intensive manufacturer enjoys the 4th lowest rate nationwide.

Property tax abatements benefit new distribution and data centers as well as manufacturing operations. Ohio's new distribution center has an effective tax rate of 15.4 percent, the lowest effective rate nationwide and less than half the national median. The new data center also pays the lowest effective rate nationwide for its firm type, due in large part to the property tax abatement and withholding tax rebate available to this firm type, along with low sales tax burdens due to the availability of partial or full sales tax exemptions for data center equipment.

* In lieu of a traditional corporate income tax, Ohio levies a gross receipts tax at a base rate of 0.26 percent.



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OKLAHOMA

TOP RATES

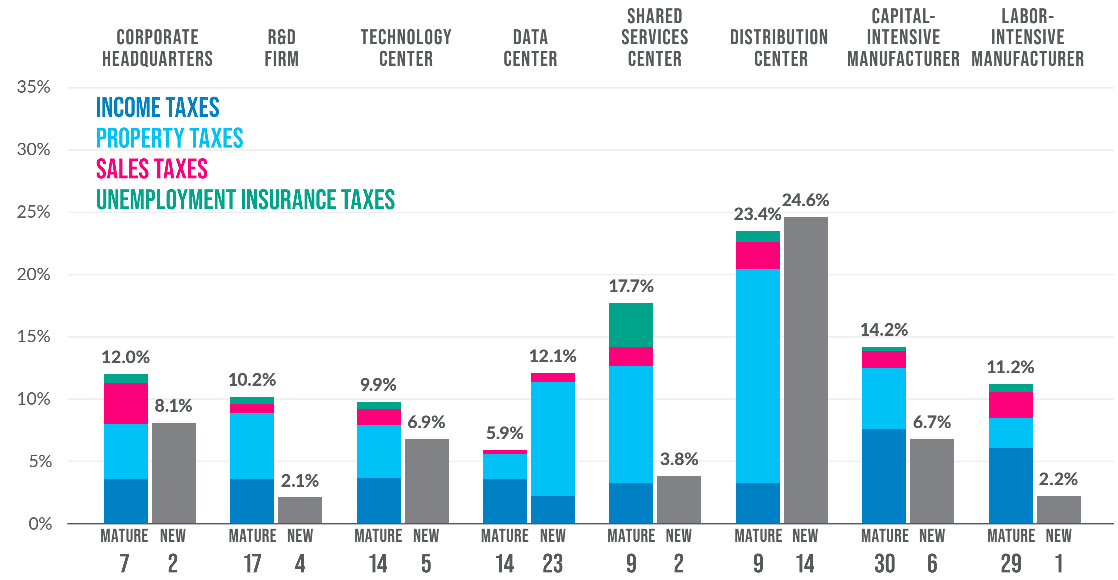
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.00%	5.00%	4.50%	4.45%

Oklahoma's generous investment and withholding tax credits combine to yield a negative income tax burden for seven of the eight new firms (all but data centers). Consequently, all new firms experience below-average tax burdens and Oklahoma ranks first for new firms overall. The new shared services center, by way of example, has an effective income tax rate of -16.7 percent and a total effective tax rate of 3.8 percent. The firm benefits from Oklahoma's generous withholding tax rebate and favorable sourcing rules for service income, which apportion the firm's income where the market is. Mature shared services centers, by contrast, experience an effective tax rate of 17.7 percent.

The state ranks 29th and 30th for mature labor- and capital-intensive manufacturing operations, respectively. While both firms benefit from low sales taxes, and the labor-intensive operation also benefits from low property taxes, both operations suffer from above-average income tax burdens that are driven in large part by the state's apportionment formula and throwback rule. Oklahoma uses an evenly-weighted three-factor apportionment formula, except for firms with capital investment of more than $200 million, which may use double-weighted sales factor apportionment.

Oklahoma ranks 7th overall for mature corporate headquarters, due primarily to relatively modest income and property tax burdens on this firm type. The state exempts manufacturing machinery from the sales tax base and provides a refund for sales taxes paid on research and development (R&D) expenditures. Together with generous incentives, these policies keep tax costs low for R&D firms.

Similarly, due to incentives, new technology centers also enjoy a total effective tax rate less than half the national median. The property tax includes both equipment and inventory in addition to land and buildings, driving up property tax costs for mature firms and others not eligible for abatements.



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OREGON

TOP RATES

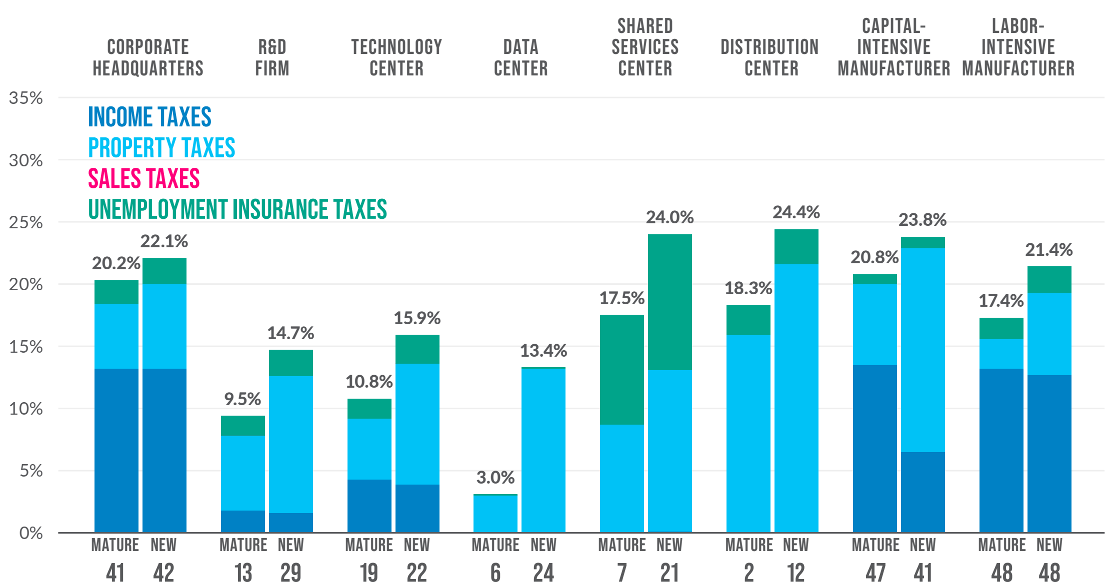
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
7.60%	9.90%	--	--

Oregon's high corporate income tax rate along with its throwback rule yields above-average overall tax burdens for many firms in our study despite the state forgoing a sales tax. Oregon is also one of only two states, Delaware, to impose a gross receipts tax in addition to the corporate income tax.

Nonetheless, services firms like the shared services center benefit from favorable sourcing rules, enjoying below-average effective tax rates. The low income tax burden for this operation, combined with the lack of a sales tax, means that the mature firm experiences one of the lowest overall tax burdens for its firm type with an effective tax rate of 17.5 percent.

Those same factors, in addition to low property tax burdens, result in both new and mature distribution centers experiencing effective tax rates that are well below average. Of these, the mature firm sees the 2nd lowest effective tax rate for its firm type at 18.3 percent. Both operations are constrained by one of the highest unemployment insurance tax burdens in the nation, although this comprises only a small portion of overall tax obligations for these firms.

The state's throwback rule burdens new and mature labor- and capital-intensive manufacturing plants and, when combined with the state's high corporate taxes, results in the highest income tax burdens in the nation for each of the four firm iterations. Furthermore, property taxes in Oregon extend to equipment, which can have a substantial impact, particularly on manufacturing firms that already see high gross receipts tax burdens. By way of example, the state imposes a particularly high property tax burden on the new capital-intensive manufacturing firm (16.4 percent) but a moderate property tax effective rate (6.5 percent) for the mature firm.



PENNSYLVANIA

TOP RATES

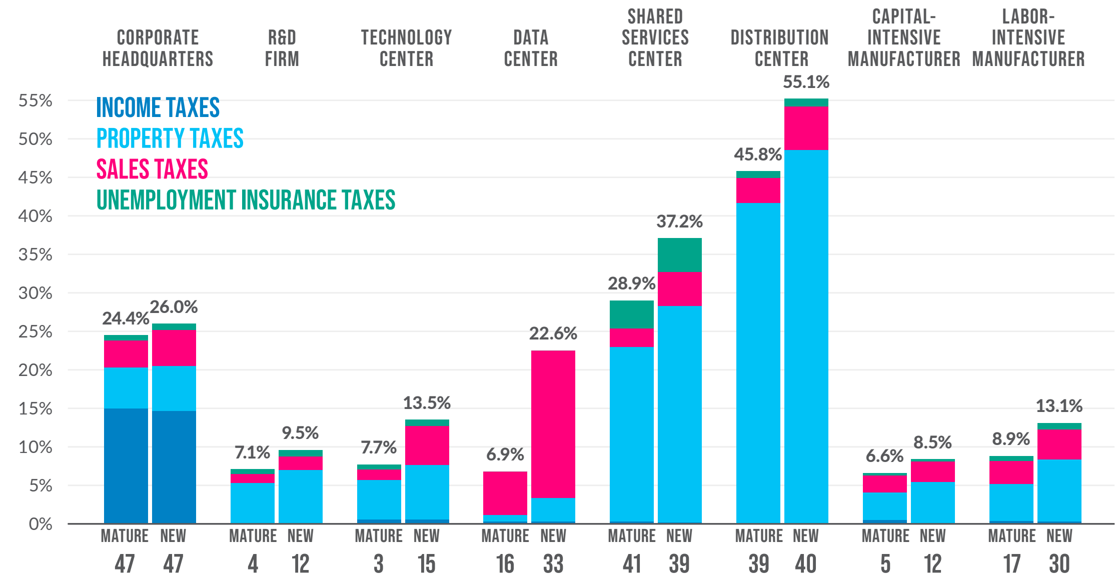
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
9.99%	3.07%	6.00%	0.34%

Pennsylvania has the second highest corporate income tax rate in the country with a flat 9.99 percent rate. Due to single sales factor apportionment, benefits sourcing, and the lack of a throwback rule, however, the income tax burden is actually lower than average for seven of the eight mature firms in our study.

Both the new and mature corporate headquarters, however, experience the highest income tax burdens in the nation for firms of their type, due to the state's high 9.99 percent tax on all corporate income. The effective income tax rate on the mature corporate headquarters is nearly three times the national median. The corporate headquarters and technology operations are also subject to locally-imposed gross receipts taxes, called business privilege and mercantile taxes.

The mature capital-intensive manufacturing operation, by contrast, ranks 5th in the nation with a total effective rate of 6.6 percent due to the state's single sales factor apportionment and the lack of a throwback rule. This firm type also enjoys a low effective property tax rate 33 percent below the national median. Meanwhile, high tax rates for the new distribution center and new shared services center are substantially driven by high property tax burdens, some of the highest in the country for their firm types. The incredibly high 55.1 percent total effective rate on new distribution centers is 70 percent above the median.

Research and development (R&D) centers are treated favorably by the state's sourcing rules with effective tax rates significantly below the national average. Mature technology centers benefit from favorable sourcing rules and a property tax that does not include equipment, which result in a total effective rate of 38 percent below the national median despite an above-average sales tax burden and average UI taxes.



RHODE ISLAND

TOP RATES

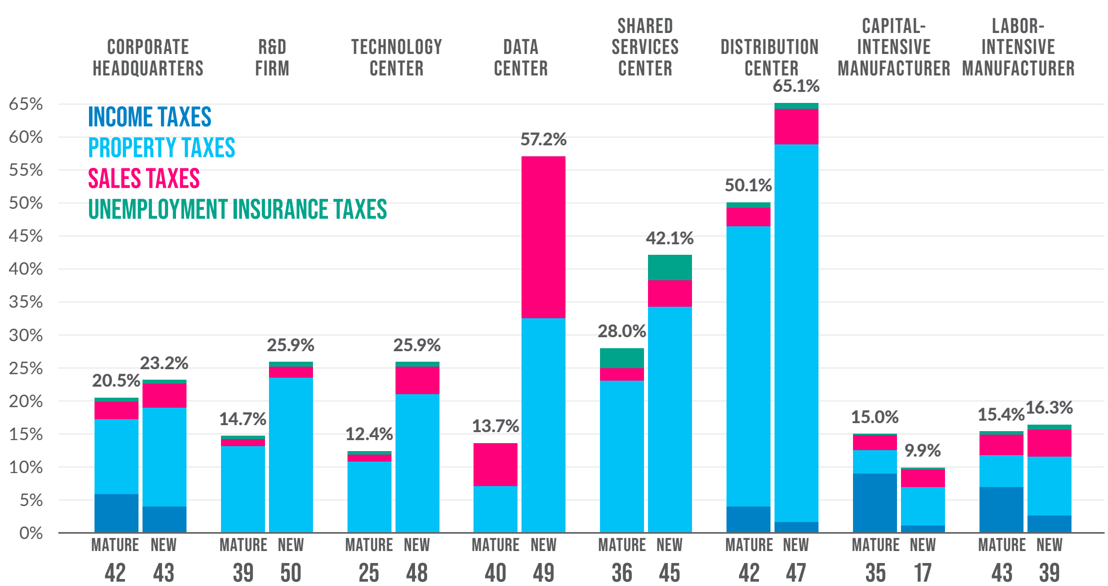
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
7.00%	5.99%	7.00%	--

Rhode Island imposes some of the highest total effective tax rates in the country regardless of industry or maturity, ranking 48th for new firms and 45th for mature firms. These poor rankings are driven in large part by a combination of a throwback rule and high property tax rates on a tax base that extends to business equipment. Despite single sales factor apportionment, which benefits many firms in our study, 15 of the 16 model firm iterations experience above-average total effective tax rates.

Twelve of the 16 model firms experience above-average income tax burdens. Among new firms, only the capital- and labor-intensive manufacturing firms receive higher-than-average incentives, and the new labor-intensive firm is still weighed down by above-average income, property, and total effective tax rates. The new capital-intensive manufacturer, which is Rhode Island's most competitive firm, ranks 17th overall due to property tax abatements more than 5.5 times the average available to that firm type nationwide.

Rhode Island's least-competitive firm, the new research and development (R&D) firm, has the highest total effective tax rate in the country for its firm type. While the state's sales tax is relatively competitive for most firms and does not apply to R&D equipment, the application of the state's high property taxes to equipment results in this firm experiencing an effective property tax rate almost twice the national median. High property taxes also burden data centers, further exacerbated by the application of the sales tax to data center equipment.

While market-based sourcing rules benefit the shared services center, this firm also experiences a steep property tax burden due to the inclusion of equipment in the property tax base. The new firm experiences the 6th highest effective property tax rate, while the mature firms see the 10th highest, leading to above-average overall tax rates for both firms.



SOUTH CAROLINA

TOP RATES

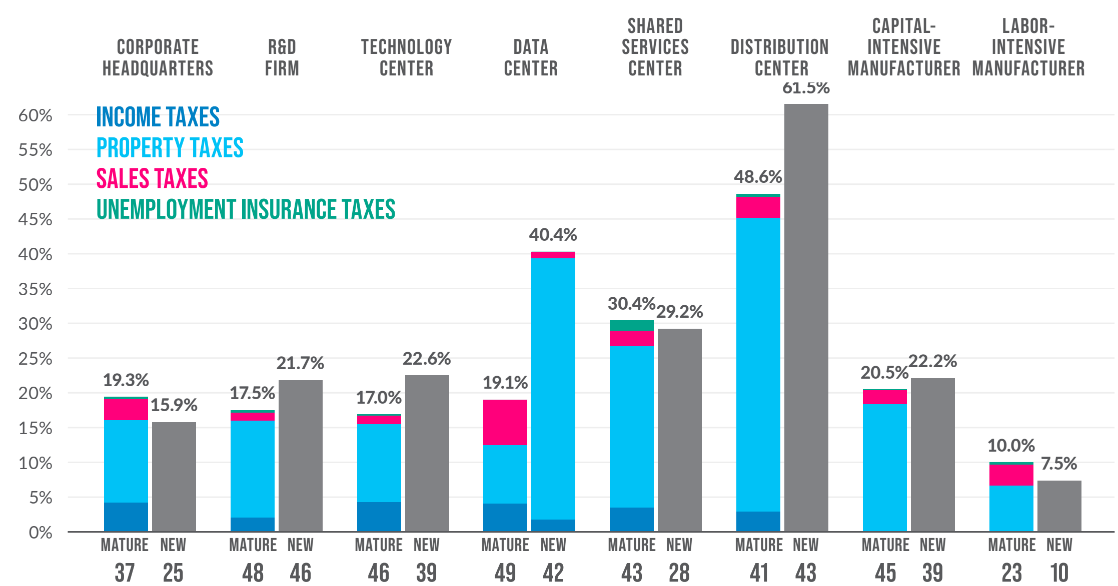
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
5.00%	7.00%	6.00%	1.46%

South Carolina's single sales factor apportionment and lack of a throwback rule work to the benefit of many of the firms in our study, as does the state's relatively modest corporate income tax rate. However, the state imposes some of the highest effective property tax rates in the country, due in significant part to high property taxes on equipment, and its service sourcing rules which penalize some firms. A capital stock (franchise) tax also adds to overall tax costs.

The state's lightest tax costs are on labor-intensive manufacturing firms. The new firm ranks 10th overall with an effective rate of 7.5 percent, while the mature firm ranks 23rd with an effective rate of 10 percent. These firms benefit from a low income tax burden attributable to single sales factor apportionment, the lack of a throwback rule, and generous incentives available to the new firm. They are hindered, however, by extremely high property tax burdens despite a particularly generous property tax abatement available for 20 years of operations. All other firm types in our study except the new corporate headquarters experience above-average tax burdens in South Carolina, often by significant margins.

The new distribution center experiences a heavy tax burden with an effective tax rate of 61.5 percent, just shy of double the median rate for this firm type nationwide. The mature distribution center's 48.6 percent tax rate is among the 10 highest in the nation for that firm type, due in large part to its property tax burden, and to the fact that the state's sourcing rules for service income expose 100 percent of the firm's income to in-state taxation. High property taxes also plague data centers, where the new data center pays an effective tax rate of over 40 percent, more than double the rate on mature operations.

Substantial inequities exist across firm types, ranging from 7.5 percent for the new labor-intensive manufacturing operation to 61.5 percent for the new distribution center. South Carolina is one of 15 states which still imposes a capital stock tax (called the Corporate License Fee), and one of 13 that requires business taxpayers to remit both corporate income taxes and capital stock taxes, rather than just the higher of the burdens.



Gray bars indicate that tax type breakdowns are unavailable due to negative effective tax rates for one or more tax types.

EFFECTIVE TAX RATES BY STATE

SOUTH DAKOTA

TOP RATES

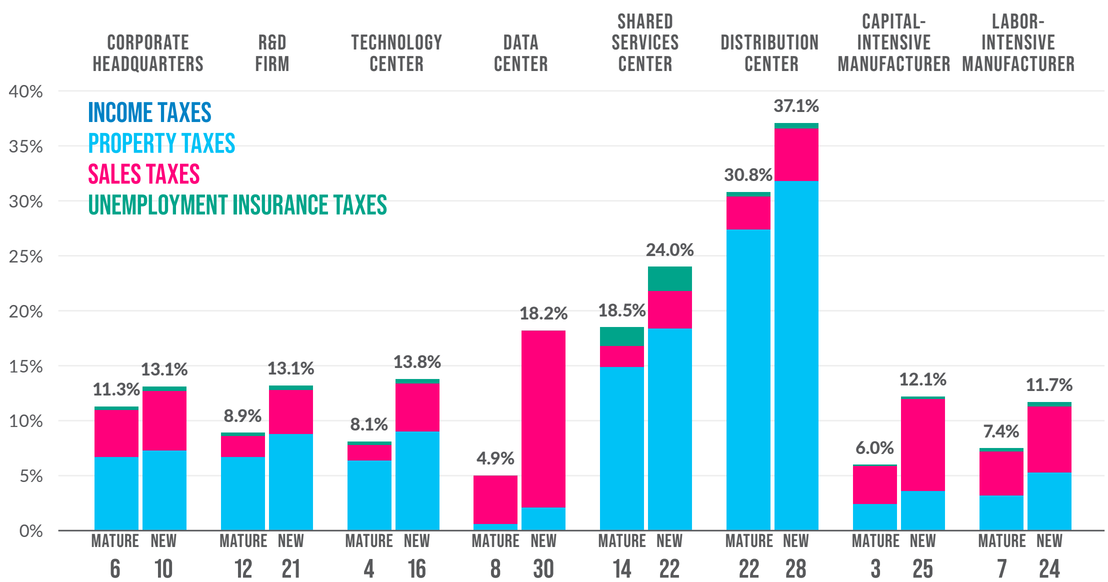
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
--	--	4.50%	1.90%

South Dakota levies neither corporate nor individual income taxes, and the state has generally low property taxes and modest sales tax rates even with local sales taxes included, though sales tax burdens can be high for some firms. Accordingly, mature firms experience consistently low tax burdens in South Dakota, with five of the eight mature firms we modeled ranking in the top 10 for lowest tax burdens.

In South Dakota, no notable incentives are available to any of our model firms. By forgoing a corporate income tax and imposing generally low tax burdens, the state ranks 2nd best in the nation for mature firms, while new firms—which often enjoy substantial incentives elsewhere—face middle-of-the-pack effective rates. The mature technology center, which has the 4th lowest total effective tax rate, and the mature capital-intensive manufacturer, which has the 3rd lowest total effective tax rate, perform especially well in South Dakota due to the lack of an income tax, low unemployment insurance taxes, and modest property taxes.

The newly established data center is the only firm in South Dakota to experience a tax burden above the median for its firm type, with an effective tax rate of 18.2 percent, 24 percent above the median rate nationwide. A high sales tax burden, almost 14 times the median, is responsible for this ranking. South Dakota has one of the country's broadest sales tax bases, which includes many business inputs and leads to tax pyramiding, where some transactions are taxed multiple times over the course of production.

Because of the high sales tax burden and lack of incentives commonly offered by other states, new manufacturers see less competitive rates than their mature counterparts. Mature manufacturing operations, both labor- and capital-intensive, fare well in South Dakota, since the state forgoes a corporate income tax, has low property taxes, and does not impose property taxes on equipment or inventory. The mature capital-intensive manufacturing operation ranks 3rd with an effective tax rate of 6.0 percent, while the labor-intensive operation ranks 7th with an effective tax rate of 7.4 percent.



TENNESSEE

TOP RATES

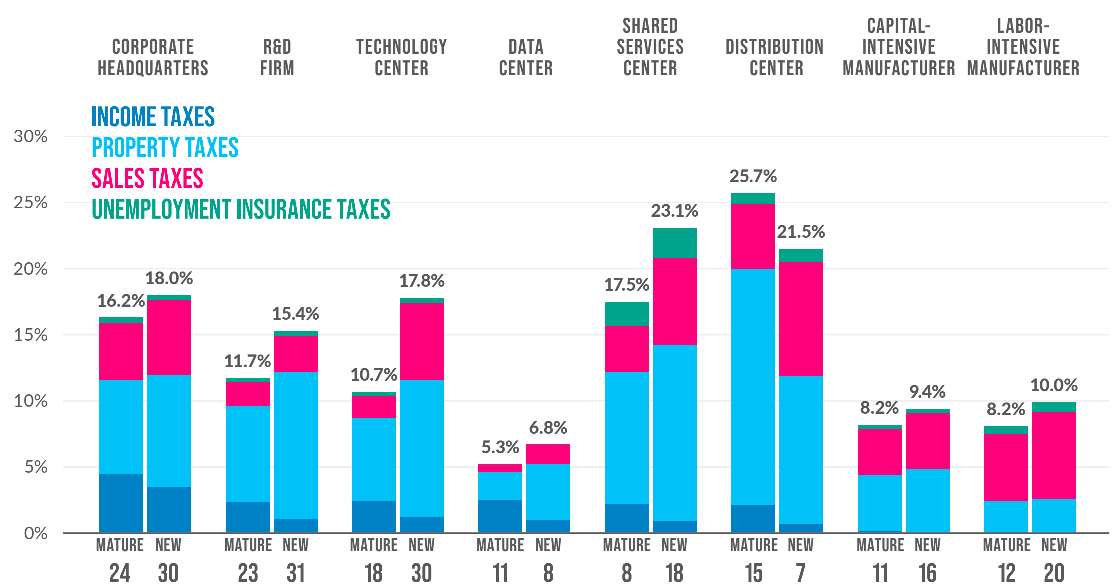
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.50%	--	7.00%	2.55%

Tennessee notably forgoes an individual income tax, which benefits pass-through businesses but is not directly pertinent to the C corporations in our study. Nevertheless, the state compares well for overall tax burdens for these firms as well, ranking 15th for new firms and 7th for mature firms. The state levies a corporate income tax rate of 6.5 percent along with a high sales tax that has a substantial local component.

Tennessee employs triple-weighted sales factor apportionment and forgoes a throwback rule, and manufacturers can elect to use single sales factor apportionment. Services are sourced to the location of the customer or client, which lowers the tax burden for firms like the shared services center. These provisions help balance out the state's high sales tax burdens, particularly for operations doing business largely out of state. Twelve of the 16 model firm iterations in our study enjoy below-average tax burdens.

The new distribution center incurs one of the lightest tax burdens relative to its peer firms in other states, with an effective tax rate of 21.5 percent, ranking 7th in the nation for its category. This firm benefits from the state's property tax abatement, as well as investment and jobs tax credits. New manufacturers benefit from these same incentives, with the property tax abatement being particularly beneficial to the capital-intensive manufacturer, as Tennessee's property tax extends to equipment.

The new data center has a significantly below-average total effective tax rate of 6.8 percent. Generous incentives result in a property tax burden just over half the national median, keeping the overall effective rate low despite a moderate income tax burden.



TEXAS

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
--*	--	6.25%	1.94%

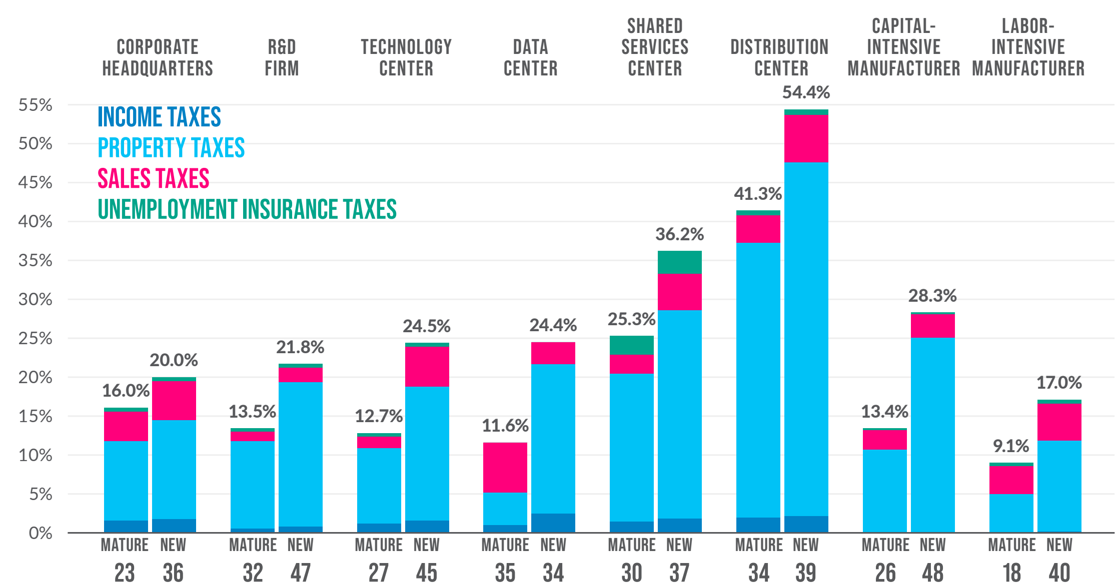
Texas does not levy a traditional corporate income tax. It does, however, impose a modified gross receipts tax known as the Margin Tax, which is levied at a rate of 0.75 percent on a calculation of taxable margin, with half-rates for retail and wholesale. Although certain subtractions from total gross receipts are allowed, the amount subject to tax is much higher than would be associated with a traditional corporate income tax.

While Texas sources service income to the location of the income-producing activity, to the detriment of service providers in our study, the state does use single sales factor apportionment without a throwback rule, which benefits firms selling goods out of state. The state's relatively high property and sales taxes, combined with a lack of general tax incentives, yield substantially above-average tax burdens for all new firm types. Mature firms rank better and consistently experience lower effective tax rates.

Texas includes equipment and inventory in its property tax base in addition to land and buildings, driving up the costs for most firms in our study, but particularly the manufacturing, distribution, and research and development (R&D) operations. It is one of only nine states to tax all inventory. Property tax rates are also high, reflecting the state's above-average reliance on location taxation.

Low taxes in other areas yield moderate overall rates for mature capital- and labor-intensive manufacturing operations, despite high property tax burdens. However, the new R&D, technology center, and manufacturing operations experience some of the highest tax burdens for firms of their types in the nation, driven by high property and sales taxes and only modest incentives.

* Texas does not impose a corporate income tax but does levy a gross receipts tax known as the Franchise Tax or, more commonly, the Margin Tax.



UTAH

TOP RATES

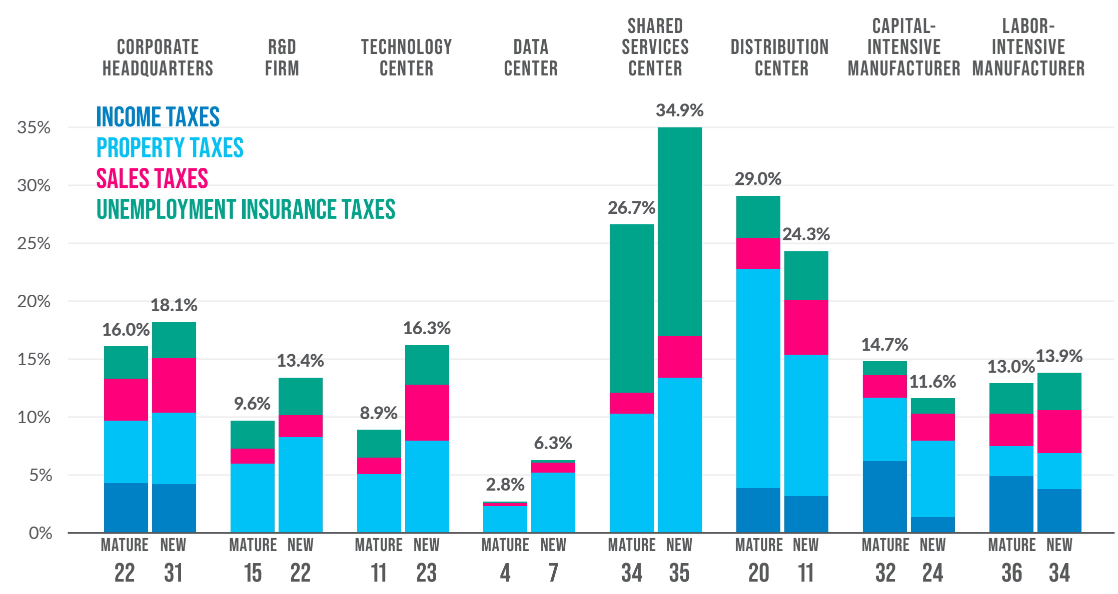
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
4.95%	4.95%	6.10%	1.09%

Utah ranks 22nd overall for new firms and 16th for mature firms, with an equal number of firms experiencing above- and below-average total effective rates. The state generally employs a single sales factor apportionment formula with a throwback rule. However, operations with more than half their total payroll and property in the state—such as the manufacturers in our study—are given a choice between less favorable double-weighted sales factor or evenly-weighted three factor apportionment.

These factors contribute to above-average income tax burdens and total effective tax rates for most of the model manufacturing and shared services firms. Additionally, Utah's unemployment insurance tax burdens are the highest in the country for all six iterations of the model manufacturing and shared services firms due to a broad taxable wage base and high maximum rates. These firms are also hindered somewhat by a property tax base that includes equipment, although manufacturing machinery is exempt from the sales tax, which is particularly beneficial to new firms.

The state's sourcing rules, which only source service income to Utah if the majority of the benefit is received in-state, work to the advantage of companies providing services out of state. As a result, the new shared services center sees an income tax burden that is only slightly above average for its firm type. The mature distribution center sees an effective income tax burden in the same range—just above average—despite the relatively unfavorable apportionment rules and an unemployment insurance effective rate nearly five times the national median.

Both new and mature data centers also benefit from the state's single sales factor apportionment and sourcing rules, ranking 7th and 4th, respectively. Utah offers incentives to research and development (R&D) facilities regardless of age, which works to the particular benefit of mature R&D operations, which are not always eligible for such incentives. Moreover, R&D equipment is exempt from the sales tax.



VERMONT

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
8.50%	8.75%	6.00%	0.24%

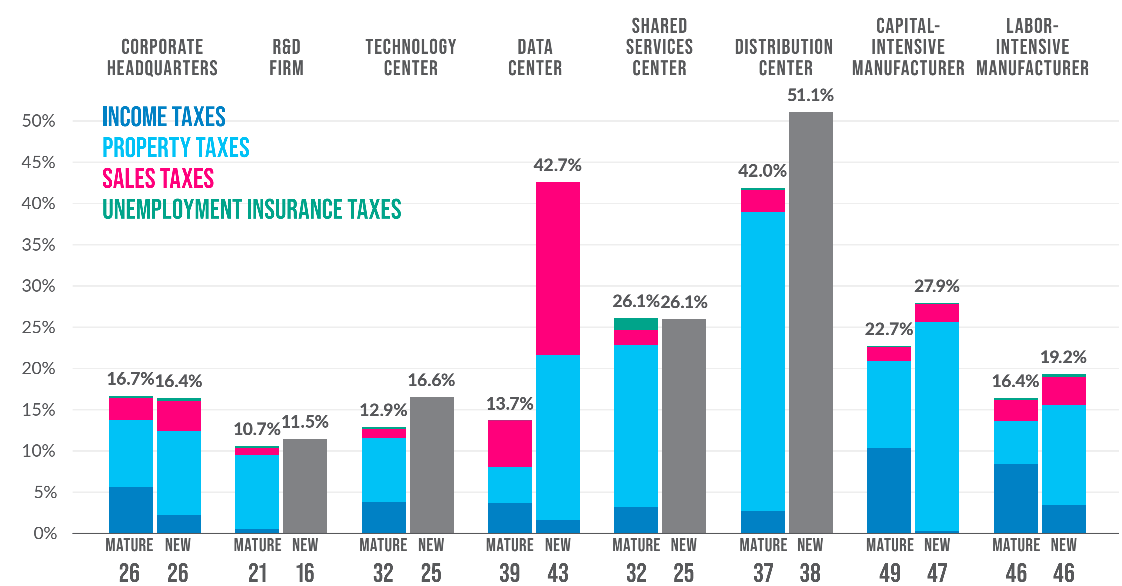
Vermont combines a high corporate income tax with three-factor double-weighted sales factor apportionment and a throwback rule, although sourcing rules only capture services that are received in Vermont. The result is above-average tax burdens for most Tier 2 firms in our study, while Tier 1 firms see effective rates close to average.

Vermont ranks 47th for new and 49th for mature capital-intensive manufacturing operations, due in large part to the state's high 8.5 percent statutory corporate income tax rate, which saddles the mature firm with one of the highest income tax burdens in the nation for its firm type. Notably, the property tax base includes equipment, an inclusion which affects firms like the technology and data centers, as well as manufacturers.

Vermont offers relatively few incentives but does provide generous withholding tax rebates for new firms. These incentives do not compensate for the other uncompetitive elements of the tax code, however, resulting in an overall ranking of 41st for new firms.

Both the new and mature shared services centers benefit from some of the lowest unemployment insurance tax burdens in the nation—due to a narrow wage base and relatively low rates—as well as modest sales tax burdens. Low unemployment insurance tax burdens are a major factor for distribution centers, which nonetheless experience high total effective tax burdens due to high property taxes that extend to equipment.

Research and development (R&D) firms receive the best tax treatment in the state, with new firms ranking 16th and mature firms ranking 21st, partly due to a related tax incentive. Corporate headquarters see middle-of-the road tax burdens, both ranking 26th. These firms benefit from low unemployment insurance tax burdens and slightly below-average sales taxes, but the mature firm experiences higher-than-average income tax burdens due to the state's three-factor apportionment.



Gray bars indicate that tax type breakdowns are unavailable due to negative effective tax rates for one or more tax types.

VIRGINIA

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.00%	5.75%	5.30%*	0.43%

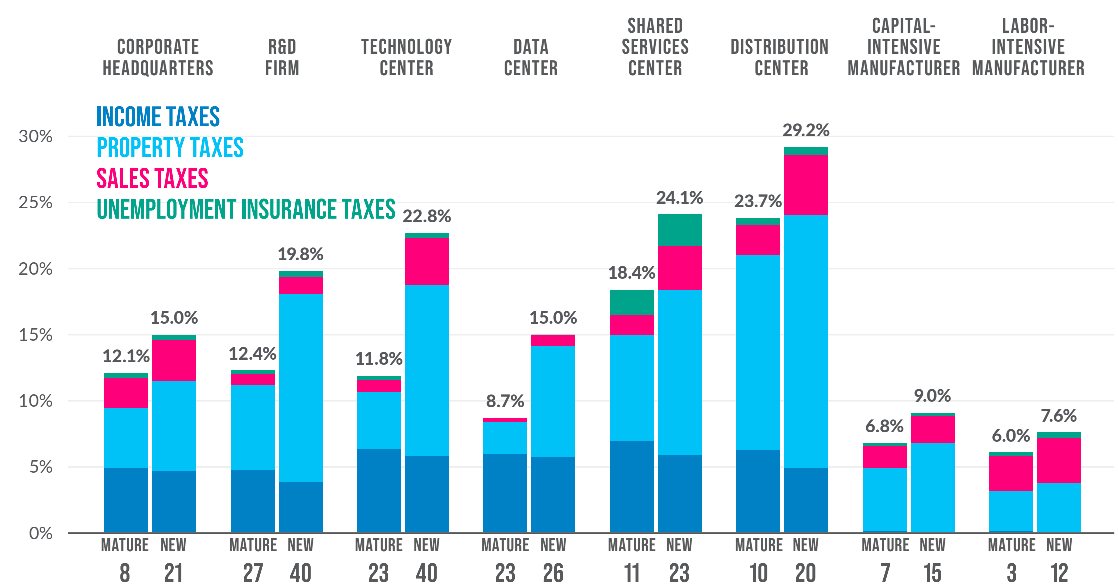
Virginia offers a competitive tax environment for many firms in our study, with modest effective tax rates on mature firms. The Commonwealth offers research and development (R&D) credits as well as withholding tax rebates for new firms, but it relies less heavily on incentives than some of its peers, creating a more neutral tax environment that benefits companies with longer time horizons.

Virginia uses double-weighted sales factor apportionment, with an optional single sales factor apportionment formula for certain industries, including manufacturing. The Commonwealth does not employ a throwback rule but does source service income to the location of income-producing activity, which can increase tax costs for service-oriented businesses with operations in-state.

High property taxes on equipment (the machinery and tools tax) impact tax burdens for some firms, even if such differences do not create uncompetitive overall effective rates. Virginia is one of a handful of states to impose a gross receipts tax, the locally levied Business, Professional and Occupational License (BPOL) Tax, with rate schedules varying across localities. This tax is imposed in addition to the state's 6.0 percent corporate income tax. It works to the disadvantage of low-margin firms and those with longer production chains. Some localities impose an inventory tax, the merchants' capital tax, though local jurisdictions cannot impose all three of these taxes in tandem.

Research and development (R&D) facilities face above-average income tax costs due to Virginia's sourcing rules and relatively modest R&D incentives. Middle-of-the-pack tax burdens on data centers have proven sufficient for Virginia to maintain its historic standing as the internet's capital.

* Virginia's sales tax includes both a statewide 5.3 percent levy (of which 1 percent goes to localities) and an additional 0.7 percent in Northern Virginia and Hampton Roads, along with a smattering of local option sales taxes in other jurisdictions. We include the uniform 1 percent in the state total.



WASHINGTON

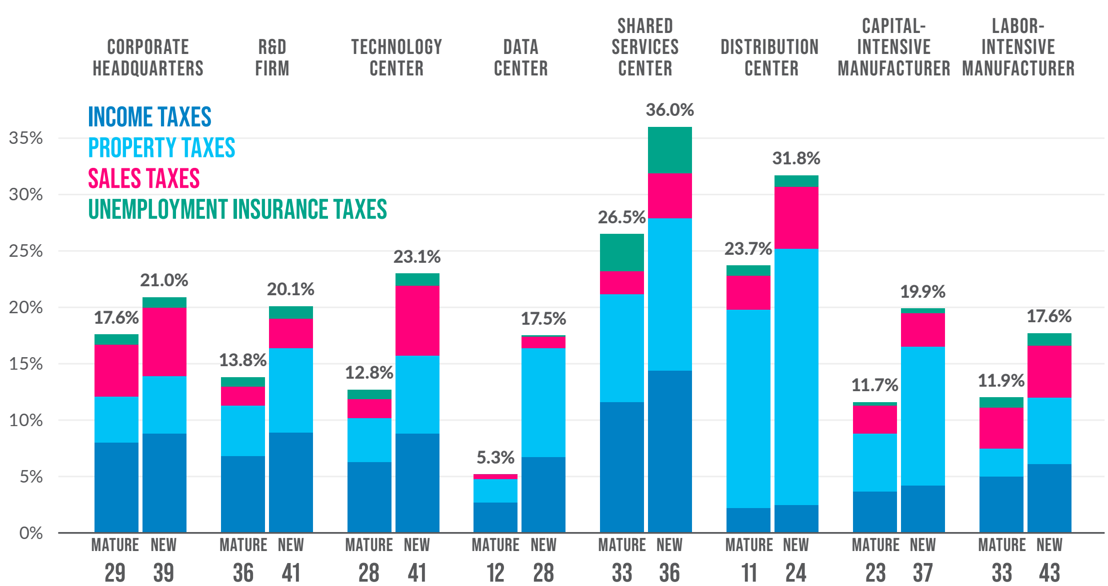
TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
--	--	6.50%	2.73%

In lieu of a traditional corporate income tax, Washington imposes a gross receipts tax called the Business & Occupation (B&O) tax. The structure of this tax, which imposes different rates on distinct industry categories, incentivizes vertical integration as firms seek to claim an industry classification subject to a lesser tax burden and reduce their exposure to tax pyramiding. Because our model firms represent "typical" examples of their type, they fare better under gross receipts taxation than would many real-world firms, since Washington's B&O tax is indifferent to a firm's actual profit margins, and raises input costs.

The new technology center sees a high comparative burden, ranking 41st for its firm type, driven in part by the sales taxation of business inputs. However, both variations of technology centers experience very high burdens from the state's gross receipts tax. The mature firm sees a B&O payment that is more than two and a half times the median corporate income tax burden. Manufacturers are also heavily burdened by this tax. On the other end of the spectrum, the mature distribution center ranks 11th, one of the few firm types that sees lower-than-average overall burdens.

Apportionment under the B&O tax is based on receipts and uses benefit sourcing for service income, both of which favor many of the firms in our study, but the state also has a throwout rule which increases in-state taxability. Washington's property tax base includes equipment, though the sales tax base expressly excludes manufacturing machinery, servers, and research and development (R&D) equipment. Unlike in states with a traditional income tax, however, these purchases do not reduce Washington taxable income.



WEST VIRGINIA

TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
6.50%	6.50%	6.00%	0.50%

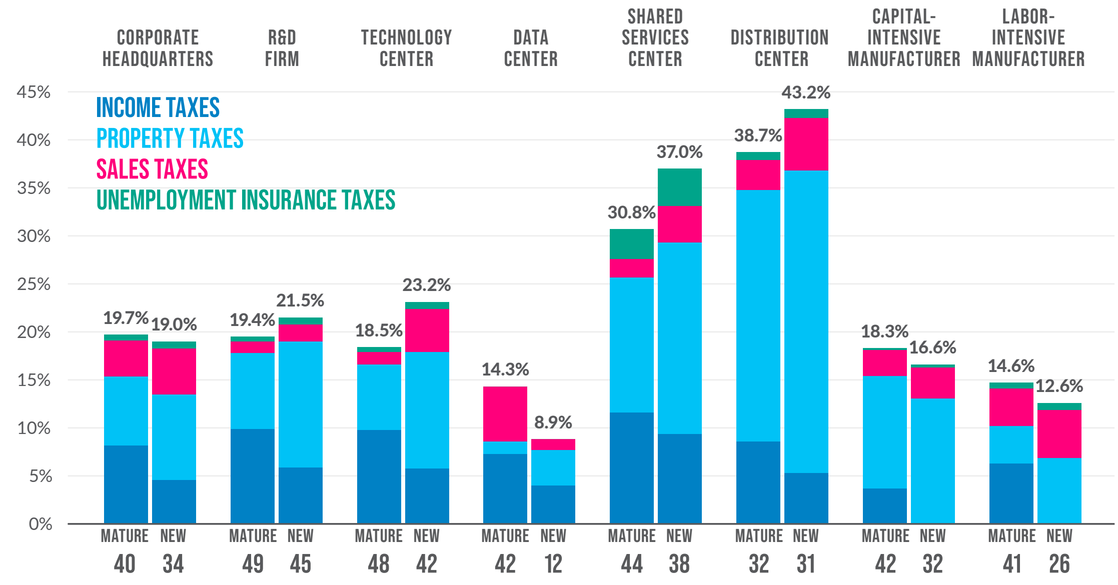
West Virginia's tax burdens are above the median for all model firms in our study except for new data centers. Notably, however, the disparity in rates between new and mature firms is relatively small in West Virginia compared to most other states.

The state uses three-factor double-weighted sales factor apportionment and imposes a throwout rule. Service income, moreover, is taxed at the location of the income-producing activity, subjecting the out-of-state income of West Virginia-based service providers to in-state taxation. All this is set to change in 2022, when the state will shift to single sales factor apportionment, adopt benefit sourcing, and repeal its throwout rule, under legislation adopted in April 2021.

West Virginia also imposes local gross receipts taxes (Business & Occupation taxes) on select industries, which affects some of our model firms, including the technology center. The state's property tax applies to equipment and inventory as well as land and buildings.

West Virginia ranks 41st for mature labor-intensive and 42nd for mature capital-intensive manufacturing. The main factor in the high tax costs on these operations is an overly broad property tax base that includes equipment and inventory, though in the case of mature labor-intensive firms, a high income tax burden contributes as well. Sales taxes on manufacturing machinery are offset by credits.

The mature research and development (R&D) facility ranks 49th with an effective tax rate of 19.4 percent despite lower-than-average sales, property, and unemployment insurance taxes. These benefits are overshadowed by a very high income burden despite lower-than-average sales, property, and unemployment insurance taxes, with business and income taxes more than 15 times the median. Technology and shared services centers both rank very poorly due to significantly above-average income tax burdens.



WISCONSIN

TOP RATES

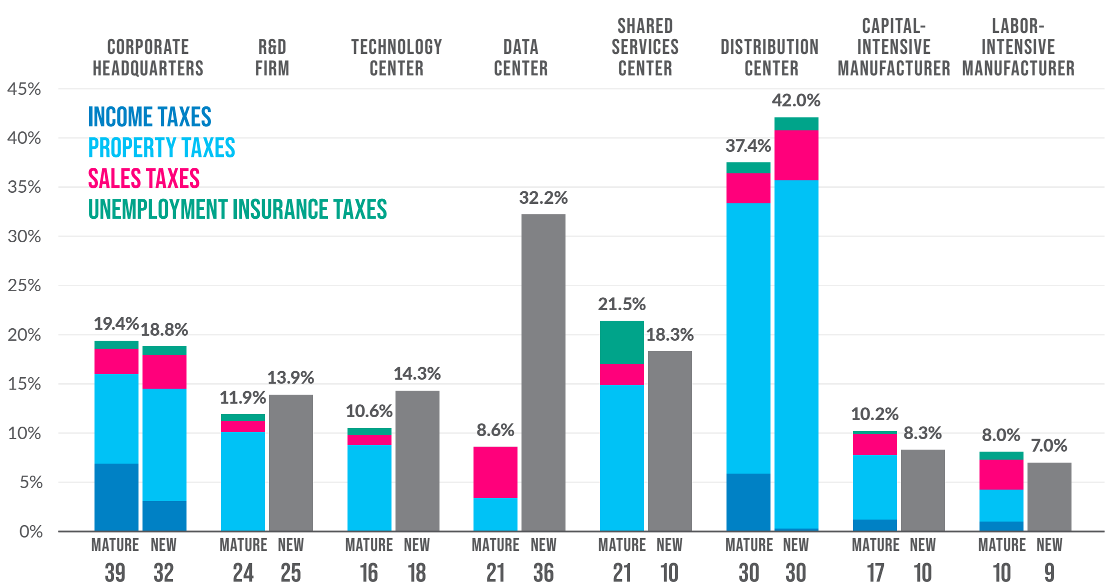
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
7.90%	7.65%	5.00%	0.43%

Wisconsin's corporate income tax is levied at a high rate of 7.9 percent, and a throwback rule is applied. However, single sales factor apportionment is used, and service income is sourced where the benefit is received, reducing income tax burdens for firms that primarily sell out of state. The property tax base extends to machinery and equipment, to the detriment of manufacturing, distribution, and research and development (R&D) facilities.

Nevertheless, the mature capital-intensive manufacturing firm sees a modest overall effective rate of 10.2 percent, ranking 16th for its category. The other manufacturing firm iterations perform even better, each ranking in the top 10 for low total effective tax rates, in large part because new manufacturing firms qualify for several generous tax incentives—including property tax abatements, investment credits, and jobs credits—while the mature firms receive property tax abatements and other tax credits.

Wisconsin ranks 24th for the mature R&D facility with an effective tax rate of 11.9 percent. The operation experiences a low income tax burden due to R&D tax incentives and sourcing rules that place much of the operation's income where the benefits are received. This operation also faces a low sales tax burden that partially offsets its property tax burden. Corporate headquarters rank worst in Wisconsin, with the new firm ranking 32nd and the mature firm 39th due to a combination of high corporate income, unemployment insurance, and property taxes.

Several types of incentives, including the generous Manufacturing & Agriculture Credit (MAC), are available to manufacturing firms, while investment and jobs credits are available to new firms more broadly. These incentives, plus R&D credits, result in six of the eight new firms experiencing negative effective income tax rates, while several of the mature firms face above-average income tax burdens.



Gray bars indicate that tax type breakdowns are unavailable due to negative effective tax rates for one or more tax types.

WYOMING

TOP RATES

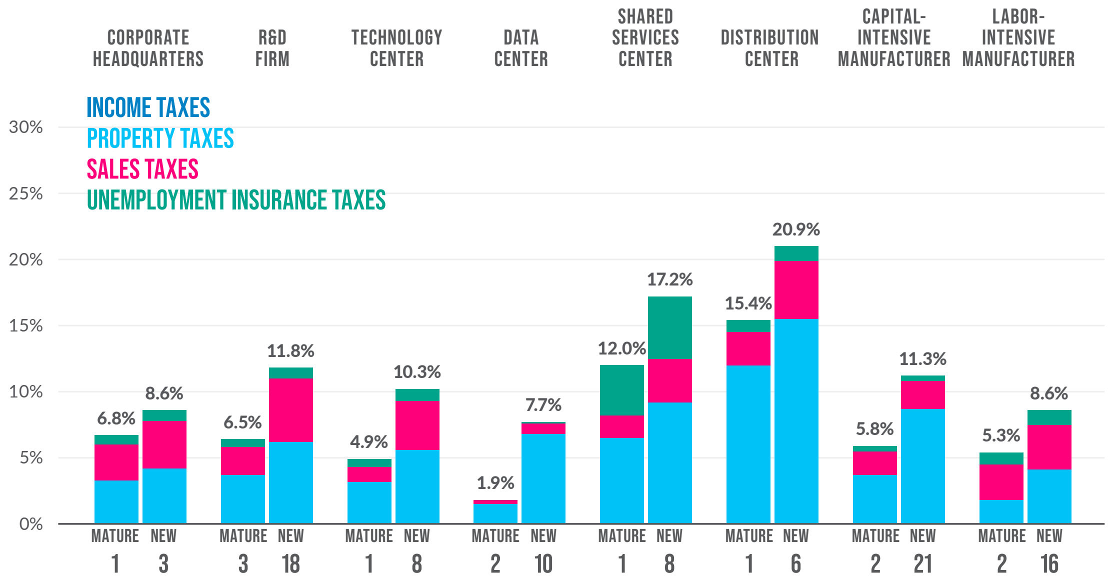
CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
--	--	4.00%	1.33%

Wyoming ranks 1st overall for four mature firm types and in the top three for all eight, due to its lack of a corporate income tax and low sales and property taxes. Specifically, it ranks 1st in the nation for the mature shared services center, technology center, distribution center, and corporate headquarters. The state focuses more on low statutory tax rates—or no tax at all—than targeted incentives, hence its particularly strong rankings for mature firms. But the state ranks competitively for new firms, too, among the top 10 states for all but three of the new firms.

Wyoming's property tax is generally low but does apply to equipment as well as to land and buildings, and the state does not offer a property tax abatement for new manufacturing firms, unlike many of its peers. Nevertheless, the mature capital-intensive manufacturing operation ranks 2nd with an effective tax rate of 5.8 percent due to the lack of an income tax and modest sales and property taxes, and despite a high unemployment insurance tax burden.

The new capital-intensive manufacturing firm experiences roughly average tax burdens for its type due to high unemployment insurance taxes and the capital stock tax (the franchise tax). Wyoming is one of 15 states to levy a capital stock tax, which is imposed on businesses regardless of profit, though Wyoming's features the nation's lowest rate. The firm also sees below-average property tax burdens despite the state's lack of incentives. Manufacturing machinery is exempt from the sales tax.

The mature research and development (R&D) facility has the lowest property tax burden in the nation for its firm type, and its overall effective tax rate is just over half the median rate for that firm type nationwide. However, R&D equipment is subject to the sales tax in Wyoming, and new R&D operations receive no incentives, contributing to the rank of 18th for new facilities.



EFFECTIVE TAX RATES BY STATE

DISTRICT OF COLUMBIA

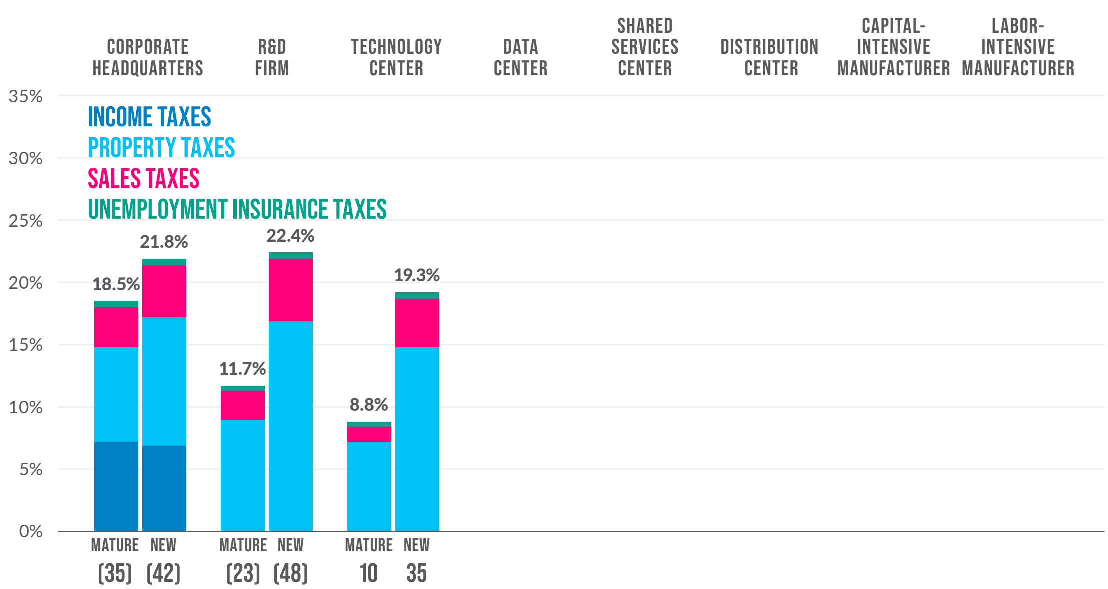
TOP RATES

CORPORATE INCOME	INDIVIDUAL INCOME	STATE SALES	AVG. LOCAL SALES
8.25%	8.95%	6.00%	--

The District of Columbia is a unique state-local entity, which presents particular challenges. We do not include the District in our rankings of states, but the model does calculate the city's effective tax rates for Tier 1 firms—the corporate headquarters, research and development (R&D) facility, and technology center—and on this page we include the rank that the District of Columbia would have were it a state. Tier 2 firm types are not considered for D.C. in this study.

The District of Columbia has above-average tax burdens for mature corporate headquarters and below-average burdens for mature technology centers. The lowest tax burden is for the mature technology center, which has an effective tax rate of 8.8 percent and would rank 10th in the nation. The mature R&D facility experiences an 11.7 percent effective tax rate (23rd), which is close to the national average, while the mature corporate office experiences an 18.5 percent effective rate (35th).

The District of Columbia has improved its treatment of all these firms by reducing its corporate income tax rate from 9.4 percent in 2015 to 8.25 percent today as part of a broad-ranging tax reform package. The District has also improved its tax treatment of firms that do business out of state by adopting single sales factor apportionment and shifting to market-based taxation of services. However, the corporate rate is still moderately high, and the District imposes a throwback rule.



APPENDIX TABLE A-1.

Incentives for Newly Established Operations: Investment

State	Incentive Value	Corporate Headquarters	Research & Development	Technology Center	Data Center	Shared Services Center	Distribution Center	Capital-Intensive Manufacturer	Labor-Intensive Manufacturer
Alabama	1.5% of eligible capital investment x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
Alaska	n/a								
Arizona	n/a								
Arkansas	10% of eligible capital investment	✓	✓	✓	✓	✓	✓	✓	✓
California	n/a								
Colorado	1% of eligible capital investment to $1,000 max.	✓	✓	✓	✓	✓	✓	✓	✓
Connecticut	5% of eligible capital investment	✓	✓	✓	✓	✓	✓	✓	✓
Delaware	0.5% of eligible capital investment x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
	10-year phase-in of gross receipts tax for firms qualifying for investment tax credit	✓	✓	✓	✓	✓	✓		
Florida	5% of eligible capital investment x 20 years			✓	✓			✓	✓
Georgia	n/a								
Hawaii	4% of depreciable equipment excise tax refund								
Idaho	3% of eligible capital investment	✓	✓	✓	✓	✓	✓	✓	✓
Illinois	n/a								
Indiana	10% of eligible capital investment	✓	✓	✓	✓	✓	✓	✓	✓
Iowa	Varies from 5-10% of eligible capital investment	✓	✓	✓	✓	✓	✓	✓	✓
Kansas	10% of eligible capital investment over $1,000,000	✓						✓	✓
Kentucky	n/a								
Louisiana	n/a								
Maine	n/a								
Maryland	n/a								
Massachusetts	3% of eligible capital investment		✓					✓	✓
Michigan	n/a								
Minnesota	n/a								
Mississippi	5% of eligible capital investment if in business >2 years							✓	✓
Missouri	n/a								
Montana	n/a								
Nebraska	Varies from 4-7% of eligible capital investment	✓	✓	✓		✓	✓	✓	✓
	Refund of sales tax paid on capex	✓	✓	✓				✓	✓
Nevada	n/a								
New Hampshire	n/a								
New Jersey	2% of qualifying investment capped at $1M, plus up to $1,000 per job x 2 years							✓	✓
New Mexico	5.125% of cap investment up to $500,000 or $1M per job							✓	✓
New York	2% of eligible capital investment, refundable		✓	✓				✓	✓
North Carolina	n/a								
North Dakota	Sales tax exemption for machinery for new firms							✓	✓
Ohio	n/a								
Oklahoma	2% of eligible capital investment x 5 years							✓	✓
Oregon	n/a								
Pennsylvania	n/a								
Rhode Island	10% of eligible capital investment	✓	✓	✓	✓	✓		✓	✓
South Carolina	2.5% of eligible capital investment							✓	✓
	20% of qualifying investment	✓							
South Dakota	n/a								
Tennessee	Varies from 1-5% of eligible capital investment	✓	✓	✓	✓	✓	✓	✓	✓
Texas	n/a								
Utah	n/a								
Vermont	n/a								
Virginia	n/a								
Washington	n/a								
West Virginia	2% of eligible capital investment x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
Wisconsin	1.5% of personal property and 2.5% of real property, min. of $1M capex, refundable	✓	✓	✓	✓	✓	✓	✓	✓
Wyoming	n/a								
District of Columbia	n/a								

APPENDIX TABLE A-2.
Incentives for Newly Established Operations: Job Creation

State	Incentive Value	Corporate Headquarters	Research & Development	Technology Center	Data Center	Shared Services Center	Distribution Center	Capital-Intensive Manufacturer	Labor-Intensive Manufacturer
Alabama	n/a								
Alaska	n/a								
Arizona	$3,000 per new job (max. 400) x 3 years	✓	✓	✓	✓	✓	✓	✓	✓
Arkansas	1% of new payroll x 5 years	✓	✓	✓	✓	✓	✓	✓	✓
California	n/a								
Colorado	3.725% of new payroll x 1 year	✓	✓	✓	✓	✓	✓	✓	✓
Connecticut	n/a								
Delaware	$500 per new job x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
Florida	n/a								
Georgia	Varies from $1,250-$5,000 per new job x 5 years	✓	✓	✓	✓	✓	✓	✓	✓
Hawaii	n/a								
Idaho	n/a								
Illinois	n/a								
Indiana	n/a								
Iowa	6% of wages (to max. $32,400) for new jobs	✓	✓	✓	✓	✓	✓	✓	✓
Kansas	n/a								
Kentucky	n/a								
Louisiana	25% of payroll and 18% of production costs for software development			✓					
Maine	n/a								
Maryland	$3,000 per new job x 1 year ($1M cap per company per year)	✓	✓	✓	✓	✓	✓	✓	✓
Massachusetts	n/a								
Michigan	n/a								
Minnesota	n/a								
Mississippi	2.5% of new payroll x 5 years	✓	✓	✓	✓	✓	✓	✓	✓
Missouri	Varies from 3-7% of new payroll x 5 years	✓	✓	✓	✓	✓	✓	✓	✓
Montana	1% of new payroll x 3 years							✓	✓
Nebraska	Varies from 4-9% of new payroll (based on pay level of each job) x 7 years	✓	✓	✓		✓	✓	✓	✓
Nevada	n/a								
New Hampshire	n/a								
New Jersey	Based on job creation, 0.1% to 1.0% of qualifying investment x 5 years	✓	✓	✓				✓	✓
New Mexico	8.5% of new payroll (up to $12,750) per job paying $60,000+ per year x 4 years	✓	✓	✓	✓	✓	✓	✓	✓
New York	5% of new payroll x 10 years		✓	✓				✓	✓
North Carolina	n/a								
North Dakota	n/a								
Ohio	n/a								
Oklahoma	n/a								
Oregon	n/a								
Pennsylvania	n/a								
Rhode Island	n/a								
South Carolina	Varies from $1,500-$2,750 per new job	✓	✓	✓	✓	✓	✓	✓	✓
South Dakota	n/a								
Tennessee	$4,500 per new job	✓	✓	✓	✓	✓	✓	✓	✓
Texas	n/a								
Utah	n/a								
Vermont	n/a								
Virginia	$1,000 over 2 years per new job in excess of 50 jobs	✓		✓		✓	✓	✓	✓
Washington	n/a								
West Virginia	n/a								
Wisconsin	Varies from 6.1-7.8% of total wages x 3 years, refundable	✓	✓	✓	✓	✓	✓	✓	✓
Wyoming	n/a								
District of Columbia	$3,000 per new job x 2 year (no carry-forward)		✓	✓					

APPENDIX TABLE A-3.
Incentives for Newly Established Operations: Withholdings

State	Incentive Value	Corporate Headquarters	Research & Development	Technology Center	Data Center	Shared Services Center	Distribution Center	Capital-Intensive Manufacturer	Labor-Intensive Manufacturer
Alabama	2% of new payroll for 10 years					✓	✓	✓	✓
	4% of new payroll for 10 years	✓	✓	✓	✓				
Alaska	n/a								
Arizona	n/a								
Arkansas	3.9% of new payroll x 7 years	✓	✓	✓	✓	✓	✓	✓	✓
California	n/a								
Colorado	n/a								
Connecticut	n/a								
Delaware	n/a								
Florida	n/a								
Georgia	Refundability of job tax credits and R&D credit		✓	✓	✓	✓	✓	✓	✓
Hawaii	n/a								
Idaho	n/a								
Illinois	2.45% of new payroll as an income tax credit x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
Indiana	n/a								
Iowa	n/a								
Kansas	4.1-4.2% of new payroll x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
Kentucky	4% of new wages or $2,000 per new job x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
Louisiana	Varies from 4-6% of new payroll x 10 years	✓	✓		✓	✓	✓	✓	✓
Maine	0.6% of new payroll x 5 years	✓	✓	✓	✓	✓	✓	✓	✓
Maryland	n/a								
Massachusetts	n/a								
Michigan	n/a								
Minnesota	n/a								
Mississippi	4% of new payroll x 5 years, with 1 year lag	✓	✓	✓	✓	✓	✓	✓	✓
Missouri	n/a								
Montana	n/a								
Nebraska	Unused job tax credits can be offset against withholdings	✓	✓	✓		✓	✓	✓	✓
Nevada	n/a								
New Hampshire	n/a								
New Jersey	n/a								
New Mexico	n/a								
New York	n/a								
North Carolina	3.5% of new payroll x 12 years	✓	✓	✓	✓		✓	✓	✓
North Dakota	n/a								
Ohio	1.925% of new payroll x 8 years	✓	✓	✓	✓	✓	✓	✓	✓
Oklahoma	5% of new payroll x 8 years	✓	✓	✓	✓	✓	✓	✓	✓
Oregon	n/a								
Pennsylvania	n/a								
Rhode Island	n/a								
South Carolina	Varies from 2.75-3.50% of new payroll x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
South Dakota	n/a								
Tennessee	n/a								
Texas	n/a								
Utah	n/a								
Vermont	4% of new payroll x 5 years	✓	✓	✓	✓	✓	✓	✓	✓
Virginia	n/a								
Washington	n/a								
West Virginia	n/a								
Wisconsin	n/a								
Wyoming	n/a								
District of Columbia	n/a								

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APPENDIX TABLE A-4.

Incentives for Newly Established Operations: Research & Development

State	Incentive Value	Corporate Headquarters	Research & Development	Technology Center	Data Center	Shared Services Center	Distribution Center	Capital-Intensive Manufacturer	Labor-Intensive Manufacturer
Alabama	n/a								
Alaska	18% of the federal credit apportioned to the state (effectively 3.6%)		✓						
Arizona	24% of in-state R&D expenses per federal concepts		✓						
Arkansas	20% of incremental in-state R&D expenses		✓						
California	15% of in-state R&D expenses per federal concepts		✓						
Colorado	n/a								
Connecticut	20% of incremental, 6% of actual in-state R&D expenses		✓						
Delaware	10% of in-state R&D expenses per federal concepts, refundable		✓						
Florida	10% of incremental in-state R&D expenses (effective rate of 1% due to funding cap)		✓						
Georgia	10% of in-state R&D expenses per fed. concepts, excess used against withholding tax		✓						
Hawaii	20% of in-state actual R&D expenses, refundable		✓						
Idaho	5% of in-state R&D expenses per federal concepts		✓						
Illinois	6.5% of in-state R&D expenses per federal concepts		✓						
Indiana	10-15% of in-state R&D expenses per federal concepts		✓						
Iowa	6.5% of in-state R&D expenses per federal concepts, refundable		✓						
Kansas	6.5% of in-state incremental R&D expenses		✓						
Kentucky	5% of capital costs for research facilities		✓						
Louisiana	10% of in-state R&D expenses per federal concepts, refundable		✓						
Maine	5% of in-state R&D expenses per federal concepts		✓						
Maryland	10% of incremental, 3% of base in-state R&D expenses (halved by funding cap)		✓						
Massachusetts	10% of in-state R&D expenses per federal concepts		✓						
Michigan	n/a								
Minnesota	10% of in-state R&D expenses per fed. concepts on first $2M of excess, 2.5% above		✓						
Mississippi	$1,000 per new job requiring R&D skills x 5 years		✓						
Missouri	n/a								
Montana	5-year tax exemption for new R&D facility income		✓						
Nebraska	15% of federal credit for in-state R&D expenses, refundable (effectively 3.0%)		✓						
Nevada	n/a								
New Hampshire	n/a								
New Jersey	10% of in-state R&D expenses per federal concepts		✓						
New Mexico	Up to 10% of in-state actual R&D expenses		✓						
New York	50% of federal credit for in-state expenses, refundable (effectively: 10.0%)		✓						
North Carolina	n/a								
North Dakota	8-25% of in-state R&D expenses per federal concepts		✓						
Ohio	7% of in-state R&D expenses per federal concepts		✓						
Oklahoma	n/a								
Oregon	n/a								
Pennsylvania	10% of in-state incremental R&D expenses (effective rate of 5% due to funding cap)		✓						
Rhode Island	16.9-22.5% of in-state R&D expenses per federal concepts		✓						
South Carolina	5% of in-state R&D expenses per federal concepts		✓						
South Dakota	n/a								
Tennessee	n/a								
Texas	5% of in-state incremental R&D expenses		✓						
Utah	5% of incremental, 7.5% of actual in-state R&D expenses		✓						
Vermont	27% of federal credit for in-state R&D activities (effectively: 5.4%)		✓						
Virginia	15% of the first $300,000 of incremental in-state QREs		✓						
Washington	n/a								
West Virginia	n/a								
Wisconsin	5.75% of incremental in-state R&D expenses per federal concepts		✓						
Wyoming	n/a								
District of Columbia	n/a								

APPENDIX TABLE A-5.

Incentives for Newly Established Operations: Property Tax

State	Incentive Value	Corporate Headquarters	Research & Development	Technology Center	Data Center	Shared Services Center	Distribution Center	Capital-Intensive Manufacturer	Labor-Intensive Manufacturer
Alabama	73% abatement x 10 years	✓	✓	✓	✓			✓	✓
Alaska	Highly Discretionary								
Arizona	Highly Discretionary								
Arkansas	65% abatement x 15 years							✓	✓
California	n/a								
Colorado	Highly Discretionary								
Connecticut	Income tax credit for 100% of property tax paid on computer equipment	✓	✓	✓	✓	✓	✓	✓	✓
	Automatic abatement for 5 years for new mfg. machinery & equip.							✓	✓
Delaware	Highly Discretionary								
Florida	Highly Discretionary								
Georgia	50% abatement x 10 years, plus freeport for manufacturing inventory	✓	✓	✓	✓	✓	✓	✓	✓
Hawaii	n/a								
Idaho	Highly Discretionary								
Illinois	Highly Discretionary								
Indiana	100% abatement x 1 year + 10-year phase-in	✓	✓	✓	✓	✓	✓	✓	✓
Iowa	Highly Discretionary, except 100% abatement of personal property for data centers								
Kansas	100% abatement of real and personal property x 10 years		✓				✓	✓	✓
Kentucky	Highly Discretionary								
Louisiana	Highly Discretionary abatements, refundable tax credit for inventory tax						✓	✓	✓
Maine	Highly Discretionary								
Maryland	Highly Discretionary, except mfg. and R&D machinery exempt in relevant counties		✓					✓	✓
Massachusetts	Highly Discretionary, except for statewide exemption for manufacturing machinery							✓	✓
Michigan	50% abatement x 12 years							✓	✓
Minnesota	50% abatement x 10 years to max. $200,000/year				✓		✓	✓	✓
Mississippi	60% abatement x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
	Income tax credit for taxes paid on inventory						✓	✓	✓
Missouri	50% abatement x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
Montana	Highly Discretionary, except 99.1% abatement on data center real and personal prop.				✓				
Nebraska	Highly Discretionary, except for 100% abatement x 10 years for personal property				✓				
Nevada	Highly Discretionary, except for 75% abatement x 20 years for personal property				✓				
New Hampshire	n/a								
New Jersey	Highly Discretionary								
New Mexico	Highly Discretionary								
New York	Highly Discretionary, except for Manufacturers Real Property Tax Credit							✓	✓
North Carolina	Highly Discretionary								
North Dakota	100% abatement x 5 years for buildings				✓		✓	✓	✓
Ohio	75% abatement x 10 years on real property				✓		✓	✓	✓
Oklahoma	100% x 5 years on machinery + inventory freeport		✓					✓	✓
Oregon	Highly Discretionary								
Pennsylvania	Highly Discretionary								
Rhode Island	State exemption of manufacturing machinery from property tax							✓	✓
South Carolina	55% abatement x 20 years							✓	✓
South Dakota	Highly Discretionary								
Tennessee	50% abatement x 10 years				✓		✓	✓	✓
Texas	Highly Discretionary abatements + freeport exemption on inventory							✓	✓
Utah	50% abatement x 10 years	✓	✓	✓	✓	✓	✓	✓	✓
Vermont	Highly Discretionary								
Virginia	Highly Discretionary								
Washington	n/a								
West Virginia	50% abatement x 10 years on personal property (up to 95% for Data Centers)				✓		✓	✓	✓
	Tax credit for property tax on manufacturer inventory							✓	✓
Wisconsin	State tax exemption for manufacturing machinery							✓	✓
Wyoming	n/a								
District of Columbia	n/a								

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APPENDIX TABLE B-1.
Corporate Income Tax

State	Rate	Applies	Prop.	Payroll	Sales	Apportionment Alternative	TB	Services	Adj.
Alabama	6.50%	-	0.0%	0.0%	100.0%	n/a	Yes	Benefits	1,3
Alaska	9.40%	$222,000	33.3%	33.3%	33.3%	n/a	Yes	IPA	-
Arizona	4.90%	-	25.0%	25.0%	50.0%	0/0/100%	No	IPA	-
Arkansas	6.20%	$100,000	0.0%	0.0%	100.0%	n/a	Yes	IPA	-
California	8.84%	-	0.0%	0.0%	100.0%	n/a	Yes	Benefits	-
Colorado	4.63%	-	0.0%	0.0%	100.0%	n/a	Yes	Benefits	-
Connecticut	7.50%	-	0.0%	0.0%	100.0%	n/a	No	Benefits	-
Delaware	8.70%	-	0.0%	0.0%	100.0%	n/a	No	IPA	-
D.C.	8.25%	-	0.0%	0.0%	100.0%	n/a	Yes	Benefits	-
Florida	4.458%	-	25.0%	25.0%	50.0%	n/a	No	IPA	-
Georgia	5.75%	-	0.0%	0.0%	100.0%	n/a	No	Benefits	4
Hawaii	6.40%	$100,000	33.3%	33.3%	33.3%	n/a	Yes	Benefits	-
Idaho	6.925%	-	25.0%	25.0%	50.0%	33.3% each	Yes	IPA	-
Illinois	9.50%	-	0.0%	0.0%	100.0%	n/a	Yes	Benefits	3
Indiana	5.25%	-	0.0%	0.0%	100.0%	n/a	No	Benefits	5
Iowa	9.80%	$250,000	0.0%	0.0%	100.0%	n/a	No	Benefits	2
Kansas	7.00%	$50,000	33.3%	33.3%	33.3%	n/a	Yes	IPA	-
Kentucky	5.00%	-	0.0%	0.0%	100.0%	n/a	No	Benefits	-
Louisiana	8.00%	$200,000	0.0%	50.0%	50.0%	0/0/100% *†	Yes	Benefits	1
Maine	8.93%	$3,500,000	0.0%	0.0%	100.0%	n/a	Yes	Benefits	-
Maryland	8.25%	-	12.5%	12.5%	75.0%	n/a	No	Benefits	-
Massachusetts	8.00%	-	25.0%	25.0%	50.0%	0/0/100% †	Yes	Benefits	3
Michigan	6.00%	-	0.0%	0.0%	100.0%	n/a	No	Benefits	-
Minnesota	9.80%	-	0.0%	0.0%	100.0%	n/a	No	Benefits	-
Mississippi	5.00%	$10,000	0.0%	0.0%	100.0%	25%/25%/50% or 33.3% each †	Yes	IPA	8
Missouri	4.00%	-	0.0%	0.0%	100.0%	n/a	No	Benefits	2
Montana	6.75%	-	33.3%	33.3%	33.3%	n/a	Yes	Benefits	-
Nebraska	7.81%	$100,000	0.0%	0.0%	100.0%	n/a	No	IPA	1
Nevada	n/a	-	n/a	n/a	n/a	n/a	n/a	n/a	-
New Hampshire	7.70%	-	25.0%	25.0%	50.0%	n/a	Yes	Benefits	-
New Jersey	9.00%	$100,000	0.0%	0.0%	100.0%	n/a	No	Benefits	-
New Mexico	5.90%	$500,000	33.3%	33.3%	33.3%	0/0/100% †‡	No	Benefits	1
New York	6.50%	-	0.0%	0.0%	100.0%	n/a	No	Benefits	6
North Carolina	2.50%	-	0.0%	0.0%	100.0%	n/a	No	Benefits	-
North Dakota	4.31%	$50,000	33.3%	33.3%	33.3%	0/0/100% §	Yes	IPA	-
Ohio	n/a	-	n/a	n/a	n/a	n/a	n/a	Benefits	4
Oklahoma	6.00%	-	33.3%	33.3%	33.3%	25/25/50% ||	Yes	Benefits	-
Oregon	7.60%	$1,000,000	0.0%	0.0%	100.0%	n/a	Yes	Benefits	-
Pennsylvania	9.99%	-	0.0%	0.0%	100.0%	n/a	No	Benefits	-
Rhode Island	7.00%	-	0.0%	0.0%	100.0%	n/a	Yes	Benefits	-
South Carolina	5.00%	-	0.0%	0.0%	100.0%	n/a	No	IPA	-
South Dakota	n/a	-	n/a	n/a	n/a	n/a	n/a	n/a	-
Tennessee	6.50%	-	20.0%	20.0%	60.0%	n/a	No	Benefits	-
Texas	0.75%	-	0.0%	0.0%	100.0%	n/a	No	IPA	7
Utah	4.95%	-	0.0%	0.0%	100.0%	25/25/50% or 33.3% each ||	Yes	Benefits	-
Vermont	8.50%	$25,000	25.0%	25.0%	50.0%	n/a	Yes	Benefits	-
Virginia	6.00%	-	25.0%	25.0%	50.0%	0/0/100% *†	No	IPA	-
Washington	n/a	-	n/a	n/a	n/a	n/a	n/a	Benefits	-
West Virginia	6.50%	-	25.0%	25.0%	50.0%	n/a	Yes	IPA	-
Wisconsin	7.90%	-	0.0%	0.0%	100.0%	n/a	Yes	Benefits	-
Wyoming	n/a	-	n/a	n/a	n/a	n/a	n/a	n/a	-

1=100% deduction for federal tax paid, 2=50% deduction for federal tax paid, 3=throwout rule applies to service receipts, 4=deduction allowed for in-state tax paid, 5= State rate decreases to 4.9% on July 1, 2021, 6=0% tax rate applies to manufacturing, 7=Texas franchise tax on taxable margin with 0.375% rate for retail and wholesale, 8=Mississippi's alternative apportionment is double weighted sales for retail manufacturing and single sales for wholesale manufacturing.

* Retail † Manufacturing ‡ Headquarters in State § Optional || Investment or Property/Payroll Minimums

APPENDIX TABLE B-2.
Sales and Property Tax

	Sales Tax			Property Tax			
State	Downtown	Suburban	Mfg. Mach.	Land	Buildings	Equipment	Inventory
Alabama							
... Birmingham	10.00%	5.50%	3.88%	1.45%	1.45%	1.45%	-
... Montgomery	10.00%	10.00%	3.58%	0.66%	0.655%	0.655%	-
Alaska							
... Anchorage	-	-	-	1.44%	1.44%	1.44%	1.44%
... Fairbanks	-	-	-	1.958%	1.958%	–	–
Arizona							
... Phoenix	8.60%	7.20%	-	1.91%	-	-	-
... Prescott	9.10%	9.10%	-	1.352%	1.352%	1.352%	-
Arkansas							
... Little Rock	9.00%	7.25%	7.25% *	1.272%	1.272%	1.272%	1.272%
... Fort Smith	9.75%	9.75%	9.75% *	1.161%	1.161%	1.161%	1.161%
California							
... Los Angeles	9.50%	7.75%	5.31%	1.10%	1.10%	1.10%	-
... Merced	7.75%	7.75%	5.31%	1.10%	1.10%	1.10%	-
Colorado							
... Denver	8.31%	4.00%	-	2.689%	2.689%	2.689%	-
... Fort Collins	7.55%	7.55%	-	3.013%	3.013%	3.013%	-
Connecticut							
... Hartford	6.35%	6.35%	-	2.902%	2.902%	2.902%	-
... Norwich	6.35%	6.35%	-	2.809%	2.809%	2.809%	-
Delaware							
... Wilmington	-		-	4.005%	4.005%	-	-
... Dover	-		-	2.281%	2.281%	-	-
District of Columbia							
... Washington	6.00%	6.00%		1.89%	1.89%	3.40%	-
... n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Florida							
... Miami	7.00%	7.00%	-	2.055%	2.055%	2.055%	-
... Gainesville	7.00%	7.00%	-	2.111%	2.111%	2.111%	-
Georgia							
... Atlanta	8.90%	7.66%	-	1.806%	1.806%	1.806%	1.796%
... Macon	7.00%	7.00%	-	1.933%	1.933%	1.933%	1.933%
Hawaii							
... Honolulu	4.50%	4.50%	4.50%	1.24%	1.24%	-	-
... Hilo	4.50%	4.50%	4.50%	1.07%	1.07%	-	-
Idaho							
... Boise	6.00%	6.00%	-	1.421%	1.421%	1.421%	-
... Coeur D'Alene	6.00%	6.00%	-	0.856%	0.856%	0.856%	-
Illinois							
... Chicago	10.25%	7.50%	-	2.392%	2.392%	-	-
... Peoria	9.00%	9.00%	-	0.996%	0.996%	-	-
Indiana							
... Indianapolis	7.00%	7.00%	-	1.368%	1.368%	1.368%	-
... Elkhart	7.00%	7.00%	-	2.992%	2.992%	2.992%	-
Iowa							
... Des Moines	6.00%	6.00%	-	4.113%	4.113%	4.113%	-
... Cedar Rapids	7.00%	7.00%	-	3.856%	3.856%	-	-
Kansas							
... Wichita	7.50%	7.50%	-	2.915%	2.915%	2.915%	-
... Topeka	9.15%	9.15%	-	3.958%	3.958%	3.958%	-
Kentucky							
... Louisville	6.00%	6.00%	6.00% †	1.313%	1.313%	1.317%	1.317%
... Lexington	6.00%	6.00%	6.00% †	1.278%	1.278%	1.541%	1.129%
Louisiana							
... New Orleans	9.45%	9.33%	-	1.402%	2.103%	2.103%	2.103%
... Shreveport	9.70%	9.05%	-	1.453%	2.152%	2.152%	2.152%
Maine							
... Portland	5.50%	5.50%	-	2.158%	2.158%	2.158%	-
... Bangor	5.50%	5.50%	-	2.300%	2.300%	2.300%	-
Maryland							
... Baltimore	6.00%	6.00%	-	1.637%	1.637%	4.047%	-
... Salisbury	6.00%	6.00%	-	1.912%	1.912%	4.572%	-
Massachusetts							
... Boston	6.25%	6.25%	-	2.50%	2.50%	2.50%	-
... Worcester	6.25%	6.25%	-	3.516%	3.516%	3.516%	-

APPENDIX TABLE B-2, CONTINUED.
Sales and Property Tax

	Sales Tax			Property Tax			
State	Downtown	Suburban	Mfg. Mach.	Land	Buildings	Equipment	Inventory
Michigan							
... Detroit	6.00%	6.00%	-	3.458%	3.458%	3.458%	-
... Saginaw	6.00%	6.00%	-	3.031%	3.031%	2.431%	-
Minnesota							
... Minneapolis	8.03%	7.35%	‡	3.556%	3.556%	-	-
... Rochester	8.13%	8.13%	‡	3.231%	3.231%	-	-
Mississippi							
... Jackson	8.00%	7.00%	2.50%	2.147%	2.147%	2.147%	2.147%
... Gulfport	7.00%	7.00%	1.50%	1.726%	1.726%	1.726%	1.726%
Missouri							
... Kansas City	8.60%	5.57%	-	2.746%	2.746%	2.788%	-
... Springfield	8.10%	8.10%	-	2.019%	2.019%	2.103%	-
Montana							
... Billings	-	-	-	2.705%	2.705%	2.102%	-
... Missoula	-	-	-	1.099%	1.099%	1.744%	-
Nebraska							
... Omaha	7.00%	5.50%	-	2.306%	2.306%	2.306%	-
... Lincoln	7.25%	5.50%	-	3.007%	3.007%	3.007%	-
Nevada							
... Las Vegas	8.38%	7.74%	7.74%	3.297%	3.297%	1.033%	-
... Reno	8.27%	8.27%	8.27%	3.297%	3.297%	1.113%	-
New Hampshire							
... Manchester	-	-	-	1.958%	1.958%	-	-
... Concord	-	-	-	2.560%	2.560%	-	-
New Jersey							
... Newark	6.63%	6.63%	-	2.712%	2.712%	-	-
... Trenton	6.63%	6.63%	-	3.297%	3.297%	-	-
New Mexico							
... Albuquerque	7.58%	6.53%	6.53%	3.297%	3.297%	1.437%	-
... Santa Fe	8.44%	6.63%	6.63%	3.297%	3.297%	1.016%	-
New York							
... New York	8.88%	8.63%	-	3.297%	3.297%	-	-
... Utica	8.75%	7.75%	-	4.361%	4.361%	-	-
North Carolina							
... Raleigh	7.25%	6.75%	§	0.97%	0.97%	0.97%	-
... Ashville	7.25%	6.75%	§	0.97%	0.97%	0.97%	-
North Dakota							
... Fargo	7.50%	5.00%	5.00% †	1.318%	1.318%	-	-
... Grand Forks	7.25%	5.00%	5.00% †	1.604%	1.604%	-	-
Ohio							
... Cincinnati	7.80%	7.01%	-	2.832%	2.832%	-	-
... Canton	6.50%	6.25%	-	2.279%	2.279%	-	-
Oklahoma							
... Oklahoma City	8.63%	4.50%	-	1.079%	1.079%	1.348%	1.348%
... Lawton	9.00%	4.88%	-	1.144%	1.144%	1.144%	1.144%
Oregon							
... Portland	-	-	-	1.287%	1.287%	2.093%	-
... Salem	-	-	-	1.067%	1.067%	1.735%	-
Pennsylvania							
... Philadelphia	8.00%	6.00%	-	1.40%	1.40%	-	-
... Erie	6.00%	6.00%	-	2.98%	2.98%	-	-
Rhode Island							
... Providence	7.00%	7.00%	-	2.871%	2.871%	4.270%	-
... n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
South Carolina							
... Columbia	8.00%	7.50%	-	2.853%	2.853%	4.992%	-
... Spartanburg	7.00%	7.00%	-	2.817%	2.817%	4.931%	-
South Dakota							
... Sioux Falls	6.50%	4.50%	4.50%	1.763%	1.763%	-	-
... Rapid City	6.50%	4.50%	4.50%	1.953%	1.953%	-	-
Tennessee							
... Nashville	9.25%	9.25%	-	1.602%	1.602%	1.201%	-
... Johnson City	9.50%	9.50%	-	1.202%	1.202%	0.902%	-
Texas							
... Dallas	8.25%	6.25%	-	2.60%	2.60%	2.60%	2.60%
... Lubbock	8.25%	6.75%	-	2.403%	2.403%	2.403%	2.403%

APPENDIX TABLE B-2, CONTINUED.

Sales and Property Tax

State	Sales Tax			Property Tax			
	Downtown	Suburban	Mfg. Mach.	Land	Buildings	Equipment	Inventory
Utah							
... Salt Lake City	7.75%	6.79%	-	1.374%	1.374%	1.374%	-
... St. George	6.75%	5.35%	-	1.30%	1.30%	1.30%	-
Vermont							
... Burlington	7.00%	6.00%	-	2.093%	2.093%	2.093%	-
... Rutland	7.00%	6.00%	-	2.498%	2.498%	2.498%	-
Virginia							
... Richmond	6.00%	6.00%	-	0.975%	0.975%	3.600%	-
... Roanoke	5.30%	4.30%	-	1.081%	1.081%	3.475%	-
Washington							
... Seattle	10.10%	9.65%	-	1.048%	1.048%	1.048%	-
... Spokane	8.90%	6.50%	-	1.212%	1.212%	1.212%	-
West Virginia							
... Charleston	7.00%	6.00%	-	1.829%	1.829%	1.829%	1.829%
... Parkersburg	7.00%	6.00%	-	1.786%	1.786%	1.786%	1.786%
Wisconsin							
... Milwaukee	5.50%	5.25%	-	2.336%	2.336%	2.336%	2.336%
... Eau Claire	5.50%	5.50%	-	1.873%	1.873%	1.873%	1.873%
Wyoming							
... Cheyenne	6.00%	6.00%	-	0.834%	0.834%	0.834%	-
... Casper	5.00%	5.00%	-	0.819%	0.819%	0.819%	-

* Manufacturing machinery exempt from sales tax for new/expanded facilities or replacement equipment

† Manufacturing machinery exempt from sales tax only for new/expanded facilities

‡ Sales tax on manufacturing machinery is refundable

§ Subject to a nominal privilege tax in lieu of sales tax

APPENDIX

APPENDIX TABLE B-3.

Other

	Unemployment Ins.		Gross Receipts Tax			Other Taxes	
State	Rate	Max. Pay	Mfg.	Services	Retail	Local Inc.	State Cap.
Alabama							
... Birmingham	2.70%	$8,000	n/a	n/a	n/a	n/a	0.175%
... Montgomery			n/a	n/a	n/a	n/a	
Alaska							
... Anchorage	1.00%	$41,500	n/a	n/a	n/a	n/a	n/a
... Fairbanks			n/a	n/a	n/a	n/a	
Arizona							
... Phoenix	2.00%	$7,000	n/a	n/a	n/a	n/a	n/a
... Prescott			n/a	n/a	n/a	n/a	
Arkansas							
... Little Rock	3.10%	$7,000	n/a	n/a	n/a	n/a	0.300%
... Fort Smith			n/a	n/a	n/a	n/a	
California							
... Los Angeles	3.40%	$7,000	0.101%	0.356%	0.101%	n/a	n/a
... Merced			n/a	n/a	n/a	n/a	
Colorado							
... Denver	1.70%	$13,600	n/a	n/a	n/a	n/a	n/a
... Fort Collins			n/a	n/a	n/a	n/a	
Connecticut							
... Hartford	3.20%	$15,000	n/a	n/a	n/a	n/a	0.260%
... Norwich			n/a	n/a	n/a	n/a	
Delaware							
... Wilmington	1.50%	$16,500	0.126%	0.3983%	0.3983%	n/a	0.035%
... Dover			0.126%	0.3983%	0.3983%	n/a	
District of Columbia							
... Washington	2.70%	$9,000	n/a	n/a	n/a	n/a	n/a
Florida							
... Miami	2.70%	$7,000	n/a	n/a	n/a	n/a	n/a
... Gainesville			n/a	n/a	n/a	n/a	
Georgia							
... Atlanta	2.70%	$9,500	n/a	n/a	n/a	n/a	≤ $5,000
... Macon			n/a	n/a	n/a	n/a	
Hawaii							
... Honolulu	2.40%	$48,100	n/a	n/a	n/a	n/a	n/a
... Hilo			n/a	n/a	n/a	n/a	
Idaho							
... Boise	1.00%	$41,600	n/a	n/a	n/a	n/a	n/a
... Coeur D'Alene			n/a	n/a	n/a	n/a	
Illinois							
... Chicago	3.13%	$12,960	n/a	n/a	n/a	n/a	0.100%
... Peoria			n/a	n/a	n/a	n/a	
Indiana							
... Indianapolis	2.50%	$9,500	n/a	n/a	n/a	n/a	n/a
... Elkhart			n/a	n/a	n/a	n/a	
Iowa							
... Des Moines	1.00%	$32,400	n/a	n/a	n/a	n/a	n/a
... Cedar Rapids			n/a	n/a	n/a	n/a	
Kansas							
... Wichita	2.70%	$14,000	n/a	n/a	n/a	n/a	n/a
... Topeka			n/a	n/a	n/a	n/a	
Kentucky							
... Louisville	2.70%	$11,100	n/a	n/a	n/a	2.200%	n/a
... Lexington			n/a	n/a	n/a	2.750%	
Louisiana							
... New Orleans	2.00%	$7,700	n/a	0.100%	0.100%	n/a	0.300% *
... Shreveport			n/a	0.100%	0.100%	n/a	
Maine							
... Portland	1.92%	$12,000	n/a	n/a	n/a	n/a	n/a
... Bangor			n/a	n/a	n/a	n/a	
Maryland							
... Baltimore	2.60%	$8,500	n/a	n/a	n/a	n/a	n/a
... Salisbury			n/a	n/a	n/a	n/a	
Massachusetts							
... Boston	2.42%	$15,000	n/a	n/a	n/a	n/a	0.260%
... Worcester			n/a	n/a	n/a	n/a	

APPENDIX TABLE B-3, CONTINUED.

Other

	Unemployment Ins.		Gross Receipts Tax			Other Taxes	
State	Rate	Max. Pay	Mfg.	Services	Retail	Local Inc.	State Cap.
Michigan							
... Detroit	2.70%	$9,000	n/a	n/a	n/a	2.000%	n/a
... Saginaw			n/a	n/a	n/a	1.500%	
Minnesota							
... Minneapolis	1.96%	$35,000	n/a	n/a	n/a	n/a	≤ $10,210
... Rochester			n/a	n/a	n/a	n/a	
Mississippi							
... Jackson	1.30%	$14,000	n/a	n/a	n/a	n/a	0.175%
... Gulfport			n/a	n/a	n/a	n/a	
Missouri							
... Kansas City	2.38%	$11,000	n/a	n/a	n/a	1.000%	n/a
... Springfield			n/a	n/a	n/a	n/a	
Montana							
... Billings	1.18%	$34,100	n/a	n/a	n/a	n/a	n/a
... Missoula			n/a	n/a	n/a	n/a	
Nebraska							
... Omaha	1.25%	$9,000	n/a	n/a	n/a	n/a	0.150%
... Lincoln			n/a	n/a	n/a	n/a	
Nevada							
... Las Vegas	3.00%	$32,500	0.091%	0.181%	0.111%	n/a	n/a
... Reno			0.091%	0.181%	0.111%	n/a	
New Hampshire							
... Manchester	2.70%	$14,000	n/a	n/a	n/a	n/a	n/a
... Concord			n/a	n/a	n/a	n/a	
New Jersey							
... Newark	2.80%	$36,200	n/a	n/a	n/a	n/a	n/a
... Trenton			n/a	n/a	n/a	n/a	
New Mexico							
... Albuquerque	1.00%	$25,800	n/a	n/a	n/a	n/a	n/a
... Santa Fe			n/a	n/a	n/a	n/a	
New York							
... New York	3.20%	$11,800	n/a	n/a	n/a	8.850%	0.150%
... Utica			n/a	n/a	n/a	n/a	
North Carolina							
... Charlotte	1.00%	$25,200	n/a	n/a	n/a	n/a	0.150%
... Ashville			n/a	n/a	n/a	n/a	
North Dakota							
... Fargo	1.02%	$37,900	n/a	n/a	n/a	n/a	n/a
... Grand Forks			n/a	n/a	n/a	n/a	
Ohio							
... Cincinnati	2.70%	$9,000	0.260%	0.260%	0.260%	1.800%	n/a
... Canton			0.260%	0.260%	0.260%	2.500%	
Oklahoma							
... Oklahoma City	1.50%	$24,000	n/a	n/a	n/a	n/a	0.125%
... Lawton			n/a	n/a	n/a	n/a	
Oregon							
... Portland	2.40%	$42,100	0.570%	0.570%	0.570%	2.600%	n/a
... Salem			0.570%	0.570%	0.570%	n/a	
Pennsylvania							
... Philadelphia	3.69%	$10,000	0.142%	0.142%	0.142%	6.250%	0.067%
... Erie			0.000%	0.225%	0.150%	n/a	
Rhode Island							
... Providence	1.27%	$24,750	n/a	n/a	n/a	n/a	0.025%
South Carolina							
... Columbia	1.09%	$14,000	n/a	n/a	n/a	n/a	0.100%
... Spartanburg			n/a	n/a	n/a	n/a	
South Dakota							
... Sioux Falls	1.20%	$15,000	n/a	n/a	n/a	n/a	n/a
... Rapid City			n/a	n/a	n/a	n/a	
Tennessee							
... Nashville	2.70%	$7,000	n/a	n/a	n/a	n/a	0.250%
... Johnson City			n/a	n/a	n/a	n/a	
Texas							
... Dallas	2.70%	$9,000	n/a	n/a	n/a	n/a	n/a
... Lubbock			n/a	n/a	n/a	n/a	

APPENDIX

APPENDIX TABLE B-3, CONTINUED.
Other

	Unemployment Ins.		Gross Receipts Tax			Other Taxes	
State	Rate	Max. Pay	Mfg.	Services	Retail	Local Inc.	State Cap.
Utah							
... Salt Lake City	4.10%	$36,600	n/a	n/a	n/a	n/a	n/a
... St. George			n/a	n/a	n/a	n/a	
Vermont							
... Burlington	1.00%	$14,100	n/a	n/a	n/a	n/a	n/a
... Rutland			n/a	n/a	n/a	n/a	
Virginia							
... Fairfax County	2.51%	$8,000	n/a	0.310%	0.170%	n/a	n/a
... Richmond			n/a	0.360%	0.220%	n/a	n/a
Washington							
... Seattle	0.89%	$56,500	0.222%	0.427%	0.222%	n/a	n/a
... Spokane			0.484%	1.500%	0.471%	n/a	
West Virginia							
... Charleston	2.70%	$12,000	0.000%	1.000%	0.150%	n/a	0.100%
... Parkersburg			0.200%	0.900%	0.150%	n/a	
Wisconsin							
... Milwaukee	3.25%	$14,000	n/a	n/a	n/a	n/a	n/a
... Eau Claire			n/a	n/a	n/a	n/a	
Wyoming							
... Cheyenne	1.43%	$27,300	n/a	n/a	n/a	n/a	0.020%
... Casper			n/a	n/a	n/a	n/a	

*Tax is 0.15% on the first $300,000 of taxable capital.

APPENDIX C-1.
Corporate Headquarters

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
Alabama	Mature	5.1%	5.8%	3.8%	0.4%	15.1%	20
	New	-3.0%	6.4%	5.2%	0.4%	9.1%	4
Alaska	Mature	5.8%	5.6%	0.0%	0.8%	12.2%	9
	New	5.7%	7.0%	0.0%	0.8%	13.5%	13
Arizona	Mature	3.2%	7.5%	3.2%	0.3%	14.2%	15
	New	1.3%	9.3%	4.5%	0.3%	15.3%	23
Arkansas	Mature	5.2%	5.3%	4.1%	0.4%	15.0%	19
	New	-0.9%	6.8%	5.5%	0.4%	11.8%	6
California	Mature	9.3%	4.3%	3.5%	0.4%	17.6%	30
	New	9.2%	5.4%	4.8%	0.5%	19.9%	35
Colorado	Mature	3.9%	10.5%	3.1%	0.4%	18.0%	33
	New	3.1%	13.1%	4.3%	0.5%	21.0%	40
Connecticut	Mature	6.0%	11.4%	3.7%	0.9%	21.9%	44
	New	4.1%	14.1%	4.7%	1.0%	23.9%	44
Delaware	Mature	9.6%	4.7%	0.0%	0.5%	14.7%	18
	New	7.4%	5.1%	0.0%	0.5%	13.1%	11
District of Columbia	Mature	7.2%	7.6%	3.2%	0.5%	18.5%	(35)
	New	6.9%	10.3%	4.2%	0.5%	21.8%	(42)
Florida	Mature	2.9%	8.0%	2.7%	0.4%	14.0%	14
	New	2.8%	10.0%	3.6%	0.4%	16.9%	28
Georgia	Mature	5.6%	7.1%	3.4%	0.5%	16.6%	25
	New	4.3%	8.2%	4.6%	0.5%	17.6%	29
Hawaii	Mature	3.5%	4.7%	3.0%	2.1%	13.2%	11
	New	3.0%	5.2%	3.7%	2.3%	14.2%	16
Idaho	Mature	4.7%	5.5%	2.3%	0.8%	13.3%	12
	New	4.1%	6.9%	3.1%	0.8%	15.0%	21
Illinois	Mature	8.0%	9.1%	3.9%	0.7%	21.8%	43
	New	4.2%	10.2%	5.3%	0.8%	20.4%	37
Indiana	Mature	4.7%	5.4%	2.7%	0.4%	13.2%	10
	New	3.6%	6.1%	3.6%	0.5%	13.8%	14
Iowa	Mature	7.1%	15.5%	3.5%	0.6%	26.7%	49
	New	5.4%	17.1%	4.4%	0.7%	27.6%	48
Kansas	Mature	3.9%	11.4%	3.4%	0.7%	19.4%	38
	New	-3.8%	14.2%	4.6%	0.8%	15.7%	24
Kentucky	Mature	6.5%	5.1%	2.3%	0.6%	14.5%	17
	New	2.6%	6.4%	3.1%	0.6%	12.7%	8
Louisiana	Mature	4.2%	9.1%	4.3%	0.3%	17.9%	31
	New	-5.3%	11.4%	5.7%	0.3%	12.2%	7
Maine	Mature	7.8%	8.5%	2.1%	0.4%	18.8%	35
	New	7.1%	10.5%	2.9%	0.5%	21.0%	38
Maryland	Mature	6.4%	6.7%	2.3%	0.4%	15.9%	21
	New	5.5%	9.7%	3.1%	0.4%	18.8%	33
Massachusetts	Mature	5.2%	9.8%	2.4%	0.7%	18.0%	32
	New	4.9%	12.2%	3.2%	0.7%	21.1%	41
Michigan	Mature	5.9%	13.4%	2.3%	0.5%	22.1%	45
	New	5.7%	16.4%	3.1%	0.5%	25.6%	46
Minnesota	Mature	7.9%	13.5%	3.0%	1.3%	25.7%	48
	New	7.7%	14.9%	4.2%	1.4%	28.1%	49
Mississippi	Mature	4.3%	9.1%	3.7%	0.3%	17.4%	28
	New	-0.9%	10.5%	4.8%	0.4%	14.8%	19
Missouri	Mature	3.6%	10.8%	3.2%	0.5%	18.1%	34
	New	-2.2%	12.4%	4.5%	0.5%	15.2%	22
Montana	Mature	4.2%	4.5%	0.0%	0.7%	9.4%	2
	New	4.1%	6.1%	0.0%	0.8%	11.0%	5
Nebraska	Mature	6.3%	9.1%	3.2%	0.2%	18.8%	36
	New	-1.6%	11.4%	4.2%	0.2%	14.3%	17
Nevada	Mature	1.8%	4.0%	3.1%	1.8%	10.8%	4
	New	2.0%	5.0%	4.2%	2.0%	13.3%	12
New Hampshire	Mature	5.2%	7.4%	0.0%	0.7%	13.3%	13
	New	5.1%	8.1%	0.0%	0.8%	14.0%	15
New Jersey	Mature	7.5%	10.2%	3.0%	1.9%	22.7%	46
	New	7.2%	11.3%	4.0%	2.1%	24.6%	45
New Mexico	Mature	3.3%	5.6%	5.0%	0.5%	14.4%	16
	New	0.8%	7.0%	6.3%	0.5%	14.6%	18

APPENDIX

APPENDIX C-1, CONTINUED.
Corporate Headquarters

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
New York	Mature	14.1%	12.4%	4.1%	0.7%	31.3%	50
	New	13.6%	13.7%	5.4%	0.8%	33.5%	50
North Carolina	Mature	2.3%	4.4%	3.3%	0.5%	10.4%	3
	New	-3.4%	5.5%	4.4%	0.5%	7.1%	1
North Dakota	Mature	2.6%	5.0%	2.9%	0.7%	11.2%	5
	New	2.5%	5.5%	4.0%	0.8%	12.7%	9
Ohio	Mature	2.0%	10.7%	3.6%	0.5%	16.7%	27
	New	-0.4%	11.8%	4.7%	0.5%	16.6%	27
Oklahoma	Mature	3.6%	4.4%	3.3%	0.7%	12.0%	7
	New	-2.8%	5.7%	4.5%	0.7%	8.1%	2
Oregon	Mature	13.2%	5.2%	0.0%	1.9%	20.2%	41
	New	13.2%	6.8%	0.0%	2.1%	22.1%	42
Pennsylvania	Mature	15.0%	5.3%	3.5%	0.7%	24.4%	47
	New	14.7%	5.8%	4.7%	0.8%	26.0%	47
Rhode Island	Mature	5.9%	11.4%	2.6%	0.6%	20.5%	42
	New	4.0%	15.0%	3.6%	0.6%	23.2%	43
South Carolina	Mature	4.2%	11.9%	3.0%	0.3%	19.3%	37
	New	-4.5%	15.9%	4.1%	0.3%	15.9%	25
South Dakota	Mature	0.0%	6.7%	4.3%	0.3%	11.3%	6
	New	0.0%	7.3%	5.4%	0.4%	13.1%	10
Tennessee	Mature	4.5%	7.1%	4.3%	0.4%	16.2%	24
	New	3.5%	8.5%	5.6%	0.4%	18.0%	30
Texas	Mature	1.6%	10.2%	3.8%	0.5%	16.0%	23
	New	1.8%	12.7%	5.0%	0.5%	20.0%	36
Utah	Mature	4.3%	5.4%	3.6%	2.8%	16.0%	22
	New	4.2%	6.2%	4.7%	3.1%	18.1%	31
Vermont	Mature	5.6%	8.2%	2.6%	0.3%	16.7%	26
	New	2.3%	10.2%	3.6%	0.3%	16.4%	26
Virginia	Mature	4.9%	4.6%	2.2%	0.4%	12.1%	8
	New	4.7%	6.8%	3.1%	0.4%	15.0%	21
Washington	Mature	8.0%	4.1%	4.6%	0.9%	17.6%	29
	New	8.8%	5.1%	6.1%	0.9%	21.0%	39
West Virginia	Mature	8.2%	7.2%	3.7%	0.6%	19.7%	40
	New	4.6%	8.9%	4.8%	0.7%	19.0%	34
Wisconsin	Mature	6.9%	9.1%	2.6%	0.8%	19.4%	39
	New	3.1%	11.4%	3.4%	0.9%	18.8%	32
Wyoming	Mature	0.0%	3.3%	2.7%	0.7%	6.8%	1
	New	0.0%	4.2%	3.6%	0.8%	8.6%	3

APPENDIX C-2.
R&D Firm

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
Alabama	Mature	7.1%	6.7%	1.7%	0.4%	15.9%	45
	New	-8.0%	8.6%	4.1%	0.5%	5.1%	6
Alaska	Mature	6.0%	6.2%	0.0%	0.7%	12.9%	29
	New	4.3%	10.3%	0.0%	0.9%	15.5%	32
Arizona	Mature	0.0%	8.2%	1.2%	0.2%	9.6%	15
	New	0.0%	13.6%	1.8%	0.3%	15.7%	33
Arkansas	Mature	0.0%	5.7%	2.6%	0.4%	8.7%	9
	New	-7.3%	10.4%	5.8%	0.5%	9.4%	10
California	Mature	1.6%	4.8%	1.7%	0.4%	8.5%	8
	New	2.1%	7.9%	3.8%	0.5%	14.3%	26
Colorado	Mature	0.1%	11.6%	0.6%	0.4%	12.7%	28
	New	0.0%	19.3%	1.0%	0.5%	20.7%	43
Connecticut	Mature	0.0%	12.6%	2.0%	0.8%	15.3%	41
	New	0.0%	20.8%	3.8%	1.0%	25.6%	49
Delaware	Mature	3.6%	4.7%	0.1%	0.4%	8.8%	10
	New	-1.1%	6.2%	0.1%	0.5%	5.6%	8
District of Columbia	Mature	0.0%	9.0%	2.3%	0.4%	11.7%	(23)
	New	0.0%	16.9%	5.0%	0.5%	22.4%	(48)
Florida	Mature	3.3%	8.9%	1.1%	0.3%	13.6%	33
	New	2.5%	14.7%	1.8%	0.4%	19.4%	39
Georgia	Mature	-5.7%	7.9%	2.5%	0.4%	5.1%	2
	New	-12.2%	11.1%	5.9%	0.5%	5.4%	7
Hawaii	Mature	-21.5%	4.7%	1.9%	1.9%	-13.0%	1
	New	-30.8%	6.2%	4.0%	2.4%	-18.2%	1
Idaho	Mature	3.3%	6.1%	0.9%	0.7%	11.1%	22
	New	1.2%	10.1%	1.5%	0.9%	13.7%	24
Illinois	Mature	4.2%	9.1%	2.4%	0.6%	16.4%	47
	New	-4.1%	12.3%	5.7%	0.8%	14.7%	28
Indiana	Mature	0.0%	5.9%	1.2%	0.4%	7.5%	6
	New	0.0%	7.9%	1.8%	0.5%	10.2%	14
Iowa	Mature	-3.8%	15.6%	1.3%	0.5%	13.7%	35
	New	-5.3%	20.4%	2.0%	0.7%	17.8%	37
Kansas	Mature	5.6%	12.6%	1.5%	0.6%	20.4%	50
	New	-6.2%	14.5%	2.7%	0.8%	11.7%	17
Kentucky	Mature	2.0%	5.7%	2.0%	0.5%	10.1%	16
	New	-2.5%	9.4%	4.6%	0.6%	12.1%	19
Louisiana	Mature	0.4%	10.4%	3.3%	0.3%	14.4%	38
	New	-15.8%	17.4%	7.5%	0.3%	9.4%	11
Maine	Mature	0.0%	9.3%	0.9%	0.4%	10.6%	20
	New	-0.8%	15.5%	1.3%	0.5%	16.5%	35
Maryland	Mature	0.0%	6.2%	1.0%	0.4%	7.6%	7
	New	0.0%	8.1%	1.6%	0.5%	10.2%	13
Massachusetts	Mature	1.9%	10.8%	1.0%	0.6%	14.3%	37
	New	1.0%	17.9%	1.5%	0.8%	21.2%	44
Michigan	Mature	0.1%	14.6%	0.9%	0.4%	16.0%	46
	New	0.1%	23.3%	1.5%	0.5%	25.4%	48
Minnesota	Mature	0.0%	13.6%	1.2%	0.6%	15.4%	42
	New	0.0%	17.8%	1.8%	0.8%	20.4%	42
Mississippi	Mature	3.8%	10.1%	1.3%	0.3%	15.4%	43
	New	-3.3%	13.9%	2.0%	0.4%	13.0%	20
Missouri	Mature	0.1%	11.9%	0.9%	0.4%	13.3%	31
	New	-4.0%	16.7%	1.4%	0.5%	14.7%	27
Montana	Mature	6.1%	5.3%	0.0%	0.6%	12.0%	26
	New	3.9%	10.1%	0.0%	0.8%	14.9%	30
Nebraska	Mature	-1.7%	10.0%	1.9%	0.2%	10.4%	18
	New	-22.2%	16.9%	4.4%	0.3%	-0.6%	3
Nevada	Mature	2.1%	4.5%	2.3%	1.6%	10.5%	19
	New	2.7%	7.4%	5.6%	2.1%	17.8%	38
New Hampshire	Mature	6.7%	7.4%	0.0%	0.6%	14.7%	40
	New	6.2%	9.7%	0.0%	0.8%	16.7%	36
New Jersey	Mature	0.1%	10.3%	1.2%	1.6%	13.2%	30
	New	-1.2%	13.5%	1.9%	2.1%	16.3%	34
New Mexico	Mature	2.6%	6.2%	2.8%	0.4%	12.0%	25
	New	-10.8%	10.3%	5.8%	0.5%	5.9%	9

APPENDIX

APPENDIX C-2, CONTINUED.

R&D Firm

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
New York	Mature	0.8%	12.5%	1.6%	0.6%	15.6%	44
	New	-22.1%	16.4%	2.5%	0.8%	-2.4%	2
North Carolina	Mature	2.3%	4.9%	1.3%	0.4%	8.8%	11
	New	-7.1%	8.2%	1.9%	0.5%	3.5%	5
North Dakota	Mature	0.0%	5.0%	1.8%	0.6%	7.4%	5
	New	0.0%	6.5%	4.0%	0.8%	11.4%	15
Ohio	Mature	1.2%	10.8%	1.3%	0.4%	13.6%	34
	New	-3.1%	14.1%	1.9%	0.5%	13.4%	23
Oklahoma	Mature	3.6%	5.3%	0.7%	0.6%	10.2%	17
	New	-7.0%	7.2%	1.1%	0.8%	2.1%	4
Oregon	Mature	1.8%	6.0%	0.0%	1.6%	9.5%	13
	New	1.6%	11.0%	0.0%	2.1%	14.7%	29
Pennsylvania	Mature	0.0%	5.3%	1.2%	0.6%	7.1%	4
	New	0.0%	7.0%	1.8%	0.8%	9.5%	12
Rhode Island	Mature	0.0%	13.2%	1.0%	0.5%	14.7%	39
	New	0.0%	23.6%	1.6%	0.7%	25.9%	50
South Carolina	Mature	2.1%	13.9%	1.2%	0.3%	17.5%	48
	New	-6.3%	25.9%	1.9%	0.3%	21.7%	46
South Dakota	Mature	0.0%	6.7%	1.9%	0.3%	8.9%	12
	New	0.0%	8.8%	4.0%	0.4%	13.1%	21
Tennessee	Mature	2.4%	7.2%	1.8%	0.3%	11.7%	23
	New	1.1%	11.1%	2.7%	0.4%	15.4%	31
Texas	Mature	0.6%	11.2%	1.2%	0.4%	13.5%	32
	New	0.8%	18.6%	1.8%	0.5%	21.8%	47
Utah	Mature	0.0%	6.0%	1.3%	2.4%	9.6%	15
	New	0.0%	8.3%	1.9%	3.2%	13.4%	22
Vermont	Mature	0.5%	9.0%	0.9%	0.2%	10.7%	21
	New	-5.3%	15.0%	1.5%	0.3%	11.5%	16
Virginia	Mature	4.8%	6.4%	0.8%	0.3%	12.4%	27
	New	3.9%	14.2%	1.3%	0.4%	19.8%	40
Washington	Mature	6.8%	4.5%	1.7%	0.8%	13.8%	36
	New	8.9%	7.5%	2.6%	1.1%	20.1%	41
West Virginia	Mature	9.9%	7.9%	1.2%	0.5%	19.4%	49
	New	5.9%	13.1%	1.8%	0.7%	21.5%	45
Wisconsin	Mature	0.0%	10.1%	1.1%	0.7%	11.9%	24
	New	-5.4%	16.7%	1.6%	1.0%	13.9%	25
Wyoming	Mature	0.0%	3.7%	2.1%	0.6%	6.5%	3
	New	0.0%	6.2%	4.8%	0.8%	11.8%	18

APPENDIX C-3.

Technology Center

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
Alabama	Mature	6.7%	5.6%	1.5%	0.3%	14.1%	36
	New	-8.0%	8.2%	5.9%	0.5%	6.5%	4
Alaska	Mature	8.6%	5.4%	0.0%	0.7%	14.7%	38
	New	8.2%	9.5%	0.0%	0.9%	18.7%	34
Arizona	Mature	0.1%	7.1%	1.3%	0.2%	8.8%	9
	New	0.0%	12.6%	5.1%	0.3%	18.1%	31
Arkansas	Mature	5.4%	4.8%	1.6%	0.4%	12.2%	24
	New	-5.9%	9.4%	5.6%	0.5%	9.6%	6
California	Mature	2.5%	4.1%	1.4%	0.4%	8.4%	6
	New	3.0%	7.3%	5.5%	0.5%	16.4%	24
Colorado	Mature	0.1%	10.0%	1.3%	0.4%	11.8%	22
	New	0.0%	17.8%	4.9%	0.5%	23.2%	43
Connecticut	Mature	0.0%	10.8%	1.3%	0.8%	12.9%	29
	New	0.0%	19.2%	4.1%	1.1%	24.4%	44
Delaware	Mature	9.7%	4.5%	0.0%	0.4%	14.6%	37
	New	6.1%	6.3%	0.0%	0.6%	13.0%	13
District of Columbia	Mature	0.0%	7.2%	1.2%	0.4%	8.8%	(10)
	New	0.0%	14.8%	3.9%	0.5%	19.3%	(35)
Florida	Mature	4.0%	7.7%	1.1%	0.3%	13.1%	33
	New	0.0%	13.6%	4.2%	0.4%	18.2%	32
Georgia	Mature	0.2%	6.8%	1.4%	0.4%	8.8%	10
	New	-4.3%	10.7%	5.3%	0.6%	12.2%	12
Hawaii	Mature	3.6%	4.5%	1.0%	1.8%	11.0%	20
	New	1.9%	6.3%	3.1%	2.6%	13.9%	17
Idaho	Mature	6.4%	5.3%	0.9%	0.7%	13.3%	34
	New	4.6%	9.4%	3.6%	0.9%	18.5%	33
Illinois	Mature	8.4%	8.7%	1.6%	0.7%	19.3%	50
	New	1.6%	12.5%	6.0%	0.9%	21.1%	38
Indiana	Mature	0.1%	5.1%	1.1%	0.4%	6.7%	2
	New	0.0%	7.5%	4.2%	0.5%	12.2%	11
Iowa	Mature	0.0%	15.0%	1.2%	0.5%	16.7%	45
	New	0.0%	21.0%	3.9%	0.7%	25.6%	47
Kansas	Mature	6.0%	10.9%	1.3%	0.6%	18.8%	49
	New	-5.3%	19.3%	4.7%	0.9%	19.5%	35
Kentucky	Mature	2.1%	4.9%	0.9%	0.5%	8.4%	7
	New	-2.5%	8.7%	3.6%	0.7%	10.4%	9
Louisiana	Mature	5.9%	8.8%	1.7%	0.2%	16.6%	44
	New	-48.4%	16.1%	5.9%	0.3%	-26.1%	1
Maine	Mature	0.0%	8.1%	0.9%	0.4%	9.3%	12
	New	-0.8%	14.3%	3.3%	0.5%	17.3%	28
Maryland	Mature	2.0%	6.3%	1.0%	0.4%	9.6%	13
	New	1.1%	14.5%	3.6%	0.5%	19.6%	36
Massachusetts	Mature	7.1%	9.3%	1.0%	0.6%	18.0%	47
	New	6.2%	16.5%	3.7%	0.8%	27.3%	49
Michigan	Mature	1.9%	12.8%	0.9%	0.4%	16.0%	43
	New	1.5%	21.8%	3.6%	0.5%	27.4%	50
Minnesota	Mature	0.1%	13.0%	1.2%	1.1%	15.5%	42
	New	0.1%	18.3%	4.7%	1.5%	24.7%	46
Mississippi	Mature	4.5%	8.6%	1.4%	0.3%	14.7%	40
	New	-3.2%	13.3%	5.0%	0.4%	15.5%	19
Missouri	Mature	0.9%	10.2%	1.3%	0.4%	12.9%	31
	New	-8.5%	16.1%	5.1%	0.6%	13.2%	14
Montana	Mature	6.4%	4.2%	0.0%	0.6%	11.2%	21
	New	6.0%	8.8%	0.0%	0.9%	15.7%	20
Nebraska	Mature	0.0%	8.6%	1.2%	0.2%	10.1%	15
	New	-19.6%	15.4%	4.3%	0.3%	0.5%	2
Nevada	Mature	2.0%	3.8%	1.2%	1.6%	8.6%	8
	New	2.8%	6.8%	4.9%	2.2%	16.7%	26
New Hampshire	Mature	7.0%	7.1%	0.0%	0.6%	14.7%	39
	New	6.7%	10.0%	0.0%	0.9%	17.5%	29
New Jersey	Mature	0.2%	9.9%	1.2%	1.6%	12.9%	30
	New	0.0%	13.8%	4.1%	2.3%	20.2%	37
New Mexico	Mature	5.1%	5.4%	1.7%	0.4%	12.5%	26
	New	-3.1%	9.5%	5.2%	0.6%	12.1%	10

APPENDIX

APPENDIX C-3, CONTINUED.
Technology Center

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
New York	Mature	0.9%	12.0%	1.6%	0.6%	15.1%	41
	New	-13.4%	16.8%	5.5%	0.9%	9.8%	7
North Carolina	Mature	2.3%	4.1%	1.3%	0.4%	8.2%	5
	New	-7.0%	7.3%	4.5%	0.6%	5.4%	3
North Dakota	Mature	4.0%	4.8%	1.2%	0.6%	10.6%	17
	New	3.7%	6.7%	4.5%	0.9%	15.8%	21
Ohio	Mature	1.6%	10.3%	1.4%	0.4%	13.6%	35
	New	-2.7%	14.4%	4.8%	0.5%	17.1%	27
Oklahoma	Mature	3.7%	4.2%	1.3%	0.6%	9.9%	14
	New	-6.9%	7.8%	5.1%	0.8%	6.9%	5
Oregon	Mature	4.3%	4.9%	0.0%	1.6%	10.8%	19
	New	3.9%	9.7%	0.0%	2.3%	15.9%	22
Pennsylvania	Mature	0.6%	5.1%	1.4%	0.6%	7.7%	3
	New	0.6%	7.1%	5.0%	0.8%	13.5%	15
Rhode Island	Mature	0.0%	10.8%	1.1%	0.5%	12.4%	25
	New	0.0%	21.1%	4.1%	0.7%	25.9%	48
South Carolina	Mature	4.3%	11.2%	1.2%	0.2%	17.0%	46
	New	-5.1%	22.6%	4.7%	0.3%	22.6%	39
South Dakota	Mature	0.0%	6.4%	1.4%	0.3%	8.1%	4
	New	0.0%	9.0%	4.4%	0.4%	13.8%	16
Tennessee	Mature	2.4%	6.3%	1.7%	0.3%	10.7%	18
	New	1.2%	10.4%	5.8%	0.4%	17.8%	30
Texas	Mature	1.2%	9.7%	1.5%	0.4%	12.7%	27
	New	1.6%	17.2%	5.1%	0.5%	24.5%	45
Utah	Mature	0.0%	5.1%	1.4%	2.4%	8.9%	11
	New	0.0%	8.0%	4.8%	3.4%	16.3%	23
Vermont	Mature	3.8%	7.8%	1.1%	0.2%	12.9%	32
	New	-1.7%	13.8%	4.1%	0.3%	16.6%	25
Virginia	Mature	6.4%	4.3%	0.9%	0.3%	11.8%	23
	New	5.8%	13.0%	3.5%	0.4%	22.8%	40
Washington	Mature	6.3%	3.9%	1.7%	0.8%	12.8%	28
	New	8.8%	6.9%	6.2%	1.1%	23.1%	41
West Virginia	Mature	9.8%	6.8%	1.3%	0.5%	18.5%	48
	New	5.8%	12.1%	4.5%	0.7%	23.2%	42
Wisconsin	Mature	0.1%	8.7%	1.0%	0.7%	10.6%	16
	New	-5.6%	15.4%	3.5%	1.0%	14.3%	18
Wyoming	Mature	0.0%	3.2%	1.1%	0.6%	4.9%	1
	New	0.0%	5.6%	3.7%	0.9%	10.3%	8

APPENDIX C-4.
Data Center

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
Alabama	Mature	4.3%	1.2%	9.3%	0.0%	14.9%	44
	New	-0.5%	1.5%	35.0%	0.0%	36.0%	39
Alaska	Mature	8.6%	0.6%	0.0%	0.0%	9.2%	26
	New	7.2%	2.1%	0.0%	0.1%	9.3%	13
Arizona	Mature	0.1%	2.4%	0.5%	0.0%	3.0%	5
	New	0.0%	10.8%	1.2%	0.0%	12.1%	22
Arkansas	Mature	5.0%	2.1%	9.2%	0.0%	16.3%	45
	New	0.9%	10.5%	34.4%	0.0%	45.8%	45
California	Mature	0.9%	1.9%	7.2%	0.0%	10.1%	31
	New	0.8%	8.8%	27.1%	0.0%	36.7%	40
Colorado	Mature	0.1%	5.3%	7.1%	0.0%	12.4%	36
	New	0.0%	24.1%	26.4%	0.0%	50.5%	46
Connecticut	Mature	0.0%	4.9%	6.1%	0.0%	11.1%	33
	New	0.0%	22.4%	22.6%	0.1%	45.1%	44
Delaware	Mature	8.7%	0.2%	0.0%	0.0%	8.9%	25
	New	4.2%	0.9%	0.0%	0.0%	5.2%	4
Florida	Mature	3.8%	3.7%	6.5%	0.0%	14.1%	41
	New	0.0%	16.9%	0.9%	0.0%	17.8%	29
Georgia	Mature	0.2%	3.4%	6.5%	0.0%	10.1%	30
	New	-0.2%	7.7%	0.9%	0.0%	8.5%	11
Hawaii	Mature	0.4%	0.3%	4.4%	0.1%	5.1%	10
	New	-10.0%	1.1%	16.1%	0.2%	7.4%	9
Idaho	Mature	6.2%	1.5%	5.6%	0.0%	13.3%	38
	New	2.8%	6.8%	0.8%	0.1%	10.5%	18
Illinois	Mature	7.9%	0.3%	8.4%	0.0%	16.7%	46
	New	6.9%	1.4%	1.2%	0.1%	9.6%	15
Indiana	Mature	0.1%	5.3%	0.4%	0.0%	5.8%	13
	New	0.0%	9.1%	0.9%	0.0%	10.1%	17
Iowa	Mature	0.1%	1.1%	6.7%	0.0%	7.9%	19
	New	0.0%	4.1%	13.1%	0.0%	17.2%	27
Kansas	Mature	5.4%	7.0%	8.7%	0.0%	21.0%	50
	New	0.5%	31.6%	32.3%	0.0%	64.4%	50
Kentucky	Mature	2.4%	2.6%	5.6%	0.0%	10.6%	32
	New	1.4%	12.0%	0.8%	0.0%	14.2%	25
Louisiana	Mature	5.2%	4.9%	8.6%	0.0%	18.7%	47
	New	2.4%	18.3%	31.9%	0.0%	52.6%	47
Maine	Mature	0.0%	4.0%	5.1%	0.0%	9.2%	27
	New	0.0%	18.4%	19.3%	0.0%	37.6%	41
Maryland	Mature	1.9%	7.3%	0.3%	0.0%	9.5%	28
	New	1.1%	33.7%	0.8%	0.0%	35.6%	38
Massachusetts	Mature	6.7%	6.2%	5.8%	0.0%	18.8%	48
	New	3.0%	28.1%	21.9%	0.0%	53.0%	48
Michigan	Mature	0.2%	4.5%	0.3%	0.0%	5.0%	9
	New	0.1%	20.0%	0.8%	0.0%	21.0%	31
Minnesota	Mature	0.1%	1.0%	7.6%	0.0%	8.7%	22
	New	0.1%	2.9%	1.1%	0.1%	4.2%	3
Mississippi	Mature	4.3%	3.7%	6.6%	0.0%	14.6%	43
	New	3.4%	6.6%	1.1%	0.0%	11.1%	19
Missouri	Mature	0.1%	3.7%	0.4%	0.0%	4.2%	7
	New	-0.2%	8.3%	1.1%	0.0%	9.3%	14
Montana	Mature	6.2%	0.0%	0.0%	0.0%	6.3%	15
	New	5.3%	0.1%	0.0%	0.1%	5.5%	5
Nebraska	Mature	0.0%	0.6%	0.4%	0.0%	1.0%	1
	New	0.0%	2.1%	0.9%	0.0%	3.1%	2
Nevada	Mature	0.1%	2.0%	7.7%	0.1%	9.8%	29
	New	0.1%	3.1%	7.8%	0.1%	11.2%	20
New Hampshire	Mature	7.3%	0.7%	0.0%	0.0%	8.1%	20
	New	6.9%	2.7%	0.0%	0.0%	9.6%	16
New Jersey	Mature	0.2%	1.0%	6.3%	0.1%	7.5%	18
	New	0.1%	3.5%	23.4%	0.1%	27.1%	35
New Mexico	Mature	4.7%	1.8%	6.4%	0.0%	12.9%	37
	New	2.3%	8.2%	23.7%	0.0%	34.3%	37
New York	Mature	0.4%	1.3%	0.5%	0.0%	2.2%	3
	New	0.3%	4.6%	1.2%	0.0%	6.2%	6

APPENDIX

APPENDIX C-4, CONTINUED.
Data Center

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
North Carolina	Mature	2.2%	2.3%	6.6%	0.0%	11.1%	34
	New	1.5%	9.0%	1.1%	0.0%	11.6%	21
North Dakota	Mature	3.8%	0.5%	4.7%	0.0%	8.9%	24
	New	2.6%	0.9%	17.5%	0.0%	21.0%	32
Ohio	Mature	0.9%	0.7%	5.9%	0.0%	7.5%	17
	New	0.5%	0.6%	1.0%	0.0%	2.1%	1
Oklahoma	Mature	3.6%	2.0%	0.3%	0.0%	5.9%	14
	New	2.2%	9.2%	0.7%	0.0%	12.1%	23
Oregon	Mature	0.1%	2.9%	0.0%	0.1%	3.0%	6
	New	0.1%	13.1%	0.0%	0.1%	13.4%	24
Pennsylvania	Mature	0.3%	0.9%	5.6%	0.0%	6.9%	16
	New	0.3%	3.1%	19.1%	0.0%	22.6%	33
Rhode Island	Mature	0.0%	7.1%	6.5%	0.0%	13.7%	40
	New	0.0%	32.6%	24.5%	0.0%	57.2%	49
South Carolina	Mature	4.1%	8.4%	6.5%	0.0%	19.1%	49
	New	1.8%	37.6%	0.9%	0.0%	40.4%	42
South Dakota	Mature	0.0%	0.6%	4.4%	0.0%	4.9%	8
	New	0.0%	2.1%	16.1%	0.0%	18.2%	30
Tennessee	Mature	2.5%	2.1%	0.6%	0.0%	5.3%	11
	New	1.0%	4.2%	1.5%	0.0%	6.8%	8
Texas	Mature	1.0%	4.2%	6.4%	0.0%	11.6%	35
	New	2.5%	19.2%	2.8%	0.0%	24.4%	34
Utah	Mature	0.0%	2.3%	0.3%	0.1%	2.8%	4
	New	0.0%	5.2%	0.9%	0.2%	6.3%	7
Vermont	Mature	3.7%	4.4%	5.6%	0.0%	13.7%	39
	New	1.7%	19.9%	21.0%	0.0%	42.7%	43
Virginia	Mature	6.0%	2.4%	0.3%	0.0%	8.7%	23
	New	5.8%	8.4%	0.8%	0.0%	15.0%	26
Washington	Mature	2.7%	2.1%	0.4%	0.0%	5.3%	12
	New	6.7%	9.7%	1.0%	0.1%	17.5%	28
West Virginia	Mature	7.3%	1.3%	5.7%	0.0%	14.3%	42
	New	4.0%	3.7%	1.1%	0.0%	8.9%	12
Wisconsin	Mature	0.1%	3.3%	5.2%	0.0%	8.6%	21
	New	-2.3%	15.0%	19.4%	0.1%	32.2%	36
Wyoming	Mature	0.0%	1.5%	0.3%	0.0%	1.9%	2
	New	0.0%	6.8%	0.8%	0.1%	7.7%	10

APPENDIX C-5.

Shared Services Center

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
Alabama	Mature	4.6%	5.4%	2.9%	2.1%	15.0%	3
	New	-10.0%	7.6%	6.0%	2.6%	6.2%	4
Alaska	Mature	7.1%	14.9%	0.0%	3.7%	25.7%	31
	New	6.6%	18.5%	0.0%	4.5%	29.6%	29
Arizona	Mature	0.1%	10.7%	3.3%	1.4%	15.4%	5
	New	0.0%	15.0%	6.2%	1.7%	23.0%	17
Arkansas	Mature	4.8%	9.4%	3.3%	2.1%	19.6%	17
	New	-13.6%	13.9%	6.4%	2.6%	9.4%	5
California	Mature	0.9%	8.7%	1.9%	2.3%	13.8%	2
	New	0.8%	12.2%	4.2%	2.9%	20.1%	12
Colorado	Mature	0.1%	23.8%	2.3%	2.2%	28.4%	39
	New	0.0%	33.5%	4.7%	2.8%	41.0%	43
Connecticut	Mature	0.0%	22.2%	2.4%	4.7%	29.3%	42
	New	0.0%	31.3%	4.5%	5.8%	41.6%	44
Delaware	Mature	10.3%	6.5%	0.2%	2.4%	19.4%	16
	New	4.4%	8.1%	0.2%	3.0%	15.7%	6
Florida	Mature	3.4%	16.7%	2.2%	1.8%	24.2%	28
	New	3.0%	23.5%	4.4%	2.3%	33.2%	32
Georgia	Mature	0.1%	15.4%	2.2%	2.5%	20.1%	18
	New	-23.9%	20.0%	4.3%	3.1%	3.5%	1
Hawaii	Mature	2.8%	8.2%	1.9%	8.9%	21.7%	22
	New	1.6%	10.1%	3.4%	11.0%	26.1%	26
Idaho	Mature	5.9%	6.8%	1.8%	3.7%	18.2%	10
	New	4.4%	9.5%	3.7%	4.5%	22.1%	16
Illinois	Mature	7.8%	7.7%	2.7%	3.9%	22.0%	24
	New	-4.2%	9.7%	5.5%	4.9%	15.9%	7
Indiana	Mature	0.1%	23.7%	2.3%	2.3%	28.3%	38
	New	0.0%	30.1%	4.5%	2.9%	37.4%	41
Iowa	Mature	0.0%	29.4%	2.7%	3.1%	35.2%	46
	New	0.0%	36.4%	5.0%	3.9%	45.3%	47
Kansas	Mature	4.1%	31.3%	3.1%	3.7%	42.1%	50
	New	-17.2%	44.0%	6.0%	4.5%	37.4%	40
Kentucky	Mature	2.3%	10.2%	1.8%	2.9%	17.2%	6
	New	-18.1%	14.6%	3.7%	3.6%	3.9%	3
Louisiana	Mature	4.9%	18.0%	3.1%	1.5%	27.5%	35
	New	-15.0%	25.9%	6.0%	1.8%	18.7%	11
Maine	Mature	0.0%	18.2%	1.7%	2.2%	22.1%	25
	New	-1.5%	25.6%	3.4%	2.8%	30.2%	30
Maryland	Mature	1.7%	15.9%	2.0%	2.2%	21.7%	23
	New	0.0%	25.8%	3.9%	2.7%	32.4%	31
Massachusetts	Mature	5.1%	27.8%	1.9%	3.5%	38.4%	48
	New	3.9%	39.1%	3.9%	4.4%	51.3%	50
Michigan	Mature	0.1%	23.8%	1.8%	2.4%	28.1%	37
	New	0.1%	32.7%	3.7%	2.9%	39.4%	42
Minnesota	Mature	0.1%	24.7%	2.5%	6.6%	33.9%	45
	New	0.1%	30.7%	5.0%	8.2%	44.0%	46
Mississippi	Mature	3.9%	14.3%	2.4%	1.8%	22.3%	26
	New	-8.1%	18.6%	4.6%	2.2%	17.3%	9
Missouri	Mature	0.1%	16.0%	2.5%	2.5%	21.1%	19
	New	-7.7%	20.8%	5.0%	3.1%	21.3%	15
Montana	Mature	5.7%	8.9%	0.0%	3.9%	18.4%	12
	New	5.2%	13.3%	0.0%	4.8%	23.4%	19
Nebraska	Mature	0.0%	16.0%	1.9%	1.1%	18.9%	15
	New	-2.3%	22.7%	3.6%	1.3%	25.3%	24
Nevada	Mature	4.3%	9.1%	2.0%	9.5%	24.8%	29
	New	5.4%	12.8%	4.4%	11.7%	34.2%	34
New Hampshire	Mature	5.5%	19.5%	0.0%	3.7%	28.6%	40
	New	5.0%	24.2%	0.0%	4.5%	33.7%	33
New Jersey	Mature	0.1%	25.1%	2.2%	9.8%	37.3%	47
	New	0.1%	31.1%	4.3%	12.2%	47.7%	48
New Mexico	Mature	4.5%	8.7%	2.8%	2.5%	18.5%	13
	New	3.4%	12.1%	5.0%	3.1%	23.6%	20
New York	Mature	0.2%	33.2%	2.8%	3.7%	39.9%	49
	New	0.2%	41.2%	5.3%	4.5%	51.2%	49

APPENDIX

APPENDIX C-5, CONTINUED.
Shared Services Center

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
North Carolina	Mature	2.1%	8.2%	2.4%	2.4%	15.1%	4
	New	1.9%	11.6%	4.6%	3.0%	21.2%	13
North Dakota	Mature	3.4%	12.2%	2.0%	3.7%	21.3%	20
	New	3.1%	15.1%	3.6%	4.6%	26.5%	27
Ohio	Mature	0.8%	17.4%	2.0%	2.4%	22.5%	27
	New	-7.2%	21.5%	4.0%	2.9%	21.2%	14
Oklahoma	Mature	3.3%	9.4%	1.5%	3.5%	17.7%	9
	New	-16.7%	13.2%	3.0%	4.3%	3.8%	2
Oregon	Mature	0.1%	8.6%	0.0%	8.8%	17.5%	7
	New	0.1%	13.0%	0.0%	10.9%	24.0%	21
Pennsylvania	Mature	0.3%	22.7%	2.4%	3.6%	28.9%	41
	New	0.2%	28.1%	4.4%	4.4%	37.2%	39
Rhode Island	Mature	0.0%	23.1%	1.9%	3.0%	28.0%	36
	New	0.0%	34.3%	4.0%	3.8%	42.1%	45
South Carolina	Mature	3.5%	23.2%	2.2%	1.5%	30.4%	43
	New	-12.5%	35.5%	4.4%	1.8%	29.2%	28
South Dakota	Mature	0.0%	14.9%	1.9%	1.7%	18.5%	14
	New	0.0%	18.4%	3.4%	2.2%	24.0%	22
Tennessee	Mature	2.2%	10.0%	3.5%	1.8%	17.5%	8
	New	0.9%	13.3%	6.6%	2.3%	23.1%	18
Texas	Mature	1.5%	19.0%	2.4%	2.4%	25.3%	30
	New	1.9%	26.7%	4.7%	2.9%	36.2%	37
Utah	Mature	0.0%	10.3%	1.8%	14.5%	26.7%	34
	New	0.0%	13.4%	3.6%	18.0%	34.9%	35
Vermont	Mature	3.2%	19.7%	1.8%	1.4%	26.1%	32
	New	-7.2%	27.8%	3.7%	1.7%	26.1%	25
Virginia	Mature	7.0%	8.0%	1.5%	1.9%	18.4%	11
	New	5.9%	12.5%	3.3%	2.4%	24.1%	23
Washington	Mature	11.6%	9.6%	2.0%	3.3%	26.5%	33
	New	14.4%	13.5%	4.0%	4.1%	36.0%	36
West Virginia	Mature	11.6%	14.1%	1.9%	3.1%	30.8%	44
	New	9.4%	19.9%	3.8%	3.9%	37.0%	38
Wisconsin	Mature	0.1%	14.8%	2.1%	4.4%	21.5%	21
	New	-12.0%	20.8%	4.0%	5.5%	18.3%	10
Wyoming	Mature	0.0%	6.5%	1.7%	3.8%	12.0%	1
	New	0.0%	9.2%	3.3%	4.7%	17.2%	8

APPENDIX C-6.

Distribution Center

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
Alabama	Mature	4.7%	9.8%	4.2%	0.5%	19.3%	3
	New	-2.5%	12.6%	7.9%	0.6%	18.6%	2
Alaska	Mature	6.8%	27.4%	0.0%	1.0%	35.2%	26
	New	4.8%	31.9%	0.0%	1.1%	37.8%	29
Arizona	Mature	3.9%	19.7%	4.3%	0.3%	28.2%	19
	New	0.8%	25.3%	7.8%	0.4%	34.3%	27
Arkansas	Mature	4.8%	17.2%	4.8%	0.5%	27.3%	18
	New	-2.2%	22.5%	8.6%	0.6%	29.4%	21
California	Mature	7.5%	16.0%	2.9%	0.6%	26.9%	17
	New	5.9%	20.6%	5.7%	0.7%	32.9%	26
Colorado	Mature	0.0%	43.8%	3.2%	0.6%	47.6%	40
	New	0.0%	56.5%	6.1%	0.6%	63.2%	45
Connecticut	Mature	0.0%	40.8%	3.8%	1.2%	45.7%	38
	New	0.0%	52.6%	6.3%	1.3%	60.3%	42
Delaware	Mature	9.4%	11.9%	0.2%	0.6%	22.1%	6
	New	4.3%	13.9%	0.2%	0.7%	19.0%	4
Florida	Mature	3.1%	30.7%	3.1%	0.5%	37.3%	29
	New	1.8%	39.6%	5.7%	0.5%	47.6%	35
Georgia	Mature	4.1%	28.4%	3.0%	0.6%	36.1%	27
	New	-2.0%	18.5%	5.6%	0.7%	22.9%	10
Hawaii	Mature	3.0%	15.0%	3.4%	2.4%	23.8%	12
	New	0.9%	17.4%	5.3%	2.8%	26.5%	16
Idaho	Mature	6.1%	12.4%	2.6%	1.0%	22.1%	5
	New	3.3%	16.0%	4.8%	1.2%	25.3%	15
Illinois	Mature	8.0%	14.0%	3.8%	1.0%	26.7%	16
	New	3.1%	16.4%	7.1%	1.1%	27.7%	19
Indiana	Mature	3.0%	43.5%	3.1%	0.6%	50.2%	43
	New	0.0%	24.9%	5.7%	0.7%	31.3%	23
Iowa	Mature	3.9%	54.0%	4.1%	0.8%	62.8%	48
	New	0.2%	62.8%	7.0%	0.9%	70.9%	48
Kansas	Mature	2.8%	57.6%	4.5%	0.9%	65.8%	49
	New	-0.1%	9.6%	8.0%	1.0%	18.7%	3
Kentucky	Mature	2.2%	18.9%	2.6%	0.7%	24.4%	13
	New	-3.4%	24.8%	4.8%	0.8%	27.0%	17
Louisiana	Mature	4.2%	31.9%	4.5%	0.4%	40.9%	33
	New	-2.4%	41.4%	8.0%	0.4%	47.3%	34
Maine	Mature	5.1%	33.5%	2.4%	0.6%	41.5%	35
	New	2.4%	43.1%	4.4%	0.6%	50.6%	37
Maryland	Mature	1.5%	29.2%	2.7%	0.5%	34.0%	25
	New	0.0%	42.3%	5.0%	0.6%	47.9%	36
Massachusetts	Mature	3.9%	51.2%	2.7%	0.9%	58.6%	47
	New	1.2%	65.9%	5.0%	1.0%	73.1%	49
Michigan	Mature	3.4%	43.8%	2.6%	0.6%	50.3%	44
	New	1.6%	55.3%	4.8%	0.7%	62.4%	44
Minnesota	Mature	5.3%	45.3%	3.5%	0.8%	54.9%	45
	New	3.2%	47.0%	6.5%	1.0%	57.6%	41
Mississippi	Mature	3.5%	25.8%	3.5%	0.4%	33.2%	23
	New	-0.8%	14.0%	6.1%	0.5%	19.9%	5
Missouri	Mature	0.0%	29.4%	3.5%	0.6%	33.5%	24
	New	-1.9%	19.0%	6.5%	0.7%	24.4%	13
Montana	Mature	5.8%	16.3%	0.0%	1.0%	23.1%	7
	New	4.3%	22.2%	0.0%	1.1%	27.5%	18
Nebraska	Mature	5.1%	29.3%	2.7%	0.3%	37.4%	31
	New	0.9%	37.9%	4.8%	0.3%	43.9%	32
Nevada	Mature	1.3%	16.8%	3.0%	2.3%	23.4%	9
	New	1.5%	21.5%	6.1%	2.7%	31.8%	25
New Hampshire	Mature	5.1%	35.9%	0.0%	0.9%	41.9%	36
	New	3.3%	41.7%	0.0%	1.0%	46.1%	33
New Jersey	Mature	4.7%	46.2%	3.3%	2.4%	56.6%	46
	New	2.2%	53.8%	5.8%	2.8%	64.6%	46
New Mexico	Mature	4.5%	15.9%	4.4%	0.6%	25.4%	14
	New	3.0%	20.4%	7.1%	0.7%	31.3%	22
New York	Mature	0.1%	61.1%	4.0%	0.9%	66.0%	50
	New	0.1%	71.1%	7.0%	1.0%	79.2%	50

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APPENDIX C-6, CONTINUED.
Distribution Center

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
North Carolina	Mature	2.1%	14.4%	3.5%	0.6%	20.6%	4
	New	-2.7%	18.7%	6.1%	0.7%	22.8%	9
North Dakota	Mature	3.3%	22.5%	2.5%	0.9%	29.2%	21
	New	2.9%	13.6%	4.4%	1.1%	22.0%	8
Ohio	Mature	1.8%	31.9%	3.0%	0.6%	37.3%	28
	New	0.0%	9.3%	5.4%	0.7%	15.4%	1
Oklahoma	Mature	3.3%	17.2%	2.1%	0.9%	23.4%	9
	New	-2.4%	22.1%	3.9%	1.0%	24.6%	14
Oregon	Mature	0.0%	15.9%	0.0%	2.4%	18.3%	2
	New	0.0%	21.6%	0.0%	2.8%	24.4%	12
Pennsylvania	Mature	0.0%	41.7%	3.2%	0.9%	45.8%	39
	New	0.0%	48.6%	5.6%	1.0%	55.1%	40
Rhode Island	Mature	4.0%	42.5%	2.8%	0.8%	50.1%	42
	New	1.7%	57.2%	5.4%	0.9%	65.1%	47
South Carolina	Mature	2.9%	42.3%	3.0%	0.4%	48.6%	41
	New	-2.8%	58.2%	5.7%	0.4%	61.5%	43
South Dakota	Mature	0.0%	27.4%	3.0%	0.4%	30.8%	22
	New	0.0%	31.8%	4.8%	0.5%	37.1%	28
Tennessee	Mature	2.1%	17.9%	4.9%	0.8%	25.7%	15
	New	0.7%	11.2%	8.6%	1.0%	21.5%	7
Texas	Mature	2.0%	35.3%	3.5%	0.6%	41.3%	34
	New	2.2%	45.4%	6.1%	0.7%	54.4%	39
Utah	Mature	3.9%	18.9%	2.7%	3.6%	29.0%	20
	New	3.2%	12.2%	4.7%	4.2%	24.3%	11
Vermont	Mature	2.7%	36.3%	2.6%	0.3%	42.0%	37
	New	-0.9%	46.8%	4.8%	0.4%	51.1%	38
Virginia	Mature	6.3%	14.7%	2.3%	0.5%	23.7%	10
	New	4.9%	19.2%	4.5%	0.6%	29.2%	20
Washington	Mature	2.2%	17.6%	3.0%	0.9%	23.7%	11
	New	2.5%	22.7%	5.5%	1.0%	31.8%	24
West Virginia	Mature	8.6%	26.2%	3.1%	0.8%	38.7%	32
	New	5.3%	31.5%	5.5%	0.9%	43.2%	31
Wisconsin	Mature	5.9%	27.5%	3.0%	1.1%	37.4%	30
	New	0.3%	35.4%	5.1%	1.3%	42.0%	30
Wyoming	Mature	0.0%	12.0%	2.5%	0.9%	15.4%	1
	New	0.0%	15.5%	4.4%	1.1%	20.9%	6

APPENDIX C-7.

Capital-Intensive Manufacturer

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
Alabama	Mature	6.7%	2.8%	3.7%	0.2%	13.4%	25
	New	-0.9%	1.9%	7.8%	0.2%	9.0%	14
Alaska	Mature	12.2%	2.4%	0.0%	0.3%	14.9%	33
	New	3.5%	3.6%	0.0%	0.4%	7.4%	8
Arizona	Mature	0.1%	5.7%	3.1%	0.1%	9.0%	14
	New	0.0%	13.8%	3.7%	0.1%	17.6%	34
Arkansas	Mature	7.2%	8.7%	3.7%	0.2%	19.7%	44
	New	-0.5%	7.4%	4.4%	0.2%	11.4%	22
California	Mature	11.2%	4.6%	3.1%	0.2%	19.1%	43
	New	6.5%	11.2%	7.5%	0.2%	25.4%	45
Colorado	Mature	5.5%	12.7%	2.2%	0.2%	20.5%	46
	New	0.1%	30.7%	2.6%	0.2%	33.5%	50
Connecticut	Mature	0.0%	11.8%	2.9%	0.4%	15.1%	36
	New	0.0%	16.1%	3.4%	0.4%	19.9%	38
Delaware	Mature	0.0%	1.1%	0.1%	0.2%	1.4%	1
	New	0.0%	1.6%	0.1%	0.2%	2.0%	1
Florida	Mature	0.4%	8.9%	2.4%	0.1%	11.8%	24
	New	0.0%	21.5%	2.8%	0.2%	24.5%	42
Georgia	Mature	0.2%	8.2%	2.4%	0.2%	11.0%	20
	New	-1.7%	9.9%	2.8%	0.2%	11.2%	20
Hawaii	Mature	6.7%	1.3%	8.3%	0.9%	17.2%	39
	New	-3.1%	1.9%	13.8%	1.0%	13.6%	30
Idaho	Mature	8.9%	3.6%	1.7%	0.3%	14.6%	31
	New	1.0%	8.7%	2.1%	0.4%	12.2%	26
Illinois	Mature	12.2%	1.6%	2.8%	0.3%	16.9%	38
	New	2.1%	2.5%	3.4%	0.4%	8.4%	11
Indiana	Mature	0.1%	12.6%	2.1%	0.2%	15.0%	34
	New	0.0%	13.0%	2.5%	0.2%	15.7%	31
Iowa	Mature	0.1%	4.6%	3.2%	0.2%	8.2%	12
	New	0.0%	7.0%	3.8%	0.3%	11.1%	19
Kansas	Mature	7.9%	16.7%	3.3%	0.3%	28.1%	50
	New	-1.9%	0.6%	3.9%	0.3%	3.0%	2
Kentucky	Mature	1.7%	8.8%	3.0%	0.2%	13.7%	29
	New	-1.5%	18.2%	9.2%	0.3%	26.2%	46
Louisiana	Mature	-3.7%	14.0%	3.2%	0.1%	13.7%	28
	New	-7.0%	27.6%	3.9%	0.1%	24.5%	43
Maine	Mature	10.8%	9.7%	1.6%	0.2%	22.3%	48
	New	3.9%	23.4%	1.9%	0.2%	29.4%	49
Maryland	Mature	2.8%	2.3%	1.8%	0.2%	7.1%	8
	New	0.4%	3.5%	2.2%	0.2%	6.3%	5
Massachusetts	Mature	10.2%	5.6%	1.8%	0.3%	17.8%	41
	New	1.2%	7.8%	2.2%	0.3%	11.5%	23
Michigan	Mature	0.2%	9.1%	1.7%	0.2%	11.3%	21
	New	0.0%	10.4%	2.1%	0.2%	12.7%	28
Minnesota	Mature	0.2%	3.9%	2.3%	0.3%	6.7%	6
	New	0.1%	5.0%	2.8%	0.3%	8.2%	9
Mississippi	Mature	2.2%	12.4%	2.8%	0.1%	17.5%	40
	New	-0.9%	13.5%	4.7%	0.2%	17.4%	33
Missouri	Mature	0.1%	8.8%	2.3%	0.2%	11.4%	22
	New	-1.4%	10.6%	2.8%	0.2%	12.3%	27
Montana	Mature	8.5%	6.6%	0.0%	0.3%	15.4%	37
	New	1.5%	16.6%	0.0%	0.4%	18.4%	35
Nebraska	Mature	0.0%	8.5%	2.0%	0.1%	10.6%	19
	New	-0.8%	20.5%	2.3%	0.1%	22.2%	40
Nevada	Mature	0.4%	4.7%	4.1%	0.7%	10.0%	16
	New	0.5%	11.4%	12.7%	0.9%	25.4%	44
New Hampshire	Mature	10.1%	3.1%	0.0%	0.3%	13.5%	27
	New	3.6%	4.7%	0.0%	0.3%	8.6%	13
New Jersey	Mature	0.3%	4.0%	2.7%	0.8%	7.8%	9
	New	-0.1%	6.0%	3.2%	0.9%	10.0%	18
New Mexico	Mature	0.0%	4.4%	5.2%	0.2%	9.9%	15
	New	-3.6%	10.5%	12.4%	0.2%	19.5%	36
New York	Mature	0.0%	5.3%	2.9%	0.3%	8.4%	13
	New	-4.6%	7.9%	3.4%	0.3%	7.1%	7

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APPENDIX C-7, CONTINUED.
Capital-Intensive Manufacturer

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
North Carolina	Mature	0.1%	5.1%	2.5%	0.2%	7.9%	10
	New	-1.6%	11.5%	3.0%	0.2%	13.1%	29
North Dakota	Mature	5.5%	1.9%	2.7%	0.3%	10.4%	18
	New	1.5%	1.6%	2.9%	0.3%	6.3%	4
Ohio	Mature	0.9%	2.7%	2.5%	0.2%	6.3%	4
	New	-0.5%	1.0%	2.9%	0.2%	3.7%	3
Oklahoma	Mature	7.6%	4.9%	1.4%	0.3%	14.2%	30
	New	-1.8%	6.6%	1.7%	0.3%	6.7%	6
Oregon	Mature	13.5%	6.5%	0.0%	0.8%	20.8%	47
	New	6.5%	16.4%	0.0%	0.9%	23.8%	41
Pennsylvania	Mature	0.5%	3.6%	2.2%	0.3%	6.6%	5
	New	0.1%	5.4%	2.6%	0.3%	8.5%	12
Rhode Island	Mature	9.0%	3.6%	2.2%	0.2%	15.0%	35
	New	1.1%	5.9%	2.6%	0.3%	9.9%	17
South Carolina	Mature	0.1%	18.3%	2.0%	0.1%	20.5%	45
	New	-1.3%	20.9%	2.4%	0.1%	22.2%	39
South Dakota	Mature	0.0%	2.4%	3.5%	0.1%	6.0%	3
	New	0.0%	3.6%	8.4%	0.2%	12.1%	25
Tennessee	Mature	0.2%	4.2%	3.5%	0.3%	8.2%	11
	New	0.0%	4.9%	4.2%	0.3%	9.4%	16
Texas	Mature	0.1%	10.6%	2.5%	0.2%	13.4%	26
	New	0.1%	25.0%	3.0%	0.2%	28.3%	48
Utah	Mature	6.2%	5.5%	1.9%	1.2%	14.7%	32
	New	1.4%	6.6%	2.3%	1.3%	11.6%	24
Vermont	Mature	10.4%	10.5%	1.7%	0.1%	22.7%	49
	New	0.3%	25.4%	2.1%	0.1%	27.9%	47
Virginia	Mature	0.2%	4.7%	1.7%	0.2%	6.8%	7
	New	0.0%	6.8%	2.1%	0.2%	9.0%	15
Washington	Mature	3.7%	5.1%	2.5%	0.3%	11.7%	23
	New	4.2%	12.3%	3.0%	0.4%	19.9%	37
West Virginia	Mature	3.7%	11.7%	2.7%	0.2%	18.3%	42
	New	0.0%	13.1%	3.2%	0.3%	16.6%	32
Wisconsin	Mature	1.2%	6.6%	2.1%	0.3%	10.2%	17
	New	-3.0%	8.4%	2.5%	0.4%	8.3%	10
Wyoming	Mature	0.0%	3.7%	1.8%	0.4%	5.8%	2
	New	0.0%	8.7%	2.1%	0.4%	11.3%	21

APPENDIX C-8.
Labor-Intensive Manufacturer

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
Alabama	Mature	5.4%	1.4%	4.6%	0.4%	11.7%	31
	New	-2.8%	0.9%	6.8%	0.5%	5.3%	7
Alaska	Mature	9.7%	3.2%	0.0%	0.7%	13.6%	38
	New	7.6%	5.3%	0.0%	0.9%	13.8%	33
Arizona	Mature	0.1%	2.7%	4.2%	0.2%	7.3%	5
	New	0.0%	6.5%	5.5%	0.3%	12.3%	25
Arkansas	Mature	5.8%	2.7%	5.3%	0.4%	14.2%	39
	New	-2.0%	2.6%	6.8%	0.5%	7.9%	13
California	Mature	9.0%	2.2%	3.5%	0.4%	15.2%	42
	New	7.3%	5.3%	5.6%	0.5%	18.7%	45
Colorado	Mature	4.5%	6.1%	3.2%	0.4%	14.3%	40
	New	2.6%	14.6%	4.2%	0.5%	21.9%	49
Connecticut	Mature	0.0%	5.7%	4.3%	0.8%	10.9%	27
	New	0.0%	10.7%	5.5%	1.0%	17.2%	41
Delaware	Mature	0.0%	1.4%	0.1%	0.4%	1.9%	1
	New	0.0%	2.3%	0.1%	0.5%	3.0%	2
Florida	Mature	2.4%	4.3%	3.2%	0.3%	10.2%	25
	New	0.0%	10.2%	4.2%	0.4%	14.8%	36
Georgia	Mature	0.2%	4.0%	3.2%	0.4%	7.8%	9
	New	-4.3%	4.7%	4.2%	0.5%	5.2%	6
Hawaii	Mature	5.4%	1.7%	10.3%	2.0%	19.4%	49
	New	2.8%	2.9%	13.8%	2.5%	22.0%	50
Idaho	Mature	7.1%	1.7%	2.6%	0.7%	12.1%	34
	New	4.5%	4.1%	3.4%	0.9%	12.8%	28
Illinois	Mature	9.6%	1.7%	4.0%	0.7%	16.0%	44
	New	4.4%	2.9%	5.2%	0.9%	13.4%	32
Indiana	Mature	0.1%	6.1%	3.0%	0.4%	9.6%	22
	New	0.0%	6.2%	4.0%	0.5%	10.7%	23
Iowa	Mature	0.1%	6.2%	4.8%	0.6%	11.6%	30
	New	0.0%	10.5%	6.1%	0.7%	17.3%	42
Kansas	Mature	6.6%	8.1%	4.8%	0.6%	20.1%	50
	New	-5.1%	1.1%	6.3%	0.8%	3.0%	3
Kentucky	Mature	1.5%	2.9%	2.9%	0.5%	7.7%	8
	New	-3.4%	6.9%	5.2%	0.6%	9.4%	17
Louisiana	Mature	-0.2%	4.6%	4.8%	0.3%	9.5%	20
	New	-8.7%	10.7%	6.2%	0.3%	8.5%	15
Maine	Mature	8.8%	4.7%	2.4%	0.4%	16.2%	45
	New	6.0%	11.1%	3.1%	0.5%	20.7%	47
Maryland	Mature	2.2%	3.1%	2.6%	0.4%	8.3%	13
	New	1.1%	5.2%	3.4%	0.5%	10.2%	22
Massachusetts	Mature	7.9%	5.8%	2.7%	0.6%	17.0%	47
	New	4.3%	9.9%	3.5%	0.8%	18.5%	44
Michigan	Mature	0.2%	5.7%	2.6%	0.4%	8.8%	16
	New	0.1%	6.1%	3.4%	0.5%	10.1%	21
Minnesota	Mature	0.2%	5.3%	3.5%	0.6%	9.5%	21
	New	0.1%	7.7%	4.5%	0.7%	13.2%	31
Mississippi	Mature	4.8%	4.4%	3.8%	0.3%	13.2%	37
	New	-1.7%	4.5%	5.2%	0.4%	8.4%	14
Missouri	Mature	0.1%	4.1%	3.5%	0.5%	8.1%	11
	New	-5.1%	5.0%	4.5%	0.6%	5.0%	4
Montana	Mature	7.0%	2.5%	0.0%	0.8%	10.3%	26
	New	5.4%	6.7%	0.0%	0.9%	13.0%	29
Nebraska	Mature	0.0%	4.1%	2.9%	0.2%	7.3%	6
	New	-6.3%	9.8%	3.8%	0.2%	7.5%	11
Nevada	Mature	1.2%	2.3%	4.0%	1.7%	9.2%	19
	New	1.5%	5.5%	7.1%	2.1%	16.2%	38
New Hampshire	Mature	7.9%	4.1%	0.0%	0.6%	12.7%	35
	New	6.1%	7.0%	0.0%	0.8%	13.9%	35
New Jersey	Mature	0.2%	5.3%	3.7%	1.7%	11.0%	28
	New	-0.3%	9.0%	4.8%	2.2%	15.7%	37
New Mexico	Mature	0.0%	2.2%	5.8%	0.4%	8.5%	15
	New	-2.0%	5.1%	8.9%	0.5%	12.6%	27
New York	Mature	0.0%	7.1%	4.2%	0.6%	11.9%	32
	New	-8.1%	11.9%	5.4%	0.8%	10.0%	19

APPENDIX

APPENDIX C-8, CONTINUED.

Labor-Intensive Manufacturer

State Name	Status	Income & Business Taxes	Property Taxes	Sales Taxes	UI Taxes	Total Effective Tax Rate	Rank
North Carolina	Mature	0.1%	2.6%	3.7%	0.4%	6.8%	4
	New	-4.9%	5.5%	4.8%	0.5%	6.0%	8
North Dakota	Mature	4.4%	2.6%	2.6%	0.7%	10.2%	24
	New	3.5%	2.3%	3.3%	0.8%	9.9%	18
Ohio	Mature	0.8%	3.7%	3.5%	0.4%	8.3%	14
	New	-1.5%	1.6%	4.5%	0.5%	5.0%	5
Oklahoma	Mature	6.1%	2.4%	2.1%	0.6%	11.2%	29
	New	-5.6%	4.3%	2.7%	0.8%	2.2%	1
Oregon	Mature	13.2%	2.4%	0.0%	1.7%	17.4%	48
	New	12.7%	6.6%	0.0%	2.1%	21.4%	48
Pennsylvania	Mature	0.4%	4.8%	3.0%	0.6%	8.9%	17
	New	0.3%	8.1%	3.9%	0.8%	13.1%	30
Rhode Island	Mature	7.0%	4.8%	3.1%	0.5%	15.4%	43
	New	2.6%	9.0%	4.1%	0.7%	16.3%	39
South Carolina	Mature	0.1%	6.6%	3.0%	0.3%	10.0%	23
	New	-4.9%	8.1%	3.9%	0.3%	7.5%	10
South Dakota	Mature	0.0%	3.2%	4.0%	0.3%	7.4%	7
	New	0.0%	5.3%	6.0%	0.4%	11.7%	24
Tennessee	Mature	0.1%	2.3%	5.1%	0.6%	8.2%	12
	New	0.0%	2.6%	6.6%	0.7%	10.0%	20
Texas	Mature	0.1%	4.9%	3.6%	0.4%	9.1%	18
	New	0.2%	11.7%	4.7%	0.5%	17.0%	40
Utah	Mature	4.9%	2.6%	2.8%	2.6%	13.0%	36
	New	3.8%	3.1%	3.7%	3.2%	13.9%	34
Vermont	Mature	8.5%	5.1%	2.6%	0.2%	16.4%	46
	New	3.5%	12.1%	3.4%	0.3%	19.2%	46
Virginia	Mature	0.2%	3.0%	2.6%	0.3%	6.0%	3
	New	0.0%	3.8%	3.4%	0.4%	7.6%	12
Washington	Mature	5.0%	2.5%	3.6%	0.9%	11.9%	33
	New	6.1%	5.9%	4.6%	1.1%	17.6%	43
West Virginia	Mature	6.3%	3.9%	3.9%	0.6%	14.6%	41
	New	0.0%	6.9%	5.0%	0.7%	12.6%	26
Wisconsin	Mature	1.0%	3.3%	3.0%	0.8%	8.0%	10
	New	-3.3%	5.4%	3.9%	1.0%	7.0%	9
Wyoming	Mature	0.0%	1.8%	2.7%	0.9%	5.3%	2
	New	0.0%	4.1%	3.4%	1.1%	8.6%	16

Appendix D: Methodology

Eight business scenarios were defined for use in the tax cost model. Each business scenario was reviewed under two fact patterns:

- New business (businesses over their first 10 years of operation)
- Preexisting operation (in operation 10 years or more)

In order to facilitate the calculation of effective tax burdens for each business operation based on the model, a sample company is identified for each firm type. For example, the capital-intensive manufacturing firm is assumed to be a steel company. For each scenario, assumptions are made with regard to the number of employees by function, salaries, capital investment, revenue, profit, and the amount of property, payroll, and sales in the state, as specified for each firm type below. These parameters are developed for each industry operation based on two sources of detailed industry-average financial and operating data:

- Anything Research data (www.anythingresearch.com), which compiles publicly available financial data for a wide range of specific industries.
- The IRS Corporation Source Book, which presents balance sheet, income statement, tax, and other selected items for all taxpayer corporations by size of total assets and by North American Industry Classification System (NAICS) sector. From this source, the statistics used are for all returns with net income.

The model assumes that all business in these scenarios are separate legal entities. Detailed financial statements are developed for each operation and modeled in each location, resulting in profit and loss statements as the basis for tax computation. The eight industry-specific business scenarios are as follows:[10]

1. **The first business scenario is a high-wage service business, e.g., a regional corporate headquarters.** This operation has 200 employees including management, financial operations, IT, sales, and administrative positions. Capital investment is estimated at $10 million, and the business leases 60,000 square feet of Class A downtown office space. The average revenue is assumed to be approximately $45 million with a gross profit ratio of 17 percent and earnings before tax of 14 percent. The equity ratio is assumed to be 100 percent. The apportionment methodology assumes 50 percent of property and payroll to be located in the state. The income-producing activities of the office are assumed to occur in state, and no benefits are provided outside the state.

2. **The second business scenario is a pharmaceutical research and development (R&D) facility for product development.** The facility is assumed to have 50 employees, including management, business and financial, computer and math, science, and administrative positions. Capital investment is estimated at $8 million and the business leases 30,000 square feet of Class A suburban commercial space. The average revenue is assumed to be approximately $14 million with earnings before tax of 14 percent. The equity ratio is assumed to be 100 percent. For R&D credit calculation, 60 percent of salaries and wages are assumed to represent qualifying R&D labor, and qualifying R&D materials are assumed to equal 10 percent of R&D labor. The apportionment methodology assumes 100 percent of property and payroll to be in the state. While all income-producing activities are assumed to be performed in state, those activities are assumed to serve clients nationally, and therefore, generate benefits and relate to the marketplaces of all 50 states in proportion to the relative population of each state.

10 Average industry scenarios are based on IRS data and Anything Research data.

3. **The third business scenario is a technology center, e.g., a computer software, programming, and systems design services operation.** This operation has 150 employees in management, financial, sales, administrative, and, chiefly, computer and mathematical occupations. Capital investment is set at $25 million and the business leases 50,000 square feet of Class A downtown space. Revenue is assumed to be $39 million, with a gross profit ratio of 70 percent and earnings before tax of 8 percent. The equity ratio is assumed to be 75 percent, and the apportionment methodology assumes 100 percent of property and payroll are in state. The income-producing activities of the technology center are assumed to occur in state, with the benefit of those activities relating to the marketplaces of all 50 states in proportion to the relative population of each state, since the technology center is assumed to serve clients nationally.

4. **The fourth business scenario is a data center, e.g., a business providing cloud computing services to client firms.** This operation has 50 employees in management, finance, computer and mathematics, sales, and office and administrative support occupations. Capital investment is $500 million, including ownership of 250,000 square feet of suburban industrial space. Revenues are $170 million with a gross profit ratio of 82 percent and earnings before tax of 15 percent. The equity ratio is assumed to be 30 percent, and the apportionment methodology assumes 100 percent of property and payroll are in state, as are income-producing activities. However, those activities are assumed to serve clients nationally and therefore generate benefits and relate to the marketplaces of all 50 states in proportion to the relative population of each state.

5. **The fifth business scenario is a shared service center, e.g., a back-office support service provider.** This operation has 500 employees, most of whom are in sales or office and administrative support occupations. Capital investment is set at $10 million, and the business leases 100,000 square feet of suburban office space. The average revenue is assumed to be $40 million with earnings before tax of 9 percent. The equity ratio is assumed to be 100 percent, and the apportionment methodology assumes that payroll and property are in state, as are income-producing activities. However, those activities are assumed to serve clients nationally and therefore generate benefits and relate to the marketplaces of all 50 states in proportion to the relative population of each state.

6. **The sixth business scenario is a distribution center (a warehouse facility) operated by an independent third-party logistics provider for a large company.** This scenario has 95 employees in transportation and material handling, administrative, and management occupations. Capital investment is estimated at $11 million, and the business leases 350,000 square feet of Class B suburban industrial space. The average revenue is assumed to be approximately $18 million with a gross profit ratio of 68 percent and earnings before tax of 12 percent. The equity ratio is assumed to be 50 percent. The apportionment methodology assumes 100 percent of property and payroll to be in state. The income-producing activities of the distribution center are assumed to occur in state, with the benefit of those activities also received in state. However, the sole customer contracting for the operation of the distribution center is assumed to be located out of state.

7. **The seventh business scenario is a capital-intensive manufacturing operation, e.g., a steel company.** The business scenario assumes the company has 200 positions, including management, administrative, installation and maintenance, production, transportation, and materials employees. The scenario assumes $320 million in capital investment, including owning a 250,000 square foot suburban industrial building owned by the firm. The average revenue is assumed to be approximately $200 million with a gross profit ratio of 25 percent and earnings before tax of 10 percent. The equity ratio is assumed to be 50 percent. The apportionment methodology assumes 100 percent of property and payroll to be in the state in which the manufacturer is located, while sales are assumed to be distributed among all 50 U.S. states in proportion to the relative population of each state.

8. **The eighth business scenario is a labor-intensive manufacturing business, e.g., a heavy transportation equipment manufacturer.** The firm has 300 positions, including management, installation, maintenance, and production and assembly employees (who are the majority of the employees). The model assumes capital investment is $100 million, including ownership of a 300,000 square foot suburban industrial building. The average revenue is assumed to be approximately $240 million with a gross profit ratio of 20 percent and earnings before tax of 7 percent. The equity ratio is assumed to be 30 percent. The apportionment methodology assumes 100 percent of property and payroll to be in the state in which the manufacturer is located, while sales are assumed to be distributed among all 50 U.S. states in proportion to the relative population of each state.

Locations

Recognizing that different industries have different location needs, our study divides locations for our firms into two tiers. Tier 1 is a major city in the state while Tier 2 is a mid-sized city in the state, generally with a population of less than 500,000. We then locate the model corporate headquarters, R&D center, and technology center in a Tier 1 city within each state. The data center, shared service center, distribution center, and manufacturing facilities are all located in a Tier 2 city. Where appropriate, firms are placed in a suburban location near the city. Corporate headquarters, for instance, are located downtown, while an R&D facility is located in the suburbs surrounding the Tier 1 city.

Tier 1 and Tier 2 locations for each state are listed on the following page. Given the state's size, all Rhode Island firms in both tiers are located in Providence, and Tier 2 firms are not modeled in the District of Columbia.

State Corporate Income Tax

Corporate income tax liability was reviewed at the state and local levels. Assumptions and notes pertaining to the calculation of state corporate income tax liability, including topics such as how income is calculated, apportionment methodology, income sourcing, and rates, are detailed below.

Taxable Income

Federal taxable income is modified for the add-back of state taxes. Federal taxable income assumes there are no net operating losses available from prior years.

Net income before tax varies between locations due to variations in other state and local taxes (property, sales, gross receipts, unemployment insurance, etc.). Therefore, variations in federal tax paid are wholly attributable to the impact on taxable income of these other taxes. Variations in federal tax do not impact the calculation of the state tax index, except to the extent that a handful of states allow a deduction at the state level for federal tax paid. Similarly, variations in state net income (top line from the federal form, before allowing for different rules regarding deductibility of federal/state taxes paid, and different state depreciation in California) are attributable solely to variations in other state and local taxes paid.

Apportionment and Sourcing of Service Income

The model assumes that entities have the right to apportion.[11] The tax review was conducted for the "home" state; tax liabilities in other states were not considered in this study. This study accounts for alternative apportionment formulas applicable to different firm types.

In scenarios involving sales of tangible personal property and throwback, the model assumes that goods are shipped from within the state and that the entity is not taxable in destination states. Therefore, the sales factor equals 100 percent. In states with no throwback rules, the sales factor equals the percentage of the U.S. population in state.

11 Apportionment rules from RIA Checkpoint; Commerce Clearinghouse (CCH); and state department of revenue websites.

State	Tier 1	Tier 2
Alabama	Birmingham	Montgomery
Alaska	Anchorage	Fairbanks
Arizona	Phoenix	Prescott
Arkansas	Little Rock	Fort Smith
California	Los Angeles	Merced
Colorado	Denver	Fort Collins
Connecticut	Hartford	Norwich
Delaware	Wilmington	Dover
Florida	Miami	Gainesville
Georgia	Atlanta	Macon
Hawaii	Honolulu	Hilo
Idaho	Boise	Coeur d' Alene
Illinois	Chicago	Peoria
Indiana	Indianapolis	Elkhart
Iowa	Des Moines	Cedar Rapids
Kansas	Wichita	Topeka
Kentucky	Louisville	Lexington
Louisiana	New Orleans	Shreveport
Maine	Portland	Bangor
Maryland	Baltimore	Salisbury
Massachusetts	Boston	Worcester
Michigan	Detroit	Saginaw
Minnesota	Minneapolis	Rochester
Mississippi	Jackson	Gulfport
Missouri	Kansas City	Springfield
Montana	Billings	Missoula
Nebraska	Omaha	Lincoln
Nevada	Las Vegas	Reno
New Hampshire	Manchester	Concord
New Jersey	Newark	Trenton
New Mexico	Albuquerque	Santa Fe
New York	New York	Utica
North Carolina	Charlotte	Asheville
North Dakota	Fargo	Grand Forks
Ohio	Cincinnati	Canton
Oklahoma	Oklahoma City	Lawton
Oregon	Portland	Salem
Pennsylvania	Philadelphia	Erie
Rhode Island	Providence	Providence
South Carolina	Columbia	Spartanburg
South Dakota	Sioux Falls	Rapid City
Tennessee	Nashville	Johnson City
Texas	Dallas	Lubbock
Utah	Salt Lake City	St. George
Vermont	Burlington	Rutland
Virginia	Fairfax County	Richmond
Washington	Seattle	Spokane
West Virginia	Charleston	Parkersburg
Wisconsin	Milwaukee	Eau Claire
Wyoming	Cheyenne	Casper
District of Columbia	Washington	n.a.

For scenarios that involve services, the sales factor is computed as follows:

- 100 percent in-state sales for all service operations in states which source income on the basis of the location of the greater proportion of income-producing activity.
- 100 percent of in-state service provision for the corporate headquarters even if located in a state with market sourcing.
- Fully out-of-state service provision for distribution centers located in states with market sourcing.
- In-state services as the percentage of the U.S. population located in a given state for R&D firms, technology centers, data centers, and shared service centers in benefit-sourcing states.

State rules for the sourcing of service income can be divided into two categories, one relying on the location of the greater proportion of income-producing activity (IPA sourcing, or cost of performance) and the other emphasizing the location where services are performed (benefit or market sourcing). In the latter category, Arizona, California, Connecticut, Georgia, Hawaii, Illinois, Indiana, Iowa, Maine, Michigan, Minnesota, Missouri, New Jersey, Ohio, Rhode Island, Utah, Washington, and Wisconsin emphasize the location where the benefit of services is received. Alabama, Colorado, Kentucky, Louisiana, Massachusetts, Montana, New Hampshire, New Mexico, North Carolina, Oregon, Pennsylvania, Tennessee, and Vermont emphasize delivery of service to a location to a state. Finally, Maryland, New York, and Oklahoma emphasize the state marketplace of the customer.[12]

In our study, 100 percent of sales are taxed in state for all six service operations (the corporate headquarters, R&D facility, technology center, data center, shared service center, and distribution center) in states with IPA sourcing. All property and payroll is located in the state, the greater proportion of income-producing activity is deemed to occur in the state, and all services are therefore considered as being performed in the state.

For states with market-based sourcing, we assume that all of the corporate headquarters' services are provided in state, but that none of the distribution center's services are. The corporate headquarters assumption means that all affiliates managed by the corporate office have their own headquarters in state as well. Our distribution center, by contrast, is modeled as being operated for a sole client, and that client is assumed to be out of state. Thus, the benefit is received by the client located in an out-of-state market.

Finally, we model the R&D facility, technology center, data center, and shared service as providing services nationwide, and thus assume that customers are distributed among states in proportion with the U.S. population as a whole. The percentage of services provided in state, therefore, is equal to the percentage of the U.S. population located in a given state.

States that require service receipts be sourced based on where the benefit of the service is received generally do not offer direct guidance to such firms. With R&D companies in particular, it is not always evident where the benefit of the service is received because the benefit comes from whatever is produced as a result of the R&D. However, a few state statutes provide that the benefit will not be deemed received in a state where the customer does not have a fixed place of business.

12 The sourcing rules described for Arizona are only applicable for multistate services providers electing to apportion using a hybrid market/IPA approach. Additionally, Alabama, Illinois, and Massachusetts have throwout rules for service receipts which exclude sales from both the numerator and the denominator if the service receipt is attributable to a state where the taxpayer is not taxable. For model analysis, these states are treated "same as IPA" on the assumption that the business is not taxable in the states of out-of-state customers and therefore out-of-state sales are thrown out.

Therefore, if the R&D is performed in state A and the customer is headquartered in state B and has no presence in state A, receipts have been sourced to the customer location to be consistent with the market concept.

State Unemployment Insurance Tax

State unemployment insurance tax rates and base amounts were identified for new businesses as of January 1, 2021.[13] For rates that vary by industry, the rate that aligns with the business scenario under review is utilized based on NAICS code.

To calculate the state unemployment insurance liability, the new employer rate (including the add-ons) is multiplied by the lesser of unemployment insurance maximum pay or actual pay per employee which is then multiplied by the number of employees. Additions to state rates vary by state but may include items such as surcharges and fees.

State and Local Sales Tax

Sales tax rates are identified for both downtown and suburban areas in and around our Tier 1 and Tier 2 cities.[14] Sales tax rates are utilized from RIA reports as of January 1, 2021. Tier 1 cities are used to assess the corporate office, R&D, and technology center business scenarios. Tier 2 cities are used to assess the data center, shared service center, distribution center, and two manufacturing business scenarios.

Sales tax rates for firms located within a city center are for the relevant central business district. For firms in a nearby suburban setting, rates for the greater metro area were calculated by establishing the sum of the following three components for each of the one to six counties forming part of each metro area, excluding the central business district, and then averaging the total rates determined for each county:

- The state sales tax rate applicable to all locations in the state; plus
- The county (and/or district) sales tax rate applicable to each county; plus
- If the total sales tax rate in the central city varied from the initial metro average rate by more than 1 percent, then the municipal composition of the metro area was further reviewed to determine whether major cities also exist in the surrounding counties, and in such cases rates for these cities were also incorporated into the calculation of the final metro area average sales tax rate.

Note that Alaska, Delaware, Montana, New Hampshire and Oregon do not impose sales tax. Even though Alaska has no state-level sales tax, there is still local-level sales tax imposed in certain areas.

Florida has a local rate cap for transactions over $5,000. For certain transactions, only the first $5,000 of a taxable sale or purchase is subject to the county discretionary sales surtax. The limitation does not apply to commercial rentals, transient rentals, or services.

Sales tax on leases were not considered.

13 Sourced from RIA Checkpoint; Commerce Clearinghouse; state department of revenue websites, and conversations with representatives of states' departments of revenue.

14 Sourced from RIA Checkpoint.

Manufacturing Exemptions

Research was conducted to identify states that exempt machinery and equipment purchased for use in a manufacturing facility. In addition to research utilizing RIA Checkpoint, CCH, BNA, and Lexis Nexis, KPMG leveraged knowledge from professional experience to verify researched conclusions and review new legislation.

For purposes of this study, it is assumed that all equipment purchased is directly used in the manufacturing process for 100 percent of its use. Sales tax exemptions were only considered for a manufacturer's purchase of machinery and equipment. The taxability of purchases of any other capital property was not reviewed.

Sales tax exemptions that are only offered to new or expanding facilities were only included as follows:

- For manufacturing machinery, statutory sales tax exemptions available for new or expanding manufacturers in Alabama, California, and Mississippi were included.
- Discretionary exemptions were not considered except for several states that clearly bundle sales tax exemption/rebate as part of their incentive packages.

The analysis also reflects the fact that all states other than Hawaii exempt from sales tax the manufacturing of raw materials used in the production process. Equipment purchased for use in research and development facilities is assumed to be non-taxable if the purchase of manufacturing equipment in the state is non-taxable.

Local Property Tax

Local property tax liability was reviewed for real and personal property in Tier 1 and Tier 2 locations.[15]

The tax is calculated by multiplying the assessment ratio times the millage rates; for locations that involved multiple jurisdictions (e.g., cities, counties, and/or school and other special districts) the millage rates were calculated as an average for various types of jurisdictions to reflect a representative rate for the location as a whole as opposed to the exact rate at a precise address. The tax calculation follows the same general approach as for local sales tax rates.

Property tax is reviewed on a multi-jurisdictional basis for Tier 1 and Tier 2 locations. Accordingly, instead of using exact locations, a blended property tax rate was utilized for the city and counties under review for the location. The final assessment ratio and millage rates thus constitute an average of the property tax rates for the various types of jurisdictions in the counties included in the review.

In Tier 1 locations, a major city is identified and reviewed, with the millage rates for surrounding counties incorporated into the average. In order to properly account for the property tax rates in the surrounding counties, the county, school district, and other applicable rates are included. Often a city millage is not selected to be included in the millage since some of the businesses implicated in these scenarios would be located in more rural areas. There are exceptions to this assumption: for instance, in the case of Pennsylvania, a local jurisdiction was selected since counties in the state are divided into contiguous townships.

15 Sourced from RIA Checkpoint; Commerce Clearinghouse; state departments of revenue and local government websites; and conversations with representatives of state and local property tax officials.

The analysis of real property tax rates includes land and buildings, while the personal property tax includes machinery, equipment, and inventory. If the state under review has a freeport exemption (a property tax exemption for property only warehoused in state en route to a final destination), the tax calculations are as follows based on a detailed review of the freeport provisions in each state:

- For Louisiana and Mississippi, freeport exemptions are quite limited and relate only to finished inventory in interstate transit. The only business scenario that could potentially qualify for freeport exemption is the distribution center, but the analysis assumes that the goods are inbound into the state and therefore are ineligible for freeport exemption. (This assumption also precludes the distribution center business scenario from any freeport benefits in the other freeport states noted below.)

- For Oklahoma and Texas, freeport exemptions have been applied to manufacturers' inventories, except for the small percentage of inventory deemed to be destined for sale to in-state customers.

- For Georgia, freeport exemptions have been applied to all manufacturers' inventories. In Georgia, the freeport exemption is a local option, and the exemption is available in the jurisdictions relevant to the Tier 2 city of Macon.

Local Business Income Tax/Business Privilege Tax

If a locality in the study imposes a local business income tax or business privilege tax, the rates were identified and included in the model.[16] Often a Tier 1 city imposes a business income tax, but cities in the surrounding counties do not. If multiple counties were reviewed for a Tier 1 location, only the business income tax of the major city was identified and applied to each of the business scenarios considered in the Tier 1 locations (corporate office, R&D, and technology center).

Incentives

For new operations scenarios, the following business incentive programs were included, as relevant to each state: investment tax credits, job creation tax credits, employee withholding tax/payroll tax rebates, R&D tax credits, and property tax abatements.[17] Since this analysis does not pick specific sites or locations, any zone-based benefits (e.g., enterprise zones, economic development zones, benefit enhancements in distressed areas, etc.) have not been taken into consideration.

Financing programs have been excluded from the analysis, as have deal closing funds and other discretionary programs outside of withholding tax and payroll refund programs. If programs have a wage threshold, wage assumptions made as part of each of the hypothetical business scenarios were applied to determine the applicability of incentives.

In cases where analyzed incentive programs had discretionary components such as providing a sliding scale of benefits based on certain project parameters, judgment calls were made in order to compute benefits. For example, for programs such as property tax abatements that may offer abatements for "up to 10 years for up to 100 percent," estimated benefits were derived from conversations with local economic development professionals as well as KPMG's experience with implementing these programs. A similar approach was adopted for payroll withholding tax refunds with a sliding scale of benefits.

16 Sourced from RIA Checkpoint; Commerce Clearinghouse; state departments of revenue and local government websites; and conversations with representatives of state and local property tax officials.

17 Sourced from Commerce Clearinghouse; RIA Checkpoint; BNA; state and local economic development websites; and discussions with state and local economic development agencies.

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Jared Walczak
Vice President of State Projects

Katherine Loughead
Senior Policy Analyst

Ulrik Boesen
Senior Policy Analyst, Excise Taxes

Janelle Cammenga
Policy Analyst

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Ulrich Schmidt
Principal, Tax

Harley Duncan
Managing Director, Tax

Sarah McGahan
Managing Director, Tax

David MacNamara
Senior Manager, Tax

Leah Scott
Senior Associate, Tax

A landmark comparison of corporate tax costs in all 50 states, Location Matters calculates and analyzes the tax burdens of eight model firms: a corporate headquarters, a research and development facility, a technology center, a data center, a shared services center, a distribution center, a capital-intensive manufacturer, and a labor-intensive manufacturer. Each firm is modeled twice, first as a new operation eligible for tax incentives and then as a mature operation not eligible for such incentives.

The result is a comprehensive calculation of real-world tax burdens designed as a resource for policymakers, corporate executives, trade organizations, site-selection experts, and media organizations. Location Matters provides the tools necessary to understand each state's business tax system, going beyond headline rates to demonstrate how tax codes impact businesses, and offering policymakers a road map for improvement.

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Tax Foundation
1325 G Street, N.W. Suite 950
Washington, D.C. 20005
202.464.6200

taxfoundation.org