Tax Foundation *Location Matters*

Methodology

*Location Matters*, now in its second 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 different 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.)

- Seven different model firm types representing a range of sectors—corporate headquarters, research and development facility, retail store, call center, distribution center, capital-intensive manufacturer, and labor-intensive manufacturer.

- 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.

An apples-to-apples comparison of corporate tax costs in the 50 states, *Location Matters* was developed and published by the Tax Foundation in collaboration with U.S. audit, tax, and advisory firm KPMG LLP. Tax Foundation economists designed seven model firms—a corporate headquarters, a research and development facility, an independent retail store, a capital-intensive manufacturer, a labor-intensive manufacturer, a call center, and a distribution center—and KPMG tax specialists calculated each firm's tax bill in each state. This study accounts for all business taxes: 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.
Seven 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 ten years of operation)
- Pre-existing 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 businesses 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 seven industry-specific business scenarios are as follows:

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 $31 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, provide all benefits in state, and relate exclusively to the marketplace of the state.

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1 Average industry scenarios are based on IRS data and Anything Research data.
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 $4 million and the business leases 30,000 square feet of Class A suburban commercial space. The average revenue is assumed to be approximately $8 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.

3. The retail business scenario is an independent clothing store. This store has 25 employees, most of whom are sales employees. Capital investment is estimated at $2 million, and the business leases 10,000 square feet of downtown commercial space. The average revenue is assumed to be approximately $2.9 million with a gross profit ratio of 45 percent and earnings before tax of 9 percent. The equity ratio is assumed to be 100 percent. The apportionment methodology assumes 100 percent of property, payroll, and sales are all in state.

4. The fourth 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 $300 million in capital investment, including owning a 250,000 square foot suburban industrial building. 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.

5. The fifth business scenario is a labor-intensive manufacturing business, e.g. a heavy transportation equipment manufacturer. The labor consists of 300 positions, including management, installation, maintenance, production, and assembly employees (who are the majority of the employees). The model assumes capital investment is $65 million, including owning a 250,000 square foot suburban industrial building. The average revenue is assumed to be approximately $174 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.

6. **The sixth business scenario is a low-wage service business, e.g. an internal call center/shared services center.** This operation has 600 employees, including management, sales, and administrative employees. Capital investment is estimated at $10 million, and the business leases 100,000 square feet of Class A suburban office space. The average revenue is assumed to be approximately $29 million with earnings before tax of 7 percent. The equity ratio is assumed to be 100 percent. 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 customers and clients nationally, and therefore, generate benefits and relate to the marketplaces of all 50 states in proportion to the relative population of each state.

7. **The seventh business scenario is a distribution center (i.e. 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 $13 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. However, the sole customer contracting for the operation of the distribution center is assumed to be located out of state. As such, the benefits associated with the distribution center's activities are assumed to occur out of 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 retail outlet in a Tier 1 city within each state. The call center, distribution center, and manufacturing facilities are all located in a Tier 2 city. These locations are listed below. Due to its small size, all Rhode Island analysis relates to the Providence metropolitan area.

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<thead>
<tr>
<th>State</th>
<th>Tier 1</th>
<th>Tier 2</th>
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<tr>
<td>Alabama</td>
<td>Birmingham</td>
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<td>Alaska</td>
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State Corporate Income Tax

Corporate income tax liability was reviewed at the state and local level. 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

The following assumptions were relied upon in identifying taxable income by state for inputs into the tax cost model:

Federal taxable income is modified for (1) the add-back of state taxes and (2) state decoupling from IRC 199 deduction (both as required by state). No adjustments have been made for state decoupling from federal bonus depreciation since this adjustment is a timing item. 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 burden, 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, different rules regarding IRC 199 deductions, 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. The tax review was conducted for the “home” state; tax liabilities in other states were not considered in this study. Where applicable, the calculations assume that the entity will elect the most advantageous apportionment formula (e.g., three-factor, single sales factor, etc.). States where an alternative method has been assumed are as follows:

**Arizona**

In Arizona, corporations may elect enhanced sales factor (7.5/7.5/85 percent) or double-weighted sales factor (25/25/50 percent) apportionment. Effective tax years 2014 and thereafter, a multistate service provider (MSP) may elect to treat sales from services as being in Arizona either using the default income-producing activity (IPA) test alone, or based on income-producing activity sales and market sales. For 2014, an electing MSP would treat its receipts as 85 percent of market sales and 15 percent of income-producing sales.

In our study, we elect enhanced sales factor apportionment for the two manufacturing firms, as their sales percentage will be lower than property or payroll. The corporate headquarters, which as modeled has both out-of-state property and payroll, uses double-weighted sales factor apportionment. The corporate office must use the IPA test for sourcing income, as under the “location of benefit” test, all sales are within Arizona and as such, this firm does not qualify as an MSP.

Finally, the call center, distribution center, and R&D facility elect enhanced sales factor apportionment and the new MSP elective sales sourcing option, as in each case, IPA sales sourcing is 100 percent in state while market sourcing places most, if not all, sales out of state.

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2 Apportionment rules from RIA Checkpoint; Commerce Clearinghouse; and state Department of Revenue websites.
3 California made this list in the first edition of Location Matters, but for tax years 2013 and later, single sales factor apportionment is required unless the taxpayer is a financial or extractive company; therefore, all California firms in our study now use single sales factor apportionment.
5 Multistate Service Providers are taxpayers that derive more than 85 percent of their sales from services provided to purchasers who receive the benefit of the service outside of Arizona.
**Missouri**

As of 2014, corporations may select from among a new single sales factor apportionment option, a historical receipts-only factor, and an evenly-weighted three factor (33.3/33.3/33.3 percent) apportionment formula. Although the statute is unclear, the state has taken the position that only sellers of tangible personal property may elect the new standard single sales factor methodology.

In our study, manufacturing facilities adopt single sales factor apportionment, and the corporate headquarters elects evenly-weighted three factor apportionment. Both options produce the same result for the R&D center, call center, and distribution center; we adopt single sales factor apportionment for these firms.

**New Mexico**

In New Mexico, manufacturers can elect double-weighted sales factor or evenly-weighted three-factor apportionment.\(^7\) Electing manufacturers are not subject to the throwback rule, which makes the double-weighted sales factor formula beneficial for manufacturers.

**Oklahoma**

Oklahoma offers a choice of double-weighted sales factor apportionment or evenly-weighted three-factor apportionment for businesses with an investment of $200 million or more.\(^8\) This threshold excludes all firms in our study except the capital-intensive manufacturing firm, for which the state’s throwback rule results in the same outcome using either formula.

**Rhode Island**

Manufacturers (NAICS 31-33) can opt for either double-weighted sales factor or evenly-weighted three-factor apportionment in Rhode Island,\(^9\) but because the state has a throwback rule, the two apportionment formulas yield identical results for our model manufacturing firms.

**Utah**

Since 2014, “sales factor weighted manufacturers”\(^10\) have been required to use single sales factor apportionment. The corporate headquarters, R&D facility, call center, and retail store are all single sales factor weighted taxpayers and must use single sales factor apportionment. Non-sales weighted taxpayers can elect evenly-weighted three-factor apportionment or double-weighted sales factor apportionment.\(^11\) For manufacturing, both options produce the same result due to the state’s throwback rule. For the distribution center, sales are treated as being out of state (location of benefit). Therefore, we elect double-weighted sales factor apportionment for this firm due to the lower weighting of property and payroll.

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\(^7\) NMSA 1978 § 7-4-10(A),(B).

\(^8\) Okla. Stat. § 2358(A)(5).


\(^10\) Sales factor weighted taxpayers are taxpayers or unitary groups with more than 50 percent of their everywhere sales from certain activities except for activities described in enumerated NAICS codes, including manufacturing and transportation and warehousing. Utah Code Ann. § 59-7-302(1)(k).

\(^11\) Utah Code Ann. § 59-7-311(2).
**Virginia**

As of the April 1, 2014 snapshot date of this study, manufacturing companies in Virginia could elect phased-in single sales factor apportionment. From July 1, 2014 onward, electing manufacturing corporations have been permitted to use the single sales factor method to apportion Virginia taxable income.\(^\text{12}\)

In our study, manufacturing firms use the sales-weighted option, while retailers are subject to mandatory phased-in single sales factor apportionment at 16.66/16.66/66.67 percent (quadruple-weighted sales).\(^\text{13}\) Single sales factor applies for retailers after July 1, 2015, though for model retailers in this study, the change makes no difference, as sales are assumed to be wholly in state. All other firms must still use double-weighted sales factor apportionment.

**Standard Assumptions**

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.

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) and the other emphasizing the location where services are received (benefit or market sourcing). In the latter category, Arizona, California, Georgia, Illinois, Iowa, Maine, Maryland, Michigan, Minnesota, Ohio, Utah, Washington, and Wisconsin emphasize the location where the benefit of services is received; while Alabama, Massachusetts, Nebraska, and Pennsylvania emphasize delivery of service to a location in the state; and Florida and Oklahoma emphasize the state marketplace of the customer.\(^\text{14}\)

In our study, 100 percent of sales are taxed in state for all four service operations (the corporate headquarters, R&D facility, call 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 benefit-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.

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\(^{14}\) The sourcing rules described for Arizona are only applicable for MSPs electing to apportion using a hybrid market/IPA approach. 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.
Finally, we model the R&D facility and call center 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 on R&D activities, call centers, or distribution companies. In states such as Iowa and Georgia, one can assume that call center business scenarios align with direct mail. In these states, the benefit is deemed received in the state to the extent the direct mail is sent to in-state addresses. Therefore, it appears reasonable to source receipts from call center services in state to the extent the calls were from or to in-state customers.

For R&D companies, it is not as 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. 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 April 30, 2014. 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 two metropolitan areas per state. The first location (Tier 1) is a major city in the state. The second location (Tier 2) is a mid-sized city in the state, generally with a population of less than 500,000. Sales tax rates are utilized from RIA reports as of April 30, 2014. Tier 1 cities are used to assess the corporate office, R&D, and retail business scenarios. Tier 2 cities are used to assess the call center, distribution center, and two manufacturing business scenarios. These rates were checked against RIA Checkpoint’s published rates as of April 30, 2014.

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15 Sourced from RIA Checkpoint; Commerce Clearinghouse; state Department of Revenue websites, and conversations with representatives of states’ Departments of Revenue.
16 Sourced from RIA Checkpoint.
Sales tax rates for each metro area were calculated by establishing the sum of the following three components for each of the 1-6 counties forming part of each metro area, 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 1.0%, 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.

The methodology used, averaging of rates, may not be as representative in Alabama because of the high local rates and thus the differential between a location outside the city and a location inside the city is 5 percent. The rate review assumes the greater metropolitan area covers both in-city and out-of-city locations. Similarly, it may not be highly representative in Missouri due to high local rates creating a significant differential between locations inside and outside of the city. The rate review assumes that the greater metropolitan area covers both in-city and out-of-city locations.

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.

**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 its 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 Kentucky and North Dakota were included.

- Discretionary exemptions were not considered except for several states that clearly bundle sales tax exemption/rebate as part of their incentive packages. Nebraska is an example in this regard.

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.

**Local Property Tax**

Local property tax liability was reviewed for real and personal property in Tier 1 and Tier 2 locations. Tier 1 cities are used to assess the corporate office, R&D, and retail business scenarios. Tier 2 cities are used to assess the call center, distribution center, and two manufacturing business scenarios.

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 constitutes 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.

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17 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 and 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. 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 retail).

**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. 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.

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18 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.

19 Sourced from Commerce Clearinghouse; RIA Checkpoint; BNA; state and local economic development websites; and discussions with state and local economic development agencies.
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 projects 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 assisting with implementing these programs. A similar approach was adopted for payroll withholding tax refunds with a sliding scale of benefits.