

Model Review: Corporate Income/Net Receipts Tax (Macro Model)

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Model Purpose	<p>Estimate the potential revenue impacts of Washington implementing a corporate income/net receipts tax, including:</p> <ul style="list-style-type: none">• Tax rates needed to achieve selected revenue targets;¹• Tax rates needed to replace the revenues from certain existing taxes; and• Revenues generated from the tax in the 2017-19 biennium if it had been implemented as described in Gates (2002) study. <p>Provide insights on how to model various features of a corporate income/net receipts tax in a microsimulation model.²</p>
Data Sources	<p>We will use a wide array of data sources for the corporate income/net receipts tax macro model (Corporate Macro Model).³ The data sources (and corresponding usage) include, but are not limited to:</p> <p>Federal Tax Collections</p> <ul style="list-style-type: none">• Internal Revenue Service (IRS) aggregate data;⁴• U.S. Department of Treasury press release.⁵ <p>Federal Tax Credits and Deductions</p> <ul style="list-style-type: none">• IRS Statistics of Income (SOI) data;⁶

¹ Certain proposals we will model assume enactment of the corporate income/net receipts tax along with a personal income tax. Where appropriate, we will calculate revenue impacts of a corporate income/net receipts tax in conjunction with the Personal Income Tax Model.

² We will ultimately prepare and use a microsimulation model (the Corporate Microsimulation Model) to more flexibly model future proposals and to assess the impact and burden of a corporate income/net receipts on specific groups of taxpayers (e.g., by region and industry).

³ For brevity, we will refer to this simply as the Corporate Macro Model.

⁴ This includes the IRS Data Book (various years through 2018) and IRS Statistics of Income (SOI) data (various years through 2018).

⁵ U.S. Treasury Department, *Mnuchin and Vought Release Joint Statement on Budget Results for Fiscal Year 2019*.

⁶ Corporation income tax return line item estimates (various years through 2015).

- IRS Microdata for Washington federal corporate income tax (FTI).⁷

Impact of Federal Tax Reform on Tax Credits and Deductions (2018)

- Joint Committee on Taxation (JCT);⁸
- Congressional Budget Office (CBO).⁹

Apportionment¹⁰

- Bureau of Labor Statistics, Personal Consumption Expenditures;¹¹
- IMPLAN Input-Output Data;¹²
- U.S. Census of Governments;¹³
- U.S. Department of Treasury.¹⁴

Apportionment Adjustments¹⁵

- Securities and Exchange Commission 10-Ks;¹⁶
- IMPLAN Input-Output Data;¹⁷
- Washington State Department of Revenue (DOR) Data.¹⁸

Forecasts (2020)

- Bureau of Economic Analysis (BEA), Before tax Corporate Profits;¹⁹
- Economic and Revenue Forecast Council, Washington Personal Income.²⁰

⁷ Federal tax information: Internal Revenue Service (2017). *Business Master File (BMF) and Business Return Transaction File (BRTF) Extracts Specification Book: Extract Year (EY) 2017*.

⁸ Joint Committee on Taxation. *Estimated Budget Effects of the Conference Agreement for H.R. 1, the 'Tax Cuts and Jobs Act*, December 2017.

⁹ Congressional Budget Office. *The Budget and Economic Outlook*, (various years).

¹⁰ Our model assumes the use of single-factor (sales) apportionment. As part of our estimation process, we calculate the aggregate share of federal taxable income apportionable to Washington based on the share of U.S. sales derived from Washington household purchases, business purchases, and government purchases.

¹¹ Bureau of Labor Statistics. *Consumer Expenditure Survey: Personal Consumption Expenditures (2016-2019)*.

¹² Capital purchases, inventory purchases, intermediate commodity demand (years to be determined).

¹³ U.S. Census of Governments (Annual Survey of State and Local Government Finances (2016-2019).

¹⁴ U.S. Department of Treasury, usaspending.gov (2016-2019).

¹⁵ Our methodology involves calculation of an "Unadjusted Apportionment" estimate, followed by a series of incremental adjustments to that estimate. These incremental adjustments account for certain identifiable deviations from the simple apportionment estimate among large public companies in Washington and Washington industries. We discuss these adjustments in detail in **Step 6**.

¹⁶ Various companies (2016-2019).

¹⁷ Capital purchases, inventory purchases, intermediate commodity demand (years to be determined).

¹⁸ For information on business receipts apportioned to Washington for purposes of the business and occupation (B&O) tax.

¹⁹ Bureau of Economic Analysis Forecast Statistic: Before-tax corporate profits with IVA & capital consumption adjustment, billions of dollars. (Various years). (Compiled by Washington Economic and Revenue Forecast Council.)

²⁰ Capital purchases, inventory purchases, intermediate commodity demand (years to be determined).

**Requirements
Model Used to
Fulfill**

Per ESHB 1109 (2019) Sec. 137:²¹

(2)(c)(v)(B): By December 1, 2020,²² the [Department of Revenue] and technical advisory group must prepare a summary report of their preliminary findings and alternatives described in (c)(vii) of this subsection;....²³

(2)(c)(vii)(A): With respect to the final report²⁴ of findings and alternatives submitted by the Washington state tax structure study committee to the legislature under section 138, chapter 7, Laws of 2001 2nd sp. sess.:

(I) Update the data and research that informed the recommendations and other analysis contained in the final report;

(II) Estimate how much revenue all the revenue replacement alternatives recommended in the final report would have generated for the 2017-2019 fiscal biennium if the state had implemented the alternatives on January 1, 2003;

(III) Estimate the tax rates necessary to implement all recommended revenue replacement alternatives in order to achieve the revenues generated during the 2017-2019 fiscal biennium as reported by the economic and revenue forecast council (ERFC).

(2)(c)(vii)(B): With respect to the recommendations in the final report of the 2018 tax structure work group:²⁵

(I) Conduct economic modeling or comparable analysis of replacing the business and occupation (B&O) tax with an alternative, such as corporate income tax... and estimate the impact on taxpayers... assuming the same revenues generated by business and occupation taxes during the 2017-2019 fiscal biennium as reported by the ERFC.

²¹ Washington State Legislature (2019). *HB 1109: Making 2019-2021 biennium operating appropriations*. (<https://app.leg.wa.gov/billsummary?BillNumber=1109&Year=2019&Initiative=false>).

²² The deadline for this report was later changed to December 31, 2020.

²³ We will refer to this report as “The Tax Structure Preliminary Report.”

²⁴ Gates, W.H. (2002). *Tax alternatives for Washington State*. Washington State Tax Structure Study Committee. (<https://dor.wa.gov/about/statistics-reports/tax-structure-final-report>). We refer to this report herein as “the Gates study (2002),” or simply “the final report.”

²⁵ Washington State Legislature (2018). *House Tax Structure Work Group Final Report*. (December 3, 2018). (<https://app.leg.wa.gov/committeeschedules/Home/Document/186393>). We refer to this report herein as “the House report (2018).”

Questions for
Technical Advisory
Group

1. Assuming corporations make quarterly estimated tax payments following a payment schedule similar to Oregon and Idaho, we anticipate a lag in collections for some taxpayers. How can we account for this in our model?
2. We observe that federal corporate income tax collections fell short of their January forecasts in each of the previous four tax years (2016 – 2019). We welcome any insights about any underlying cause for this, especially given solid corporate profits during the period.
3. We welcome suggestions on recent (2018 or later) resources/research on the federal revenue impacts of TCJA corporate tax provisions (either individual provisions or collectively).
4. We welcome suggestion on measuring or estimating either:
 - a. The reduction in foreign tax credits occurring under the 2017 Tax Cuts and Jobs Act (TCJA); and/or
 - b. The amount of foreign tax credits relating to GILTI inclusions.
5. In what ways did TCJA lead to changes (impacting corporate income tax revenues) **that were not anticipated when it was enacted?**
6. Factoring in time and resource constraints, are there additional details we should present in our results that would significantly improve:
 - a. The ability to validate the model;
 - b. The usefulness of the results to policymakers.
7. In order to validate our model, we would like to see how well it predicts state corporate tax receipts when applied to other states' corporate income tax structures. We would like advice on a few possible states to include in this model validation exercise, especially such that:
 - a. The state corporate income tax is tied to federal taxable income;
 - b. The state has a flat corporate income tax rate;
 - c. S-Corporations are exempt from the state's corporate income tax;
 - d. The state's corporate income tax features few, if any, credits, deductions, thresholds, or other features that affect the tax base or tax collections;
 - e. To the extent such deviations exist, data exists to adjust the model accordingly;
 - f. The state has a June 30 fiscal year end, comparable to Washington.
8. Are there features of other state corporate income taxes that we have not considered that are ubiquitous enough that we should consider modelling in our analysis (or building a toggle for)?
9. For all analyses, we welcome suggestions relating to data sources, background reading, and methods.

Questions from
Technical Advisory
Group

We will capture at meeting and record here

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Overview

This section provides a brief overview of why we are estimating the revenue impacts of a Washington corporate income/net receipts tax using a macro approach, and provides a brief overview the general steps involved in our approach, beginning with the tax years 2017-2019, and then describing our application of forecasts for tax years beginning in 2020. For details on our methodology, refer to the **Methodology** section.

Corporate Macro Model vs. Corporate Microsimulation Model?

Since we ultimately plan to create a Corporate Microsimulation Model using taxpayer-level federal tax information (FTI) data, one might wonder why our analysis doesn't simply begin there? What do we gain with the intermediate step of creating a model using a macro approach?

A microsimulation model based on the most recently available FTI data (2017)²⁶ faces limitations because of the December 2017 federal passage of the Tax Cuts and Jobs Acts (TCJA). As we discuss further in **Step 3 of the Methodology** section, several features of TCJA make a taxpayer's 2017 taxable income a poor predictor of their 2018 taxable income. Therefore, until 2018 FTI data is available, we must look primarily to other sources to understand how TCJA has and will impact federal corporate income taxes. Even once 2018 FTI data becomes available, some features of TCJA reflect one-time changes (e.g., deemed repatriation), other features of TCJA reflect ongoing changes (e.g., moving from "worldwide taxation" to "territorial taxation"), while still other features of TCJA are phased in or out (e.g., changes to BEAT tax rates and bonus depreciation schedules). By starting with a macro approach, we expect to gain insights into trends and future changes that will affect Washington taxpayers and potential corporate income/net receipts tax revenues.

The Corporate Macro Model will be the primary model underlying the analysis of the corporate income/net receipts tax in the Tax Structure Preliminary Report (December 2020). Development of the Corporate Microsimulation Model will occur mostly (if not exclusively) after the completion of the Tax Structure Preliminary Report.

Corporate Macro Model Overview

It is, perhaps, helpful to begin with a few basic tax equations to understand how the Corporate Macro Model progresses from federal tax collections data to ultimately estimate taxes due under a Washington corporate income/net receipts tax. Note, in the Corporate Macro Model equations that follow in this section, each variable should be viewed as *aggregate* amounts across all taxpayers (either federal or Washington, based on subscripts).

At a very basic level, the following equation summarizes the U.S. federal corporate income tax:

²⁶ After factoring in automatic extensions, corporate taxpayers must file corporate income taxes by the 15th day of the 10th month of the next year. Therefore, for December fiscal year end companies, we have FTI on taxes filed in October 2018.

Equation 1

$$Tax\ Due_{US} = Tax\ Rate_{US}^{27} \times Taxable_{US}^{28\ 29} - Total\ Credits_{US}^{30} + Minimum\ Tax\ Payments_{US}^{31\ 32}$$

The starting point for most states' corporate income taxes is federal taxable income (Line 30 on Internal Revenue Service (IRS) Form 1120).³³ A key point to understand about the Corporate Macro Model is that taxable income for tax years 2017-2019 is itself currently unobservable. However, we can restate Equation 1, solving for taxable income:

Equation 2

$$Taxable_{US} = \frac{Tax\ Due_{US} + Total\ Credits_{US} - Minimum\ Tax\ Payments_{US}}{Tax\ Rate_{US}}$$

After adjusting for historical differences between tax due and tax collections (see **Step 2 of the Methodology** section), we will use the available aggregate federal corporate income tax collections data for 2017-2019 as a proxy for tax due. As will be described further, we will then estimate the amount of federal taxable income using Equation 2 (see **Step 3** and **Step 4 of the Methodology** section). We will then estimate the proportion of federal taxable income apportionable to Washington in 2017-2019 **Step 5** and **Step 6 of the Methodology** section. (The main analysis assumes single-factor sales apportionment, but we will also model three-factor apportionment).³⁴ Then, we will apply tax rates provided in the Gates study (2002) to estimate tax due under a Washington corporate income/net receipts tax, as well as tax rates required to achieve given revenue targets (see Equation 3 below and **Step 7** and **Step 8 of the Methodology** section).

²⁷ The statutory corporate income tax rate was 35 percent in 2017 (with lower rates for some taxpayers with low taxable income). TCJA removed the corporate income tax brackets and introduced a flat corporate rate of 21 percent.

²⁸ *Taxable* = *Gross Receipts* – *Returns and Allowances* – *Cost of Goods Sold* + *Dividends & Inclusions* + *Interest* + *Gross Rents* + *Gross Royalties* + *Capital Gain Net Income* + *Net Gain(Loss)* + *Other Income*

²⁹ *Total Deductions* = *Compensation of Officers* + *Salaries & Wages* + *Repairs & Maintenance* + *Bad Debts* + *Rents* + *Taxes & Licenses* + *Interest* + *Charitable Contributions* + *Unclaimed Depreciations* + *Depletion* + *Advertising* + *Pension Plans* + *Employee Benefits* + *Other Deductions*

³⁰ *Total Credits* = *Foreign Tax Credits* + *General Business Credits* + *Prior Year Minimum Tax Credits* + *Other Credits*.

³¹ Taxpayers generally must determine their tax liability under a minimum tax, and must pay the minimum tax liability if it is greater than the tax liability calculated under the traditional tax calculation. “Minimum Tax Payments” refers to the *additional* amount of tax due as a result of a minimum tax (beyond the amount of tax liability under the traditional tax).

³² The Alternative Minimum Tax (AMT) was in effect in 2017, but was eliminated by TCJA. TCJA introduced the Base Erosion Anti-abuse Tax (BEAT) in 2018, which, is another form of minimum tax. BEAT has a lower tax rate than the statutory rate of 21 percent, but disallows most deductions for payments to foreign affiliates.

³³ The Washington corporate net income tax in the Gates study (2002) was based on federal taxable income as defined in the Internal Revenue Code (IRC).

³⁴ For state income tax purposes, most states apportion companies' federal taxable income using either:

- (i) Single-Factor Apportionment: Based on the pro-rata share of Sales by state;
- (ii) Three-Factor Apportionment: Based on equal weights of Sales, Property, and Payroll by state; or
- (iii) A hybrid of these methods, such as double sales-weighted Sales apportionment, so the Sales factor has a 50 percent weight, while payroll and property have 25 percent weights.

Equation 3

$$Tax\ Due_{Wa} = Tax\ Rate_{Wa} \times Apportionment\%_{Wa} \times Taxable_{US}$$

Although not required to satisfy the basic objective of the budget proviso (i.e., estimation of the tax's revenue impacts in the 2017-2019 fiscal biennium), we will also build forecasts into the Corporate Macro Model in anticipation of future proposal requests.³⁵ Finally, we will report our results.

In summary, the broad steps in the Corporate Macro Model include the following:

Corporate Macro Model Steps

1. Gather federal tax collections data through the U.S. Fiscal Year Ended September 30, 2019 (U.S. Fiscal 2019),³⁶
2. Adjust for timing differences between U.S. and Washington fiscal years;³⁷
3. Estimate and add-back federal tax credits (less minimum tax payments),³⁸
4. Divide by statutory federal tax rates to arrive at federal taxable income;
5. Estimate the portion of federal taxable income that is apportionable to Washington ("Unadjusted Apportionment");
6. Apply adjustments to apportionment formula to account for identifiable effects of large Washington businesses, and Washington commodity demand;
7. Apply tax rates from the Gates study (2002) or determine tax rates necessary to determine tax due under a Washington corporate income/net receipts tax;
8. Adjust the timing of Washington corporate income/net receipts tax due to account for potential lags in tax payments;
9. Forecast Washington corporate income/net receipts tax due for tax years after U.S. Fiscal 2019, factoring in predicted growth in corporate profits, changes in apportionment, and corporate conversions; and
10. Validate model and report results.

³⁵ The Corporate Macro Model forecast for tax years beginning in 2020 will include the following steps: (i) Begin with our estimates of U.S. federal taxable income for 2019; (ii) Apply forecasts of growth of U.S. before-tax corporate profits; (iii) Apply adjustments to account for major provisions of TCJA with differential impact post-2019; (iv) Apply the (adjusted) Washington apportionment percentages as determined in the 2017-2019 model; (v) Apply adjustment for differences in forecast Washington growth, relative to U.S. growth; and (vi) Apply tax rates as in the 2017-2019 model.

³⁶ Hereafter, we will refer to U.S. Fiscal Year ended/ending September 30, 20XX as "U.S. Fiscal 20XX."

³⁷ The timing issues here refer to the alignment of U.S. fiscal years (ending September 30) and Washington fiscal years (ending June 30).

³⁸ The Alternative Minimum Tax (AMT) applied to corporate taxpayers in tax years 2017 and earlier. TCJA eliminated the AMT but created another minimum tax, the Base Erosion Anti-Abuse Tax (BEAT). "Minimum Tax" within this analysis plan refers to either AMT or BEAT, depending on the year.

As described in the **Methodology** section, two key parts of the modelling process are the estimation of federal tax credits (and their evolution under TCJA)³⁹ and the calculation of apportionment.⁴⁰ We will devote a significant portion of time in our analysis on these steps.

For details on model methodology, including federal tax credits and apportionment, refer to the **Methodology** section.

Background

Objectives

We will estimate revenues that would have been generated for the 2017-2019 fiscal biennium if the corporate income/net receipts tax proposals had been implemented as described in the Gates study (2002). We will also estimate the tax rates necessary to implement the corporate income tax proposals in the Gates study (2002) and the House report (2018) in order to achieve the revenues generated during the 2017-2019 fiscal biennium.

Gates study (2002) – Flat Rate Personal and Corporate Income Tax:

The Gates study (2002) identified the following replacement alternatives as achieving revenue neutrality.⁴¹

Table 1: Gates study (2002) proposals

Proposal A:	Proposal B:
<ul style="list-style-type: none">• Reduce the state retail sales/use tax to 3.5%• Eliminate the state B&O tax• Eliminate the state property tax levy• Replace revenues with a flat 5.0% personal/corporate income tax	<ul style="list-style-type: none">• Reduce the state retail sales/use tax to 3.5%• Eliminate the state B&O tax• Replace revenues with a flat 3.8% personal/corporate income tax

³⁹ Note, we will also analyze provisions of TCJA that significantly affect taxable income and deductions, as such changes will be relevant in the Corporate Macro Model forecasts and the Corporate Microsimulation Model. Estimation of federal tax credits and minimum tax payments requires detailed analysis of the impact of the major provisions of TCJA on these amounts.

⁴⁰ Our approach to estimating single-factor apportionment in the Corporate Macro Model starts with a high-level estimate of the ratio of (aggregate) Washington-based sales to U.S. based sales, followed by adjustments to account for specific features of Washington’s economy that may cause apportionment to be disproportionately high or low. Essentially, these adjustments are necessary to the extent that businesses selling to Washington customers have above or below average federal taxable income per dollar of revenue. We will perform adjustments to account for: (i) large Washington companies whose historical federal taxable income per dollar of receipts is greater than or less than the U.S. average; and ii) Washingtonian’s propensity to purchase goods and services associated with industries having either high or low ratios of taxable income to gross receipts. (We will also estimate the impact of using three-factor apportionment following a similar approach.)

⁴¹ The Gates study (2002) calculated revenue neutrality based on the 2005 calendar year.

Model Review: Corporate Income/Net Receipts Tax, Continued

As summarized in Table 2, we will estimate the tax revenues that would have been generated under Proposal A and Proposal B if they had been in effect during the 2017-2019 fiscal biennium.

Table 2: Objective – Identify revenues generated by proposed replacement alternatives in the Gates study (2002)

Proposal	State Sales/Use Tax		State Portion of Property Tax Levy		B&O Tax		Personal & Corporate Income Tax		FY 17-19 Revenues under Proposal
	2002 Rate	Proposed	2002 Rate ⁴²	Proposed	2002 Rate	Proposed	2002 Rate	Proposed	
Proposal A	6.5%	3.5%	\$2.71/ \$1,000	\$0	0-1.5% ⁴³	0%	0%	5.0%	TBD
Proposal B	6.5%	3.5%	\$2.71/ \$1,000	No Change	0-1.5%	0%	0%	3.8%	TBD

Similarly, as summarized in Table 3, we will estimate the flat personal and corporate income tax rates needed to replace the revenues that would have been lost if the tax reductions and eliminations in Proposal A and Proposal B had been in effect during the 2017-2019 fiscal biennium.

Table 3: Objective – Identify income tax rates needed to enact the Gates study (2002) proposals while maintaining revenue neutrality

Proposal	State Sales/Use Tax		State Portion of Property Tax Levy		B&O Tax		Personal & Corporate Income Tax		FY 17-19 Revenues to Replace ⁴⁴
	Current Rate	Proposed	Current Rate ⁴⁵	Proposed	Current Rate	Proposed	Current Rate	Proposed	
Proposal A	6.5%	3.5%	\$2.70 / \$1,000	\$0	0-1.75% ⁴⁶	0%	0%	TBD	\$24.2b
Proposal B	6.5%	3.5%	\$2.70 / \$1,000	No Change	0-1.75% ⁴⁷	0%	0%	TBD	\$19.1b

⁴² The state portion of the property tax levy varies from year to year. This value represents the state property tax levy rate as a share of statewide market value for calendar year 2002.

⁴³ The B&O tax rate varies according to the activities in which a business engages. Current rates for some activities differ compared to 2002.

⁴⁴ Based on the amount of tax raised by the state sales and use tax, the state portion of the property tax levy, and the B&O tax, according to ERFC data.

⁴⁵ The state portion of the property tax levy varies from year to year. This value represents the state property tax levy rate as a share of statewide market value for calendar year 2020.

⁴⁶ The B&O tax rate varies according to the activities in which a business engages. Current rates for some activities differ compared to 2002.

⁴⁷ A limited number of businesses currently face B&O tax rates above 1.75%, including advanced computing businesses with worldwide gross income in excess of \$25 billion.

Model Review: Corporate Income/Net Receipts Tax, Continued

House report (2018) – Replace B&O Tax with Corporate Income Tax:

Proposal: The House report (2018) proposed the elimination of the B&O tax with an alternative tax, such as the corporate income tax (note that unlike the Gates study (2002), a personal income tax is *not* proposed).

As summarized in Table 4, we will estimate the flat corporate income/net receipts tax rates needed to replace the B&O tax revenues raised in the 2017-2019 fiscal biennium.

Table 4: Objective - Identify income tax rates needed to enact the House report (2018) proposal while maintaining revenue neutrality

Proposal	B&O Tax		Corporate Income/ Net Receipts Tax		FY 17-19 Revenues to Replace
	Current Rate	Proposed	Current Rate	Proposed	
Proposal C	0-1.75%	0%	0%	TBD	\$8.6b

While the December 2020 report that we prepare requires only an estimate of revenues and replacement tax rates during the 2017-2019 fiscal biennium, we anticipate fiscal note requests for a corporate income/net receipts tax during the 2021 legislative session. These requests would require estimated revenues ten years into the future. Therefore, as we develop growth rates and forecasted values, we will consider tax years beyond 2019.

Impacts by Business Activity

For each corporate income tax proposal, the budget proviso also assigns the Department to estimate tax paid as a share of total business revenue for various business activities. We intend to meet this requirement and include this analysis in the Tax Structure Preliminary Report, however we will discuss this portion of the analysis in a separate document.

Assumptions

In general: In general, we follow the assumptions as described in the Gates study (2002), where provided. In some cases, where the Gates study (2002) is silent on an aspect of the tax structure, we will follow assumptions based on the structures of Oregon and Idaho.

Conformity to Federal Corporate Income Tax

Assumption: Washington’s corporate income/net receipts tax will be based on federal taxable income as defined in the Internal Revenue Code (IRC).

We will follow the Gates study (2002) proposal, which states, “The corporate net income tax would be based on federal taxable income as defined in the IRC. Thus it would implicitly adopt all of the deductions as allowed under the federal corporate net income tax.” This is particularly relevant in light of TCJA, as any elements of tax reform dealing with income or deductions will affect Washington-apportioned federal taxable income.

However, tax reforms dealing with tax credits or federal minimum tax should not directly impact the modelled Washington corporate income/net receipts tax revenues.⁴⁸

We plan to develop the Corporate *Microsimulation* Model, to be sufficiently flexible to incorporate a broad range of corporate income/net receipts tax proposals, including those that do not conform to the federal corporate income tax.

Apportionment

Assumption: Washington’s corporate income/net receipts tax will use single-factor (sales) apportionment, to determine the portion of a business’s federal taxable income that is subject to Washington’s tax.

The Gates study (2002) assumed that Washington would apply, “a standard three-factor apportionment formula,” using ratios of in-state sales, property, and payroll compared to a firm’s totals. Each factor accounted for one-third of apportionment calculations. However, since the time of the Gates study (2002), most states with a corporate income tax transitioned away from three-factor apportionment. In 2014, the Multistate Tax Commission gave up its support for the standard three-factor apportionment formula.⁴⁹ As of January 2020, only five states use “the standard three-factor apportionment formula.” Table 5 summarizes state corporate income tax apportionment rules as of January 2020.⁵⁰

Table 5: Corporate income tax apportionment rules by state, 2020⁵¹

Apportionment Rule	Apportionment Factors	Number of States
Sales	100% Sales	25
Triple-Weighted Sales (or Greater) ⁵²	60% Sales, 20% Property, 20% Payroll	2
Double-Weighted Sales	50% Sales, 25% Property, 25% Payroll	7
Three Factor	33% Sales, 33% Property, 33% Payroll	5
Taxpayer Option/Rules Vary	Varies	5
No Corporate Income Tax	N/A	6

Most states with a corporate income tax now use single-factor apportionment. Furthermore, for purposes of computing the B&O tax, Washington now assigns gross receipts based on sales.⁵³ For these reasons, and with the guidance of our legislation and policy analyst colleagues, we believe single-factor apportionment is the

⁴⁸ Therefore we must “add back” credits to determine taxable income from federal tax collections.

⁴⁹ Source: Hellerstein, Hellerstein & Swain, *State Taxation* ¶18.06 (Thomson Reuters/Tax & Accounting, 3rd ed. 2001, with updates through December 2019) (online version accessed on Checkpoint (www.checkpoint.riag.com) [February 20, 2020]).

⁵⁰ Source: Federation of Tax Administrators (2020).

⁵¹ *Ibid.*

⁵² Maryland uses the following formula: 71.4% Sales, 14.3% Property 14.3% Payroll.

⁵³ RCW 82.04.462.

most likely rule in the present context. However, we will also compute alternative revenue impacts based on three-factor apportionment. Refer to **Appendix C** for additional details on the decision to use single-factor apportionment for the primary analysis.

Washington Credits and Deductions

Assumption: We assume Washington’s corporate income/net receipts tax will not have any tax credits or minimum tax structures, and will not allow any deductions to federal taxable income.

The Gates study (2002) did not explicitly include any deductions or credits (except those deductions implicitly adopted by virtue of basing the tax on federal taxable income). We follow that approach in this analysis.

Time to Implement

Assumption: The Department of Revenue requires 18 months to implement a corporate income/net receipts tax.

For instance, if Washington enacts a corporate income/net receipts tax bill during the 2021 legislative session, the tax would take effect on January 1, 2023. The first payment would be due in April 2024, although withholdings and estimated payments would be due during 2023.

For estimating the revenue impacts of the replacement alternatives in the Gates study (2002), implementation time is not a factor. The budget proviso states that the Department of Revenue is to “Estimate how much revenue all the revenue replacement alternatives recommended in the final report would have generated for the 2017-2019 fiscal biennium if the state had implemented the alternatives on January 1, 2003.” However, this assumption will be relevant in modeling future proposals.

Alignment of U.S. and Washington Fiscal Years

Assumption: In general, we assume federal taxable income, deductions, and credits between quarters within a single U.S. fiscal year (October 1 – September 30) grow proportionally with U.S. before-tax corporate profits. (However, adjustments for the effects of TCJA provisions supersede this assumption.)

For example, for U.S. Fiscal 2019 (ended September 30, 2019), a portion of the corporate federal taxable income during the period aligns with Washington’s Fiscal Year ended June 30, 2019 (Washington’s Fiscal 2019)⁵⁴ and a portion aligns with Washington’s Fiscal 2020. Assuming zero growth in the period, 75 percent of federal taxable income aligns with Washington’s Fiscal 2019, and the other 25 percent aligns with Washington’s Fiscal 2020. However, we account for economic growth during the period by distributing the

⁵⁴ Hereafter, we will refer to Washington Fiscal Year ended/ending June 30, 20XX as “Washington’s Fiscal 20XX.”

Model Review: Corporate Income/Net Receipts Tax, Continued

taxable income across the four quarters proportionally with the U.S. GDP in each quarter. See the example in Table 6 below (using hypothetical data).

Table 6: Hypothetical example showing alignment of U.S. and Washington fiscal years

(Amounts in \$ billions)		US Fiscal 2018			
		Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
Federal Taxable Income Apportioned to WA		40.0			
US Corporate Profits		1,000	1,010	1,020	1,030
US GDP (as % of US Fiscal 2018)		74.6%			25.4%
(Amounts in \$ billions)	Washington Fiscal 2018				
	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	
Federal Taxable Income	(Calculated based on US Fiscal 2017)	74.6% X 40.0			

Estimated Payments

Assumption: Under a Washington corporate income/net receipts tax, corporations will make quarterly estimated corporate income/net receipts tax payments. As the model currently stands, we assume corporations make estimated tax payments within the same fiscal quarter in which the taxable income relates (based on Washington’s fiscal calendar), however we expect there may be some lag in estimated payments.

As with federal corporate income taxes, many states require corporate taxpayers to make quarterly estimated income tax payments. Therefore, although a typical corporation may not file their 2017 income taxes until October 2018, the jurisdiction still receives regular quarterly payments throughout 2017 that should approximate tax due for the year.

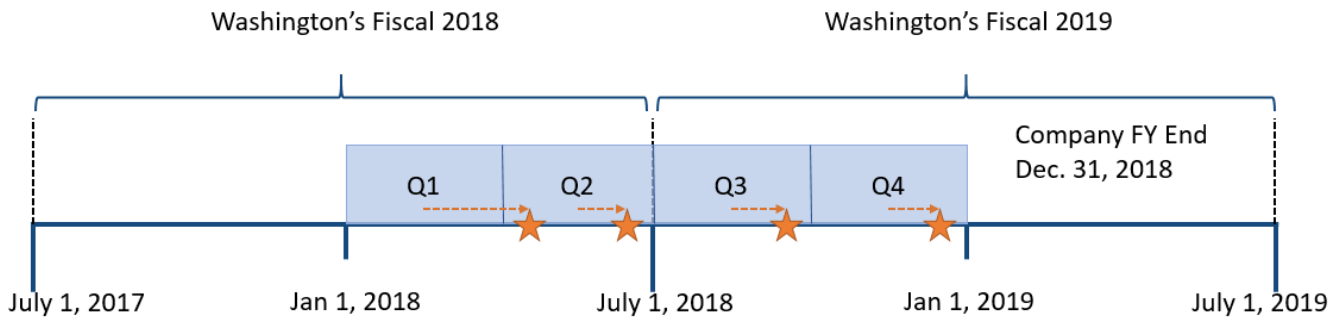
The Gates study (2002) does not provide an assumption regarding the implementation of estimated payments and the timing of such payments, so we currently assume estimated payment schedules that follow Oregon and Idaho.

Oregon and Idaho require estimated tax payments from corporate taxpayers that anticipate having a tax liability of greater than \$500.⁵⁵ For a company with a December 31 fiscal year end, the estimated payments in both states are due on April 15, June 15, September 15, and December 15. As shown in Figure 1, for December 31 fiscal year end companies, this payment schedule aligns well with Washington’s fiscal year (July 1 – June 30).

⁵⁵ We assume that the impact of this threshold is minimal, so we do not intend to model its effect.

Model Review: Corporate Income/Net Receipts Tax, Continued

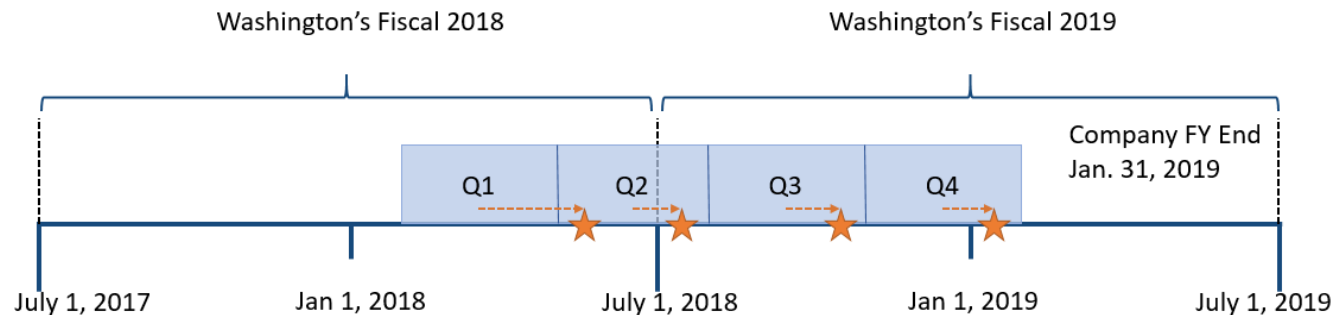
Figure 1: Estimated tax payment schedule for corporation with a December 31, 2018 fiscal year end



★ Orange stars denote due dates for company to pay estimated corporate tax for Q1, Q2, Q3, and Q4 (April 15, June 15, September 15, and December 15, respectively).

Note that many retailers have a January 31 fiscal year end. These taxpayers' second quarter estimated tax payments would be due July 15 and therefore fall in a separate fiscal year (based on Washington's fiscal calendar). Refer to Figure 2 below.

Figure 2: Estimated tax payment schedule for corporation with a January 31, 2019 fiscal year end



★ Orange stars denote due dates for company to pay estimated corporate tax for Q1, Q2, Q3, and Q4 (May 15, July 15, October 15, and January 15, respectively).

In the Corporate Macro Model, accounting for the effect shown above is difficult (at least in the absence of data on Washington companies' income, by taxpayer's fiscal year). In the Corporate Microsimulation Model, we can potentially account for it based on individual taxpayers' fiscal year ends. This adjustment may not be appropriate, though, to the extent it is common for taxpayers to remit estimated tax payments more than 15 days before the deadline. We welcome your ideas and feedback regarding how and whether to account for this effect in our model.

Technical Advisory Group Question 1

Assuming corporations make quarterly estimated tax payments following a payment schedule similar to Oregon and Idaho, we anticipate a lag in collections for some taxpayers. How can we account for this in our model?

Methodology

Corporate Macro Model Steps

As was noted in the **Overview** section, the broad steps in the Corporate Macro Model begin with gathering federal corporate income tax collections data and culminate in reporting estimates of tax due under a Washington corporate income/net receipts tax:

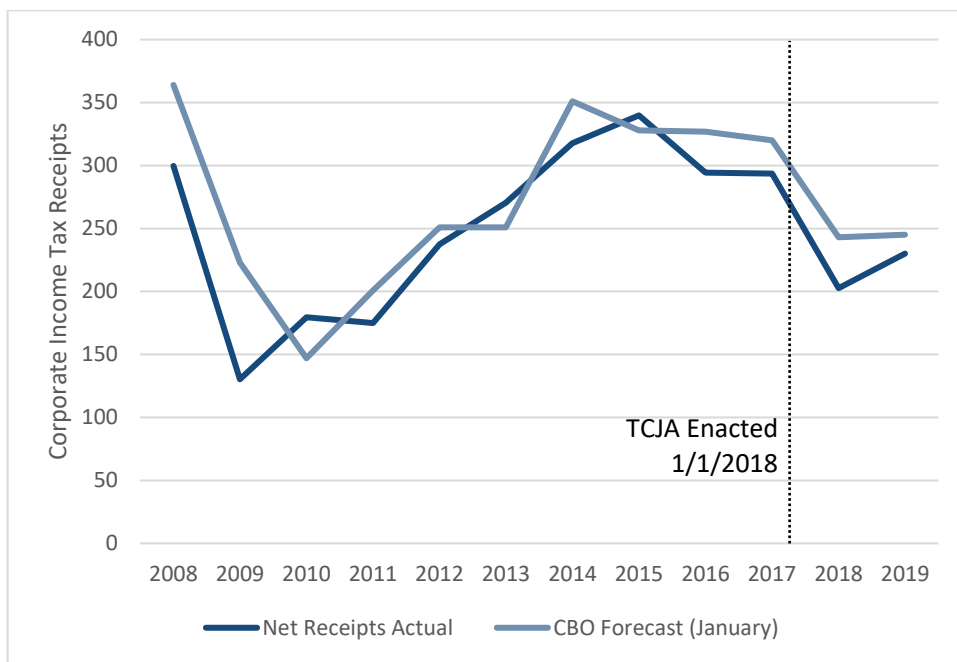
1. Gather federal tax collections data through the U.S. Fiscal Year Ended September 30, 2019 (U.S. Fiscal 2019);
2. Adjust for timing differences between U.S. and Washington fiscal years;⁵⁶
3. Estimate and add-back federal tax credits (less minimum tax payments);
4. Divide by statutory federal tax rates to arrive at federal taxable income;
5. Estimate the portion of federal taxable income that is apportionable to Washington (“Unadjusted Apportionment”);
6. Apply adjustments to apportionment formula to account for identifiable effects of large Washington businesses, and Washington commodity demand;
7. Apply tax rates from the Gates study (2002) or determine tax rates necessary to determine tax due under a Washington corporate income/net receipts tax;
8. Adjust the timing of Washington corporate income/net receipts tax due to account for potential lags in tax payments;
9. Forecast Washington corporate income/net receipts tax due for tax years after U.S. Fiscal 2019, factoring in predicted growth in corporate profits, changes in apportionment, and corporate conversions; and
10. Validate model and report results.

1. Total Federal Corporate Income Tax Collections

The IRS Data Book (2008-2018), presents the number of corporate income tax returns filed, gross collections amounts, and the amount of refunds issued for U.S. Fiscal 2014 - 2018. The U.S. Department of the Treasury also released corporate income tax receipts data for U.S. Fiscal 2019. In addition, in January of each year the Congressional Budget Office (CBO) publishes “The Budget and Economic Outlook,” which includes 10-year projections of corporate income tax revenues. Figure 3 summarizes this information, where the CBO forecasts refer to the forecasts from January of the same fiscal year.

⁵⁶ The timing issues here refer to the alignment of U.S. fiscal years (ending September 30) and Washington fiscal years (ending June 30).

Figure 3: IRS corporate income tax collections vs. prior January forecast, U.S. Fiscal 2008-2019 (billions of dollars)⁵⁷



As the figure above demonstrates, federal corporate income tax receipts are pro-cyclical, and vary with changes in the tax code. The large drop in corporate income tax receipts between 2008 and 2009 reflects both the reduced corporate profits because of the recession and certain tax credits and deductions introduced in the American Recovery and Reinvestment Act of 2009.

Technical Advisory Group Question 2

We observe that federal corporate income tax collections fell short of their January forecasts in each of the previous four tax years (2016 – 2019). We welcome any insights about any underlying cause for this, especially given solid corporate profits during the period.

The steep drop in federal corporate income tax net receipts between U.S. Fiscal 2017 and U.S. Fiscal 2018 largely stems from the reduction of the corporate income tax rate from 35 percent to 21 percent.⁵⁸

Finally, note that actual federal corporate income tax for each year between U.S. Fiscal 2016 and 2019 came in below prior year projections. It is possible that this indicates that corporate taxpayers claimed more federal tax credits than expected⁵⁹ during the period. Note that, based on surveys conducted by the Federation of Tax Administrators, state corporate income tax collections experienced strong growth during the same period. Growth in state corporate tax receipts is not necessarily inconsistent with lower than expected federal

⁵⁷ Source SOI collections data and CBO forecasts.

⁵⁸ Note, it is likely that between calendar year 2017 and calendar year 2018, the reduction in corporate income tax revenues was greater than is shown in the graph, since the U.S. Fiscal 2018 estimates shown include one quarter of estimated tax payments (from October 1 – December 31, 2017) under the pre-TCJA rules.

⁵⁹ Federal tax credits almost certainly fell during this period, credits may have fallen less than expected.

corporate tax receipts. The reduction of tax deductions under TCJA may explain the surge in state receipts (with respect to federal taxes, the reduction in revenues from lower corporate tax rate dwarfs the effect of reduced deductions). We will explore this topic further, including review of federal publications (e.g., CBO Budget Outlooks and appendices), and exploring features of and significant changes in state corporate income tax rules during the period. Refer to the *Error! Reference source not found.* section. We also welcome insights from the technical advisory group on this topic and welcome suggestions about possible resources.

2. Total Federal Corporate Income Tax Due: Adjustments for Timing

As noted in the **Assumptions** section, U.S. fiscal years end on September 30, creating some alignment issues relative to Washington fiscal years ending June 30. For fiscal years that do not include significant tax reform, we will align the federal corporate income tax collections to quarters, based on the estimated pro-rata share of before-tax corporate profits earned each quarter.⁶⁰

Because the first quarter of U.S. Fiscal 2018 collections preceded the enactment of TCJA, we will allocate a larger share of the year's collections to that quarter. Based on estimates from the Joint Committee on Taxation (JCT) (described in more detail in Step 3), the net effect of 2018 changes in deductions, credits and minimum taxes in TCJA was to offset about 43 percent of the revenue reduction from the rate reduction from 35 percent to 21 percent). We will therefore adjust the relative quarterly allocations to account for 57 percent of the 14 percentage point rate reduction.⁶¹

3. Total Federal Tax Due, Adjusted for Tax Credits and Minimum Tax Payments

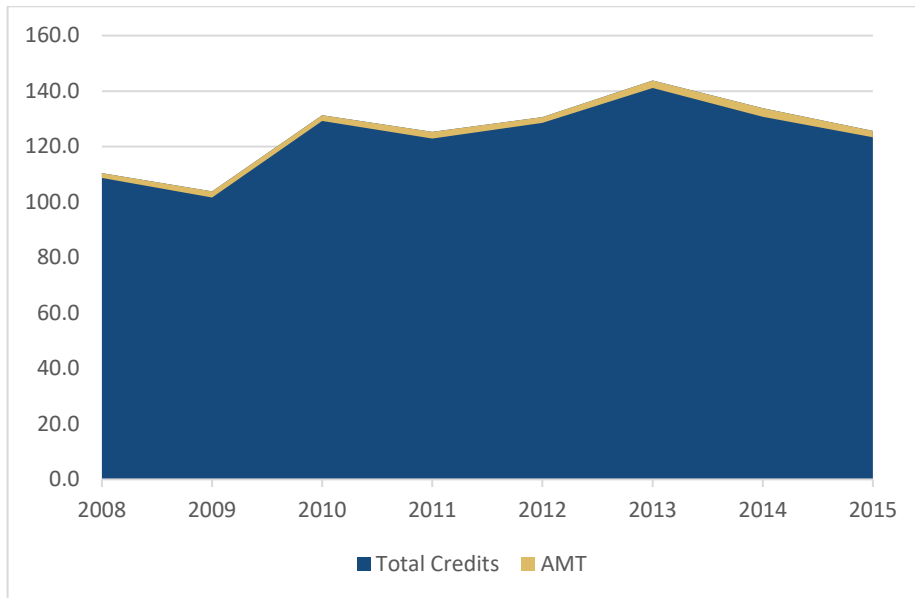
Federal tax credits and minimum tax payments do not affect taxable income under the proposed Washington corporate income/net receipts tax. However, they do affect the collections data we describe above, so we must add back the total estimated tax credits and subtract off estimated minimum tax payments before we can compute federal taxable income in Step 4.

Prior to enactment of TCJA, the use of tax credits to offset federal corporate income taxes was relatively stable year-over-year, even as total corporate income tax collections varied widely (see Figure 3). Figure 4 shows total corporate income tax credits for the 2008 - 2015 period, along with the offsetting impact of minimum tax payments.

⁶⁰ We rely on the BEA statistic, "Before-tax corporate profits with IVA & capital consumption adjustment, billions of dollars."

⁶¹ Note, this only impacts the timing of collection in our model, so a more precise adjustment will only incrementally improve the model.

Figure 4: Total federal corporate income tax credits (less minimum tax payments), 2008 - 2015 (billions of dollars)⁶²



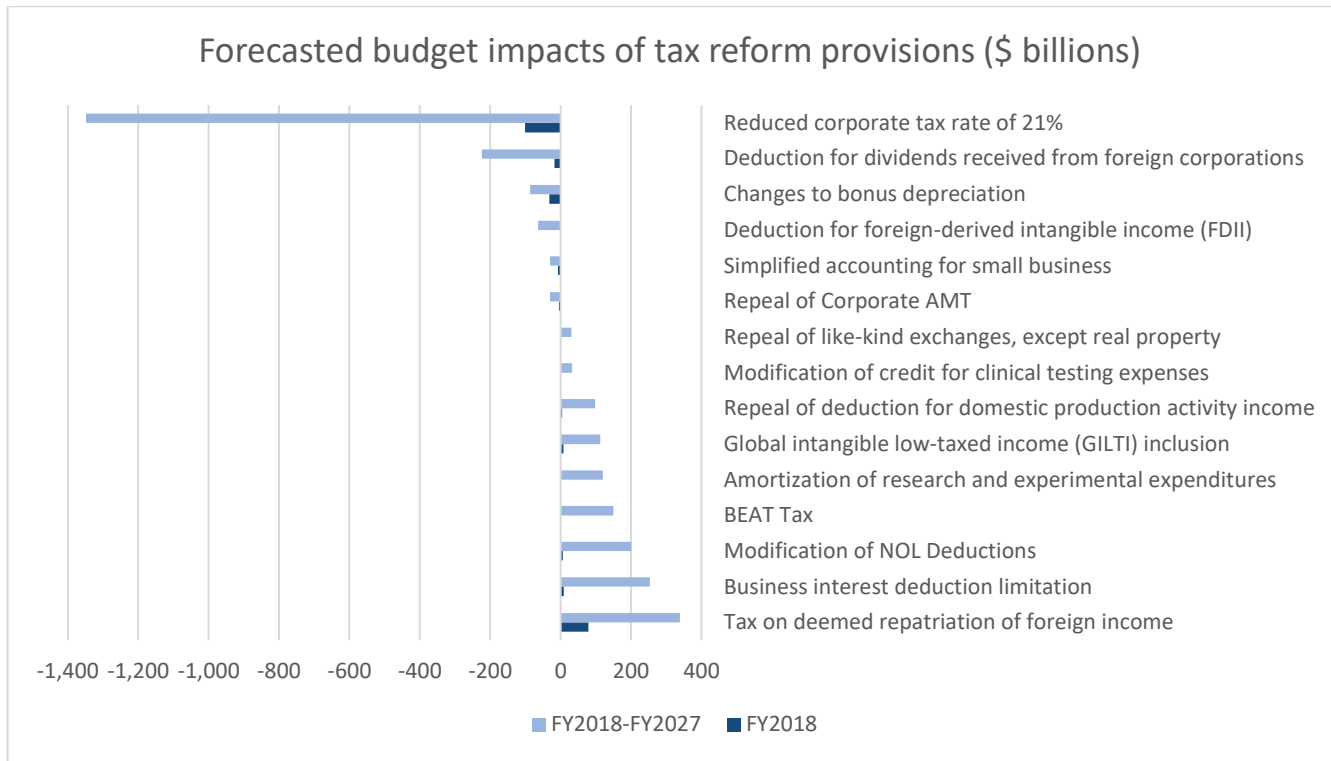
Certain provisions of TCJA significantly changed this landscape, however. Four days prior to the passage of TCJA, the JCT published the “Estimated Budget Effects of the Conference Agreement for H.R. 1, the ‘Tax Cuts and Jobs Act.’” This analysis provided estimates of the federal budget impacts of each of the tax reform provisions of TCJA for each fiscal year between 2018 and 2027. Although additional evidence exists today, this analysis is a helpful starting point for identifying, categorizing, and initial analysis of various features of tax reform. Refer to Figure 5 for a summary of the business tax reforms that JCT estimated would have the largest budget effects.

Technical Advisory Group Question 3

We welcome suggestions on recent (2018 or later) resources/research on the federal revenue impacts of TCJA corporate tax provisions (either individual provisions or collectively).

⁶² Source: SOI line item estimates.

Figure 5: Estimated net budget impacts of large TCJA business tax reforms (December 18, 2017 estimate)^{63,64}



(Refer to **Appendix B** for details on most of the business tax reform provisions summarized in Figure 5.

In total, the JCT analysis estimates the impact of 85 business tax provisions, 54 of which appear to:

- Have non-zero budget impacts; and
- Potentially affect C-corporations.

Of these 54 provisions, we classified their impact on tax returns as follows in Table 7.

⁶³ Source: JCT (2017).

⁶⁴ Does not include budget effects related to changes in outlays.

Table 7: Primary impact of TCJA provisions affecting corporations⁶⁵

Provision Primarily Relates to	# of Provisions
Gross Income or Deductions ⁶⁶	45
Tax Credits	4
Alternative Tax	3
Change in tax rate	1
Tax Credits AND Deductions	1

The net impact of the four tax credit provisions is relatively small in U.S. Fiscal 2018 and U.S Fiscal 2019. The most significant impact related to alternative taxes in 2018 and 2019 relates to the tax on deemed repatriation of foreign income.⁶⁷ For details on the tax on deemed repatriation of foreign income, refer to **Appendix B**. We will explore the tax credit and alternative tax provisions in more detail and make adjustments in the model to account for them.

However, the Corporate Macro Model requires a much larger adjustment for the one provision that relates to both tax credits and deductions. Specifically, this is the deduction for dividends received from foreign corporations, which largely replaces foreign tax credits.

TCJA moved the federal tax code from a more worldwide taxation system closer to a territorial taxation system. Pre-TCJA, domestic corporations owed taxes on worldwide profits, including dividends received from subsidiaries and affiliates operating in other countries. However, a domestic U.S. corporation could claim foreign tax credits, so the U.S. taxpayer owed U.S. corporate income tax to the extent that the corporate tax rate in the foreign territory was lower than the U.S. rate. Under TCJA, the deduction for dividends received from foreign corporations goes further than the old foreign tax credits by allowing the U.S. corporation to fully deduct foreign dividends, except when the dividend is tied to Subpart F income. (Subpart F refers to specific categories of passive income and under TCJA also includes Global Intangible Low Taxed Income (GILTI) inclusions).⁶⁸

⁶⁵ Author’s classification of provisions in listed in JCT (2017).

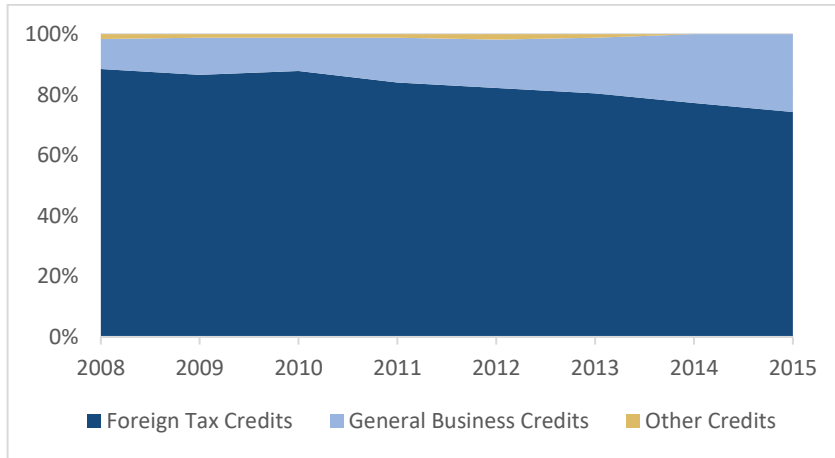
⁶⁶ Note, the large number of provisions affecting gross income and deductions illustrate the challenge that would be involved in creating a microsimulation model based on 2017 FTI data. This problem will be much more tractable once 2018 FTI data becomes available.

⁶⁷ The impact of the new BEAT tax is larger in later years as the BEAT tax rate increases.

⁶⁸ GILTI is a new category of foreign income under TCJA. Foreign earnings with greater than a 10 percent return on specified tangible property are subject to tax under Subpart F rules. By intent, GILTI should include royalty income, licensing income, etc.

For our purposes, this provision is especially important because foreign tax credits historically accounted for a substantial majority of all credits claimed by C-Corporations. See Figure 6 below.

Figure 6: Composition of U.S. tax credits claimed by C-corporations⁶⁹



Since corporate taxpayers will claim a significantly smaller amount of foreign tax credits post-TCJA, we expect the amount of tax credits to “add back” when calculating federal taxable income will be much smaller beginning in 2018. We can use SOI data and FTI data to reasonably infer the amount of foreign tax credits in the system in the absence of tax reform, but estimating the amount or share of foreign tax credit we expect to remain in the system post-TCJA is more challenging.

As a back-of-the-envelope calculation, we *may* estimate the percentage of foreign tax credits that remain in the system post-TCJA as follows (subject to feedback from the Technical Advisory Group). As noted above, foreign tax credits still apply in the context of Subpart F income. Based on SOI data, prior to TCJA Subpart F income accounted for about a quarter of total income from controlled foreign corporations. Thus, we expect that portion of foreign tax credits to remain. In addition, some foreign tax credits remain in the context of the new GILTI inclusions under TCJA. JCT (2017) has estimates of the budget impact of the GILTI inclusions.

Technical Advisory Group Question 4

We are seeking advice on a more direct measure or way of estimating either:

- The reduction in foreign tax credits under TCJA; and/or
- The amount/percentage of foreign tax credits retained as a result of GILTI inclusions.

With respect to any post-U.S. Fiscal 2019 estimates that we perform using the Corporate Macro Model, we will begin with the JCT (2017) analysis of the impacts of TCJA provisions to identify expected changes to gross income, deductions, credits, and minimum tax payments that evolve over time. We will research other

⁶⁹ Source: Based on information compiled from IRS Statistics of Income, Corporation Income Tax Return Line Item Estimates, 2008-15. Other credits reported in 2014-15 were slightly negative. They are omitted from the chart in those years.

sources, including but not limited to more recent CBO publications,⁷⁰ to validate these estimates, focusing on provisions with large estimated budget impacts. Some initial efforts to align the JCT budget impacts with actual and forecasted changes in federal corporate income taxes show some promise.

Technical Advisory Group Question 5

In what ways did TCJA lead to changes (impacting corporate income tax revenues) **that were not anticipated when it was enacted?**

4. Total Federal Taxable Income

In Step 4, to estimate federal taxable income in 2018 and subsequent years, we apply Equation 2 (shown again below), dividing the amount estimated in the previous step by the current U.S. statutory corporate income tax rate of 21 percent.

$$Taxable_{US} = \frac{Tax\ Due_{US} + Total\ Credits_{US} - Minimum\ Tax\ Payments_{US}}{Tax\ Rate_{US}}$$

Prior to TCJA, most federal taxable income faced approximately a 35 percent tax rate, although marginal rates varied for taxpayers with low taxable income. Refer to the 2017 federal corporate income tax schedule in Table 8 below.

Table 8: U.S corporate income tax schedule, 2017

Taxable Income Range	Marginal Tax Rate	Average Tax Rate ⁷¹
\$0 - \$50,000	15%	15.0%
\$50,000 - \$75,000	25%	18.3%
\$75,000 - \$100,000	34%	22.3%
\$100,000 - \$335,000	39%	34.0%
\$335,000 - \$10 million	34%	34.0%
\$10 million - \$15 million	35%	34.3%
\$15 million - \$18.33 million	38%	35.0%
\$18.33 million +	35%	35.0%

⁷⁰ For example, the CBO’s April 2018 publication, *Budget and Economic Outlook: 2018 to 2028*, included an appendix on the effects of TCJA on CBO’s economic and budget projections.

⁷¹ Average tax rate applies to taxpayers at the top of a given tax bracket.

Based on the table above, the average corporate tax for 2017 was slightly below the statutory rate of 35.0 percent. We will use SOI data on the amount of corporate taxable income subject to tax, by taxable income categories to estimate the average tax rate on all federal taxable income.⁷²

5. Washington-Appportioned Federal Taxable Income (“Unadjusted Apportionment”)

Most states with a corporate income tax now use single-factor (sales) apportionment, and Washington most likely would use single-factor (sales) to apportion corporate income. (For details on the estimation process for the alternate three-factor apportionment formula, refer to **Appendix C**.) As it relates to the Corporate Macro Model, the term “apportionment” is used loosely to refer to the share of all U.S. federal taxable income that is apportionable to Washington under a given apportionment method.

We begin with a broad simplifying assumption to estimate Washington apportionment, and then we refine our apportionment estimate to account for major empirical deviations from our simplifying assumptions (see **Step 6**). Specifically, we begin by assuming that each dollar of business receipts leads to the same increment of federal taxable income. Based on that assumption, the percentage of federal taxable income apportionable to Washington is equal to the percentage of U.S. businesses’ domestic⁷³ receipts derived from a Washington buyer. The Unadjusted Apportionment Formula is:^{74,75}

Equation 4

$$\text{Unadj. Apportion}_{Wa} = \frac{\text{Consumption}_{Wa} + \text{Business Purchases}_{Wa} + \text{Government Purchases}_{Wa}}{\text{Consumption}_{US} + \text{Business Purchases}_{US} + \text{Government Purchases}_{US}}$$

We rely on the data sources in Table 9 to estimate the share of U.S. businesses’ domestic receipts that are apportionable to Washington in a given year (we plan to apply the same apportionment percentage to each quarter of a given calendar year).

⁷² We anticipate that the average tax rate will be only slightly below 35 percent. Based on preliminary review of SOI data, approximately 90 percent of corporate taxable income is concentrated among taxpayers with greater than \$10 million of taxable income.

⁷³ At this point, we have not developed plans to account for any difference in the rate of use of imports by Washington buyers relative to all U.S. buyers. Time permitting, we will explore this issue and adjust the model as appropriate.

⁷⁴ The equation below disregards the effect of consumption that occurs out of state, such as tourism expenses.

⁷⁵ Washington’s single-factor apportionment for the B&O tax apportions service income based on where the customer receives the benefit of the service. There are complicated rules that guide the benefit received determination, which we ignore in this analysis.

Table 9: Components of business receipts in apportionment calculation

Component of Business Receipts	Estimated with:	Source
Consumption	Personal consumption expenditures	Bureau of Economic Analysis
Business-to-Business Purchases	Capital purchases, inventory purchases, intermediate commodity demand	IMPLAN Input-Output Data
State and Local Government Purchases	Non-salary & benefit component of current operation and capital outlay, calculated as: State government expenditures less: (i) Salaries & wages, (ii) Employee benefits, (iii) Intergovernmental expenditures, (iv) Insurance benefits and repayments, (v) Assistance and subsidies, (vi) Interest on debt.	U.S. Census of Governments
Federal Government Purchases	Federal contracts with business recipients	U.S. Treasury Department

Unsurprisingly, preliminary analysis indicates that Washington’s relative share of each of these factors reasonably approximates Washington’s share of U.S. GDP (give or take a couple tenths of a percentage point).

6. Washington-Apportioned Federal Taxable Income (with Apportionment Adjustments)

The apportionment equation in the previous section relied on the simplifying assumption that each dollar of business receipts leads to the same amount of federal taxable income. Clearly, this is not the case. For example, a low-margin distributor may have very high turnover and so achieve high gross receipts, but their taxable income will remain relatively low. In addition, companies with similar margins may claim deductions and credits at different rates for any number of reasons.

Therefore, we will identify and make adjustments to account for estimated taxable income per dollar of net revenue that is above or below average among:

- Large companies that sell disproportionately to Washington customers; and
- Industries that Washington buys from at disproportionately high or low rates.⁷⁶

⁷⁶ This includes purchases by Washington households, businesses, and governments.

Large Company Apportionment Adjustment

In 2015, 2,273 C-Corp taxpayers achieved over \$1 billion of net revenue. These taxpayers accounted for 84 percent of all federal corporate taxable income.⁷⁷ Indeed, Washington has four of the 30 largest U.S. companies by net revenue,⁷⁸ including two of the world’s most valuable companies with market capitalization near or above \$1 trillion. To the extent we estimate that Washington-based companies with more than \$1 billion of annual revenue have either above average or below average taxable income per dollar of receipts, we will adjust the apportionment calculation accordingly.

We illustrate this adjustment process with a simple hypothetical example where we adjust for a single large Washington company named Washington Retail Co. Let us assume we calculated $Unadj. Apportionment_{wa} = 2.5\%$.

Suppose that Washington Retail Co. has the following results for 2018, compared alongside the total for all U.S. companies.

Table 10: Illustration of apportionment adjustment, hypothetical company (\$ billions)

Amount		All U.S. Companies - Unadjusted		
Total Federal Taxable Income	(A)	40,000		
Average Taxable Income as % of Revenue	(B)	5%		
Federal Taxable Income	(C) = (B) x (A)	2,000		
Washington Sourced-Revenue % (Unadj. Apportionment)	(D)	2.5%		
Unadj. Taxable Income Apportionable to Washington	(E) = (C) x (D)	50		
Amount		Washington Large Co.	Washington Large Co. if "Average"	Difference
U.S. Revenue	(a)	200	200	-
Federal Taxable Income as % of Revenue	(b)	10%	5%	5%
Federal Taxable Income	(c) = (b) x (a)	20	10	10
Washington-Sourced Revenue %	(d)	50%	2.5%	47.5%
"Excess" Taxable Income Apportionable to Washington	(e) = (c) x (d)			4.75

As you can see in Table 10, Washington Large Co. has relatively high federal taxable income per dollar of revenue, compared to the average U.S. company (10% vs. 5%). Washington Retail Co.’s federal taxable income of \$20 billion is **\$10** billion higher than if the assumption held that every dollar of revenue led to the same amount of federal taxable income.

⁷⁷ Source: SOI: Selected Balance Sheet, Income Statement, and Tax Items, by Size of Business Receipts, 2015.

⁷⁸ Source: Fortune 500, <https://fortune.com/fortune500>.

According to Table 10, Washington Large Co.’s sales to Washington customers account for 50 percent of its total sales, compared to 2.5 percent for the average U.S. company. We will want to account for the *extra* 47.5 percent of Washington Retail Co.’s taxable income that is apportionable to Washington.

In this example, by relaxing the assumption that every dollar of sales leads to the same amount of federal taxable income, we identified $47.5\% \times \$10$ billion = \$4.75 billion of “extra” federal taxable income that is apportionable to Washington. This is in addition to the \$50 billion of Washington federal taxable income based on unadjusted apportionment, as shown in Table 10. Therefore, in this simple example the adjusted percentage of federal taxable income apportionable to Washington would be:

Equation 5

$$\text{Adjusted Apportionment}_{Wa} = \text{Unadj. Apportionment}_{Wa} + \text{Adjustment}$$

$$2.5\% \left(\frac{50 + 4.75}{50} \right) = 2.74\%$$

This process of adjusting the apportionment calculation generalizes for a series of large companies as follows. First, define the following terms in Equation 6a and Equation 6b:

Equation 6a and 6b⁷⁹

$$\beta_i = \frac{X_i}{X_{US\ Avg}}, \text{ where } X_i = \text{Taxable Income per dollar of net revenue for company } i;$$

$$\alpha_i = \text{The “excess” percentage of all Washington spending going to company } i$$

$$= \left(\frac{\text{Washington Revenue}_i}{\text{US Revenue}_i} - \text{Unadj. Apportionment}_{Wa} \right) \times \frac{\text{US Revenue}_i}{\text{Aggregate Washington Revenue}}$$

Then, the series of adjustments for each large company is:

Equation 7

$$\text{Adjusted Apportionment}_{Wa} = \text{Unadj. Apportionment}_{Wa} + \sum_i \frac{\alpha_i (\beta_i - 1) (X_{US\ Avg}) R_{Wa}}{TI_{US\ Total}},$$

$$\text{where } TI_{US\ Total} = \text{Total U.S. taxable income and}$$

$$R_{Wa} = \text{Total revenue of all corporation’s sourced from Washington}$$

⁷⁹ Note, Aggregate Washington Revenue in the denominator of Equation 6b refers to total net revenue sourced from all Washington households, businesses, and government.

Note, that adjustments can be positive or negative depending on whether $\beta_i = \frac{X_i}{X_{US\ Avg}} > 1$ (i.e., whether the adjustment applies to a company with high or low rates of federal taxable income. We show the derivation of Equation 7 in **Appendix D**.

We will use the Form 10-K data⁸⁰ of all public Fortune 500 companies and all Washington companies with \$1 billion of net revenue to estimate their federal taxable income (and net revenue) for fiscal years ending after June 30, 2017. Note: 2019 10-K data is already available for most December fiscal year end companies, allowing us an early – but somewhat limited – preview of large public companies’ tax results.

For each large taxpayer in our scope as described above, we will extract the following data:

- Net revenue,⁸¹
- Total cash paid for income taxes (net of refunds);
- Provision for US federal income taxes;
- Provision for US state and local taxes; and
- Provision for foreign taxes.

We use total cash paid for income taxes to approximate the total amount of income taxes due (federal, state and local, and foreign) in a given tax year. Total cash paid for income taxes has some limitations. Corporate taxpayers face frequent audits, often for multiple tax years and in multiple countries. Therefore, the total cash paid for income tax includes a component of prior year taxes. We assume that there is no systematic difference between Washington companies and other U.S. companies in this regard.

Total cash paid for income taxes also does not distinguish between federal, state and local, or foreign taxes. We rely on each taxpayer’s provisions for federal, state and local, and foreign taxes⁸² to estimate the percentage of cash paid for income taxes that relates to federal taxes. We divide our estimate of federal income taxes paid by the statutory corporate tax rate in that tax year to arrive at an estimate of their federal taxable income. We then divide this by their net U.S. receipts in the same year, yielding X_i in Equation 6a (taxable income per dollar of net revenue). $X_{US\ Avg}$ is simply the weighted average value of X_i among all of the public Fortune 500 companies.⁸³

Finally, we rely on DOR excise tax data to determine, in conjunction with net revenues from Form 10-K to estimate α_i (the “excess” percentage of all Washington spending going to company i).

⁸⁰ As published by the Securities and Exchange Commission (SEC).

⁸¹ Where available, we will also collect data on net revenues inside and outside the U.S.

⁸² As stated in their Form 10-K.

⁸³ Note we do not rely on a taxpayer’s federal tax provision data to directly estimate the amount of federal tax due in a given year. We consider tax provision data more limited than total cash paid for income tax, as the tax provisions will systematically overstate the amount of tax due each year. The amount by which it overstates tax due may vary systematically depending on how aggressive or conservative a particular taxpayer is.

Industry Apportionment Adjustment

Just as we will adjust the unadjusted apportionment estimate to account for “excess” Washington spending paid to large companies with high/low ratios of federal taxable income to net revenues (X_i), we will do the same for spending paid to industries with high/low ratios of X_i . The industry apportionment adjustment process will proceed very similarly to what was described for large companies, using Equation 7 to make a series of adjustments.

Based on initial estimates using an incomplete sample of Fortune 500 companies, the ratio of federal taxable income to net revenues (X_i) does vary significantly by industry. This is unsurprising given differences in industry margins, and differences in the rates of tax deductions that companies in various industries can claim.

Table 11: Industries with high/low rates of federal taxable income per dollar of net revenue (Preliminary estimates)

High X_i Industries	Low X_i Industries
Information services, and software	Oil and gas extraction, mining, and quarrying
Pharmaceuticals	Vehicle manufacturing
	Wholesale trade
	Retail trade – Food, groceries, drugstores

The table above is subject to change. We plan to identify the industries with X_i that are significantly above or below the average of all Fortune 500 companies. For these industries, we will use IMPLAN input-output data to estimate α_i (the “excess”⁸⁴ percentage of all Washington spending going to goods and services produced by industry i). We can then apply Equation 7 just as with the large company apportionment adjustment to determine the industry adjustments.

Note, where our large companies and industries [i.e., the large company(ies) are in one of the Low/High X_i Industries], we will net out the large company adjustment(s) from the corresponding industry adjustment.

7. Tax Due under a Washington Corporate Income/Net Receipts Tax

Each of the proposal summarized in Table 2 - Table 4 assume a flat tax rate. Therefore, we simply multiply the proposed tax rates by the (adjusted) Washington apportionable taxable income each quarter to estimate the amount of tax due each quarter under a Washington corporate income/net receipts tax.

For the 2017-19 biennium, we will use DOR data on quarterly tax receipts from: (a) the state sales and use tax, (b) the state property tax, and (c) the B&O tax. To identify tax rates to achieve given revenue targets, we simply divide the revenue target by the amount of Washington apportionable taxable income in the period.

⁸⁴ Relative to unadjusted apportionment.

8. Tax Due Under a Washington Corporate Income/Net Receipts Tax

As noted in the **Assumptions** section, assuming Washington adopted the estimated payment schedule of Oregon and Idaho, there may be a lag for a small – but perhaps not insignificant – percentage of tax collections, particularly around the cutoff between Washington fiscal years. In this step we intend to account for such timing differences, but we are still in the process of determining the best approach. (Again, we welcome your suggestions on how best to account for this.)

9. Washington Corporate Income/Net Receipts Tax Forecasts (2020-)

For any proposals or requests that require estimates of corporate income/net receipts taxes for Washington Fiscal 2020 or later, we must forecast future changes in the taxable income of Washington corporations, as well as the ongoing impact of TCJA reforms.

For our 2020- forecasts, we will begin with our Step 4 estimates of quarterly federal taxable income during U.S. Fiscal 2019. We will apply the BEA’s before-tax corporate profits statistic⁸⁵ to account for growth in U.S. corporate profits since U.S. Fiscal 2019.

Next, we will account for the evolving impact of TCJA provisions on taxpayer’s gross income and deductions. Because of TCJA provisions, taxable income should increase over time, even holding corporate profits constant.⁸⁶ Based on JCT (2017) (and more recent sources where available), we will adjust for these evolutions.

For example, suppose the best available estimates suggest that TCJA increased gross income less deductions by \$40 billion in 2019 and will increase gross income less deductions by \$56 billion in 2021. Also, assume BEA’s forecasts of corporate profit grow by 10 percent over the 2-year period from 2019 - 2021. Then we would adjust the 2021 estimate of federal taxable income by:

Equation 8

$$\begin{aligned} \text{Taxable income Adjustment}_{2021} &= \\ \text{TCJA Impacts}_{2021} - \text{TCJA Impacts}_{2019} \times \text{Growth Corp Profit}_{2019-21} &= \\ \$56 \text{ billion} - (\$40 \text{ billion} \times 110\%) &= \$12 \text{ billion} \end{aligned}$$

We would then split the \$12 billion adjustment into four \$3 billion *quarterly* adjustments, which we would add to federal taxable income during U.S. Fiscal 2021 to account for the incremental effects of TCJA in 2021.

⁸⁵ “Before-tax corporate profits with IVA & capital consumption adjustment, billions of dollars.”

⁸⁶ Based on the JCT (2017) analysis. As noted in Step 6, we plan to use the JCT (2017) analysis of the impacts of TCJA provisions as a starting point to identify changes to gross income, deductions, credits, and minimum tax payments that evolve over time. We will research other sources to validate these estimates, focusing on provisions with large estimated budget impacts.

As with the 2017-2019 model, we will then proceed to calculate apportionment. Since data does not exist to calculate apportionment in 2021 in the way we described in Steps 5 and 6, we will instead simply adjust our prior (adjusted) apportionment calculations to account for any forecasted change in Washington's share of total U.S. personal income. The portion of federal taxable income apportionable to Washington in U.S. 2021 would be:

Equation 9

$$\text{Apportionment}_{Wa,2021} = \text{Adjusted Apportionment}_{Wa,2016-19} \times \frac{\text{WA \% of U.S. Personal Income}_{2021}}{\text{WA \% of U.S. Personal Income}_{2016-19}}$$

Note: we will use the average of the four Washington apportionment percentages for calendar years 2016 – 2019, instead of just the most recent year. By doing so, we intend to smooth out some year-to-year volatility in the estimated apportionment percentages that are caused by one-time changes in profitability or tax results.

Finally, for our 2020 forecasts, we will proceed with **Step 7** and **Step 8** (calculation of tax due under a Washington corporate income/net receipts tax) identically to the 2017-2019 calculations.

10. Validate Model and Report Results

General Reporting

As discussed in the **Objectives** section, the budget proviso requires that we determine:

- The amount of revenue raised during the 2017-2019 fiscal biennium under a flat personal and corporate income/net receipts tax rate of 5.0 percent and 3.8 percent;
- The flat personal and corporate income/net receipts tax rate needed to replace the revenues raised during the 2017-2019 fiscal biennium by taxes that would be reduced or replaced under Proposal A or Proposal B (see Table 1); and
- The flat corporate income/net receipts tax rates needed to replace the revenues raised during the 2017-2019 fiscal biennium by the B&O tax.

However, an advantage of using a macro approach is that it allows for more transparency. Specifically, for a given proposal we plan to summarize a table similar to Table 12 below.

Model Review: Corporate Income/Net Receipts Tax, Continued

Table 12: Summary report template for corporate income tax proposal - Corporate Macro Model

Amount		U.S. Fiscal 2017	U.S. Fiscal 2018	U.S. Fiscal 2019
Total federal corporate income tax collections				
Estimate		Washington Fiscal 2017	Washington Fiscal 2018	Washington Fiscal 2019
Total federal corporate income tax collections	a			
Add back: Federal corporate income tax credits Less: minimum tax payments ⁸⁷	b			
Average federal corporate income tax rate	c			
Total federal taxable income	$d = \frac{a + b}{c}$			
Unadjusted Washington Apportionment %	e			
Net Adjustments to Washington Apportionment %	f			
Taxable Income Apportionable to Washington	$g = (e + f) \times d$			
Proposed Washington corporate income/net receipts tax rate	h			
Tax due under proposed Washington corporate income/net receipts tax	$i = g \times h$			

Presenting results in this manner will make it easier to validate the reasonableness of the estimates and identify any areas of concern.

Technical Advisory Group Question 6

Factoring in time and resource constraints, are there additional details we should present in our results that would significantly improve:

- *The ability to validate the model;*
- *The usefulness of the results to policymakers.*

Model Validation - Other States

Especially in light of uncertainty about the effects of TCJA, we want to see how the model's underlying assumptions hold up when tested. To confirm that the Corporate Macro Model gives reliable estimates, we

⁸⁷ Reports may include additional details related to tax credit adjustments compared to JCT (2017).

would like to see how it performs on other states that report their annual corporate income tax collections. It is not feasible to test our model's performance for all states. It may be feasible for a small sample of states, ideally, if those states do not deviate significantly from a simple flat tax based on federal taxable income.

The steps in the model validation based on other states would be similar – but simpler – than the steps used in the main analysis. **Step 1 - Step 4** are each based on the federal corporate income tax, so we would not need to repeat these steps (some adjustments may be necessary if the state has a different fiscal year). Given the amount of work involved in determining the apportionment adjustments in **Step 6**, we would likely rely on the state's unadjusted apportionment in **Step 5**. Then we will apply the state's flat tax rate to its apportionable federal taxable income and make any necessary adjustments to account for relevant features of the state's corporate income tax structure (e.g., credits, deductions, thresholds, etc).

Technical Advisory Group Question 7

In order to validate our model, we would like to see how well it predicts state corporate tax receipts when applied to other states' corporate income tax structures. We would like advice on a few possible states to include in this model validation exercise, especially those with:

- *The state corporate income tax is tied to federal taxable income;*
- *The state has a flat corporate income tax rate;*
- *S-Corporations are exempt from the state's corporate income tax;*
- *The state's corporate income tax features few, if any, credits, deductions, thresholds, or other features that affect the tax base or tax collections;*
- *To the extent such deviations exist, data exists to adjust the model accordingly;*
- *The state has a June 30 fiscal year end, comparable to Washington.*

Other Considerations

Application to Corporate Microsimulation Model

We ultimately plan to develop a Corporate Microsimulation Model. Development of that model will begin in earnest in late 2020/early 2021 when the 2018 tax year data is available in FTI. Although we expect the Corporate Macro Model will allow us to meet the requirements of the budget proviso related to the corporate income/net receipts tax, it will not offer the same level of flexibility as a microsimulation model. A microsimulation also will allow more visibility into the impact of a corporate income/net receipts tax on specific groups of taxpayers (e.g., by region and industry).

Although we expect the Corporate Microsimulation Model will ultimately replace the Corporate Macro Model, we expect the latter analysis to have more than just interim usefulness. Some ways we expect to apply results or lessons from the Corporate Macro Model are as follows:

- In general, the Corporate Macro Model will provide a valuable framework for thinking through the Corporate Microsimulation Model plan. Familiarity with the federal corporate income tax framework

and having worked through modeling issues in the macro framework will help us avoid missteps in developing the Corporate Microsimulation Model.

- The Corporate Macro Model will allow us to perform “sanity checks” in many cases that may help us identify modelling errors in the Corporate Microsimulation Model.
- The Corporate Microsimulation Model will also need to factor in how TCJA provisions change over time. The research that the Corporate Macro Model requires related to the ongoing effects of TCJA provisions will be invaluable.
- Some tasks we perform, adjustments we apply, data we identify, and programs we write we expect will be directly leverageable in the Corporate Microsimulation Model.

Corporate Conversions

Certain observers believe a significant amount of pass-through business activity converting to a corporate form in response to federal tax reform. If this is occurring, it will lead to a long-term shift in taxable income from the federal personal income tax to the federal corporate income tax. To the extent this has occurred through 2019, this effect is captured in the federal corporate income tax collections and thus is implicit in the Corporate Macro Model. In conjunction with the personal income tax modelling, we will explore whether corporate conversions will likely impact *future* collections. For additional details, refer to the Corporate Conversions Analysis Plan.

Depending on our findings, materiality, and time constraints, the Corporate Microsimulation Model may model corporate conversions.

Other Questions for the Technical Advisory Group

Technical Advisory Group Question 8

Are there features of other state corporate income taxes that we have not considered that are ubiquitous enough that we should consider modelling in our analysis (or building a toggle for)?

Technical Advisory Group Question 9

For all analyses, we welcome suggestions relating to data sources, methods, and references.

Ideas from the Technical Advisory Group

- TBD

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Appendix B: Tax Cuts and Jobs Act – Major Corporate Provisions

Reduced corporate tax rate of 21%

Summary: Prior to TCJA, most federal corporate taxable income was tax at approximately a 35 percent rate (with some variation in rates at lower levels of taxable income). TCJA introduced a flat 21 percent corporate income tax rate.

Pre-TCJA Corporate Income Tax Schedule (2017):

Taxable Income Range	Marginal Tax Rate	Average Tax Rate ⁸⁸
\$0 - \$50,000	15%	15.0%
\$50,000 - \$75,000	25%	18.3%
\$75,000 - \$100,000	34%	22.3%
\$100,000 - \$335,000	39%	34.0%
\$335,000 - \$10 million	34%	34.0%
\$10 million - \$15 million	35%	34.3%
\$15 million - \$18.33 million	38%	35.0%
\$18.33 million +	35%	35.0%

Tax on deemed repatriation of foreign income

Summary: The TCJA tax on deemed repatriation of foreign income is a one-time tax on the unrepatriated assets held by foreign affiliates as of the end of 2017. Under TCJA, future dividends paid by foreign subsidiaries to US multinational parents are no longer subject to US taxation (see ***Deductions for dividends received from foreign corporations***).

New Tax Base: The TCJA Repatriation Tax applied to certain assets held by foreign subsidiaries of US multinationals to capture foreign income that was not repatriated as of 2017. (Under pre-2017 law, income of foreign subsidiaries was not taxable until repatriated (e.g., as dividends) to the parent.

Tax Rate: A preferred tax rate of 15.5% applied on cash/cash equivalents and 8% applied on other deemed repatriations.

Installments: Taxpayers have the option of paying tax on deemed repatriations in installments over eight years.

Move to Territorial Taxation in 2018: Consistent with a move to a territorial system, active income earned by foreign affiliates of U.S. multinationals and repatriated to the U.S. generally is no longer subject to US, with the exception of certain inclusions for low-taxed foreign income (see Base Erosion Abuse Tax (BEAT) and Global Intangible Low-Taxed Income (GILTI) provisions of the TCJA.

⁸⁸ Average tax rate applies to taxpayers at the top of a given tax bracket.

Deduction for dividends received from foreign corporations

Summary: Most active income earned foreign affiliates of U.S. multinationals which is later paid to the U.S. domestic corporation through a dividend is eligible for a deduction, beginning in the 2018 tax year. This, in effect, moves the U.S. toward a territorial tax system where U.S. taxpayers usually only pay corporate income taxes on income earned in the U.S.

Effect on Foreign Tax Credits: Although this does not directly change foreign tax credit rules, foreign tax credits become obsolete in many cases where taxpayers can fully deduct their foreign income. However, as noted in *Key Exceptions* below, not all dividends received from foreign corporations can be claimed as a deduction.

Key Exceptions: This deduction does not apply to Subpart F (passive) income or Global Intangible Low-Taxed Income (see *Global Intangible Low-Taxed Income*).

Business Interest Deduction Limitation

Summary: Under TCJA, beginning in the 2018 tax year the net interest expenses (interest expenses less interest earned) of businesses not meeting the gross receipts test was limited to 30% of adjusted taxable income.

Threshold: The gross receipts test stipulates that taxpayers with average gross receipts of less than \$25 million in the previous three years are not subject to the business interest deduction limitation. The threshold of \$25 million applies in 2018, and will be adjusted for inflation thereafter.

Pre-2017 Law: Prior to TCJA, business interest was limited to 50% for firms with a debt-equity ratio greater than 1.5.

Modifications to Net Operating Loss (NOL) Deductions

Summary: Under TCJA NOLs carrybacks are no longer allowed. NOLs can now be carried forward *indefinitely*.

Pre-2017 Law: Prior to TCJA, NOLs were carried back to the two tax years prior to the year in which the NOLs were accrued. Any unapplied NOLs were carried forward for *up to 20 years*.

Base Erosion and Anti-abuse Tax

Summary: The Base Erosion and Anti-abuse Tax (BEAT) is an alternative minimum tax that is calculated similar to regular corporate income tax liability, except that i) certain deductions such as those taken for most payments to foreign affiliates are disallowed, and ii) a lower tax rate applies. If a taxpayer's BEAT tax

calculation is greater than its regular corporate income tax liability, the taxpayer must pay the tax liability under BEAT.

Threshold: Corporations with average annual gross receipts greater than \$500 million in the 3-year tax period preceding the current tax year.

Tax Rate: The applicable BEAT tax rate schedule is as follows:

- **2018:** 5%
- **2019-2025:** 10%
- **2026-:** 12.5%

Deductions Added Back: Most payments to foreign affiliates are disallowed and hence added back to determine the taxpayer's modified taxable income (MTI) and any alternative BEAT tax liability. Payments to foreign affiliates that qualify as COGS or that qualify under §482-9 for the Services Cost Method are exceptions, and do not need to be added back to determine MTI.

Global Intangible Low-Taxed Income

Rationale: With TCJA's shift toward a territorial tax system, a new category of foreign income, Global Intangible Low-Taxed Income (GILTI), was added to corporate taxable income to reduce incentives for corporate taxpayers to shift profits to low-tax jurisdictions.

Summary: While regular income earned outside the U.S. is not subject to U.S. taxation, any returns earned by a multinational taxpayer in excess of a 10% return on depreciable tangible property in a foreign country that is subject to less than a 13.125% tax in the foreign territory is considered GILTI. The taxpayer will owe U.S. taxes on GILTI such that the overall rate paid on that income (including U.S. and foreign taxes) is 13.125%.

Tax Rate Schedule: Technically the tax rate on GILTI income in 2018-25 is the standard rate of 21%. However, taxpayers can deduct 50% of GILTI income, reducing the effective rate to as low as 10.5%. In addition, taxpayers receive an 80% foreign tax credit, which means that foreign income taxed at greater than 13.125% is not subject to tax under the GILTI provisions. In 2026, the GILTI deduction will fall from 50% to 37.5%, making the effective tax rate at that time 13.125%.

Changes to Bonus Depreciation (100% Expensing Depreciation of Qualified Property)

Summary: Under TCJA, bonus expensing (immediate deduction) is allowed on business equipment acquired and placed in service between 2018-26, including 100% expensing for 2018-2022.

Bonus Depreciation Schedule: Bonus expensing of business equipment is allowed at the following rates for 2018-2026:

- **2018-2022:** 100% Expensing

- **2023:** 80% Expensing
- **2024:** 60% Expensing
- **2025:** 40% Expensing
- **2026:** 20% Expensing

Pre-2017 Law: Prior to TCJA, the bonus deduction schedule was 50%, 40%, and 30% for property placed in service in 2017, 2018, and 2019, respectively.

Deduction for Foreign Derived Intangible Income

Rationale: While GILTI provisions are the “stick” to discourage multinational taxpayers from shifting intangible income to foreign low-tax jurisdictions, Foreign Derived Intangible Income (FDII) is the “carrot” to attract intangible income to the U.S.

Summary: If a U.S. multinational taxpayer earns a return on depreciable assets of greater than 10%, then the portion of that “excess return” that is allocable to foreign sales is subject to a reduced tax that is lower than the regular corporate tax rate of 21%. The global intangible income (or excess return) is determined first, and then is multiplied by the ratio of foreign sales to total sales to determine FDII.

Tax Rate Schedule: The applicable tax rate schedule for FDII is as follows:

- **2018-2025:** 13.125%
- **2026-:** 16.83%

Repeal of Corporate Alternative Minimum Tax

Summary: The Corporate Alternative Minimum Tax (AMT), which was in effect pre-2017 was repealed under TCJA.

Pre-2017 Law: Prior to TCJA, the AMT was a secondary tax that ran in parallel to the rest of the federal corporate income tax system. The AMT tax rate was lower than the standard corporate income tax rate of 35 percent, but the AMT calculation did not allow all of the same credits and preferences of the standard corporate income tax calculation. If the taxpayer’s liability under the AMT calculation exceeded the taxpayer’s regular tax liability (excluding AMT), then the additional AMT was added to the taxpayer’s tax liability.

Deduction of Qualified Pass-Through Business Income

Rationale: To extend some of the benefits of the corporate income tax rate reduction to some pass-through entities.

Summary: Under TCJA, a deduction of 20% is allowed on qualified business income of pass-through entities. This effectively reduces the tax rate at the highest tax bracket from 37% to 29.6%. Note this provision did not

directly impact C-Corporations, but was intended to help level the playing field between C-Corporations and S-Corporations.

Qualified Business Income: Qualified Business Income (QBI) includes taxable income effectively connected with a U.S. trade or business. Items such as capital gains and losses, certain dividends, and interest income are excluded.

Incentive to Convert to C-Corporation: The deduction for QBI does not apply to dividends received in connection with certain business activities, including professional services. Therefore pass-through entities in these industries have a relatively stronger incentive to convert to C-Corps, post-TCJA.

Appendix C: Single-Factor vs. Three-Factor Apportionment

Background

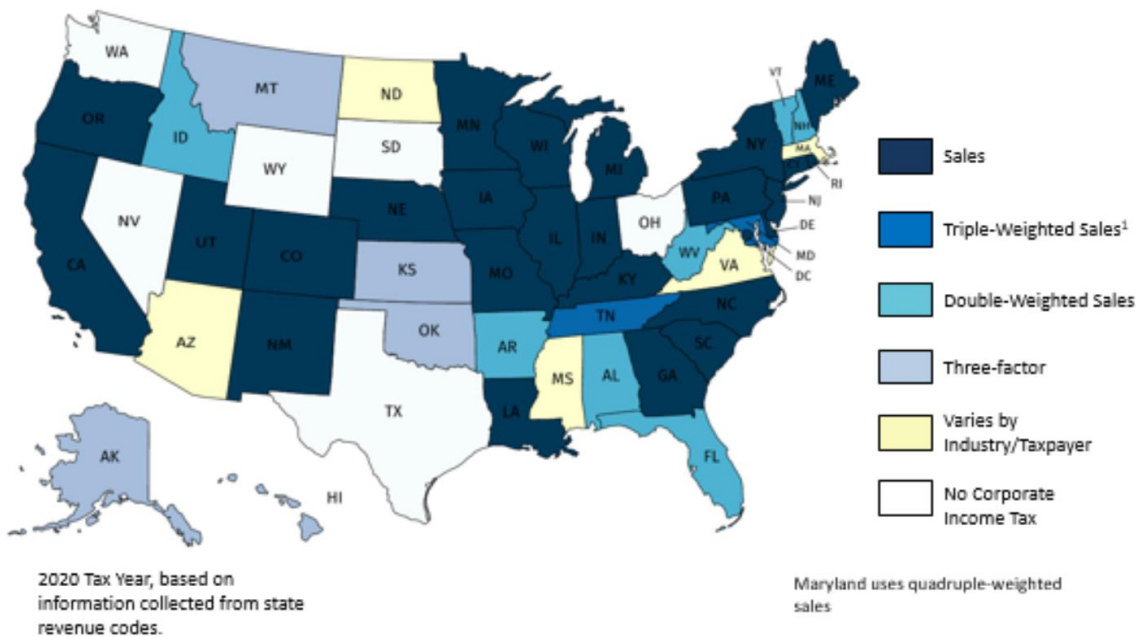
The 2002 Tax Structure Report recommended apportioning the income of multistate corporations using the three-factor formula or a three-factor formula with double weighted sales. We were asked to consider what apportionment method would be most likely to be adopted today if the State of Washington were to enact a corporate net income tax.

If the corporate tax were adopted today in Washington State, a single factor destination sales formula would be the most likely apportionment formula to be adopted. State trends, consistency with the other Washington taxes, and economic development reasons all favor a single sales factor.

States are increasingly adopting a single factor sales formula

In 2002, the dominant formula was the three-factor formula with double weighted sales. Today, a majority of jurisdictions with a corporate income tax use a single sales factor. Twenty-five states and the District of Columbia use single sales factor apportionment exclusively or with narrow exceptions. Five additional states either give taxpayers the option of using single sales factor or apply single sales factor apportionment to certain taxpayers. Another nine states use a three-factor apportionment method where sales is at least double-weighted. Only five states continue to use the “standard” three-factor apportionment.

Figure 7: State corporate income tax apportionment formulas



The department currently apportions income for B&O tax and retail sale tax consistent with sales

The single weighted sales factor is consistent with how the Department apportions income and sales for other Washington taxes. B&O tax and retail sales taxes are already sourced to the destination of the sale. To the extent we replaced the B&O tax with the net corporate income tax, the corporate income would be sourced consistent with the retail sales tax.

Economic development and political considerations favor a single sales factor

Finally, economic development and political considerations favor a single factor sales formula. Under a three-factor formula, the property and payroll factors increase the share of income assigned to a corporation's home state. The greater the investment in plant, offices, and employees in a state, the greater the share of the income will be apportioned to that state. In contrast, the sales factor assigns sales to where the goods are sold and shipped to customers. Giving exclusive weight to the sales factor is designed to encourage taxpayers to locate in the state because their in-state capital and labor will not increase their corporate tax liability, and their sales will count only insofar as they have a market in the state. In addition, the sales factor captures more income from out-of-state businesses. Accordingly, the sales factor tends to be more politically palatable and encourages economic development in a state.

Conclusion

For these reasons, we are planning to use single sales factor apportionment in our main analysis to determine the potential impact a corporate income/net receipts tax would have in Washington. However, we will also model three-factor apportionment as an alternative that may be considered or requested.

Alternative Calculation of Three-Factor Apportionment

To calculate the alternative three-factor apportionment, we will rely on a similar methodology as in **Step 5** and **Step 6**, but scaled back. For the payroll factor, we will begin with an unadjusted apportionment estimate that is based on Washington's share of total non-farm private sector employment (multiplied by mean annual wages).⁸⁹ Similar to the apportionment adjustment for the sales factor, we will then perform a large company adjustment. However, in this case payroll (P) replaces revenue as a variable in the apportionment adjustment equation α_i refers to the "excess" percentage of company i 's employees that are based in Washington, and $X_{US Avg}$ is the U.S. average of taxable income per employee.⁹⁰

$$Adjusted\ Apportionment_{Wa} = Unadj.\ Apportionment_{Wa} + \sum_i \frac{\alpha_i(\beta_i - 1)(X_{US Avg})P_{Wa}}{TI_{US Total}}$$

Due to time constraints we do not anticipate performing the industry adjustment to the payroll apportionment factor.

With respect to the property factor, we are exploring the best approach. Many states publish statistics on property tax assessments, broken down by type of use. An option would be to estimate Washington's assessed business/commercial property values as a percentage of the total.⁹¹ Due to time constraints, we do not anticipate performing the apportionment adjustments to the property apportionment factor.

We welcome any suggested improvements on this methodology.

⁸⁹ We plan to use BLS state employment data and mean annual wages data.

⁹⁰ We plan to rely on Washington State Employment Security Data to determine these company's Washington payroll.

⁹¹ To the extent some states do not publish this data, we may impute business/commercial property values to these states based on GDP or another factor.

Appendix D: Derivation of Apportionment Adjustment Equation

This appendix demonstrates the derivation of *Equation 7*:

$$\text{Adjusted Apportionment}_{Wa} = \text{Unadj. Apportionment}_{Wa} + \sum_i \frac{\alpha_i(\beta_i - 1)(X_{US\ Avg})R_{Wa}}{TI_{US\ Total}},$$

where $TI_{US\ Total}$ = Total U.S. taxable income

To begin, note that under single-factor apportionment, the percentage of all U.S. taxable income apportionable to Washington is:

$$\text{Apportionment}_{Wa} = \frac{\sum_i [\frac{R_{Wa,i}}{R_{US,i}} \times TI_{US,i}]}{TI_{US\ Total}}, \text{ where:}$$

We sum across all U.S. corporations, (*i*)

$R_{Wa,i}$ is corporation *i*'s revenue earned in Washington

$R_{US,i}$ is corporation *i*'s revenue earned in the U.S.

$TI_{US,i}$ is corporation *i*'s taxable income earned in the U.S

The equation above can be restated as:

$$\text{Apportionment}_{Wa} = \frac{\sum_i [\frac{TI_{US,i}}{R_{US,i}} \times R_{Wa,i}]}{TI_{US\ Total}}$$

If we assumed (as we do in **Step 5**) that each corporation's taxable income per dollar of net receipts ($\frac{TI_{US,i}}{R_{US,i}}$) is equal to a fixed amount, X^* , then this yields:

$$\text{Apportionment}_{Wa} = \frac{\sum_i [X^* \times R_{Wa,i}]}{TI_{US\ Total}}$$

If we relax that assumption, and instead allow that some "excess"⁹² proportion (α) of revenue sourced from Washington customers is associated with a corporation *j* such that $\frac{TI_{US,j}}{R_{US,j}} = \beta X^*$, while the remainder of revenue sourced from Washington customers ($1 - \alpha$) still goes to "typical" corporations such that $\frac{TI_{US,i}}{R_{US,i}} = X^*$ X^* dollars of taxable income per dollar of net revenue.

⁹² "Excess" refers to the extra proportion of Washington's spending to that company beyond what would be expected based on Washington's share of all revenues.

$$Apportion_{Wa} = (1 - \alpha) R_{Wa} \times \frac{X^*}{TI_{US\ Total}} + \alpha R_{Wa} \times \frac{\beta X^*}{TI_{US\ Total}}$$

Note, R_{Wa} refers to total Washington-sourced revenues.

This equation can be restated:

Equation 10: Adjusted apportionment

$$Apportion_{Wa} = [1 - \alpha + \alpha\beta] \times R_{Wa} \times \frac{X^*}{TI_{US\ Total}}$$

Note, if $\alpha = 0$, then the previous equation reverts to the assumption that taxable income per dollar of net revenue is constant for all corporations. This is our unadjusted apportionment percentage:

Equation 11: Unadjusted apportionment

$$Unadj. Apportion_{Wa} = R_{Wa} \times \frac{X^*}{TI_{US\ Total}}$$

We can solve for the apportionment adjustment by simply subtracting unadjusted apportionment from adjusted apportionment (Equation 10 minus Equation 11).

$$Apportionment\ Adjustment = R_{Wa} \times \frac{\alpha(\beta - 1) X^*}{TI_{US\ Total}}$$

The apportionment adjustment formula in Equation 7 simply sums up a series of these apportionment adjustments to determine Adjusted Apportionment:

$$Adjusted\ Apportion_{Wa} = Unadj. Apportion_{Wa} + \sum_i \frac{\alpha_i(\beta_i - 1)(X_{US\ Avg}) R_{Wa}}{TI_{US\ Total}},$$