

## CHAPTER 4

### WASHINGTON COMPARATIVE TAXES

RCWs 82.04.4452(8) and 82.63.020 require that the Department shall study the effect of the high tech B&O tax credit and sales and use tax deferral on diversification of the state's economy, growth in R&D investment, and the movement of firms or consolidation of firms' operations into the state. The incentives have an effect on diversification and growth if they serve to make Washington more competitive.

The analysis shows that:

- Washington ranks towards the mid-range of six competitor states for total state and local taxes paid by high tech firms.
- The high tech B&O tax credit does not change Washington's position, when all major business taxes are considered.
- However, the sales and use tax deferral for new R&D facilities does improve the competitive position of Washington high tech firms, when all major business taxes are considered.
- Washington's high tech credit and deferral programs provide more tax relief on average than the other states' incentives considered here, except California. Oregon and Nevada provide little or no relief, in part because of routinely low tax burdens on high tech firms.
- Washington's B&O tax credit is easy to use, which could be a reason for its higher participation compared with other states' credits.

### METHODOLOGY

A hypothetical firm analysis is used to measure the relative impact of the high tech R&D incentives on the competitive position of Washington firms. The R&D incentive programs are modeled as a component of the major state and local business taxes in the selected states in order to address the incremental impact of the R&D programs on Washington's overall tax competitiveness.

### Competitor States and Their Tax Systems

Along with Washington, the states included in the analyses are:

- California
- Missouri
- Nevada
- North Carolina
- Oregon
- Texas

These six states have been identified by industry sources as potential sites for future facilities or the home of competitor firms, or by public officials as states that are soliciting industries and jobs that Washington would like to retain and attract.

The following major state and local business taxes are included:

- Washington B&O tax and corporate income and franchise taxes in other states,
- Sales and use taxes paid by business, and
- Property taxes paid on real and personal business property.

### Hypothetical Firm Profiles

The study employs detailed firm profiles containing characteristics such as gross receipts, corporate income and profits, taxable purchases, and property holdings. The profiles were constructed with data from financial filings, the IRS, state tax return information, industry experts, and other sources.

There are five firm types analyzed in the study. Data on sales, R&D spending, and investment in new R&D facilities are described below for both the B&O tax credit analysis and the new facility deferral analysis:

**Table 4.1**  
**For the B&O Tax Credit: Hypothetical Firm Sales and R&D Spending**

	<b>Annual Sales (\$Millions)</b>	<b>R&amp;D Spending (Percent of Sales)</b>	<b>10 Yr. NPV Sales (\$Millions)</b>
• Small aircraft and parts manufacturer	\$40	8%	\$309
• Instruments and related equipment manufacturer	\$24	8%	\$172
• Semiconductor and related devices manufacturer	\$353	3%	\$2,538
• Biotechnology/pharmaceutical integrated manufacturer and wholesaler	\$209	26%	\$1,543
• Software originator	\$10	3%	\$73

The firms in the analyses are typical Washington firms, not the giants of their respective industries. The smallest in sales is the software originator with sales of \$10 million annually. The small aircraft manufacturer with \$40 million of annual sales matches that of a supplier rather than a seller. The largest firm is the manufacturer of semiconductor and related devices whose annual sales of \$353 million classify it as a modest-sized facility in this industry.

R&D spending by the hypothetical firm reflects the levels of R&D spending by participants in Washington's high tech programs. R&D expenditures for the software firm and the semiconductor firm are approximately 3 percent of sales revenues, while the integrated biotech/pharmaceutical firm, at 26 percent, has the greatest R&D expenses relative to sales.

**Table 4.2**  
**For the New R&D Facility Deferral: Hypothetical Firm Investment and Sales**

	<b>Investment in New Facility (\$Millions)</b>	<b>Annual Sales Attributed to the Facility (\$ Millions)</b>	<b>10 Yr. NPV Sales Attributed to the Facility (\$Millions)</b>
• Small aircraft and parts manufacturer	\$2.1	\$3.9	\$24.9
• Instruments and related equipment manufacturer	\$1.3	\$0.9	\$5.4
• Semiconductor and related devices manufacturer	\$8.8	\$11.4	\$68.8
• Biotechnology/pharmaceutical integrated manufacturer and wholesaler	\$41.1	\$44.9	\$272.9
• Software originator	\$0.2	\$0.4	\$2.5

The assumed investment in new R&D facilities for the five firm types range from \$183,000 for the small software firm, to \$41.1 million for the integrated biotech/pharmaceutical firm. A portion of firm revenues and taxes are attributed to these R&D facilities.

Total tax burden is estimated for the seven different state tax systems for each of the firms. Taxes are ranked by the total estimated ten-year net present value. Tax savings due to the incentives are determined by taking the difference between total tax burden with and without incentives for all states. Factors such as labor and other business costs, federal taxes, and regulatory structure are the same within each industry in order to study the effect of taxes alone.

In reality, a firm's actual tax payments vary considerably due to factors including the firm's form of ownership, its corporate structure, and the method of apportionment used. To hold these constant, the firms are modeled as independent entities or as parts of larger corporations that are considered on a stand-alone basis.

Firms are assumed to sell all products in-state. It is also assumed that firms take full advantage of the available credits and exemptions, such as Washington's manufacturers' sales and use tax exemption. All firms are assumed to be located in areas where high tech businesses typically desire to locate; therefore, firms are not shown as taking advantage of programs for distressed areas, enterprise zones, or rural areas. All firms are assumed to be profitable. The details for the states' programs, the location of the firms, taxes, and assumptions are found in Appendix B.

## **SEVEN STATE COMPARISONS**

### **Relative Tax Burdens**

The hypothetical firm analysis has two parts which answer two separate questions. The first part of the analysis examines the effectiveness of Washington State's B&O tax credit and sales and use tax deferral in improving the competitive position of Washington high tech firms. In this part of the analysis the hypothetical firms are taxed under current law for each of the six comparative states and Washington State. The ten-year net present value tax burden is compared and the states are ranked according to their total tax burdens. Washington's ranking is compared both with and without its tax incentives.

### **Relative Tax Relief**

The second part of the hypothetical firm analysis compares the high tech incentive programs in each of the seven states to determine which type of high tech incentive program offers the greatest tax relief.

### **Separate Analyses for the Credit and Deferral**

For both parts, the analysis compares the B&O tax credit and sales and use tax deferral programs separately. Washington's B&O tax credit for R&D spending compares with credits granted by other states against their corporate income and franchise taxes. However, the sales and use tax deferral for R&D facilities is found only in Washington. Washington's sales and use tax deferral compares more closely to other state incentives targeting investment in new facilities in general.

### **Part 1: Change in Washington's Relative Tax Burden Caused by the High Tech Incentives**

#### ***Effect of the B&O Tax Credit on Tax Rankings***

The first two columns of Table 4.3 show Washington's total tax burden without the B&O tax credit compared to current-law tax burden in the other six states. The second two columns show Washington's relative tax burden with the B&O tax credit.

Washington's rank is approximately in the middle for most of the hypothetical firms, generally ranking 3rd, 4th, or 5th out of 7 (where 1 is the lowest tax burden and 7 is the highest). The introduction of the high tech credit changes the rank of only one of the hypothetical firms, as instruments and equipment improves from 4th to 2nd. The Washington biotech/pharmaceutical firm, however, moves into a virtual tie with the California firm.

**Table 4.3**  
**Washington With and Without B&O Credit**

Net Present Value: 10 Years of Expected Taxes in \$Millions/Rank: 1=lowest tax burden, 7=highest tax burden

		No WA B&O Credit		WA B&O Credit	
		\$Millions	Rank	\$Millions	Rank
Small Aircraft and Parts	Nevada	\$2.199	1	\$2.199	1
	Oregon	2.373	2	2.373	2
	California	3.551	3	3.551	3
	North Carolina	3.741	4	3.741	4
	<b>Washington</b>	<b>4.356</b>	<b>5</b>	<b>3.979</b>	<b>5</b>
	Texas	4.741	6	4.741	6
	Missouri	4.800	7	4.800	7
Instruments and Equipment	Nevada	\$1.345	1	\$1.345	1
	Oregon	3.610	2	3.610	3
	California	3.655	3	3.655	4
	<b>Washington</b>	<b>3.658</b>	<b>4</b>	<b>3.449</b>	<b>2</b>
	North Carolina	4.585	5	4.585	5
	Texas	6.112	6	6.112	6
	Missouri	6.474	7	6.474	7
Semiconductor and Related Devices	Nevada	\$15.852	1	\$15.852	1
	Oregon	30.085	2	30.085	2
	<b>Washington</b>	<b>38.800</b>	<b>3</b>	<b>37.684</b>	<b>3</b>
	California	40.753	4	40.753	4
	North Carolina	40.766	5	40.766	5
	Texas	51.788	6	51.788	6
	Missouri	54.018	7	54.018	7
Integrated Biotech Pharmaceutical	Nevada	\$16.758	1	\$16.758	1
	Oregon	27.823	2	27.823	2
	California	31.594	3	31.594	3
	<b>Washington</b>	<b>37.782</b>	<b>4</b>	<b>31.793</b>	<b>4</b>
	North Carolina	43.126	5	43.126	5
	Texas	52.584	6	52.584	6
	Missouri	54.011	7	54.011	7
Small Software Originator	Nevada	\$0.299	1	\$0.299	1
	Oregon	0.604	2	0.604	2
	North Carolina	0.780	3	0.780	3
	California	1.086	4	1.086	4
	<b>Washington</b>	<b>1.158</b>	<b>5</b>	<b>1.123</b>	<b>5</b>
	Texas	1.290	6	1.290	6
	Missouri	1.293	7	1.293	7

Table 4.4 summarizes Washington's ranking for the hypothetical firms in the five industries.

**Table 4.4**  
**Washington's High Tech Tax Burden Rank**  
**WA With and Without R&D Credit**

Washington Firms	WA Without Credit	WA With Credit
Small aircraft and parts	5	5
Instruments and equipment	4	2
Semiconductor and related	3	3
Biotech/pharmaceutical	4	4
Small software originators	5	5

***Effect of the Sales and Use Tax Deferral on Tax Rankings***

The first two columns of Table 4.5 show Washington's tax burden without the sales and use tax deferral. The second two columns of the table show Washington's relative tax burden incorporating its sales and use tax deferral.

In these scenarios, Washington's tax burden ranks in the middle of the seven states without the deferral program. However, the deferral improves the rankings for most of the firms. Table 4.6 summarizes Washington's ranking for the hypothetical firms building R&D facilities in the five industries.

**Table 4.5**  
**Washington With and Without Sales Tax Deferral**

Net Present Value: 10 Years of Expected Taxes in \$Millions/Rank: 1=lowest tax burden, 7=highest tax burden

		No WA Sales Tax Deferral		WA Sales Tax Deferral	
		\$Millions	Rank	\$Millions	Rank
Small Aircraft and Parts	Oregon	\$0.217	1	\$0.217	1
	Nevada	0.246	2	0.246	2
	California	0.342	3	0.342	4
	North Carolina	0.385	4	0.385	5
	<b>Washington</b>	<b>0.457</b>	<b>5</b>	<b>0.299</b>	<b>3</b>
	Missouri	0.492	6	0.492	6
	Texas	0.493	7	0.493	7
Instruments and Equipment	Nevada	\$0.067	1	\$0.067	1
	Oregon	0.116	2	0.116	3
	California	0.128	3	0.128	4
	<b>Washington</b>	<b>0.150</b>	<b>4</b>	<b>0.112</b>	<b>2</b>
	North Carolina	0.169	5	0.169	5
	Texas	0.223	6	0.223	6
	Missouri	0.231	7	0.231	7
Semiconductor and Related Devices	Nevada	\$0.568	1	\$0.568	1
	Oregon	0.741	2	0.741	2
	California	1.160	3	1.160	4
	North Carolina	1.211	4	1.211	5
	<b>Washington</b>	<b>1.259</b>	<b>5</b>	<b>0.897</b>	<b>3</b>
	Missouri	1.568	6	1.568	6
	Texas	1.605	7	1.605	7
Integrated Biotech Pharmaceutical	Nevada	\$3.628	1	\$3.628	1
	Oregon	4.741	2	4.741	2
	California	6.812	3	6.812	4
	<b>Washington</b>	<b>7.523</b>	<b>4</b>	<b>4.928</b>	<b>3</b>
	North Carolina	7.818	5	7.818	5
	Texas	9.977	6	9.977	6
	Missouri	10.112	7	10.112	7
Small Software Originator	Nevada	\$0.011	1	\$0.011	1
	Oregon	0.020	2	0.020	2
	North Carolina	0.026	3	0.026	4
	California	0.043	4	0.043	5
	Missouri	0.044	5	0.044	6
	<b>Washington</b>	<b>0.047</b>	<b>6</b>	<b>0.025</b>	<b>3</b>
	Texas	0.059	7	0.059	7

**Table 4.6**  
**Washington Total Tax Rank**  
**WA With and Without the Sales Tax Deferral/Exemption on New R&D Facilities**  
 (other states have general incentives for new facilities)

	WA Without Sales Tax Deferral	WA With Sales Tax Deferral
Small aircraft and parts	5	3
Instruments and equipment	4	2
Semiconductor and related	5	3
Biotech/pharmaceutical	4	3
Small software originators	6	3

## Part 2: Comparison of High Tech R&D Programs in Seven States

This section compares the high tech incentives available in the seven comparison states. Detailed information about each state's incentive programs is in Appendix B.

### *WA B&O Tax Credit and Similar Programs in other States*

R&D credit programs in the selected states are similar in that a percentage of qualified R&D spending can be taken as a credit against the B&O tax, corporate income tax, or franchise taxes levied on businesses. The programs differ in the type of activity that qualifies, the ability to carry credits forward, the allowable credit limit, and the amount of the credit. A major difference is that the other states grant credits on incremental R&D spending over an initial base, often following the complex federal procedure. Washington's credit is much easier for businesses to apply. It is calculated by taking a percentage times all qualifying spending, though at a lower rate than other states. Note that Nevada does not have an R&D credit program nor does it have a comprehensive business tax based on income or sales.

### *WA Sales and Use Tax Deferral for New R&D Facilities and General Incentives for New Facilities in Other States*

The sales and use tax deferral/exemption is not taken on a continuing basis like the R&D credits, but only when a firm invests in a new or expanded R&D facility or acquires eligible equipment. Washington's sales and use tax deferral/exemption is unique among the states in the study, but the modeling effort had to assume that firms governed by other states' laws would take advantage of all incentives for new investment in general. New investment incentives in other states are included if they are generally available when new facilities are brought on line.

Other exemptions and tax treatments apply whether the facility is new or existing; these include machinery and equipment exemptions, inventory exemptions, and special property tax treatment.



High tech R&D firms are assumed to locate in areas that attract similar investment, not in areas with high unemployment, in enterprise zones, or in other areas targeted for special relief. It is also assumed that all firm types will meet the criteria necessary to convert Washington's and other states' deferrals into exemptions.

### **Comparison of Tax Savings from High Tech Incentives**

#### ***Tax Savings from Programs Similar to the B&O Credit***

Table 4.7 presents the tax savings of tax incentives similar to the B&O credit in all seven states. The savings are presented both in terms of ten-year net present value dollars and as a percentage of total ten-year net present value taxes and sales.

In terms of the incremental impact, Washington's R&D credit program generally provides a greater dollar savings to the firms than the other credit programs modeled, except for California (and Texas in the case of software). The reason for this is that Washington's credit is taken for the full amount of R&D expenditures, rather than just the addition over an initial base; this tends to outweigh the higher credit rates allowed in the other states.

Another advantage to the Washington R&D credit is its relative simplicity, since there is no need to determine a base level of research spending. R&D credit programs in other states are known for their difficulty of use, particularly those piggybacking on the federal program. There is anecdotal evidence that it is extremely difficult for small firms to qualify for most state R&D credit programs.

#### ***Tax Savings from Programs Similar to the Sales and Use Tax Deferral***

Table 4.8 presents the tax savings of tax incentives similar to Washington's sales and use tax deferral in all seven states. The savings are presented both in terms of ten-year net present value dollars and as percentages of total ten-year net present value taxes and sales.

The Washington sales and use tax deferral/exemption for new facilities also provides a greater tax savings than the general incentives for new facilities found in other states with the exception of California. Keep in mind that this analysis assumes that high tech firms locate in high tech areas, not in enterprise zones or distressed areas. As a percent of total tax burden, Washington's tax savings rank second three times and first twice.

**Table 4.7**  
**Washington's B&O Tax Credit Compared with Credits in Other States**

Net Present Value: 10 Years of Expected Taxes in \$Millions/Rank: 1=highest tax relief, 7=lowest tax relief

		<b>Tax Savings</b>	<b>Savings as a Percent</b>	
		<b>\$Millions</b>	<b>of Total Tax Burden</b>	<b>Rank</b>
<b>Small Aircraft and Parts</b>	California	\$0.549	15.46%	1
	<b>Washington</b>	<b>0.377</b>	<b>9.47%</b>	<b>2</b>
	North Carolina	0.207	5.53%	3
	Oregon	0.114	4.80%	4
	Missouri	0.228	4.75%	5
	Texas	0.163	3.44%	6
	Nevada	-	-	7
<b>Instruments and Equipment</b>	California	\$0.299	8.18%	1
	<b>Washington</b>	<b>0.209</b>	<b>6.06%</b>	<b>2</b>
	North Carolina	0.114	2.49%	3
	Texas	0.083	1.36%	4
	Missouri	0.079	1.22%	5
	Oregon	0.033	0.91%	6
	Nevada	-	-	7
<b>Semiconductor and Related Devices</b>	California	\$1.341	3.29%	1
	<b>Washington</b>	<b>1.116</b>	<b>2.96%</b>	<b>2</b>
	North Carolina	0.524	1.29%	3
	Missouri	0.465	0.86%	4
	Texas	0.373	0.72%	5
	Nevada	-	-	6
	Oregon	-	-	6
<b>Integrated Biotech Pharmaceutical</b>	California	\$9.944	31.47%	1
	<b>Washington</b>	<b>5.989</b>	<b>18.84%</b>	<b>2</b>
	Oregon	2.467	8.87%	3
	North Carolina	3.783	8.77%	4
	Missouri	3.323	6.15%	5
	Texas	2.770	5.27%	6
	Nevada	-	-	7
<b>Small Software Originator</b>	Texas	\$0.199	15.43%	1
	California	0.042	3.87%	2
	<b>Washington</b>	<b>0.035</b>	<b>3.12%</b>	<b>3</b>
	North Carolina	0.016	2.05%	4
	Missouri	0.017	1.31%	5
	Nevada	-	-	6
	Oregon	-	-	6

**Table 4.8**  
**WA Sales Tax Deferral Compared with Incentives for New Facilities in Other States**

Net Present Value: 10 Years of Expected Taxes in \$Millions/Rank: 1=highest tax relief, 7=lowest tax relief

		Tax Savings	Savings as a Percent of	
		\$Millions	New R&D Facility Taxes	Rank
Small Aircraft and Parts	<b>Washington</b>	<b>\$0.158</b>	<b>52.84%</b>	<b>1</b>
	California	0.132	38.60%	2
	North Carolina	0.007	1.82%	3
	Nevada	0.001	0.41%	4
	Missouri	0.001	0.20%	5
	Oregon	-	-	6
	Texas	-	-	6
Instruments and Equipment	California	\$0.096	75.00%	1
	<b>Washington</b>	<b>0.039</b>	<b>34.82%</b>	<b>2</b>
	North Carolina	0.006	3.55%	3
	Missouri	0.000	0.00%	4
	Nevada	-	-	5
	Oregon	-	-	5
	Texas	-	-	5
Semiconductor and Related Devices	<b>Washington</b>	<b>\$0.362</b>	<b>40.36%</b>	<b>1</b>
	California	0.466	40.17%	2
	North Carolina	0.022	1.82%	3
	Nevada	0.007	1.23%	4
	Missouri	0.001	0.06%	5
	Oregon	-	-	6
	Texas	-	-	6
Integrated Biotech Pharmaceutical	California	\$3.767	55.30%	1
	<b>Washington</b>	<b>2.596</b>	<b>52.68%</b>	<b>2</b>
	North Carolina	0.589	7.53%	3
	Nevada	0.063	1.74%	4
	Missouri	0.006	0.06%	5
	Oregon	-	-	6
	Texas	-	-	6
Small Software Originator	Nevada	\$0.010	90.91%	1
	<b>Washington</b>	<b>0.022</b>	<b>88.00%</b>	<b>2</b>
	North Carolina	0.001	3.85%	3
	Missouri	0.000	0.00%	4
	Oregon	-	-	5
	California	-	-	5
	Texas	-	-	5

Note that the "0.000" is a small tax savings, where "-" denotes no change in tax payments.

**Table 4.9**  
**Tax Savings as a Percent of Firm Sales**  
**Net Present Value: 10 Years of Expected Taxes Divided by Sales**

<b>Washington Firm</b>	Tax Savings R&D Credit	Tax Savings R&D Facility*
Small Aircraft and Parts Firm	0.12%	0.63%
Instruments and Equipment	0.12%	0.72%
Semiconductor & Related	0.04%	0.53%
Biotech/Pharmaceutical	0.39%	0.95%
Small Software Originators	0.05%	0.90%

\*The tax savings for the sales tax deferral/exemption for R&D facilities is divided by the sales that are attributed to that R&D facility.