DRAFT

ECONOMIC VITALITY

Questions on Economic Vitality

Do Washington taxes affect the competitive position of Washington business?

Do the effects of taxes on wages create a positive or negative impact on the competitive position of employers?

Do Washington taxes affect the ability of established business to survive and grow?

Are Washington tax incentives effective and sufficient in encouraging firms to locate and remain in the state?

To what extent does government investment in infrastructure impact economic development?

Does our tax system (especially the B&O tax) affect businesses' ability to survive during economic downturns?

Do Washington taxes affect the ability to start and grow a new business?

The Competitive Position of Washington Firms

Hypothetical Firm Analysis

In order to assess the impact of Washington State and local taxes on the competitive position of Washington firms, we simulated hypothetical firms and taxed them under the tax systems of Washington State and competitor states. The hypothetical firms represent several different industries. They also represent small, large, new and established firms.

The hypothetical firm analysis is taken from several studies done by the Department of Revenue Research Division over the past 6 years. Although the analyses differ in some details, they all share the same basic structure. Each hypothetical firm was created to be typical for the category it represents. Every effort was made to portray realistic firms. In the comparison from state to state, every aspect of the firm is held constant except for differences in state and local tax liability and the attendant differences in profit margins. In each analysis, the firms' tax burdens are compared over a long period of time, either 10 or 20 years. The comparison is made in terms of the total net present value taxes paid throughout the period. In each industry, states chosen for comparison are those states in which competitors of Washington firms reside.

Although the hypothetical firm analysis does not cover all industries, it does cover most of the industries that compete with firms from other states.

Tax Rankings for Manufacturers

The following information is from The Manufacturing Tax Study by the Washington State Department of Revenue, Research Division, December 1994.

Industries included:

- Food Products
- Lumber and Wood Products
- Paper products
- Printing and Publishing
- Petroleum Products
- Primary Metals
- Electrical Equipment
- Aircraft and Parts
- Instruments
- Software

Types of firms:

- New
- Established firm
- Independent Branch of an Established Firm

Comparative states: 12, including Washington

- Oregon
- Texas
- North Carolina
- Colorado
- Montana
- Idaho
- Arizona
- Alabama
- Minnesota
- Florida
- California

Number of years analyzed: 10

Taxes included in analysis:

- Gross Receipts
- State Income Tax
- Unemployment Insurance
- Industrial Insurance
- State and Local Property Tax
- State and Local Sales and Use Tax

Year of analysis: 1994 (The analysis of Washington taxes is updated to include major tax changes since 1994.)

TAX BURDEN RANKINGS FOR WASHINGTON
Based on 10 year NPV Tax Burdens for Hypothetical Manufacturing Firms
(Washington Rank out of 12 states, 1 = lowest tax; 12 = highest tax)

Industry	New Firm	Established Firm	Independent Branch
Computer software	1	1	1
Food products	4	10	7
Lumber/wood products	5	5	5
Paper products	5	5	5
Printing/publishing	2	1	1
Petroleum products	3	10	7
Primary metals	3	6	3
Electrical equipment	5	3	5
Aircraft & parts	3	6	3
Instruments	6	3	2

Tax Rankings for the Warehouse and Distribution Industry

The following information is from the Warehouse and Distribution Study, Department of Revenue, Research Division, December 1996.

Industries included:

- Third party warehouse
- Warehouse owned by a wholesaler
- Warehouse which is a fully owned subsidiary of a large regional retail distributor

Each warehouse is assumed to be new in the first of the ten analysis years. All of the firms in this example are assumed to export 80% of their goods. For each of the warehouses, essentially only the warehouse activity is taxed. Taxes that are related to other aspects of the firms' operations are not directly included in this analysis. However, in income tax states, the change in the firm's income tax liability caused by the increase in in-state property and payroll is included in the total tax liability.

Comparative states: 8, including Washington

- Oregon
- Idaho
- California
- Nevada
- Louisiana
- Texas
- Utah

Number of years analyzed: 10

Taxes included in analysis:

- Gross Receipts
- State Income Tax
- Unemployment Insurance
- Industrial Insurance
- State and Local Property Tax
- State and Local Sales and Use Tax
- Motor vehicle Excise tax on Trucks

Year of analysis: 1996 (The analysis of Washington taxes is updated to include major tax changes since 1996, including removal of MVET.)

TAX BURDEN RANKINGS FOR WASHINGTON
Based on 10 year NPV Tax Burdens for Hypothetical Warehousing Firms
(1 = lowest tax; 8 = highest tax)

Industry	**Washington Tax Rank (out of 8 States)**
Third Party Warehouse	2
Wholesaler	3
Large Retailer	2

Tax Rankings for Other Washington Industries with Competitors in Other States

The following information comes from the study, Tax Incentive Comparison of Six States and One Province, by the Washington State Department of Revenue, Research Division, 1999.

Industries included:

- Semiconductor Manufacturer
- Biotech integrated
- Biotech R&D only
- Small Software Originator
- High Tech Call Center

Comparative states: 7, including Washington

- Oregon
- Utah,
- California
- Arizona
- New Mexico
- British Columbia

Number of years analyzed: 20

Taxes included in analysis:

- Gross Receipts
- State Income Tax
- Unemployment Insurance
- Industrial Insurance
- State and Local Property Tax
- State and Local Sales and Use Tax

Year of analysis: 1999

TAX BURDEN RANKINGS FOR WASHINGTON
Based on 20 year NPV Tax Burdens for Hypothetical Firms
(1 = lowest tax; 7 = highest tax)

Industry	Washington Tax Rank (out of 7 states)
Semiconductor Manufacturer	2
Biotech, Integrated	2
Biotech, R&D only	6
Software Originators	3
High Tech Call Center	4

Summary of Tax Ranking Analysis

Relative tax burden varies by industry and type of firm. For the 38 firms presented in these analyses, Washington ranks in the lower third of the states 20 times, in the middle third 15 times and in the highest third, 3 times.

A comparison of tax burden by tax type shows that for most of the firms, Washington B&O tax is higher than all or most other states' income tax. Washington's unemployment insurance is among the highest for many of the hypothetical firms. However, Washington is one of the lowest industrial insurance states for all of the hypothetical firms. Washington's property taxes are about in the middle. Because of the machinery and equipment exemption for manufacturers, the sales tax burden is not high compared to the other states.

Each of the three firms with high Washington tax ranks has a low profit margin. For example, the Washington ranking for Biotech R&D is higher because the hypothetical firm is unprofitable and does not pay corporate income tax in the other states or British Columbia.

However, profit margins are not the only drivers in Washington tax rankings. Other firms have lower profit margins and lower ranks. Despite the fact that most of the new firms have low or negative profits, new Washington manufacturers have a slightly better competitive position than established manufacturers or independent branches. This is mainly because industrial insurance rates, which comprise a large percentage of total tax burden for new businesses, are lower in Washington State.

Note that ranking for both the manufacturing and warehousing industry reflect exemptions that were instituted to specifically address the issue of competitiveness in these industries. A different mix of industries may yield different results.

Impact of Different Taxes on the Competitiveness of Washington Firms

The above analysis shows that taxes differ across states. For some types of firms, Washington taxes are higher, and for some, lower than taxes in states that are home to competitor firms. But are the tax differences large enough to affect competitiveness? The following table shows a comparison of profit margins for some of the hypothetical firms analyzed above. Since everything about the hypothetical firms are held constant except for taxes, the differences in profit margins are completely attributable to taxes.

COMPARISON OF PROFIT MARGINS OF HYPOTHETICAL FIRMS
10-year average NPV profit margins under Washington's tax system, the lowest tax state and the highest tax state

Industry and firm type	Profit Margin with WA taxes	Highest profit margin (State)	Lowest profit margin (State)
Food Processing:			
New	3.50%	3.51% (N. Carolina)	2.14% (Florida)
Established	1.14%	1.72% (Alabama)	0.91% (Florida)
Branch	0.34 %	1.13% (N. Carolina)	0.30% (Florida)
Lumber and Wood products:			
New	1.23%	2.44% (N. Carolina)	-2.24% (Colorado)
Established	2.60%	3.29% (N. Carolina)	0.81% (Colorado)
Branch	1.95%	2.77% (N. Carolina)	0.00% (Colorado
Paper Products:			
New	1.48%	2.26% (N. Carolina)	0.44% (Texas)
Established	2.40%	3.00% (N. Carolina)	2.02% (Montana)
Branch	1.88%	3.20% (Colorado)	-0.78% (Montana)
Printing/Publishing:			
New	4.35%	4.83% (N. Carolina)	2.38% (Texas
Established	14.60%	14.60% (Washington)	12.46%(California)
Branch	10.13%	10.23% (N. Carolina)	8.37% (California)
Petroleum Products:			
New	-1.34%	-0.70% (N. Carolina)	-3.30% (Florida)
Established	0.51%	1.27% (N. Carolina)	0.51% (Washington)
Branch	0.39%	1.12% (Colorado)	0.20% (Montana)
Primary Metals:			
New	-2.61%	-1.51% (N. Carolina)	-5.39% (Florida)
Established	0.32%	1.86% (Alabama)	-0.49% (Texas)
Branch	0.86%	1.71% (N. Carolina)	-0.19% (Florida)

Industry and firm type	Profit margin with WA taxes	Highest profit margin (State)	Lowest profit margin (State)
Electrical Equipment			
New	-4.15%	-3.28% (N. Carolina)	-4.79% (Minn.)
Established	6.45%	7.05% (N. Carolina)	5.66% (Minn.)
Branch	4.26%	4.70% (N. Carolina)	3.56% (Montana)
Aircraft and Parts:			
New	1.97%	2.59% (N. Carolina)	0.27% (Montana)
Established	4.93%	5.33% (N. Carolina)	4.32% (Minn.)
Branch	4.07%	4.34% (N. Carolina)	3.34% (Min)
Instruments:			
New	1.06%	1.68% (N. Carolina)	0.72% (Florida)
Established	6.89%	7.38% (Alabama)	5.67% (Montana)
Branch	13.79%	13.79% (Washington)	11.88% (Montana)
Computer Software:			
New	7.69%	7.78% (N. Carolina)	7.00% (California)
Established	3.20%	3.40% (N. Carolina)	2.84% (Florida)
Branch	0.22%	0.69% (N. Carolina)	0.04% (Florida)

Note that there can be a large difference in profit margins caused by taxes alone. However, many factors cause differences in profit margins.

How big of a role do taxes play compared to other factors? In order to answer this question, we analyzed the profit margins for actual Washington firms for the same industries (Tax Competitiveness Policy and Ranking of 12 States, Dept. of Revenue Research Report, 1995). In this analysis, taxes are the only factor held constant, while everything else that affects profit margins varies. The variance in the profit margins of actual Washington State firms was larger than the variance in profit margins of hypothetical firms. In other words, the variance caused by all other factors is larger than that caused taxes alone.

Ability of Washington Firms to Export Taxes

All taxes are eventually shifted to households in some capacity, either as consumers, employees, capital owners or out-of-state households. By applying the shifting assumptions in the 2001 Minnesota Tax Incidence Study to Washington's State's industry and tax mix, we are able to measure the percent of tax that businesses are able to export to households out of state.

ESTIMATED PERCENTAGE OF TAXES EXPORTED

WA State Taxes Fiscal Year 2000	Percent of Taxes Exported
Retail Sales/Use Tax	32%
B&O Tax	50
Property Tax	41
Motor Fuels Tax	36
Real Estate Excise Tax	44
Cigarette & Tobacco	0
Public Utility Tax	42
Beer, Wine & Liquor	32

Impact of the Tax System on Business Survival during Economic Downturns

By using hypothetical manufacturing firms from the competitiveness analysis, we are able to see how taxes affect a firm's competitive position during economic downturns. The following table shows Washington's tax rankings for a boom year, a bust year and an average year. Note that the Washington tax rank changes in both boom and bust years, but not in a consistent way. It is inconclusive whether economic upturns or downturns change Washington's relative competitive position.

WASHINGTON TAX LIABILITY RANKING
During Economic Upturns and Downturns
Calculated from Manufacturing Tax Study Hypothetical Profiles
1 = Lowest, 12 = Highest

Industry	WA Rank Year 1 (Boom Year)	WA Rank Year 5 (Bust Year)	WA Rank Year 9 (Average Year)
Food Products	7	1	1
Lumber/Wood Prod.	5	5	5
Paper Products	3	3	4
Printing/Publishing	1	1	1
Petroleum Products	10	11	12
Primary Metals	4	8	9
Electrical	5	3	3
Aircraft and Parts	5	5	4
Instruments	3	3	2
Computer Software	8	4	2

Tax Incentives and Economic Vitality

There are two major policy purposes of Washington's tax incentives, to improve competitiveness of Washington businesses and to stimulate the economy by encouraging businesses to locate and stay in Washington State. The following table outlines Washington's tax incentive programs and their objectives.

MAJOR STATEWIDE WASHINGTON TAX INCENTIVES

	Objective	Target
M&E Sales/Use Tax Exemption	Level playing field; retention, expansion; family wage jobs	Manufacturing; R&D; Testing
R&D B&O Credit	Encourage early stages of research; high wage high-skilled jobs	R&D
R&D Sales/Use Tax Deferral	Encourage research; create jobs; spur manufacturing	R&D
Warehouse/Grain Elevator Sales/Use Tax	Facility location; increase global and regional trade; jobs	Wholesaling, warehousing and distribution

MAJOR GEOGRAPHICALLY TARGETED WASHINGTON TAX INCENTIVES

	Objective	Target
Sales & Use Tax Deferral Rural Counties/CEZ	Family wage jobs	Manufacturing; R&D; testing
Rural B&O Rural Counties/CEZs	Family wage jobs	Manufacturing; R&D
International Service Districts B&O Credit	Retention and attraction; jobs	Professional services for international customers
Rural Software B&O Credit	Rural job creation; skills	Software and programming
Rural Helpdesk B&O Credit	Rural job creation; skills	Help desk technology

Effectiveness of Incentives in Terms of Competitiveness of Washington Firms

The manufacturing machinery and equipment sales tax exemption and the warehouse sales tax remittance have been effective in improving the competitiveness of Washington firms. Analysis using hypothetical firms showed that before these exemptions, Washington's tax system imposed one of the highest tax burdens compared to competitor states. Washington's tax ranking was 11th

or 12th highest for most manufacturers, and in the top half of states for most warehouses. (Detailed rankings can be found in The Manufacturing Tax Study and The Warehouse Study). As a result, most of Washington's tax rankings for the industries benefiting from the exemptions are currently among the lowest third of states. (See the tables, "Tax Burden Rankings for Washington" in the Hypothetical Firm Analysis Section.)

Participation of Firms in Incentive Programs

The table below summarizes the results of two studies, Economic Impacts of the Manufacturer's Sales Tax Exemption, by Rick Peterson, House Finance Staff, and the High Technology R&D Tax Incentives Study, by the Research Division of Washington State Department of Revenue. The studies show that the industries that enjoy the incentives contribute to Washington's economic vitality by creating jobs. Jobs in industries taking the R&D credit have high wages. Washington residents fill 60 percent of new jobs created in these industries.

Connections between Incentives and Economic Vitality

Both studies referenced above used econometric analysis to determine whether the tax incentives caused any of the growth in the industries. The studies were unable to find a causal relationship between job growth and the tax incentives. It is possible that better data and modeling may prove such a relationship.

WASHINGTON INCENTIVE STUDIES ON JOB CREATION

	Year	New Jobs	Filled by WA Residents	Average Wage	Jobs Linked to Incentive
Manufacturing/R&D Sales/Use Tax	1995-1999	36,000			No clear link
R&D B&O Credit	1999	19,500	11,450	$80,000	Inconclusive*
Warehouse Tax	1997	Study in progress			
Rural Sales & Use Tax Deferral/Jobs Credit	1994	3,800		$29,000	Inconclusive*

*Possible small impact, but more data needed for proof.

Impact of Taxes on Firm Location

A review of the literature on factors that affect firm location decisions show that taxes are not one of the most important factors in firms' location decisions. The studies show however, that taxes do matter on the margin, when other factors are held equal. (See table on page 12, "Factors that Influence Business Location".)

Although the hypothetical firm analysis shows Washington's tax ranking to be in the lowest third for many industries, Oregon's tax ranking is lower than Washington's in almost every case. To the extent that location factors in Oregon and Washington are equal, the lower taxes in Oregon could attract businesses away from Washington.

Impact of Government Investment in Infrastructure on Firm Location

Note that the majority of the studies on the factors of firm location that are summarized in the table below indicate that some government infrastructure has a large impact on firm location decisions. Most studies have found that transportation infrastructure is a significant driver in firm location decisions. Results are mixed about the impact of other types of government infrastructure.

Impact of Washington Taxes on New Businesses

The hypothetical firm analysis shows that for new manufacturing firms, the high B&O taxes are ameliorated by low industrial insurance rates. Therefore, compared to other states, new Washington manufacturers do not face an inordinate tax burden. However, manufacturing is not representative of all new firms. Industrial insurance is not as large a percentage of total tax burden for some other industries. Because of the high B&O tax that some industries face relative to Corporate Income Tax, new businesses in some industries could face an inordinate tax burden in Washington.

Nonetheless, taxes do not seem to impede the ability to start a new business. According to the Corporation for Enterprise Development's (CFED's) 2001 Development Report Card for the States, the state of Washington is one of the top 5 states for the category "Entrepreneurial Energy". The report card also shows that Washington has the highest rate of new business starts-ups.

The CFED report card also shows that Washington has the highest number of business closures. To at least some extent, the higher number of firm closures are a result of the higher number of start-ups. There remains a possibility that taxes may be affecting firm closures, but there is no clear evidence.

FACTORS THAT INFLUENCE BUSINESS LOCATION

	Transportation & Infrastructure				*Other Factors that Government May Influence*					*Direct Governmental Factors*					*General*
	Transportation			TeleComm	Higher Ed	Skilled	Research	Technical	Land	K-12	Govt.	Regulation &	Public	Tax	Market
	Land	Water	Air	& Related	/ Univ.	Workers	Labs	Asstnce.	Availability	Expend	Subsidies	Permit Costs	Safety	Factors	Factors*
Ag/Forest/ Fish/Mine	**1**	**1**	**3**	**3**	**2**	**2**	**3**	**2**	**2**	**2**	**3**	**2**	**3**	**2**	**1***
Construction	**1**	**3**	**3**	**3**	**2**	**1**	**3**	**2**	**2**	**2**	**3**	**2**	**3**	**2**	**1***
Non-Durable Manufacturing	**1**	**3**	**2**	**3**	**2**	**2**	**3**	**2**	**1**	**2**	**3**	**2**	**3**	**2**	**1***
Durable Manufacturing	**1**	**3**	**3**	**3**	**2**	**2**	**2**	**2**	**1**	**2**	**3**	**2**	**3**	**2**	**1***
Aerospace	**1**	**3**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**3**	**2**	**3**	**2**	**1***
Computer Manf/Srvcs	**2**	**3**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**3**	**2**	**3**	**2**	**1***
BioTech	**2**	**3**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**3**	**2**	**3**	**2**	**1***
Health Services	**2**	**3**	**2**	**2**	**1**	**1**	**1**	**2**	**2**	**2**	**3**	**2**	**3**	**2**	**1***
Business Services	**2**	**3**	**1**	**2**	**1**	**1**	**3**	**2**	**2**	**2**	**3**	**2**	**3**	**2**	**1***
Transport/ Comm/Util	**1**	**3**	**1**	**1**	**1**	**1**	**3**	**2**	**1**	**2**	**3**	**2**	**3**	**2**	**1***
Wholesale	**1**	**3**	**2**	**2**	**2**	**2**	**3**	**2**	**1**	**2**	**3**	**2**	**3**	**2**	**1***
Retail	**1**	**3**	**2**	**2**	**2**	**2**	**3**	**2**	**1**	**2**	**3**	**2**	**3**	**2**	**1***
Financ/Insrn Real Estate	**2**	**3**	**1**	**2**	**2**	**2**	**3**	**2**	**2**	**2**	**3**	**2**	**3**	**2**	**1***
All Other Services	**2**	**3**	**3**	**3**	**2**	**2**	**3**	**2**	**2**	**2**	**3**	**2**	**3**	**2**	**1***

Legend **1** = a fair amount of empirical evidence and a consensus concerning a factor's importance ***most important**

2 = a small amount of evidence, no clear consensus **3** = no real evidence (See "Selected Bibliography", pages 15-19.)

Summary—Answers to Questions

Do Washington taxes affect the competitive position of Washington business?

Do the effects of taxes on wages create a positive or negative impact on the competitive position of employers?

Do Washington taxes affect the ability of established business to survive and grow?

For some types of firms, Washington taxes are higher than taxes in states that house competitors. But in the majority of firms analyzed above, Washington taxes are among the lowest third of competitor states.

Washington's B&O tax is generally high compared to income taxes in other states. Firms with low profit margins are more likely to face a relatively high tax burden in Washington.

However, some of Washington's taxes are lower than those in other states. Washington has some of the lowest industrial insurance rates. For most of the hypothetical new manufacturing firms the benefit of the low industrial insurance taxes outweighs the high B&O tax.

Taxes can have a significant impact on profit margins. But differences in profit margins caused by taxes are smaller than differences caused by other factors.

To what extent can Washington business export taxes (to their customers or to the federal government)?

The ability of Washington business to export taxes depends on the type of tax. B&O tax is the most exportable: an estimated 50% can be exported. Consumption taxes are the least exportable. Retail sales and use taxes are 32% exportable, motor fuels tax is 36% exportable, 32% of beer, wine and liquor tax is exportable, and none of cigarette and tobacco products tax is exportable.

Are Washington tax incentives effective and sufficient in encouraging firms to locate and remain in the state?

A review of the literature on factors that affect firm location decisions shows that taxes are not one of the most important factors in firms' location decisions. The studies show however, that taxes do matter on the margin, when other factors are held equal.

The manufacturing machinery and equipment exemption and the warehousing remittance have been effective in "leveling the playing field" for Washington State taxes compared to competitor states taxes. Although the hypothetical firm analysis shows Washington's tax ranking to be in the lowest third for many industries, Oregon's tax ranking is lower than Washington's in almost every case. To the extent that location factors in Oregon and Washington are equal, the lower taxes in Oregon could attract businesses away from Washington.

Although Washington's tax ranking has improved because of tax incentives, statistical studies of both the manufacturing exemption and R&D incentives are not conclusive about the effectiveness of these incentives in creating new jobs. There is no conclusive evidence that the incentives either did or did not cause new job growth.

To what extent does government investment in infrastructure impact economic development?

Studies on the factors of firm location indicate that some government infrastructure has a large impact on firm location decisions. Most studies have found that transportation infrastructure is a significant driver in firm location decisions. Results are mixed about the impact of other types of government infrastructure.

Does our tax system (especially the B&O tax) affect businesses' ability to survive during economic downturns?

Analysis using hypothetical manufacturing firms was inconclusive in determining whether taxes cause a larger problem for business during economic downturns.

Do Washington taxes affect the ability to start and grow a new business?

For new businesses in industries with high industrial insurance, Washington's tax system is no more onerous than tax systems in other states because the relatively high B&O taxes are ameliorated by low industrial insurance rates. The B&O tax may make Washington's tax system more onerous than other states for other new businesses.

According to actual data on new firms, Washington's taxes do not seem to have a negative impact on start-ups. Washington is ranked highest of all 50 states for firm start-ups. However, taxes may be a problem in keeping new businesses alive. Washington is also ranked highest for firm closures. To at least some extent, the higher number firm closures is caused by the higher number of start-ups. Therefore, there is a possibility that taxes may be affecting firm closures, but there is no clear evidence.

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