TAX INCENTIVES FOR HIGH TECHNOLOGY BUSINESSES

Chapter One

EXECUTIVE SUMMARY

Pursuant to RCWs 82.04.4452(8) and 82.63.020, the Department of Revenue is required to perform three assessments on the tax credit and exemption programs authorized under RCW 82.04.4452 (High Technology Business and Occupation Tax Credit) and RCW 82.63 (High Technology Sales/Use Tax Deferral/Exemption). The assessments are required to take place in 1997, 2000, and 2003 and are due in September of each year. This report is the first in the series of three analyses of these programs.

The assessments are required to measure the effect of each program on job creation, the number of jobs created for Washington residents, company growth, the introduction of new products, the diversification of the state's economy, growth in research and development investment, the movement of firms or the consolidation of firms' operations into the state, and such other factors as the department selects.

PROGRAM UTILIZATION AND IMPACT ON TAX REVENUES

Sales Tax Deferral/Exemption

One of the two tax incentive programs enacted by the 1994 Legislature for high technology firms provided a deferral of retail sales and use tax for investment in research activities in one of five areas: advanced computing, advanced materials, biotechnology, electronic device technology or environmental technology. The deferral was allowed for capital expenditures related to research and development or for pilot scale manufacturing facilities. The following year the deferral was converted to an outright exemption, as long as the firm continues to use the facility for a qualified purpose. Unlike the current sales tax exemption for manufacturing machinery and equipment, the statute does not provide exemption for repairs or replacement of high technology equipment.

Firms must make application for sales tax exemption with the Department of Revenue prior to purchasing research and development equipment or starting construction of R&D or pilot scale manufacturing facilities.

Since the effective date of January 1, 1995, 84 applications for exemption have been approved; these represent only 64 companies because some firms have multiple projects. Thirty-four of the participants are firms engaged in advanced computing; another 28 are biotech companies. Together, these represent nearly three-quarters of all applicants.

A total of $72.6 million in state and local sales/use tax has been approved for exemption for the 84 projects; approximately $53.6 million of the tax reduction is for the state tax and $19.0 million is attributable to local taxes. Fifty-three of the 64 companies that are participating are headquartered in King County. The remaining 11 firms are located in six other counties. However, some of the 20 multiple projects could also be located in other counties.

B&O Tax Credit

The second program features a credit against state business and occupation tax for costs incurred in research and development activities by companies engaged in the same five high technology areas as the sales tax exemption. Such expenditures must exceed 0.92 percent of the firm's taxable gross income derived from within the state. For proprietary businesses the credit is calculated by applying the B&O tax rate for manufacturing, 0.484 percent, to the amount of qualified R&D expenditures; nonprofit corporations and associations apply the B&O service rate of 1.75 percent (1.5 percent as of July 1, 1998). The maximum amount of credit for a firm is $2 million per year, and the credit must be used in the same calendar year as the expenditure was made. If a firm does not have sufficient B&O tax liability to utilize the entire credit amount, the excess may not be carried forward to subsequent years.

Prior application is not required; instead firms attach an affidavit that details the credit calculation to their state combined excise tax return when it is submitted to the Department.

Since the effective date of January 1, 1995, approximately 410 firms have utilized the B&O tax credit. As for the sales tax exemption program, the largest technology area is represented by firms engaged in advanced computing; these firms represent over one-half of all companies that have claimed the credit. Companies that develop electronic devices are the second largest recipients of the tax credit; these are followed by biotech firms. The areas of advanced materials and environmental technology have only a handful of companies that have claimed the credit.

To date, the impact of the tax credit has been a reduction in state general fund revenues of approximately $33 million. This amounts to an average tax savings of roughly $80,000 per participant.

Participants have largely been confined to two counties: King with nearly two-thirds of all credit recipients and Snohomish with nine percent. Tied for third place in utilization of the credit are Benton and Kitsap with 11 companies each.

ECONOMIC IMPACT OF THE PROGRAMS

Because of the very limited data which the programs have generated to date, broader economic analysis of the tax incentive programs will have to wait until future years. There is information for only two full calendar years, 1995 and 1996, which is inadequate to establish trend-lines. Further, employment data for calendar year 1996 is not yet available from the Employment Security Department, so analysis of job impacts is largely conjecture at this time. Also, because participation has been limited to a very small number of companies, it is difficult to obtain measurable economic data for these investments. More detail analysis will also have to wait until more projects are completed, and audits can be conducted to assure that the reported impact data are accurate. Also, in future reports we plan on surveying program participants to obtain their perspective on the effectiveness of the incentives and their recommendations on areas of possible improvement. Chapter 5 does look at some of the indicators of program success.

Job Creation. In terms of estimated new jobs reported by participants, the sales tax exemption has generated in excess of 5,000 new jobs. Using industry-wide employment data, it is inferred that 300-400 new jobs may be linked to firms that have taken the B&O tax credit. However, it is too soon to tell whether these are new, permanent positions or simply represent shifts of other employees into temporary positions.

Employment Growth. Available data indicates that firms which have utilized these tax incentives have enjoyed very high rates of growth in recent year and have paid very high wages to their employees (average in excess of $71,000 in 1995). While some of the participating companies are very large, the average employment per firm in these high tech industries is around 100. The median number of jobs per firm is only six employees.

Company Growth. High tech companies in general have exhibited high rates of growth, both in terms of number of new firms and income of existing firms. Somewhat ironically, the growth rate of gross income for industries which are typically considered as heavily involved in high tech activities has slowed in the past year or two. This demonstrates the lead time which is necessary for investment in R&D activities to become reflected in company income.

R&D Investment. Based on the information available to date, gross income for firms taking the B&O tax credit appears to be growing at roughly the same rate as income for all firms in the five high technology areas. However, because the lag time between the R&D activity and commercial production can often take at least 3 - 5 years for many new products (longer if patents and/or FDA approval must be obtained), it is too early to expect to see results of the incentives on investment in R&D. Therefore, it is premature to analyze the impact the R&D investment may have on growth for participating companies.

Product Line Diversification. Data to demonstrate new products that result from R&D investments is not yet available. When more firms have participated in the programs, the Department will survey these companies and attempt to learn more about new products that can be attributable to these investments. At the present time, there is insufficient information to form any conclusions about new products.

Economic Diversification. Similarly, there is very little data to indicate greater diversification of Washington's economy - either from the perspective of growth in traditionally weaker industries or growth in counties that have

traditionally been economically distressed. One measure of the result of R&D activities may be the issuance of new patents. Data presented in Chapter 5 serve to establish baseline information for patents on a per capita basis. This may yield significant information to determine whether more innovation has occurred outside of the Puget Sound/I-5 corridor to whether most of the growth continues to be confined to this region of the state. The information available so far indicates that roughly 75 percent of recent patents have been granted to firms in King, Snohomish and Clark counties. This is approximately the same distribution of firms that have participated in the two tax incentive programs.

Comparison of patent data for all states indicates that new issuances to Washington firms during 1995 and 1996 were 14 percent higher than the trend line for earlier years in the 1990s. In fact, only one other state of comparable size - Indiana - had a higher growth rate in patents issued during the latest two years. While it is too soon to attribute this result to the tax incentive programs, it may represent a positive trend which can be correlated with participation in the incentive programs.

TAX INCENTIVES FOR HIGH TECHNOLOGY BUSINESSES

Chapter Two

DESCRIPTION AND HISTORY OF PROGRAMS

In 1993 the Department of Revenue was asked to study high technology incentives, determine which technologies have the greatest potential for improving high wage research and development jobs and make recommendations for targeted tax incentive with the goal of increasing the number of high wage jobs involved in research and development. This effort culminated in a report "Incentives for High Technology" issued by the Research and Legislation and Policy Divisions of the Department on January 10, 1994.

The legislature agreed with this goal and in 1994 created the two programs covered by this report. Both programs established tax incentives for five technologies. These technologies were synthesized from a list of national critical technologies as well as industry input on capabilities within the state and state level initiatives.

High Technology Sales/Use Tax Exemption

In 1994 a new sales and use tax deferral program, similar to the distressed area program, was established for research and development expenditures and pilot scale manufacturing facilities in selected high technology activities. The program became effective on January 1, 1995. This program is codified in Chapter 82.63 RCW. The five research activities that qualify for the program are in the following technology categories:

Advanced computing

Advanced materials

Biotechnology

Electronic device technology

Environmental technology

In 1995, the legislature waived the tax repayment requirement for firms that continue to use the high tech facility for eight years, thus converting the tax deferral into an exemption.

Businesses are eligible for a sales/use tax deferral/exemption, if they start new research and development or pilot scale manufacturing operations, or expand or diversify a current operation by expanding, renovating or equipping an existing facility anywhere in Washington. However, the exemption does not apply to repair or replacement of high technology equipment, as does the current sales tax exemption for manufacturing machinery and equipment.

High Technology Business and Occupation Tax Credit

The 1994 Legislature also established a B&O tax credit for qualified research and development expenditures other than for capital improvement purposes (RCW 82.04.4452). An annual credit of up to $2 million is allowed for businesses that perform research and development in Washington in specified high technology categories and meet the minimum expense requirements. The credit cannot exceed the amount of the business and occupation tax due for the same calendar year. The credit is required to be taken against taxes due for the same calendar year in which the qualified research and development expenditures are incurred.

Any business claiming the credit is required to file an affidavit form prescribed by the Department of Revenue which includes the amount of credit claimed, an estimate of anticipated qualified research and development expenditures, an estimate of the taxable amount, the type of research and development being performed and other information.

A business must spend at least 0.92 percent (0.0092) of its taxable income (adjusted for the multiple activities credit) upon qualified research and development within Washington. The 0.92 percent threshold was determined as the estimated average percentage of R&D spending for all industries in the state.

The rate for calculating the credit is currently:

Nonprofit corp./association

- 0.515 percent (.00515) of qualified expenses
  (This rate drops to .484% July 1, 1998)

Proprietary businesses

- 2.5 percent (0.025) of qualified expenses
  (this rate drops to 1.5 percent, July 1, 1998)

During the time covered by this edition of the report series , which covers 1995 and 1996, the tax credit rates were 0.515 percent for nonprofit corporations and 2.5 percent for proprietary businesses. These rates decline to 0.484 percent and 1.5 percent respectively on July 1, 1998..

The technology categories are the same as those listed in RCW 82.63.010 for the sales tax deferral/exemption:

Advanced computing

Advanced materials

Biotechnology

Electronic device technology

Environmental technology

A new administrative rule, WAC 458-20-24003, is currently being written which will provide clarification of the above technology categories; the rule is now being reviewed and should be issued by early 1998. Definitions of the above categories can be found in RCW 82.63.010. These definitions are as follows:

STATUTORY DEFINTIONS OF HIGH TECHNOLOGY ACTIVITIES

"Advanced computing" means technologies used in the designing and developing of computing hardware and software, including innovations in designing the full spectrum of hardware from hand-held calculators to super computers, and peripheral equipment.

"Advanced materials" means materials with engineered properties created through the development of specialized processing and synthesis technology, including ceramics, high value-added metals, electronic materials, composites, polymers, and biomaterials.

"Biotechnology" means the application of technologies, such as recombinant DNA techniques, biochemistry, molecular and cellular biology, genetics and genetic engineering, cell fusion techniques, and new bioprocesses, using living organisms, or parts of organisms, to produce or modify products, to improve plants or animals, to develop microorganisms for specific uses, to identify targets for small molecule pharmaceutical development, or to transform biological systems into useful processes and products or to develop microorganisms for specific uses.

"Electronic device technology" means technologies involving microelectronics; semiconductors; electronic equipment and instrumentation; radio frequency, microwave, and millimeter electronics; optical and optic-electrical devices; and data and digital communications and imaging devices.

"Environmental technology" means assessment and prevention of threats or damage to human health or the environment, environmental cleanup, and the development of alternative energy sources.

TAX INCENTIVES FOR HIGH TECHNOLOGY BUSINESSES

Chapter Three

ADMINISTRATION OF THE PROGRAMS

High Technology Sales/Use Tax Exemption

REQUIREMENTS

Applications must be filed with the Department of Revenue before construction begins or machinery or equipment is acquired. The investment project must be devoted to research and development or pilot scale manufacturing in order to qualify for the deferral/exemption. The investment must consist of machinery and equipment, new structures (including materials and labor), and/or expansion or renovation to increase floor space or production capacity. The machinery and equipment may be used but must be new to the state or to the business.

Qualified machinery and equipment means fixtures, equipment and support facilities that are an integral and a necessary part of pilot scale manufacturing or qualified research and development operation. Included are computers, software, data processing equipment, laboratory equipment, instrumentation, and other devices used in the process of experimentation to develop a new or improved pilot model, plant process, product, formula, invention or similar property.

If a building, machinery, or equipment is used partly for pilot scale manufacturing or qualified research and partly for other purposes, the tax deferral will be apportioned on the basis of the cost of the area used for the qualified purposes.

REPAYMENT

No repayment of the taxes deferred under this program is required if the business uses the investment project for qualified research and development or pilot scale manufacturing. If the investment project is used for any other reason at any time during the calendar year in which the investment is certified as operationally complete, or during the next seven calendar years, the deferred taxes must be repaid immediately according to a prorated schedule. Interest will be assessed on the payments.

The sales or use taxes on machinery or equipment used in pilot scale manufacturing that could have qualified for the sales/use tax exemption for manufacturers at the time of sale or first use do not have to be repaid.

APPLICATION

A project that has received any sales/use tax deferral under this or any other deferral program is not eligible for further deferral under this program. A research and development facility may get additional deferral certificates to upgrade to pilot scale manufacturing. Businesses may have more than one project that may qualify for deferral/exemptions under any of these programs.

Applications may be requested by calling the Department of Revenue's Telephone Information Center at 1-800-647-7706 (TTY 1-800-451-7985).

The Department of Revenue must approve or deny applications within 60 days. If denied, the business may appeal the decision to the Department's Division of Appeals. Businesses approved for a deferral program receive a Tax Deferral Certificate from the Department to present to their contractors and vendors. This certificate allows the contractors and vendors to sell to approved businesses without charging retail sales tax (the seller must keep a copy of the certificate in its records).

High Technology Business and Occupation Tax Credit

REQUIREMENTS

Expenditures by qualified firms for research and development purposes are eligible for a credit against B&O tax liability incurred during the same year. Such expenditures must exceed 0.92 percent (0.0092) of the firm's taxable amount during that same year. Spending for research and development includes operating expenses, wages and benefits, supplies, and computer expenses directly incurred while conducting the research and development. For example: a business reports a taxable amount of $1 million on its Combined Excise Tax Return during a calendar year. This company must spend at least $9,200 ($1,000,000 x .0092 = $9,200) on qualified research and development during that same calendar year to claim the credit.

Businesses may estimate their annual spending on research and development for the year and thus take the credit throughout the year. If a firm's spending does not reach the threshold, it is required to pay the underpaid taxes, with interest, to the Department of Revenue.

The rate by which the amount of credit is determined will be tied to B&O tax rates beginning on July 1, 1998. Nonprofit corporations and associations will calculate the credit by applying the B&O rate for R&D income, per RCW 82.04.260(6); this rate will be 0.484 percent. All other firms will utilize a rate equivalent to the B&O tax rate for general services, per RCW 82.04.290(2); this rate will drop to 1.5 percent on July 1, 1998. The current rates are 0.515 percent and 2.5 percent respectively. A person performing research under contract has the option of using the greater of either its qualified research and development expenditures or 80 percent of the amounts received as compensation for conducting the qualified research and development. The following examples would apply using current rates for the credit.

Example A: a for-profit business performs its own research and development and has research and development expenses of $10,000. To determine if the amount of expenses qualifies the business for a credit, the taxable income must be determined. To do this:

Divide $10,000 by .92 percent ($10,000 / .0092 = $1,086,957). If the taxable amount is $1,086,957 or less, the expenses qualify.

To determine the amount of credit:

> Multiply the expenses ($10,000) times the rate (2.5%). The amount of credit is determined to be $250. ($10,000 x 0.025% = $250).

To use the credit:

> If the business is a manufacturer, the B&O tax on the taxable amount is $5,261
>
> ($1,086,957 x .00484 = $5,261). The credit of $250 should be subtracted from
>
> $5,261, leaving a B&O tax due of $5,011.

Example B: a for-profit business performs its own research and development. It has a gross taxable income of $2,000,000. To determine if the business is eligible for the credit:

It must have expenses that total $18,400 ($2,000,000 x .0092 = $18,400). If the expenses are $18,400 or more, the credit may be used.

To calculate the amount of credit:

> Multiply the expenses ($18,400) times the rate (2.5%). The amount of credit is $460 ($18,400 x 0.0250 = $460).

To use the credit:

> The manufacturing B&O tax on $2,000,000 is $9,680 ($2,000,000 x .00484 = $9,680). The credit of $460 should be subtracted from $9,680, leaving B&O tax due of $9,220.

Example C: a nonprofit business performs its own research and development. It has a gross taxable amount of $1,000,000 and $8,000 in expenses. To be eligible for the credit, this business must have $9,200 of expenses ($1,000,000 x .0092 = $9,200). In this example the firm would not qualify, and no credit can be used.

A person performing qualified research and development under contract for another MAY ASSIGN all or a portion of the credit to the person paying for the research and development. Both businesses must meet the eligibility requirements. Assigned credits may not exceed the smaller of the business and occupation tax of the research business or $2 million.

When credit is used, a copy of the "Affidavit - Research and Development Credit" must be attached to the Combined Excise Tax Return. The credit should be entered on page one of the Combined Excise Tax Return, under the TOTALS section. The amount of the credit should also be entered on page two of the Combined Excise Tax Return under the CREDITS section, credit ID number 810.

APPLICATION

No preapproval from the Department of Revenue is required to use this credit. The first time a business uses the high tech B&O tax credit, it must complete an initial survey and mail it to the address shown on the bottom of the form. In addition, the business must complete the "Affidavit - Research and Development Credit" and attach it to the Combined Excise Tax Return each time the credit is used.

The forms may be requested by calling the Department of Revenue's Telephone Information Center at 1-800-647-7706 (TTY 1-800-451-7985).

Data Limitations

In general data were available for most of the participants in each of the programs. Participants in the sales/use tax exemption program are required to file an application to be included in the program. Most applications were completed in full; however, some of the applications were missing at least some information. The most frequent information that is missing from applications is the amount of anticipated employment. Both current employment and expected future employment are missing from approximately 30 percent of applications processed to date. Project cost information is the second most frequent information missing from applications. Approximately 20 percent of applications are missing project cost data.

A frequent problem with the B&O credit program was that the affidavit was improperly filled out or information was omitted. There is apparently some confusion by taxpayers in the ability to take credit during a calendar year when individual months of activity limit the credit to the amount of B&O tax for the period but other periods in the year would have allowed the credit. Some firms apparently did not accumulate these unused credits that they might have used in subsequent months within the year. Additionally, several firms attempted to apply the credit to other types of taxes and others attempted to carry the credit forward to subsequent years.

Each time the credit is taken on the Combined Excise Tax Return, state law requires that an affidavit be filed with the return. A copy of the B&O credit affidavit is included in the Appendix. Almost all credits were accompanied by an affidavit, but many were incomplete.

The major difficulty in analysis of these types of programs is that the specific information which is helpful or even necessary to do the analysis is not provided by the firm or is not readily available from other sources.

One area of difficulty with the B&O credit program as opposed to the sales tax deferral/ exemption program is that the location of the research activity is not known or provided. Since an application form is not provided, only the mailing

address of the taxpayer is known, and this must be assumed to be the location of the investment activity. For firms with single locations this is not a problem, but larger firms with multiple locations are not always separately identified for employment tax purposes.

Another potential problem is the lack of product information which would help in determining if product line diversification is improving. We will need to actually survey the firms to obtain this type of information. Because of the limited time since the program inception, plus the lag time between R&D investment and product development, the Department has not yet surveyed the participating firms. However, it is anticipated that such a survey will be incorporated in subsequent studies.

The lack of copyright statistics also is a hindrance to analyzing the trend in software research and development activity.

TAX INCENTIVES FOR HIGH TECHNOLOGY BUSINESSES

Chapter Four

PROGRAM UTILIZATION AND TAX IMPACTS

High Technology Sales/Use Tax Exemption

During calendar year 1995, the first year the program was effective, 45 applications were received for the High Technology Sales/Use Tax Exemption program. During calendar year 1996 there were 39 new applications received. Through May 1997 there were 6 additional applications. Two program applications were denied because of late filing and 4 applications were withdrawn.

The 84 applications approved to date are in the following areas of technology:

ADVANCED COMPUTING	34
ADVANCED MATERIALS	1
BIOTECHNOLOGY	28
ELECTRONIC DEVICES	19
ENVIRONMENTAL TECH	2

FISCAL IMPACT

During calendar year 1995, 9 projects were completed; 28 projects were completed during calendar year 1996. It is estimated that 38 projects will be completed during 1997 with the remaining 9 projects currently approved being completed during 1998. The estimated amount of state and local sales tax exempted for the projects now total $72.6 million for the 84 projects that have been approved. The sales tax impact data are based on amounts indicated in the firms' applications and have not yet been spread over time to reflect the actual construction schedules. Few audits of completed projects have yet been completed, so it is premature to know the actual impact on sales tax receipts.

It should be noted that only 64 businesses participate in the sales/use tax exemption. This means that some businesses have more than one project in the program. The tax impact by year is indicated in the following table.

ESTIMATED TAX IMPACT
State and Local Sales/Use Tax
By Calendar Years

Year	Amount	Projects
1995	$ 3,358,207	9
1996	14,272,975	28
1997	28,477,609	38
1998	26,405,291	9

LOCATION OF BUSINESSES

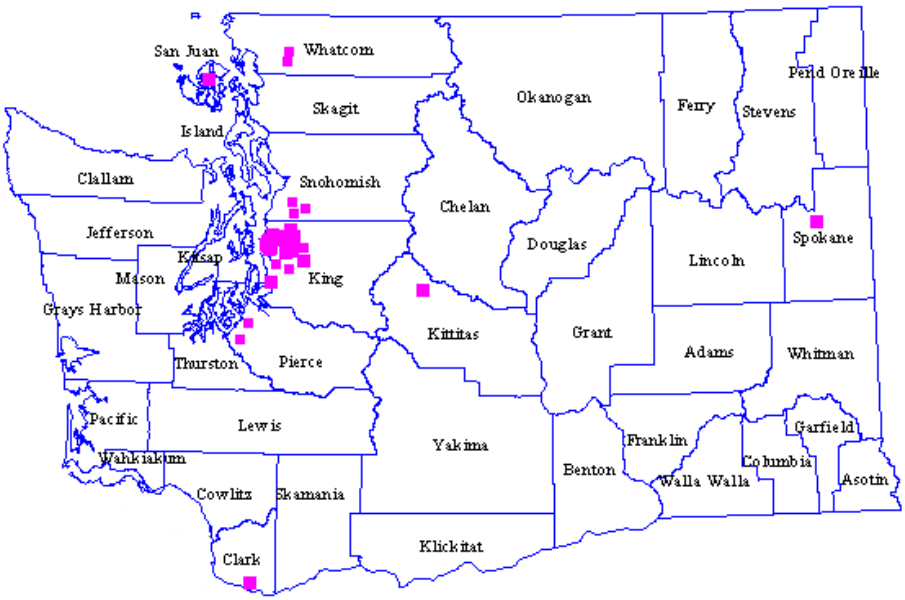
Most of the businesses taking the sales and use tax exemption are distributed throughout the Seattle-Bellevue-Redmond area of King County. Exhibit One on the following page shows graphically how these businesses are distributed. The 64 businesses shown below differ from the count of projects because some businesses have multiple projects in the program. In table form the distribution is shown below:

LOCATION OF BUSINESSES TAKING
SALES/USE TAX EXEMPTION

County	Businesses
King	53
Kittitas	1
Pierce	2

San Juan	1
Snohomish	3
Spokane	1
Whatcom	3
Total	64

Exhibit One. Location of Businesses Taking High Tech Sales/Use Tax Exemption.



High Technology Business and Occupation Tax Credit

Through March of 1997, 410 businesses have participated in the B&O tax credit for research and development. Not all of these firms have participate every year and not all of the firms have been in existence since the program's inception. For the last full year of activity, calendar year 1996, the following counts of technologies were provided by firms or estimated by DOR staff.

ADVANCED COMPUTING	207
ADVANCED MATERIALS	14
BIOTECHNOLOGY	41
ELECTRONIC DEVICES	105
ENVIRONMENTAL TECH	27
TOTAL	394

Several firms indicated that they were involved in multiple technologies so the technology counts above exceeds the firm count. During 1996 there were 352 different firms that took the R&D credit.

REVENUE IMPACT

Tax credits taken are as follows:

CY 1995	$13.3 million
CY 1996	15.3
CY 1997	4.4 (partial year)

On a fiscal year basis $3.3 million in credits were taken in FY 1995 and $14.5 million in credits were taken during FY 1996. Many firms took credits after the eligible year when they discovered they were eligible for the credit or it was discovered during an audit. This explains why the

calendar year (report period) credits are significantly different than fiscal year credits. The following pie chart indicates the distribution of credits during the first two calendar year of the program according to the five eligible technology areas.

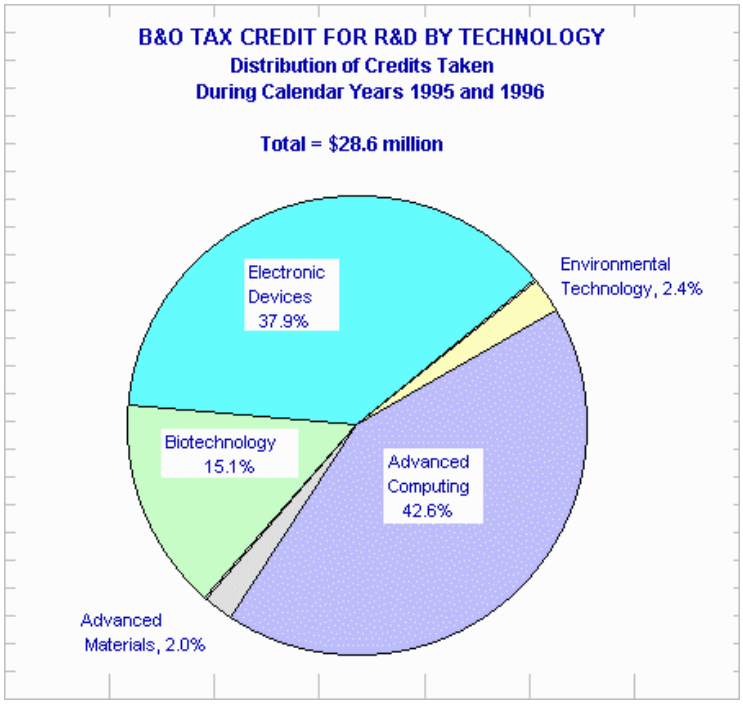


Table 4.1 shows a summary of firms' activity by technology by apportioning the activity that firms indicated on their affidavit equally across the indicated technologies. For example, if a firm indicated that it participated in three technologies, the information about the firm was apportioned one-third to each technology.

LOCATION OF FIRMS TAKING THE CREDIT

While widely distributed geographically in the state, most businesses taking the B&O tax credit are located in western King County. Exhibit Two illustrates how participants are distributed geographically. In table form the distribution is shown below. It should be noted that this distribution is based on the firm's tax return mailing address which may be to its out of state headquarters office or tax preparer. Firms are not eligible to take credit for research and development performed out of state.

Table 4.1

Summary Of High Technology Firm Activity By Technology

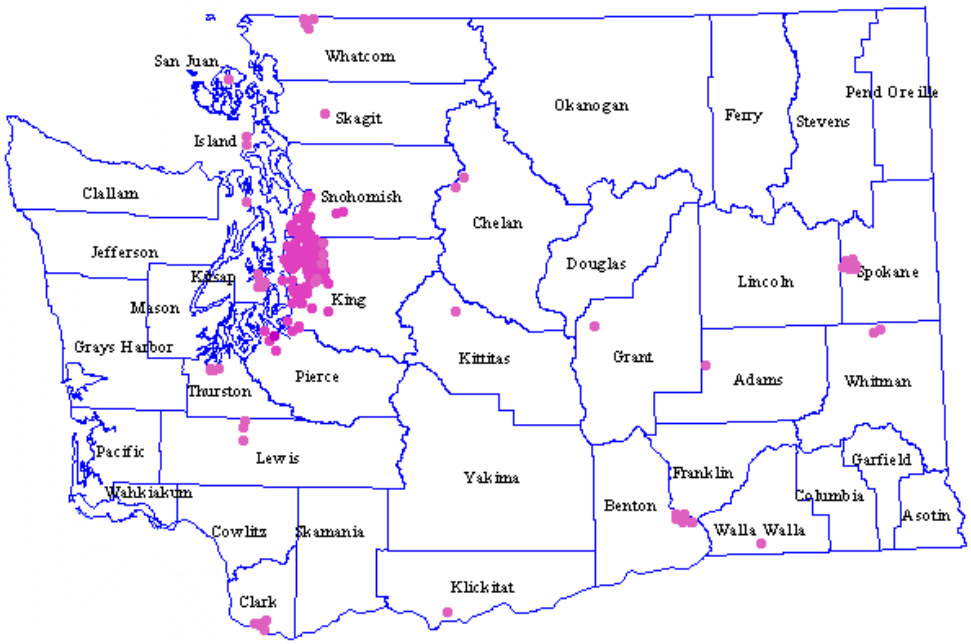
Calendar Years

	ADVANCED COMPUTING	ADVANCED MATERIALS	BIOTECHNOLOGY	ELECTRONIC DEVICES	ENVIRONMENTAL TECHNOLOGY	TOTALS	
1996 TOTAL ALLOCATED GROSS INCOME	$ 7,241,871,800	$ 268,235,793	$ 742,345,955	$ 3,465,920,926	$ 235,602,150	$ 11,953,976,624	
1996 GROSS ELIGIBLE R&D SPENDING	$ 1,087,730,221	$ 40,855,836	$ 251,601,597	$ 310,198,116	$ 37,948,829	$ 1,728,334,599	
R&D SHARE OF GROSS INCOME	15.0%	15.2%	33.9%	8.9%	16.1%	14.5%	
1996 POTENTIAL CREDITS	$ 26,610,324	$ 438,464	$ 4,633,390	$ 7,172,022	$ 365,789	$ 39,219,989	
1996 ACTUAL CREDITS TAKEN	$ 6,505,863	$ 302,688	$ 2,252,959	$ 6,040,964	$ 221,401	$ 15,323,876	
CREDITS TAKEN AS SHARE OF POTENTIAL	24.4%	69.0%	48.6%	84.2%	60.5%	39.1%	
1995 ACTUAL CREDITS TAKEN	$ 5,690,395	$ 269,284	$ 2,070,934	$ 4,818,699	$ 478,327	$ 13,327,640	
1996 ACTUAL CREDITS TAKEN	$ 6,505,863	$ 302,688	$ 2,252,959	$ 6,040,964	$ 221,401	$ 15,323,876	
1995-1996 GROWTH RATE	14.3%	12.4%	8.8%	25.4%	-53.7%	15.0%	
						TOTAL TECHNOLOGY COUNT	TOTAL COMPANY COUNT
1995 TECHNOLOGIES INDICATED	173	11	34	89	30	337	303
1996 TECHNOLOGIES INDICATED	207	14	41	105	27	394	352
1995-1996 GROWTH RATE	19.7%	27.3%	20.6%	18.0%	-10.0%	16.9%	16.2%

LOCATION OF FIRMS TAKING B&O TAX CREDIT

County	Businesses
Adams	1
Benton	11
Chelan	2
Clark	8
Franklin	1
Grant	1
Island	2
Jefferson	1
King	263
Kitsap	11
Kittitas	1
Klickitat	1
Lewis	3
Out of State	31
Pierce	5
San Juan	1
Skagit	1
Snohomish	38
Spokane	9
Thurston	5
Walla Walla	1
Whatcom	5
Whitman	4
Total	410

Exhibit Two. Location of Businesses Taking High Tech B&O Credit.



TAX INCENTIVES FOR HIGH TECHNOLOGY BUSINESSES

Chapter Five

ECONOMIC IMPACT OF THE PROGRAMS

The legislative goals for economic impact analysis of these programs were separated into job creation, employment growth, company growth, growth in R&D, product line diversification and diversification of the overall state economy. These items are both symptomatic of the results of the tax incentive programs, as well as potential measures of future benefits to the state if research and development growth is successful in creating marketable products that in turn create manufacturing, wholesaling, retailing and service jobs that use or sell the products. They also recognize the fundamental contribution of R&D to maintaining and enhancing Washington's economic vitality. In addition, research and development activity that is successful can create the need for more highly skilled and/or highly educated workers. However, research and development has a relatively long lead time for new discoveries or ideas to manifest themselves in products that are produced and sold.

There are certain difficulties in measuring the results of programs such as these, primarily in the availability of historic data, as well as data that firms might consider proprietary. The impact of other tax incentive programs and publishing lags for data also create difficulties in measuring the impact of the high tech programs, particularly for this initial report with the relatively short period of time in which the programs have been effective. So far, the high tech programs have generated only two years of data, so at best the results can only be tentatively indicated at this time.

The effectiveness of R&D spending is critical to the effectiveness of these programs. This is because the results of these research activities cause further development, processing, manufacturing or trade activities to be stimulated. The effectiveness of R&D spending is the most difficult part of the study to quantify. Measurements of R&D effectiveness will need to be developed for future studies, utilizing not only administrative information but also survey results from the participants.

Patents and copyrights are one indicator of the effectiveness of R&D activities. Patents and copyrights provide evidence of successful research and may be a quantifiable example of activities that could produce future economic development.

Copyrights are generally used to protect written materials such as software from use by others. Since a large part of the participation in these programs is by advanced software technology, it would be beneficial to be able to obtain quantitative copyright information by region in the state over time to evaluate trends. However, we have not yet had success in locating a source for this information. It is possible that this information has been developed by some of the program participants but might be considered proprietary information by them. In future studies we may be able to do analysis in this area if such information can be developed.

Patents are used to protect owners from unlawful commercial use of their ideas as well, but these are generally used for tangible assets. It is our understanding, though, that some patents may be used for software/equipment combinations. While it is true that not all product ideas are converted into patents, and that not all research results in useful ideas, and there is a potentially long lead time between the time of application and grant, nonetheless granted patents do provide reasonable evidence of success in research. Patent statistics are available in a fairly timely manner from the U.S. Patent Office and are published for geographic areas down to the county level, so they can be a useful tool for analysis.

Job Creation

SALES/USE TAX EXEMPTION

Based on information submitted from applicants, the estimated number of jobs created for projects completed in 1995 is 81. Estimated jobs created for projects completed in 1996 is 1,667 and in 1997 is 3,329. This information has not yet been verified by reference to actual employment data. However, not all applicants provided estimates of new jobs that

were expected to be created. The above information only reflects estimates of job creation that were reported to the Department of Revenue.

Sometimes a research and development facility is a separately identifiable facility with employment separately reported to the Employment Security Department. If any of these facilities become identifiable as separate units, it may be possible in the future to identify job creation for research and development activities. At this time, however, only total employment is available for most firms.

B&O TAX CREDIT

The B&O tax credit is potentially available to all participants in the sales/use tax exemption program. Since all firms performing research in the designated five technology categories are eligible for the credit program, but only those building or expanding facilities are eligible for the deferral/exemption program, B&O tax credit participants could include participants of both programs. However, only 37 of the 64 participants in the exemption program also take the B&O credit.

In Table 5.1 total employment for all program participants is shown. During 1995 (1996 employment was not available at the time of the report) total employment was 42,718 or 3,260 jobs more than in 1994. Since research and development spending represents only an average of about 14.5 percent of total gross activity and R&D wages are higher than average, it is likely that about 300 - 400 new R&D jobs were created during 1995 by participants.

Table 5.1

ECONOMIC INFORMATION FOR HIGH TECHNOLOGY FIRMS
PARTICIPATING IN R&D CREDIT PROGRAM
CalendarYears

	GROSS INCOME	TOTAL EMPLOYMENT	TOTAL WAGES*	AVERAGE WAGE	WAGES/ GROSS	COMPANY COUNT	GROSS INCOME GROWTH	COMPANY GROWTH	EMPLOYMENT GROWTH
1990	$ 3,693,330,406	20895	$ 993,521,017	$ 47,548	26.9%	161	NA	NA	NA
1991	$ 4,699,041,052	28967	$ 1,467,005,680	$ 50,644	31.2%	190	27.2%	18.0%	38.6%
1992	$ 5,884,742,060	32653	$ 2,079,077,816	$ 63,672	35.3%	223	25.2%	17.4%	12.7%
1993	$ 7,193,541,066	37540	$ 2,059,579,036	$ 54,864	28.6%	255	22.2%	14.3%	15.0%
1994	$ 8,879,355,924	39458	$ 2,456,392,529	$ 62,253	27.7%	301	23.4%	18.0%	5.1%
1995	$ 10,500,815,013	42718	$ 3,040,752,004	$ 71,182	29.0%	362	18.3%	20.3%	8.3%
1996	$ 11,966,899,968	NA	NA	NA	NA	387	14.0%	6.9%	NA

* INCLUDES STOCK OPTIONS EXERCISED

CONCLUSIONS

Applicants for the sales tax exemption indicate that 5,077 new jobs are attributable to R&D investments to date. It is too soon to verify these employment changes and attribute the jobs to the tax incentive programs, but it is likely that employment was higher than it might have been expected to be (see discussion about patents in later sections). Clearly the completion of a new research facility generates more employment (assuming that positions are not transferred from an old facility) because participants are investing capital that requires a higher level of labor to support. Future studies may be able to obtain more employment data to analyze this question.

Employment Growth for Participants

Table 5.1 shows that employment growth for participating firms in these programs has historically been high but

growth has slowed in the last two years.

This table also shows a history of wages for high-tech participants. In 1995 the average employee in these industries earned over $71,000 per year and had a history of rapidly increasing wages. However, the trend of base wage growth is not always seen in the data.

For example, average wages were higher in 1992 than in 1993 and for several companies employment increased significantly during that time while total wages decreased. This apparent anomaly is believed to be caused by the timing and magnitude of stock options being exercised.

While the average employment per firm for these industries is over 100, the median employment for participating firms is 6 employees. This indicates that the majority of high-tech firms participating in these programs are quite small in terms of number of employees.

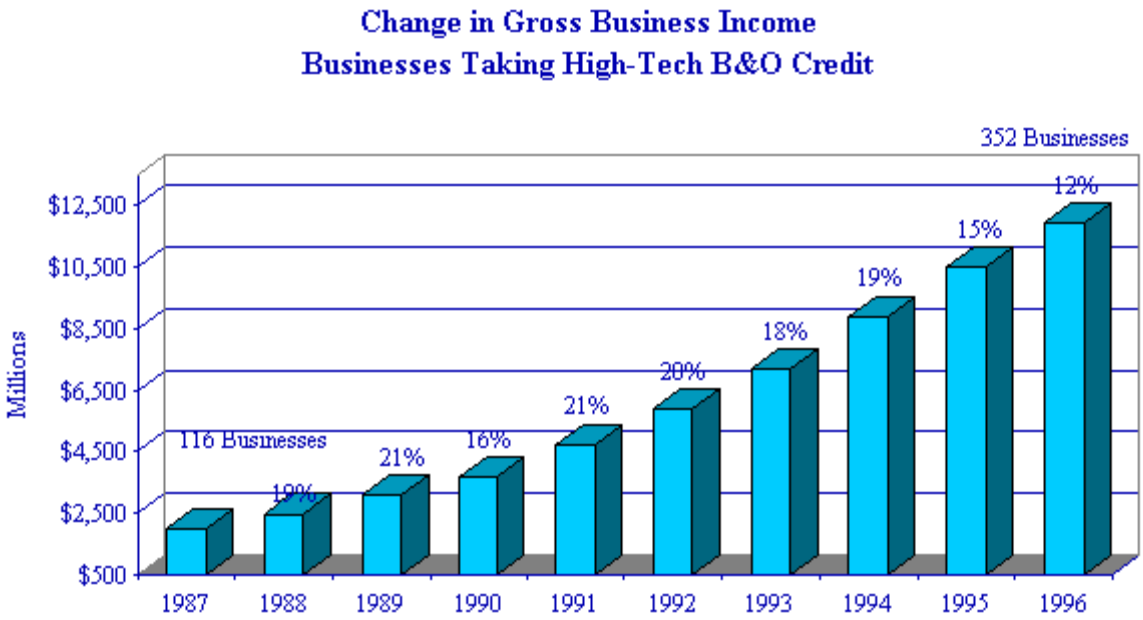
CONCLUSIONS

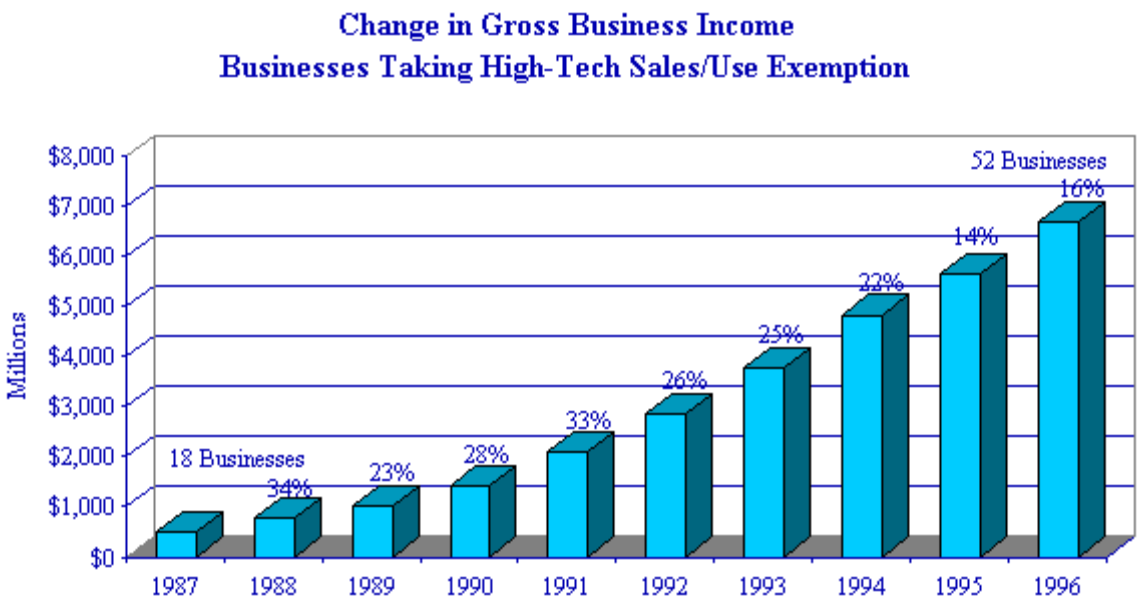
It appears that employees in these high-tech industries have enjoyed rapid increases in employment opportunities and wages over the years. Recent slowing in growth of employment still leaves growth above statewide average growth for all industries. The slow-down likely represents a period of consolidation until markets absorb spending levels of recent years. While both large and small firms participate in the programs, the majority of firms are small.

Company Growth

The following two charts show the growth in gross business income (GBI) for participants in each of the high-tech programs. The definition of GBI used here is the same as that found in the Quarterly Business Review, published by the Department. It is important to note that not all businesses reported income in every year represented on the charts. In fact, many of the companies participating in the programs are new and were only organized in the past few years.

A review of these charts indicates that the firms participating in the deferral/exemption program are considerably larger and have also grown faster than those high-tech firms that only participate in the R&D credit program.





Looking at Table 5.1 it can be seen that the growth in the number of companies per year has been less than the growth in gross income; this has allowed the average sales level per firm to increase. However, the slowing in total sales growth in the last two years has reduced opportunities for new firms to enter these technology areas and may have encouraged mergers between companies. This is shown by a decline in the growth count of companies from 20.3 percent in 1995 to 6.9 percent in 1996.

Table 5.2 shows GBI growth for firms in the high-tech programs compared to GBI growth for all firms in selected two-digit SIC categories. The SIC categories that were selected are indicative of the SIC categories of businesses participating in the high-tech programs. The table only shows GBI for businesses that were present in 1990 or in other terms, the table shows GBI for the same number of businesses in 1990 as in 1996. Selected SIC categories are:

28 Chemicals And Allied Products

36 Electronic And Electrical Equipment

50 Wholesale Trade

57 Home Furniture, Furnishings, And Equipment Stores

737 Computer Programming, Data Processing, And Related Services

87 Engineering, Accounting, Research, Management, And Related Services

As can be seen by the table, businesses participating in the high-tech programs show a steady growth in GBI. Most of this growth is due to the large percentage of participants that are in the 737 SIC category. Most of the large software development firms in Washington State are in the 737 category. Other SIC categories show various growth trends that do not correlate well with the high-tech category.

CONCLUSIONS

Company and gross income growth has been rapid for these technologies for at least several years, but some slowing has been noticed in the last two years which has reduced opportunities for new firms to enter the market. Those firms which have been able to become large enough to have strong financial support are those that are able to expand research and development facilities and are therefore the primary participants in the deferral/exemption program.

Table 5.2 Percent Growth in Gross Business Income

Selected SICs vs. Participants in High-Tech Programs

Year	High Tech	All SICs High Tech	28	36	50	57	737	87
1990	14.7%	10.8%	15.1%	4.5%	8.7%	-3.6%	52.0%	12.7%
1991	18.0%	5.4%	-38.4%	3.1%	-1.8%	7.8%	38.9%	1.9%
1992	17.1%	8.1%	78.7%	11.4%	6.7%	9.2%	21.1%	10.2%
1993	16.8%	8.3%	0.0%	6.2%	0.0%	10.9%	44.5%	2.6%
1994	16.7%	9.5%	11.0%	8.5%	9.3%	14.8%	34.6%	10.5%
1995	14.7%	10.2%	-40.1%	20.3%	6.0%	9.5%	7.4%	6.0%
1996	11.6%	7.9%	9.5%	7.3%	9.4%	10.7%	10.1%	8.7%

Growth of Research & Development Investment

Table 4.1 shows the estimated research and development spending by technology category, and credits taken for 1995 and 1996. It appears that R&D credit growth is moving at about the same growth rate as gross income growth during 1996 for the combined five technology groups. Growth during 1995 can not be analyzed since data earlier than 1995 are not available, because the program did not exist prior to 1995.

Some differences exist in R&D spending between technology groups for the period reviewed. Biotechnology companies spent a higher share of gross income on R&D (33.9 percent) than the other technologies (which averaged 14.5 percent) but growth in R&D spending was lower for biotechnology (8.8 percent) than the average 15 percent. Also, firms in the electronic device technology category had the highest growth in R&D spending (25.4 percent) but had the lowest share of R&D spending to gross (8.9 percent). These differences are probably due to the difficulty of expanding research budgets from high levels compared with low levels. For example, when a research budget is already 33 percent of gross revenue, it is more difficult to increase it 15 percent (or about 5 percent of sales) than it is when the research budget is 8 percent (or about 1 percent of sales). It is not likely that changing markets caused these differences in spending, because growth in the number of companies participating in these technologies (shown in Table 4.1) was similar (20.6 percent for biotechnology and 18 percent for electronic devices) indicating that markets were still relatively easy to enter.

Environmental technology firms had a decline in R&D credits taken in 1996 which was explained by three firms dropping from the list of participants. This category accounts for about 1.4 percent of total credits taken.

Advanced materials technology had the highest growth rate in new firm entrants (27.3 percent) of the five groups but was also a small group amounting to only 2 percent of the total credits taken.

The largest technology category is the advanced computing group which is comprised of 207 firms and represents 42.5 percent of the credits taken. The group had an increase in R&D spending of 14.3 percent during 1996 and the number of participants increased at a healthy 19.7 percent rate.

CONCLUSIONS

While we are not able to say anything about growth in R&D spending compared to periods prior to the beginning of the programs at this time (at least using information provided by participants), R&D spending growth during 1996 has moved in tandem with company gross revenue during 1996. All of the technology sectors except environmental technology took greater credits in 1996 than in 1995 but that sector may have had unqualified firms in 1995 which dropped out in 1996. In future years audited credits may provide better data on R&D spending.

Product Line Diversification

Data on production line diversification are presently not available for businesses participating in either of the programs.

Because of the time it takes for R&D investment to yield new products and the short time these programs have been in effect, it was not reasonable to attempt to obtain product information for this study. However, it is anticipated that this data may be obtained by surveying participants in the two high-tech programs for subsequent analyses of the incentive programs.

Diversification of State Economy

At this time no specific definition exists for the term "diversification of the state economy" as indicated in the statute. A wide range of economic and demographic indicators may be chosen to represent "diversification" as the term means different things to different people. For example, an increase in employment across SIC categories may represent a more diversified economy. Diversification of activity geographically across the state is another way of looking at the data. For future versions of this study, measurable indicators of diversification will need to be developed; they will likely include both geographical and industry diversification measures.

One way of viewing diversification is geographic diversification across the state. In Table 5.3 patent counts per 1000 population are shown by county and are ranked by the level of activity and by the change in level since 1994. This is to show the trend after the beginning of these programs. Obviously, there is a time lag between the time that an application for a patent is made and the time it is granted, so patents granted in 1995 and 1996 are probably not closely related to research during the same period. Nonetheless, this information is helpful in establishing a base for comparison. It is interesting to note that many rural counties generate a high level of patents and have raised the level of patent generation in recent years. For example, Lewis, Walla Walla, Jefferson and Franklin counties have all had significant increases in patents in recent years. Of course, about 75 percent of program participants are located in King, Snohomish and Clark counties and about 75 percent of all state patents are also granted in the same counties.

It is interesting to note that the county location of participants correlates highly with the location where patents are granted. While the participants in the R&D credit program are generally located in the Puget Sound area they are distributed across most of the state. This implies that originality is not just centered in the Puget Sound area, but that the R&D activity which precedes the issuance of a patent is probably more concentrated.

Table 5.4 shows patent counts for Washington as compared with other states. The purpose of this table is to give an indication if patent activity is higher during 1995 and 1996 than might have been expected based on trend levels in 1990-1994 for the entire country. The result of this calculation is that the number of Washington patents granted in 1995-1996 was about 14 percent above what might have been expected given the level of patents granted in the entire country. When compared to other states the only state of comparable size that had higher relative growth than Washington was Indiana. The other states with higher relative growth in patent generation, Wyoming, Montana, Kentucky, Alabama and Vermont, all had smaller population bases and had lower per capita patent generation.

It is interesting to note that many of the states with higher historic levels of patent generation such as Massachusetts, New York and Texas were all adding patents at lower growth rates than might have been expected by historic trends. In fact, on average states were computed to be 4 percent below the expected trend in patent generation, which indicates that the comparison period 1990-1994 was a relatively higher growth period for patents on a national basis.

Table 5.3

GEOGRAPHIC DISTRIBUTION OF PATENTS GRANTED
PER 1000 POPULATION AND R&D FIRM LOCATION
RANKED BY PATENT COUNT - CALENDAR YEARS

COUNTY	1990-1994 AVERAGE PER 1000 POPULATION	1995-1996 AVERAGE PER 1000 POPULATION	PERCENT CHANGE	CHANGE IN NUMBER PER 1000 POPULATION	RANK BY 1995-1996 LEVEL	RANK BY CHANGE FROM 1990-1994 LEVEL	NUMBER OF R&D CREDIT COMPANIES	1996 SHARE OF STATE PATENTS	SHARE OF PARTICIPATING R&D COMPANIES
KING	0.326	0.376	15%	0.050	1	17	263	57.7%	64.1%
SNOHOMISH	0.177	0.219	23%	0.041	5	15	38	11.5%	9.3%
CLARK	0.179	0.231	29%	0.052	4	14	8	5.6%	2.0%
SPOKANE	0.118	0.099	-16%	-0.019	20	27	9	3.3%	2.2%
PIERCE	0.092	0.069	-25%	-0.023	23	29	5	3.3%	1.2%
BENTON	0.296	0.263	-11%	-0.033	2	26	11	3.1%	2.7%
KITSAP	0.082	0.110	33%	0.027	15	12	11	3.1%	2.7%
WHATCOM	0.195	0.216	11%	0.021	6	19	5	2.9%	1.2%
YAKIMA	0.076	0.073	-5%	-0.003	22	23		1.4%	0.0%
SKAGIT	0.126	0.117	-7%	-0.009	12	25	1	0.9%	0.2%
ISLAND	0.068	0.122	80%	0.054	11	7	2	0.8%	0.5%
THURSTON	0.033	0.052	57%	0.019	28	8	5	0.8%	1.2%
GRAYS HARBO	0.110	0.110	1%	0.001	14	22		0.6%	0.0%
LEWIS	0.042	0.106	151%	0.064	16	2	3	0.6%	0.7%
WALLA WALLA	0.106	0.142	34%	0.036	10	11	1	0.5%	0.2%
COWLITZ	0.061	0.067	9%	0.005	24	20		0.5%	0.0%
SAN JUAN	0.327	0.242	-26%	-0.085	3	30	1	0.4%	0.2%
WHITMAN	0.272	0.160	-41%	-0.112	8	31	4	0.3%	1.0%
JEFFERSON	0.121	0.158	30%	0.036	9	13	1	0.3%	0.2%
FRANKLIN	0.084	0.114	35%	0.030	13	10	1	0.3%	0.2%
ASOTIN	0.045	0.103	131%	0.058	17	4		0.3%	0.0%
CLALLUM	0.048	0.102	114%	0.054	19	6		0.3%	0.0%
CHELAN	0.055	0.066	20%	0.011	25	16	2	0.3%	0.5%
MASON	0.039	0.054	38%	0.015	27	9		0.3%	0.0%
DOUGLAS	0.036	0.084	130%	0.047	21	5		0.2%	0.0%
KITTITAS	0.057	0.066	15%	0.009	26	18	1	0.2%	0.2%
GRANT	0.045	0.046	2%	0.001	32	21	1	0.2%	0.2%
LINCOLN	0.109	0.103	-6%	-0.007	18	24		0.1%	0.0%
PACIFIC	0.060	0.048	-21%	-0.013	30	28		0.1%	0.0%
KLICKITAT	0.082	0.027	-67%	-0.055	33	33	1	0.1%	0.2%
GARFIELD	0.000	0.213	NA	0.213	7	1		0.0%	0.0%
SKAMANIA	0.116	0.052	-55%	-0.063	29	32		0.0%	0.0%
PEND OREILLE	0.020	0.047	136%	0.027	31	3		0.0%	0.0%
OKANOGAN	0.029	0.000	-100%	-0.029	34	34		0.0%	0.0%
ADAMS	0.057	0.000	-100%	-0.057	35	35	1	0.0%	0.2%
STEVENS	0.074	0.000	-100%	-0.074	36	36		0.0%	0.0%
COLUMBIA	0.000	0.000	NA	0.000	NA	NA		0.0%	0.0%
FERRY	0.000	0.000	NA	0.000	NA	NA		0.0%	0.0%
WAHKIAKUM	0.000	0.000	NA	0.000	NA	NA		0.0%	0.0%
UNKNOWN OR OUT OF STATE	NA	NA	NA	NA	NA	NA	31	0.1%	7.6%
TOTAL STATE	0.181	0.199	10%	0.019			410	100.0%	100.0%

CONCLUSIONS

Firms participating in the high-tech programs are distributed throughout the state in about the same proportions that patents are generated in the state. This indicates that they mirror the historic creativity areas around the state and future patent growth is likely to be in the same areas. This implies that program participants are not likely to distort the historic pattern of geographic creativity by concentrating it in the Puget Sound area. It is interesting that some rural

counties have had increases in growth in patents (which may be too early to attribute to these programs) which may indicate a possibility of future growth in products for those areas and a positive force for diversification.

Washington has generated more patents in recent years than might have been expected according to historical trends, and the state has performed well in patent growth in comparison with other states. While it is not yet possible to determine whether the tax incentive programs are causing the growth in patents, they are at least in support of the positive trends that appear to currently exist.

Table 5.4

TREND GROWTH IN PATENTS FOR 1995-1996
BASED ON U.S. PATENT TOTALS 1990-1994

	TREND LEVEL		ACTUAL		PERCENT DIFFERENT FROM TREND		AVE. % DIFFERENCE FOR 1995-
	1995	1996	1995	1996	1995	1996	
WYOMING	35	53	75	45	114%	-15%	50%
MONTANA	100	124	141	141	41%	14%	28%
KENTUCKY	267	330	341	397	28%	20%	24%
ALABAMA	277	299	359	336	30%	12%	21%
INDIANA	1,082	1,189	1,281	1,417	18%	19%	19%
VERMONT	213	184	171	282	-20%	53%	17%
WASHINGTON	**1,058**	**1,217**	**1,257**	**1,330**	**19%**	**9%**	**14%**
NEVADA	165	252	216	233	31%	-8%	11%
NORTH DAKOTA	53	70	63	72	19%	2%	11%
NORTH CAROLINA	1,148	1,354	1,255	1,454	9%	7%	8%
MISSOURI	705	788	819	762	16%	-3%	6%
UTAH	524	568	554	603	6%	6%	6%
CALIFORNIA	10,170	11,636	10,825	11,957	6%	3%	5%
ARIZONA	989	1,208	1,120	1,153	13%	-5%	4%
OREGON	861	910	870	965	1%	6%	4%
GEORGIA	1,023	1,085	1,047	1,135	2%	5%	3%
IOWA	453	489	486	485	7%	-1%	3%
ILLINOIS	3,360	3,590	3,478	3,674	4%	2%	3%
KANSAS	335	323	319	348	-5%	8%	1%
FLORIDA	2,417	2,489	2,466	2,509	2%	1%	1%
NEW JERSEY	3,093	3,298	3,065	3,385	-1%	3%	1%
WISCONSIN	1,440	1,491	1,426	1,522	-1%	2%	1%
TENNESSEE	695	737	708	719	2%	-2%	0%
PENNSYLVANIA	3,049	3,192	2,927	3,226	-4%	1%	-1%
TEXAS	4,262	4,740	4,313	4,511	1%	-5%	-2%
MICHIGAN	3,143	3,492	3,045	3,457	-3%	-1%	-2%
OHIO	3,033	3,266	2,987	3,173	-2%	-3%	-2%
DELAWARE	438	505	442	472	1%	-7%	-3%
LOUISIANA	450	433	413	444	-8%	2%	-3%
NEW YORK	5,517	6,020	5,266	5,816	-5%	-3%	-4%
NEW HAMPSHIRE	461	515	459	468	0%	-9%	-5%
NEW MEXICO	258	302	280	242	8%	-20%	-6%
COLORADO	1,322	1,394	1,207	1,320	-9%	-5%	-7%
VIRGINIA	979	1,084	945	967	-3%	-11%	-7%
MINNESOTA	2,085	2,211	1,944	2,000	-7%	-10%	-8%
SOUTH CAROLINA	549	589	521	518	-5%	-12%	-9%
SOUTH DAKOTA	52	50	44	49	-16%	-2%	-9%
ARKANSAS	171	169	143	164	-16%	-3%	-10%
MARYLAND	1,224	1,341	1,099	1,208	-10%	-10%	-10%
CONNECTICUT	1,854	2,000	1,768	1,685	-5%	-16%	-10%
MASSACHUSETTS	2,884	2,994	2,427	2,713	-16%	-9%	-13%

RHODE ISLAND	287	359	263	291	-8%	-19%	-14%
MISSISSIPPI	181	177	138	167	-24%	-6%	-15%
NEBRASKA	183	213	150	187	-18%	-12%	-15%
OKLAHOMA	677	654	545	542	-20%	-17%	-18%
WEST VIRGINIA	180	176	150	139	-17%	-21%	-19%
HAWAII	122	114	84	104	-31%	-9%	-20%
ALASKA	55	81	49	50	-10%	-39%	-24%
MAINE	184	167	137	113	-25%	-32%	-29%
IDAHO	489	556	329	393	-33%	-29%	-31%
TOTALS	66,544	72,472	64,417	69,343	-3%	-4%	-4%

AUTHORIZING STATUTE FOR THE STUDY

Business and Occupation Tax Credit

RCW 82.04.4452 Credit--Research and development spending--Assessment report--Expiration of section. (Effective January 1, 1995.) (1) In computing the tax imposed under this chapter, a credit is allowed for each person whose research and development spending during the year in which the credit is claimed exceeds 0.92 percent of the person's taxable amount during the same calendar year.

(2) The credit is equal to the greater of the amount of qualified research and development expenditures of a person or eighty percent of amounts received by a person other than a public educational or research institution in compensation for the conduct of qualified research and development, multiplied by the rate of 0.515 percent in the case of a nonprofit corporation or nonprofit association engaging within this state in research and development, and 2.5 percent for every other person.

(3) Any person entitled to the credit provided in subsection (2) of this section as a result of qualified research and development conducted under contract may assign all or any portion of the credit to the person contracting for the performance of the qualified research and development.

(4) The credit, including any credit assigned to a person under subsection (3) of this section, shall be taken against taxes due for the same calendar year in which the qualified research and development expenditures are incurred. The credit, including any credit assigned to a person under subsection (3) of this section, for each calendar year shall not exceed the lesser of two million dollars or the amount of tax otherwise due under this chapter for the calendar year.

(5) Any person taking the credit, including any credit assigned to a person under subsection (3) of this section, whose research and development spending during the calendar year in which the credit is claimed fails to exceed 0.92 percent of the person's taxable amount during the same calendar year shall be liable for payment of the additional taxes represented by the amount of credit taken together with interest, but not penalties. Interest shall be due at the rate provided for delinquent excise taxes retroactively to the date the credit was taken until the taxes are paid. Any credit assigned to a person under subsection (3) of this section that is disallowed as a result of this section may be taken by the person who performed the qualified research and development subject to the limitations set forth in subsection (4) of this section.

(6) Any person claiming the credit, and any person assigning a credit as provided in subsection (3) of this section, shall file an affidavit form prescribed by the department which shall include the amount of the credit claimed, an estimate of the anticipated qualified research and development expenditures during the calendar year for which the credit is claimed, an estimate of the taxable amount during the calendar year for which the credit is claimed, and such additional information as the department may prescribe.

(7) A person claiming the credit shall agree to supply the department with information necessary to measure the results of the tax credit program for qualified research and development expenditures.

(8) The department shall use the information required under subsection (7) of this section to perform three assessments on the tax credit program authorized under this section. The assessments will take place in 1997, 2000, and 2003. The department shall prepare reports on each assessment and deliver their reports by September 1, 1997, September 1, 2000, and September 1, 2003. The assessments shall measure the effect of the program on job creation, the number of jobs created for Washington residents, company growth, the introduction of new products, the diversification of the state's economy, growth in research and development investment, the movement of firms or the consolidation of firms' operations into the state, and such other factors as the department selects.

(9) For the purpose of this section:

(a) "Qualified research and development expenditures" means operating expenses, including wages, compensation of a proprietor or a partner in a partnership as determined under rules adopted by the department, benefits, supplies, and computer expenses, directly incurred in qualified research and development by a person claiming the credit provided in this section. The term does not include amounts paid to a person other than a public educational or research institution to conduct qualified research and development. Nor does the term include capital costs and overhead, such as expenses for land, structures, or depreciable property.

(b) "Qualified research and development" shall have the same meaning as in RCW 82.63.010.

(c) "Research and development spending" means qualified research and development expenditures plus eighty percent of amounts paid to a person other than a public educational or research institution to conduct qualified research and development.

(d) "Taxable amount" means the taxable amount subject to the tax imposed in this chapter required to be reported on the person's combined excise tax returns during the year in which the credit is claimed, less any taxable amount for which a credit is allowed under RCW 82.04.440.
(10) This section shall expire December 31, 2004. [1994 1st sp.s. c 5 § 2.]

NOTES:

Findings--Effective date--1994 1st sp.s. c 5: See RCW 82.63.005 and 82.63.900.

Sales and Use Tax Deferral/Exemption

RCW 82.63.020 Application--Assessment reports. (Effective January 1, 1995.) Application for deferral of taxes under this chapter must be made before initiation of construction of, or acquisition of equipment or machinery for the investment project. The application shall be made to the department in a form and manner prescribed by the department. The application shall contain information regarding the location of the investment project, the applicant's average employment in the state for the prior year, estimated or actual new employment related to the project, estimated or actual wages of employees related to the project, estimated or actual costs, time schedules for completion and operation, and other information required by the department. The department shall rule on the application within sixty days.
Applicants for deferral of taxes under this chapter shall agree to supply the department with nonproprietary information necessary to measure the results of the tax deferral program for high-technology research and development and pilot scale manufacturing facilities. The department shall use the information to perform three assessments on the tax deferral program authorized under this chapter. The assessments will take place in 1997, 2000, and 2003. The department shall prepare reports on each assessment and deliver their reports by September 1, 1997, September 1, 2000, and September 1, 2003. The assessments shall measure the effect of the program on job creation, the number of jobs created for Washington residents, company growth, the introduction of new products, the diversification of the state's economy, growth in research and development investment, the movement of firms or the consolidation of firms' operations into the state, and such other factors as the department selects. [1994 1st sp.s. c 5 § 4.]