

PART IV: ECONOMIC FOUNDATIONS

A. Overview

Underpinning every successful cluster are the economic foundations of a region as described here and shown as the base of the pyramid in the cluster diagram below.

- **Human Resources:** an educated and productive workforce.
- **Technology:** the quality of research and development and other sources of innovation.
- **Access to Capital:** the ability of firms in the region to obtain financing.
- **Business Climate:** a competitive business climate; adequate funding for necessary services.
- **Physical Infrastructure:** well-developed, cost-effective and efficient roads, highways, transit, ports, and airports that meet the transit and transportation needs of both workers and business.
- **Quality of Life and Social Capital:** The quality of life a region offers its residents is comprised of many things—many of them intangible. It also consists of what is known as “social capital”—the inter-personal and organizational networks that enhance a region’s ability to facilitate transactions and investment due to trust and access to information.

Figure IV-1: Economic Foundations of a Cluster-Based Economic Development Framework



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This section provides summary statistics, or indicators, and a description of the major issues for each of these foundations for the central Puget Sound region.

Peer Region Benchmarking

To assess the strength and performance of the region’s economic foundations, this report has identified five peer regions with which to compare the central Puget Sound region (or, where limited data is available, the state of Washington). These regions were selected on the basis of a number of criteria including: (1) population and urban orientation (rural regions of the U.S. were excluded from consideration); (2) cluster structure (regions with similar key clusters were given extra weight in the selection process); (3) economic performance (metro regions with faster employment growth were preferred over slow growing regions); (4) strategy-oriented economic development (regions that had followed or were developing a collaborative, regional economic development strategy were preferred to those without a strategy); and (5) multimodal transportation issues (regions that faced similar transportation constraints were given extra weight).

On the basis of these criteria, the following “peer regions” were identified:

- San Francisco Bay Area (including San Jose and Oakland), CA
- San Diego, CA
- Denver, CO
- Minneapolis-St. Paul, MN (the “Twin Cities”)
- Phoenix, AZ

To the extent possible, each of the economic foundations of the central Puget Sound examined in the following analysis is compared, or “benchmarked,” with these peer regions. Where possible, data is presented at the regional level. In some instances, data is only available at the state level. The methodology used in the peer selection process can be reviewed in greater detail in *Appendix A*.

B. Human Resources

Competitive economies require a workforce that has the necessary technical skills, the ability to continue developing skills as technologies and markets change, and a commitment to perform high-quality work (i.e., a good work ethic). Education and job skill training are the primary ways by which the human capital of a region is preserved and enhanced. The ability of the labor force, industry, educational and training institutions, statewide policy organizations, organized labor, and workforce development councils to respond flexibly and work collaboratively are vital to a strong human resource foundation at the regional level.

Labor Force

The central Puget Sound labor force totals more than 1.8 million individuals and represents 58% of the state of Washington’s total workforce. Interestingly, a greater percentage of the region’s population is within the workforce age range (25-64) than that of the state or even the rest of the country: 33.3% versus 30.8% in the state and 30.2% in the U.S. This is an indication that the region’s economy is a draw for individuals in the labor force and that it attracts them from beyond its borders.

Table IV-1: Labor Force Statistics

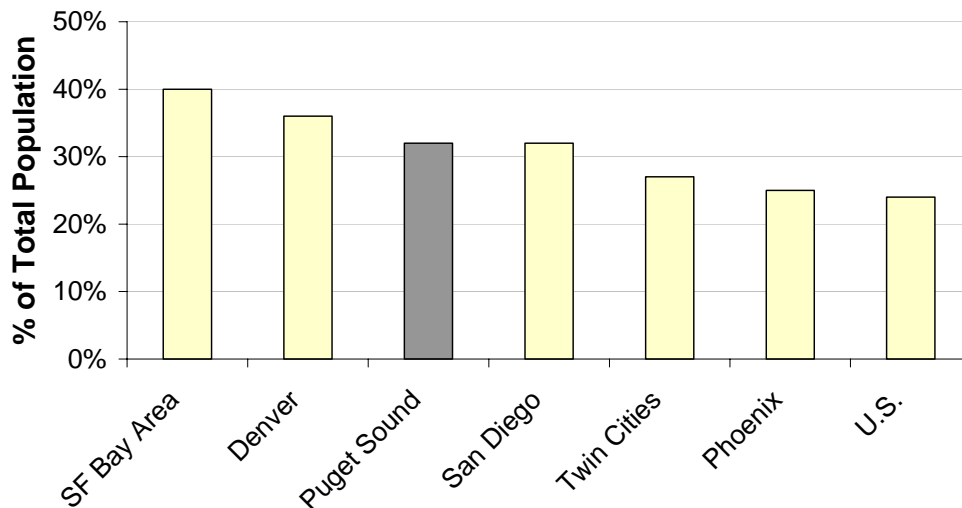
	Puget Sound Region	Washington	Percentage in PS Region
Population (2003)	3,387,198	6,098,300	56%
Labor Force (2004)	1,857,000	3,176,900	58%
Employed (2004)	1,743,800	2,967,700	59%
Unemployed (2004)	113,300	209,300	54%
Unemployment Rate (2004)	6.1%	6.6%	114%
Average Annual Wage (2001)	\$42,863	\$37,455	--
Average Wage Growth (1995-01)	26.6%	22.4%	--

Source: U.S. Census, Washington Employment Security Department, various years

Educational Attainment

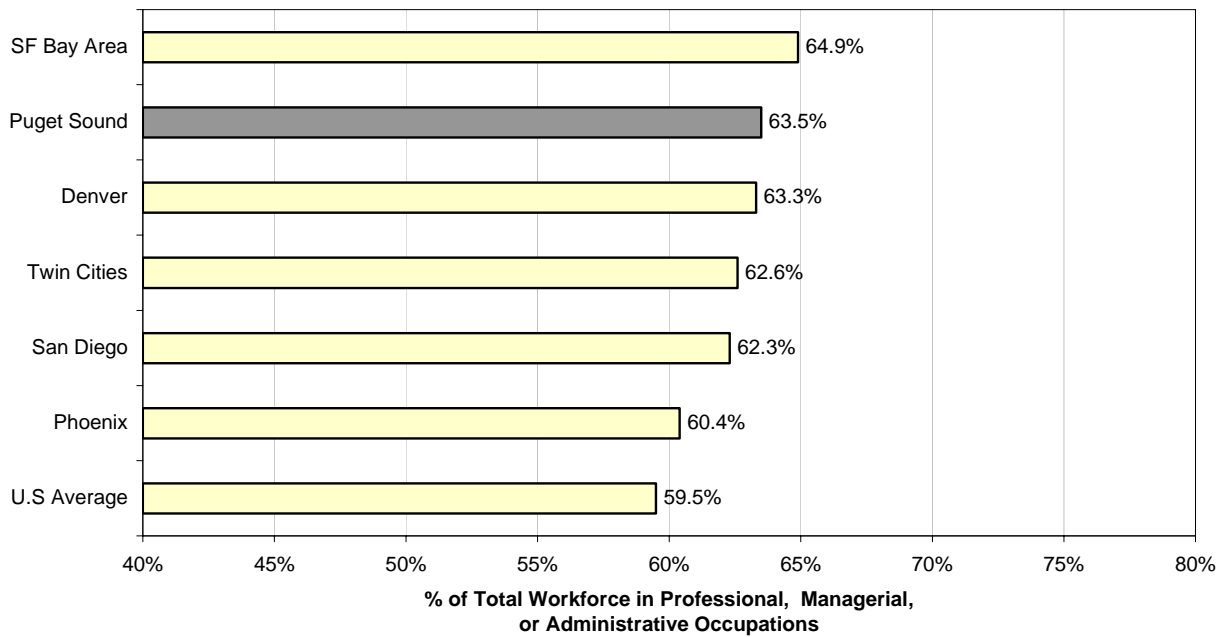
The central Puget Sound region’s workforce is as well or better educated as those in its peer group (see *Figure IV-2*), as is its share of “knowledge workers.” Knowledge jobs and occupations deal with information technology in managerial, professional, and technical positions. Compared to the U.S. average and peer regions average, the central Puget Sound region has a relatively high concentration of such workers (see *Figure IV-3*).

Figure IV-2: Percentage of Population (25 and older) with Bachelor’s Degree or Higher, 2003



Source: Census Bureau, American Community Survey, 2003

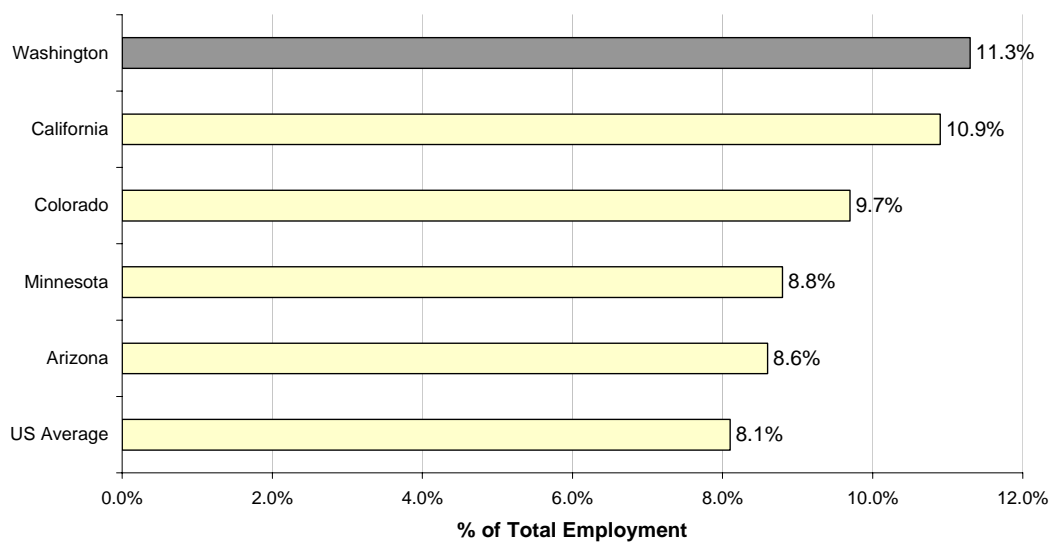
Figure IV-3: Percentage of Workforce in Professional, Managerial or Administrative Occupations as Compared to Peer Regions, 2003



Source: Census Bureau, American Community Survey, 2003

In addition, the region’s employment is relatively more concentrated in high-tech occupations. More than any of its peer states, Washington’s employment in high-tech companies is a higher percentage of its overall employment (*Figure IV-4*). This means that while, on average, the region’s workforce is highly skilled, the region’s job base requires a higher-than-average degree of skill and education.

Figure IV-4: Percentage of Total Employment in High-Tech Establishments as Compared to Peer States, Average: 1998, 1999, 2000



Source: National Science Foundation

Skills Gap

As several studies have shown in recent years, a *skills gap* exists between what employers need and what the region's workforce is able to supply.²⁸ This gap is particularly pronounced in some of the key industry clusters identified in this report and others.

Table IV-2, below, illustrates the employment growth projected in key clusters over the next 15 years. According to Dr. Paul Sommers and Deena Heg, authors of the 2003 report that documented this skills gap, colleges are generating about 34% of overall projected openings for occupations with short- to moderate-skill requirements.

"Statewide, the colleges supply 52% of projected demand in the computer programming related cluster of occupations."

- Paul Sommers and Deena Heg, 2003.

Table IV-2: Forecasted Employment Growth in Five Pilot Clusters, 2003 - 2018

Cluster	CAGR (%) 2003-2018	Employment 2003	Employment 2018	New Employment
Aerospace	1.0%	83,089	96,464	13,375
Environment & Alternative Energy	5.4%	2,937	6,465	3,528
Information Technology	2.6%	82,327	120,991	38,664
Life Sciences	4.0%	17,562	31,629	14,066
Logistics & International Trade	0.6%	40,214	43,989	3,775
TOTAL		226,130	299,538	73,408

Source: Global Insight, 2004

These trends are confirmed by the most recent Employer Survey conducted by the state's Workforce Training and Education Coordinating Board in 2004. According to this survey, 45% of employers who were trying to fill positions reported difficulty finding qualified job applicants. While this number is down from that of 60% two years ago, the persistent issue appears to be that many new labor market entrants and job seekers do not have the skills employers are looking for.²⁹ This implies a training gap.

The industry sectors reporting the most difficulty in finding qualified personnel were construction (65%) and high-tech (54%), according to the Employer Survey. The skills cited most frequently as lacking were: occupational-specific skills, positive work habits, communication skills, problem-solving and critical-thinking skills. According to the Employer Survey, the problem is a scarcity of workers with post-secondary training as opposed to a general shortage of job candidates.

The Workforce Development System

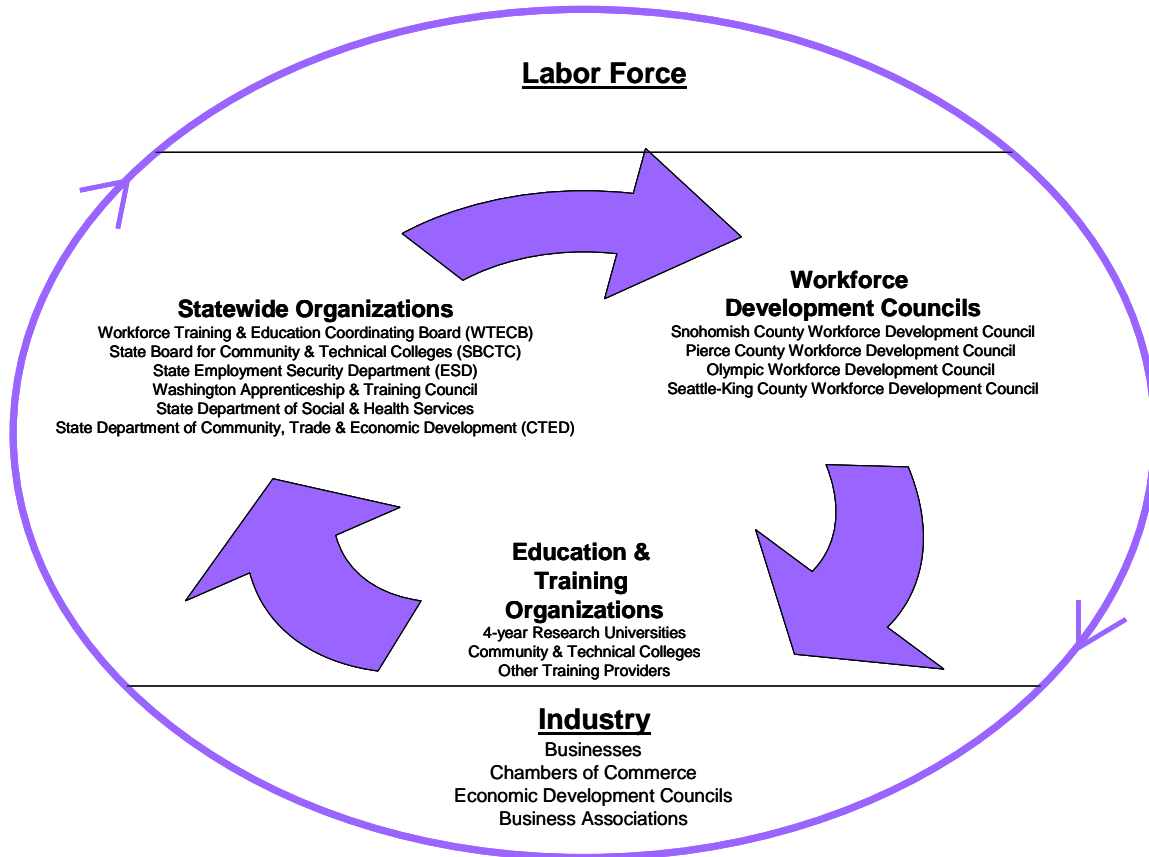
Fortunately, the region's workforce preparation system is relatively well-positioned to meet the challenges it faces in meeting this skills gap. The region's post-secondary workforce development system is well-endowed with institutions providing a wide spectrum of workforce training and development programs that are among the finest in the country in terms of linking the region's labor force with employers in key industry clusters. The region hosts the state's two major public research institutions: University of Washington and Washington State University; 19 community and technical colleges; and

²⁸ Sommers, Paul and Heg, Deena. "Occupational Demand and Supply by Industry Cluster." October 2003.

²⁹ Workforce Training and Education Coordinating Board. Employer Survey 2004.

more than 150 private colleges and technical schools. Weaving the labor force, industry, and the education and training organizations together are the region’s workforce development councils and a number of statewide organizations, especially the Workforce Training and Education Coordinating Board and the State Board for Community and Technical Colleges.

Figure IV-5: The Region’s Workforce Development System



Source: ECG research, 2004

Across the country, workforce development organizations are in the unenviable position of providing services to an array of interests so broad it ranges from disadvantaged workers to corporate CEOs. Simultaneously, they are expected to address myriad public policy goals such as offshoring and training tomorrow’s technology workers while helping to lift a single mother off of welfare dependency and into a self-sustaining job. With so many demands placed on workforce development boards, agencies and their affiliated training institutions, it is no surprise that one of the most significant “best practices” identified in recent years in the field of workforce development is that of collaboration.

The workforce development agencies in Washington state and the central Puget Sound region in particular have made some truly notable advances in how they collaborate with each other.³⁰ During the past several years, community and technical colleges across the region have brought together

³⁰ This effort was launched by the State Board for Community and Technical Colleges and the Workforce Training and Education Coordinating Board when they commissioned a comprehensive analysis of the state’s industry clusters by Paul Sommers and Deena Heg entitled “Occupational Demand and Supply by Industry Cluster,” October 2003.

representatives from the private sector, labor, economic development councils and workforce development councils to do several things:

- Identify key industry clusters (or economic drivers) in the region.
- Analyze the fast-changing workforce skills required by those industry clusters.
- Analyze the gap between those skills and those offered by the region’s workforce.
- Develop collaborative regional initiatives for addressing this gap.

The result of focusing workforce development efforts on the needs of key industry clusters has been an impressive array of initiatives—many under the rubric of “industry skill panels” sponsored by the Workforce Training and Education Coordinating Board. These skill panels represent a truly innovative way to bring disparate actors together—employers, employees, and trainers—to link the region’s economic development goals with its workforce development goals. For each industry, the skill panels seek to link curriculum development and workforce training with the needs of key industries. The results have included new curricula, skill standards, assessment tools, apprenticeship programs, and research that helps monitor skill gaps and how to address them.

One example is the consortium of 11 employers and five community and technical colleges who developed an Electronics Skill Panel with the Pierce County Careers Connection in order to address the persistent shortage of qualified electronics technicians. This consortium drafted skill standards for two occupations (Industrial Systems and Information/ Communications Systems), revised the electronics program at two school districts and four community and technical colleges, and identified a core set of competencies shared by both information technology and electronics occupations.

“We need to make sure human investment is powerful in the lives of companies, so we need to have crisp, impactful services and we must have integration between workforce development councils, community and technical colleges, and company representatives.”

*- David Harrison, Chair,
Workforce Training &
Education Coordinating Board*

There are more than 20 such skill panels in the central Puget Sound region today; however, they face a number of obstacles. While Governor Locke provided the initial funding to launch a number of cluster-specific skill panels (specifically in marine trades, agriculture and food processing, and biotechnology), matching investments in terms of executive time or cash from the public and private sectors are required to sustain the effort. Also, one of the strengths of skill panels is that they are focused on the needs of particular industries. However, these industries and their workforce needs are constantly changing. To be truly effective, skill panels and similar initiatives must establish ongoing collaborative mechanisms to revisit and revise curriculum and on-the-job workforce training.

C. Technology

Tomorrow’s truly competitive regions will have found mechanisms for providing ongoing support to research, discovery, and the development of new ideas and products. The ability and flexibility of a region’s research institutions, both private and public, to innovate will be increasingly crucial to the types of companies and economic activity that will be generated in that region. Technology commercialization—or the bringing of new ideas to market—similarly will be crucial.

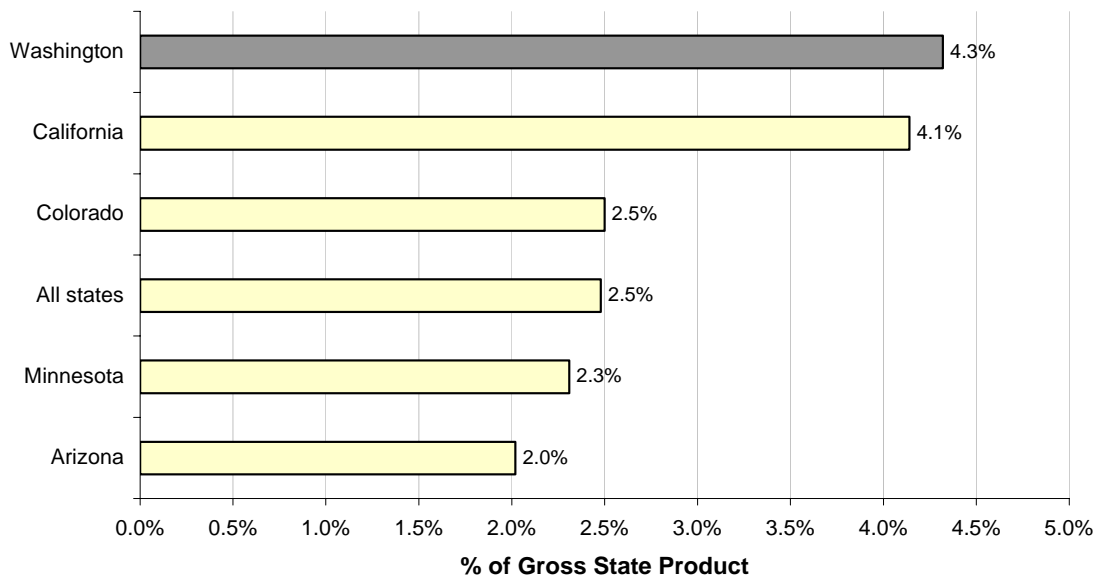
Technology Commercialization

Puget Sound is a world-class research community. The list of premier research institutions in the region includes the Benaroya Research Institute at Virginia Mason, the Fred Hutchinson Cancer Research Center, the Institute for Systems Biology, Microsoft Research, the University of Washington, SBRI

(Seattle Biomedical Research Institute) and Washington State University. Together, these institutions attract nearly \$1.5 billion in federal research dollars and more than \$5 billion of private investment in research.

The University of Washington (UW) has led the country's public universities in its ability to capture the most federal research and training dollars. UW is a world center for research on AIDS, cancer, computational biology (crucial to the Human Genome Project), and recently launched the first doctoral degree program in nanotechnology in the country. Traditionally, the region has attracted world-class research talent and the federal and private R&D dollars that go with it (see *Figure IV-6*).

Figure IV-6: R&D Performed as Percentage of Gross State Product as Compared to Peer States



Source: National Science Foundation and Bureau of Economic Analysis, 1991, 1995, 2000

In its commercialization of new technological innovations, however, the region faces challenges. While UW receives the most federal research dollars of any public university, it ranked fifth in 2003 among U.S. universities in launching start-up companies from this research (see *Table IV-3*). While there have been many success stories in technology commercialization, such as ultrasound imaging that was developed at UW and subsequently spawned dozens of companies and created thousands of jobs in the region, interviews and research for this report indicate that the region's innovation system needs attention. In particular, UW's role in technology transfer has come under fire.

Table IV-3: University of Washington’s Technology Transfer Statistics, 2003

	National Rank
INPUTS, 2002	
Total R&D Expenditures	5
OUTPUTS, 2003	
Invention Disclosures Received	16
New U.S. Patent Applications Filed	23
Licenses and Options Filed	14
Licenses & Options Yielding Income	5

Source: Association of University Technology Transfer Managers, 2003

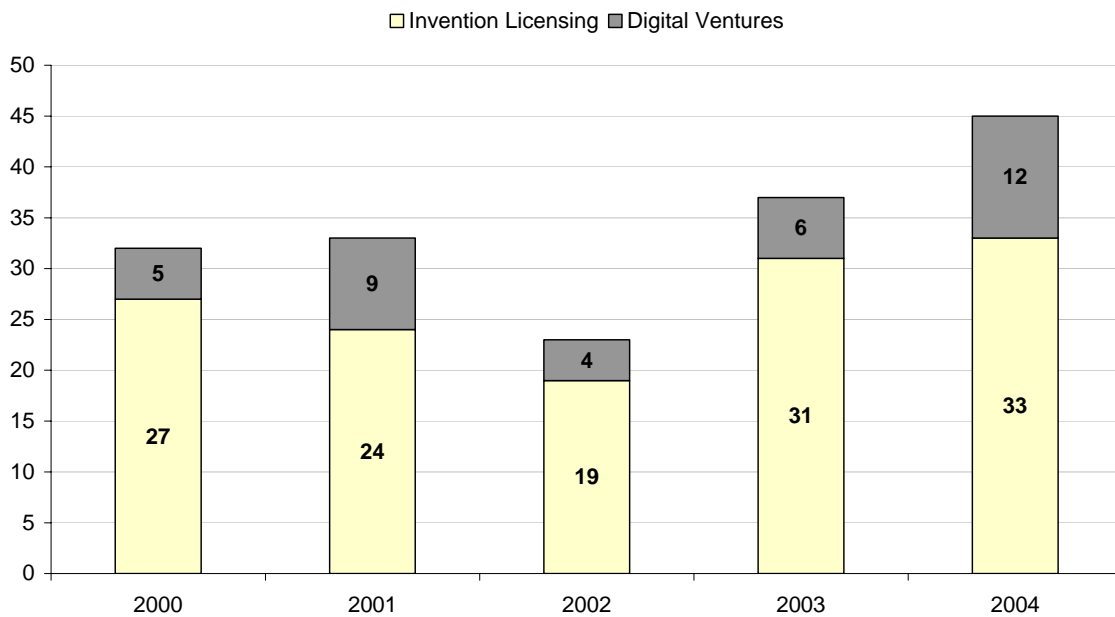
As a public research institution, the University of Washington has always faced different constraints than private research universities like Stanford and MIT who also have famed histories of innovation and technology transfer. However, even as compared to other public research universities like the University of California system and the University of Arizona, it has become evident that the state’s current interpretation of the Washington State Ethics in Public Service Law is more constraining on faculty who might otherwise be encouraged to disclose patent-worthy technologies, serve on the boards of technology firms, or consult to companies in the region, and thereby may be inhibiting the technology transfer process.

The University of California system’s University-Industry Relations Policy demonstrates their particular approach to university-industry relations. As far back as 1989, the University of California system recognized the importance of nurturing an environment that allows for ideas and innovations generated within the system to transfer to the private sector. The first point the system makes in its guidance for faculty and other academic employees is that, “outside professional activities are encouraged.”³¹

In evaluating the ability of UW to generate innovative ideas and products and subsequently license them for commercial gain, however, it is important to point out that the University is doing far better in many measures than only a few years ago (see *Figure IV-7*).

³¹ University of California, Office of the President. “Guidance for Faculty and other Academic Employees on Issues Related to Intellectual Property and Consulting.” March 3, 2003.

**Figure IV-7: University of Washington’s Executed Commercialization Agreements
Fiscal Years 2000 - 2004**



Source: Association of Technology Transfer Managers, 2004

Since 2002, UW’s performance has increased, in some cases dramatically: in (1) measures of innovation (potentially patent-worthy research); (2) investment (university patent protection); and (3) impact (marketing of inventions/agreements to companies). From a local economic development perspective, there are strong signs that the University is beginning to show good results in new companies started. Recent examples include: Hamlet, Seattle Sensor Systems, Second Act Partners, and Microgreen Polymers.

That UW may not be living up to its role in technology commercialization may stem from factors outside its control: the possibly over-controlling ethics law being a prime example. However, there are other aspects of the region’s innovation and technology transfer system that also need attention: a business tax structure that can punish start-up companies needing to invest profit; a more coherent network of organizations supporting potential entrepreneurs; and the lack of early stage venture capital (see *Access to Capital* below). One common indicator of the health of a region’s innovation system—patents per capita—reveals that the region, as a whole, must address this issue.

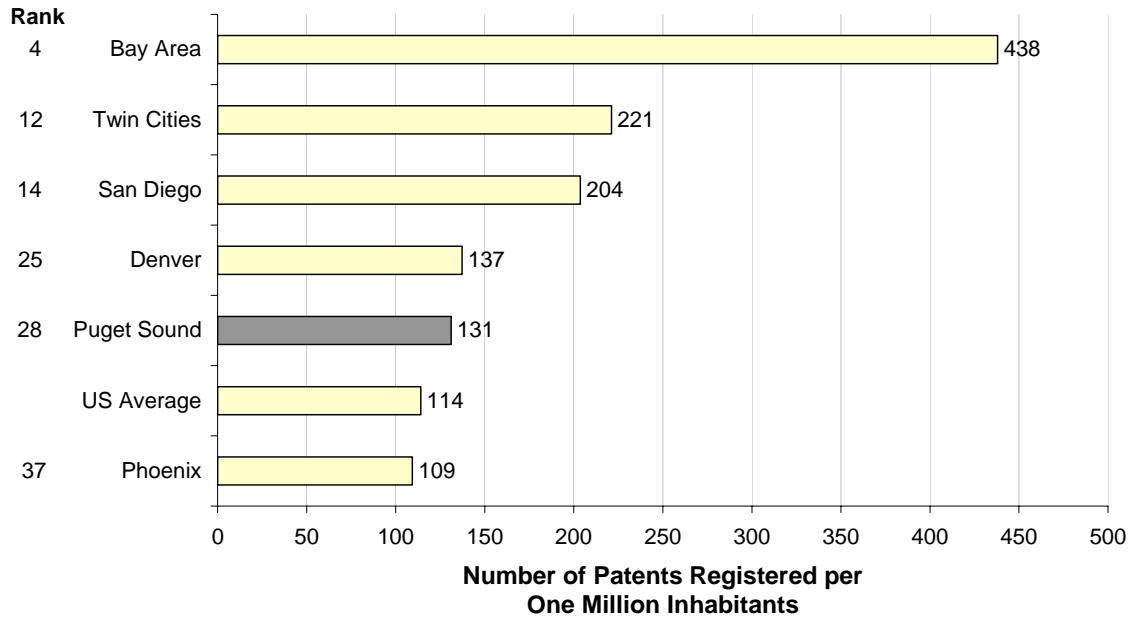
But UW is not the only source of commercializable technology. Microsoft spends nearly five times the UW budget in research and is the largest software research organization in the world. Its research has advanced nearly every Microsoft product currently on the market.³²

Both the *Center for Design of Analog-Digital Integrated Circuits* and the *Center for Excellence in Semiconductor Research* at Washington State University are industry-university research consortia for the sake of research and the development of new products.

³² Trade Development Alliance of Greater Seattle. “Greater Seattle and Washington State: A Center of World Class Research,” 2003.

However, as a region, the central Puget Sound is still not seeing the number of patents registered that its peer regions are seeing (see *Figure IV-8* below).

Figure IV-8: Patent Registrations as Compared to Peer Regions, 2004



Source: Robert Huggins Associates, *World Knowledge Competitiveness Index, 2004*; U.S. Patent Office, 2004

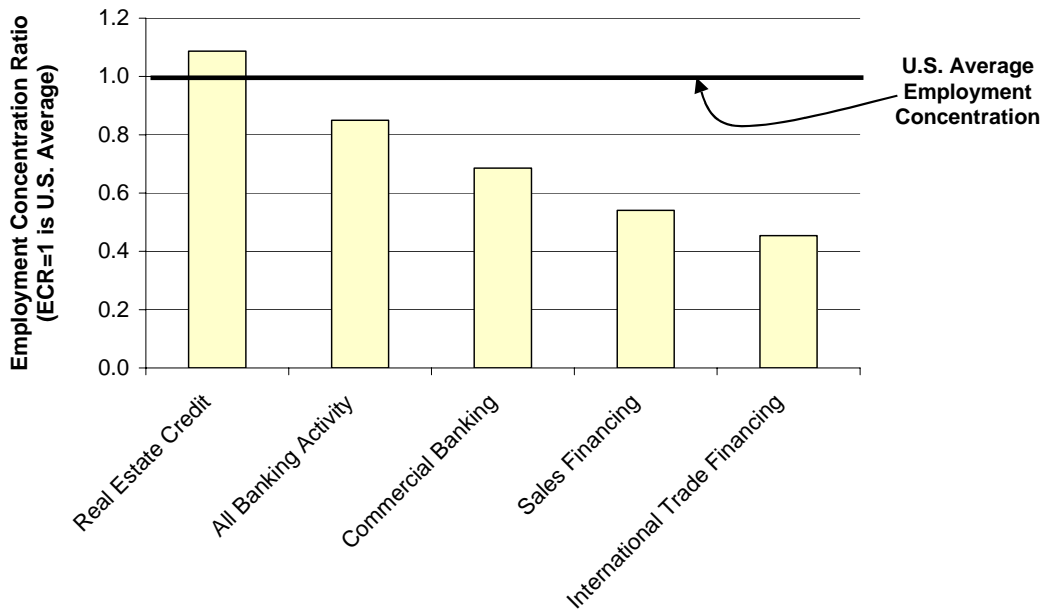
This indicates that the link between cutting-edge research and its commercial application is still relatively weak in the region. While there is an abundance of research talent and resources, the ability of entrepreneurs with the business skill and financial backing to bring that research to market appears to be limited.

D. Access to Capital

The ability of firms to obtain the start-up and operating capital they need is essential to any region's economic health. In the central Puget Sound region, several trends regarding the ability of firms to obtain access to the capital they need are apparent:

- The region is relatively “under-banked” in the sense that its employment in industries such as commercial banking is significantly below the national average (see *Figure IV-9*).
- The availability of early stage venture capital has been particularly scarce ever since the burst of the tech bubble in 2001.
- The region shows strength in SBA-backed small business lending per employee, though firms in the region tend to be smaller, on average, than those in peer regions.

Figure IV-9: Concentration of Employment in Banking and Finance Industries, 2004



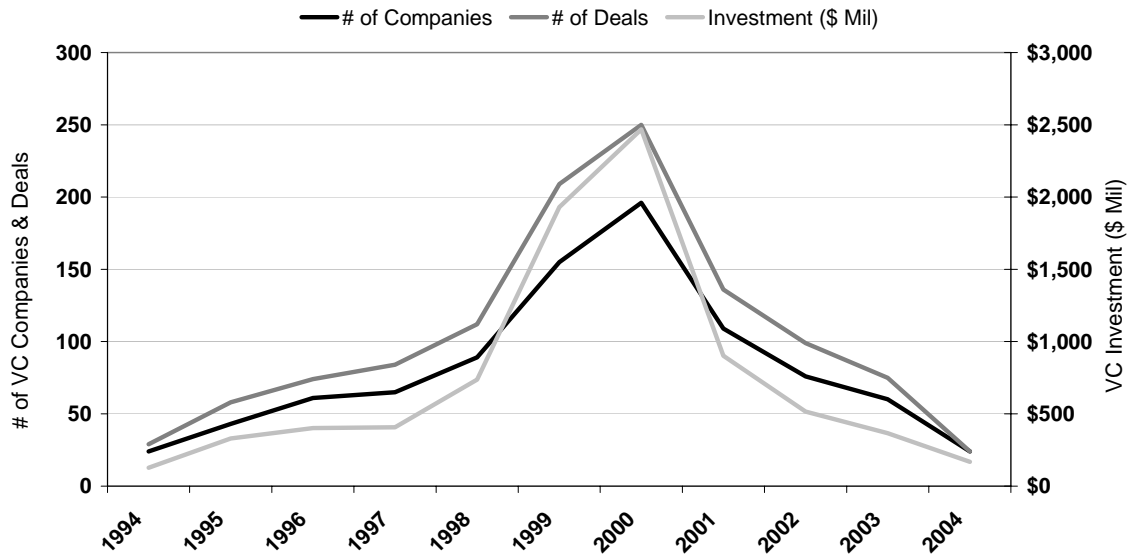
Source: Global Insight, 2004.

While the region is home to certain premier financial institutions as Washington Mutual Bank, when taken as a whole, the region’s financial services industry is fairly under-represented. The number of persons working in commercial banking, for example, is well below that of a typical U.S. region.

Venture Capital

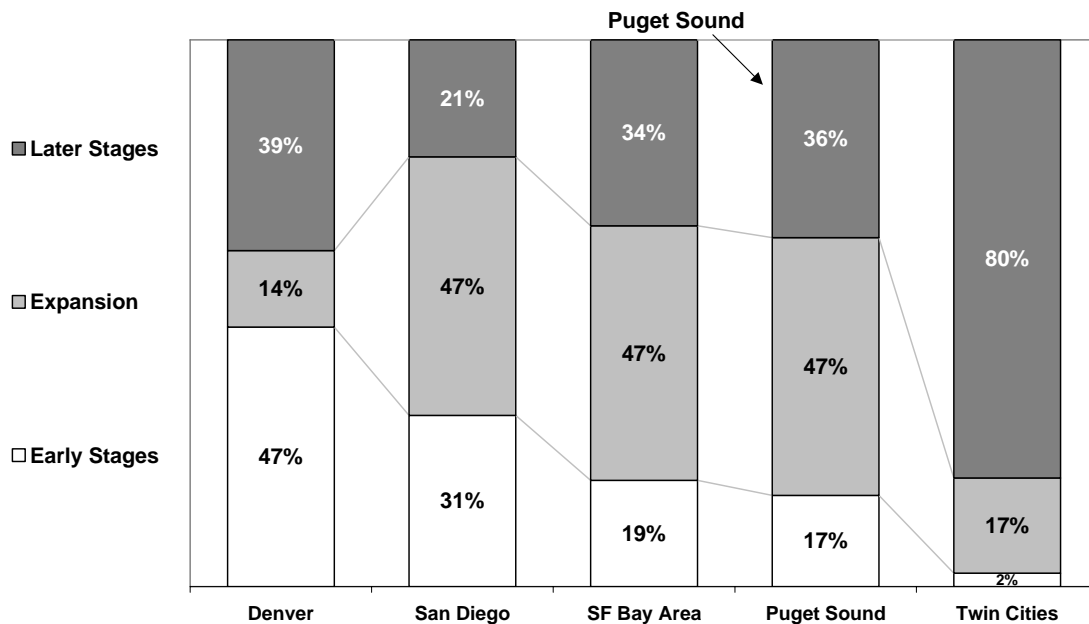
For start-up companies, the availability of venture capital has swung dramatically over the past 10 years following the boom and bust of the technology bubble in 2000-01 (see *Figure IV-10*). In particular, seed and early stage capital has been scarce in every region as investors reacted conservatively to the collapse. In Puget Sound in particular, this has been a problem in recent years (see *Figure IV-11*).

Figure IV-10: Venture Capital Activity, 1994 - 2004



Source: Price Waterhouse Coopers. ECG Analysis, 2004

Figure IV-11: Breakdown of Venture Capital by Stage Invested, 2004

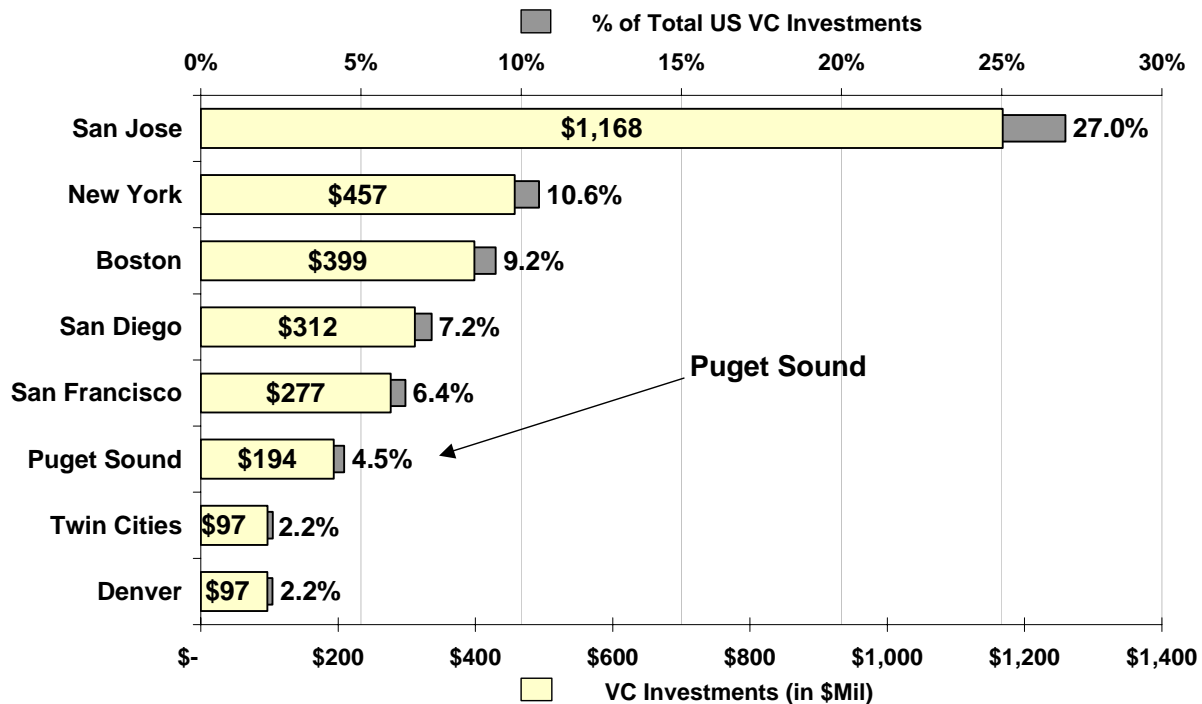


Source: Price Waterhouse Coopers. ECG Analysis, 2004

However, a recent report demonstrates that Washington is steadily registering gains in terms of venture capital. According to a quarterly venture capital report released by Ernst & Young and VentureOne, “more venture capital was invested in Washington state than in any other period in the last three years...[Washington] ranked fourth in receiving the most capital—the second quarter in a row that it made the top five—and it accounted for two of the country’s top financings.... in the second quarter,

\$271.7 million was invested in state companies, an increase of 218 percent over the \$85.3 million invested in the same period last year...it was also a jump over the seasonally strong first quarter, when \$226.1 million was invested.”³³

Figure IV-12: Venture Capital Investments as Compared to Peer Regions and Top 5, Q3 2004



Source: Price Waterhouse Coopers. ECG Analysis, 2004

Relative to its peers, the central Puget Sound region ranks fifth (if the SF Bay Area is taken as a whole) in receipt of venture capital. Much of this capital comes from sources in the Bay Area, however. The Puget Sound region has very few of its own venture capitalists.

To address this issue, the Washington Technology Center has launched its own seed capital network, providing technical expertise and financial resources to companies in the region via its own Research and Technology Development (RTD) Program, facilitating the ability of local firms to receive Small Business & Innovative Research (SBIR) and Small Business Technology Transfer Program grants from the federal government, as well as its own Angel Network.

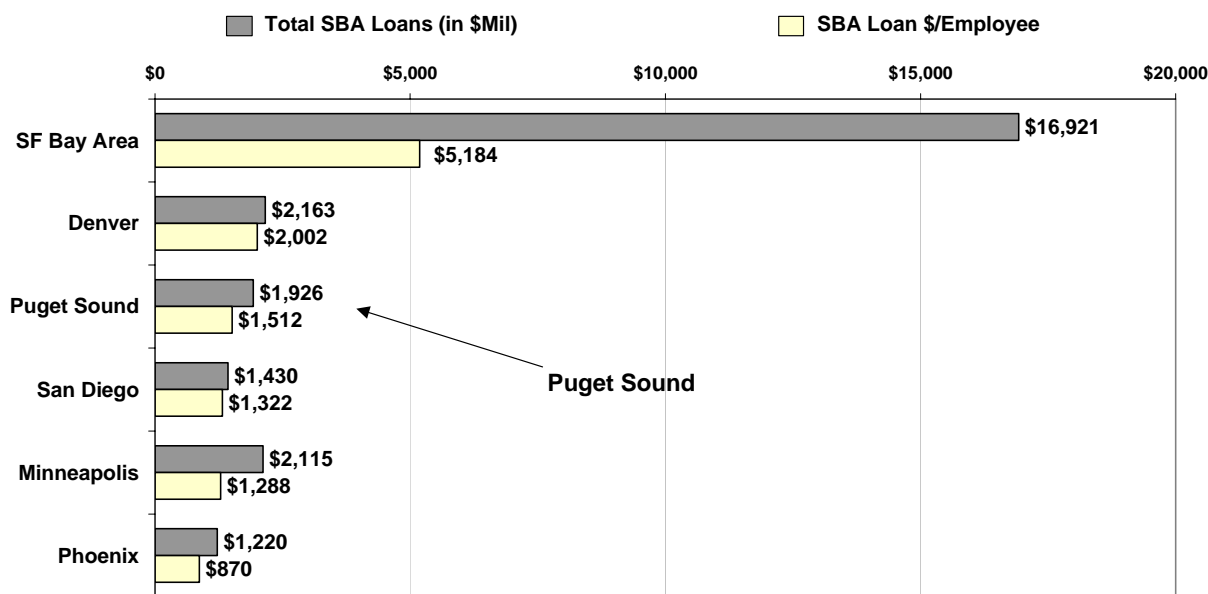
The SBIR program is a highly specialized form of funding for small firms (less than 500 employees) to perform cutting-edge R&D that addresses the nation’s most critical scientific and engineering needs. In 2001, 36 biotechnology, device and life science-related Washington based companies received more than \$16 million from the National Institutes of Health alone, one of 10 federal agencies that administer the SBIR program.

³³ Duryee, Tricia. “State reaps robust venture capital funding.” *The Seattle Times*. July 26, 2004.

Small Business Lending

In 2002, the central Puget Sound region lent \$1.9 billion of SBA-backed loans of less than \$1 million to small firms in the region (see *Figure IV-13*). The typical small business in the region tends to be smaller than that of the peer regions. Therefore, it ranks third in terms of SBA loan dollars per small firm employee. The region receives \$1,512 per each employee of a small business, surpassing San Diego with \$1,322. Given the relatively larger number of small businesses in the region compared with its peers, Puget Sound ranks fourth in SBA loan dollars per small firm, with \$24,500/firm. The region lags only San Francisco with \$109,600/firm and Denver with \$38,900/firm.

Figure IV-13: Small Business Administration (SBA) Loans as Compared to Peer Regions, 2002



Source: U.S. Small Business Administration

E. Business Climate

A region’s business climate is determined by a variety of factors including its regulatory and tax environment and the general attitude of its officials. Ideally, this environment operates in a streamlined and efficient manner to eliminate unnecessary constraints to economic growth. Competitive regions are those that have struck a balance between regulating business activity to ensure the health and safety of their populations, collecting adequate revenues to provide essential services, while maintaining a vibrant business climate that promotes job creation and business activity.

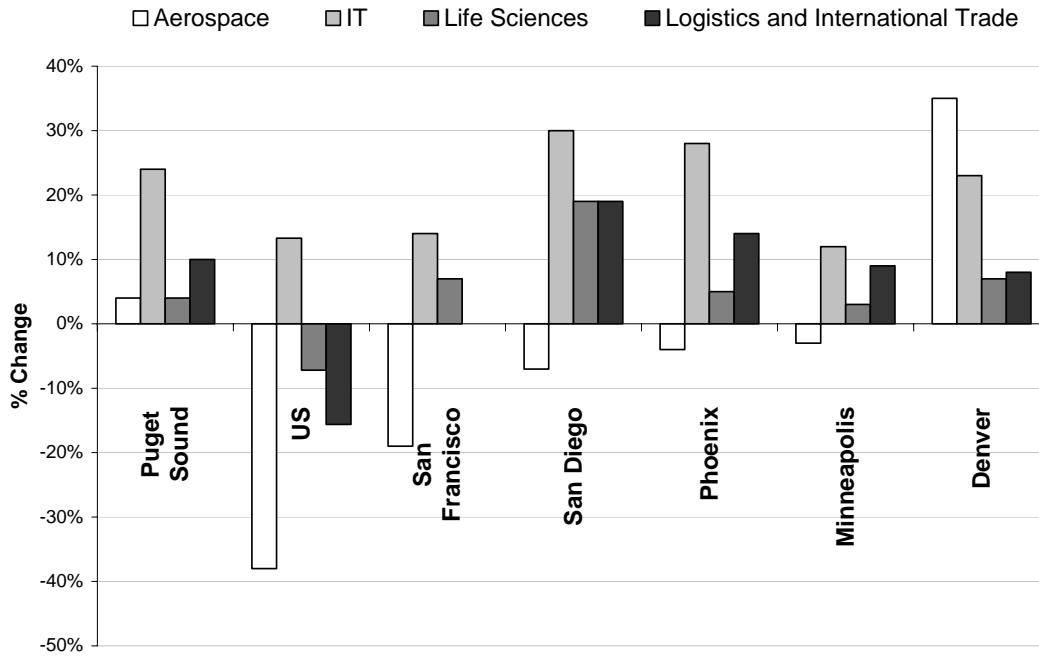
Business Trends

Change in the Number of Establishments

Puget Sound has a vibrant economy as evidenced by the 970 net new business establishments in all the clusters in the region during the five-year period ending 2001. This represents a 6% increase in the number of establishments and stands in contrast to a 3.7% decline in the number of establishments in the same clusters at the U.S. national level. The only mature cluster that had a reduced firm count over the period was Specialty Foods and the only challenge cluster that had a reduced firm count was Wood

Products. All of the star clusters experienced an increase in the number of establishments.³⁴ *Figure IV-14* shows the percent change in the number of establishments for four of the five pilot clusters across peer regions. For more details on the number of business establishments by cluster and by county, see *Appendix C*.

Figure IV-14: Percent Change in Number of Establishments in Sample Clusters, 1996 – 2001

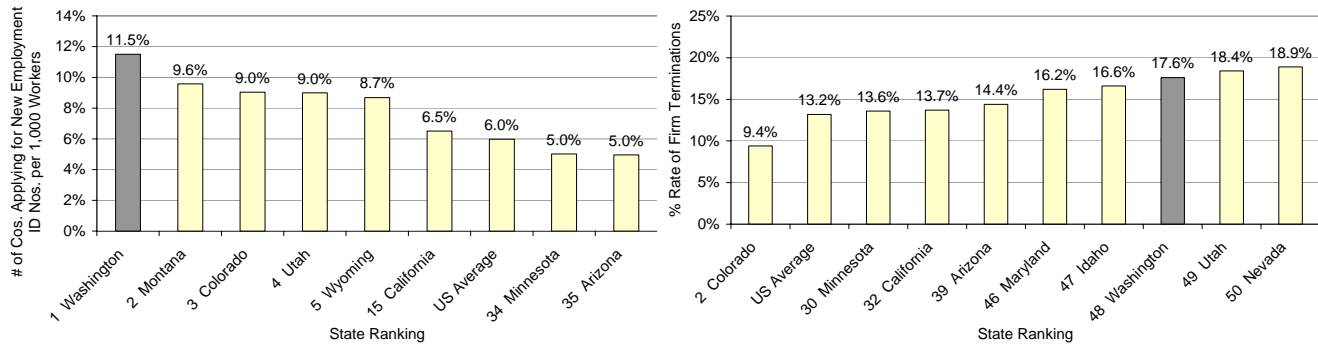


Source: Global Insight, 2004

Business Starts and Closures

According to the Corporation for Enterprise Development, Washington state is very good at launching new businesses (per employee), but not as good at keeping them open. (See *Figure IV-15*.)

³⁴ The change in establishments results from new firms entering the industry (new business start-ups as well as firms relocating from other jurisdictions) as well as firms exiting the industry as a result of bankruptcy or business closure.

Figure IV-15: Business Starts and Closures as Compared to Peer States and Top 5 / Bottom 5, 2004

Source: Corporation for Enterprise Development

The manner in which firm starts and closures is collected, however, makes it difficult to discern the reasons for these trends. The ranks are simply a reminder of the importance of fostering *both* an entrepreneurial environment in which starting a business is facilitated as much as possible *and* a supportive business infrastructure as businesses evolve.

Small Business Trends

In the clusters identified for the Puget Sound, small businesses with fewer than 100 employees represent 96% of all business establishments in 2001. Medium-sized firms (100 – 499 employees) represented most of the remaining 4%. There are only a small number of large firms (above 500 employees) in the Aerospace, Business Services, Head Offices, IT, Logistics, and Tourism clusters. For more specific data on the number of firms in key clusters by firm size, see *Appendix C*.

Regulatory and Tax Issues

There are four primary prerequisites to a sound tax system: taxation is broad based, rates are low, administration is not difficult and compliance is not difficult. According to the Tax Foundation, an independent, non-profit research organization in Washington, D.C., the state of Washington's business tax climate ranks ninth in the nation.³⁵

³⁵ This rank is a composite of five other ranks: corporate income tax index rank, individual income tax index rank, sales and gross receipts tax index rank, unemployment insurance tax index rank, and the fiscal balance index rank. For more information, visit the Tax Foundation's Web site at: <http://www.taxfoundation.org>.

Table IV-4: Washington Tax Climate Rankings

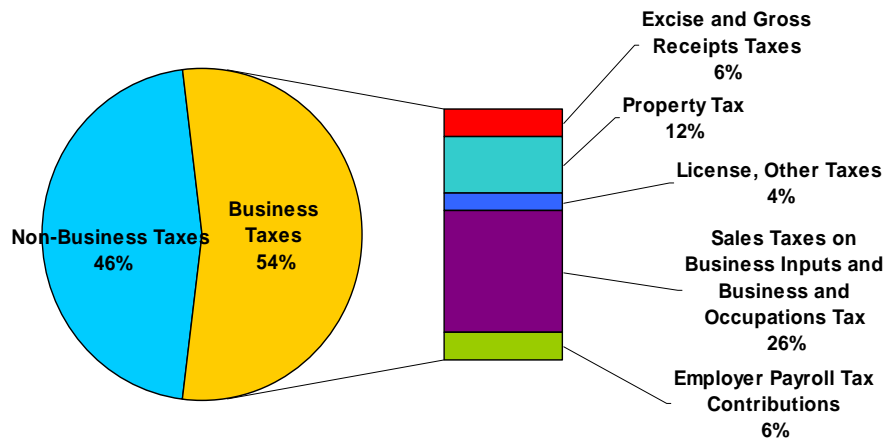
Type of Tax Index	Rank
Corporate Income Tax Index	1st
Individual Income Tax Index	1st
Sales & Gross Receipts Tax Index	50th
Unemployment Insurance Tax Index	36th
Fiscal Balance Index	23rd
Overall Rank	9th

Source: Tax Foundation, 2004

A composite of five other ranks, this index demonstrates the relative imbalance of the state’s fiscal structure. In particular, it demonstrates the state’s over-reliance on the business sector. For example, Washington ranks 16th in terms of per capita state and local tax burden, but ranks 32nd when measured by taxes per \$1000 of personal income.³⁶ Moreover, the state’s lack of personal and corporate income taxes further skews Washington’s overall rank.

Perhaps a more telling indicator is Washington business’ share of the overall tax burden. When benchmarked using this measurement, “Washington had the 10th highest business tax share in the nation”³⁷ (see *Figure IV-16*).

Figure IV-16: Business Tax Share in Washington State



Source: "Catching the Tide 2005 Presentation." Washington Alliance for a Competitive Economy, AWB Policy Summit, September 23, 2004.

³⁶ The Tax Foundation, 2004.

³⁷ "Tax Increases would Stifle Fragile Recovery." Washington Alliance for a Competitive Economy. January 21, 2005.

Washington’s businesses pay 54 percent of state and local taxes, while the U.S. average is only 43 percent and the average of the seven western states is only 30 percent. The state’s absence of an income tax puts a large part of the tax burden on businesses, taxing them up to 2% of their gross revenue through the Business and Occupation (B&O) tax. To compensate for this, the government has implemented numerous credits and incentives over the years, particularly for manufacturing machinery and equipment (M&E), research and development, and other technology-related activities.

The result has been to add complexity to the state’s fiscal structure, compelling William Gates, Sr., who chaired the 2002 Tax Structure Study Committee, to conclude that, “high business tax burdens reduce the economic vitality of the state, discourage firms from locating their operations here, and invite firms already located in Washington to consider other locations.” With the heavy burden of taxes on businesses, actual household tax share is fairly low compared to the rest of the nation (45th in the U.S. in 1991).

Within the central Puget Sound region, each municipality also imposes business taxes that lack uniformity and are therefore difficult to compare—and therefore an obstruction to business location decisions. The lack of coordination among jurisdictions on tax and regulatory issues was cited by the business executives interviewed for this report, as was a general culture that is perceived to be “anti-business” or “anti-growth.” There are on-going efforts by the PSRC and many local governments to dispel these perceptions.

The major issues concerning the region’s business climate are:

- The burden of tax payment falls on businesses due to the lack of an income tax.
- Tax on gross revenue hinders start-up businesses.
- A lack of standardization among jurisdictions leads to a variety of interpretations.

The Washington Competitiveness Council has studied these issues and has made a series of recommendations regarding short-, medium- and long-term efforts to address them. The Gates Committee did the same in 2002. The Office of Regulatory Assistance was created in 2003 by the state, but it lacks the authority to fully implement streamlined systems across local governments.

Utilities

The Puget Sound region has long been known for low utility rates due to the abundance of water for hydro-powered energy. However, recent water shortage threats and the rising cost of natural gas have been nudging rates upward, jeopardizing the traditional low-cost advantage of the region. Some utility providers are seeking innovative solutions such as the Cedar Hills Gas-to-Energy landfill in King County which can generate enough power to supply 16,000 homes (the fourth largest gas-to-energy landfill in the country), or the “asset-management” program by Seattle Public Utilities which has brought lower costs to consumers. Major issues are:

- Water shortages and rising gas costs threaten the low-cost advantage of the region.
- The Growth Management Act can strain the capacity of some communities’ infrastructure, both through concurrency regulations and higher costs due to frequent use.

Environmental Protection

In the Puget Sound region, the environment is actively protected by a number of regulations. To limit urban sprawl into agriculture and forestry land, the urban growth boundary was implemented within existing urban growth areas. With the decline of fishing and forestry as industries, numerous environmental groups are seeking further protection of these valuable resources. Attempting to improve what was once a lengthy and confusing permitting process, the Department of Ecology has undergone an

overhaul in order to streamline its permit application systems on recommendations from the Washington Competitiveness Council. Major issues are:

- Industries of fishing and paper products are in decline due to resource depletion and environmental constraints.
- Washington’s Growth Management Act preserves rural areas from unplanned sprawl through urban growth areas, yet this process can be costly.
- Washington’s Department of Ecology has streamlined its regulatory process, providing greater clarity and permitting support through new centers established under the recommendations of the Washington Competitiveness Council.

F. Physical Infrastructure

The central Puget Sound region is the largest population and job center in the Pacific Northwest. The region is roughly equidistant from the two other major regional population centers—Vancouver, British Columbia and Portland, Oregon. Defined as King, Kitsap, Pierce and Snohomish counties, the region totals 6,290 square miles. The central Puget Sound’s four-county region is hemmed in by Hood Canal to the west and the Cascade mountain range to the east. Long bodies of water divide the landscape, including Hood Canal, Puget Sound, Lake Washington, and Lake Sammamish. These physical features create long corridors through the region through which traffic, freight and development is funneled.

Land and People

The four-county region is home to approximately 3.4 million people. King County, the central county among the four and home to Seattle, Bellevue, and Renton, is the largest in population and land area. North of King County lies Snohomish County with roughly one-third the population of King County yet nearly as much land area. Pierce County is south of King and is home to the Port and City of Tacoma. Across Puget Sound, accessible by ferry from Seattle or via bridge from Tacoma, lies Kitsap County, comparatively small in both population and in land area.

Table IV-5: Population and Land Area of the Puget Sound Region, 2003

County	Population (2003)	Land Area (Square Miles)
King	1,779,056	2,126
Kitsap	237,003	396
Pierce	733,704	1,679
Snohomish	637,435	2,089

Source: PSRC Estimates

With natural deep, protected bays easily accessible to the Pacific Ocean, it is no surprise that the Puget Sound region has thriving ports. As the closest major U.S. ports to Asia, the ports of Seattle and Tacoma are attempting to capitalize on increased trade with countries such as China and Japan. The ports of Seattle and Tacoma together are the third largest marine container load center in the country, with Tacoma as the leading port for auto imports. More than \$40 billion worth of goods travel through the two ports each year. However, Puget Sound ports face extreme competition from the ports of Long Beach,

Vancouver, and other U.S. marine ports on both coasts. Between 1998 and 2003, the ports of Seattle and Tacoma lost 11.9% of foreign market share.³⁸

The cruise industry has seen a boom in recent years out of the Port of Seattle. Nearly 158,000 people embarked on a cruise from Seattle in 2003, up 300% from 2000, according to a study conducted by the International Council of Cruise Lines. The Port spent \$52.5 million in recent years to build two cruise-ship terminals, which enabled the significant leap in passengers. The Port of Seattle has not profited from the increased volume directly but hopes for the investment to pay off in future years. Despite the lack of profit at the Port, the cruise industry pumped an estimated \$208 million and 1,700 jobs into the region during 2004, according to a study conducted by the Port of Seattle.

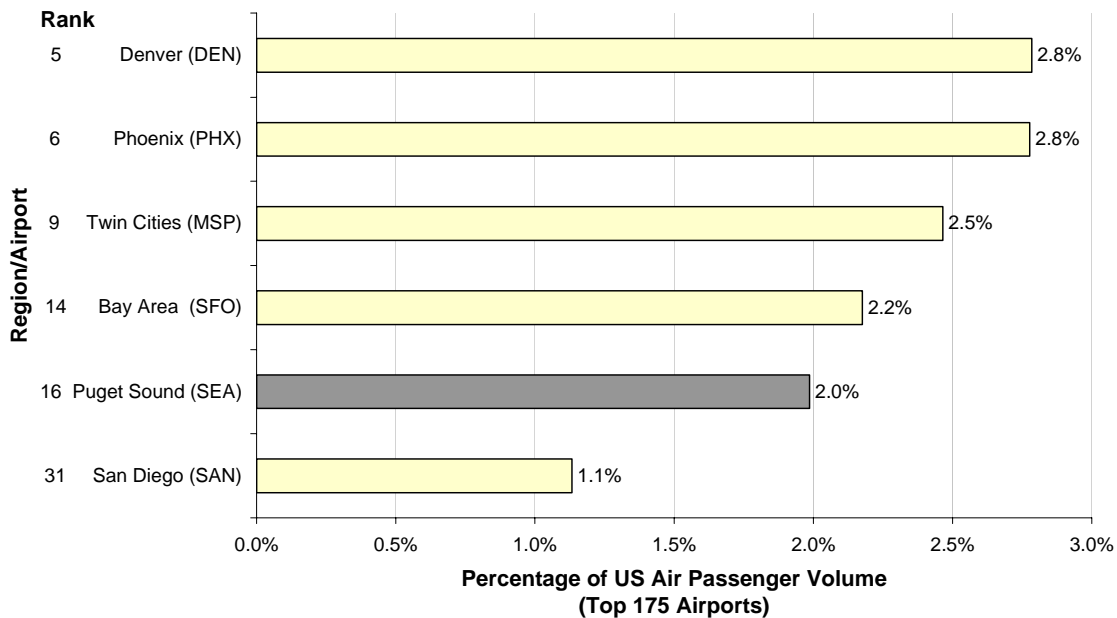
Rail

The rail system is served by Burlington Northern & Santa Fe (BNSF) and Union Pacific, which provide intercontinental rail service and operate three intermodal yards in Seattle. New BNSF double-stack container trains and Union Pacific's existing double-stack service speed the intermodal service. These on-dock rail lines speed the transport of goods, making the trip to Los Angeles in two days or the trip to Chicago in just three days via these two rail networks. The state also has more than 4,000 miles of operable track.

Airports

Seattle-Tacoma International Airport is the major gateway to the region. In 2002, 26.7 million passengers passed through Sea-Tac, as did 375,000 metric tons of air freight. Of this, 19% was international freight cargo. In the continental U.S., Sea-Tac is the closest airport to Asia and is approximately nine hours from both Tokyo and London. Nearly 10% of passengers through Sea-Tac Airport are international, totaling 2.3 million in 2003. It is the 16th busiest passenger airport in the U.S., well behind many peer region airports, but is undergoing major upgrades to handle increased volume. A new International Arrivals Hall opened in 2004, a new Central Terminal will open in 2005, and work is underway on a second, all-weather runway.

³⁸ FAST Corridor. FAST Workshop Report. Date.

Figure IV-17: Percentage of U.S. Air Passenger Volume, 2003

Source: Airports Council International – North America

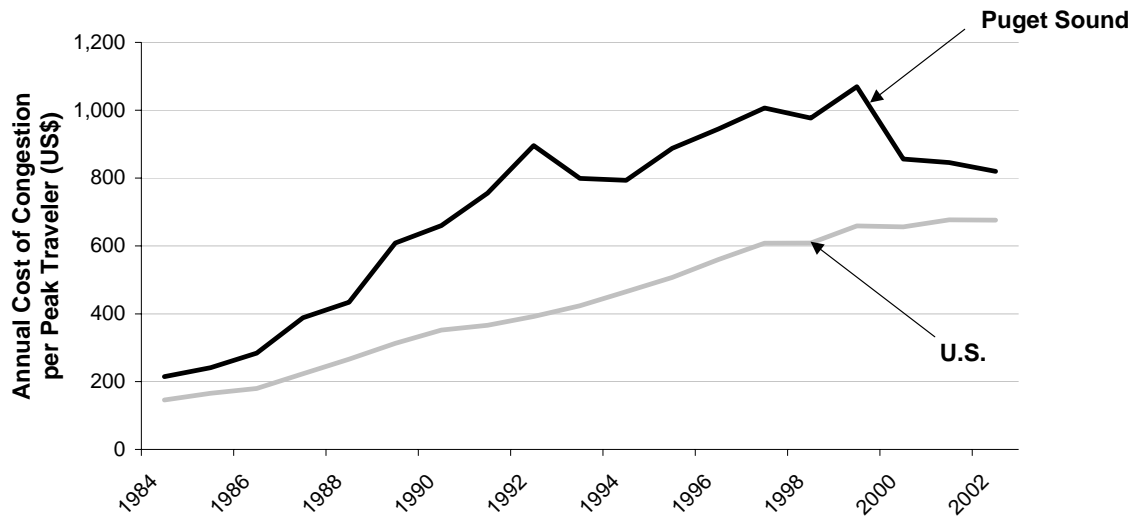
Roadways

The topography of the region dictates much of the roadway infrastructure. Constructing roads is a challenging task in a region of mountain ranges, hilly terrain, and large bodies of water. The long corridors funnel cars through the core area—Interstates 5 and 405 and Highway 99—while east-west bridges on Interstate 90 and Highway 520 connect the eastside of King County with Seattle. Such limited infrastructure in dense urban areas has contributed to worsening highway transportation congestion over the past decade. Congestion-driven productivity losses could remain a drag on the economy well into the future. When asked about the most pressing issue in the region, the majority of participants in the Prosperity Partnership’s Economic Summit in November 2004 cited traffic congestion.³⁹ A growing inability to move around the region also leads to a deteriorating quality of life, which in turn leads to the loss of talented people who can live and work anywhere.

Most people interviewed for this report felt that highway transportation congestion has worsened over the past decade. It is important to note that very recent data shows an improvement in this measure. But, as is the case with other regions, longer term solutions to transportation problems are few. *Figure IV-18* compares the cost of highway congestion with typical large urban regions.

³⁹ PSRC Real-Time Survey, Regional Economic Summit, Seattle, WA, Nov. 19, 2004.

Figure IV-18: Traffic Congestion Costs as Compared to U.S., 1994 - 2002



Source: Texas Transportation Institute, Urban Mobility Study 2004

Table IV-6: Traffic Delays as Compared to Peer Regions, 2002

Region	Rank (1 is worst)	Annual Hours of Delay Per Traveler
Los Angeles, CA	1	93
San Francisco-Oakland, CA	2	73
San Jose, CA	10	53
San Diego, CA	17	47
Seattle, WA	18	46
Denver, CO	19	45
Phoenix, AZ	19	45
Minneapolis, MN	22	42
<i>Average Large Urban Area</i>		<i>20</i>

Source: Texas Transportation Institute, Urban Mobility Study 2004

Public Transit

Recognizing the worsening traffic situation, the region has attempted to implement a variety of public transit options. Sound Transit was created by the state Legislature to build a mass transit system that connects regional employment and population centers in King, Pierce, and Snohomish counties. The councils in the three counties voted to participate in the authority, legally forming the agency in 1993. In November 1996, voters in the urban areas of those counties approved local taxes to build the first phase of that system.

Although commuters are using the system, thoroughfares remain highly congested at peak times. Sound Transit is a regionwide \$3.9 billion (and growing) project to provide a new system of 25 miles of electric light rail, 81 miles of commuter rail, more than 100 miles of HOV Expressway (with direct access on/off

ramps), 20 new regional express bus routes, and regionwide coordination of schedules and fares among all local and regional transit services. The project encompasses major portions of King, Snohomish and Pierce counties.

Today, Sounder commuter trains run more than 80 miles every weekday from Everett and Tacoma into Seattle and back. Sound Transit operates express bus, commuter rail and light rail services that carry more than 35,000 people a day. In addition, construction is well underway on the \$2.4 billion Link light rail system connecting downtown Seattle with Sea-Tac International Airport.

Many commuters also rely on the Washington State Department of Transportation's ferry system, especially in Kitsap County. This system extends the state highways across Puget Sound, transporting over 10 million vehicles a year (3.3 percent commercial trucks or large motor homes). Walk-on commuters are also encouraged to use the system with low fare commuter books and ferry runs that meet transit connections. It is estimated that roughly 25.5 million passengers and vehicles use the ferry system each year.⁴⁰

Although a fair number of commuters cross Puget Sound daily via ferry, the large body of water has limited western suburban growth in the county. Ferry ridership has declined for four straight years through 2003. Meanwhile, fares have increased for four straight years, the latest in May 2004. Fares have ballooned nearly 50% since June 2001, providing a potential cause for the continued ridership decline in addition to a continued economic dip.

For a region where traffic congestion is often ranked among the top concern of a majority of residents, continued inability to create real change in the availability and use of transit will likely weaken the region's overall competitiveness. A good physical infrastructure is inherent in quality of life, in the form of sea and airports and less congested highways and will surely be key to regional success.

G. Quality of Life & Social Capital

People, especially if they are well educated, are increasingly mobile. They have many options about where to live and work. Going forward, the most challenging competition faced by firms will be the competition for people—for human talent. Those regions that offer a high quality of life will be the winners in this competition—places with clean air and water, and that have an array of cultural, leisure time and recreation offerings. According to Carnegie Mellon Professor Richard Florida, the mobile, highly educated “creative class” is seeking to settle in places that provide a high quality of life, systems of governance that work, and human scale. Most of today's mega-regions are seriously lacking in this regard, becoming ever more difficult places in which to live.

Central Puget Sound has advantages in what has become known as “quality of life” or, sometimes, “social capital” measures. The region's natural beauty and good places for recreation, and cultural amenities were consistently cited as major strengths by respondents to the interviews and surveys conducted in the course of this study (*see Parts VI and VII*).

In the context of economic development, social capital is a term increasingly used to describe community functioning and problem-solving attributes. Definitions range from the academic “social relations of mutual benefit characterized by norms of trust and reciprocity,” to the pragmatic, “the glue that binds.” Although not a precise concept, social capital can be viewed as the set of formal and informal community networks such as business and trade organizations, ad hoc problem-solving groups and other non-profits engaged in what can be viewed, at least in part, as community “quality of life” issues.

⁴⁰ enterpriseSeattle. 2004.

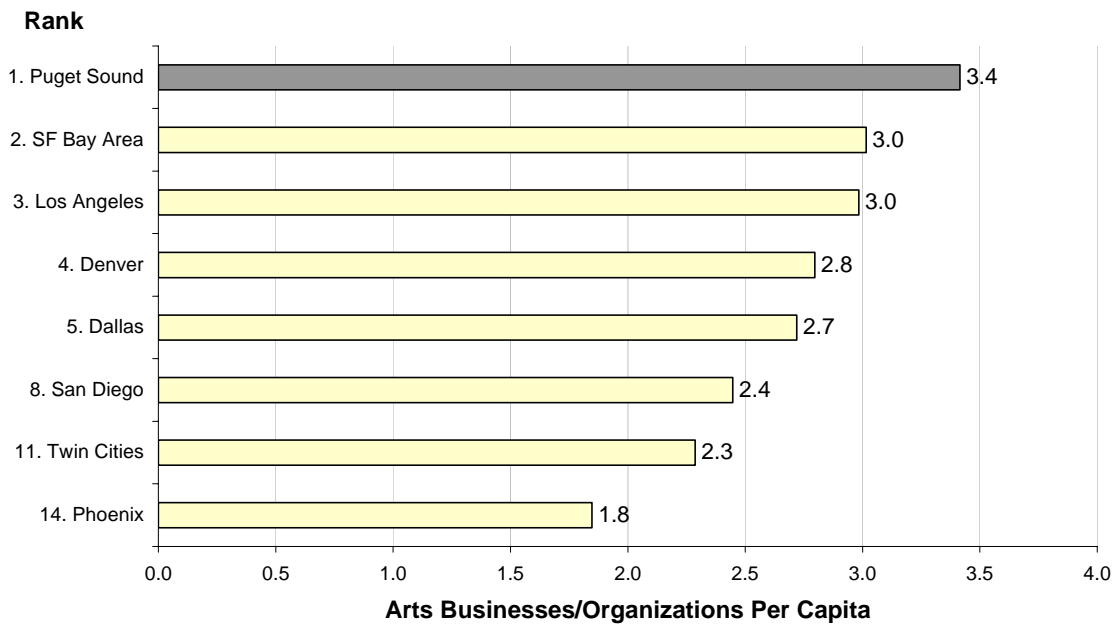
Indicators of social capital include per capita measures of community-based non-profits, arts and culture organizations, and philanthropic giving. Higher levels of these and related measures suggest the presence of more workable and more livable communities. A lower level suggests cities less able to work together as a community to address social and economic problems and therefore places with a generally lower quality of life.

This section compares Puget Sound to its peer regions in several ways. It is worth noting that across the spectrum of social capital indicators, Minneapolis-St. Paul stands well above others, but Puget Sound is comparatively strong as well. Below are a number of indicators that track the region’s performance along this foundation area.

Arts and Culture

One good indicator of a region’s cultural amenities and its general orientation towards arts and culture is the number of art-related organizations per 1,000 residents. *Figure IV-19* demonstrates that central Puget Sound stands out from its peers in this regard.

Figure IV-19: Arts-related Organizations Per Capita as Compared to Peer Regions and Top 5, 2003



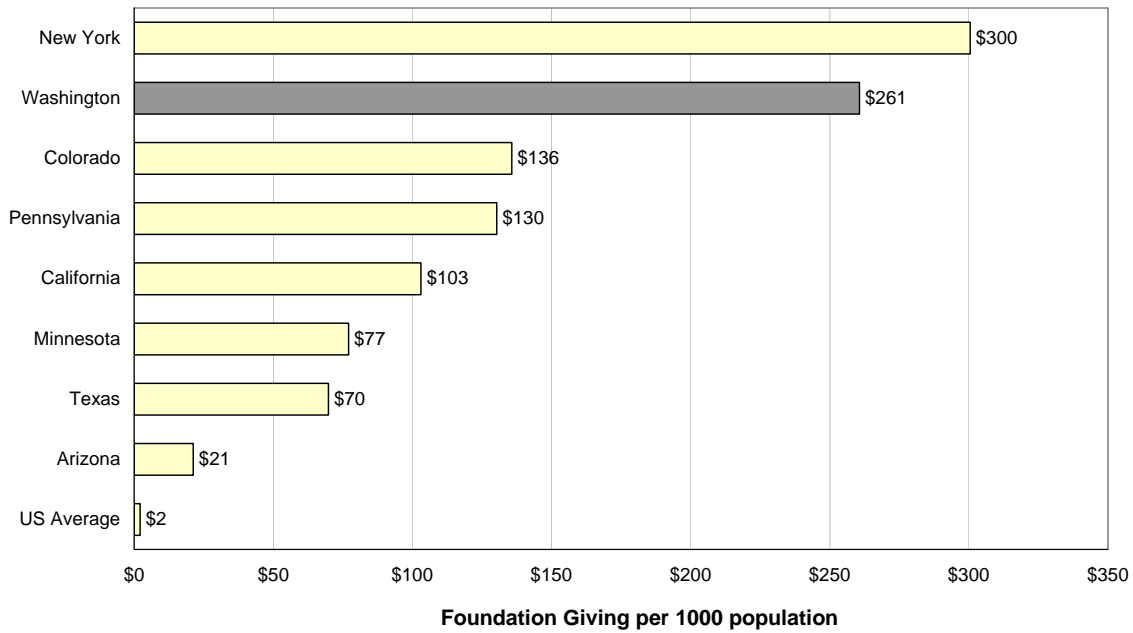
Source: Americans for the Arts

Philanthropy

Charitable giving is another strong feature of the region and one more indicator of the community character and its social capital. On a per capita basis, the state is among the most generous of all states (see *Figure IV-20*). According to a recent study in *BusinessWeek*, the central Puget Sound region is home to two of the top 10 most generous U.S. philanthropists, Bill and Melinda Gates and Paul Allen.⁴¹

⁴¹ Conlin, Michelle, Gard, Lauren, Hempel, Jessi. “The Top Givers.” *BusinessWeek*, November 29, 2004.

Figure IV-20: Charitable Giving Per Capita as Compared to Peer States, 2001



Source: *The Foundation Center, "Foundation Yearbook," 2003.*

In addition, the role of the region’s non-profit sector cannot be overstated. From a strategic perspective, and as related to a region’s social capital, non-profits represent key economic foundations as important to the economy as other factors like the availability of capital. In part, it is through the development and deployment of social capital that we join two imperatives—economic competitiveness and social values.

School Quality

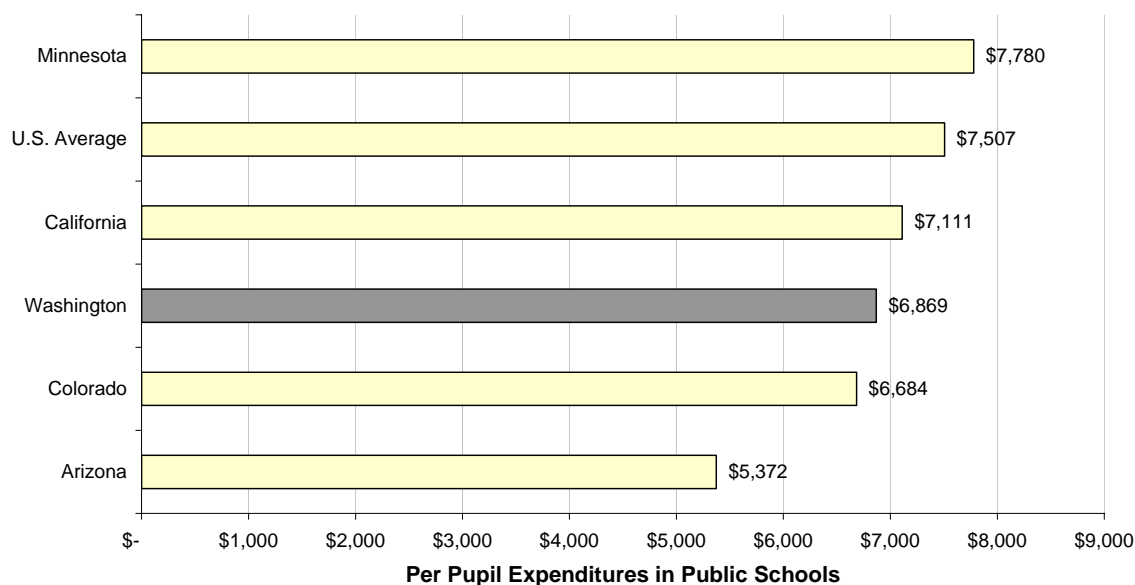
A major factor in the decision young families make as to where to live and work is the quality of the K-12 public school system. In this regard, subareas within the four-county region vary widely. Across the state of Washington, there is evidence that overall student achievement is improving, as evidenced by recent changes in the Washington Assessment of Student Learning (WASL) scores:

Table IV-7: Percentage of Students Meeting WASL Standards, 2002-03.

	Math	Reading
All students	39.4%	60.0%
Low income students	24.1%	42.7%

Source: *Washington Office of Financial Management, 2003*

While many debate the relationship between per-pupil spending on public education and achievement, the state, as a whole, is not spending as much as the average U.S. state, and not as much as several of its peers (see *Figure IV-21*).

Figure IV-21: Per Pupil Expenditures in K-12 Public Schools as Compared to Peer States, 2003

Source: U.S. Department of Education, National Center for Education Statistics, August, 2003. Data presented in constant 2001-02 dollars.

From an economic strategy point of view, social capital offers at least two challenges:

- Leveraging a region's existing social capital for economic gain*—This means bringing the social capital-related organizations into the economy for both economic and broader-based community benefits. Here it is suggested that non-profits be an integral part of the economic strategy development and implementation team. Non-profits should play a role in these processes as prominent as that played by education and training providers, by lenders and equity financiers, and by organizations that provide physical infrastructure. For broader-based community gain, a community's social capital (e.g., philanthropy, the arts) should be seen as having the potential to strengthen community quality of life in specific ways. For example, in the competition to attract (and retain) talented people who could live anywhere, social capital should be seen as a tool for helping do so.
- Building up more social capital*— If social capital is a community good, then from a strategic perspective more of it should be built up within the community. This suggests steps to build within the economy, especially in the private sector, a "culture of giving." Lessons from Minneapolis-St. Paul may be instructive. This community (like Des Moines, IA and other mid-western cities), has inculcated a culture of giving in the business community. For years, Minneapolis-St. Paul had an informal "2% Club" that basically expected upstanding firms to give 2% of their after tax profits to local charities.

Whether it will be strategies like these or others, attention to the region's social capital will be important as the Prosperity Partnership goes forward. Just as strategies will be required to enhance job skill training and venture capital, specific strategies will be required to both make more of what social capital the region enjoys today, and strengthen the region's ability to generate more capital of this kind.