

# 2003 Washington State Labor Market and Economic Report



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This report has been prepared in accordance with RCW 50.38.040 State of Washington

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Published December 2003

**Acknowledgements:** The *Labor Market and Economic Report* was produced through the collaboration of members of the Economic and Policy Analysis Unit:

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The team wishes to acknowledge the analysis, data, and intelligence provided by Felix D'Allesandro, Gary Kamimura, and Chris Thomas.

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# 2003 Washington State Labor Market Fast Facts

## Labor Force and Unemployment, Washington, 1980-2003

Year	Labor Force	Employment	Unemployment	Unemployment Rate
1980	1,985,000	1,828,000	156,000	7.9%
1985	2,091,000	1,921,000	170,000	8.1%
1990	2,537,955	2,412,815	125,140	4.9%
1995	2,809,977	2,630,924	179,053	6.4%
2000	3,050,482	2,891,456	159,026	5.2%
2001	3,015,087	2,822,226	192,861	6.4%
2002	3,096,859	2,871,015	225,844	7.3%
<b>2003</b>	<b>3,115,777</b>	<b>2,888,322</b>	<b>227,456</b>	<b>7.3%</b>

**Note:** Not seasonally adjusted. 2003 data are averages for year-to-date as of October.

## Labor Force and Unemployment, Washington Metro Areas, 2003

Metro Area	Labor Force	Employment	Unemployment	Employment Rate
<b>Washington State</b>	<b>3,115,777</b>	<b>2,888,322</b>	<b>227,456</b>	<b>7.3%</b>
Bellingham MSA	87,981	82,669	5,312	6.0%
Bremerton PMSA	101,596	95,173	6,422	6.3%
Clark County	184,862	166,798	18,064	9.8%
Olympia MSA	107,817	101,708	6,108	5.7%
Richland-Kennewick-Pasco	104,021	96,372	7,649	7.4%
Seattle-Bellevue-Everett PMSA	1,391,591	1,296,120	95,471	6.9%
Spokane MSA	212,198	197,849	14,350	6.8%
Tacoma PMSA	348,903	322,117	26,786	7.7%
Yakima MSA	110,721	99,436	11,285	10.2%

**Note:** 2003 metro area data are averages for year-to-date as of September, not seasonally adjusted. Washington State data are year-to-date as of October.

## Recent and Projected Growth Rates, Washington, 2000-2012

Industry	Annual Average Employment Growth			
	2000-2002	2003Q1-2005Q1	2002-2007	2007-2012
<b>Total</b>	<b>-1.0%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>1.6%</b>
Construction	-2.2%	1.3%	1.5%	1.2%
Manufacturing	-7.4%	-0.4%	-0.3%	1.4%
Trade, Transportation, and Utilities	-2.1%	1.4%	1.3%	1.2%
Information	-2.3%	3.2%	2.4%	2.5%
Financial Activities	0.9%	1.7%	2.1%	1.3%
Professional and Business Services	-2.4%	2.8%	2.9%	2.6%
Education and Health Services	2.7%	2.1%	2.1%	1.7%
Leisure and Hospitality	-1.5%	1.7%	1.7%	1.3%
Government	2.7%	1.5%	1.6%	1.5%

\***Note:** Certain Tribal employment, including gaming, was reclassified from other sectors to government in 2001.

## Covered Employment, Employer Units, and Wages by Industry, Washington, 2002

Major Industry Division	Employer Units	Total Wages (in billions\$)	Employment	Average Annual Wage
<b>Total</b>	<b>207,357</b>	<b>\$101.1</b>	<b>2,643,715</b>	<b>\$38,244</b>
Trade, Transportation, and Utilities	33,331	\$16.3	492,272	\$33,087
Government (including public education)	2,017	\$19.3	490,324	\$39,360
Education and Health Services	14,899	\$9.1	287,410	\$31,725
Manufacturing	7,738	\$14.3	280,964	\$50,901
Professional and Business Services	25,582	\$12.9	279,997	\$45,933
Leisure and Hospitality	13,930	\$3.7	240,611	\$15,297
Construction	24,142	\$5.6	142,285	\$39,396
Financial Activities	11,878	\$6.5	141,710	\$45,883
Information	2,627	\$9.5	92,715	\$102,309
Natural Resources, Agriculture, Forestry, Fishing, and Mining	9,639	\$1.7	79,354	\$20,963
Other Services	10,857	\$1.9	74,461	\$25,336

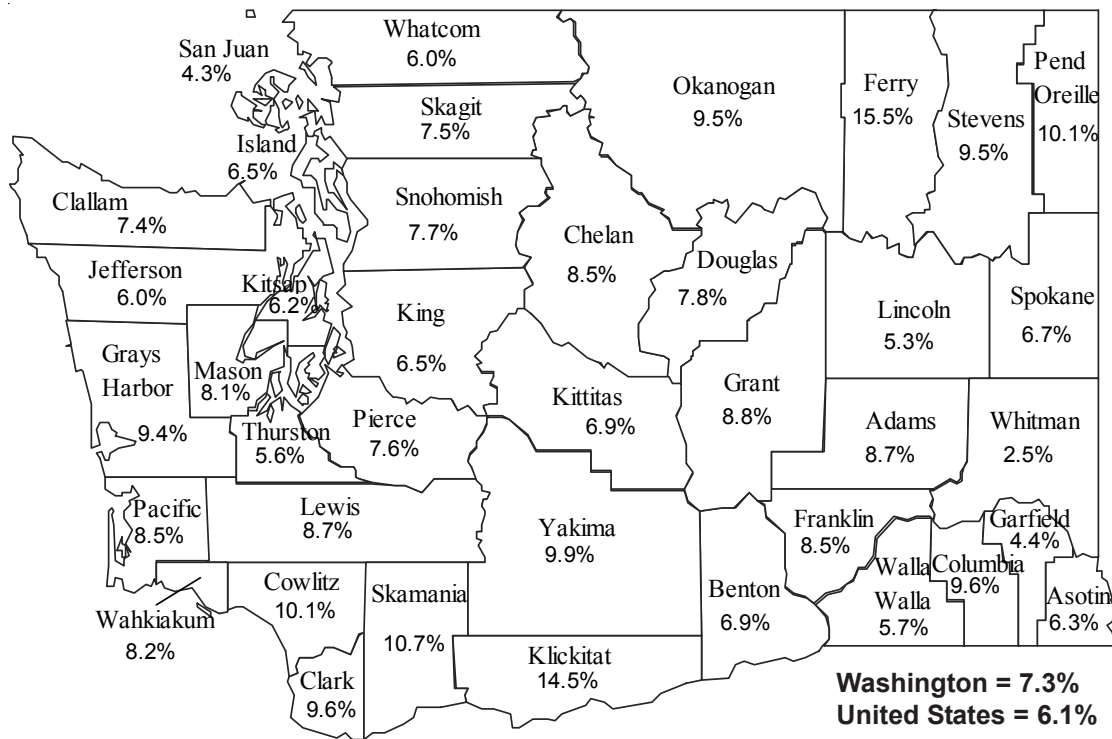
**Source:** Washington State Employment Security Department

## Average Monthly Unemployment Insurance Claims and Estimated Employment Occupation Groups, Washington, 2002

Occupation Groups	Unemployment Claims*	Unemployment		Occupation Groups	Unemployment Claims*	Unemployment	
		2002 Estimated Employment	Claims as Share of Employment			2002 Estimated Employment	Claims as Share of Employment
<b>Total</b>	<b>144,007</b>	<b>3,039,505</b>	<b>4.7%</b>	<b>Total</b>	<b>144,007</b>	<b>3,039,505</b>	<b>4.7%</b>
Production	21,344	171,763	12.4%	Protective Service	1,643	54,155	3.0%
Construction and Extraction	20,721	186,585	11.1%	Sales and Related	9,145	310,973	2.9%
Management	12,663	115,785	10.9%	Building and Grounds Cleaning and Maint.	3,340	121,362	2.8%
Farming, Fishing, and Forestry	7,738	75,753	10.2%	Business and Financial Operations	3,296	128,598	2.6%
Transportation and Material Moving	14,112	220,944	6.4%	Food Preparation and Serving Related	5,485	219,179	2.5%
Installation, Maintenance, and Repair	7,083	117,038	6.1%	Life, Physical, and Social Science	783	38,209	2.0%
Computer and Mathematical	4,861	98,004	5.0%	Legal	490	26,678	1.8%
Architecture and Engineering	3,395	80,594	4.2%	Personal Care and Service	1,885	123,389	1.5%
Office and Administrative Support	17,860	452,240	3.9%	Community and Social Services	714	53,618	1.3%
Arts, Design, Entertain., Sports, Media	1,924	58,186	3.3%	Education, Training, and Library	1,808	179,559	1.0%
Healthcare Support	2,380	72,474	3.3%	Healthcare Practitioners and Technical	1,130	134,417	0.8%

\*Unemployment insurance claims are average of monthly continued claims filed in 2002.

### Unemployment Rates by County, 2003 (Year-to-Date Averages as of October) Not Seasonally Adjusted.



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# Washington State Labor Market and Economic Report

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## Executive Summary

### *Employment Trends*

- In early 2003 employment started to pick up, but lagged over the summer. September 2003 saw a job loss of 6,200 from September 2002, a loss of 32,200 since September 2001 and 66,300 since September 2000.
- Manufacturing has been the largest loser with a job loss of 14,100 over the past year, from September 2002 to September 2003. Since September 2001 the job loss in manufacturing has been 46,600 and since its employment peak in June 1998, job loss has been 94,400 or 26 percent.
- The high tech information sector has seen job loss slow to almost zero. Sectors adding jobs from September 2002 to September 2003 are:
  - Financial activities
  - Healthcare and educational services
  - Retail trade
  - Construction
  - Professional and business services
  - Leisure and hospitality

### *National Outlook*

Although output grew at a strong 8.2 percent in the third quarter of 2003, the labor market remains weak. A failure to create jobs could trigger a decline in consumer spending and ensuing uneasiness among businesses. The most recent data, however, finally indicate seasonally adjusted job creation at the national level<sup>1</sup>. A full recovery may finally emerge.

### *Cyclical Versus Structural Job Loss*

Some industries have lost (or gained) jobs because of the cyclical downturn, while others are undergoing a long-term structural change. Industries with a fairly clear classification during the period from 1990 to 2002 are:

Structurally declining industries:

- Manufacturing
- Natural resources and agriculture
- Federal government

Structurally increasing industries:

- Information
- Other services
- Arts, entertainment, and recreation
- Professional and technical services

Cyclical industries:

- Real estate
- Accommodation and food services
- Retail trade
- Finance and insurance
- Construction
- Management of companies

<sup>1</sup> BLS news release November 7, 2003. Nonfarm employment preliminary numbers show a job increase of 125,000 in September and 126,000 in October.

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### *Income and wages*

Washington's per capita income was \$32,661 in 2002, which translated into an over-the-year real gain of just 0.8 percent (\$244). 2002 represented a recovery from a negative 0.8 percent over the year hit in 2001. The 2002 level is still not high enough to beat real per capita income in 2000 (\$32,668).

### *Unemployment*

Over the recession Washington's unemployment rate was on average 1.7 percentage points higher than the nation's. This is not unusual, though, as Washington's jobless rate has consistently remained above the nation's for the past twenty-five years (except for brief dips below the national rate in 1990 and 1991, and again in 1997 and early 1998).

### *Occupational Outlook*

The state's occupational composition is projected to continue to become slightly more skewed toward office and professional workers. Service occupations are expected to enjoy the fastest growth in the mid-term (2002-2007). Professional and office occupations are also projected to have relatively strong growth. By contrast, the production and installation occupations are forecast to rise at much slower annual rates (0.7 and 1.1 percent, respectively).

# Chapter 1 - The Year in Review

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In late 2002, as last year's annual *Labor Market and Economic Report* was being written, the economy was surprising everyone by its lackluster recovery. The prediction made in that report was that while 2003 would be another year of recovery, it would feel like a recession. Unfortunately, that prediction has largely come true and now, in late 2003, the economy finds itself in a very similar position. The goal of this report is to explain the key features of what has been called a *jobloss* recovery<sup>1</sup> and to identify the sectors of the economy most likely to see job growth over the coming year.

## Evidence of a Jobless Recovery

The recession, which is dated by the National Bureau of Economic Research, has been identified as starting in March 2001 and ending in November. Job losses, however, have indeed continued for the Washington economy beyond those nine months. Using year-over-year changes of nonagricultural employment to help separate job losses associated with the recession from those associated with normal seasonal variation, the following employment pattern has occurred:

- From December 1999 to December 2000, the economy gained 48,900 jobs.
- From December of 2000 (about the peak in the labor market) to December 2001, the economy lost 74,100 jobs.
- Last year, lamentably, from December 2001 to December 2002, there was a further loss of 4,400 jobs.

In early 2003 employment started to pick up, but lagged over the summer. October has seen a slight improvement with an estimated 8,000 more jobs than in October 2002, but there were still 10,500 fewer jobs than in October 2001, and 54,400 fewer than in October 2000.

**Gross domestic product or GDP** is a measure of the value of all the goods and services produced in the economy.

Can any conclusions be drawn from these aggregate numbers? First, the obvious: if this has been a recovery, then it has certainly been a *jobloss* recovery. Second, although job losses usually lag a drop in production (GDP), most of the jobs were actually lost during the year of the recession (2001). These job losses were also quite significant, over fifty percent greater than the job gains during the last year of the expansion. Job losses during the recovery have continued, but at a much slower pace.

## The Story of the Recession

The basics of the 2001 recession are as follows: the high tech bubble burst in late 2000, causing layoffs and business closures in high tech industries such as information, professional and technical services, and retail trade (many dot.coms were classified in the retail sector). There was also some fall in spending as incomes disappeared, thus causing secondary effects in service sectors such as construction, trade, transportation, and leisure. At the same

<sup>1</sup> Some have very rightly questioned what a recovery means if it brings no jobs. In fact, the past two years may not have been a recovery in the meaningful sense of bringing back economic prosperity. Still, as this is the term currently being used by the media, it will be used in this report to refer to the post 2001 recession years.



time, business investment fell sharply leading to an overall decline in the manufacturing sector. The second hit to the economy came with the September 11 terror attacks. The resulting fall in air travel caused a decline in demand for planes, and aerospace began a series of layoffs in the Puget Sound area. These layoffs would have further repercussions with declines in spending and the loss of service sector jobs.

In the year of the recession, Washington's retail trade sector lost over 11,000 (11,700 December to December) jobs along with job losses in information and professional and business services. Secondary effects can be seen with job losses in construction, wholesale trade, and leisure and hospitality. Although aerospace manufacturing lost few jobs in 2001, the manufacturing sector as a whole was down by almost 27,000 jobs. In fact, Washington's manufacturing sector started its job loss well before the recession began.

### The Story of the Recovery

During the first year of the recovery large aerospace layoffs began. The rest of the manufacturing sector also continued to decline along with the information sector. Some support sectors, such as trade, transportation, and utilities, also continued to lose jobs but at much slower rates. Other sectors, however, had begun to turn around. Professional and business services managed to add jobs, as did leisure and hospitality and construction. Financial activities, education, healthcare, and government continued to add jobs through the recovery.

The first nine months of 2003 have led to little overall job gain; just 8,000 net gain in October 2003 from October 2002.

#### *Manufacturing*

Since the employment peak of November 2000, the economy has, on net, lost 62,300 jobs. The manufacturing sector, however, lost 62,500 jobs over this time period. This sector has thus been one of the major drivers of the recession. Looking back further reveals that the weakness in this sector pre-dated the recession. Since 1990, the manufacturing sector has lost over 69,000 jobs while the economy as a whole added over 600,000 jobs.

In 1990, aerospace employment accounted for about a third of Washington's manufacturing employment; by October of 2003, the aerospace share had fallen to less than a quarter of all manufacturing employment. Despite this decline relative to manufacturing as a whole, aerospace remains a powerful influence on Washington's economy. Its wide cyclical swings, for example, have added considerable volatility to the economy. While aerospace has, on average, accounted for about four percent of total employment since 1990, its annual change in employment is 16 percent of the annual change in total employment.

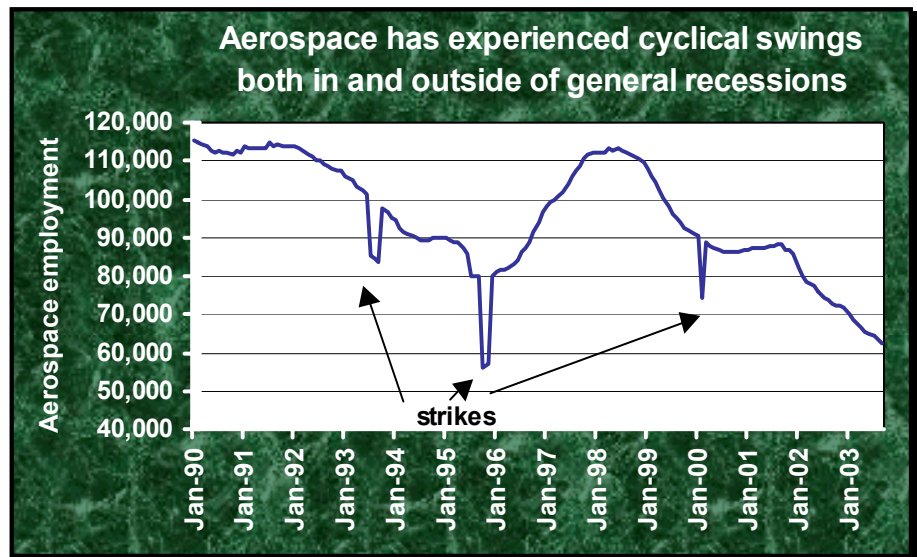
A **recession** is a downturn in economic activity, most commonly recognized as at least two consecutive quarters of decline in gross domestic product (GDP).

#### **What is NAICS?**

In order to study and appropriately tax employers, each is assigned a code that identifies them with other employers engaged in similar business. Beginning in 1997, the **Standard Industrial Classification (SIC)** was replaced by the **North American Industry Classification System (NAICS)**. This six-digit, hierarchical classification system is a major revision that not only recognizes newer industries (such as Internet service providers), but also reorganizes sectors according to a production process orientation. This new, uniform, economy-wide classification system has been designed as the system for statistical reporting of all economic activities of the U.S., Canada, and Mexico. More information about the new classification system is online at: <http://www.census.gov/epcd/www/naics.html>.

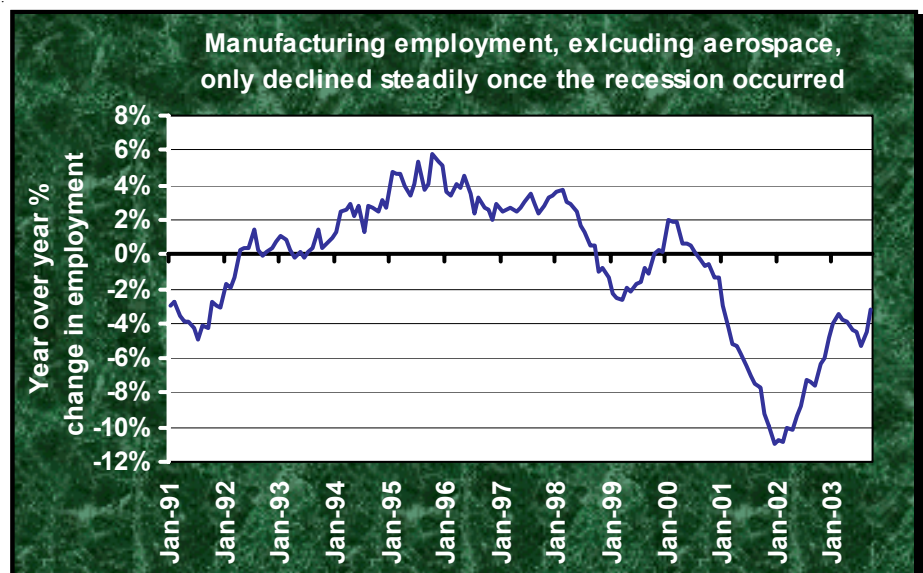
**Recession drivers** are the industries that have largely fueled the job losses in the supporting sectors of the economy.

**Figure 1**  
 Monthly Aerospace Employment  
 Washington, January 1990 - September 2003  
 Source: Employment Security Department



All other manufacturing (besides aerospace) is also very cyclical. This sector, which accounts for about 10 percent of total employment in Washington, has seen employment variation of about 27 percent of the variation in total employment annually from 1990. Manufacturing employment other than aerospace has declined by 39,400 jobs or 15.5 percent since its peak in 1998.

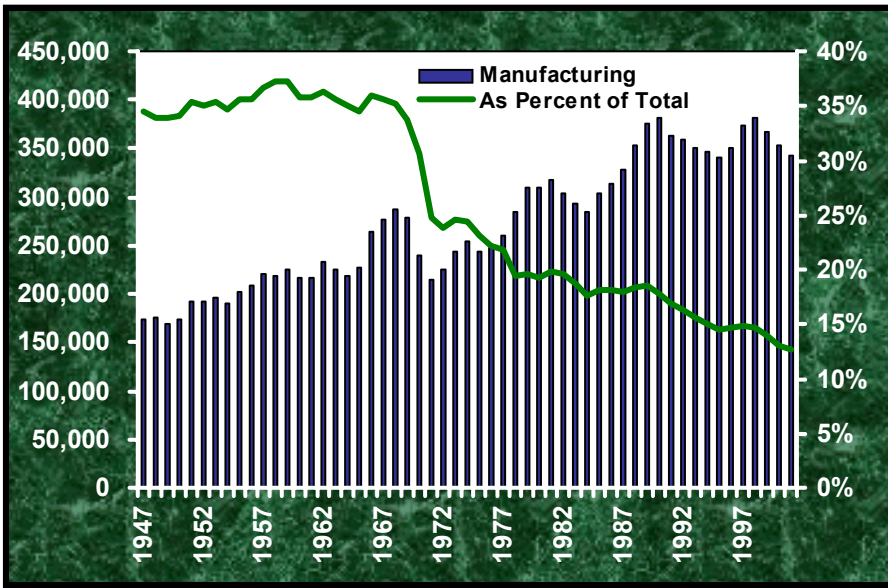
**Figure 2**  
 Year-Over-Year Employment Change, Manufacturing Excluding Aerospace  
 Washington, January 1991 - September 2003  
 Source: Employment Security Department



**Figure 3**

Manufacturing Employment and Share of Total Employment  
Washington, 1947- 2001

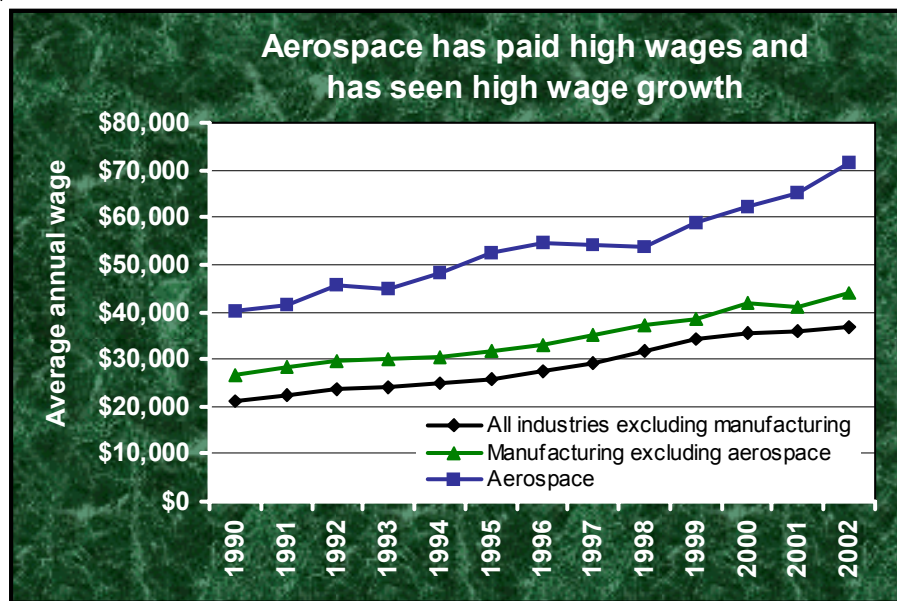
Source: Employment Security Department



**Figure 4**

Average Annual Wages in All Industries Excluding Manufacturing,  
Manufacturing Excluding Aerospace, and Aerospace  
Washington, 1990 - 2002

Source: Employment Security Department



## High Tech

The information sector is used to represent high tech industries in this report. However, many workers within the information industry are not information technology workers, and many information technology workers work in other industries. Still, over 70 percent of employment in the information industry is directly involved with providing technology products or services to technology users. The information sector is the most closely aligned of all industries to information technology workers.

In contrast to the manufacturing sector, the information industry increased by almost 90 percent from January 1990 to September 2003. Software publishing dominates this sector accounting for 41 percent of information employment in September 2003. Software publishing increased by an astounding 485 percent between January 1990 and September 2003. Another important sector, telecommunications, accounted for 29 percent of information employment in September 2003 and had increased by 36 percent since January 1990.

**Figure 5**  
Information Industry Employment Change  
Washington, 1990 - 2003  
Source: *Employment Security Department*

Industry and Sub-sector	Employment Change			
	1990 to 2000	December 2000 to December 2001	December 2001 to December 2002	September 2002 to September 2003
<b>Information</b>	4,811	-5,220	-3,580	-800
Software Publishers	2,491	2,873	-273	1,800
Telecommunications	1,181	-1,789	-2,811	-1,900
Wired Telecommunications Carriers	-92	-2,913	-1,387	-900
Wireless Telecommunications Carriers	1,011	506	-1,106	200

Whereas software publishing hardly decreased at all over the recession, telecommunications, particularly wired telecommunications, declined steadily through the recession and recovery. By 2003, wireless telecommunications carriers actually managed to add jobs, while the rate of job decline had slowed among wired carriers. This industry will likely begin to add jobs once the great overcapacity has worked itself out.

**Figure 6**  
Employment, Annualized Wage, and Location Quotients,  
Information Industry Sub-sectors  
Washington, 2002 - 2003  
Source: *Employment Security Department*

Industry and Sub-sector	Average Monthly Employment (1st Quarter 2003)	Average Annualized Wage (based on 1st Quarter 2003)	2002 Location Quotient
Software Publishers	36,074	\$149,471	6.99
Cellular and Other Wireless Telecommunications	12,408	\$77,641	3.59
Wired Telecommunications Carriers	9,401	\$60,743	0.71
Newspaper Publishers	8,222	\$34,355	1.03
Cable and Other Program Distribution	4,090	\$43,158	1.55

*Other Industries That Have Not Yet Recovered*

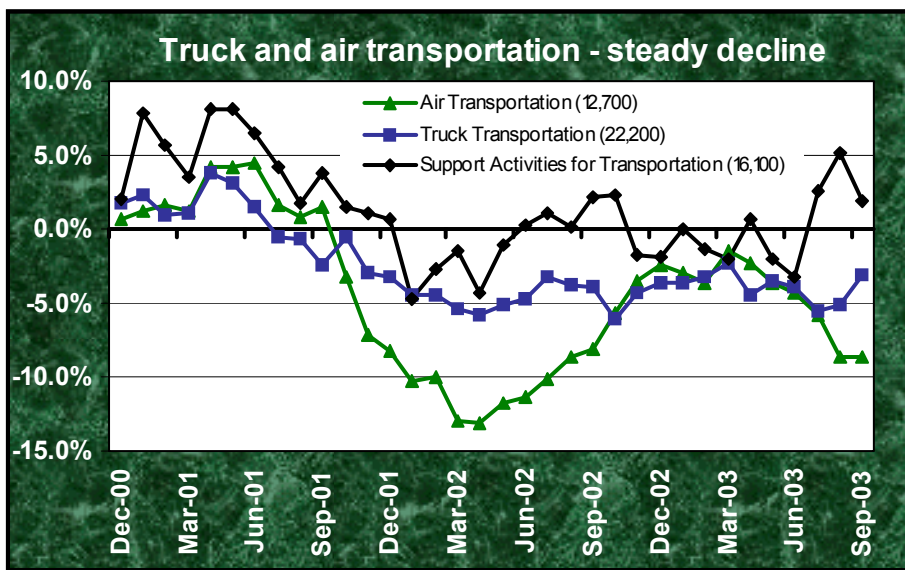
Wholesale trade has been affected by a series of classification changes that make it very difficult to identify true trends in employment. For example, in 2000 Tribal government employment was moved to local government from a variety of sectors, including wholesale trade. In 2001, the Bureau of Labor Statistics had a cycle of recoding that concentrated on wholesale trade, which caused the appearance of one-time decline in employment. However, a look past these code changes still reveals a very weak sector. Over the past year, when there have been few administrative or classification changes, employment has continued to decline, although at a very low rate.

**Figure 7**  
Wholesale Trade and Transportation, Warehousing, and Utilities Employment Change  
Washington, 1990 - 2003  
Source: Employment Security Department

Industry and Sub-sector	Employment Change			
	1990 to 2000	December 2000 to December 2001	December 2001 to December 2002	September 2002 to September 2003
Wholesale Trade	1,988	-5,777	-1,123	-300
Transportation, Warehousing and Utilities	1,140	7,365	-1,535	-2,100

The transportation industry has been one of the foci of this recession. First, air transportation was particularly hard hit in the aftermath of the September 11 terror attacks. Truck transportation declined with the fall in manufacturing and trade. These are among the largest sub-sectors in this industry along with support activities for transportation, which is closely tied to air, water, and truck transportation and has seen little job growth over the past three years.

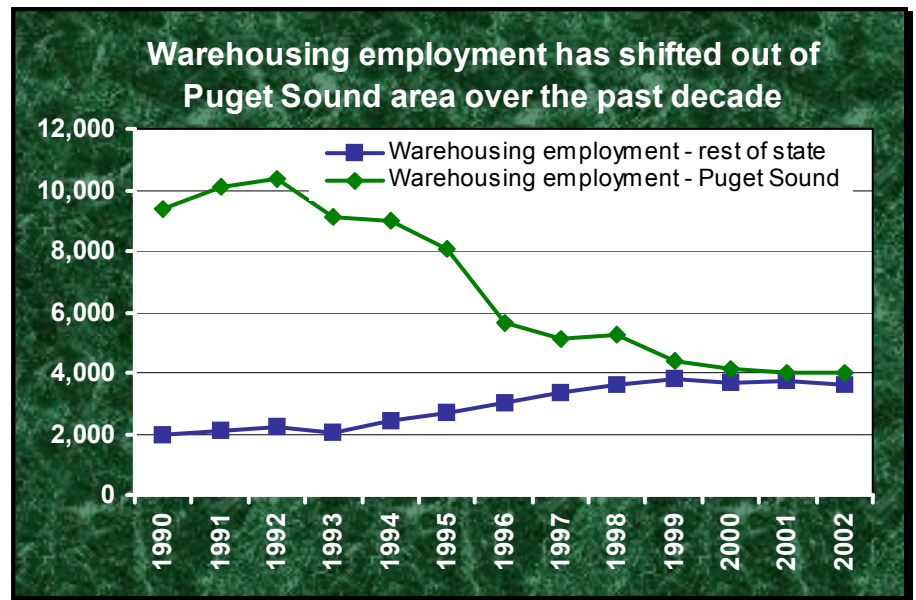
**Figure 8**  
Year-Over-Year Employment Change, Transportation  
Washington, December 2000 - September 2003  
Source: Employment Security Department



Washington's **warehousing** industry has declined by 33 percent since 1990, going from employment of over 11,000 to under 8,000. This sector has not, however, experienced a general decline. Rather, there has been a shift of activity from the Puget Sound area to the rest of the state.

### Figure 9

Warehousing Employment  
Puget Sound and Balance of State, 1990 - 2002  
Source: *Employment Security Department*



This shift has occurred across the different types of warehousing. General warehousing, which comprises about half of warehousing employment, went from a 96 percent concentration of employment in the Puget Sound area in 1990 to 67 percent in 2002. Refrigerated warehousing, the next largest sector, went from about 50 percent concentration in the Puget Sound area in 1990, to about 17 percent in 2002. Farm product warehousing lost a major employer in the Puget Sound area in 1993. In 1990, 74 percent of employment in this sector was in the Puget Sound area; by 2002, only 3.5 percent was in there.

This geographic shift seems to have leveled off in 2000, about the time of the onset of the recession. This will be an important sector to watch as the economy begins to heat up once again.

Transportation and warehousing are both very dependent on the volume of trade. Retail trade is just beginning to increase in number of jobs, and the rate of decline in wholesale trade has slowed this year. As trade picks up with a general economic recovery, trucking and warehousing should follow.

### *Industries That Continue to do Well*

The **financial activities** industry, **health services**, and **education** sectors have added jobs throughout the recession and recovery. Each of these industries has a very different reason for its strength. The financial activities industry has been helped out by unusually low interest rates during the recession. The health

services industry, on the other hand, has often been constrained in growth by the supply of workers rather than by the demand for workers. Employment in this industry often increases when people are being laid off from other industries, thus, pushing up potential supply.

Education, especially public education, is more determined by population growth than by the economy<sup>2</sup>. Colleges, universities, and training programs have also seen increased enrollments as some unemployed workers return to school to learn new skills.

**Figure 10**  
 Financial Activities Employment Change  
 Washington State, 1990-2003  
 Source: *Employment Security Department*

Industry	Employment Change			
	1990 to 2000	December 2000 to December 2001	December 2001 to December 2002	September 2002 to September 2003
Financial Activities	2,918	3,439	1,461	6,700

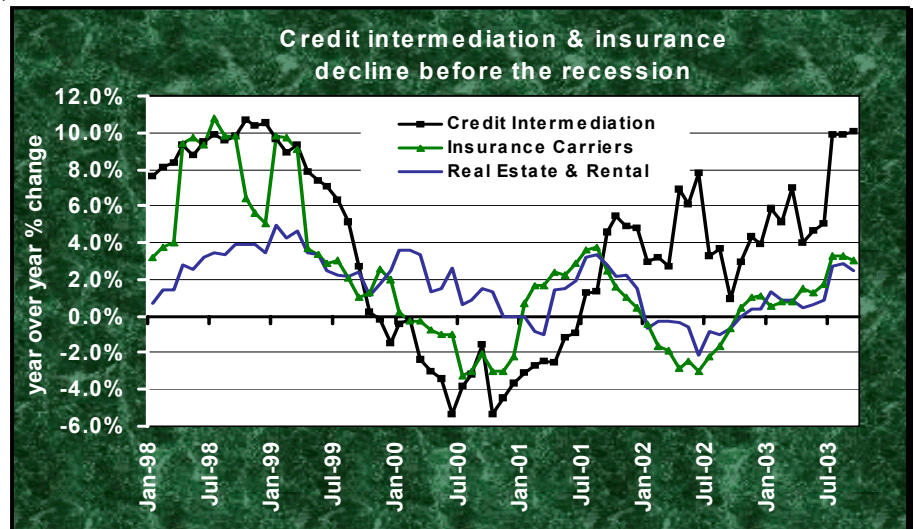
The main sub-sectors within financial activities are credit intermediation, insurance carriers, and real estate and rental leasing. Together these three sectors account for over 90 percent of financial activities employment. Credit intermediation, in particular, saw declines in employment starting in late 1999. This is in stark contrast to the large gains in jobs starting in mid-2001 when the Federal Reserve Board began to lower interest rates. Insurance carriers saw two employment dips, one during 2000 and a second in early 2002 corresponding to the emergence of corporate scandals. Real estate and rental leasing employment has only declined slightly, twice over the past five years, briefly in early 2001 and again in early 2002.

<sup>2</sup> There are certainly some aspects of public education that may be cut back due to state and local budget constraints. Population growth is simply the main determinant of employment growth in this case.

**Figure 11**

Year-Over-Year Employment Change, Credit, Insurance, and Real Estate  
Washington, January 1998 - September 2003

Source: *Employment Security Department*



Health services and education are two of the largest sectors of Washington's economy; together they account for about a quarter of covered employment. **Education** is separated into private educational services and state and local public education. Over half of all education employment is in local, K-12 public schools, an additional third is in state-level public colleges and universities, and the rest is in private educational enterprises.

**Figure 12**

Health and Educational Services Employment Change  
(including government education)

Washington, 1990 - 2003

Source: *Employment Security Department*

Industry	Employment Change			
	1990 to 2000	December 2000 to December 2001	December 2001 to December 2002	September 2002 to September 2003
Health Services	6,899	9,214	5,986	4,600
Private Educational Services	1,658	-1,313	913	-400
State Government Education	1,668	2,973	1,627	1,200
Local Government Education	3,598	-1,042	3,342	-2,300

Since education is a very seasonal industry and the seasonality seems to vary slightly from year to year, the change from September 2002 to 2003 may just be highlighting a chance seasonal change in hiring. Private educational services, which shows a clearer market response, experienced declines in employment during the recession year and a rather small increase the first year of the recovery. During the past year, the growth in jobs has not been strong and may even be declining. Employment levels in local education are largely driven by population and state law. The increase in 2002 was in part due to efforts to lower class size. The decline in 2003 is almost certainly due to seasonality. By December 2003, a clear reading of overall change should emerge.



**Health services** has grown steadily throughout the recession and recovery. Although 2001 was an unusually strong year compared to average change over the 1990s, 2002 and 2003 have seen slower growth. Some occupations within healthcare services are widely believed to be *supply-constrained* in Washington. That is, there might have been only 4,600 new jobs in health services over the past year because health services providers could only find 4,600 people to hire. There may actually be vacant positions that have not been filled. Some credence is given to this theory by the results of the Employment Security Department's *May 2003 Job Vacancy Survey*, which shows that the health service industry had the most vacancies of any industry in the state.

**Figure 13**  
Health Services Employment and Wages, Select Sub-sectors  
Washington, 1997 - 2002  
Source: *Employment Security Department*

Industry	1997 Employment	2002 Employment	Employment Change	2001 Location Quotient	2002
					Average Annual Wage
Ambulatory Health Care Services	88,644	104,308	17.7%	1.07	\$36,157
Hospitals	78,209	90,196	15.3%	0.82	\$42,684
Nursing and Residential Care Facilities	51,678	55,587	7.6%	0.90	\$22,438

### *Industries in Recovery*

Some industries that lost jobs over the recession have begun to hire again. Even with these four industries though, the recovery is slow.

**Figure 14**  
Employment Change, Select Industries  
Washington State, 1990 - 2003  
Source: *Employment Security Department*

Industry	Employment Change			
	1990 to 2000	December 2000 to December 2001	December 2001 to December 2002	September 2002 to September 2003
Construction	4,375	-9,868	2,968	3,000
Retail Trade	6,743	-11,676	-424	1,200
Professional and Business Services	10,627	-23,086	2,686	200
Leisure and Hospitality	6,105	-11,001	2,501	3,100

Construction, leisure and hospitality seem to be experiencing the firmest recoveries, with constant job gains in 2002 and into late 2003. Low interest rates and the refinancing boom, which many people have put into home improvement, have helped **construction**. Business structure construction is the weakest area as commercial vacancy rates are still relatively high. Construction of publicly funded infrastructure projects is also still down. The almost 10,000 jobs lost in construction over the recession have not been made up, and the rate of increase is less than half of what it was on average during the 1990s. A recovery of business investment and spending would be expected to add an extra boost to construction employment.

Food service and drinking establishments account for about 70 percent of employment within the **leisure and hospitality industry**. This sector has created jobs only at about a third of the rate that it did in the 1990s. The arts, entertainment, and recreation sub-sector, on the other hand, grew more strongly in 2002 than it had on average in the nineties. This sector is bolstered by job creation within the gaming sector.

**Retail trade** will recover with the general economy. Although consumption spending has remained strong at the national level throughout the recession, retail trade has lost jobs both nationally and in Washington, showing that consumers have adjusted spending in line with current economic conditions. In 2003, building and garden stores added jobs, in line with the refinancing boom and home improvement trends. General merchandising stores also added jobs. This indicates a general trend of consumers away from more expensive specialty stores to discount chains such as Wal-Mart and Costco.

**Professional and business services** is a very large sector within Washington's economy (only retail trade and government employ more people). This sector, which encompasses many diverse services to businesses, grew fairly strongly throughout the 1990s.

#### Figure 15

Employment Change, Professional and Business Services  
and Select Sub-sectors

Washington State, 1990 - 2003

Source: *Employment Security Department*

Industry	Employment Change			
	1990 to 2000	December 2000 to December 2001	December 2001 to December 2002	September 2002 to September 2003
<b>Professional and Business Services</b>	<b>10,627</b>	<b>-23,086</b>	<b>2,686</b>	<b>400</b>
<i>Professional, Scientific and Technical Services</i>	4,583	-6,352	-1,148	1,200
Computer Systems Design and Related Svcs.	2088	-5,758	-1,642	-1,500
Management of Companies and Enterprises Administrator, Support,	677	-514	314	3,100
Waste Management and Remediation	5,368	-16,220	3,520	-3,900
Employment Services	3,000	-15,653	1,253	-2,400

All three major sub-sectors within professional and business services declined during the recession (professional, scientific, and technical services; management of companies and enterprises; and administration, support, waste management, and remediation). In 2002, administration, support, waste management, and remediation staged a short-lived rebound based on the volatile employment services sector. Employment services include temporary help agencies, which often lead recessions and recoveries. Unfortunately, this sector has been weak over the past year.

Computer systems design, which is a high tech barometer, has declined steadily since the recession. Other professional, scientific, and technical services have seen some turn around over the past year. On the national level, professional and

business services is expected to be a leading indicator for the economy over the coming years. Its lack of a strong recovery over the past year is another indication of current weakness among Washington businesses that will have to turn around before general job growth begins in earnest.

## Industries Doing Worse

Only government expanded over the recession and now has begun to shed jobs. Parts of government are classical counter-cyclical industries. Unemployment insurance and social programs tend to increase in jobs over a recession, as more people need services. As conditions improve and government budget constraints begin to feel the pinch of the recession, job creation usually slows or reverses itself.

**Figure 16**  
 Government Employment Change  
 Washington State, 1990 - 2003  
 Source: *Employment Security Department*

Industry and Sub-Sectors	1990 to 2000	Employment Change		
		December 2000 to December 2001	December 2001 to December 2002	September 2002 to September 2003
Federal Government	-318	292	2,508	-1,500
State Government, except Education	973	1,135	165	-400
Local Government, except Education	2,717	22,554	2,064	-4,000

About 40 percent of government is public education, which was discussed above. Jobs in government, other than education, have been declining as a share of total employment over the 1990s. As a share of total employment, federal government has declined from 3.4 percent in 1990 to 2.6 percent in 2000. State government (except education) has gone from 2.6 percent to 2.4 percent and local government, except education, has remained constant at 4.7 percent.

Note that the large increase in local government except education in 2001 was due to a recoding employment by Indian tribes, including casinos, from various private sector industries (particularly wholesale trade) to local government.

## Industry Outlook

Projections for employment growth complete the story begun above. From 2000 to 2002, all industries saw employment decline except financial activities, education and health services, and government. Over the next two years all industries are expected to grow except for manufacturing, which is projected to continue slow job losses through 2007. However, in the longer run, from 2007-2012, all industries are expected to expand. During this period, manufacturing is expected to expand at almost the same rate of total employment, thus, roughly maintaining its employment share from that point in time.

**Figure 17**  
 Nonagricultural Employment Projections  
 Washington, 2000 - 2012  
 Source: *Employment Security Department*

Industry	Projected Annual Average Growth			
	2000 2002	2003Q1- 2005Q1	2002- 2007	2007- 2012
<b>Total</b>	-1.0%	1.6%	1.6%	1.6%
Construction	-2.2%	1.3%	1.5%	1.2%
Manufacturing	-7.4%	-0.4%	-0.3%	1.4%
Trade, transportation, and utilities	-2.1%	1.4%	1.3%	1.2%
Information	-2.3%	3.2%	2.4%	2.5%
Financial Activities	0.9%	1.7%	2.1%	1.3%
Professional and business services	-2.4%	2.8%	2.9%	2.6%
Education and health services	2.7%	2.1%	2.1%	1.7%
Leisure and hospitality	-1.5%	1.7%	1.7%	1.3%
Government	2.7%	1.5%	1.6%	1.5%

Starting in the period from 2003 to 2005, professional and business services and information are expected to be the most quickly expanding sectors in Washington. This is consistent with total growth from 1990 to 2003. This relatively strong growth is expected to moderate but continue to be the leading sectors through 2012.

After information and professional and business services, education and health services are projected to grow the quickest. These sectors are expected to revert towards the industry average growth rate from 2007 to 2012.

Construction and trade, transportation, and utilities are expected to grow below trend through 2012. These industries would thus slowly lose employment share over the next ten years.

In terms of average annual growth, the top five growth sub-sectors from 2003, quarter 1, to 2005, quarter 1, are expected to be:

- Computer systems design 4.7%
- Software publishers 4.7%
- Employment services 3.6%
- Electric equipment and appliance manufacturing 3.6%
- Wireless telecommunications carriers 3.5%

Four of these sectors continue to be among the top five growth sectors for the longer term period from 2007 to 2012. Electric equipment and appliance manufacturing, though, is replaced by computer and electronic product manufacturing.

Sectors expected to decline or grow relatively slow from 2003, quarter 1, to 2005, quarter 1, are:

- Aerospace -5.6%
- Aluminum production -2.2%
- Support activities for water transportation -1.8%
- Primary metal manufacturing -0.9%
- Sawmills and wood preservation 0.0%

This list is dominated by some manufacturing industries and traditional natural resource based industries. Job growth here is expected to recover much more slowly than total employment. Even in the longer run, from 2007 to 2012, only aerospace is expected to make a turn around and have an annual growth rate of 2.2 percent.

## The 2001 Recession is Difficult to Compare to Previous Recessions

This report started with a discussion of “jobless” recoveries versus “jobloss” recoveries. In this section, the 2001 recession and recovery will be compared to previous recessions and recoveries in three different ways. First, overall employment loss and gain will be examined, then, unemployment rate changes, and finally, job loss and gain by industry.

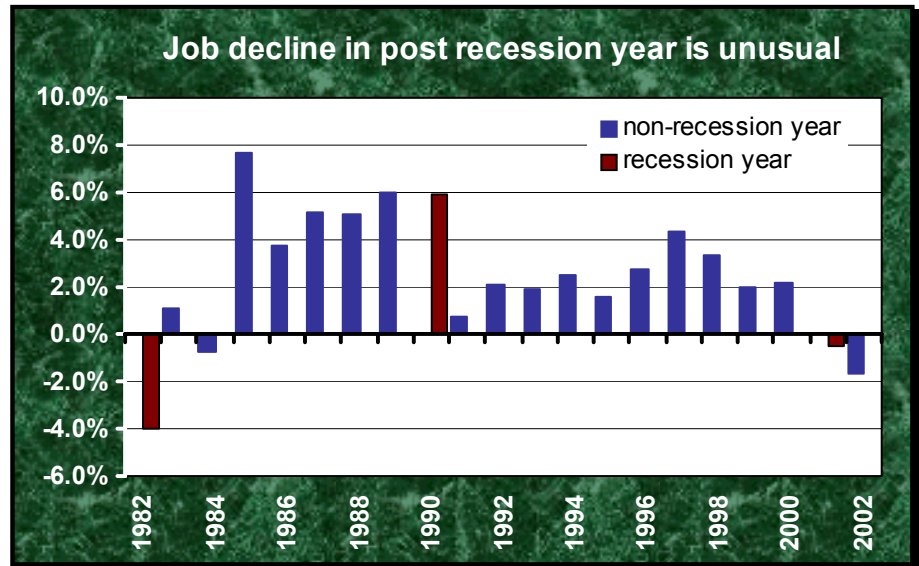
### *Employment Change*

Employment changes generally lag the business cycle. At the beginning of a recession, firms start to see their business decline, but are reluctant to let a trained workforce go. Beyond some point though, as sales continue to fall, businesses lay off employees. In a similar fashion, as the economy begins to pick up, firms at first try to fill orders with existing staff.

**Figure 18**

Annual Percent Change in Covered Employment  
Washington, 1982 - 2002

Source: Employment Security Department

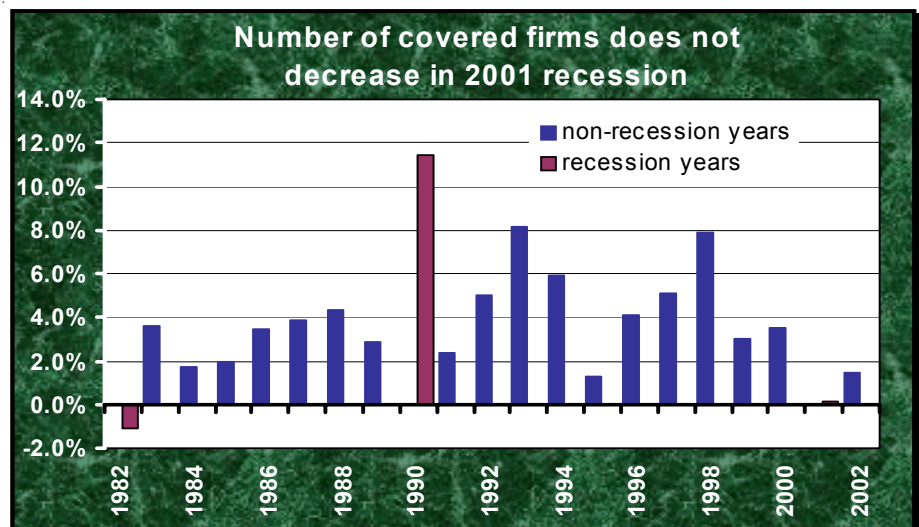


Using annual average covered employment data back to 1981, employment changes in the last three recessions can be compared. Certainly, more jobs were lost during the 1981 recession. Job growth in 1990 emphasizes the mild impact of this recession on the Washington economy. In 2001, there was some job loss during the recession. This job loss continued into 2002, which contrasts with the previous two recessions. Note, however, that for the 1981 recession, which was supposed to be an example of a *normal* “job growth” recovery, jobs were lost again in 1984. This was followed by tremendous job growth in the later half of the 1980s.

**Figure 19**

Annual Percent Change in Number of Covered Firms  
Washington, 1982 - 2002

Source: Employment Security Department



An even more interesting story emerges when looking at the change in the number of firms that are covered for unemployment insurance. During the 1981 recession the number of firms declined. During the ensuing recovery there is mild growth in the number of firms. The 1990 recession is associated with a large increase in the number of firms. This growth continues on through the 1990s. Interestingly, the 2001 recession saw little firm growth, but no losses. In fact, on net, the number of firms grew by 265 between 2000 and 2001. The total number of firms continued to grow in 2002, but at a lower rate than in most of the 1990s.

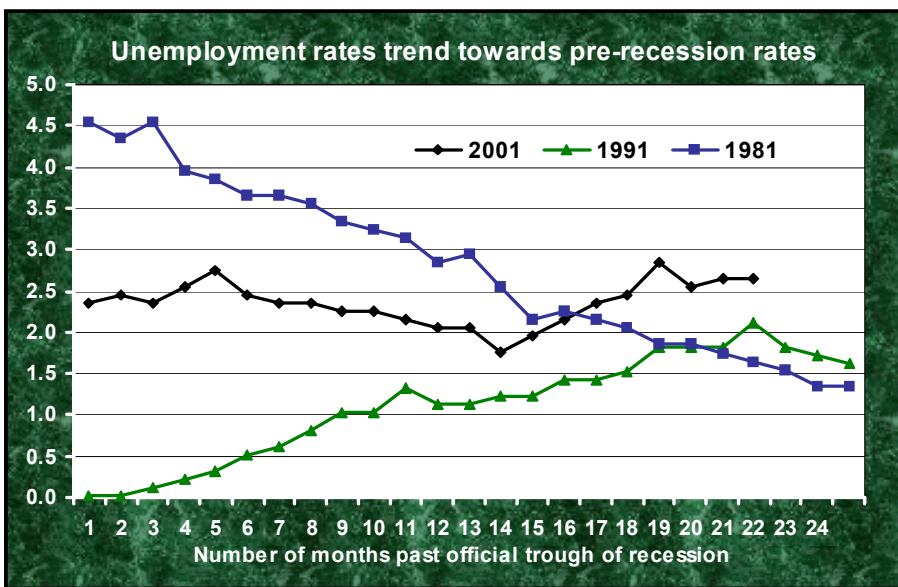
Based on this evidence, the 1990 recession had little impact on Washington’s labor market. The 2001 recession was less severe than that of 1981, but its recovery has been slow.

*Unemployment Rates*

The unemployment rate tends to lag the business cycle just as employment does. The unemployment rate can actually, though, send quite counter-intuitive signals during a recovery. As a recovery begins and firms start to hire, the unemployment rate can temporarily rise. This happens when workers, who have previously dropped out of the labor force, go to school, start their own business, or leave the state<sup>3</sup>. As the labor market picks up, many of these workers come back into the labor force and begin to look for work, thus pushing up the official unemployment rate.

Figure 20 charts the difference between the unemployment rate for the 25 months following each of the last three recessions, and the average unemployment rate for the three years before that recession began. This methodology assumes that the economy was running at some steady state before the recession, what might be called the “natural” rate of unemployment. So, the post-recession unemployment

**Figure 20**  
 Deviation of Unemployment Rate from Pre-recession Average  
 Washington, 25 Months Past the End of Each of the Last Three Recessions  
 Source: *Employment Security Department*



<sup>3</sup> Because they have become discouraged about job prospects, they enter school for retraining, started their own business, or leave the state.

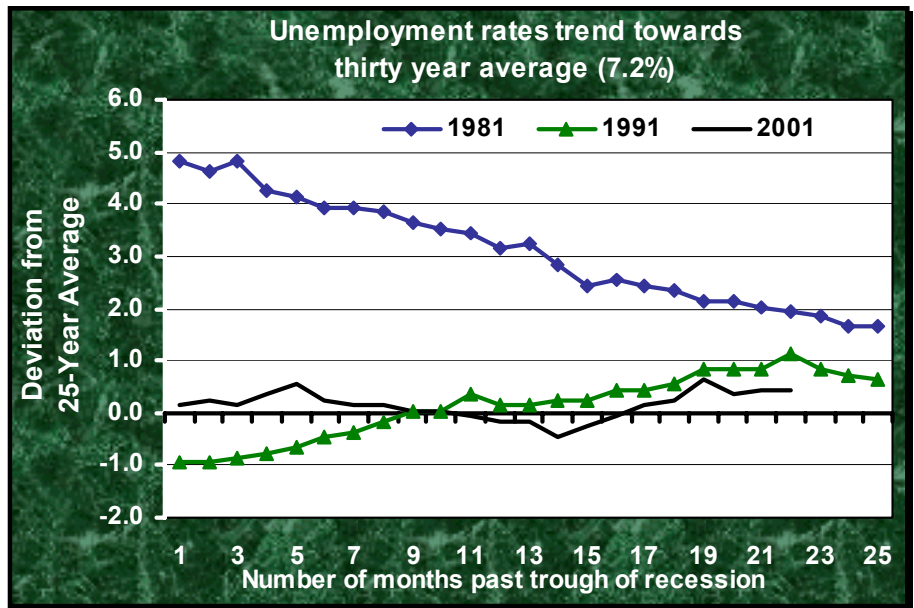
The post-recession unemployment rate behaves quite differently after each of the past three recessions. First, during the 1981 recovery, the unemployment rate starts out quite far above the pre-recession unemployment rate and then declined steadily back down towards that pre-recession rate. A small increase is even noted three months out from the end of the recession, illustrating the possible effects of discouraged workers re-entering the labor force.

For the 1991 recession, a different pattern emerges. Recall that this was not really a recession in Washington. The unemployment rate began the recovery at its pre-recession average. It then increased for twenty-three months and then started a decline. The unemployment rate continued its decline for several years beyond the end of the chart in *Figure 20*.

For the 2001 recession, the unemployment rate started out above the pre-recession rate, thus, indicating the real nature of this recession in Washington. It bumped along at about the same rate for the first year, some slight downward trend was evident, but then the rate has increased somewhat in this second year of recovery. Most current predictions are that the unemployment rate will, if anything, increase slightly in 2004<sup>4</sup>.

**Figure 21**

Deviation of Unemployment Rate from 25-Year Average  
Washington, 25 Months Past the End of Each of the Last Three Recessions  
Source: *Employment Security Department*



The return to a natural rate of unemployment, though, can be looked at a little differently. Suppose that the natural rate of unemployment does not change very much over time. Then, we would expect all the unemployment rates to be tending towards the same natural rate, rather than towards different rates. Washington's average unemployment rate from January 1978 to September 2003 was 7.2 percent. The difference between the current monthly unemployment rate in each recession and 7.2 percent is followed for 25 months past the end of each of the three recessions in *Figure 21*.

<sup>4</sup> See the Washington State Office of the Forecast Council for the most recent information on unemployment rate forecasts. <http://www.wa.gov/ofc/>



The three recessions now form a quite logical story. In the 1981 recovery, the unemployment rate started the recovery above the natural rate, 7.2 percent, and then declined towards that rate during the recovery.

In the 1991 recovery, the unemployment rate started out below the natural rate and increased towards it during the recovery. For the 2001 recession, the unemployment rate began the recovery at about this natural rate and has bumped around this rate all through the recovery.

The implications of the employment and unemployment picture of the 2001 recession are hard to reconcile. On the one hand, it seems that the economy has failed to recover in the sense of job creation. On the other hand, the unemployment rate may not be expected to decline much based on historical levels. Does this natural rate of unemployment, 7.2 percent, then imply no job creation in Washington's future? No, in fact over one million jobs have been created in Washington since 1978.

The 1991 recession provides a counter example. During the recovery, the unemployment rate was rising at the same time that over 100,000 jobs were created. The natural rate of unemployment is the one that is needed to provide time for job seekers to find the best job. In a rapidly growing economy, new firms emerge, old ones die and workers move constantly in and out of jobs. The unemployment rate might remain high as workers take the time to find the best possible job.

In the current period, the high unemployment rate cannot be explained by increased labor market activity, because there are actually fewer jobs. As the unemployment chapter will highlight later in this report, there are increasing numbers of long-term unemployed who cannot find jobs. Thus, there indeed exists a problem of unemployment, even if the unemployment rate is not unusually high relative to recent history.

### *Recession and Recovery by Industry*

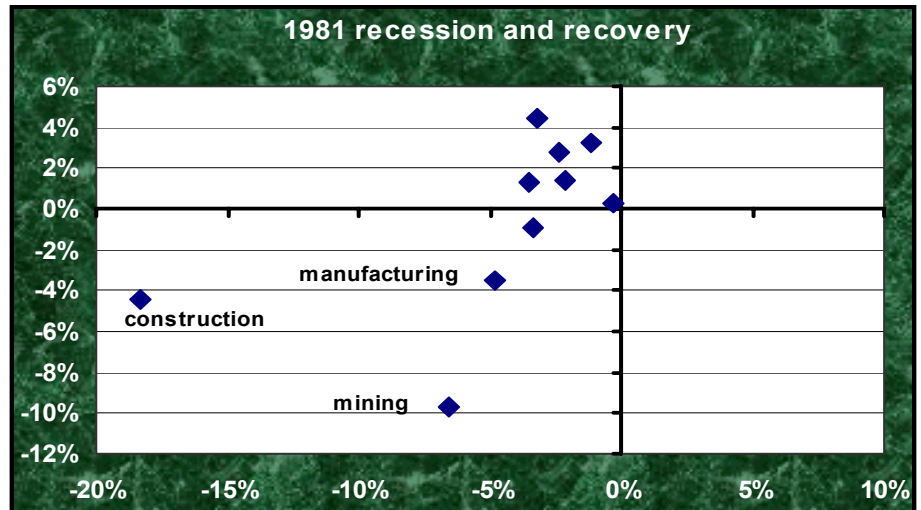
The next section examines how job creation differs among industries. In research coming out of the New York Federal Reserve Board, the case has been made that structurally declining industries in our economy have been mixed in with the cyclical downturn to cause a long-term loss of jobs.

The following three graphs compare the industry job loss and gain during recessions and the first year of recovery. The industry breakdown for this part of the report is the old Standard Industrial Classification (SIC) codes rather than the newer North American Industry Classification System (NAICS) codes used in the rest of the report. The SIC coding is the only source of data back to 1981 so that the 1981 recession could be compared to the others. It is also annual rather than monthly data, so capturing the periods of recession and recovery are general.

The 1981 recession shows across-the-board job losses of a deep recession. In the first year of the recovery there is job growth in agriculture, transportation, communications and utilities, retail trade, finance, insurance and real estate, services, and public administration.

**Figure 22**

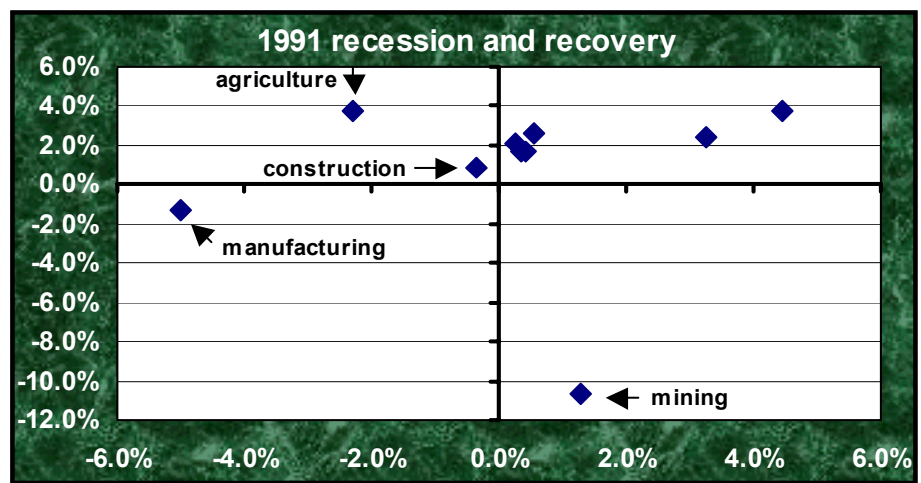
Percent Change in Employment During 1981 Recession and Recovery  
 Washington, Recession 1981 Q3 - 1982 Q4; Recovery 1983  
 Source: *Employment Security Department*



During the 1991 recession, there were only job losses in manufacturing, construction, and agriculture. Agriculture and mining tend to follow unique cycles independent of the national economy. The decline in mining and recovery in agriculture are probably not directly related to the recovery in the general economy. Manufacturing continued to lose jobs in the first year of recovery while construction showed a modest increase.

**Figure 23**

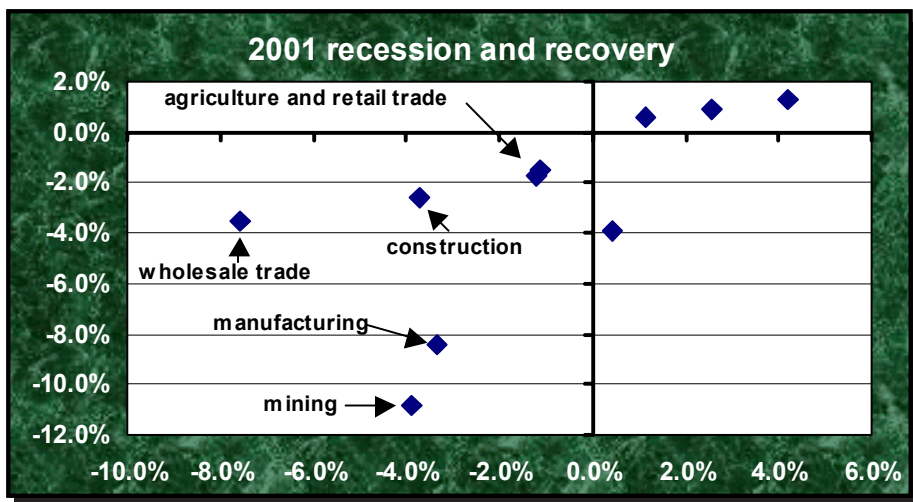
Percent Change in Employment During 1991 Recession and Recovery  
 Washington, Recession 1990 Q3 - 1991 Q1; Recovery the Following Year  
 Source: *Employment Security Department*



The 2001 recession hit Washington harder than the 1991 recession, but less severely than the 1981 recession. Besides agriculture and mining, which, again, operate on independent cycles, manufacturing saw a continued and much greater decline. Still, manufacturing also lost jobs in the previous two recessions and recoveries.

Transportation, communications, and utilities lost jobs during the 2001 recovery. This was, in part, due to the impact of September 11 on transportation. Wholesale trade was very weak during this recession, but the employment estimates in this sector have been affected by a number of classification changes. The most prominent one was the movement of tribal-based employment, including casinos, out of wholesale trade and into local government. Although retail trade and construction lost jobs during the first year of the recovery, more recent data for 2003 shows job growth in both of these sectors.

**Figure 24**  
 Percent Change in Employment During 2001 Recession and Recovery  
 Washington, Recession 2001 Q1 - 2001Q4; Recovery the Following Year  
 Source: *Employment Security Department*



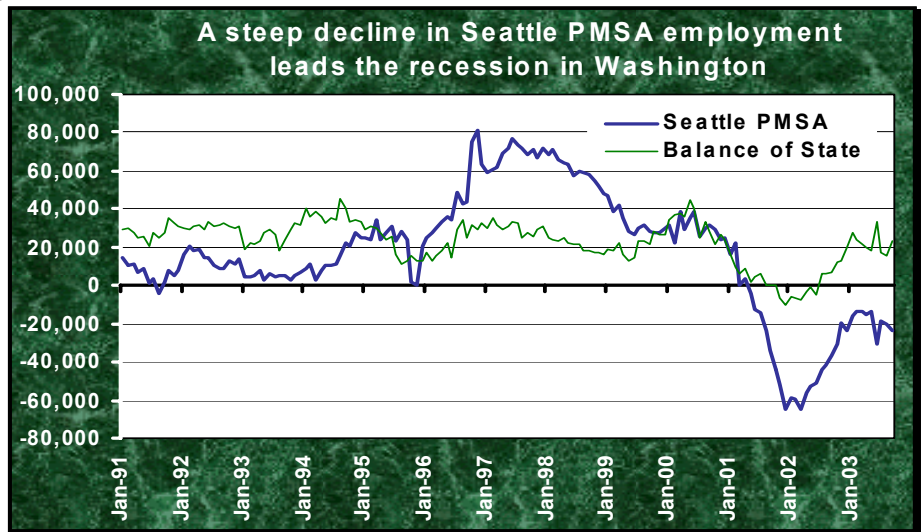
There is some evidence here of a structural decline in manufacturing. This decline, though, was also evident in the earlier recessions. The slow recoveries of retail and wholesale trade are already turning around and are unlikely to be long-term features of our economy. Transportation and communications are also likely to improve with the general economy.

## The Geographic Epicenter of the Recession

The Seattle Primary Metropolitan Statistical Area (PMSA), which includes King, Snohomish, and Island counties, saw the greatest build-up in employment in the late 1990s and the steepest declines since early 2001.

**Figure 25**

Employment Change, Seattle PMSA and Balance of State  
 January 1991 - September 2003  
 Source: Employment Security Department



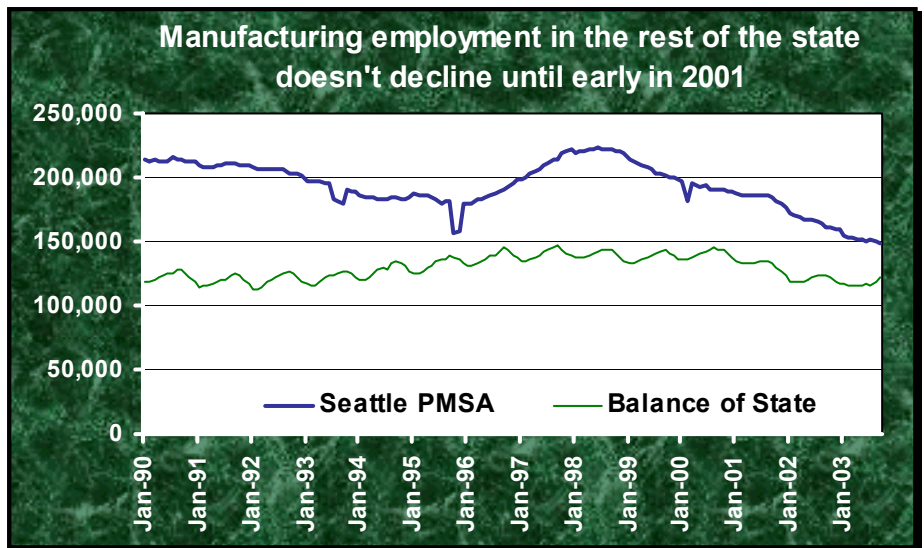
From September 1999 to September 2003, the Seattle PMSA lost 94,700 jobs while the rest of the state gained 31,000 jobs. The rest of the state did lose almost 10,000 jobs in 2001, but has gained over 36,000 jobs since that time (through September 2003).

The **Seattle PMSA**, which includes King, Snohomish, and Island counties, accounts for about half of state employment.

The job losses in the Seattle PMSA dominate those in the state and so their characteristics are consistent with those for the state presented earlier in this report. In this section, only some unique features of the Seattle area versus the rest of the state will be examined. The Seattle PMSA accounts for about half of state employment.

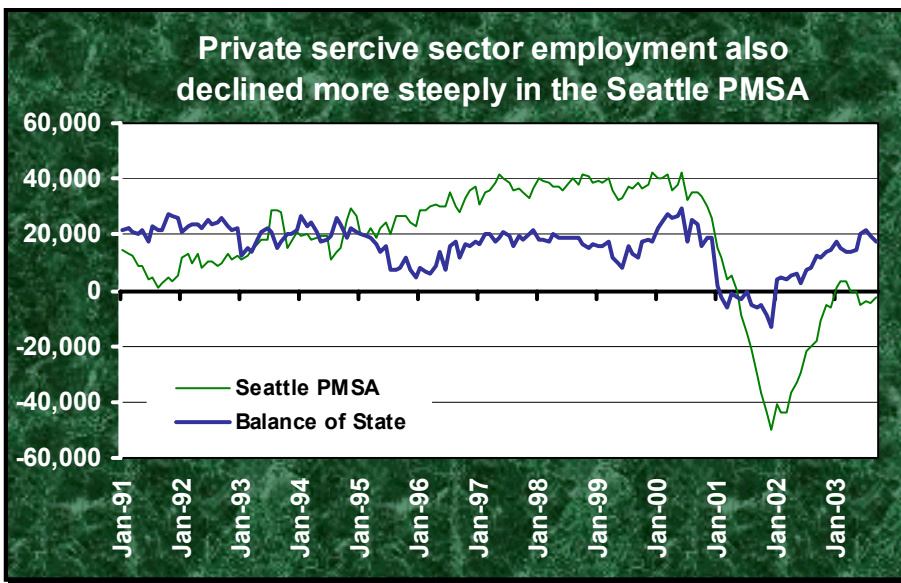
**Figure 26**

Manufacturing Employment, Seattle PMSA and Balance of State  
 January 1990 - September 2003  
 Source: Employment Security Department



Manufacturing employment in the Seattle PMSA shows the dominant influence of aerospace layoffs and hiring throughout the 1990s. The rest of the state displays the seasonal pattern of food processing<sup>5</sup>. Manufacturing employment started to decline in the Seattle PMSA in early 1998, but not in the rest of the state until early 2001. One of the dominant declining sectors outside the Seattle area was computer and electronic product manufacturing, which declined by 6,700 jobs (or by 45 percent) between January 2001 and September 2003. In the Seattle PMSA, this sector declined by only 5,300 jobs (or 23 percent).

**Figure 27**  
Private Sector Service Employment Change,  
Seattle PMSA and Balance of State  
January 1991 - September 2003  
Source: Employment Security Department



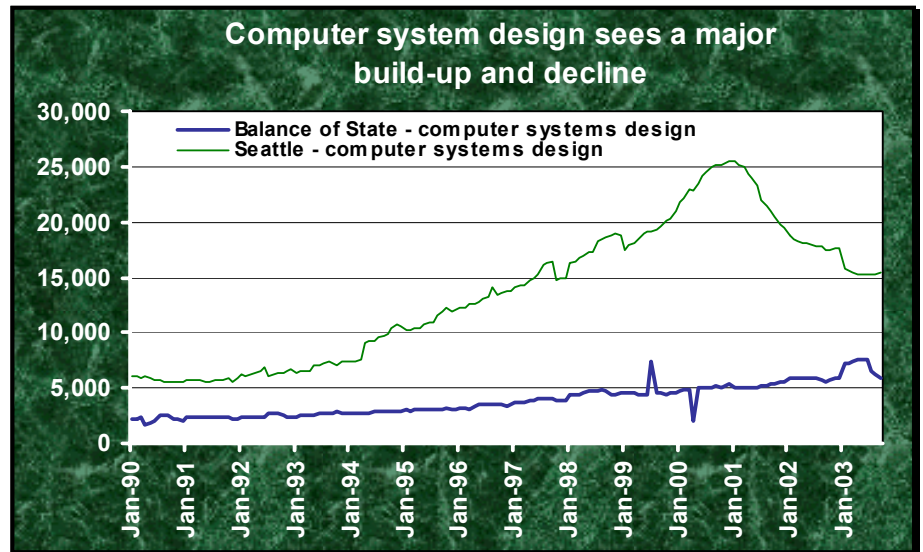
Private services declined much more sharply in the Seattle PMSA than in the rest of the state. Private services also increased much more strongly from the mid-1990s in the Seattle area. Within private services, some industries saw major growth and decline concentrated in the Seattle PMSA such as computer system design and employment services, or temporary help agencies.

<sup>5</sup> Food processing makes up about a quarter of manufacturing employment in the rest of the state.

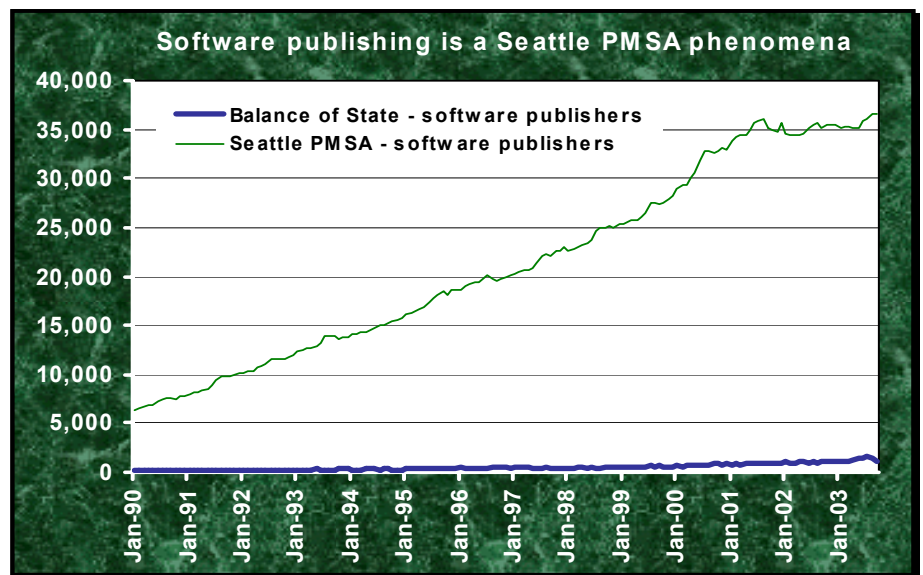
**Figure 28**

Computer System Design Employment

Seattle PMSA and Balance of State, January 1990 - September 2003

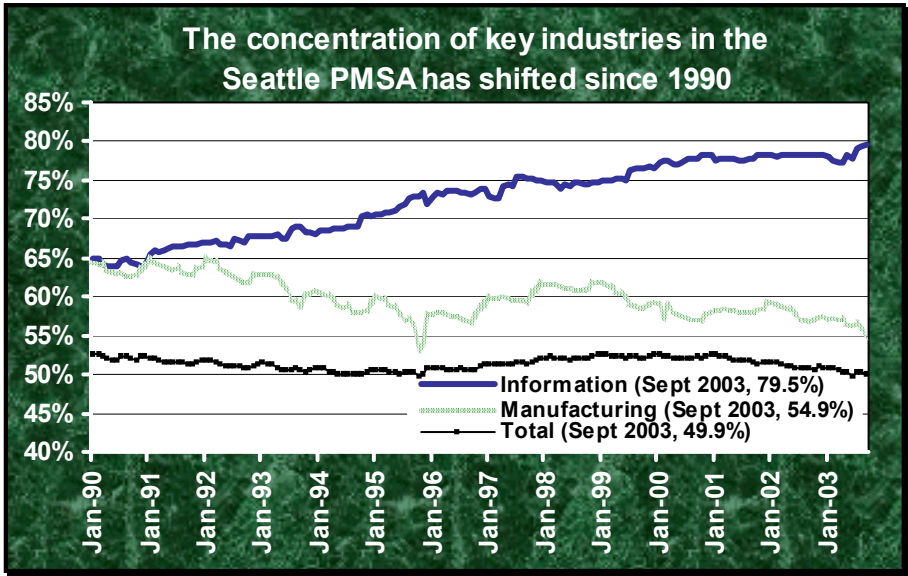
Source: *Employment Security Department*

Other industries, such as software publishing, have been almost wholly concentrated in the Seattle area and have experienced little decline during the recession. Wireless telecommunications employment has also been very concentrated in the Seattle area.

**Figure 29**Software Publishing Employment, Seattle PMSA and Balance of State  
January 1990 - September 2003Source: *Employment Security Department*

Overall, both job growth in the 1990s and job decline since 2000 have been concentrated in the Seattle area. In particular the very dynamic and, for this recession, cyclical industries in high tech and aerospace are centered in the Seattle area.

**Figure 30**  
Key Industry Employment Concentration (Share of State Totals) Seattle PMSA  
January 1990 - September 2003  
Source: Employment Security Department



While the information industry (including software publishing, Internet providers, and telecommunications) has become more concentrated in the Seattle PMSA, other industries like manufacturing have become less so. Seattle's share of total employment has declined somewhat from 1990. However, in 1999, Seattle's employment share had exceeded that of 1990. The decline is, thus, probably associated with the relatively greater cyclical decline in the Seattle area and will likely not fall further.

# Chapter 2 - Labor Market and Economic Developments

**Gross Domestic Product or GDP** is a measure of the value of all the goods and services produced in the economy. GDP is not only a useful measure of aggregate economic activity; it is also directly linked to some other important concepts:

GDP = **national income**  
(because everything that is produced is paid for.)

GDP = **aggregate demand**  
(because everything that is produced ends up being bought by someone. Even goods and services that have not been sold are counted as an increase in inventory or business investment.)

## National Outlook

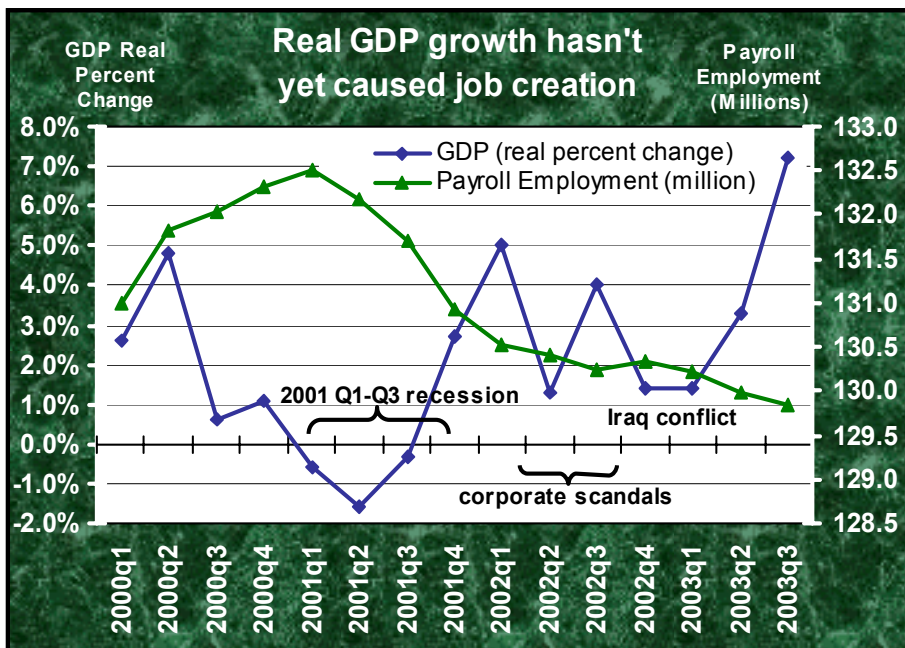
### Economic Growth

As of November 2003, the national economy had yet to achieve a stable and strong recovery.

**Figure 31**

Real Gross Domestic Product and Employment  
United States, Quarter 1, 2000 - Quarter 3, 2003

Source: U.S. Bureau of Economic Analysis and  
U.S. Bureau of Labor Statistics



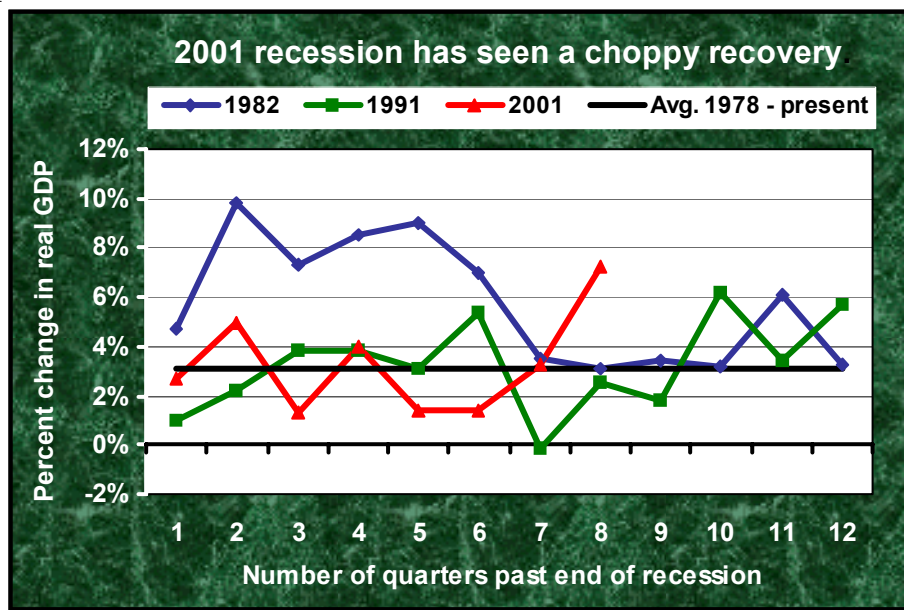
Gross Domestic Product (GDP) growth has been sporadic since the end of the recession in November 2001. Each strong quarter of GDP growth seems to have inevitably been followed by a quarter or two of slow growth. The dips in GDP growth are easy to line up with adverse shocks. First, the terrorist attacks, then, corporate scandals, and, finally, the conflict in Iraq. Corporate scandals are a strong influence on business risk taking behavior. The stock market had already been rocked by the tech bust and was then beset by fears that corporate balance sheets were untrustworthy. To shore up investor confidence and lagging stock values, firms put an emphasis on improving profits. This led to a round of cost cutting made possible by continued large gains in productivity. The lack of business confidence was compounded by the on-again, off-again nature of GDP growth, which never created a sustained increase in aggregate demand that would be needed to entice firms to hire more workers.



**Figure 32**

Change in Real Gross Domestic Product Post-Recession  
 United States, 1982-2003

Source: U.S. Bureau of Economic Analysis



The two previous recessions saw very different recoveries of GDP growth. The recovery after the 1981 recession was brought on by an enormous expansion in GDP, which was missing from the first years of recovery after the 1991 and 2001 recessions. Only in the third quarter of 2003 is GDP growth anywhere near the levels observed in 1982. The recovery from the 1991 recession was easily as bad, in terms of GDP growth, as the current recovery, with maybe less justification. Negative growth even re-appeared during the first quarter of 1993.

GDP must grow faster than the rate of increase in productivity for the economy to create jobs. On average, since 1978, real GDP has grown at a quarterly rate of 3.1 percent. Although this rate is lower than the average rate of productivity growth recently, it has been used as a proxy for the long run, sustainable rate at which the U.S. economy is able to increase its capacity. A growth rate in real GDP at or above 3.0 percent would then tend to be job creating. If fourth quarter growth is again above 3.0 percent, the economy will have had three consecutive quarters of solid growth. This would finally lay the foundations for job creation. Net job creation would close the virtuous circle of higher sales, higher profits, more purchasing, business expansion, and hiring.

The strength of the current recovery has been questioned principally because of a weak labor market. The weakness in the labor market could trigger a decline in consumer spending (which accounts for over 70 percent of aggregate demand). Such a possibility is causing uneasiness among businesses, leading to a hesitancy to invest in new capital equipment or to hire new employees. The most recent data, however, finally indicates seasonally adjusted job creation at the national level<sup>1</sup>. Along with the strong output growth for the third quarter, the virtuous cycle may finally be emerging.

<sup>1</sup> Productivity growth averaged 4.9 percent over the past year (as of the third quarter of 2003), compared to an average of 3.2 percent since 1996. Global Insights, November 2003.



Job creation in the economy could bring into alignment all the factors needed for renewed, stable growth and a real expansion. If the momentum in the economy is sufficiently high at the end of the fourth quarter, then the economy could enter 2004 with a real burst of steam.

## Factors Promoting Growth

**Accommodative fiscal policy.** Tax cuts can cause an increase in private sector spending or investment, while the budget deficit indicate that the Federal government is spending more than it is getting in tax revenue. All else equal, this stimulates the economy in the short-run.

**The Federal Reserve Board seems content to leave interest rates low<sup>2</sup>.** Although the Federal Reserve Board notes that the preliminary growth rate of 7.2 percent in the third quarter of 2003 is unsustainable and expects that the job market is going to improve, they still see few signs of pricing power among firms and expect that inflation will remain low. The Federal Open Market Committee did say that it would watch for signs of inflation vigilantly. Still, most forecasts have inflation lower in 2004 than in 2003.

**Unemployment rate reasonable in historic terms.** The national unemployment rate averaged 6.0 percent in 2003 compared to 6.3 percent on average since 1978. Even with discouraged workers and some long-term unemployed, the relatively low number of unemployed relative to those employed is a positive factor for the economy. The unemployed don't spend as much, they don't contribute to GDP, and they are more likely to experience problems with debt.

**Personal income growth continues.** Personal income grew at an average annualized rate of 3.5 percent as of October 2003. Continued income growth helps maintain consumer spending even as the unemployment rate remains high.

**Corporate profits are up.** Over the past year, corporate profits increased by \$270 billion<sup>3</sup>. Healthy corporate profits reassure Wall Street. Fewer fears about investors on the part of firms should eventually orient them towards expansion and revenue generation and away from cost cutting.

**Stock market increasing in value.** An increasing stock market has a positive affect on consumer and business confidence, increases consumer, business, and investor wealth, thus leading to increased spending, and provides financing for business expansion.

**Inventories are lean.** When firms cannot meet current demand with existing inventories, they will have to order more goods. Increasing factory output will slow the job losses in the manufacturing sector allowing the service sector to produce net job gains.

**Productivity growth strong<sup>4</sup>.** Productivity growth increases the competitiveness of goods produced in the United States. It will also lead to rising incomes over time as a given worker produces more in the same amount of time. Growing productivity is also a sign of a dynamic and powerful economy that should lead to international competitiveness, more interesting, high skilled jobs, and new conveniences for consumers.

**U.S. dollar has weakened a bit on world markets<sup>5</sup>.** A weaker U.S. dollar makes foreign goods more expensive to domestic buyers and makes U.S. goods cheaper to foreign buyers. All else equal, the falling dollar should increase U.S. exports and decrease imports, leading to an improved trade balance. A falling dollar, though, has the counter balancing effect of causing investors to reduce their holdings of U.S. financial assets. In an extreme case, a rapidly falling dollar could destabilize U.S. financial markets and eventually cause the domestic interest rate to rise.

<sup>2</sup> In a statement on November 6, 2003 to the Securities Industry Association, Greenspan said, "...the Federal Open Market Committee has judged that the probability, though minor, of an unwelcome fall in inflation exceeds that of a rise in inflation from its already low level. In these circumstances, monetary policy is able to be more patient. That said, no central bank can ever afford to be less than vigilant about the prospects of inflation."

<sup>3</sup> Before-tax corporate profits with Inventory Valuation Adjustment (IVA) & capital consumption adjustment, billions of dollars, annual rate, Bureau of Economic Analysis concept—2002 third quarter to 2003 third quarter. Global Insights, November 2003.

<sup>4</sup> Productivity growth averaged 4.9 percent over the past year (as of the third quarter of 2003), compared to an average of 3.2 percent since 1996. Global Insights, November 2003.

<sup>5</sup> In the third quarter of 2003, the U.S. dollar trade weighted exchange rate against developing countries is down 2.1 percent since its local high during the first quarter of 2003. The U.S. trade weighted exchange rate against developed countries is down 16.2 percent since the first quarter of 2002. Global Insights, November 2003.

## Factors of Concern

### Job losses continue<sup>6</sup>.

Although GDP growth has been positive and even at times very strong since the end of the recession, job losses continue. Until September 2003, the economy continued to lose jobs. Job loss creates uncertainty in businesses and lowers consumer confidence. Jobs will have to be created for a lasting economic recovery.

### Capacity utilization is low.

This recession has been business investment led. As long as businesses have excess capacity, they will not need to invest in new facilities. A recovery in business investment is needed to stimulate the manufacturing sector and slow or turn around the job losses there.

### Business climate still risk averse.

Businesses remain risk averse because of the weak labor market, little pricing power, and the financial upheavals of the corporate scandals. Business investment will not revive until businesses are convinced of the strength of the economic recovery. This amounts to the proverbial chicken and egg problem.

### Debt levels are high.

Consumer debt has the potential to dampen consumer spending. If the labor market worsens, consumers could begin to default on debt, sending shock waves through real estate and financial markets.

### State and local governments have little money to spend.

Most states are far more dependent upon state and local revenues than upon federal allocations.

### The rest of the world lagging the U.S.

The U.S. can expect little help from the rest of the world in pulling out of the recession. The U.S. trade deficit is likely to worsen as the economy begins to grow more strongly. Europe, Japan, and Latin America seem particularly weak, while the rest of Asia is doing better.



<sup>6</sup> Over 400,000 jobs were lost between the third quarter 2002 and the third quarter 2003. Global Insights, November 2003.

## Global Conditions in Brief

### Europe – a drag on global growth

- Double dip recession in Germany
- Fiscal and monetary policies remain tight, a pact for stability and growth
- The Euro has appreciated
- Unemployment rates remain high
- Little progress on structural reforms

### 2003 GDP Growth (Estimates)

- **France** < 0.5 percent
- **Germany** 0.0 percent
- **Italy** < 0.5 percent
- **Spain** > 2.0 percent
- **UK** > 1.5 percent

### Japan – slow growth of 1990s may continue

- Debt overhang and deflation persist
- Domestic demand weak
- Banking problems remain
- Macro policy constrained
- Reforms are very slow

**Japan's GDP growth estimated at over 2.0 percent in 2003, but expected to be lower in 2004.**

### Asia – recovery on the horizon

- SARS risk diminished
- Exports booming
- High-tech growth
- Macro policies accommodating
- Chinese deflation ending
- Excess capacity diminishing

**Danger of liquidity explosion and 1997 financial collapse**

**China could be over-heating**

### 2003 GDP Growth (Estimates)

- China** >6.0 percent
- S. Korea** >2.0 percent
- India** >5.0 percent
- Australia** >2.0 percent
- Taiwan** >2.5 percent

### Latin America's recovery is uncertain.

There is positive growth in **Argentina**, but only after two years of decline. Argentina is currently in the process of negotiating a restructuring of its foreign debt. Brazil just managed above zero growth and Venezuela declined by about nine percent. Mexico grew at a little over one percent.

**Other emerging economies present unsteady outlook.** While some countries in **Eastern Europe** are helped by their anticipated accession to the European Union, falling trade barriers and privatization, the former Soviet Republics, including Russia, are hurt by corruption, scandals, and weak financial systems. The **Middle East** is inhibited by political strife and **African** growth is hampered by the AIDS epidemic, political instability, and weak demand for metals and agricultural exports.

### China—Friend or Foe?

China has been blamed for many economic ills. Among the most notable are as a destination for U.S. manufacturing jobs, as a destination for firms outsourcing high-tech jobs from the U.S. (although India is seen as the main culprit here), and for flooding the U.S. market with cheap goods.

#### *What Do We Know for Sure?*

China's trade surplus with the U.S. exceeded \$100 billion in 2002. Chinese goods are now the largest component of the U.S. trade deficit. Still, many goods we now import from China, such as shoes and toys, used to be imported from other countries. Meanwhile, China itself is running trade deficits with such countries as Taiwan and Korea. On balance, China's overall trade surplus with all countries has shrunk to a small surplus.

China has pegged its currency, the Renminbi, to the U.S. dollar over the past few years. So, the dollar's over valuation was not caused by an increase in its value against the Renminbi (as it was against the Euro). The gain in the dollar's value against the Renminbi was, in part, caused by falling prices in China in recent years, which have been passed on to U.S. consumers. This is part of the explanation for low inflation, or lack of pricing power, in the U.S. market.

It is generally estimated that the dollar is overvalued against the Renminbi by up to 40 percent using various measures of purchasing power parity. Still, with China's manufacturing wage about 65 cents an hour compared to 12 dollars in the U.S., even a 40 percent re-valuation would only increase the manufacturing wage in China to about one dollar.

China maintains a fixed exchange rate with a trade surplus by buying up U.S. assets, in the end the balance of payments must balance. By June 2003, China held \$122 billion of U.S. Treasury securities. China is now the third largest foreign holder of U.S. securities. This helps to finance the burgeoning U.S. fiscal deficit and helps to keep our interest rates low.

China has stringent capital controls and a weak banking system. China's banks not only hold a lot of bad debt (of inefficient state run companies), but also are making many new loans of questionable value. Chinese bankers are not yet experienced in assessing credit risk. Currently, the Chinese are impeded from purchasing foreign assets. Letting the Renminbi float, along with a loosening of capital controls, could cause a balance of payments crisis in China as investors flee the unstable banking system. This would, in fact, cause the value of the Renminbi to fall.

China has an abundance of labor and a desperate political need to create domestic jobs. As the old state run factories are closed down, China needs to create millions of jobs to absorb the rural poor. This is a high priority for the Chinese government, which is unlikely to do anything that would jeopardize this objective, such as re-valuing.

China is not Japan. While the Japanese economy is relatively closed to foreign investment, China is fairly open. In fact, ten of China's 40 top exporting companies are American owned. In 2002, 26 percent of American foreign direct investment went to Asia. Still, 55 percent went to Europe where labor costs are higher than in the United States. Foreign direct investment usually follows consumer markets rather than cheap labor.

The Chinese market will be very important to key U.S. producers in the future. For instance, China is seen as a major potential buyer of aircraft from the U.S.

### *A Complicated Relationship*

Rather than a friend or a foe, China is more like a new, loud and very productive employee hired at your firm. Here to stay and dangerous to ignore. Chinese export power is not just a matter of temporary undervaluation. In 2002 China, Hong Kong, and Macou accounted for 8.2 percent of world exports, just behind the U.S. with 10.7 percent. China is beginning to move into the export of more sophisticated products and is becoming the world's industrial center. The U.S. and China do a great deal of trade with each other and the relationship between the two countries is becoming ever more intertwined and complicated.

## Is Outsourcing the Next Wave of Globalization?

Outsourcing is the term used to refer to the movement of some aspects of a business's operations to an outside firm. It has recently been used to refer to the movement of those functions overseas. Much foreign outsourcing reported in the news media is targeted at information technology jobs where U.S. labor is much more expensive than that in some foreign countries.

**Outsourcing** is the term used to refer to the movement of some aspects of a business's operations to an outside firm.

### **Figure 33**

Estimated and Projected Outsourcing of U.S. Jobs  
United States, 2000 - 2015

Source: U.S. Department of Labor and Forrester Research, Inc.

<b>Number of U.S. jobs moving offshore by job category</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>
Total	102,674	587,592	1,591,101	3,320,213
Business	10,787	61,252	161,722	348,028
Computer	27,171	108,991	276,954	472,632

### *Is Outsourcing a Significant Phenomenon?*

As can be seen in the numbers in *Figure 33*, many jobs could be created by U.S. companies in foreign countries for selected business functions. *Global Insight*, for example, predicts that the U.S. economy will create a total of 3.2 million jobs in 2005. If the 3.2 million jobs included those that are outsourced, about 19 percent of newly created jobs would be sent offshore.

### *There Are Several Fallacies in Such a Conclusion*

1. The projections of future outsourced jobs may be too high. Over the past couple of years, new possibilities in outsourcing were just being explored. Projecting those trends into the future assumes we have reached stable growth in outsourcing. This is definitely untrue. Firms will find that some jobs outsource well and that some do not. As firms dip into more and more foreign employees in different countries they will potentially encounter more language barriers, time barriers, cultural barriers, bureaucratic barriers, and political instability. By the end of the projection period, 2015, firms will have gained a lot of experience and relationships will have evolved.
2. The total job projections are based on job projections in the United States. The assumption, then, is that suddenly the historic trend of domestic employment creation will be reduced one for one with outsourced jobs. This is highly unlikely. Outsourcing has gone on in the past and those jobs have not been counted as part of domestic employment.
3. The argument assumes that businesses will not become more efficient through outsourcing. Businesses, though, are going to optimally allocate work, so efficiency should increase. Some savings due to lower labor costs of outsourced work should be funneled back into expansion of the original firm.

A recent advertisement for outsourcing<sup>7</sup> starts out with the injunction, “Discover how smart companies are using outsourcing for competitive advantage.” The ad goes on to suggest that the services appropriate for outsourcing are, “Anything that’s not core to your business or related to your strategic direction. In general, functions that affect revenue generation, such as product development and direct customer contact, are core.” The conception here, then, is much more complex than just moving operations overseas. In fact, it pre-supposes a strategic decision based on the most efficient allocation of labor.

The advertisement is almost exclusively for outsourcing to U.S. based firms. It is only in the area of information technology that significant savings are projected from outsourcing to foreign locations. The advertisement goes on to predict that more than one third of all organizations are expected to outsource some part of their information technology function to offshore resources within the next year.

Outsourcing is, thus, an important trend to watch both in the outsourcing to domestic and to foreign locations. Part of the decline in manufacturing employment over the past decade<sup>8</sup>, for example, may have been caused by outsourcing of specific functions. This is undoubtedly an area to monitor closely over the next 10 to 15 years as the phenomena takes full advantage of new information technology and communications capacities.

<sup>7</sup> Business Week, October 27th, 2003: Pages 76-80.

<sup>8</sup> Remarks by Federal Reserve Board Governor, Ben Bernanke at the Global Economic and Investment Outlook Conference, Carnegie Mellon University, Pittsburgh, Pennsylvania. November 6, 2003.

## The Productivity Paradox

Productivity is measured as GDP divided by total employment. There are other measures that can be used such as GDP divided by total hours, but hours are hard to estimate accurately, so GDP per worker is used here.

Productivity is measured as Gross Domestic Product (GDP) divided by total employment. There are other measures that can be used such as GDP divided by total hours, but hours are hard to estimate accurately, so GDP per worker is used here.

High productivity implies that more output can be produced with a given workforce. Since GDP must equal aggregate demand, increasing aggregate demand can then be met with the existing or even a smaller workforce. Is high productivity growth causing unemployment? No, high productivity growth leads to increasing income and profits, albeit just for those who are employed, and higher aggregate demand. Low productivity growth wouldn't necessarily create jobs. It would cause less to be produced (and earned, the national income identity) and, so, less purchased.

In other words, aggregate demand is the problem. Low aggregate demand means that sufficient output can be produced with fewer workers.

Some of the causes for high productivity growth are probably temporary. Businesses may be working existing workers and facilities at unsustainable levels, because they are uncertain about the sustainability of the recovery. Businesses also may have accumulated inefficiencies during the boom years of the late 1990s, which are still being worked out. There are also, undoubtedly, some long-term effects of the adaptation of new technology to different aspects of business. This effect is likely to last for a considerable time into the future.

The higher profits and low inflation caused by the rise in productivity are likely to contribute to an increase in business confidence, which is crucial to stimulating a hiring expansion.



# Chapter 3 - Cyclical, Structural, and Seasonal Employment

## Cyclical Versus Structural Employment Change

Industries experience structural as well as cyclical downturns. Structural changes are associated with permanent changes in demand or supply that lead to an adaptation in an industry. For example, changes in trade barriers tend to have permanent affects on the market, as do changes in technology and management practices. The rise of China as a manufacturing powerhouse will likely change the U.S. industrial structure. Widespread use of information technology has led to the growth of new types of businesses. And just-in-time management practices have created more use of temporary help firms.

Cyclical employment changes, on the other hand, are usually associated with the business cycle, or more specifically with fluctuations in aggregate demand. During a cyclical downturn, businesses and consumers tend to spend less causing a ripple affect through the economy. Industries that provide business and consumer discretionary goods are the most cyclical. These include retail sales, especially for luxury or high-end goods, manufacturing of capital goods and equipment, and leisure and recreation. Of course, the specific nature of each economic downturn determines which industries will suffer the greatest effects. There are usually a few unique industries that get the downturn started. For example, the oil price hikes in the mid-1970s hit energy dependent industries. The high interest rates in the early 1980s hit industries dependent on borrowed capital. The 2001 recession began as a reaction to an overheated, high tech stock market and then was amplified by terrorist attacks and a downturn in transportation.

In this section the structural elements of employment change will be isolated from the cyclical impact. For the purposes of this analysis, a growing industry was identified as one that increased as a share of total employment over the 1990s, while a declining industry is one that saw its employment share decline. Structural employment change is that change which is consistent with the trend change in employment, while cyclical change is employment variation around that trend.

The general implication of this study is that structurally changing industries (either growing or declining) are more likely to continue to grow or decline in the recovery, as long as the conditions causing their structural change remain. An industry that has experienced primarily a cyclical decline or expansion may resume its long-term growth trend once the recovery is firmly under way.

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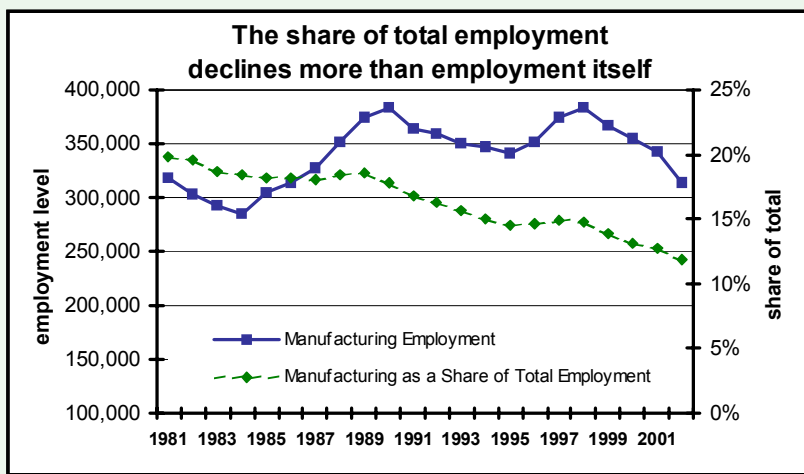
For the purposes of this analysis, **a growing industry** was identified as one that increased as a share of total employment over the 1990s, while **a declining industry** is one that saw its employment share decline. **Structural employment change** is that change which is consistent with the trend change in employment, while **cyclical change** is employment variation around that trend.

**Methodology: Cyclical-Structural Industry Analysis**

The analysis contained in this chapter uses the period from 1990 to 2002 to identify what part of an industry's employment change was caused by long-term structural forces and which was caused by cyclical downturns in the economy. Source data were drawn from the Covered Employment and Wage series, which includes establishments covered by Washington's unemployment insurance tax law (about 90 percent of the economy). Industries were categorized according to the North American Industrial Classification System, known commonly as NAICS.

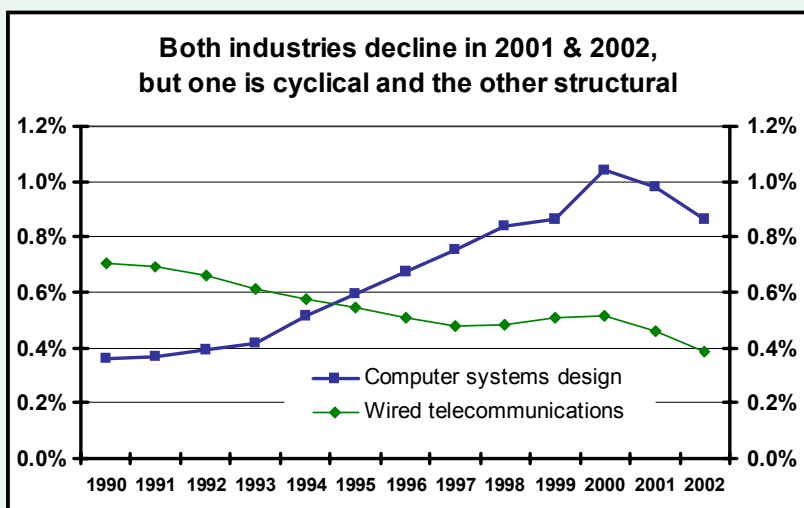
This study examines given industries' changing shares of total employment to identify expanding and declining industries. First, most industries grew in terms of total employment over this period. Some industries, however, grew more slowly than total employment, which expanded by 24 percent from 1990 to 2002, thereby becoming less important for the overall economy. For example, manufacturing employment fluctuated throughout the 1990s with no clear trend, but manufacturing's share of total employment declined.

**Figure 34**  
 Manufacturing Employment  
 Washington, 1981 - 2002  
 Source: Employment Security Department



Total variation in employment share for a given industry is divided into that which can be explained by a linear trend (structural) and that which can be explained by variation around a linear trend (cyclical). Consider, for example, the computer system design and wired telecommunications industries, illustrated below. Both industries have experienced declines in employment share since the 2001 recession began. One, however, seems to have much better prospects for recovery than the other.

**Figure 35**  
 Computer System and Wired  
 Telecommunication Employment  
 as Share of Total Employment  
 Washington, 1990 - 2002  
 Source: Employment Security Department



By examining the behavior of employment share before the recession began, two different longer-term patterns are identified. While the computer systems design industry grew as a share of total employment throughout the 1990s, the wired telecommunications industry declined fairly steadily. A general economic recovery should, in itself, bring about a recovery in the computer systems design industry. The wired telecommunications industry, on the other hand, would be expected to continue working out its structural problems. This may lead the industry to continue a slow decline or to eventually level out.

## Industry-by-Industry Analysis

Figure 36 shows the trend change in employment between 1990 and 2002 and the percent of variation that is due to structural rather than cyclical change. Industries with a trend change of 100 percent have not changed as a share of total employment. Those below 100 percent have declined in share while those above have increased. An employment change above 50 percent indicates an industry dominated by structural factors, while a change below 50 percent indicates a very cyclically oriented industry.

An employment change above 50 percent indicates an industry dominated by **structural** factors, while a change below 50 percent indicates a very **cyclically oriented** industry.

**Figure 36**  
Trend and Structural Variation Employment Change  
Washington, 1990 - 2002  
Source: Employment Security Department

Industry	Trend Change in Employment 1990-2002	Structural/Total Variation
Utilities	55%	78%
Federal Government (except post offices)	71%	72%
Manufacturing	73%	75%
Mining	77%	59%
Agriculture, forestry, fishing and hunting	78%	71%
Management of companies and enterprises	88%	36%
State Government (other)	88%	66%
Wholesale trade	92%	76%
Transportation and warehousing	94%	73%
Accommodation and food services	98%	31%
Real estate and rental and leasing	98%	24%
Retail trade	99%	24%
Finance and insurance	101%	8%
Construction	108%	43%
Health care and social assistance	108%	49%
Educational services	108%	59%
Local Government (other)	109%	37%
Professional and technical services	117%	68%
Arts, entertainment, and recreation	123%	65%
Administrative and waste services	134%	67%
Other services, except public administration	148%	90%
Information	165%	80%

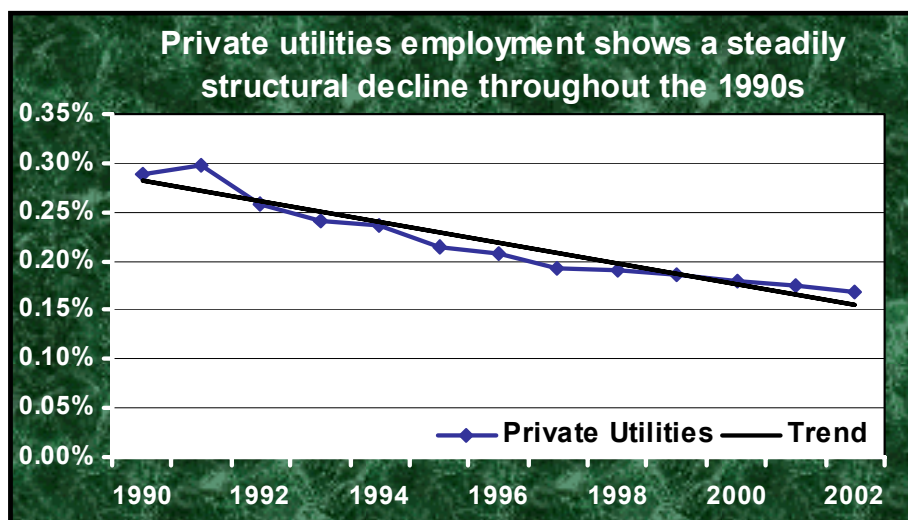
### *Utilities*

Starting in 1992, private sector utilities commenced declining as a share of total employment. There was some leveling off in this trend starting in 1997.

**Figure 37**

Private Utilities Share of Total Employment and Trend  
Washington, 1990 - 2002

Source: *Employment Security Department*



The variation in **private sector utilities** employment share follows the trend line very closely. Based on this analysis, private utilities would not be expected to recover in employment share with a general recovery of the labor market.

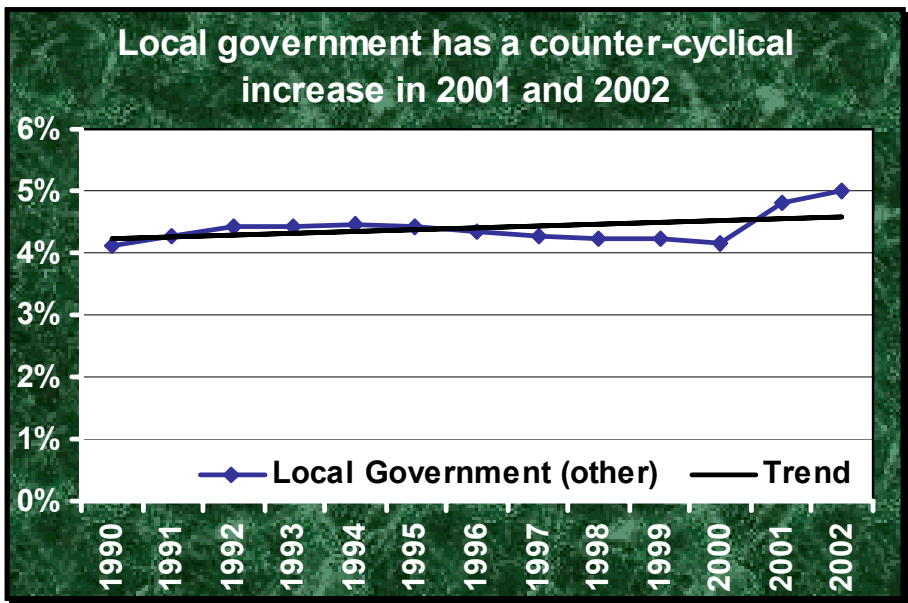
**Public utilities** have also declined as a share of total employment over this period, but fared better than private utilities. In 1990 public sector employment in utilities accounted for about two-thirds of total employment in utilities. By 2002 that share had risen to about three quarters. So, while there might continue to be a slow decline in utilities' share of total employment, there may also be an accompanying shift of employment from the private sector to the public sector.

In this analysis, **government employment** does not include public hospitals or public schools, which are tracked under healthcare and educational services, respectively.

### *Government*

In this analysis, government employment does not include public hospitals, public schools, postal services, or ship yards—which are tracked under healthcare, educational services, postal services, and ship yards respectively. About 60 percent of the balance of government employment is local government.

**Figure 38**  
Local Government Share of Total Employment and Trend  
Washington, 1990 - 2002  
Source: Employment Security Department



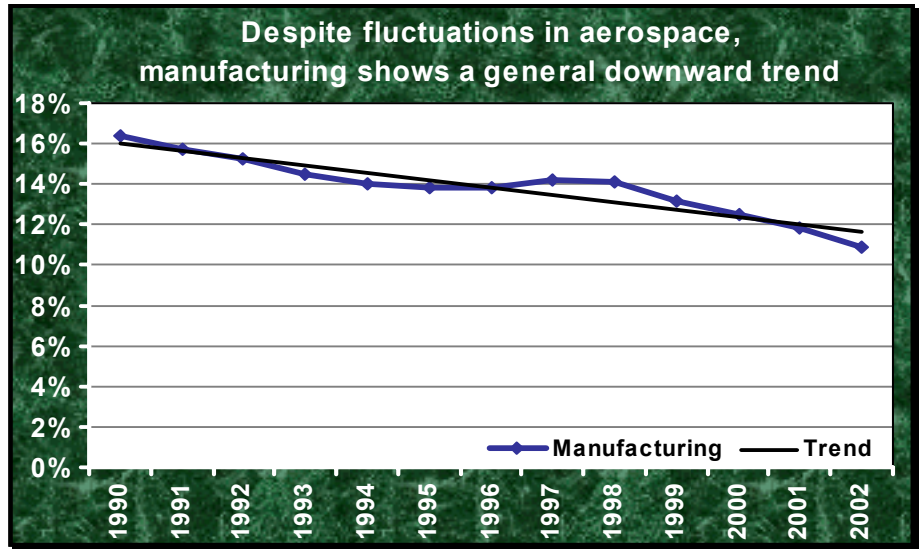
Local government employment grew by 15 percent between 2000 and 2001. This, combined with a four percent decline in total employment over the same time period, caused the dramatic increase in local government as a share of total employment. This change was due to a reclassification of employment by Indian tribes from various private industries, such as trade and gambling, to local government. Only 37 percent of the variation in local government employment since 1990 is estimated to be due to structural change. The reclassification of gambling services, however, was significant enough, that it may cause a permanent change in the behavior of local government employment.

State government and federal government both have experienced some structural decline over the 1990s. Based on this analysis, the employment share of these sectors would not be expected to increase with the economic recovery.

### *Manufacturing*

Manufacturing declined from almost 17 percent of Washington's employment base in 1990 to just under 11 percent in 2002. About three-quarters of the decline is estimated to be structural, which means that even though there have been large temporary swings in some manufacturing sectors, the structural change accounts for most of the employment variation.

**Figure 39**  
 Manufacturing Share of Total Employment and Trend  
 Washington, 1990 - 2002  
 Source: Employment Security Department



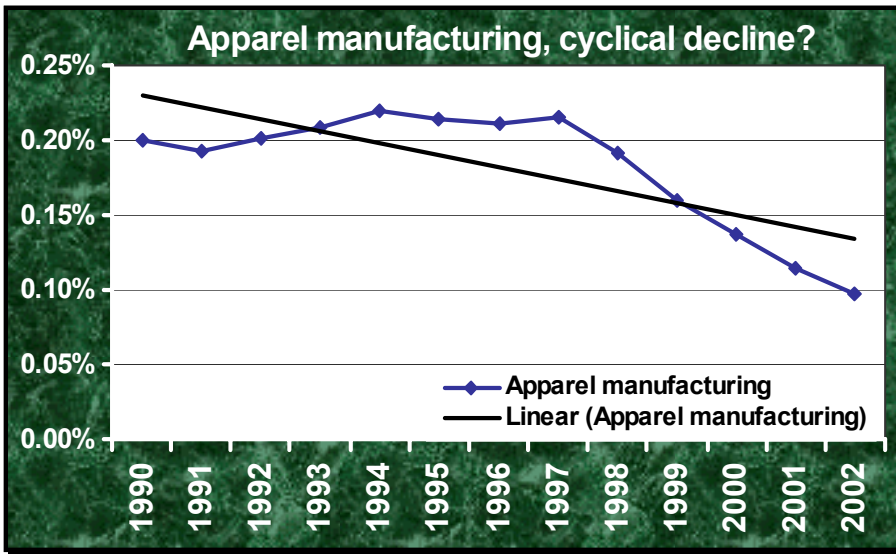
A more detailed examination of principle manufacturing industries reveals important variation in the nature of change and the resulting prospects for recovery.

**Figure 40**  
 Manufacturing Employment, Trend, and Structural Variation Employment Change  
 Washington, 1990 - 2002  
 Source: Employment Security Department

Manufacturing Sub-Sectors	Employment 2002	Trend Change in Employment Share 1990-2002	Structural/ Total Change
<b>Sectors exhibiting largely structural declines:</b>			
Primary metal manufacturing	6,410	56%	69%
Transportation equipment	94,650	58%	70%
<i>Aerospace product and parts</i>	75,660	57%	67%
Apparel manufacturing	2,570	58%	53%
Wood product manufacturing	17,680	64%	80%
Paper manufacturing	13,210	65%	88%
Printing	9,210	73%	60%
Textile product mills	2,250	74%	51%
Food manufacturing	35,050	77%	76%
<b>Sectors exhibiting more stable employment and cyclically dominated change:</b>			
Petroleum and coal products	2,730	83%	49%
Furniture and related products	7,540	84%	58%
Computer and electronic products	7,540	93%	24%
Nonmetallic mineral products	8,290	94%	44%
Beverage and tobacco products	3,680	94%	32%
Chemical manufacturing	5,760	95%	24%
Fabricated metal products	16,240	96%	18%
Machinery manufacturing	12,520	106%	24%
Miscellaneous manufacturing	11,450	107%	32%
Plastics and rubber products	9,250	111%	33%
Electrical equipment and appliance	3,780	149%	68%

At a greater level of detail, manufacturing industries can be grouped into two main groups—although there are quite a few anomalies. The first are those characterized by structural decline. The trend of the shares of these industries declined from 56 percent to 77 percent. Although apparel manufacturing and textile mills have a highly cyclical, as well as structural component, both seem dominated more by structural change.

**Figure 41**  
 Apparel Manufacturing Share of Total Employment and Trend  
 Washington, 1990 - 2002  
 Source: Employment Security Department



Take apparel manufacturing, whose share of total employment is graphed in *Figure 41*. Although there is quite a bit of variation around the trend, this seems to be due to a change in trend rather than to cyclical variation. In this industry, **cut and sew apparel manufacturing**, the largest sub-sector, employment increased by about 30 percent from 1990 to 1996 and then declined by over 50 percent by 2002. Meanwhile, the number of firms in this industry declined by 33 percent from 1995 to 2002. There is little to lead us to believe that these firms will re-emerge and so the decline is likely to be permanent.

In total, structurally declining sectors accounted for 180,000 jobs in 2002, two-thirds of all manufacturing employment. The largest sectors were aerospace (75,600 jobs) and food processing (35,000 jobs). **Aerospace** has always been very cyclical. Recently, however, there seems to have been quite a few potentially structural changes like the movement of the headquarters to Chicago, the increased likelihood of terrorist attacks, competition from Airbus, and a drive to increase productivity. Such structural changes make it unlikely that the decline in aerospace employment will be fully reversed by a cyclical recovery.

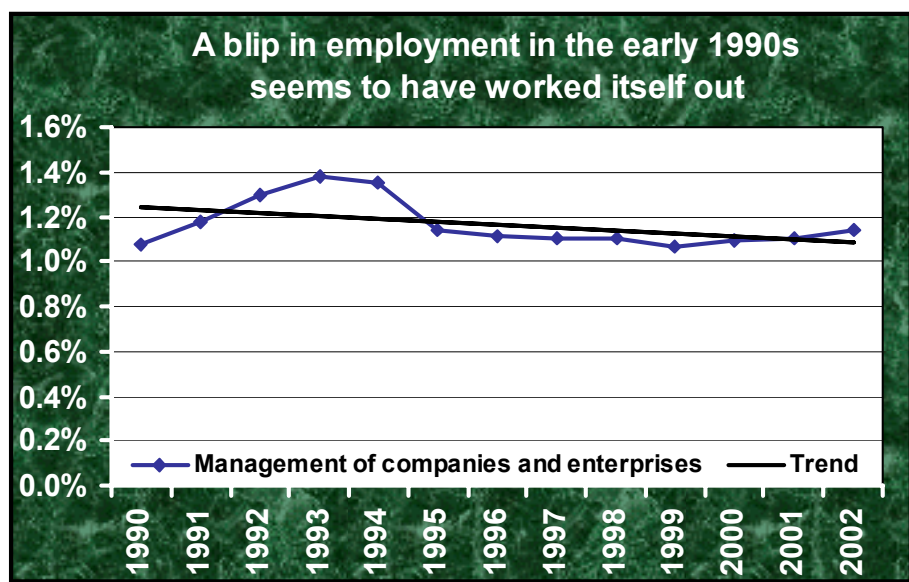
**Food processing** employment has also seen wide swings over the 1990s. From 1990 to 1996, employment increased by more than 7.5 percent. Then, from 1996 to 2002 employment declined by 11.5 percent. This sector has always been highly volatile, subject to both demand and supply shocks and is very vulnerable to foreign competition, and thus, changes in U.S. trade policy. Any rebound in this industry is quite uncertain.

The next group of manufacturing industries tends to have smaller employment levels, having declined by less since the early 1990s, and having highly cyclical components. These industries would, thus, seem to have better prospects to rebound with the general economy. In fact, the last industry (*shown in Figure 40*), **electrical equipment and appliance manufacturing**, has seen impressive employment growth over the 1990s, quite a bit of which is estimated to be structural. This industry would, thus, seem to have growth potential for the future.

### Management

Management of companies and enterprises is a new category developed under the North American Industry Classification System (NAICS). Employment in this category had reached 30,200 by 2002.

**Figure 42**  
 Management of Companies and Enterprises Share of Total Employment and Trend  
 Washington, 1990 - 2002



**Management of companies and enterprises** is a new category developed under the North American Industry Classification System (NAICS).

Since the mid 1990s, employment changes in this industry have tracked total employment in the economy quite closely. During the recession, the industry even increased its share of total employment. Much of the variation in this industry is estimated to be cyclical, in large part due to the unusual fluctuation in the early 1990s. In all likelihood this industry will grow in pace with the general economy in the future.

### Wholesale and Retail Trade

Wholesale trade has declined since the early 1990s as a share of total employment and most of this change appears to be structural. It's important to note here that wholesale trade has been affected by many classification changes in the administrative records used to track employment. First, Indian tribes were reclassified



to local government causing a large outflow of employment from wholesale trade. In 2001, the Bureau of Labor Statistics had a cycle of recoding that concentrated on wholesale trade, which caused the appearance of one-time decline in employment.

**Figure 43**  
 Wholesale Trade Share of Total Employment and Trend  
 Washington, 1990 - 2002  
 Source: Employment Security Department



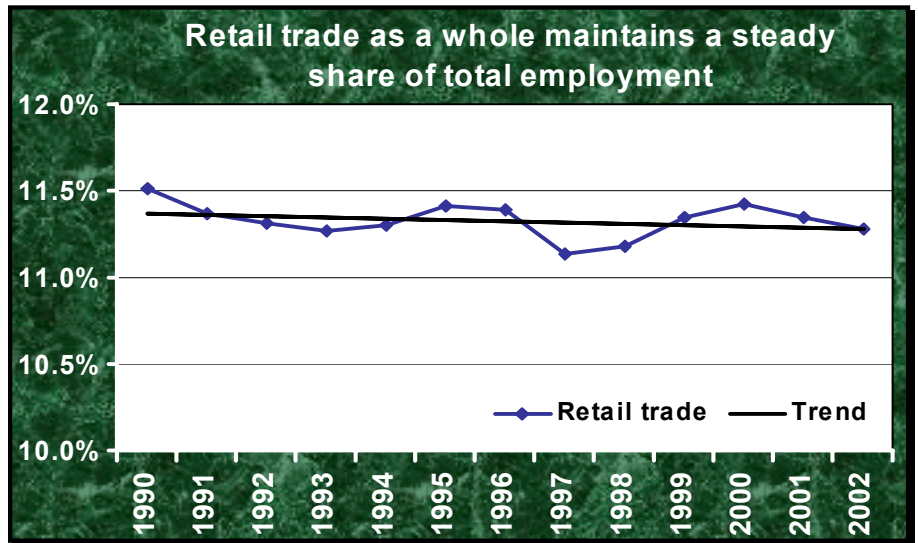
**Wholesale trade** has been affected by many **classification changes** in the administrative records used to track employment. First, Indian tribes were reclassified to local government causing a large outflow of employment from wholesale trade. In 2001, the Bureau of Labor Statistics had a cycle of recoding that concentrated on wholesale trade, which caused the appearance of one-time decline in employment.

The largest sub-sectors within wholesale trade, however, show quite different behavior. **Commercial equipment merchants**, with over 14,000 jobs in 2002, experienced strong, structural growth in the 1990s. Meanwhile, **machinery and supply merchants**, with just under 14,000 jobs in 2002, declined to about 91 percent of trend employment share by 2002. About half of the variation was due to cyclical fluctuations. **Grocery wholesalers**, on the other hand, declined significantly and structurally over the 1990s.

So within wholesale industries there are those that are likely to continue strong growth independent of the recovery, those that are likely to see some cyclical recovery, and those that will likely continue to decline irrespective of a recovery.

**Retail trade** maintained an almost constant share of total employment over the 1990s. Most of the variation in retail trade's share of total employment, thus, had to be cyclical. There were, however, important variations in specific retail sectors.

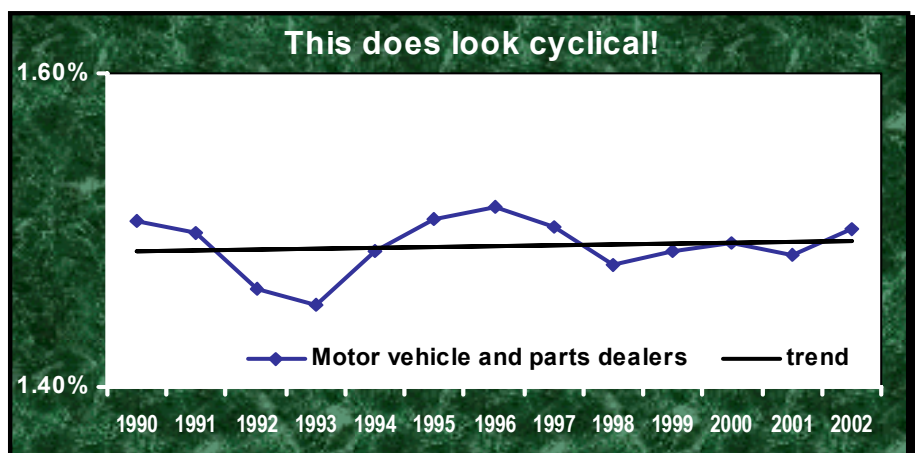
**Figure 44**  
Retail Trade Share of Total Employment and Trend  
Washington, 1990 - 2002  
Source: Employment Security Department



In fact, the incredibly constant share of total employment that retail trade has maintained masks the important structural shifts within the industry.

The largest sector within retail trade is **food and beverage stores**, with over 61,000 jobs in 2002. This sector had experienced a significant employment decline by 2002, down to 85 percent of trend employment. Much of this change, though, was due to cyclical rather than structural variation. **General merchandise stores**, including stores such as Wal-Mart and Costco, were up strongly—120 percent of trend—by 2002. The variation in employment of these stores was evenly split between cyclical and structural forces. **Motor vehicle and parts dealers**, with just under 40,000 jobs in 2002, have managed to successfully use low interest rates to increase sales over the recession. Still, these stores have just managed to maintain their share of total employment since 1990.

**Figure 45**  
Motor Vehicle and Parts Dealers Share of Total Employment and Trend  
Washington, 1990 - 2002  
Source: Employment Security Department

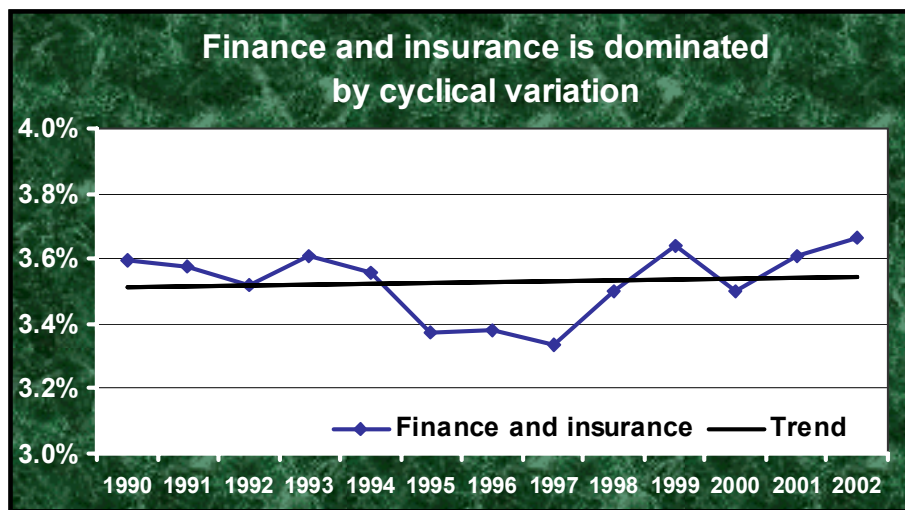


In contrast to total retail trade, where gains in some industries are evened out by losses elsewhere, the fluctuations in **motor vehicle dealer** employment clearly shows cyclical rather than structural variation. This industry is likely to continue to see wide fluctuations, but on average will maintain a fairly constant share of total employment.

*Finance and Insurance*

The finance and insurance industry has maintained a constant share of total employment and its variation is almost totally associated with cyclical change.

**Figure 46**  
Finance and Insurance Share of Total Employment and Trend  
Washington, 1990 - 2002  
Source: *Employment Security Department*



The recent upturn in employment share in 2001 and 2002 are associated with the very low interest rates during this recession. A stable recovery in the general economy should eventually lead the Federal Reserve Board to raise interest rates. Higher interest rates, in turn, will lead to a slower growth in this sector, and the share should return to its trend.

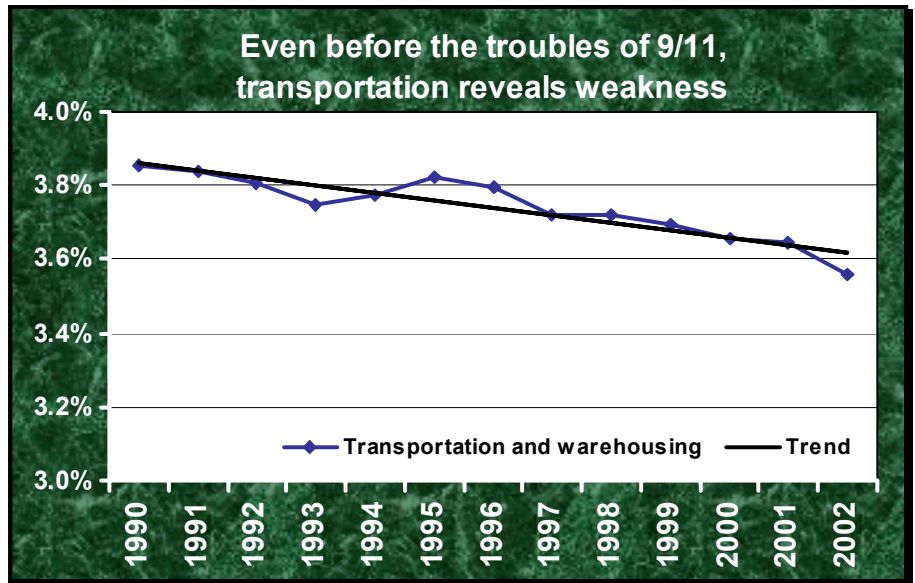
*Transportation and Warehousing*

Transportation and warehousing had employment of about 94,000 in 2002. The troubled airline industry accounted for about 15 percent of this employment, the cyclical truck transportation industry 23 percent, and the postal service industry 17 percent.

**Figure 47**

Transportation and Warehousing Share of Total Employment and Trend  
Washington, 1990 - 2002

Source: *Employment Security Department*

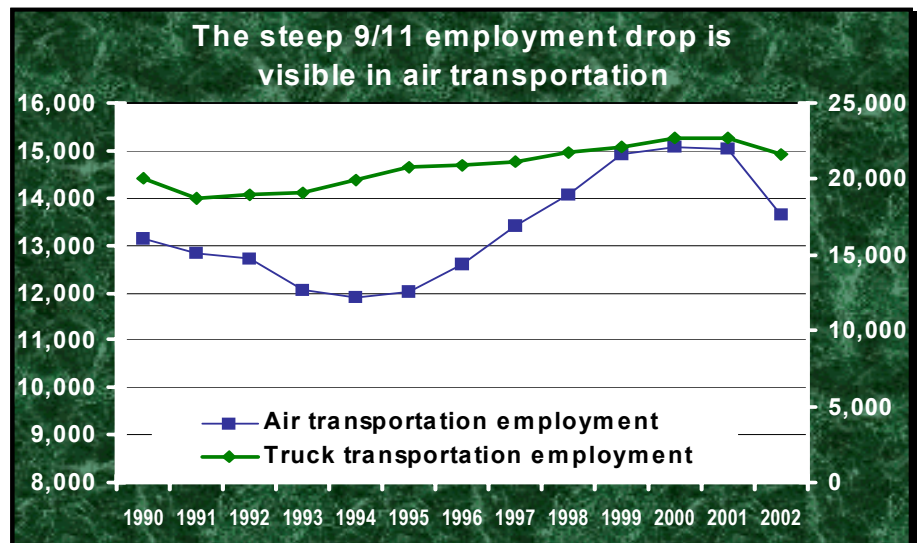


Despite the perception that 9/11 was the cause of troubles for the transportation industry, the industry actually showed a trend decline before 2001. **Air transportation's** employment share is down 91 percent of trend by 2002, but most of its decline is estimated to be cyclical. **Truck transportation**, on the other hand, shows about the same decline but more of it, 57 percent, is estimated to be structural. In fact, in a graph of actual employment (*see Figure 48*), the post 9/11 drop in air transportation employment is quite evident. Truck transportation's employment change has been much smoother but also shows a recession-associated decline in 2002.

**Figure 48**

Air and Truck Transportation Employment  
Washington, 1990 - 2002

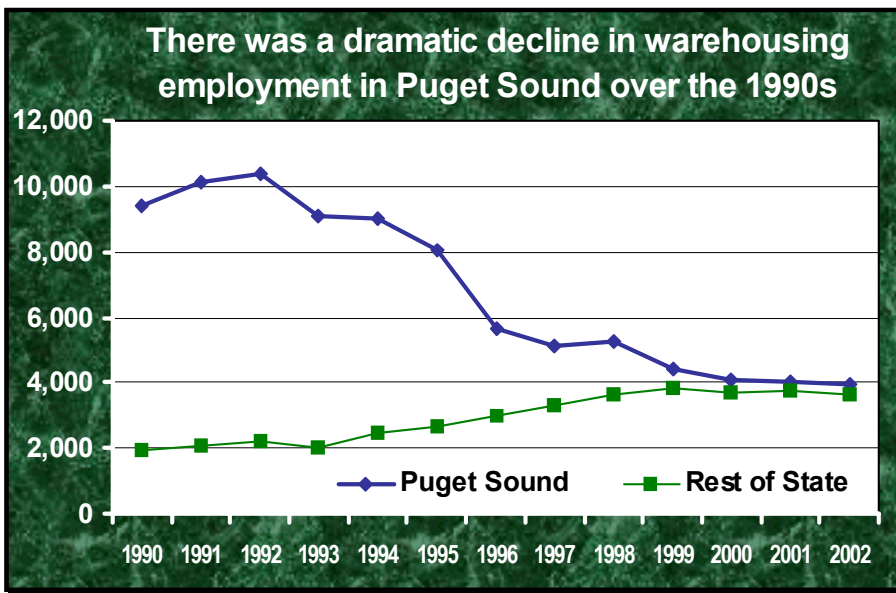
Source: *Employment Security Department*



**Postal services** has maintained a fairly constant employment share. Its constant employment share, though, forces any small variation to be explained by cyclical rather than structural factors.

**Warehousing**, which accounted for about 7,500 jobs in 2002, shows a pronounced drop in the mid-1990s. The industry did experience an interesting geographic shift over this time period. The chart below shows actual employment levels in the Puget Sound area—King, Snohomish, and Pierce counties—versus the rest of the state.

**Figure 49**  
Warehousing Employment  
Puget Sound and Balance of State, Washington, 1990 - 2002  
Source: *Employment Security Department*



While Puget Sound employment in warehousing declined by 58 percent from 1990 to 2002, the rest of the state saw an 85 percent increase in employment. The drop in the Puget Sound area employment occurred in the early 1990s while the rest of the state has seen a gradual acceleration starting in the middle to late 1990s. By 2002 it looks like the two geographic areas have reached a comfortable steady state justifying the three-quarters of variation that is estimated to be caused by structural factors.

### *Accommodation and Food Services*

Accommodation and food services have maintained an almost constant share of total employment over the 1990s and, again, almost all of the change is estimated to be due to cyclical variation.

**Figure 50**

Accommodation and Food Employment, Trend, and Structural Variation Employment Change  
Washington, 1990 - 2002

Source: *Employment Security Department*

	Trend Change in Employment 1990-2002	Structural/Total Variation	Employment 2002
Accommodation	90%	70%	27,020
Food services and drinking places	99%	16%	173,093

**Food services** dominate this industry. It is by far the larger of the two sectors—six and a half times more employment than accommodation—and displays little change in employment share, and so, most variation is cyclical. **Accommodation** has seen a great fall in employment, quite a bit of which is estimated to be structural. This sector has seen a decline of over 11 percent in employment share since its peak in 1991.

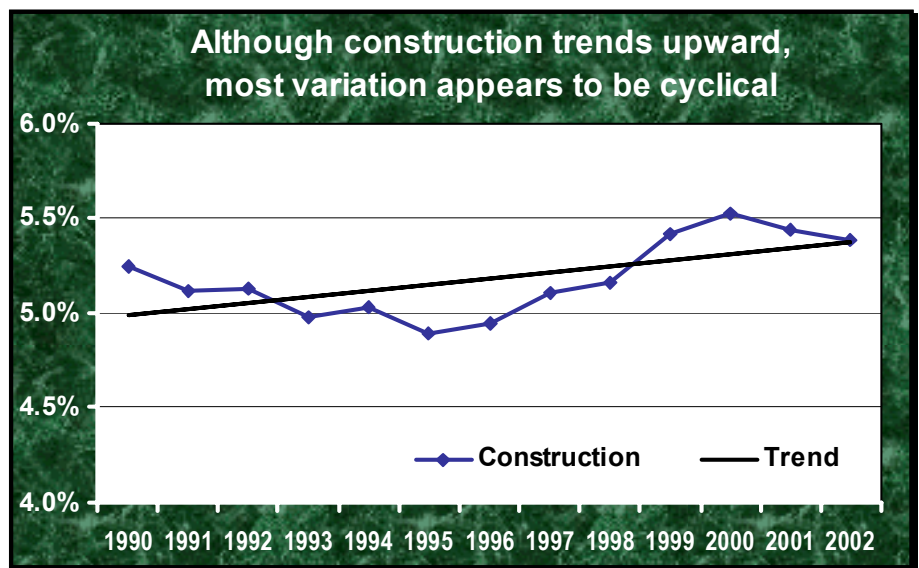
### *Construction*

The trend in **construction** employment as a percent of total employment has increased since 1990. Still, only 43 percent of its variation has been estimated to be structural. The building boom of the mid to late nineties is evident as is the negative effect of the recession in 2001.

**Figure 51**

Construction Share of Total Employment and Trend  
Washington, 1990-2002

Source: *Employment Security Department*

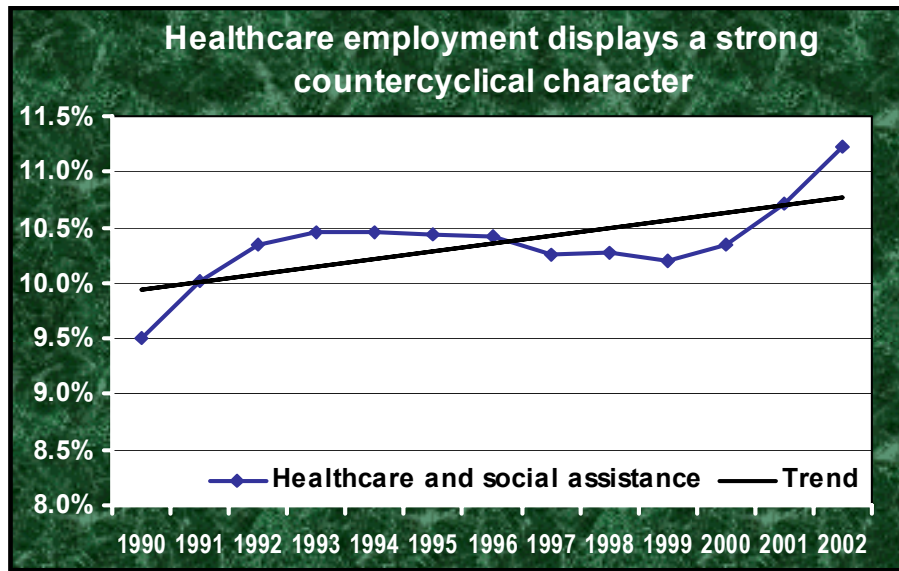


Given the cyclical character of construction employment and the negative effect of the recent recession, employment as a share of total employment is expected to rebound with the end of the recession.

*Healthcare and Education*

**Healthcare employment**, as a percent of total employment, displays classically countercyclical behavior. During the recession of the early 1990s healthcare rose from 9.5 percent of total employment to almost 10.5 percent. There was then a slow decline through the late 1990s and a strong rebound in 2001 and 2002.

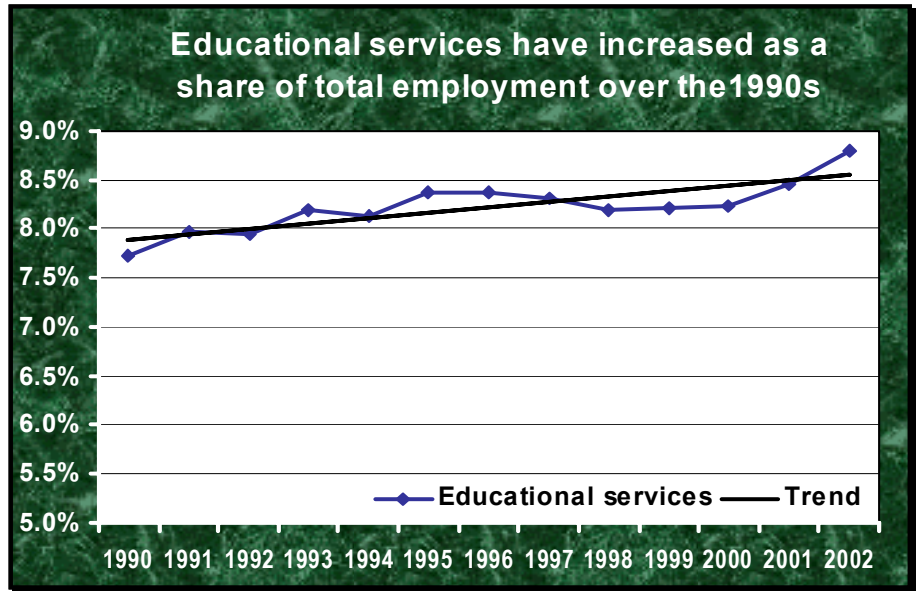
**Figure 52**  
 Healthcare and Social Assistance Share of Total Employment and Trend  
 Washington, 1990 - 2002  
 Source: *Employment Security Department*



Part of this behavior is explained by movements in total employment rather than healthcare employment. In fact, growth in healthcare employment in 2000 (4.0 percent), 2001 (3.1 percent), and 2002 (2.9 percent), are not far off the twelve year average of 3.3 percent. Half of the variation in the healthcare share is caused by cyclical variations, which are likely due to variations in total employment growth, not healthcare employment growth. Based on this analysis, a general recovery in total employment growth would be expected to cause the healthcare employment share to decline back towards its trend.

**Educational services** have increased slightly as a share of total employment over the 1990s. There has also been some cyclical variation around that trend. The employment level in educational services, though, has grown at a very constant rate of about 3 percent. The variation around the trend is, thus, almost totally attributable to fluctuations in the growth of total employment rather than employment in this sector.

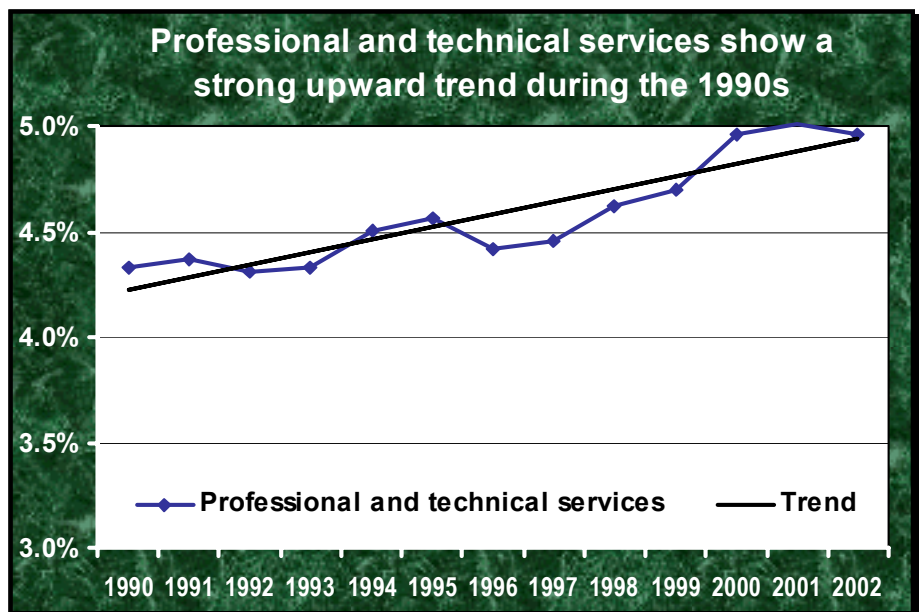
**Figure 53**  
 Educational Services Share of Total Employment and Trend  
 Washington, 1990 - 2002  
 Source: *Employment Security Department*



*Professional and Technical Services*

Although **professional and technical services** has experienced ups and downs along the way, there is a strong positive trend. In fact, trend employment has increased 117 percent from 1990 to 2002. It is interesting that the fluctuations in the employment share of professional and technical services do not follow the normal business cycle.

**Figure 54**  
 Professional and Technical Services Share of Total Employment and Trend  
 Washington, 1990 - 2002  
 Source: *Employment Security Department*



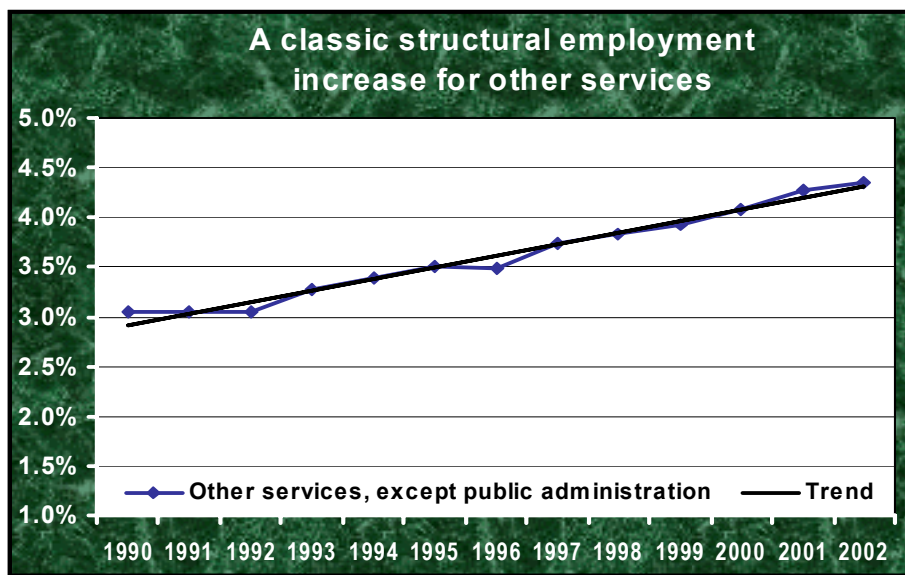


The **computer system design** industry is the largest sector in this industry with almost 23,000 jobs in 2002. The share of total employment of this sector grew by 186 percent between 1990 and 2000 and then declined by 17 percent over the next two years. Eighty percent of the variation in computer system design employment is estimated to be structural even though the industry experienced a strong cyclical decline over the recession. This positive structural element would be expected to reassert itself with a strong economic recovery leading to renewed growth.

*Other Services*

**Other services** have grown considerably as a percent of total employment since 1990. This industry which catches services not classified elsewhere is dominated by services to private households. This industry accounts for about a third of the employment in the other service sector and probably got a boost from legislation.

**Figure 55**  
 Other Services Share of Total Employment and Trend  
 Washington, 1990 - 2002  
 Source: *Employment Security Department*



The trend of services to households sub-sector grew by 1,530 percent over the nineties, ninety percent of which was structural. Such explosive growth could not be maintained in the future, so some leveling off is expected. The next largest sub-sector, automotive maintenance and repair shops grew 144 percent, of which about two-thirds was structural. This industry is expected to continue its strong growth path as the economy recovers.

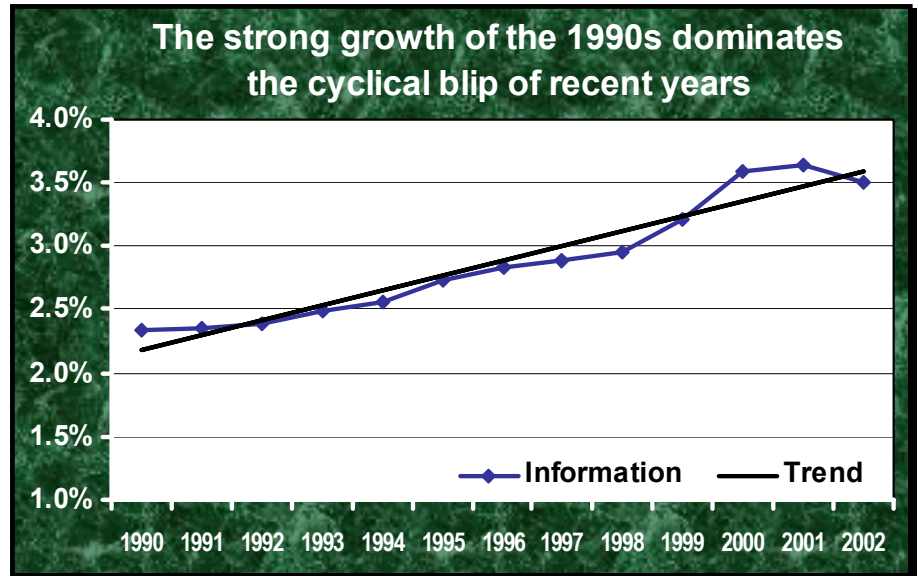
*Information*

The information industry includes software publishing, Internet publishing, and telecommunications. Most of the employment change in this industry is estimated to be structural and, thus, the cyclical downturn of 2001 is unlikely to greatly impact the general upward trend.

**Figure 56**

Information Share of Total Employment and Trend  
Washington, 1990 - 2002

Source: *Employment Security Department*



**Software publishing** is the largest sub-sector within this industry accounting for just under 40 percent of employment. This sector shows a trend growth of almost 400 percent over the nineties and 92 percent of its variation is explained by structural factors. This industry is estimated to have the highest degree of structural change of any industry examined in this analysis. This industry is dominated by one firm, Microsoft, and its fortunes will depend upon that firm.

**Wired telecommunications** accounts for about 11 percent of employment and saw a large decline in employment to about 60 percent of what it was in 1990. About thirty percent of the variation in this industry is cyclical. The fairly steady structural and cyclical decline in this industry argues against a robust recovery with the recovery of the general economy.

**Wireless telecommunications**, on the other hand, had a trend growth of almost 1,700 percent due to its nascent starting size of just over 1,000 jobs in 1990. Eighty-four percent of variation in this industry is estimated to be due to structural factors. The slight decline due to the recession is, thus, unlikely to persist and strong growth is expected with the recovery of the economy.

## Conclusion: Cyclical and Structural Employment in Washington

In general, Washington's economy is made up both of structurally dominated and cyclically dominated industries. Industries that are primarily structural have been slowly changing in importance in the economy over the 1990s. These changes will likely weather the recession and recovery. This analysis provides some evidence of a structural decline in manufacturing and a structural increase in the information sector.

Professional and business services are also increasing in importance as natural resources and agriculture, government (excluding public education and healthcare), and wholesale trade have declined.

The cyclical downturn has undoubtedly exacerbated the problems in some struggling industries. Those industries that can most easily be shifted overseas may have seen the most permanent damage. Still, these trends were already evident in the 1990s. The industries at the heart of the recession, information, air travel, and aerospace manufacturing all have futures dictated by events far beyond the recession. Many aspects of information have very good prospects, air travel is showing some restructuring towards discount carriers, and aerospace has a myriad of forces playing on its future.

Other industries hit hard by the cyclical downturn show signs of a potentially unobstructed recovery—retail trade, construction, and leisure activities. Financial activities, healthcare, and motor vehicle sales have shown a counter-cyclical upturn which will likely moderate with the recovery. The expected pace of the general return of jobs becomes the question of interest. That pace is being determined in the market place and seems to be critically dependent on a return of business demand before consumer purchases are squeezed by high unemployment.

### Seasonal Employment

Seasonal industries experience wide employment fluctuations depending on the season of the year. There is no set seasonal pattern: agriculture tends to come on in late summer and fall, schools are out for the summer, ski resorts hire in the winter, and so on. All these industries, and the people who work in them, must adapt to fluctuating employment over the course of each year. Agricultural workers often migrate from crop to crop during the year. Educational workers may specifically choose that line of work so as to have summers off. Others pick up summer jobs. College students work at temporary jobs in recreational industries during summer and winter breaks.

Many other workers suffer from the inability to find steady employment. Washington has a relatively high percentage of seasonal agriculture and construction workers. The state also has a relatively high unemployment rate, which may be partly due to the seasonality of its industries.

About 80 percent of agricultural employment is involved in industries classified as being very highly seasonal. Next, about 13 percent of employment in arts, entertainment, and recreation is very highly seasonal. Some types of accommodation very closely associated with recreation are also seasonal, such as RV parks and rooming and boarding houses. Beyond these, the only very highly seasonal industries are highway, street and bridge construction, school and employee bus drivers, and junior colleges. These industries together represented just under 100,000 jobs in 2002 or about 3.7 percent of total employment.

**Seasonal industries** experience wide employment fluctuations depending on the season of the year.

**Figure 57**

Highly Seasonal Industries

Washington, 1990-2002

*Source: Employment Security Department*

Highly Seasonal Industries	Employment Variation Due to Seasonality	2002 Average Annual employment
Vegetable and melon farming	66.6%	4,509
Fruit and tree nut farming	45.1%	31,386
Other crop farming	44.5%	6,240
Amusement parks and arcades	43.6%	995
Oilseed and grain farming	34.4%	1,943
RV parks and recreational camps	31.7%	1,177
Spectator sports	29.7%	2,493
Scenic and sightseeing transportation, land	29.2%	185
Agents and managers for public figures	23.0%	99
Forest nursery and gathering forest products	21.6%	190
Rooming and boarding houses	20.4%	323
School and employee bus transportation	19.4%	1,612
Scenic and sightseeing transportation, water	16.4%	407
Support activities for crop production	14.5%	11,073
Highway, street, and bridge construction	13.9%	6,189
Other telecommunications	12.9%	404
Greenhouse and nursery production	11.9%	5,015
Junior colleges	11.9%	20,817
Educational support services	11.4%	1,247
Promoters of performing arts and sports	10.8%	1,671

The next group of industries, which are classified as having a high degree of seasonality, but not very high, comprise 322,700 jobs or 12.2 percent of total employment. These industries are dominated by elementary and secondary schools, which provide 154,100 jobs. Another large industry that has a high degree of seasonality is services to private households with 40,900 jobs in 2002. Besides the usual agriculture, arts, entertainment, and recreation, accommodation, and construction industries, almost all major industrial categories have at least a couple of highly seasonal sub-sectors.

For example, coal mining and natural gas distribution are highly seasonal. Other industries closely associated with agriculture are influenced by agriculture's seasonality. In manufacturing, fruit and vegetable preserving is seasonal and in wholesale trade, raw farm product distribution. Retail trade has a few highly seasonal industries including lawn and garden stores, florists, and electronic shopping and mail order businesses. In the information sector, the motion picture industry is the most seasonal and in administration and waste services, it is the services to buildings and dwellings that is the most seasonal with 27,100 jobs.

There are then those industries that are not very seasonal. Healthcare had no sub-sectors that were highly seasonal or very highly seasonal. Neither did professional and technical services, management, finance, insurance and real estate, and public administration once education is removed. In fact, 1.5 million jobs in Washington (about 57 percent of employment) are not seasonal. Further, an additional 440,000 jobs are classified as having a low degree of seasonality.

In general, then, the majority of Washington jobs are not very seasonal. There are specific industries, though, with a very high degree of seasonality. In particular, the high concentration of labor-intensive agriculture is unique to Washington and makes this state subject to seasonal variation.

# Chapter 4 - Unemployment and Its Dimensions

## The Unemployment Rate

Over the recession Washington's unemployment rate was on average 1.7 percentage points higher than the nation's. Recently, Washington's rate converged slightly towards the nation's—by October 2003 the state's rate was one percentage point higher. This is not unusual though as Washington's jobless rate has fairly consistently remained above the national rate for the past twenty-five years (except for brief dips below the national rate in 1990 and 1991, and again in 1997 and early 1998).

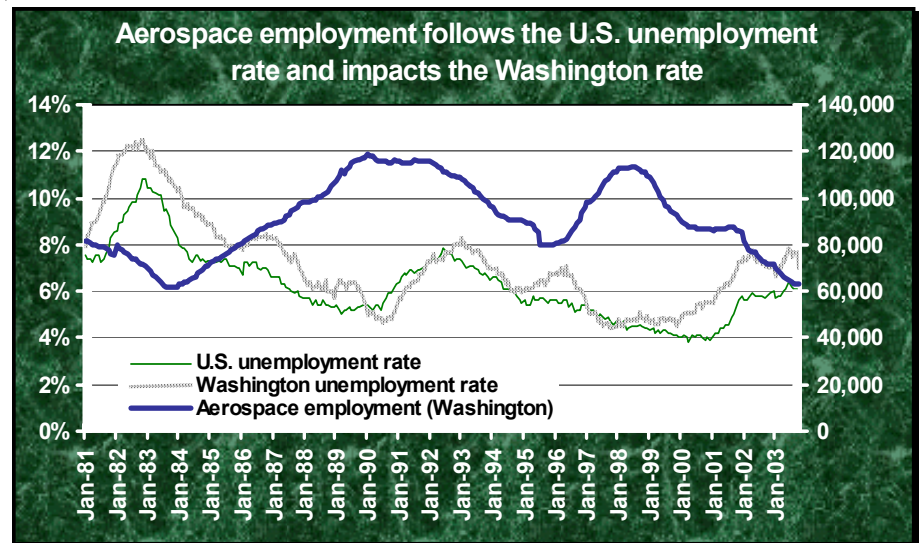
The **unemployment rate** is estimated based on three pieces of information. First is the Current Population Survey, in which households are asked whether unemployed adults in the household searched for work over the past four weeks. Second is the Current Employment Statistics survey, which estimates employment based on a survey of firms. The last piece of information is the number of unemployment insurance claimants, which is used in conjunction with the other two pieces of information to estimate the number of unemployed.

The sustained difference between the state and national unemployment rates is due to many factors. The magnitude of the difference, however, tracks employment in one of the state's largest industries, aerospace, fairly well. First, aerospace employment tends to lag the national business cycle. When the national unemployment rate begins to rise, aerospace employment begins to fall. Falling aerospace employment tends to then intensify the effect of national recessions on Washington. The figure below indicates that low points in aerospace employment are associated with the unemployment rate in Washington exceeding the nation's. Peaks in aerospace employment are associated with the Washington unemployment rate dipping down below the national unemployment rate.

**Figure 58**

Aerospace Employment and Seasonally Adjusted Unemployment Rates Washington and U.S., January 1981 - September 2003

Source: U.S. Bureau of Labor Statistics and Washington Employment Security Department



Other reasons for Washington's generally high unemployment rate include:

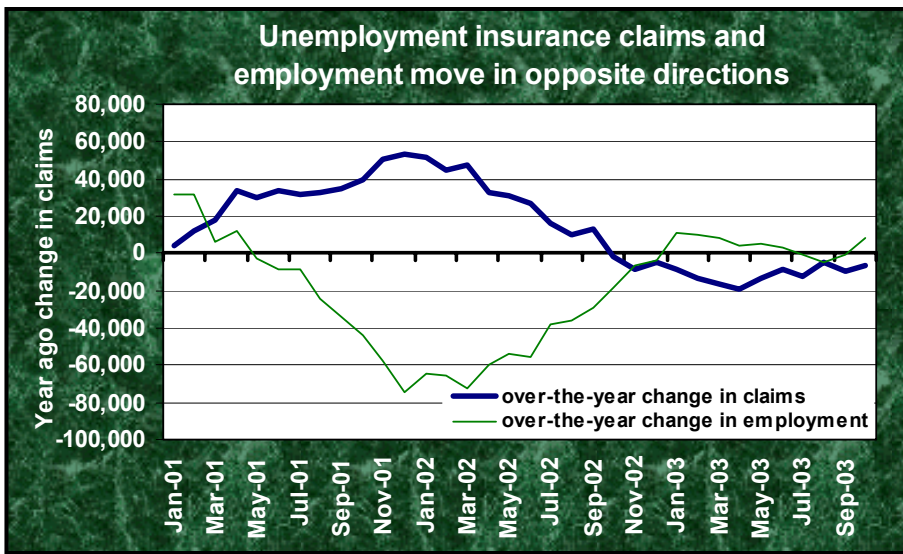
- The seasonal nature of labor-intensive agricultural work
- High unemployment rates in rural areas (including traditionally timber-dependent areas)
- Unemployment insurance benefits that allow longer job search and retraining durations

Washington’s high quality of life is also a potential contributor to the state’s generally high jobless rate. The state’s attractive geographic and cultural features likely entice some people to live here, even without work or job security. In contrast, the Great Plains states, for example, typically have quite low unemployment rates. In September 2003 Nebraska’s jobless rate was 4.0 percent, North Dakota’s was 3.7 percent, and South Dakota’s was 3.4 percent.

## Unemployment Insurance Claimants

Unemployment insurance claimants represent those unemployed people who currently qualify and are drawing unemployment insurance benefits. These individuals are quite interesting to track because they can be counted exactly, and other information such as occupation and industry characteristics of their last job is known. This section will concentrate on the industries from which these claimants became unemployed.

**Figure 59**  
Over-the-Year Change in Unemployment Insurance Claims and Employment Washington, January 2001 - September 2003  
Source: Employment Security Department



**Unemployment insurance claimants** (also referred to as **beneficiaries**) represent just the portion of those unemployed people who are qualified and receiving unemployment insurance payments.

The number of unemployment insurance claimants in the state rose steeply over year ago levels in 2001. Starting in 2002, the number declined. *Figure 59* shows that the movement in the number of claimants tracks employment numbers closely—as one rises, the other falls. This is important because these are two independent sources of information both pointing to current, be they slight, improvements in the labor market.

*Figure 60* shows claimants as a percent of employment for selected major industry groups. Construction has the highest number of claimants as a percentage of employment, reflecting both the seasonal nature of many construction projects and the relative reduction of construction jobs over the recession.

**Figure 60**

Unemployment Insurance Claims as a Percent of Covered Employment  
Washington, 1999 - 2002

Source: *Employment Security Department*

	Construction	Manufacturing	Retail Trade	Transportation and Warehousing	Information	Professional and Technical Services	Finance and Insurance	Health Care and Social Assistance
1999	19.8%	11.4%	5.0%	6.0%	2.9%	4.7%	4.7%	3.7%
2000	21.6%	11.4%	5.7%	6.9%	3.9%	4.8%	5.5%	3.4%
2001	25.4%	13.6%	6.3%	7.5%	8.1%	8.1%	3.9%	3.1%
2002	25.7%	14.2%	6.1%	7.8%	6.4%	7.2%	4.8%	3.7%

Manufacturing also has a high percentage of claims for all years, representing the lack of recovery in this sector. Transportation and warehousing is another sector showing little recovery, but the general rate of claims is lower than for manufacturing.

Retail trade, information, and professional and technical services all show some improvement in claims in 2002. Finance and insurance and healthcare and social assistance, which have continued to add jobs over the recession and recovery, show some slight worsening in the number of claims in 2002. Still, the claimant rate is very low in these two industries and we should bear in mind that healthcare and social assistance employment tends toward counter-cyclical patterns.

**Figure 61**

Unemployment Insurance Exhaustion Rates  
and Average Annual Unemployment Rates  
Washington, 1999 - 2002

Source: *Employment Security Department*

	Exhaustion Rate	Unemployment Rate
1999	27.7%	4.7%
2000	26.1%	5.2%
2001	32.5%	6.4%
2002	34.0%	7.3%

### *Unemployment Exhaustion Rates*

The rate at which claimants exhaust their insurance claims has risen from 1999 through 2002. This parallels the rise in the unemployment rate indicating the parallel between the percentage of people searching for jobs and the percentage of claimants who can't find jobs. At the national level a relatively high number of claimants have been unemployed for a long time (over 2 million had been looking for work 27 weeks or more in October 2003). The high exhaustion rates imply that this is also likely to be true at the state level.

The **claimant unemployment rate** is not directly related to unemployment rate estimates for the state. It is simply the number of continued unemployment insurance claims divided by covered employment.

Exhaustion rates by industry for 2002 show no particular relation to a calculated claimant unemployment rate. In fact, the information sector, which had the lowest claimant unemployment rate, had the highest exhaustion rate. Agriculture, which



had the third highest claimant unemployment rate, had the lowest exhaustion rate. Although it would generally be expected that a high unemployment rate would be associated with higher exhaustion rates, there are enough other significant differences between industries so that this relationship does not hold well. For example, those industries characterized by temporary employment and high unemployment rates, like agriculture and construction, also tend to have low exhaustion rates as new jobs are always opening up. Industries with highly skilled and specialized workers have to match employees to jobs more carefully. This takes time and so exhaustion rates are higher.

**Figure 62**  
 Unemployment Insurance Exhaustion Rate and  
 Calculated Unemployment Rate by Industry  
 Washington, 2002  
 Source: *Employment Security Department*

Industry	Exhaustion Rate	Unemployment Rate Proxy
Information	31.2%	0.4%
Real Estate and Rental and Leasing	28.4%	6.7%
Finance and Insurance	28.2%	3.7%
Other Services, except Public Administration	27.7%	7.2%
Administrative, Support, Waste Mgmt and Remediation Services	26.0%	11.6%
Public Administration	24.9%	5.0%
Health Care and Social Assistance	24.7%	6.4%
Wholesale Trade	24.0%	8.6%
Arts, Entertainment, and Recreation	23.9%	25.7%
Manufacturing	22.8%	17.9%
Utilities	22.8%	2.9%
Retail Trade	22.6%	6.1%
Educational Services	22.1%	4.8%
Accommodation and Food Services	20.8%	5.7%
Transportation and Warehousing	19.7%	7.8%
Management of Companies and Enterprises	18.3%	14.2%
Construction	17.7%	1.7%
Mining	17.2%	5.9%
Agriculture, Forestry, Fishing, and Hunting	15.7%	16.4%

Exhaustion rates are highest in the Puget Sound area (including King, Snohomish, and Pierce counties), followed by other urban areas (Southwest Washington, including Clark County; the Olympic Consortium, including Thurston County; and Spokane County). Part of this is explained by the low exhaustion rates for the agricultural industry, which is concentrated in rural areas. However, even in the area with the lowest exhaustion rate, the North Central Workforce Development Area, more than a fifth of claimants exhausted their claims in 2002. Some of these claimants had the option to receive extended unemployment insurance, usually through temporary emergency unemployment insurance.

**Figure 63**  
 Unemployment Exhaustion Rates and Rates at Which Claimants Extend Unemployment Insurance Benefits  
 Washington Workforce Development Areas, 2002  
 Source: *Employment Security Department*

Workforce Development Area	Exhaustion Rate	Extension Rate
Seattle-King	39.8%	91.6%
Snohomish	38.3%	92.2%
Tacoma-Pierce	36.1%	89.5%
Southwest	35.4%	83.2%
Olympic Consortium	31.1%	85.0%
Spokane	30.1%	86.0%
Northwest	29.2%	86.6%
Pacific Mountain	28.1%	79.1%
Eastern	27.6%	76.4%
Benton-Franklin	26.6%	76.6%
Tri-County	25.6%	77.1%
North Central	22.1%	85.0%

The **Mass Layoff Statistics** program is a federally funded program that began in 1996. This program collects information on firms that layoff fifty or more employees over a five week period. The rationale for this program is that large layoffs indicate areas of potential distress in the state and point to industries that may be in trouble. Also, since those involved in a mass layoff are more likely to have trouble finding re-employment than other laid off individuals, the mass layoff statistics program helps service providers target those unemployed most in need of services.

Further analysis of mass layoff statistics is available through the Employment Security Department upon request.

The exhaustion rate is closely correlated with the extension rate (the ratio of the number of extended claims to the number of those who exhausted). In King and Snohomish counties more than 90 percent of those who exhausted their claims received an extension of unemployment insurance.

### Mass Layoff Statistics

**Figure 64**  
 Top Ten Industries Affected by Mass Layoffs by Number of Claimants  
 Washington, Third Quarter 2003  
 Source: *Employment Security Department*



**Figure 65**

Top Industry Producing Mass Layoffs Per Quarter  
 Washington, 2002-2003 (Quarterly)  
 Source: Employment Security Department

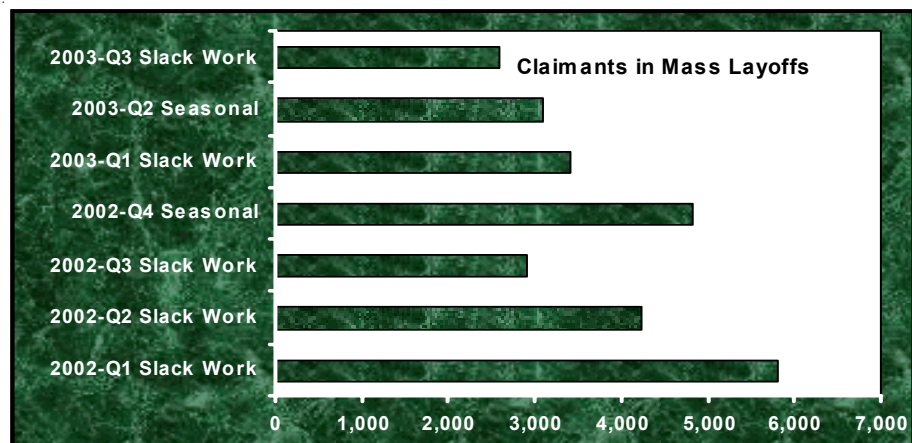


Figure 64 shows mass layoffs by industry for the third quarter of 2003, the most current data available. The transportation equipment industry had by far the most workers affected by mass layoffs (2,457 affected claimants). Food manufacturing took the second position, followed by agricultural and forestry support activities, illustrating the seasonal downturns those industries experience in the latter part of the calendar year. Looking over the most recent quarters (Figure 65), the dominance of layoffs in transportation equipment is made clear, as the industry is the top mass layoff producer in six of the last seven quarters.

The continued lackluster performance of the labor market coming out of the recent recession is illustrated in Figure 66, which shows the dominant reason firms' cited for mass layoffs. "Slack work" was most commonly the cause of mass layoffs in five of the last seven quarters.

**Figure 66**

Dominant Reason for Mass Layoffs Per Quarter  
 Washington, 2002-2003 (Quarterly)  
 Source: Employment Security Department



**Figure 67**

Mass Layoff Separations Compared to Separations  
as Share of Pre-Layoff Firm Employment  
Washington, 1997 - 2003 (Quarterly)

Source: Employment Security Department

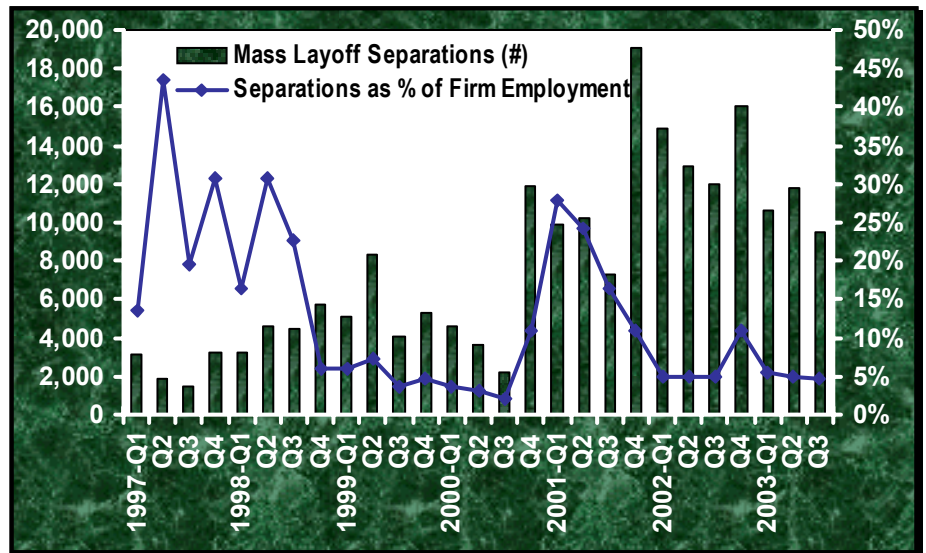
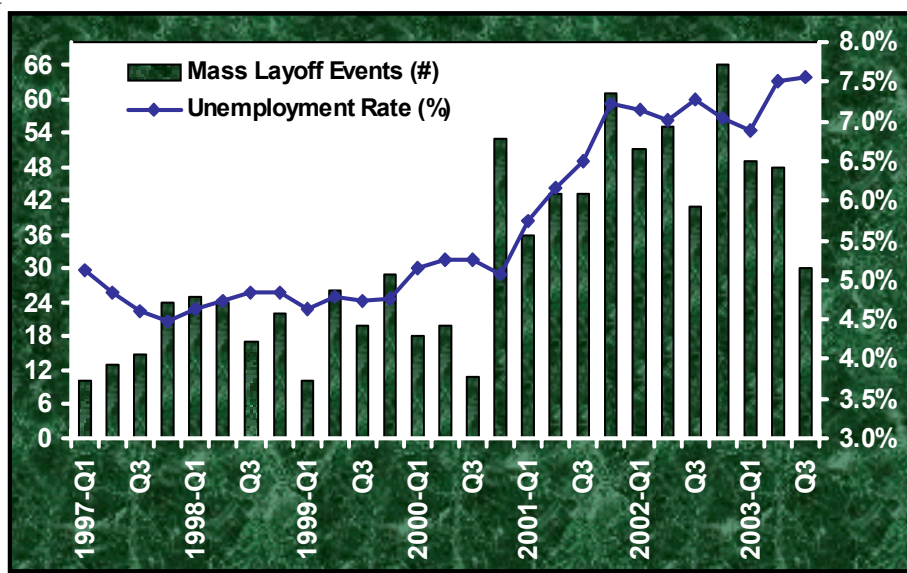


Figure 67 shows the number of people separated in mass layoff events compared to the layoff as a percent of firm employment. From 1997 through the end of 1998 there were relatively few people involved in mass layoffs, but the firms laying off the workers were significantly affected, laying off on average 20 to 50 percent of their workforce. In 1999 and the first three quarters of 2000 the number of people involved in mass layoffs had increased, but firms were laying off a smaller percentage of their workforce, between 3 and 7 percent. But as the bottom of the business cycle arrived in 2001, the number of people involved in mass layoff events had increased *and* firms were also laying off large percentages of their employees. This pattern quickly diminished, shifting then to a series of quarters that saw very high numbers of separations with relatively low shares of total employment, dropping again to a level of around 5 percent in 2002 and 2003. These numbers are hard to interpret, but in early 2001 the bursting of the dot.com bubble may have initially led to bankruptcies leading small firms to layoff all their employees. As the recession spread and the pain was felt more widely, many larger, financially sound and more established firms were forced to layoff small portions of their workforce.

Figure 68 shows the number of mass layoff events alongside the unemployment rate. A high unemployment rate is not always associated with a large number of mass layoff events over this period. For example, in 1997 we can see the unemployment rate declining even while mass layoff events tick upward a bit. This may have been a period of high frictional unemployment when firms were doing fairly well, but workers were willing to remain unemployed longer as they searched for the best possible job. Higher unemployment could also be explained by a lack of effective information on where jobs were, a lack of skills, or that people were located in the wrong places to find jobs.

By late 2000, however, an opposite problem occurred when the number of mass layoff events increased. These mass layoff events seem to lead into the recession with the unemployment rate soon rising as well. By 2003, it appeared that mass layoff events were retreating, though still high relative to the late 1990s. Meanwhile, the unemployment steadied itself around 7 percent. The divergence of mass layoff events from unemployment in 2003 indicates that while business conditions may not be worsening (leading to fewer mass layoff events) those that are unemployed may continue to face significant challenges in finding work.

**Figure 68**  
 Mass Layoff Events Compared to Quarterly Unemployment Rate  
 Washington, 1997 - 2003 (Quarterly)  
 Source: Employment Security Department



### Discouraged Workers

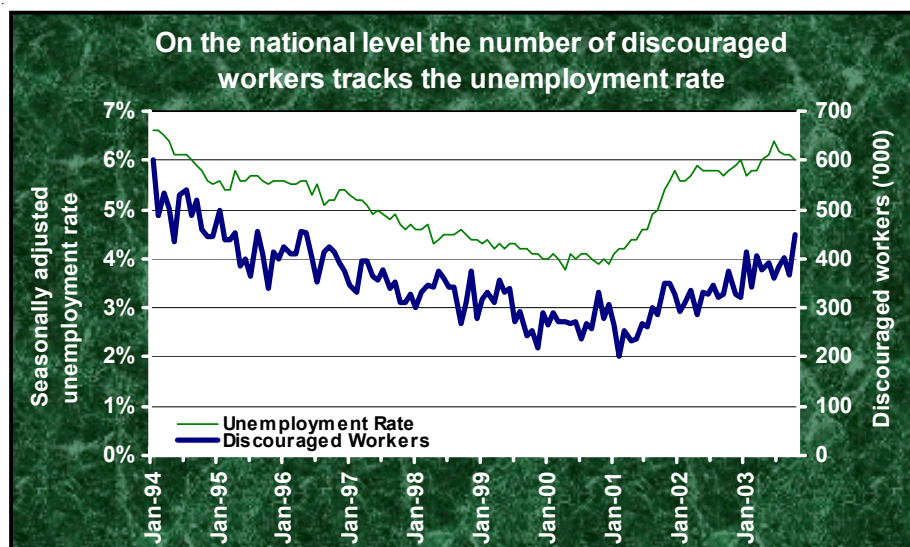
Discouraged workers are those unemployed workers who have given up looking for work because they believe that they will not find a job. This concept has been around since, at least, the 1970s, but no official estimates are available before 1994 and these are only available nationally.

The term **discouraged worker** is often confused with the term dislocated or displaced worker. The most important distinction is that the dislocated or displaced worker is most often considered part of the labor force. The notion of dislocation is strongly aligned with the economic concept of structural unemployment. **The discouraged worker is not in the labor force and is not part of the unemployment rate calculation.**

**Figure 69**

Discouraged Workers and Seasonally Adjusted Unemployment Rate  
United States, January 1994 - October 2003

Source: Bureau of Labor Statistics



### *Discouraged Workers at the National Level*

The number of discouraged workers at the national level tracks the unemployment rate quite well. In 2003, through October, there were on average 468,000 discouraged workers a month. An adjusted unemployment rate can be calculated by adding in these discouraged workers. This rate would have been about 0.25 of a percentage point higher than the unadjusted unemployment rate and the difference tends to increase as the unadjusted unemployment rate rises.

### *What Then on the State Level?*

In general, the unemployment rate in the state has been higher than in the nation over the last couple of decades (except for spells in 1990-1991 and 1997-1998). Because the percentage of discouraged workers tends to grow with the unemployment rate, the percentage of discouraged workers would be expected to be higher in the state than in the nation.

The number of discouraged workers was estimated for the years from 1994 to 2003 using a simple regression model based on the relationship between discouraged workers and the unemployment rate at the national level. Correlations between the number of discouraged workers and various other measures of unemployment (specifically, the labor force participation rate, the median number of weeks unemployed, and the number of people unemployed more than 27 weeks) were also examined. The strongest correlation, however, was with the unemployment rate, where a 94 percent correlation was found. The number of discouraged workers was then regressed against the unemployment rate to quantify the relationship. This relationship was used to estimate the number of discouraged workers in the state. The numbers were adjusted for the lower number of unemployed in the state versus the nation.

**Figure 70**

Estimated Number of Discouraged Workers, Seasonally Adjusted Unemployment Rate, and Adjusted Unemployment Rate  
Washington, 1994 - 2003

Source: *Employment Security Department*

Year	Estimated Number Of Dislocated Workers In Washington	Unemployment Rate	Adjusted Unemployment Rate
1994	12,200	6.4%	6.8%
1995	12,200	6.4%	6.8%
1996	12,500	6.5%	6.9%
1997	8,400	4.8%	5.0%
1998	8,400	4.8%	5.0%
1999	8,100	4.7%	5.0%
2000	9,300	5.2%	5.5%
2001	12,200	6.4%	6.8%
2002	14,400	7.3%	7.7%
2003	14,400	7.3%	7.7%

The number of discouraged workers at the state level started increasing significantly at the beginning of the recession in early 2001. The numbers for 2003 include data through August and have the potential to show yet a third year of increase by the end of the year.

Washington’s unemployment rate was then re-calculated to include discouraged workers. On average, the adjusted unemployment rate for the state is 0.35 of a percentage point higher than the unadjusted rate. The difference between the adjusted state unemployment rate and the normal unemployment rate is greater than the difference at the national level (0.25 of a percentage point). The greater divergence at the state level is, in part, due to the larger increase in the unemployment rate in Washington over this time period.

Another source of information on discouraged workers comes from the Washington State Population Survey<sup>1</sup>. One question on this survey asks unemployed respondents why they did not seek work during the last four weeks. This question is consistent with the question asked of unemployed workers in the Current Population Survey. Three of the possible answers from the State Population Survey seem to be associated with what are thought of as discouraged workers. The first is, “no work in field,” the second is, “can’t find work,” and the third is, “lack of skills.” *Figure 71* displays those findings.

**Figure 71**

Estimated Number of Workers Who Have Given Up Looking for Work  
Washington, 1998, 2000, and 2002

Source: *Washington State Population Survey, Office of Financial Management*

	Reason for Giving Up Looking for Work			Total
	No Work in Field	Can't Find Work	Lack Skills	
1998	52%	25%	24%	6,583
2000	60%	12%	29%	5,556
2002	42%	49%	10%	11,694

<sup>1</sup> The Office of Financial Management administers the State Population Survey, see: <http://www.ofm.wa.gov/sps/index.htm#download>.

Information from the State Population Survey produced a smaller estimate of the number of discouraged workers. There is also the odd falling in the number of discouraged workers in 2000 compared with 2002. Still, this data does support the previous calculations of something over 10,000 discouraged workers in 2002. It also confirms the rise in the number during the recession and recovery.

### *Long Term Unemployment*

Traditional arguments pit a widespread belief that periods of temporary unemployment should be compensated against an equally widespread belief that an unlimited period of compensation poses a moral hazard. This analysis will look at the growth of the population of the long-term unemployed, compare their characteristics with the newly unemployed, and assess some opportunities for their return to work.

**Extended benefits** are generally defined as a specific benefit program triggered by specific conditions, in which eligible claimants receive benefits, 50 percent from federal funds and 50 percent from the state trust fund. In January 2002 the federal-state Extended Benefits (EB) program was triggered “on” as a consequence of the Total Unemployment Rate (TUR) passing through a calculated 6.5 percent threshold.

The recession that began in March 2001 led to the “triggering” of the Extended Benefits (EB) entitlement in January 2002. Congress enacted the first of several potential duration extensions in March 2002; they are considering yet another. At the same time that congress is pushing out the limits of potential compensated duration in a context that says there are no jobs out there, Washington State is strengthening job search requirements for those individuals who want to collect benefits, beginning in January 2004. The operational performance goal for the Department’s WorkSource Operations Division is to reduce the average percent of benefits used by unemployment insurance beneficiaries.

The recovery after the 1991 recession was also characterized as jobless. In 1993 Congress enacted legislation that promoted the early identification of likely long-term unemployment insurance beneficiaries. The idea was that early intervention with appropriate services or training would alleviate the need for extended durations. Unfortunately, even with the early identification and referral system, the state currently has many thousands of individuals who are on one or another of the extension entitlements.

### *A Growing Number of Beneficiaries*

*Figure 72* follows the changing size of the regular unemployment insurance (UI) beneficiary population, starting in the period just before the recession of 2001 and continuing through the third quarter of 2003. The regular program is the first program for most new claimants. The recently unemployed individual files a claim for benefits and, if all eligibility requirements are met, receives a weekly benefit amount for a set number of weeks. Both the weekly benefit amount and the potential number of weeks of compensation are the result of a calculation using employment and earnings history from the base period. This discussion is concerned primarily with the *potential duration of compensation*.

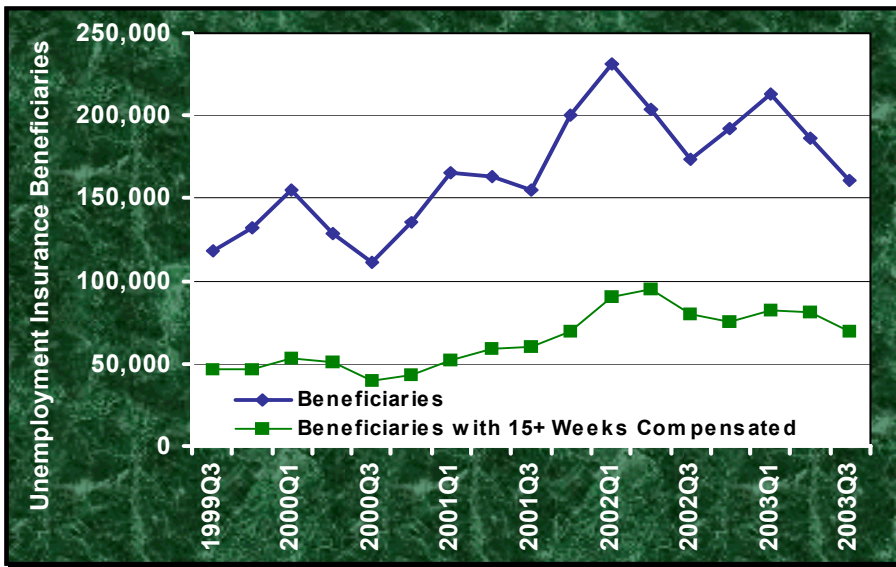
The potential duration of entitlement in the regular program ranges between 13 and 30 weeks in non-recessionary times. In recessionary times, when the Extended Benefit (EB) trigger has been activated, weeks 27 through 30 count against the EB



potential duration. During non-recessionary times, most discussions of long term use center on those beneficiaries drawing 15 or more weeks of benefits. Individuals exhausting available benefits are a subset of the long-term use analysis. *Figure 70* lays out the changing size of the long-term use population.

The number of beneficiaries in the regular unemployment insurance program climbed steadily through the first quarter of 2002. The count of beneficiaries peaked at nearly 232,000. In the second quarter of 2002, the number of beneficiaries with weeks in excess of 15 reached a peak of 94,400. At the mid-year point, over 46 percent of the regular UI caseload had drawn 15 weeks or more of compensation.

**Figure 72**  
 Growth of Beneficiaries in Regular Unemployment Insurance Compensation Program Washington, 1999 Quarter 3 - 2003 Quarter 3  
 Source: *Employment Security Department*



Program analysts first noticed a change in pattern when the number of beneficiaries reached its annual peak in the first quarter of 2001 and did not drop off as is typical in the second quarter. Eventually, March 2001 was pegged as the beginning of a recession that was to last until November 2001. Increasing duration was starting to dominate reemployment discussions at this time. The average percent of potential regular UI benefits used was creeping up from the mid-sixties to over seventy percent.

The number of regular UI beneficiaries has been declining since the peak in the first quarter of 2002. A positive part of this story finds the percentage of beneficiaries drawing 15 or more UI checks down to about 40 percent. Lingering doubts about the jobless recovery are turning around. The positive reports on the gross domestic product and increasing numbers of employees in the third quarter of 2003 were not yet enough to convince many that a full recovery was underway.

### *Increasing Benefit Exhaustion Fosters Extensions*

A question that is frequently asked during a period of extended UI entitlements is, “How many people are drawing beyond 26 weeks of compensation?” The national media picked up on the question and reported some percentages. The question simplifies the more meaningful and probably more correct question, “How many people are continuing to draw UI benefits after exhausting a regular claim?” Recall that in Washington State the potential duration for each claim varies between 13 and 30 weeks. Washington is unusual in that it is one of only two states that have a maximum potential duration over 26 weeks. Many people assume that all beneficiaries receive the 26 week entitlement, but as the old song goes, “It ain’t necessarily so.” The average potential duration in Washington is about 25 weeks. In the third quarter of 2003, nearly 45 percent of the regular UI exhaustees used all available benefits in less than 26 weeks.

*Figure 73* plots the number of exhaustees from the period before the recession to the third quarter of 2003. Extended entitlement beneficiaries (training, re-training, extended, and emergency are combined) are also plotted for the same period. There is a mistaken notion that the extension programs are activated when the number of exhaustions reaches a specified level. In the period through the fourth quarter of 2001 the number of extended beneficiaries was the result of entitlement to dislocated worker benefits. The federal-state Extended Benefits (EB) program is triggered as a consequence of either the Insured Unemployment Rate (IUR) or the Total Unemployment Rate (TUR) passing through a calculated threshold.

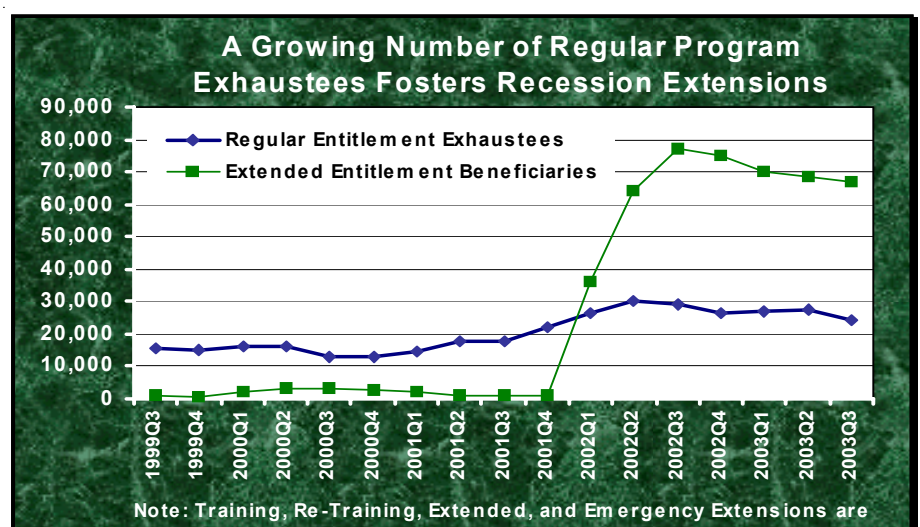
The Total Unemployment Rate (TUR) relies heavily on the Current Population Survey. In the last months of 2001, the TUR moved on through the 6.5 percent mark. In December 2001, Washington had one of the highest unemployment rates in the country at 7.0 percent. EB was paid for the first time in over nine years in January 2002.

#### **Figure 73**

Unemployment Insurance Compensation Exhaustees and Extended Entitlement Beneficiaries

Washington, 1999 Quarter 3 - 2003 Quarter 3

Source: *Employment Security Department*



At the turn of the century, the regular UI program was issuing between 15,000 and 16,000 final payments on claims per quarter. This number accounted for about 11 percent of all regular UI checks issued. The count was relatively constant up through the first quarter of 2001. How quickly it took off—by the first quarter of 2002 there were over 26,000 final pays. The state's Total Unemployment Rate had continued growing and triggered the EB program “on” in January. The federal Temporary Emergency Unemployment Compensation (TEUC) program started in March. The exhaustees started moving into the extended programs. The first quarter of extensions added over 36,000 beneficiaries to the population of insured unemployed. This figure was the answer to the question, “How many beneficiaries were drawing benefits beyond the regular entitlement?” It amounted to 15 percent of the total beneficiary population constant up through the first quarter of 2001.

### *Many Did Not See It Coming*

Most of the individuals who were laid off before the recession began, when finding a job was easy, never thought for a minute that the return to work would be a challenge. A follow up on new claims filed in the first quarter of 2001 found that individuals laid off from firms in the management of companies and enterprises sector were the first to experience increased levels of exhaustion. Two quarters later the new pattern was taking hold on the labor market. Especially prominent among the growing number of exhaustees were individuals from the information and real estate and rental leasing industries. It was not long before claimants from the utilities industry joined the group. An increasing exhaustion rate became quite common across industry sectors for beneficiaries who started a new regular claim in 2002. Two industries, however, seemed to buck the trend. These were transportation and warehousing and health care.

Those same individuals who filed for regular UI in the first quarter of 2001 were the most likely to be in the first group to draw extended benefits in the first quarter of 2002. Former workers in real estate and rental leasing and utilities led the way into the extension entitlements. The real surge in extendees came as those who filed a new claim for regular UI in the third quarter of 2001 began to exhaust their claims. Again, not all industries were found to be very likely to go on extension. Individuals in health care, food services, and transportation and warehousing were not as likely to move on to the extension programs.

Beneficiaries filing a new regular claim in the first quarter of 2002 had about a 10 to 12 percent chance of going on to draw extended benefits. The probability of drawing extended benefits was linked to the industry sector of the beneficiary in the base period. Beneficiaries filing new claims by the end of the year were showing a 30 percent or greater chance of drawing benefits from an extension program if separated from work in the information, utilities, real estate, or professional, scientific and technical services industries. Interestingly, beneficiaries coming from agriculture, construction, mining, and utilities were showing lower chances of drawing an extension check.

### *How Long is Long?*

During a week in August 2003, there were 6,143 individuals collecting unemployment insurance from the extended benefits (EB) entitlement. In Washington State, the EB entitlement is most often the last entitlement available for beneficiaries who have already exhausted other state and federal extensions to the regular program.

Nearly 95 percent of the beneficiaries in the EB program are attached to a local WorkSource center. Of the 6,143 beneficiaries in the analysis week, 5,826 were serviced through a local WorkSource center and 317 beneficiaries were serviced as an interstate claim. Nearly 63 percent of the 5,826 beneficiaries linked to a WorkSource center were provided with a staff-assisted service from the department's most visible reemployment services.

One-half of the individuals on this week's list of EB beneficiaries filed a new claim for regular unemployment insurance before June 1, 2002. The most recently filed new claim for regular UI occurred in March 2003. The oldest benefit year start date for this group of EB beneficiaries was in the first week of January 2001.

One-half of the EB beneficiaries attached to a WorkSource center received 58 or more weeks of unemployment compensation. The majority of the EB beneficiaries were compensated at least 28 weeks on the regular claim. Over 43 percent of the 5,826 beneficiaries attached to a WorkSource center drew the maximum of 30 weeks of regular UI.

Nearly two-thirds of the EB beneficiaries attached to WorkSource centers have drawn 26 weeks of TEUC. Of the 5,826 EB beneficiaries, 50 percent have drawn at least 5 weeks of compensation on this, their last entitlement. Part of the way EB works is that it extends the regular program by up to 13 weeks, but the combined total of weeks, *i.e.*, regular plus EB, cannot exceed 39. There are 614 beneficiaries on this week's list, over 10 percent, who received more than nine weeks of EB.

There are 517 EB beneficiaries on this week's list who drew their last check last week. Over 60 percent of these exhaustees, 317 beneficiaries had drawn 65 weeks or more of compensation. The 292 beneficiaries who exhausted all entitlements after receipt of last week's check filed a new initial claim in April or May 2002. A relatively large number of benefit exhaustees drew a final check at 42 weeks of total compensation; these individuals had filed a new initial claim in October 2002.

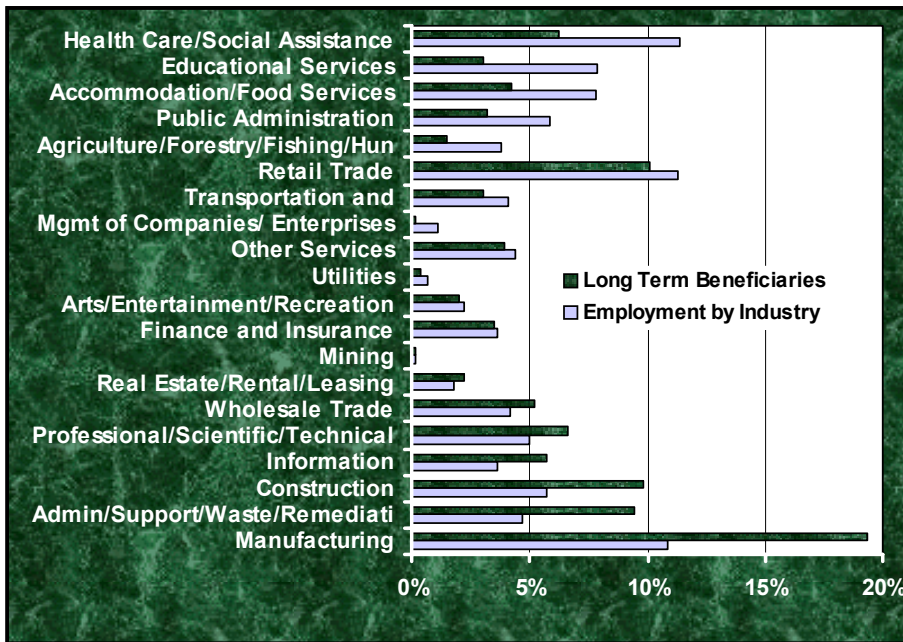
### *Industries and Occupations of the Long Term Unemployed*

Key economic indicators from the third quarter of 2003 are being flashed about by individuals and organizations anxious to generate excitement around an economic recovery. By most accounts the last piece of the recovery, jobs, was finally beginning to fall into place. The next several charts take a preliminary look at where the jobs are relative to the industry and occupational backgrounds of the long term unemployed.

*Long Term Unemployed Not Found in All Industries*

In the third quarter of 2003, the long term beneficiaries are disproportionately found in 7 of the 20 sectors of Washington's economy (see Figure 74). The three largest sectors of the state's economy are health care and social assistance, retail trade, and manufacturing. Nearly 20 percent of the long term unemployed formerly held positions in manufacturing alone. The share of employment for this sector is about 11 percent. Retail trade contributes one of the largest shares to the population of the long term unemployed. Its share of the employee population, however, exceeds its share of the long-term population.

**Figure 74**  
 Long Term Unemployment Beneficiaries and Employment by Industry  
 Washington, 2003 Quarter 3  
 Source: Employment Security Department



At the other end of the spectrum is the health care and social assistance sector where only 6 percent of the long term beneficiaries came from an industry that generated over 11 percent of the state's jobs.

Two industries that generate large proportions of the long term unemployed deserve further analysis. The administrative and support and waste management and remediation services sector is the industry grouping where most of the temporary employment firms are located. Assignments in this sector range from long term temporary positions, such as computer analysts, to day labor jobs. The construction industry is characterized by seasonal employment. The many weeks since a new claim are very likely the result of several temporary spells of UI rather than one long continuous spell. These temporary spells are often referred to as add claims in the official reports.

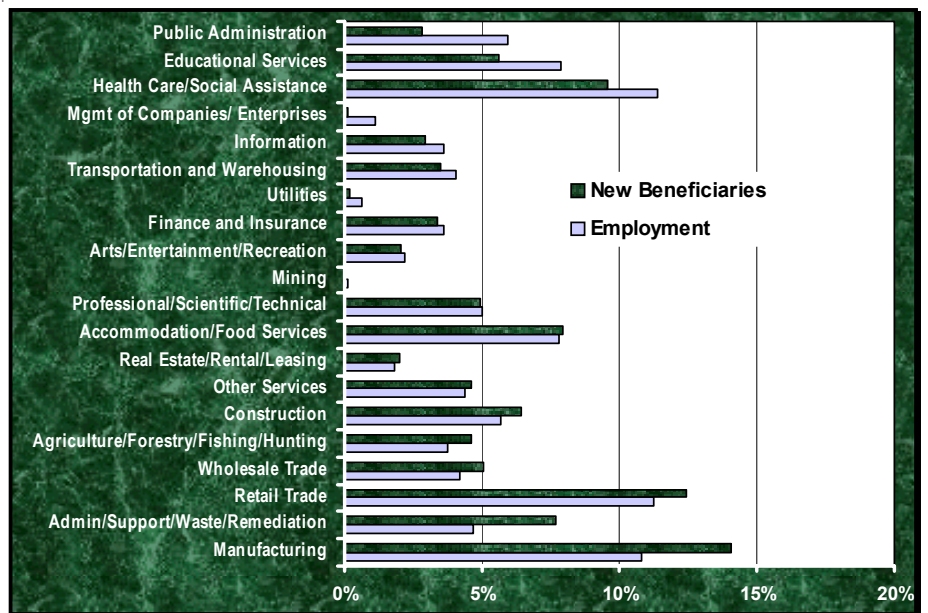
### *New Beneficiaries More Evenly Spread*

*Figure 75* compares beneficiaries identified shortly after filing a new claim for regular unemployment insurance. The immediate impression is that the composition of this group of beneficiaries more nearly matches the distribution of employees across industries. Again, the manufacturing and administrative and support and waste management and remediation services sectors generate more beneficiaries than might be expected given their share of the economy. Retail trade has crossed the line, where the share of long term unemployed generated by the retail sector was below expectations; in this group it too exceeds the employment share.

**Figure 75**

New Unemployment Beneficiaries and Employment by Industry  
Washington, 2003 Quarter 3

Source: Employment Security Department



The fact that the manufacturing and the administrative and support and waste management and remediation services sectors continue to contribute a disproportionately large share of the UI beneficiaries suggests the permanent nature of the job loss in these industries. This phenomenon, suggestive of structural dislocation, contrasts with retail trade where the higher than expected separations for new beneficiaries is matched with lower than expected numbers of long term beneficiaries.

### *Comparing Long Term to New Beneficiaries*

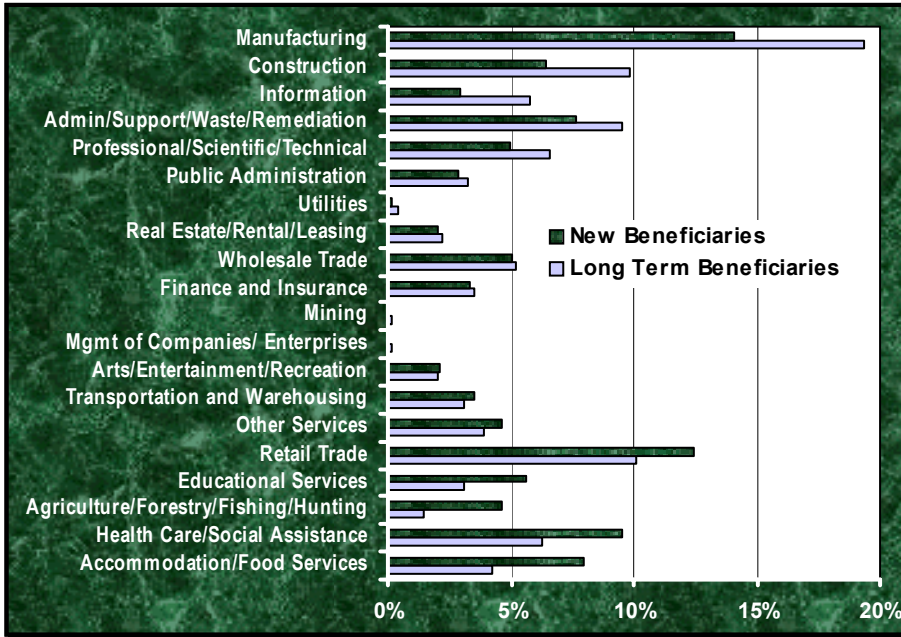
*Figure 76* compares the long term beneficiaries to the new beneficiaries. No surprise at this point. Manufacturing firms are the greatest source of the UI beneficiaries. The comparison finds manufacturing, construction, administrative and support and waste management and remediation services, and the professional, scientific, and technical services sectors contributing strongly to the long term group.

The new beneficiaries are most heavily represented by former employees of the retail trade, health care and social assistance, and accommodation and food services sectors.

**Figure 76**

Distribution of New and Long Term Unemployment Beneficiaries by Industry Washington, 2003 Quarter 3

Source: Employment Security Department



*Jobseekers Offer Their Knowledge, Skills, and Abilities to the Labor Market*

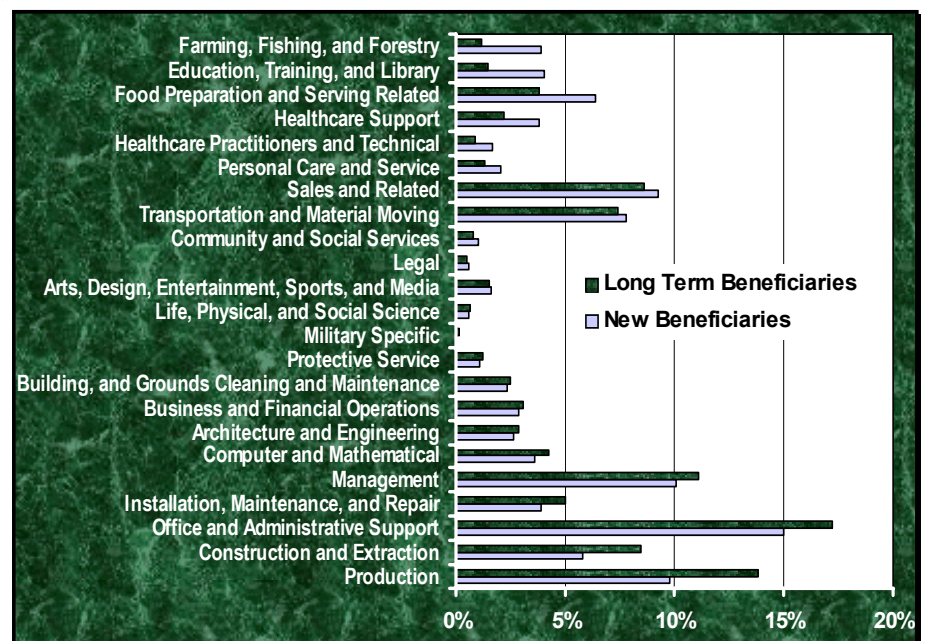
Occupational categories do a fair job of summarizing the specialized bundles of knowledge, skills, and abilities that the unemployed have to offer to the labor market. The new beneficiaries have the advantage of a recent work history. Often as not, they are well positioned to take advantage of a job referral. Some of the newly separated may need some help putting together a resume or getting pointed in the right direction for their job search. Connectedness and confidence, however, help most new beneficiaries put together a quick return to work.

The long term unemployed have a more difficult road ahead as they seek to return to work. The long term group in this analysis is faced with explaining what they have been doing for the last 58 or more weeks. For many, the separation has been long enough that their skills are not up to the new demands of the labor market. They may no longer have access to the tools required or have transportation to the job site. Feeling desperate, discouraged, and rejected, the long term unemployed find it hard to image a return to work in a labor market without jobs.

Figure 77 compares the last occupation of the long term beneficiaries to the last occupation of the new beneficiaries. Keep in mind that the last occupation may not be the occupation that is being sought. Either an eroded skill base or a new vision of a work life may have the unemployed jobseeker looking for something new.

Individuals in production, construction, office and administrative support, transportation, and sales compose the largest share of the long term unemployed. In most of these groups the long term unemployed have a more visible presence than do the new beneficiaries.

**Figure 77**  
 Distribution of New and Long Term Unemployment Beneficiaries  
 by Occupation Group  
 Washington, 2003 Quarter 3  
 Source: Employment Security Department



*Increasing Job Orders*

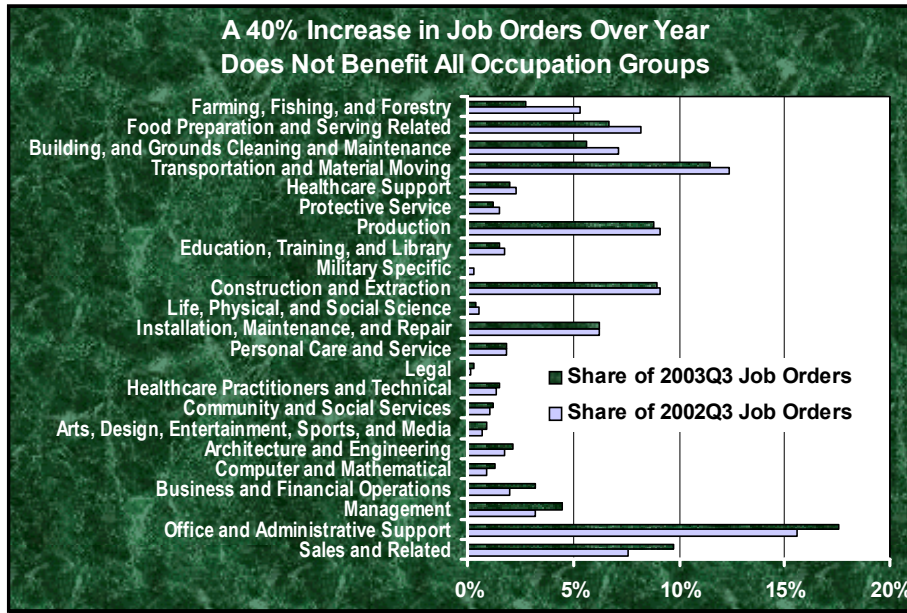
There were over 13,500 new job orders filed through the WorkSource system ([www.go2worksource.com](http://www.go2worksource.com)) in the third quarter of 2003. This number amounted to a 40 percent increase over the number of new job orders filed during the same quarter in 2002.

Office and administrative support and transportation and material moving occupations were the most requested positions in both 2002 and 2003. Sales; installation, maintenance, and repair; management; architecture and engineering; healthcare practitioners; and computer and mathematical occupations all showed an increasing presence in the number of new job orders.



Construction, production, and food preparation were a smaller share of the new job orders in 2003 compared to 2002. Farming, fishing, and forestry, along with healthcare support and protective services, also were the source of relatively fewer new job orders.

**Figure 78**  
 Job Orders by Occupation Group  
 Washington, 2002 Quarter 3 - 2003 Quarter 3  
 Source: *Employment Security Department*

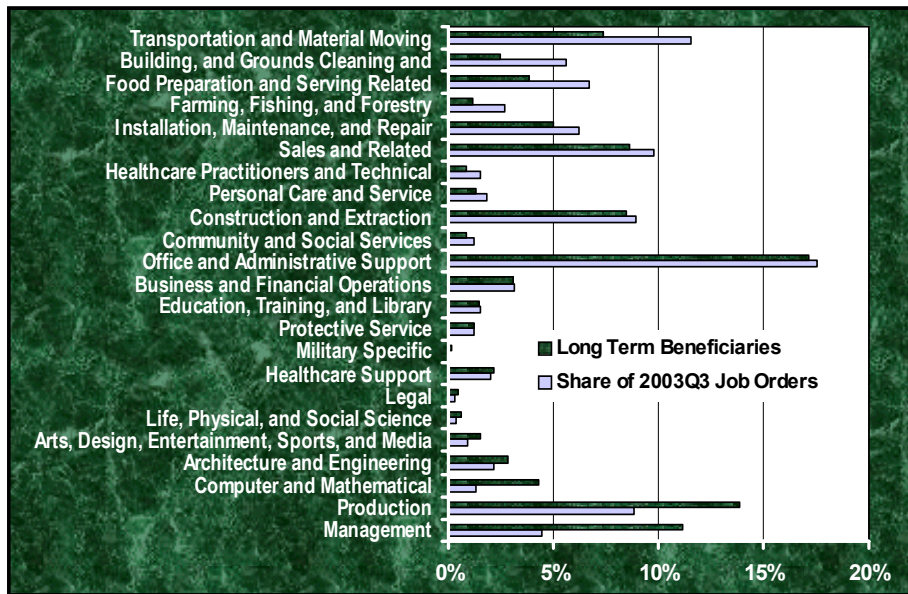


*Occupations of the Long Term Mismatch Orders Coming In*

A greater proportion of the new job orders are coming in from the transportation and material moving; building and grounds cleaning and maintenance; and food preparation occupation groups than there are shares of long term beneficiaries seeking work.

The real need for job orders is in management; production; computer and mathematical; and architectural and engineering occupations. With the exception of production, these are the groupings where there have been increasing numbers of orders.

**Figure 79**  
 Distribution of Long Term Unemployment Beneficiaries  
 and Job Orders by Occupation Group  
 Washington, 2003 Quarter 3  
 Source: *Employment Security Department*



# Chapter 5 - Occupational Outlook

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## *Occupational Outlook*

The first (*the Year in Review*) and third (*Cyclical, Structural, and, Seasonal*) chapters of this report examine labor market conditions for industries—the world of firms and employers. The outlook for Washington’s industries directly bears upon the outlook for occupations and the demand for workers with certain skills. This chapter explores the current and projected labor market conditions in the context of occupations—the world of workers.

### *Occupational Distribution*

Three out of every four workers in Washington work in service related occupations. Those jobs are concentrated in the following broad occupation groups:

- Professional
- Service
- Office and Administrative Support
- Sales
- Management, Business, and Financial

The balance of Washington’s workforce, about one in four workers, is concentrated in production-related occupations. Those occupation groups include:

- Transportation and Material Moving
- Construction and Extraction
- Production
- Installation and Maintenance
- Farming, Fishing, and Forestry

Professional occupations represent the largest individual occupation group, with 22.0 percent of statewide employment (just short of 670,000 jobs). The professional group is comprised of a large and diverse list of jobs—computer, mathematical, architecture, engineering, physical sciences, healthcare, and education—to name a few. The common element is that they are of a professional or highly technical orientation. Farming, fishing, and forestry currently represent the smallest occupation group with only 2.5 percent of total employment. *Figure 80* demonstrates the distribution of Washington’s workforce among major occupation groups.

Like industries, there is a standard classification system for organizing occupations into related groups. The system used by Washington and all other states is simply called the **Standard Occupational Classification**, or “SOC.” Not only is the SOC used to classify occupational employment projections, but it’s also used for the Occupational Employment Statistics Survey, the Washington Job Vacancy Survey, and to track unemployment insurance claims.

**Figure 80**

Employment Distribution Among Occupational Groups  
Washington, 2002

Source: Employment Security Department

Occupation Group	Estimated Employment 2002	Share of Total Employment
Professional	669,266	22.0%
Service	590,559	19.4%
Office and Administrative Support	452,240	14.9%
Sales and Related	310,973	10.2%
Management, Business, and Financial	244,383	8.0%
Transportation and Material Moving	220,944	7.3%
Construction and Extraction	186,585	6.1%
Production	171,763	5.7%
Installation, Maintenance, and Repair	117,038	3.9%
Farming, Fishing, and Forestry	75,753	2.5%

### The Demand for Workers

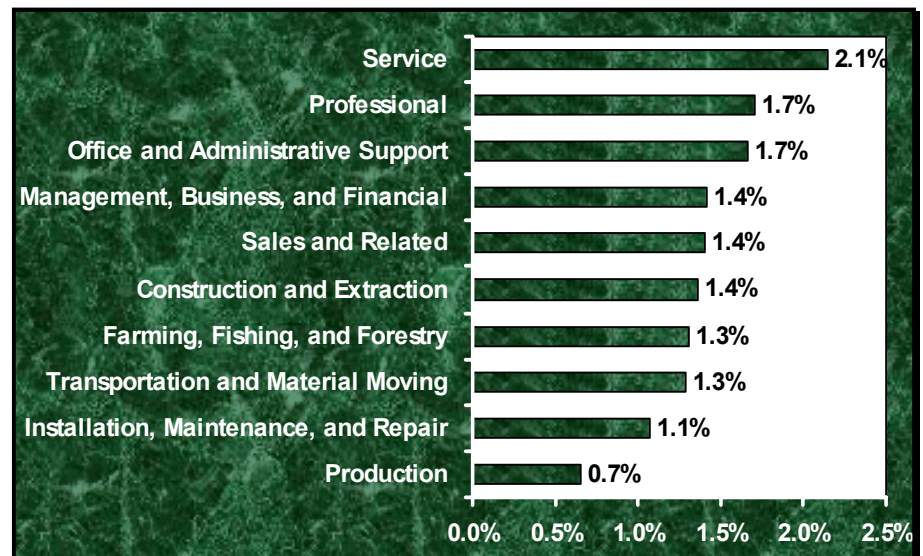
#### Occupational Employment Projections

How will employment patterns change over the next ten years? The state's occupational composition is projected to continue to become slightly more skewed toward office and professional types of work. Service occupations are expected to enjoy the fastest growth in the mid-term (2002-2007). Professional and office occupations are also projected to have relatively strong growth. By contrast, the production and installation occupations are forecasted to rise at much lower annual rates (0.7 and 1.1 percent, respectively).

**Figure 81**

Projected Annual Average Growth, Major Occupational Groups  
Washington, 2002 - 2007

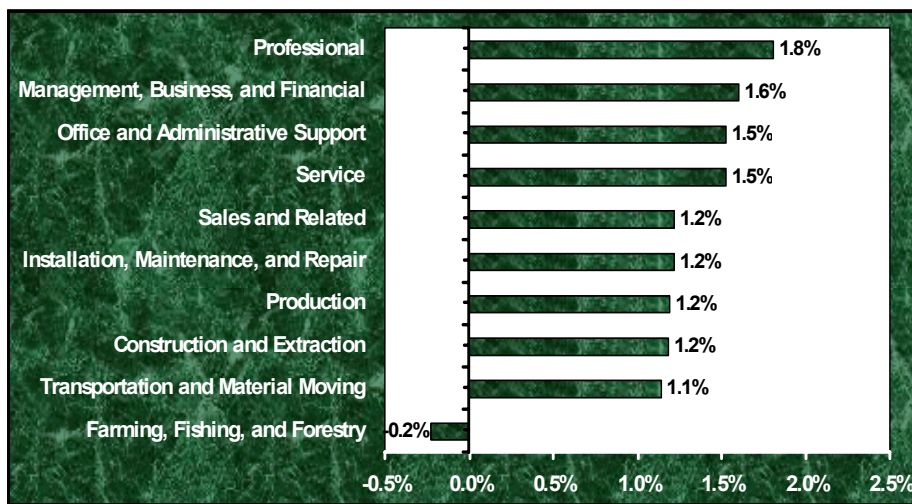
Source: Employment Security Department



Like industry projections, which are covered briefly in the “**Year in Review**” chapter, **occupational employment projections** are prepared for the short-term (first quarter, 2003 – first quarter, 2005), the mid-term (2002-2007), and the long-term (2007-2012). Unlike the industry projections, however, occupational projections attempt to estimate a full-employment picture of the economy, and therefore include estimates of the self-employed, agricultural workers, and unpaid family members.

Longer-term projections (2007-2012) foresee slower annual growth rates for service, office and administrative, construction, and transportation occupations than in the previous five-year period. Although slower than the previous period, service and, office and administrative occupations are expected to have annual employment growth around 1.5 percent between 2007 and 2012, while projections for most other major groups are for growth between 1.1 and 1.2 percent annually. Meanwhile, farming, fishing, and forestry are projected to suffer annual declines during the 2007-2012 period. Professional and management occupations, in particular, are seen as having a good chance for strong long-term growth.

**Figure 82**  
 Projected Annual Average Growth, Major Occupational Groups  
 Washington, 2007 - 2012  
 Source: Employment Security Department



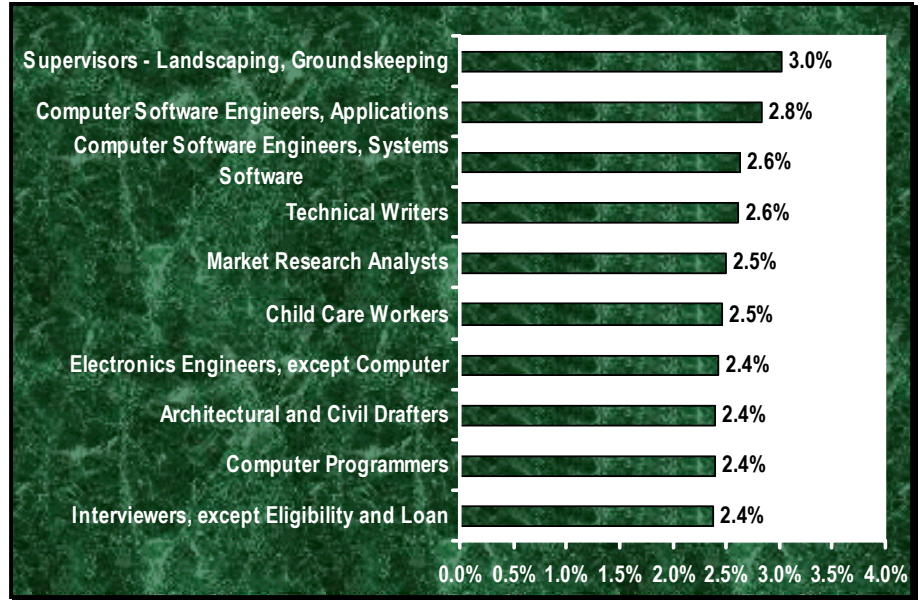
When looking at the individual jobs expected to post the highest annual growth rates over the next ten years, the dominance of the professional and service occupation groups is evident. In fact, six of the top ten growth occupations are from the professional group, while another three are from the service group. *Figure 83* depicts projected annual average growth rates for the ten occupations predicted to have the strongest growth between 2002 and 2012 (with estimated employment of 2,000 or more in the year 2002, excluding self-employment and private household occupations). Considering the increasingly important role of technology across most sectors of the economy, it's no surprise to see several highly technical occupations on this list.

Complete occupational projections are available on the Internet at: [www.workforceexplorer.com](http://www.workforceexplorer.com). Click on the "Download Data" menu item, and then scroll down to the box marked "Projections."

**Figure 83**

Fastest Growing Occupations by Annual Average Growth Rates Washington, 2002 - 2012 (2002 Estimated Employment of 2,000 or more; excluding self-employed and private household jobs)

Source: Employment Security Department

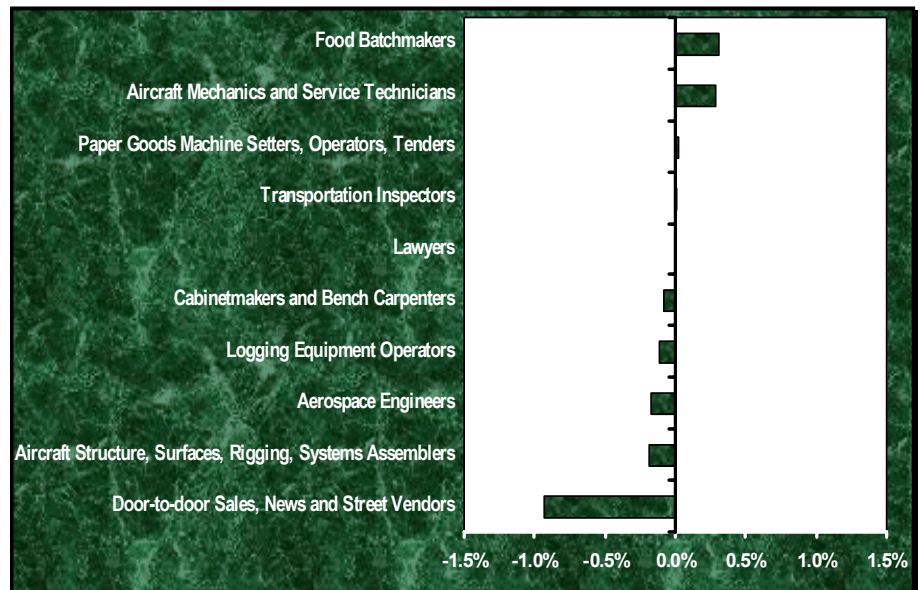


**Figure 84**

Slowest Growing and Declining Occupations by Annual Average Growth Rates

Washington, 2002 - 2012 (2002 Estimated Employment of 2,000 or more)

Source: Employment Security Department



At the other end of the scale are those individual occupations projected to either decline or post the lowest annual growth rates over the 2002-2012 period. Six of the ten slowest growing and largest declining occupations (*as shown in Figure 84*) are in the production group. This list reveals little in the way of surprises. There are occupations with slow and negative growth that clearly relate to the aerospace and air transportation industries, reflecting downturns already examined in the industry side of the labor force equation. Five of these occupations are projected to have year-by-year employment declines; the others are not expected to see visible growth over the coming ten years.

### About the May 2003 Washington State Job Vacancy Survey

The May 2003 Washington Job Vacancy Survey produced point-in-time estimates of job vacancies in Washington based on a survey of 21,349 employers with more than four employees. The overall response rate to the survey was 72 percent. The sample of establishments surveyed was randomly selected among firms representative of size class (number of employees), workforce development areas, and industries across the state.

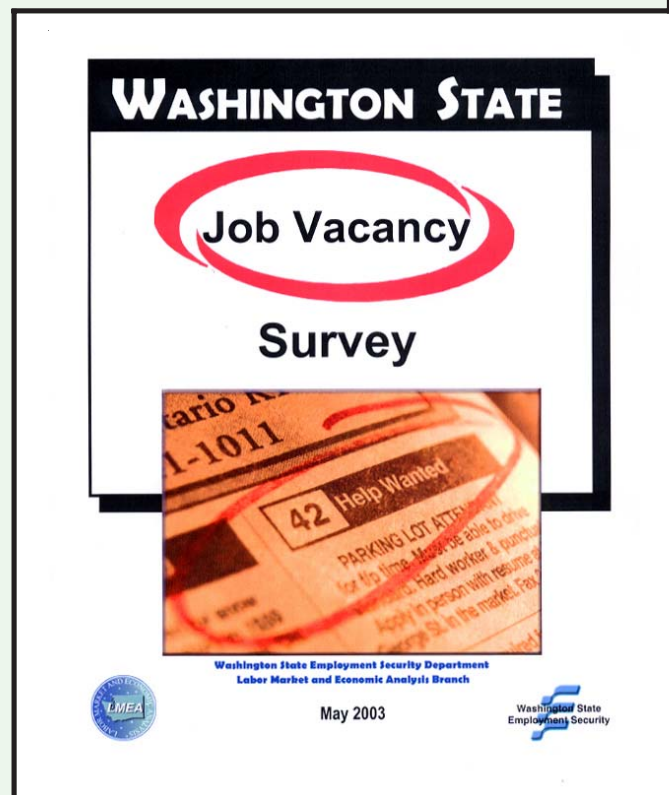
By measuring the number of vacant positions for which employers are hiring, the Washington Job Vacancy Survey provides valuable insights into employment conditions in our state. Survey results show not just the number of vacant positions, but also a number of job characteristics to reveal the reality of employers' immediate workforce needs.

For each vacant position, the survey gathers basic information about the following requirements and characteristics:

- Wage offered
- Full time/part time status
- Permanent/temporary status
- Number of weeks vacant
  
- Newly-created positions
- Education requirements
- Licensing/certification requirements
- Experience requirement

Results are cross-tabulated by occupation group, industry, and region. Reference lists of occupation and industry categories are located at the end of this report.

Detailed results sorted by Workforce Development Area are available to download from the Internet. To get this information go to: [www.workforceexplorer.com](http://www.workforceexplorer.com). Choose from the "Economy" page or the "Data Download" page—either one will lead you to downloadable spreadsheets and online reports.



### Job Vacancies

In May 2003, there were an estimated 54,939 job vacancies statewide, 74 percent of which were full time, and 70 percent of which were permanent. Of all job openings, 33 percent (18,095) required education beyond high school or its general equivalent. Twenty-four percent of vacant positions required a professional license or certificate and 50 percent required related work experience. Of the 54,939 vacancies, just under 1,800 (3 percent) of them were for newly-created positions rather than existing positions left vacant.

Top among Washington employers' list of job openings in May 2003 were office and administrative support positions, an occupation group with fairly broad representation across all industries. At the time of the survey, employers had 6,769 openings for administrative positions—12 percent of all vacancies.

The number two most-in-demand occupations in May 2003 were in farming, fishing, and forestry with just shy of 6,100 openings. However, of those openings, just 2.0 percent (135) were permanent positions. The prominence of this occupation group in the job vacancy statistics reflects the seasonal nature of job vacancy information, as it was gathered in late spring just as the first wave of tree fruit crops became ready for harvest. Sales occupations, healthcare practitioners, and food preparation also topped the list of occupation groups with the most vacancies.

**Figure 85**

Job Vacancies by Detailed Occupation Group  
Washington, May 2003

Source: *Employment Security Department,  
Washington State Job Vacancy Survey, May 2003*

Occupation Group	Estimated Job Vacancies	Share of Total Openings	Median Wage Offered	Full Time Openings	Permanent Openings	Average Weeks Vacant	Newly Created Positions	Requiring Education Beyond	Requiring License or Certificate	Requiring Related Experience
Office and Administrative Support	6,769	12%	\$10.00	78%	88%	3	3%	20%	5%	59%
Farming, Fishing, and Forestry	6,091	11%	\$7.74	85%	2%	3	2%	0%	4%	6%
Sales and Related	5,235	10%	\$8.14	59%	81%	5	2%	16%	6%	34%
Healthcare Practitioners and Technical	5,136	9%	\$20.00	70%	90%	10	3%	84%	84%	65%
Food Preparation and Serving Related	4,318	8%	\$7.10	43%	66%	4	2%	4%	17%	41%
Transportation and Material Moving	3,630	7%	\$8.00	63%	49%	3	2%	5%	32%	34%
Business and Financial Operations	2,699	5%	\$19.23	97%	98%	6	2%	72%	10%	87%
Computer and Mathematical	2,425	4%	\$24.04	99%	97%	5	2%	88%	5%	93%
Production	2,227	4%	\$9.00	94%	84%	5	5%	14%	8%	46%
Education, Training, and Library	2,122	4%	\$13.52	75%	79%	4	3%	78%	65%	47%
Personal Care and Service	1,912	3%	\$7.56	51%	65%	4	4%	25%	37%	52%
Construction and Extraction	1,849	3%	\$12.02	84%	48%	6	16%	10%	27%	61%
Healthcare Support	1,770	3%	\$10.00	67%	91%	6	4%	41%	57%	53%
Building and Grounds Cleaning and Maintenance	1,461	3%	\$8.40	68%	47%	5	3%	4%	5%	29%
Management	1,177	2%	\$31.25	96%	97%	7	3%	74%	16%	91%
Installation, Maintenance, and Repair	1,088	2%	\$10.00	93%	71%	7	2%	25%	27%	55%
Protective Service	1,066	2%	\$10.00	61%	70%	4	7%	8%	43%	48%
Community and Social Services	1,035	2%	\$13.23	73%	89%	4	4%	63%	35%	56%
Life, Physical, and Social Science	964	2%	\$15.86	91%	74%	8	5%	63%	16%	60%
Architecture and Engineering	904	2%	\$22.51	99%	95%	8	7%	80%	20%	87%
Arts, Design, Entertainment, Sports, and Media	843	2%	\$12.00	47%	58%	5	2%	55%	17%	57%
Legal	220	0%	\$17.34	97%	92%	6	3%	59%	20%	73%
<b>Total, All Occupations</b>	<b>54,939</b>	<b>100%</b>	<b>\$9.16</b>	<b>74%</b>	<b>70%</b>	<b>5</b>	<b>3%</b>	<b>33%</b>	<b>24%</b>	<b>50%</b>



The single occupation with the most vacant positions was graders and sorters (agricultural products), with an estimated 4,197 vacancies statewide. Again, the standing of this position at the top of vacancy rankings indicates seasonal hiring in full swing. Registered nurses ranked second, with 2,511 vacancies across Washington.

Statewide, vacant positions paid a median hourly wage of \$9.16. Sixty-three percent of vacancies offered hourly wages under \$10.00, while 7.0 percent offered wages above \$25.00 per hour. More details about wages offered for job vacancies are analyzed in the “Income and Wages” chapter of this report.

### How do the Job Vacancy Survey and Occupational Projections compare?

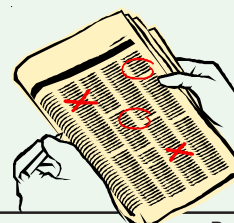
In addition to providing a wealth of information on current labor market conditions, the Job Vacancy Survey (JVS) allows us the opportunity to compare Washington’s occupational employment projections to another source of occupational information. The fundamental difference between the two is that the JVS is a survey that gives a snapshot picture of vacancies at one point in time, while projections estimate the annual number of openings. Also, since the JVS represents one month of the year, it will exhibit seasonal variations not seen in the projections data. While the data is not directly comparable due to these differences, relative rankings of occupations could be used to apply a “reality check” on both.

Since both sources estimate how many openings there will be for detailed occupations, we compared the most recent JVS (May 2003) with annual average openings for 2003, Q1 - 2005, Q1 from projections. The statistical technique rank correlation was used to make comparisons. After testing at multiple levels of detail, it was found that the hypothesis of independence is rejected with probability not less than 99.99 percent (for 95 percent confidence level) for 3-, 4-, and 6-digit Standard Occupational Classification levels of detail. In other words, the two data sets are highly related and tell similar stories about employers’ demands for certain occupations.

One can see some of the similarities by looking at *Figure 86* and comparing top ten lists for each source. The lists share six out of ten occupations in common, which, given the multitude of occupations out there, is significant. Jobs that require short-term on-the-job-training were most common for both JVS and projections, while those requiring moderate on-the-job-training represented the smallest share of openings for both.

**Figure 86**

Top Ten Openings for Job Vacancy Survey and Occupational Projections  
Washington, Vacancies: May 2003; Projections: 2003 Quarter 1 - 2005 Quarter 1  
Source: Employment Security Department



Job Vacancy Survey		Projections	
Occupation Title	Rank	Occupation Title	Rank
Registered Nurses	1	Retail Salespersons	1
Cashiers, except Gaming	2	Cashiers, except Gaming	2
Customer Service Representatives	3	Combined Food Preparation, Serving Workers, including Fast Food	3
Retail Salespersons	4	Waiters and Waitresses	4
Waiters and Waitresses	5	Child Care Workers	5
Laborers: Freight, Stock, Material Movers, Hand	6	Maids and Housekeeping Cleaners	6
Nursing Aides, Orderlies, and Attendants	7	Counter Attendants, Cafeteria, Food Concession, Coffee Shop	7
Computer Software Engineers, Systems Software	8	Office Clerks, General	8
All other Business Operations Specialists	9	Laborers: Freight, Stock, Material Movers, Hand	9
Maids and Housekeeping Cleaners	10	Registered Nurses	10

Rank: Ordered ranking of occupations by number of job vacancies or job openings.

**Figure 87**

Job Openings by Education and Training Level, Job Vacancy Survey Compared to Occupational Projections  
Washington, Vacancies: May 2003; Projections: 2003 Quarter 1 - 2005 Quarter 1  
Source: Employment Security Department

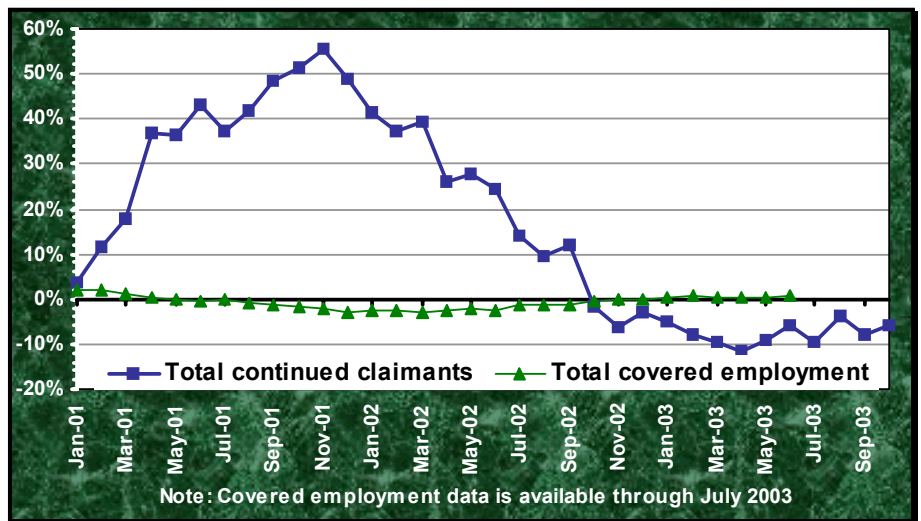
Education and Training Level	Job Vacancy Survey	Projections
Bachelor degree or higher	20.0%	19.2%
AA degree, post-secondary training, or long-term, on-the-job training	28.3%	20.7%
Moderate-term on-the-job training	18.1%	14.0%
Short-term on-the-job training	33.6%	46.1%

*Unemployment Claims by Occupation*

**Continued claimants** are an unduplicated count of persons in their waiting period, or requesting payment for one or more weeks of unemployment.

Based on several economic gauges, the *National Bureau of Economic Research* dated the most recent recession from March to November 2001. However, as has been discussed in earlier chapters, employment trends have shown a different picture. Over-the-year changes in covered monthly employment only began to stabilize in early 2003. Unemployment insurance continued claims data is useful in tracking occupations during this period.

**Figure 88**  
Over-the-Year Percent Change, Covered Employment and Continued Unemployment Insurance Claims  
Washington, January 2001 - October 2003  
*Source: Employment Security Department*



*Figure 88* depicts over-the-year changes in total continued claims (claiming unemployment for more than one week) and total covered employment from January of 2001 to October of 2003. *Figure 88* demonstrates the expected inverse relationship between employment and unemployment claims growth, although changes in claims are much more pronounced. The peaks of continuing claims growth between August 2001, and June 2002, are consistent with the trough in employment numbers.

Examining changes in continuing claims for various occupation groups reveals different patterns during the recession and recovery. As shown in *Figure 88*, the turning point for year-over-year changes in monthly claims was in October 2002—that is the point at which claims from year-ago levels began declining<sup>1</sup>. This was the same turning point for the following five occupation groups:

- Management
- Office and Administrative Support
- Construction and Extraction
- Production
- Transportation and Material Moving

**Granger Causality**

**Correlation does not necessarily imply causation.** The Granger (1969) approach to the question of whether X causes Y is to see how much of the current Y can be explained by past values of Y, and then to see whether adding lagged values of X can improve the explanation. Y is said to be Granger-caused by X if X helps in the prediction of Y. When two-way causation is frequently the case, X Granger causes Y, and Y Granger causes X. Granger Causality measures precedence and information content, but does not by itself indicate causality in the more common use of the term.

A Granger Causality test produced surprising results. It shows that unemployment insurance claims could be used as a predictor of employment changes and, thus, could serve as an early warning indicator of turning points in employment growth. For a lag period of 12 months, causality is significant in both directions, but still, claims are much better predictors of employment, than vice-versa.

<sup>1</sup> Note that a drop in claims can either be due to an economic recovery where the unemployed are finding jobs or to a long malaise where claimants exhaust their claims and are thus no longer counted, but still unemployed.

Meanwhile, August 2002, was the turning point for computer and mathematical occupations; November 2002, for sales occupations; and January 2003, for building and grounds cleaning, as well as installation, maintenance, and repair occupations. It wasn't until March of 2003, that a turning point in unemployment claims for food preparation and serving occupations was observed.

In the last observed month (October 2003), claims finally started declining for protective services, but it is not clear yet if a sustained turning point has been reached for this occupation group. The group, to some extent, has seen turbulent claims because of the fallout from the shift from private to federalized security at commercial airports. No turning points have been observed for the following five occupation groups:

- Architecture and Engineering
- Life, Physical, and Social Services
- Community and Social Services
- Education, Training, and Library
- Healthcare Support

The last occupational group, healthcare support, still shows a large growth in unemployment claims (of 20 percent or more) for comparable months over the year. Still, claims as a percent of total employment in these occupations remain relatively low.

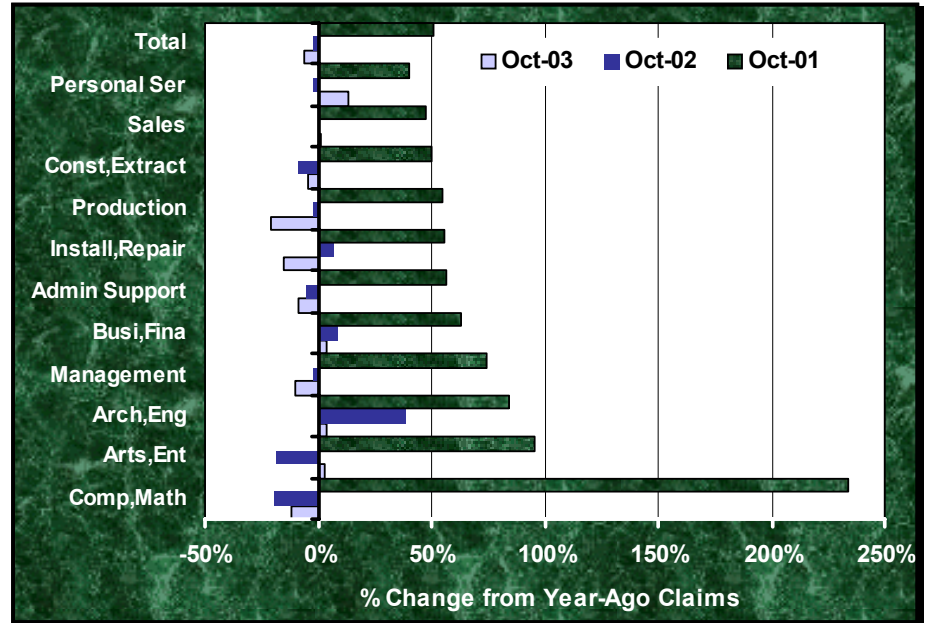
The following five occupation groups showed no obvious patterns in unemployment claims:

- Business and Financial Operations
- Legal
- Art, Design, Entertainment, Sport, and Media
- Personal Care and Service
- Farming, Fishing, and Forestry

Finally, unemployment claims made by workers in the healthcare practitioner and technical group demonstrate a strong counter cyclical pattern. That is, when claims were up overall and for other groups, those for healthcare practitioners and technicians were declining (until November 2001). Since November 2001, their claims have grown by 30 percent on an annual basis.

**Figure 89**

Over-the-year Percent Changes in  
Unemployment Insurance Claims, Selected Occupations  
Washington, October, 2001 - October, 2003  
Source: *Employment Security Department*



*Figure 89* demonstrates the variety of trends in unemployment claims for select occupational groups. Of the three years shown, the first year far outpaced the subsequent two in terms of growth in the number of claims. Computer and mathematical occupations, in particular, showed tremendous expansion. Ironically, just a few months before, this occupational group was considered by many as having a shortage of workers. The variations are even larger if we consider the monthly patterns of more detailed occupations.

### *Unemployment Shares by Occupation*

In order to gain a better understanding of the relative slackness in employment among different occupations, claims are compared to employment to derive an occupational unemployment share. To use this measure, the seasonality bias is eliminated from the claims data by averaging monthly claims for 2002.

The average numbers of unemployment claims for 2002, and their shares of estimated employment by occupation group, are presented in *Figure 90*. Worth noting here, is that the total share of claims is expected to be lower than the overall official state unemployment rate, because not all of unemployed labor force participants are eligible for unemployment insurance. The number of occupational groups with below average occupational unemployment shares (4.7 percent) is more than twice the number above average.

**Figure 90**  
Average Monthly Unemployment Insurance Claims,  
Estimated Employment, and Occupational Unemployment Shares  
Washington, 2002

Source: *Employment Security Department*

Occupation Group	Unemployment Insurance Claims	Estimated Employment 2002	Occupational Unemployment Share
Production	21,344	171,763	12.4%
Construction and Extraction	20,721	186,585	11.1%
Management	12,663	115,785	10.9%
Farming, Fishing, and Forestry	7,738	75,753	10.2%
Transportation and Material Moving	14,112	220,944	6.4%
Installation, Maintenance, and Repair	7,083	117,038	6.1%
Computer and Mathematical	4,861	98,004	5.0%
<b>Total, All Occupations</b>	<b>144,007</b>	<b>3,039,505</b>	<b>4.7%</b>
Architecture and Engineering	3,395	80,594	4.2%
Office and Administrative Support	17,860	452,240	3.9%
Arts, Design, Entertainment, Sports, and Media	1,924	58,186	3.3%
Healthcare Support	2,380	72,474	3.3%
Protective Service	1,643	54,155	3.0%
Sales and Related	9,145	310,973	2.9%
Building and Grounds Cleaning and Maintenance	3,340	121,362	2.8%
Business and Financial Operations	3,296	128,598	2.6%
Food Preparation and Serving Related	5,485	219,179	2.5%
Life, Physical, and Social Science	783	38,209	2.0%
Legal	490	26,678	1.8%
Personal Care and Service	1,885	123,389	1.5%
Community and Social Services	714	53,618	1.3%
Education, Training, and Library	1,808	179,559	1.0%
Healthcare Practitioners and Technical	1,130	134,417	0.8%

The lowest occupational unemployment shares are found in healthcare practitioners and technical (0.8 percent) and education, training, and library (1.0 percent) occupations. Even with high counter cyclical growth of unemployment claims, healthcare practitioners still have a relatively low share of unemployment claims.

Groups exhibiting double-digit occupational unemployment shares include production (12.4 percent); construction and extraction (11.1 percent); management (10.9 percent); and farming, fishing, and forestry (10.2 percent). The high share for construction and farming occupations can be partially explained by high seasonality and turnover rates.

**Personal income** data is compiled by the Bureau of Economic Analysis within the U.S. Department of Commerce. It reflects the total pre-tax income received by or on behalf of individuals from all sources:

- (1) wages and salaries,
- (2) proprietors' income,
- (3) dividends, interest, and rent,
- (4) government transfer payments and
- (5) other labor income.

Adjustments are made for contributions to social insurance and for differences between place of work and residence (the latter largely reflecting cross-border commuters between, for example, Washington and Oregon, Idaho, or British Columbia).

Because of its broad nature, it is one measure used to assess economic stability and change in an area and to compare areas against one another. It was adjusted for inflation using the Implicit Price Deflator for Personal Consumption Expenditures (or PCE Deflator).

## Personal Income

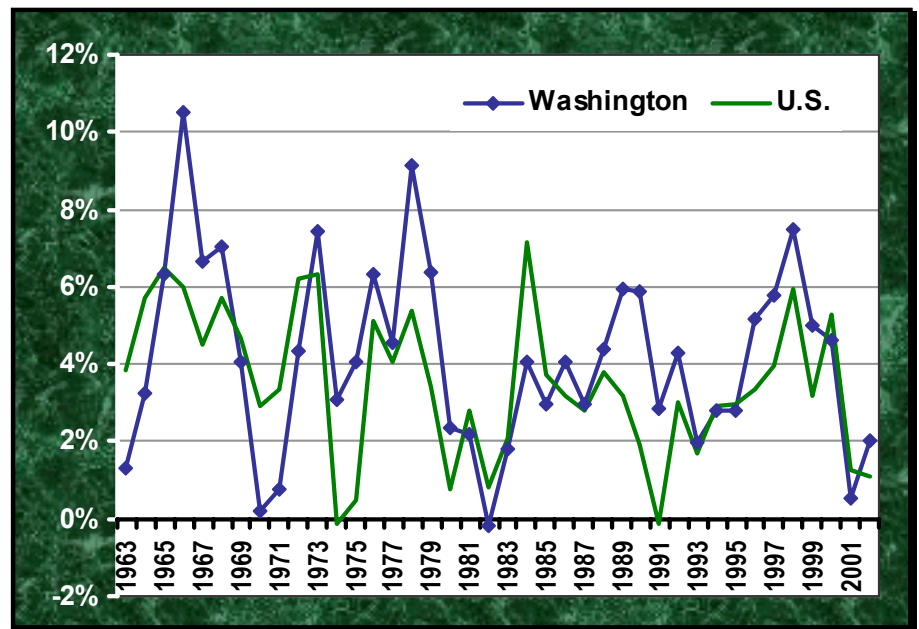
### State

Washington's total personal income was more than \$198 billion in 2002, which translated into 2.0 percent real growth from the previous year. This marked an upswing, albeit modest, after nearly flat real income growth in 2001. Prior to that the state enjoyed a string of moderate growth years from 1996 to 2000, averaging annual real growth of 4.5 percent. In fact, real income growth between 1962 and 2002 has grown at an average annual rate of 4.2 percent. *Figure 91* illustrates real personal income as a measure that reflects the ups and downs of the business cycle over time.

**Figure 91**

Annual Percent Change in Real Total Personal Income  
Washington and United States, 1963-2002

Source: U.S. Bureau of Economic Analysis



With earnings by place of work contributing a 70 percent share of total personal income for our state in 2002, the fact that it posted nearly flat growth (0.4 percent) over the year means that earnings did little to contribute to the 2.0 percent gain the state's population made in real personal income. Moreover, real growth in dividends, interest, and rents (a 19.0 percent share of total income) was flat-to-negative at -0.2 percent over the year. Only transfer payments, the smallest component of total personal income (a 14.0 percent share), posted positive real growth over the year—a whopping 12.7 percent. This significant growth over the year was due to increasing draws on the social service system as the economy remained in the doldrums and more people found wages dwindling or, worse, lost.

**Figure 92**

Derivation of Personal Income (billions of dollars)  
Washington, 2001 and 2002

Source: U.S. Bureau of Economic Analysis

	2001 Current \$	2001 Constant 2002 \$	2002 Constant 2002 \$	Nominal Change	Real Change
<b>Earnings by Place of Work</b>	<b>\$137,199,518</b>	<b>\$139,090,457</b>	<b>\$139,603,167</b>	<b>1.8%</b>	<b>0.4%</b>
(-) Personal Contribution for Social Insurance	\$8,446,082	\$8,562,489	\$8,701,332	3.0%	1.6%
(+) Adjustment for Residence	\$2,147,633	\$2,177,233	\$2,691,895	25.3%	23.6%
<b>(=) Net Earnings by Place of Residence</b>	<b>\$130,901,069</b>	<b>\$132,705,200</b>	<b>\$133,593,730</b>	<b>2.1%</b>	<b>0.7%</b>
(+) Dividends, Interest, and Rent	\$36,503,215	\$37,006,317	\$36,921,302	1.1%	-0.2%
(+) Transfer Payments	\$24,240,285	\$24,574,374	\$27,706,278	14.3%	12.7%
<b>(=) Total Personal Income</b>	<b>\$191,644,569</b>	<b>\$194,285,892</b>	<b>\$198,221,310</b>	<b>3.4%</b>	<b>2.0%</b>
Wages and Salaries	\$110,761,380	\$112,287,938	\$111,115,893	0.3%	-1.0%
(+) Other Labor Income	\$12,165,332	\$12,333,000	\$13,121,974	7.9%	6.4%
(+) Proprietors' Income	\$14,272,806	\$14,469,520	\$15,365,300	7.7%	6.2%
<b>(=) Earnings By Place of Work</b>	<b>\$137,199,518</b>	<b>\$139,090,457</b>	<b>\$139,603,167</b>	<b>1.8%</b>	<b>0.4%</b>

**Personal income** is derived from a combination of earnings; dividends, interest, and rents; and transfer payments (see Figure 92).

**Transfer payments** include government payments to individuals for which no service is rendered, government payments to nonprofit institutions serving individuals, and business payments to individuals and to nonprofit organizations serving individuals.

As noted, growth (or the relative lack thereof) in earnings by place of work typically sets the pace for growth in total personal income. Earnings by place of work is made of three components: wages and salaries; other labor income; and proprietors' income. 2002 was a bad year for wage and salary workers, who saw a decline in real earnings of 1.0 percent from 2001 levels. Unlike in 2001, when income growth was negative, proprietors enjoyed robust real income growth of 6.2 percent in 2002. Meanwhile, other labor income also appreciated at a nice clip—6.4 percent after adjustment for inflation. Other labor income consists of the contributions by employers to privately administered pension and welfare funds for their employees, the fees paid to corporate directors, and miscellaneous fees.

### *Across the U.S.*

Nationally, real personal income growth continued at a muted pace in 2002 at 1.1 percent, having grown by 1.5 percent from 2000 to 2001. The tempering of income growth across the nation brought Washington's standing in terms of real growth up from the paltry 46th position in 2001 to 19th in 2002. In a reversal of fortune, or perhaps simply as a matter of catching up, the District of Columbia (5.0 percent) and Hawaii (3.5 percent) made the greatest gains over the year in real personal income. For the period 1992 through 2002 they ranked at the bottom of real personal income growth. Among the states posting less than one percent real personal income growth from 2001 to 2002 were the powerhouses of California (0.9 percent), Texas (0.3 percent), Illinois (0.3 percent), and New York (-1.5 percent).

### *Northwest*

Among northwest states, Washington had far and away the highest total personal income at more than \$198 billion in 2001 (see Figure 93). Oregon's personal income, though the second highest in the region at just over \$100 billion, was but a little more than half of Washington's. Idaho, Montana, and Alaska generated personal income totals that were from one-tenth to one-sixth of Washington's. Despite the sheer size of Washington and Oregon's total personal income, they were outpaced in terms of real growth from 2001 to 2002 by Alaska (2.7 percent growth), Idaho (2.4 percent growth), and Montana (2.6 percent growth). While

“**Real**” income has been adjusted for inflation. In other words, it shows historical values in terms of the actual value of dollars today, minus the impacts of inflation, so we can see actual growth rather than price growth. When comparing monetary values over time it is best to use real values so all observations are in comparable units.

“**Nominal**” income has not been adjusted for inflation.

The **Implicit Price Deflator for Personal Consumption Expenditures**, which is produced by the U.S. Bureau of Economic Analysis, is used to adjust nominal to real dollar values in this chapter.

**Per capita personal income** is another measure of economic performance and change. By dividing total personal income by total population it provides a basis for comparing otherwise disparate geographic and populated areas.

not necessarily posting outstanding income growth rates, all states throughout the Northwest, with the exception of Oregon, outpaced real national growth in total personal income over the year. Oregon kept pace with the nation at 1.1 percent.

**Figure 93**  
Total Personal Income (billions of dollars)  
Northwest States and United States, 2001 and 2002  
Source: U.S. Bureau of Economic Analysis

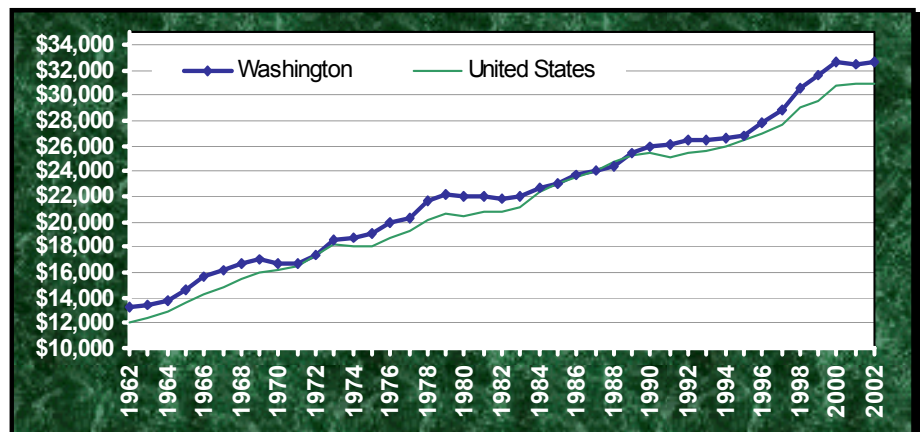
Area	2001 Current \$	2001 Constant 2002 \$	2002 Constant 2002 \$	Nominal Change	Real Change
Washington	\$191.645	\$194.286	\$198.221	3.4%	2.0%
Oregon	\$98.026	\$99.377	\$100.481	2.5%	1.1%
Idaho	\$32.363	\$32.809	\$33.585	3.8%	2.4%
Montana	\$21.769	\$22.069	\$22.650	4.0%	2.6%
Alaska	\$19.660	\$19.931	\$20.467	4.1%	2.7%
<b>United States</b>	<b>\$8,677.490</b>	<b>\$8,797.087</b>	<b>\$8,891.093</b>	<b>2.5%</b>	<b>1.1%</b>

### Per Capita Income

#### State

Washington’s per capita income was \$32,661 in 2002, which translated into over-the-year real gain of just 0.8 percent (\$244). 2002 represented a recovery from a negative 0.8 percent over-the-year hit in 2001, but still not enough to beat real per capita income in 2000 (\$32,668). These flat income numbers went hand in hand with the economic downturn after a few years of robust growth concentrated in the second half of the 1990s. Despite the virtual holding pattern over the past couple of years, Washington’s per capita income maintained a 6.0 percent advantage over the nation’s per capita income in 2002. At this level, Washington enjoys the same per capita income relationship vis-à-vis the U.S. that it commanded when the state’s economy was buoyed by the Washington Public Power Supply System project during the late 1970s and even the high tech boom of the late 1990s.

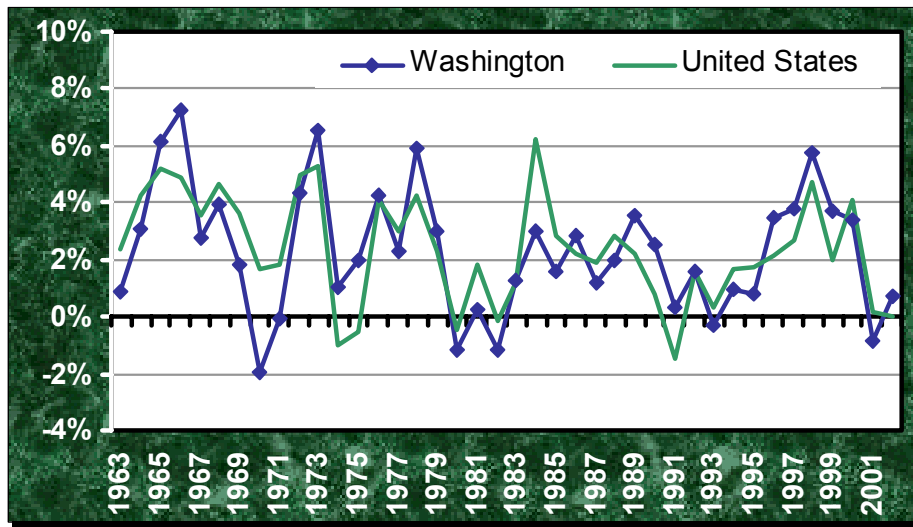
**Figure 94**  
Real Per Capita Personal Income  
Washington and United States, 1962-2002  
Source: U.S. Bureau of Economic Analysis





The idling of per capita income displayed over the last couple of years in Washington is not historically unfounded. In a trend that generally follows the business cycle (depicted in *Figure 95*), Washington's real per capita income declined in 1970 and 1971, 1980 and 1982, 1993, and 2001. Over the 1962-2002 observation period, Washington's per capita income progressed at a real average annual rate of 2.2 percent. U.S. per capita income, by comparison, essentially matched Washington's overall performance with 2.3 percent average annual real growth.

**Figure 95**  
 Annual Percent Change in Real Per Capita Personal Income  
 Washington and United States, 1963 - 2002  
 Source: U.S. Bureau of Economic Analysis



*Regions*

A regional view of Washington in terms of per capita income reveals rather distinctly the disparity that has come to be termed the *Two Washingtons*. When viewed in absolute terms, the state's western, urban, metropolitan, and Puget Sound regions maintain a distinct advantage with regard to per capita income (see *Figure 96*). For example, an averaging of the per capita incomes for the state's western, urban, metropolitan, and Puget Sound regions reveals a per capita income of \$34,919 compared to \$23,896 for the state's eastern, rural, non-metropolitan, and non-Puget Sound regions in 2001 (there is a one-year lag in the generation of sub-state data). That represents an \$11,000 gap.

However, at least during the economic downturn of the past couple of years, the gap may not be aggressively widening. During the 2000-2001 period, the slump exerted downward pressure on real per capita income growth across all of Washington's regions. But real income losses were more pronounced in the state's western, urban, metropolitan, and Puget Sound regions.

**Figure 96**  
Regional Per Capita Income  
Washington, 2000 and 2001  
Source: Bureau of Economic Analysis

	2000	2000	2001	2000-2001	
	Current \$	Constant 2001 \$	Constant 2001 \$	Nominal Change	Real Change
<b>Eastern WA</b>	\$23,327	\$24,127	\$23,822	2.1%	-1.3%
<b>Western WA</b>	\$33,961	\$35,125	\$34,280	0.9%	-2.4%
<b>Non-Puget Sound</b>	\$24,342	\$25,176	\$24,839	2.0%	-1.3%
<b>Puget Sound</b>	\$36,386	\$37,633	\$36,669	0.8%	-2.6%
<b>Rural WA</b>	\$22,893	\$23,677	\$23,619	3.2%	-0.2%
<b>Urban WA</b>	\$34,784	\$35,976	\$35,007	0.6%	-2.7%
<b>Non-Metropolitan</b>	\$22,718	\$23,497	\$23,304	2.6%	-0.8%
<b>Metropolitan</b>	\$33,408	\$34,553	\$33,722	0.9%	-2.4%

### Counties

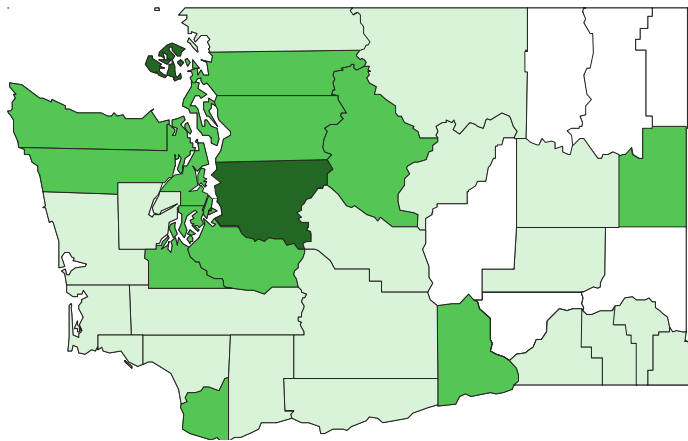
Unlike total personal income, which when rank-ordered generally distinguishes counties based on size of population and employment base, per capita income tends to reveal distinctions tied to unique economic factors (see Figures 97 and 98). As expected, county per capita income data for 2001 (again, there is a one-year lag in the generation of sub-state data) reveal three counties that routinely occupy the top five listing—King, San Juan, and Snohomish. King and Snohomish, of course, by sheer scale and diversity effectively partner up to fuel the state's economic engine. San Juan and, to some extent, Jefferson are home to expensive residential enclaves for upper-income professionals and retirees. Clark County is also in the ranks of the five counties with the highest per capita income, the only county outside of the central and northern Puget Sound region of the group.


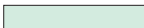


**Figure 97**  
Per Capita Personal Income, Selected Counties  
Washington, 2000 and 2001  
Source: U.S. Bureau of Economic Analysis

		2000	2000	2001	2000-2001	
		Current \$	Constant 2001 \$	Constant 2001 \$	Nominal Change	Real Change
<b>Highest:</b>	King	\$45,682	\$47,247	\$45,965	0.6%	-2.7%
	San Juan	\$37,390	\$38,671	\$38,370	2.6%	-0.8%
	Snohomish	\$29,362	\$30,368	\$29,460	0.3%	-3.0%
	Jefferson	\$27,677	\$28,625	\$28,850	4.2%	0.8%
	Clark	\$28,961	\$29,953	\$28,763	-0.7%	-4.0%
<b>Lowest:</b>	Whitman	\$20,325	\$21,021	\$19,793	-2.6%	-5.8%
	Pend Oreille	\$19,109	\$19,764	\$19,497	2.0%	-1.4%
	Franklin	\$18,715	\$19,356	\$18,956	1.3%	-2.1%
	Stevens	\$18,444	\$19,076	\$18,798	1.9%	-1.5%
	Ferry	\$16,662	\$17,233	\$17,437	4.7%	1.2%
<b>Other Counties:</b>	Benton	\$25,931	\$26,820	\$27,454	5.9%	2.4%
	Kitsap	\$26,497	\$27,405	\$27,427	3.5%	0.1%
	Pierce	\$26,354	\$27,257	\$26,601	0.9%	-2.4%
	Spokane	\$25,977	\$26,867	\$26,107	0.5%	-2.8%
	Thurston	\$27,426	\$28,366	\$28,266	3.1%	-0.4%
	Whatcom	\$23,567	\$24,375	\$24,564	4.2%	0.8%
	Yakima	\$22,145	\$22,904	\$22,872	3.3%	-0.1%

The counties in the state's lowest per capita income tier have also changed little over time. They include three resource-dependent counties in the northeastern corner of Washington—Ferry, Stevens, and Pend Oreille, plus more agriculturally intensive Franklin and Whitman counties. To illustrate the gap between the lowest and highest per capita incomes in Washington, King County's per capita income of \$45,965 (the highest) was about 264 percent of Ferry County's per capita income of \$17,437 (the lowest) in 2001, amounting to an income difference of a whopping \$28,500 per person.

**Figure 98**  
 Per Capita Personal Income by County  
 Washington, 2001  
 Source: U.S. Bureau of Economic Analysis



Minimum	Maximum	
\$16,600	\$19,900	
\$20,000	\$24,999	
\$25,000	\$29,999	
\$30,000	+	

Perhaps more important than absolute levels are the over-the-year percent changes in per capita income among Washington counties. Considering that statewide real per capita income lost 2.2 percent in value from 2000 to 2001, 28 of the state's 39 counties, too, lost ground. However, a handful of counties, largely rural in character, gained ground in 2001. Positive per capita income gains were seen in Asotin, Chelan, Ferry, and Okanogan in the east, and Wahkiakum, Whatcom, Jefferson, Clallam, and Cowlitz to the west. Benton County posted the state's strongest gain in real per capita income in 2001, a modest 2.4 percent.

*Northwest*

Washington continued to generate the highest per capita income in the northwestern United States with \$32,661 in 2002 (see Figure 99). Alaska had the second highest per capita income in the region at \$31,792, including transfer payments to residents from the Alaska Permanent Fund (\$1,540 in 2002). Washingtonians enjoyed incomes over \$7,700 higher per capita than Montana, which had the lowest income in the northwest at \$24,906 (the highest real growth for the year).

**Figure 99**  
 Per Capital Personal Income  
 Northwest States and United States, 2001 and 2002  
 Source: U.S. Bureau of Economic Analysis

	2001 Current \$	2001 Constant 2002 \$	2002 Constant 2002 \$	2001-2002 Nominal Change	2001-2002 Real Change	2002 Share of U.S.
Washington	\$31,976	\$32,417	\$32,661	2.1%	0.8%	105.9%
Alaska	\$31,027	\$31,455	\$31,792	2.5%	1.1%	103.1%
Oregon	\$28,222	\$28,611	\$28,533	1.1%	-0.3%	92.5%
Idaho	\$24,506	\$24,844	\$25,042	2.2%	0.8%	81.2%
Montana	\$24,044	\$24,375	\$24,906	3.6%	2.2%	80.8%
<b>U.S.</b>	<b>\$30,413</b>	<b>\$30,832</b>	<b>\$30,832</b>	<b>1.4%</b>	<b>0.0%</b>	<b>100.0%</b>

### Minimum Wage Workers in Washington State

By Kirsta Glenn, Chief Economist

Washington's minimum wage rose eleven cents to \$7.01 an hour on January 1, 2003 due to an automatic indexation to inflation.<sup>1</sup> It will be adjusted again on January 1, 2004, up another 15 cents to \$7.16. At \$5.15 an hour, the federal minimum wage will be \$2.01 lower (about 28 percent) than Washington's minimum wage.

The following points summarize key observations about minimum wage workers in Washington as of mid-2003. A full report entitled "Minimum Wage in Washington State" is on the Internet at: [www.workforceexplorer.com](http://www.workforceexplorer.com) (click on the "Wages" button).

- Minimum wage workers tend to be concentrated in just a few industries.
  - Accommodation and food services (21,511 FTE<sup>2</sup>)
  - Retail sales (15,069 FTE)
  - Agriculture, forestry, and fishing (21,511 FTE)
  - Health care and social assistance (4,107 FTE)
- Together these four industries account for 30 percent of workers across all wage levels, but 70 percent of all FTE minimum wage workers.
- Minimum wage workers tend to be concentrated in specific occupations, such as food preparation and serving workers, clerks, attendants, cashiers, agricultural crop workers, home health aids, child care workers, and building and grounds cleaning workers.
- Certain industries have very few minimum wage jobs, including: manufacturing; professional, scientific, and technical services; local government; management of companies and enterprises; finance and insurance; construction; mining; utilities; and state government.
- Among minimum wage workers, about 98 percent worked less than 30 hours a week. Part-time workers are much less likely to be covered for health insurance than full-time workers.
- A larger percentage of workers in small firms earn minimum wage than do workers in large firms.

<sup>1</sup>The state's minimum wage is recalculated each year in September as a result of an initiative approved by voters in 1998, which ties the minimum wage to changes in the federal U.S. Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). For the 12 months ending August 2002, the nationwide CPI-W increased 1.6 percent. Therefore, Washington's minimum wage of \$6.90 for 2002 increased 1.6 percent in 2003, to \$7.01. For the 12 months ending August 2003, that nationwide index increased 2.1 percent over August 2002, resulting in a 15-cent increase for Washington's minimum wage to \$7.16 in January 2004. More information is available at: <http://www.lni.wa.gov/scs/workstandards/minwage.htm>

<sup>2</sup> FTE stands for full-time equivalent. All estimates reported for minimum wage workers are in full-time equivalents. Since minimum wage workers tend to work part time more than higher wage workers, reporting numbers in full-time equivalents gives a better estimation of relative economic importance of the different worker groups.

Poverty

While poverty is an issue that impacts Washington’s population beyond just its labor force, it is an important factor to consider in the context of this chapter. According to Census Bureau estimates, 10.8 percent of Washington’s population was living in poverty in 2001-2002, amounting to nearly 648,900 people, compared to 11.9 percent nationally. Despite the economic downturn, Washington’s poverty rate remained essentially constant from the previous two-year period (2000-2001), as it did in all but nine states across the U.S.

The **poverty threshold** for a single individual under age 65 was \$9,359 in 2002, according to the U.S. Census Bureau. A four person family with one parent or guardian and three children under the age of 18 was considered to be living in poverty if their income was less than \$18,307.

The 2000 Census offers insight into the scope of poverty in our state. In 1999, 110,663 (7.3 percent) of Washington’s families lived below the poverty level, including 52,290 families with a female householder (no husband present). While its impacts reach every county, poverty is largely a rural phenomenon in Washington. This is probably due in some part to significantly lower wages paid in rural areas, as we observed earlier in this chapter (see Figure 96). The counties with the highest poverty rates in 1999 included Whitman and Okanogan, both with over 20 percent of their population in poverty. Figure 100 shows poverty rates for select counties. Washington’s poverty rate in 1989 was 10.9 percent.

**Figure 100**  
 Poverty Rates for Select Counties  
 Washington, 1999  
 Source: U.S. Census Bureau, Census 2000

	1999 Total Population	Population Below Poverty Level	Poverty Rate
<b>Highest Poverty Rates</b>			
Whitman	35,280	9,027	25.6%
Okanogan	38,943	8,311	21.3%
Yakima	218,966	43,070	19.7%
Kittitas	31,177	6,122	19.6%
Franklin	48,307	9,280	19.2%
<b>Lowest Poverty Rates</b>			
Snohomish	597,813	41,024	6.9%
Island	69,924	4,895	7.0%
Wahkiakum	3,735	301	8.1%
King	1,706,305	142,546	8.4%
Kitsap	224,006	19,601	8.8%
<b>Other Metro Areas</b>			
Spokane	404,764	49,859	12.3%
Pierce	680,056	71,316	10.5%
Clark	341,464	31,027	9.1%
Thurston	203,619	17,992	8.8%
<b>Washington</b>	<b>5,765,201</b>	<b>612,370</b>	<b>10.6%</b>

**Average covered wages** are simply a matter of taking total covered wages paid over the year and dividing by average monthly covered employment. Covered means workers covered by the Unemployment Insurance (UI) program. Though not all-inclusive—among others, many self-employed persons and corporate officers are not covered under the UI system—about 90 percent of all employment in Washington was covered in 2002. The data are derived from UI tax reports and published quarterly by the Employment Security Department.

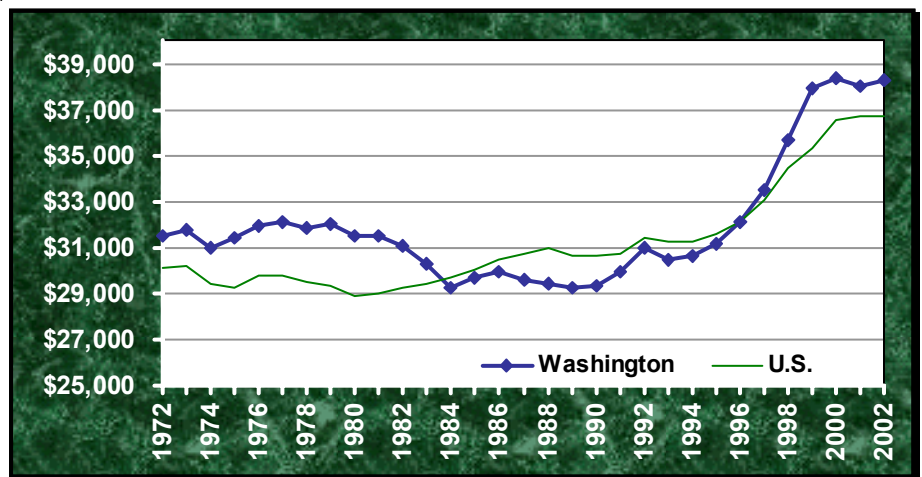
## Average Covered Wages

### State

Washington's average covered wage was \$38,244 in 2002, reflecting a real over-the-year gain of 0.7 percent. However modest, this gain indicates that the state's income base may be on the mend after experiencing a real decline of 0.9 percent in 2001. The state enjoyed a run of robust real average wage gains throughout the late 1990s, closing the wage gap between the state and U.S. Now, despite the hits of the recession of 2001, Washington's average annual covered wage (adjusted for inflation) has outpaced the nation's for six years running (see *Figure 101*).

**Figure 101**

Real Average Covered Wage  
Washington and United States, 1972 - 2002  
Source: Employment Security Department



Despite the mellowing associated with the recession, the recent run of stronger average covered wage gains appears to be signaling a break between the state's mature economy and its emerging economy. Because of the state's historical dependence on resource-related industries (typically referred to as mature industries), its long-run average covered wage pattern reflected considerable volatility, particularly during turning points in the business cycle. As such, the state's long-term average covered wage trend has been less than stellar. From 1977 (when average covered wages peaked during the mature economy) to 1989, real average covered wages in Washington *declined* at an annual rate of 0.7 percent. Since then, however, the state's average covered wages have been in a modest growth pattern, climbing 2.0 percent between 1993 and 2002, for example.

### Industries

The information industry posted by far the highest average wage in 2002 at \$102,309. The industry includes a variety of both "high tech" and more traditional firms in the information production and dissemination business, including traditional publishing, software, Internet publishing and broadcasting, sound record-

The switch in 2002 from classifying employers by **Standard Industrial Classification (SIC)** to **North American Industrial Classification (NAICS)** causes a break in covered wage data for Washington. Comparisons of real wage changes by industry will resume next year.

ing, and Internet search portals. Publishing (except Internet) is the information sector heavyweight, dominating in both employment (48,214) and average wage (\$145,525). These wages include cash earned via exercised stock options.

Manufacturing workers earned the second highest average wage in 2002 at \$50,901. That industry pumped over \$14.3 billion in wages into the state's economy, supporting nearly 281,000 workers in 2002. The state's lowest paying industry in 2002 was leisure and hospitality, paying just under \$15,300 on average. With about 240,600 workers, the industry is not far off from manufacturing in terms of number of employees. Low annual wages in leisure and hospitality, then, are probably partially due to workers being more likely to work part time.

**Figure 102**  
Average Covered Wages by Major Industry Division  
Washington, 2002  
Source: Employment Security Department

Major Industry Division	Employer Units	Total Wages	Employment	Average Wage
Information	2,627	\$9,485,543,099	92,715	\$102,309
Manufacturing	7,738	\$14,301,450,994	280,964	\$50,901
Professional and Business Services	25,582	\$12,861,018,223	279,997	\$45,933
Financial Activities	11,878	\$6,502,019,054	141,710	\$45,883
Construction	24,142	\$5,605,447,496	142,285	\$39,396
Government (including public education)	2,017	\$19,299,292,417	490,324	\$39,360
<b>Total - All Industries</b>	<b>207,357</b>	<b>\$101,105,677,809</b>	<b>2,643,715</b>	<b>\$38,244</b>
Trade, Transportation, and Utilities	33,331	\$16,287,837,054	492,272	\$33,087
Education and Health Services	14,899	\$9,117,946,979	287,410	\$31,725
Other Services	10,857	\$1,886,537,704	74,461	\$25,336
Natural Resources, Agriculture, Forestry, Fishing, and Mining	9,639	\$1,663,507,229	79,354	\$20,963
Leisure and Hospitality	13,930	\$3,680,554,273	240,611	\$15,297

### Regions

A regional view of Washington in terms of average covered wage, like the earlier discussion around per capita income, also distinctly illustrates regional wage disparities and reinforces the *Two Washingtons* challenge. When average earnings are viewed in absolute terms, the state's western, urban, metropolitan, and Puget Sound regions maintain a distinct advantage (see Figure 103). For example, average covered wages for the state's western, urban, metropolitan, and Puget Sound regions reveal a wage of \$40,499 compared to \$27,112 for the state's eastern, rural, non-metropolitan, and non-Puget Sound regions in 2002. But in terms of real annual rates of change, eastern, rural, non-metro, and non-Puget Sound regions continued making real wage gains in 2002, seen first in 2001 as a reversal of fortune, with modest gains compared to across-the-board wage declines in their wealthier counterpart regions. While these changes did not do much to close the gaps, at least the disparities did not worsen. Meanwhile, the state's western, metropolitan, Puget Sound, and urban areas all saw positive gains under 1.0 percent in 2002.

**Figure 103**Regional Average Covered Wages  
Washington, 2001 and 2002

Source: Employment Security Department, LMEA

	2001 Current \$	2001 Constant 2002 \$	2002 Constant 2002 \$	Nominal Change	Real Change
Washington	\$37,478	\$38,010	\$38,244	3.7%	0.6%
Eastern WA	\$27,484	\$27,874	\$28,452	5.4%	2.1%
Western WA	\$39,986	\$40,554	\$40,761	3.5%	0.5%
Non-Puget Sound	\$28,174	\$28,574	\$29,069	4.9%	1.7%
Puget Sound	\$42,230	\$42,830	\$43,054	3.4%	0.5%
Rural WA	\$26,898	\$27,280	\$27,896	3.7%	2.3%
Urban WA	\$40,538	\$41,114	\$41,324	3.8%	0.5%
Non-Metropolitan	\$25,894	\$26,261	\$26,805	3.6%	2.1%
Metropolitan	\$39,243	\$39,800	\$40,020	3.8%	0.6%

*Counties*

The sub-state ranking of average covered wages in 2002 was little changed from that of the previous years (see *Figures 104 & 105*). Metropolitan counties again dominated the upper echelons. King County occupied the top spot with an average covered wage of \$47,917—a figure that surpassed the state average by over \$9,600. Though software and aircraft come to mind, King County has a diverse range of industries that contribute to its status as the principal economic driver in Washington. In fact, the second highest average covered wage was Benton County's \$38,347, right about on par with the statewide average.

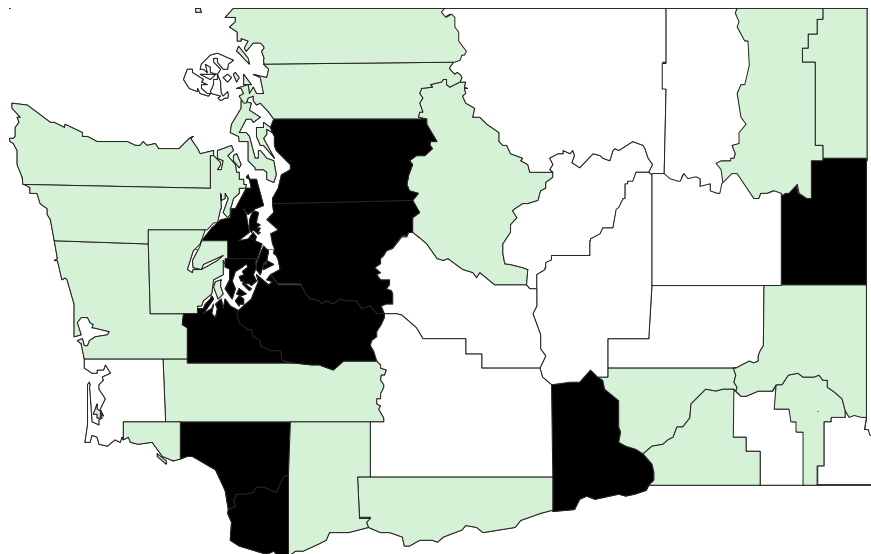
At the lower end, the same counties tend to appear year after year. The lowest average covered wage in 2002 belonged to Okanogan County at \$20,954—more than \$17,000 below the state average and nearly \$27,000 below King County. Okanogan County is an example of a resource dependent area that has experienced numerous relative setbacks in its wage base due to its ties to maturing forest products and agricultural industries. For the most part, the common denominators with respect to the lowest wage counties were that they were rural, sparsely populated, and agriculturally dominated. Pacific County, a western Washington entry, is also rural, thinly populated, and dependent on a natural resource-based economy. Its average covered wage was \$22,830 in 2002.



**Figure 104**  
 Average Covered Wage, Selected Counties  
 Washington, 2001 and 2002  
 Source: Employment Security Department

		2001 Current \$	2001 Constant 2002 \$	2002 Constant 2002 \$	Nominal Change	Real Change
	Washington	\$37,478	\$38,010	\$38,244	2.0%	0.6%
<b>Highest:</b>	King	\$47,187	\$47,857	\$47,917	1.5%	0.1%
	Benton	\$36,363	\$36,879	\$38,347	5.5%	4.0%
	Snohomish	\$36,390	\$36,907	\$37,752	3.7%	2.3%
	Kitsap	\$31,523	\$31,971	\$33,775	7.1%	5.6%
	Thurston	\$32,771	\$33,236	\$33,770	3.0%	1.6%
<b>Lowest:</b>	Grant	\$23,807	\$24,145	\$24,133	1.4%	-0.1%
	Pacific	\$21,979	\$22,291	\$22,830	3.9%	2.4%
	Adams	\$21,978	\$22,290	\$22,855	4.0%	2.5%
	Douglas	\$21,694	\$22,002	\$22,810	5.1%	3.7%
	Okanogan	\$20,007	\$20,291	\$20,954	4.7%	3.3%
<b>Other Metros:</b>	Clark	\$33,124	\$33,594	\$33,764	1.9%	0.5%
	Pierce	\$31,263	\$31,707	\$32,507	4.0%	2.5%
	Spokane	\$29,287	\$29,703	\$30,037	2.6%	1.1%
	Whatcom	\$27,724	\$28,118	\$28,283	2.0%	0.6%
	Yakima	\$24,203	\$24,547	\$24,935	3.0%	1.6%

**Figure 105**  
 Average Covered Wage by County  
 Washington, 2002  
 Source: Employment Security Department



Minimum	Maximum	
\$20,000	\$24,999	<span style="display: inline-block; width: 20px; height: 10px; border: 1px solid black; background-color: white;"></span>
\$25,000	\$29,999	<span style="display: inline-block; width: 20px; height: 10px; border: 1px solid black; background-color: #c8e6c9;"></span>
\$30,000	+	<span style="display: inline-block; width: 20px; height: 10px; border: 1px solid black; background-color: black;"></span>

In terms of over-the-year changes in county average covered wages from 2000 to 2001, the effect of the recession was clear: eleven counties saw average wages decline. But this wage slip seemed to clear up in 2002, with just three counties seeing wage declines and a couple feeling some stagnation. The majority of the state's counties, twenty-one of them, saw wages grow modestly between 0.5 and 3.0 percent. Notable average wage growth was observed in Benton, Whitman, Lincoln, Kitsap, and Garfield counties, where 4.0 to 6.7 percent wage increases mean somewhere between \$1,200 and \$1,800 for the average worker.

### Wage Distribution and Inequality in Washington

Has wage distribution become more or less even over time?

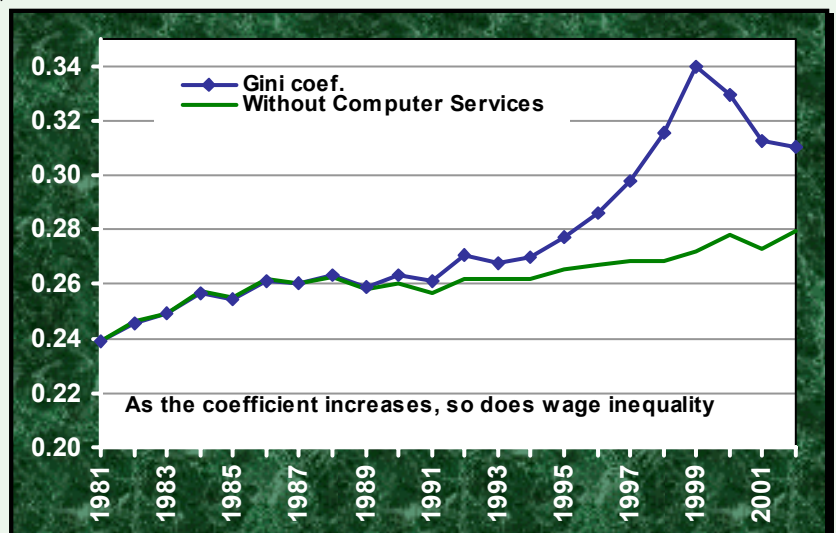
The Gini Coefficient is a commonly used measure of inequality in income distribution. A Gini Coefficient of zero (0) indicates perfect income equality, where everyone is paid the same, while a coefficient of one (1) would signify that all income is concentrated in a single person. Everything in between 0 and 1 represents some gradation of income distribution. The lower the score, the more equally income is distributed across a given population.

Based on covered employment and wage data for Washington (representing about 90 percent of total employment) we examined wage distribution for the period 1981-2002. The observations showed that inequality in wages increased significantly between 1981 (0.24) and 1999 (0.34), but then started slowly decreasing in 2000 (0.33), holding to 0.31 in 2001 and 2002. The most rapid growth of inequality happened between 1995 and 1999, stemming largely from soaring employment and wage growth in computer services (Standard Industrial Class 737). The average annual growth rate of the Gini Coefficient during that time was 5.2 percent. But when we remove the computer services industry from consideration, the Gini Coefficient shows a much gentler upward trend, around 0.27 from 1995 to 1999, moving toward 0.28 in 2000 and 2002.

Wages constitute a significant share (80 percent) of personal income and therefore can provide important insights to income distribution among workers and income inequality. The data used in this analysis includes regular wages plus cashed stock options. Including stocks in wages makes them even closer to total personal income and enables the analysis to yield a better approximation of inequality in terms of total income distribution.

Worth noting, income is but one component of wealth, which also includes real property, dividends, and other fixed and liquid assets. Wealth is usually much less equally distributed across the population. Also worth mention is the fact that the Gini Coefficient cannot be used to measure absolute welfare of the lower segment of the population. In other words, even as the Gini Coefficient increases, wages (or income) for the lower segments of the population could also be rising.

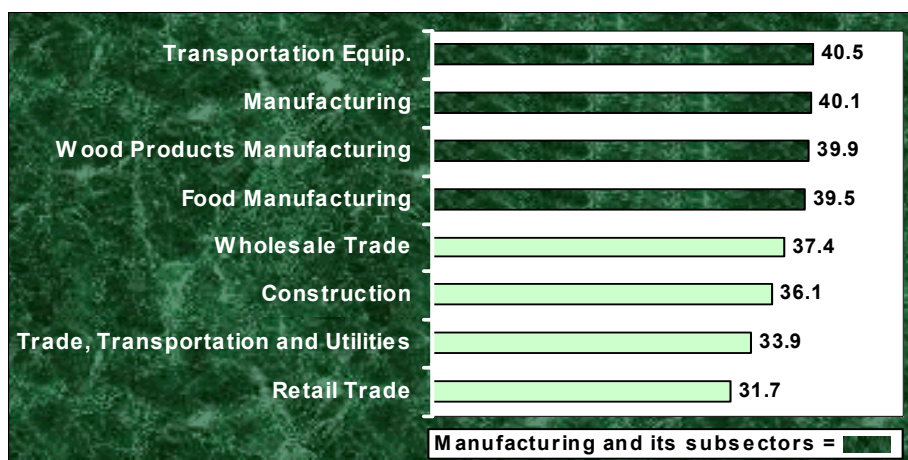
**Figure 106**  
Wage Inequality  
Washington, 1981-2002  
*Source: Employment Security Department*



## Average Hours and Earnings

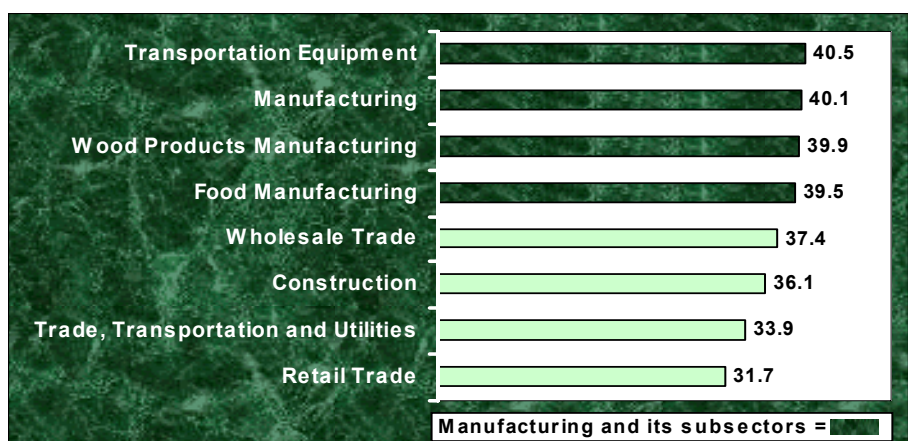
Of the industries surveyed in 2002, average weekly hours worked was highest in manufacturing (40.1 hours) and its subsectors, transportation equipment (40.5 hours), wood products (39.9 hours), and food (39.5 hours). Retail trade carried the shortest weekly hours on average with 31.7 hours, likely reflecting the prevalence of part time employment in the industry. *Figure 107* illustrates average weekly hours for select industries.

**Figure 107**  
Average Hours Worked Per Week, Selected Industries  
Washington, 2002  
Source: Employment Security Department



With regard to average hourly earnings in these select industries, those with higher value added margins had higher hourly earnings than more resource-dependant, labor-intensive sectors. This bore out as transportation equipment (\$23.65) held the top spot, followed by construction (\$22.56) and all manufacturing (\$18.15). On the flip side, wood products (\$14.59) and food (\$14.55) posted the lowest wages of select manufacturing sectors. *Figure 108* illustrates average weekly hours for select industries.

**Figure 108**  
Average Hourly Earnings, Selected Industries  
Washington, 2002  
Source: Employment Security Department



**Hours and earnings for selected industries** are estimated by the state Employment Security Department's Current Employment Statistics (CES) program. The major industry divisions surveyed are construction, manufacturing, trade, transportation, and utilities. Three manufacturing subsectors—food processing, wood products, and transportation equipment, are also detailed, as are wholesale trade and retail trade. With the introduction of a new industry classification in 2002 (the North American Industry Classification System—NAICS) came a break in the series of hours and earnings. This means that data from 2002 are not directly comparable to those from previous periods.

**What's the going rate?**

**The Washington Job Vacancy Survey reveals market realities**

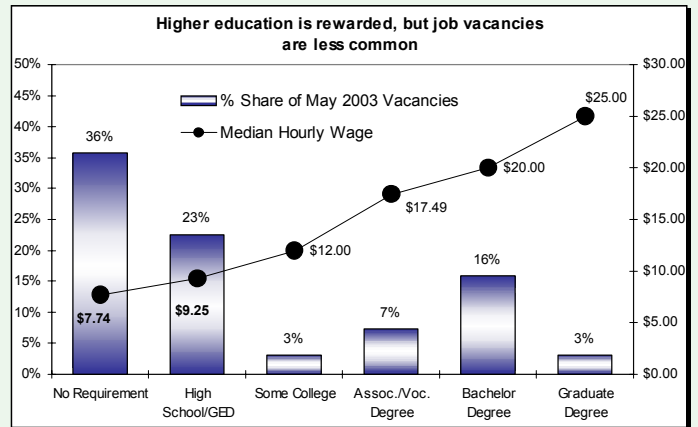
By measuring the number of vacant positions for which employers are hiring, the *Washington Job Vacancy Survey* provides valuable insights into employment conditions in our state. Survey results show not just the number of vacant positions, but also several job characteristics, including wages, to reveal the reality of employers' immediate workforce needs. The following summarizes information about wages offered for vacant positions in May 2003.

- **Statewide, vacant positions paid a median starting wage of \$9.16 per hour in May 2003.**
- Overall, **20 percent of vacant positions** (10,835 jobs) **in May offered hourly wages under \$10.00.**
- Positions that pay **\$25.00 an hour or more** amounted to **7 percent of all open jobs.**
- **Management occupations** had the highest median wages offered for vacant positions (\$31.25 per hour).
- **Food preparation and serving workers, personal care and service occupations, farming, forestry, and fishing, and transportation and material moving workers** all have median wages of \$8.00 or less.

**Figure 109**

Job Vacancies and Wages by Education Requirement  
Washington, May 2003

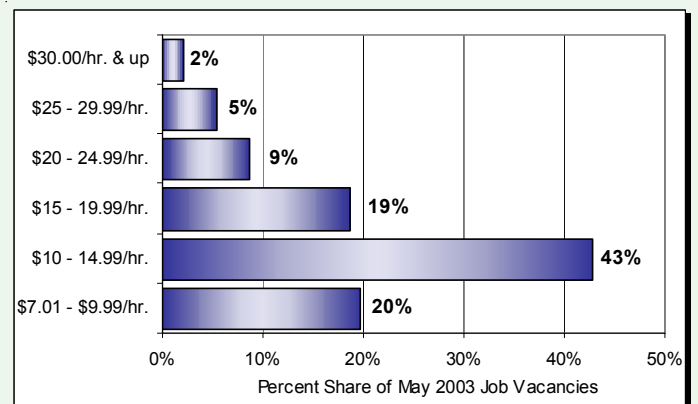
Source: Employment Security Department



**Figure 110**

Distribution of Job Vacancies by Median Starting Wage Range  
Washington, May 2003

Source: Employment Security Department



**About Survey**

Complete reports on job vacancies are online at [www.workforceexplorer.com](http://www.workforceexplorer.com). Select "Download Data" and then scroll down to the box labeled "Job Vacancy/Benefits Survey." Results from the October 2003 *Washington Job Vacancy Survey* will be released in January 2004.

**Employee Benefits: There's More to Compensation than Just Wages and Salaries**

In late 2002, the Employment Security Department began an annual survey of employers asking about the range of fringe benefits they offer to full- and part-time employees. The survey is an addendum to the *Job Vacancy Survey*, highlighted earlier in this chapter. Over 54 percent of the 10,700 establishments surveyed in November and December of 2002 responded to the Employee Benefits Survey. Findings from the October 2003 Employee Benefits Survey will be released in January 2004.

The following are key findings from the November-December Employee Benefits Survey.

- Statewide, **76 percent of firms offered health insurance to full-time employees**, while just 23 percent of firms provided coverage to part-time employees. The significantly lower share of firms that offered health care benefits to part-time workers was reflected across all regions, industries, and employer size classes.
- **Establishment size was a significant factor in the availability of health insurance to workers:** 99 percent of very large firms (250 or more employees) offered insurance to full-time workers. Just 54 percent of very small firms (less than ten employees) provided the same.
- **Paid vacation leave was the most commonly offered benefit**, with 77 percent of firms making it available to full-time employees.

**Figure 111**  
 Percent of Establishments Offering Benefits by Employee Type  
 Washington State, November-December 2002  
 Source: *Employment Security Department*

<p><b>Health Insurance (Employee)</b>                  Full time 76%                  Part time 23%</p>	<p><b>Paid Sick Leave</b>                  Full time 56%                  Part time 22%</p>
<p><b>Health Insurance (Employee's Dependents)</b>                  Full time 69%                  Part time 22%</p>	<p><b>Paid Vacation Leave</b>                  Full time 77%                  Part time 28%</p>
<p><b>Retirement Plan</b>                  Full time 60%                  Part time 19%</p>	<p><b>Child Care</b>                  Full time 1.0%                  Part time 0.7%</p>
	<p><b>Child Care Subsidy</b>                  Full time 2.0%                  Part time 1.4%</p>

Complete reports on employee benefits are online at [www.workforceexplorer.com](http://www.workforceexplorer.com). Select "Download Data" and then scroll down to the box labeled "Job Vacancy/Benefits Survey."

## About the Economic and Policy Analysis Unit

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The Economic and Policy Analysis unit within the Labor Market and Economic Analysis (LMEA) Branch of the Employment Security Department has primary responsibility for providing analysis and commentary on Washington's current labor market situation. Toward that end, it is the chief voice for the department and principal point of contact with the public for statewide labor market information and analysis. In addition to the *Labor Market and Economic Report*, the unit's other notable publications include the *Commissioner's News Release*, *Washington Labor Market*, *County Profiles*, *Agricultural Workforce in Washington State*, and *Occupational Outlook 2003*. These publications are also available on the Workforce Explorer ([www.workforceexplorer.com](http://www.workforceexplorer.com)). The unit's work is also showcased at the annual LMEA Economic Symposium, presentations from which are available on the Workforce Explorer.