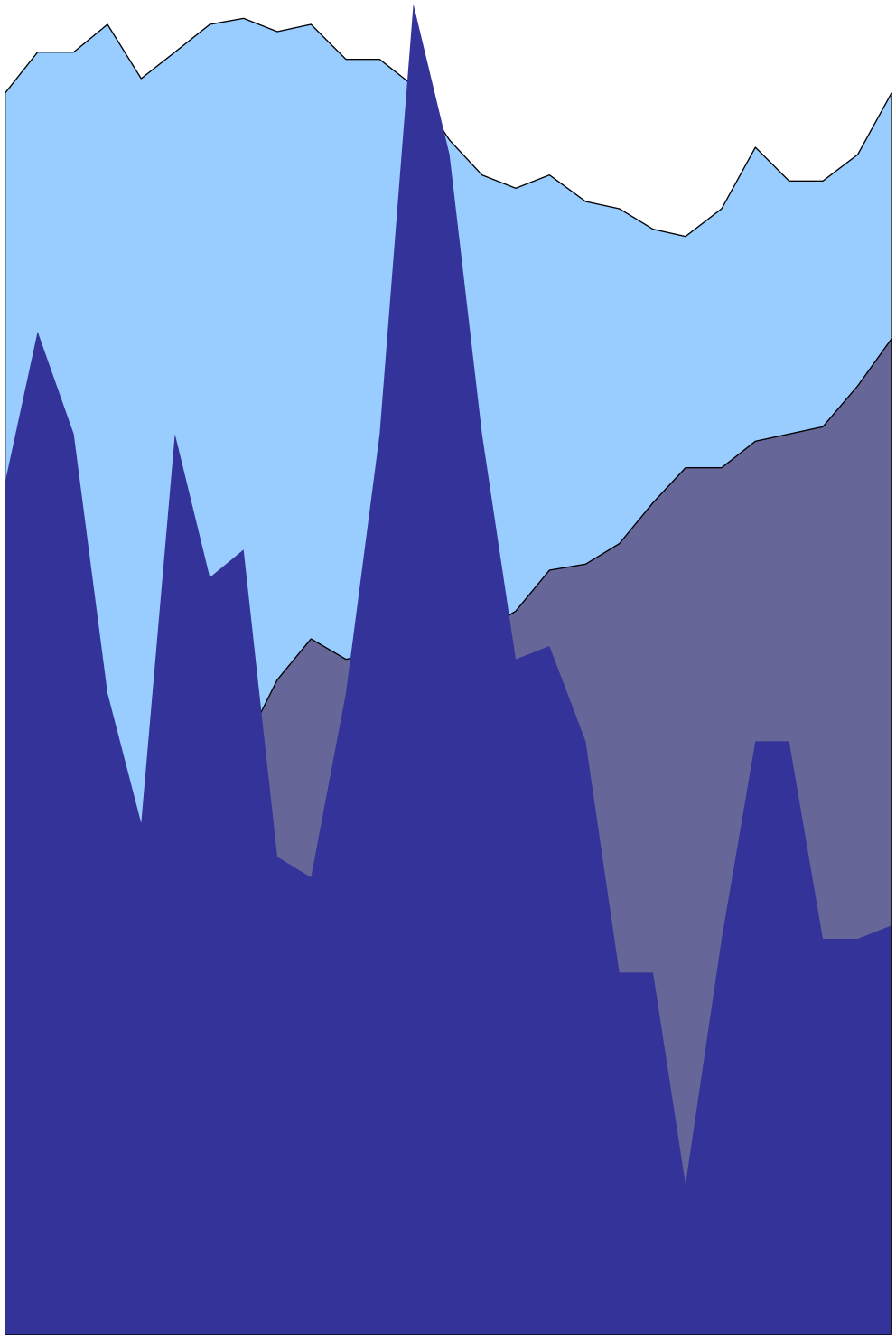
1998 Washington State Labor Market and Economic Report



The Right Connection for
Labor Market Information

Washington State Employment Security
Labor Market & Economic Analysis

This report has been prepared in accordance with
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Contents

Data appendices for selected chapters are available in hard copy, on diskette, and on the LMEA Internet homepage (http://www.wa.gov/esd/lmea). For more information, contact Gary Kamimura at (360) 438-3152 or the Labor Market Information Center at 1-800-215-1617.

Executive Summary

- Washington's economy performed exceptionally in 1998. The period marked the culmination of three years of job growth that was higher than the national average and jobless rates that were much lower than the national average.

- Unemployment both nationally and statewide dropped to historic lows in 1998 as labor markets across much of the state and the nation tightened progressively. By way of perspective, Washington's six-quarter stretch of seasonally adjusted unemployment rates below 5 percent represent the longest period of low unemployment since the "Boeing Boom" in the mid-1960s.

- Much of the past three years of strong economic growth in Washington has been driven by an unrelenting buildup in the basic goods-producing sector. The past 12 months, however, have revealed a decisive flattening in manufacturing's growth trend. Rather, the biggest thrust of employment growth in Washington is occurring in *business services,* which includes both temporary help services and computer data processing and software.

- The economic outlook for Washington in 1999 essentially mirrors that for the nation. Fourth quarter 1998 employment growth is expected to slow as a result of heavy cutbacks in aircraft and parts and ongoing restructuring in computer equipment and electronics manufacturing. Real personal income growth is expected to average around 2 percent in 1999 following 6 percent gains in 1997-98. Wage and salary employment is assumed to ease from 3.5 percent to less than 2 percent.

- Washington's unemployment rate fell sharply to 4.8 percent in 1997, reflecting the rebound in the state's economy as it moved from a restructuring in the aircraft industry to an economy firing on all cylinders. The state's jobless rate situation was also affected by a broad-based labor and skill shortage. The stage appears set, however, for it to gradually rise to around 5 percent by the end of 1998 as the global economic situation and other factors put a damper on economic growth.

- The count of discouraged workers nationally has declined annually from 500,000 in 1994 to 343,000 in 1997. The 1997 estimate represents a 16 percent decline from 1996, which was consistent with a healthy national economy that showed persistent signs of regional labor shortages.

- The most recent four quarters of data from Washington's Mass Layoff Statistics program show that all variables—establishments, layoff events, separations and initial claims—picked up in the fourth quarter of 1997. The data also show that relative to the state's labor force composition, the sex of a worker appears to have little effect on whether or not he or she is caught up in a mass layoff event while age, race, and education, on the other hand, appear to have an effect.

- Though seasonality, cyclicality, and structural maturity are all present to varying degrees in Washington's economy, one finding was that shares of seasonal and structurally mature employment are subsiding; the former because the economy is diversifying, the latter because the major restructuring activity since 1990 has passed. Cyclical employment is up, but that is consistent with where the state is in the current business cycle.

- Washington's labor force and nonagricultural employment are both projected to expand more slowly than usual over the next 25 years, though still faster than the national average. Specifically, state nonfarm employment is expected to climb 1.4 percent annually from 1995-2020. Services is projected to be the strongest performer, thanks to the computer and software component of business services while goods-production as a whole is projected to be a drag. Occupationally, new job creation is projected to be strongest in the professional and technical and services fields.

- Washington's total personal income was more than $148 billion in 1997, which translated into 7.5 percent growth over the year in current terms or 5.4 percent in constant terms. This marked the third consecutive year of increasing rates of personal income growth following modest gains in 1993 and 1994. It was also the third consecutive year that state personal income growth outpaced national personal income growth.

- Washington's per capita income was $26,412 in 1997, which translated into over-the-year growth of 5.8 percent in current terms or 3.7 percent in constant terms. This represents the latest in a string of increasing rates of per capita income growth in Washington since 1993. Per capita income growth in Washington has been stronger over the past two years than that for the nation as a whole.

- Washington's average covered wage was $30,756 in 1997, reflecting a 6.5 percent gain in current terms or 4.4 percent in real terms. This was considerably higher than the gains nationally. This pattern has repeated itself for several years now, enabling Washington to close the gap with the U.S. to the point where its average covered wage is effectively the same as that of the nation.

- Washington's real average hourly earnings were generally healthy in 1997 with manufacturing, construction, and trade all posting real gains. The picture was more mixed within manufacturing as some sectors experienced strong gains while others saw big declines. Overall, though, the increases were induced in large part by a vibrant state economy that was increasingly beset by broad-based labor shortages.

Labor Market and Economic Developments

Washington's economy performed exceptionally in 1998. The period marked the culmination of three years of higher than national job growth and much lower than average unemployment. The employment pickup began in the first quarter of 1996, accelerated in the first half of 1997, eased by the second half, and then rebounded sharply again in 1998 (*see Figure 1*). Net new job creation in the third quarter of 1998 was more than twice the national average at a seasonally adjusted annual rate of 4.7 percent—up from 3.6 percent in the first half and 4.0 percent on average for the year as a whole. National labor markets, in contrast, slowed in the second and third quarters. Both the state and nation, however, continued moving ahead in what amounts to a very strong and very lengthy expansion period.

For the most part, the state managed to mirror the pace of the prior two years despite a marked slowdown in manufacturing. Job growth in the primary goods-producing sector leveled off sharply starting in January after leading the economy through much of 1996 and 1997. The principal weakness centered in durable goods production—specifically computers and electronics and aircraft and parts—which shifted from high employment growth to no growth and then some modest reductions starting late in the third quarter. Stepping into the breach was a sharp pickup in construction and services—principally housing, commercial and industrial building, and producer services.

By way of contrast, national labor markets showed a decisive leveling as the months progressed. Manufacturing employment nationally fell in absolute terms on a seasonally adjusted basis starting in April 1998 and was down 150,000 workers by September 1998. Nonmanufacturing proceeded to build but at progressively slower rates with the third quarter seasonally adjusted annual pace coming in at 2.7 percent compared to 3.0 percent in the first three months of the year. Construction mounted through the second quarter and then stabilized. Business investment in plant and equipment and national housing starts continued to climb. Services employment expanded sharply.

Unemployment both nationally and statewide dropped to historic lows in 1998 (*see Figure 2*). Labor markets across much of the state and nation tightened progressively as both headed

Figure 1
Nonagricultural Wage and Salary Employment Growth (Seasonally Adjusted)
Washington and United States, 1995-1998
Source: *Employment Security Dept., Office of the Forecast Council, & BLS*

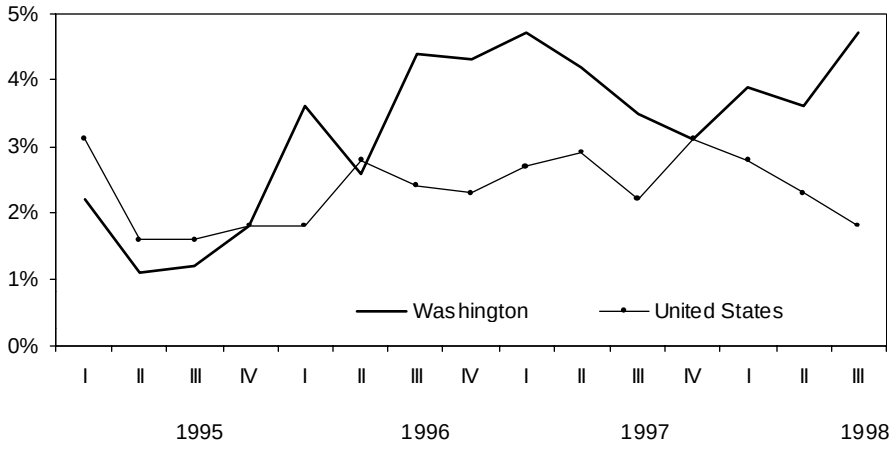
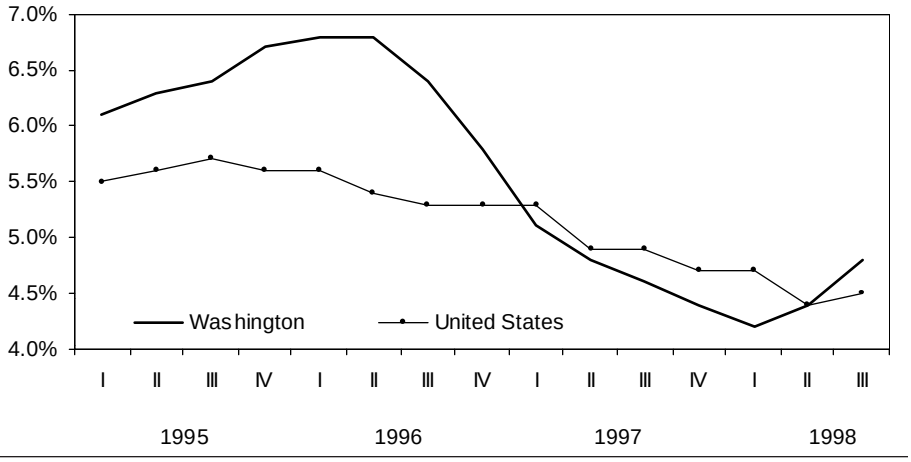


Figure 2
Unemployment Rates (Seasonally Adjusted Quarterly Averages)
Washington and United States, 1995-1998
Source: *Employment Security Department, and Bureau of Labor Statistics*



into yet another year at lower than average rates. Washington's seasonally adjusted jobless rate troughed at 47-year lows in the first quarter at 4.2 percent and then moved up fractionally in both the second and third quarters to 4.8 percent heading into fall. Comparisons against the prior year shifted from slightly below to slightly above the line. The state inched above the national average once again in the third quarter after a year and a half of tracking well below.

By way of perspective, Washington's six-quarter stretch of seasonally adjusted unemployment rates below 5 percent represent the longest period of low unemployment since the "Boeing Boom" in the mid-1960s (*see Figure 3*). Much of the lead, of course, has centered in metropolitan areas—particularly the central Puget Sound region—where the raw unemployment rate in September averaged less than 4 percent. Seattle stood at 3.1 percent; Tacoma at 4.4 percent; and Spokane at 4.2 percent. Western Washington averaged 4.0 percent for the month; eastern Washington, 5.6 percent. The jobless count in timber-dependent counties is down from the 8 to 10 percent average early in the decade but rates have remained basically unchanged over the past four years.

Much of the past three years of strong economic growth for the state has been driven by an unrelenting buildup in the basic goods-producing sector (*see Figure 4*). Job growth in manufacturing shot up 4 percent in 1996 and 7 percent in 1997 at a time when the rest of the economy was rising in the 3.0 to 3.5 percent range. Moreover, the principal drivers at that time cut across a broad spectrum of industries that included not only aircraft and parts but industrial machinery, electronics, scientific and medical instruments, and primary and fabricated metals. The 37,000 net new manufacturing jobs created in 1996-97 ranked third highest of any state in the nation, and the pace continued strong through the third quarter of 1998.

The past 12 months, however, have revealed a decisive flattening in the growth trend. No longer is manufacturing driving the economy. Overall employment statewide has risen in the 3.5 to 4.5 percent range since the first of the year. But manufacturing job growth narrowed from a seasonally adjusted annual rate of 5.5 percent in the first quarter to less than 2 percent in the second and only half a percent in the third quarter with the count dipping negative in August and September. The slowdown in hiring has centered primarily in producer durable goods. Aircraft and parts employment, in particular, pulled back from adding 1,300 workers a month in 1996-97 to basically no change in the first half and then a falloff starting in July.

Pushing to the fore has been electronics manufacturing—which grew 8 percent over the past 12 months—along with construction and a number of very key service and trade sectors of the economy. Both housing and commercial building in the central Puget Sound area are booming. Shortages of electricians, plumbers, and framers have pulled workers into the region from increasingly wider labor pools across the state. Collateral strength has taken place in engineering and management

Figure 3
Regional Unemployment Rates (Percent of Civilian Labor Force)
Washington State, 1998
Source: *Employment Security Department*

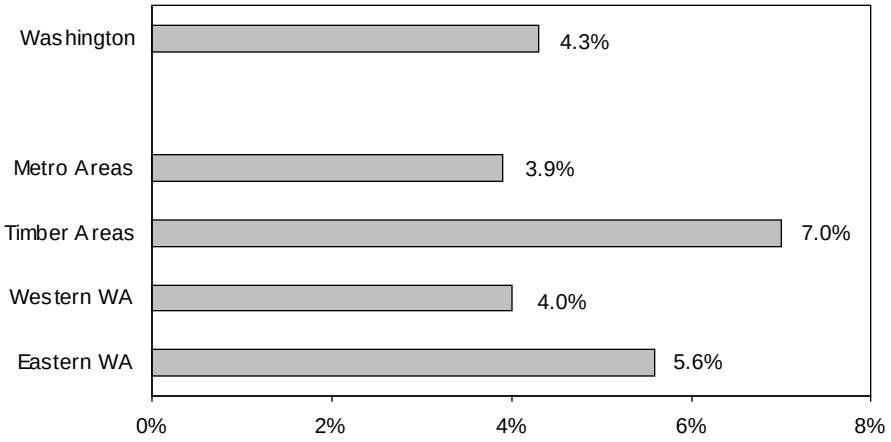
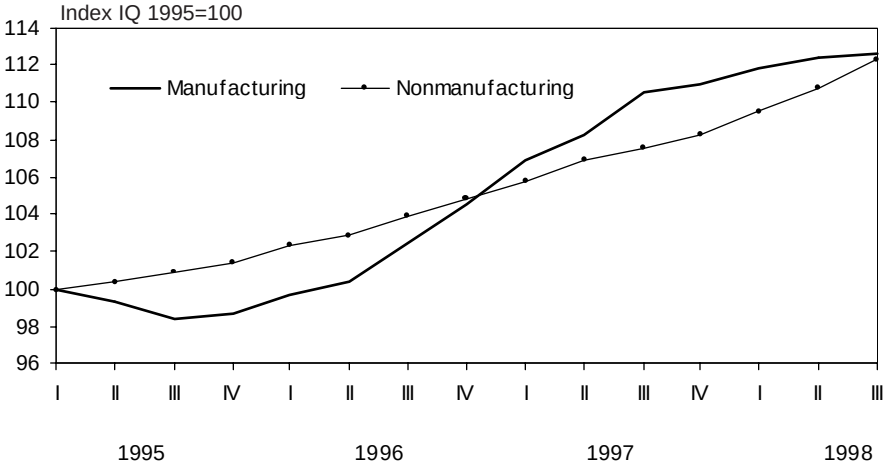


Figure 4
Manufacturing and Nonmanufacturing Employment Change
Washington State, 1995-1998
Source: *Employment Security Department*



services. Health care and education employment is rising sharply in response to demographic changes taking place. Furthermore, rising incomes are generating greater demand for eating and drinking places.

However, the biggest thrust of employment growth is occurring in *business services*, which includes both temporary help services and computer data processing and software. Flexibility in hiring temporary workers is a phenomenon that characterizes much of the present up-cycle. The number of workers in Washington's temporary help industry jumped nine-fold over the past 15 years and the pace has accelerated in 1997-98 running four-to-five times greater than the economy as a whole. At the same time, growth in high tech computer software and data processing services continues to balloon as Microsoft and others in this rapidly changing field continue operating on the cutting edge.

Coming into view, however, are some major changes. One is the emerging pullback in aircraft and parts. Boeing announced coming into the year a 12,000-worker cutback—mostly Seattle-based—starting in the second half of 1998 that became part of a larger 28,000 national company-wide target announced in July. Production problems delayed action and Boeing was unable to meet commercial delivery schedules starting in the fourth quarter and suffered a $178 million loss in 1997. Employment finally began inching lower by 300 to 500 workers a month starting in July. And, in addition, virtually all of Boeing's 3,000 contract engineering workers were officially released in one swoop in September.

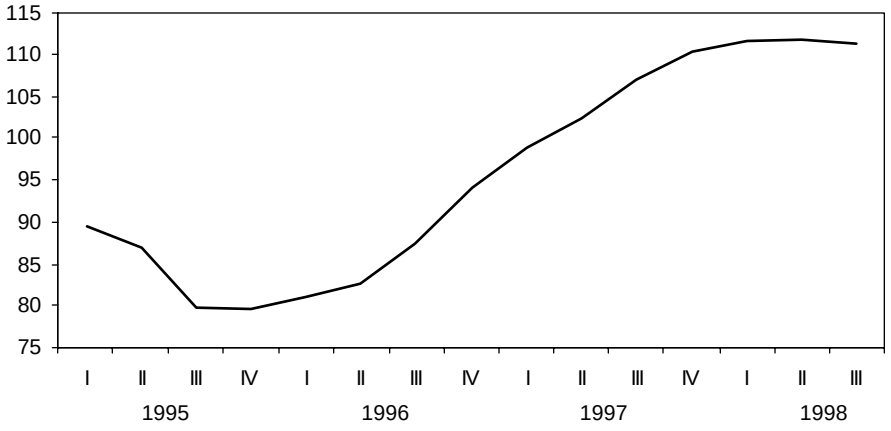
Computer and office equipment manufacturing employment has also weakened—down 1,800 workers over the year in September as the industry generally has been hit by over-capacity and falling prices. Washington-based affected firms have included Hewlett Packard in Vancouver (1,200 jobs), NEC Technology in Fife (200 jobs), and Key Tronics in Spokane (180 jobs). In addition, Intel is ceasing its manufacturing activity at Du Pont—affecting 650 workers through the first quarter of next year—while at the same time continuing to build its research and development arm. Seafood processing in the state is also down 1,300 over the year and 3,200 from the high three years ago as regulatory reallocation of coastal fisheries catch and falling prices have taken a toll.

What needs to be emphasized, however, is that manufacturing employment in Washington is, on average, operating at an all-time high. The rather modest downward adjustments that are taking place are coming off a very high base. Aircraft and parts output in the state is booming (*see Figure 5*). Boeing's goal is 550 aircraft deliveries in 1998 and a record 620 in 1999. This certainly provides some major underpinning to the state's economy for the next couple of years. The state still has a significant presence in computer and electronics manufacturing and the state's largest new chip manufacturer—WaferTech—is operating in what amounts to the first phase of a three-stage employment buildup to the year 2000.

Another major drag on the economy is the Asian financial crisis, which spread to Russia and is now affecting parts of Latin America. Southeast Asia is hurting badly with a middle class being pushed rapidly into poverty as the economy slides. At issue are insolvent banks, lax regulatory enforcement, and political and institutional factors that are difficult to change but actively promote inefficiencies in the market. The International Monetary Fund stepped in with a bailout and calls for austerity. But looser monetary policy, more government pump-priming, and increased domestic growth are spreading. Korea and Thailand have cut interest rates along with Malaysia, China, and Hong Kong. Japan is earmarking $600 billion for the rescue.

As the Asian currencies have plunged against the dollar, the U.S. trade deficit has soared to record highs resulting in huge trade surpluses to Indonesia, Thailand, Korea, and Malaysia. Collaterally, purchases of U.S.-made goods and services have dropped like a rock. Container ships are entering U.S. ports full and returning empty as demand continues to be completely one-sided. U.S. industrial production has drifted lower

Figure 5
Aerospace Employment (in Thousands)
Washington State, 1995-1998
Source: *Employment Security Department*



for five consecutive months and U.S. manufacturing employment has dropped. The stock market has gyrated in fits and starts. Bank lending practices have tightened. And in an effort to keep the economy rolling, the Federal Reserve has moved actively to cut interest rates three times in the past seven weeks—the first in two years.

Washington's impact has been largely trade-related and, more explicitly, centered in exports of agriculture and forest products. Approximately 90 percent of the state's wheat crop is exported and 12 percent of its sawn timber. Exports of wheat, logs, lumber, and apples to Asian markets are down anywhere between 30 and 40 percent. Puget Sound container exports through the first nine months were off 20 percent with imports up 17 percent. Asian airlines have tabled Boeing jetliner purchases and Boeing itself concedes that the Asian crisis could cost the company as much as 90 aircraft over the next five years.

The good news is that Washington's employment on balance has not followed the national trend. Despite a falloff in Asian exports, domestic demand for lumber and wood products has held up strong and the overall job count has held relatively stable throughout the period. Wheat harvesting—unlike fruits and vegetables—is not a labor-intensive industry. The shortfall in sales to Asia in machinery and other manufacturing is likewise being offset by strong domestic demand. The number of workers on the docks and across the state's land-based transportation system has not been effected with incoming cargo heavy. Some of the ripple effect in the semiconductor industry has been attributed to weak Asian markets but that is only one of the factors leading to restructuring.

At this point, the fundamentals of the U.S. economy remain essentially intact. Business investment and consumer spending continue strong. Interest rates have been cut and the Fed is determined to keep the economy rolling. Liquidity will start flowing and businesses will start growing again if Japan's bank rescue plan works—a highly important tonic for Asia. In addition, there are encouraging signs that the emerging southeast Asian markets may, in fact, be bottoming out. However, this is destined to be a lengthy process with a long way yet to go.

Within this context, pressure on wages continues to mount (*see Figure 6*). Average hourly earnings in Washington's manufacturing sector bounced around the $14-to-$15 range until late in the third quarter of 1997. At this point, average hours worked started climbing. Wages, accordingly, rose by roughly 5 percent through the third quarter on a fairly steady upward trend to a high of $15.85 an hour in the third quarter of 1998. Certainly, the rev up in aircraft and parts has played a major role. But each of the manufacturing sectors detailed in the Current Employment Statistics monthly hours and earnings report showed some upward pressure on wages over the past year.

National labor markets have shown comparable wage gains—up 4 percent over the year in the third quarter after holding in the 3.0-to-3.5 percent range for the better part of six years (*see Figure 7*). Moreover, the offset provided by progressively lower benefit cost increases seems to have finally

Figure 6
Hours and Earnings in Manufacturing (Quarterly Averages)
Washington State, 1995-1998
Source: *Employment Security Department*

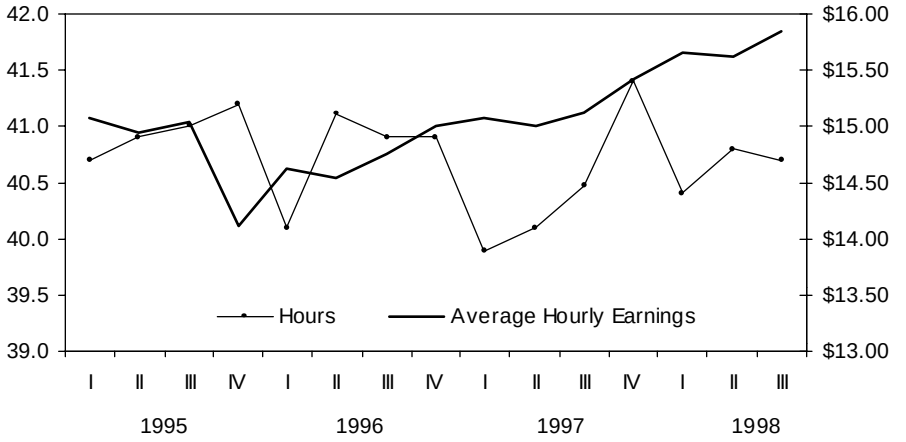
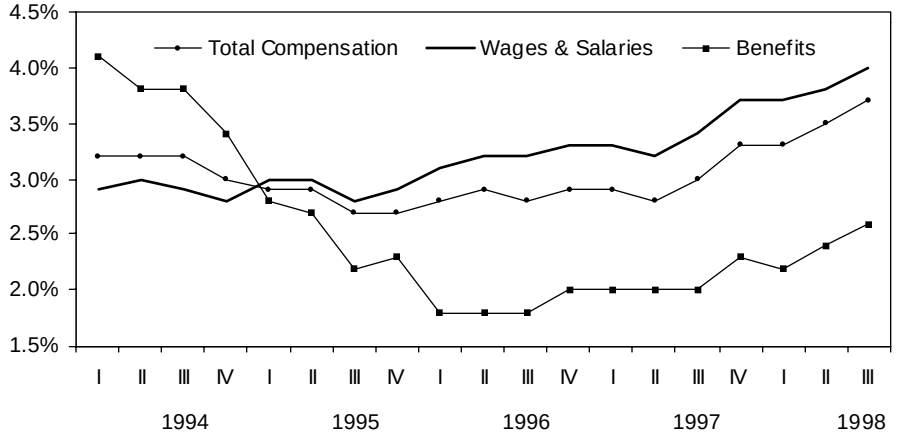


Figure 7
Employment Cost Index (Annual Percent Change)
United States, 1994-1998
Source: *U.S. Bureau of Labor Statistics*



run its course. Benefit cost hikes are still relatively modest compared to recent experience at around 2.5 percent. However, the increase is running higher than a year ago and by every indication the pressure is mounting. The overall U.S. employment cost index is expected to rise in the 3.5 percent range in 1999—not much change from the present pattern.

Into the third quarter, the national economy continued to look strong. Growth of first quarter Gross Domestic Product was 3.3 percent (*see Figure 8*). The pace eased off sharply in the second quarter and then rebounded again in the third quarter—very much in line with the seesaw pattern experienced throughout much of the past two years. Personal consumption expenditures rose at a very healthy pace of 4 percent, though somewhat more subdued than the 6 percent hike in the first and second quarters. Housing outlays grew 7 percent in the third quarter following double-digit gains in the first half, and business fixed investment also leveled off after huge upticks earlier in the year. Outlays for computers and peripheral equipment, on the other hand, charged ahead at a near 50 percent seasonally adjusted annual rate.

Lower interest rates have been a principal driving force of the economy throughout the past couple years (*see Figure 9*). The prime commercial lending rate hovered at 8.50 percent for a year-and-a-half as the Federal Reserve held firm. But the prime has now dipped to 7.75 percent with a three-step quarter-point interest rate slide in the federal funds rate since September 29—good news for corporate borrowers. Thirty-year conventional fixed mortgage rates are fluctuating between 6.8-and-6.9 percent—fully 60 basis points below a year ago and 130 basis points below the high in the third quarter of 1996. The result has been three years of constantly rising housing starts and double-digit gains in producer durable equipment outlays.

Several variables, however, reveal a shift to lower growth. Industrial production has weakened in the face of reduced exports to Asia and a strong dollar is hurting U.S. producers who compete one-on-one with foreign importers, particularly capital goods producers. Consumers continue to spend strongly but sales growth in recent months has outstripped income growth and savings rates are falling sharply. Nonfarm employment growth nationally was cut in half in September and October from a seasonally adjusted rate of more than 200,000 a month to a little more than a 100,000 pace. The index of leading indicators has flattened and various consumer and business confidence surveys are coming in more guarded than earlier in the year.

The consensus forecast calls for a further slowing in the U.S. economy through the fourth quarter of this year and into 1999 but with no real threat of recession and continued expansion for the eighth consecutive year (*see Figure 10 on the next page*). Clearly, the robust pace of the U.S. economy could be expected to moderate of its own volition at this point in the business cycle. The Asian situation is just another added piece of the pie. For the most part, the consumer is expected to play a pivotal role in 1999 and psychology is everything in this

Figure 8
Real Gross Domestic Product Change (% Change at Seasonally Adj. Annual Rates)
United States, 1995-1998
Source: *U.S. Department of Commerce, Bureau of Economic Analysis*

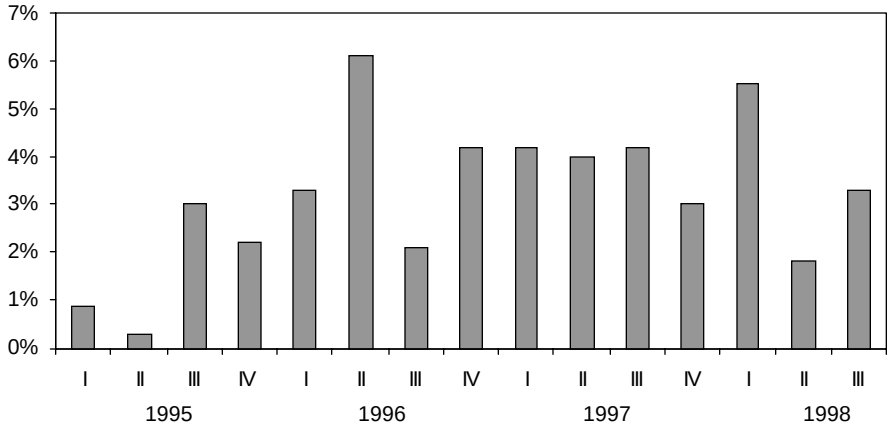


Figure 9
Interest Rates (Average Quarterly Percentage Points)
United States, 1995-1998
Source: *Federal Reserve*

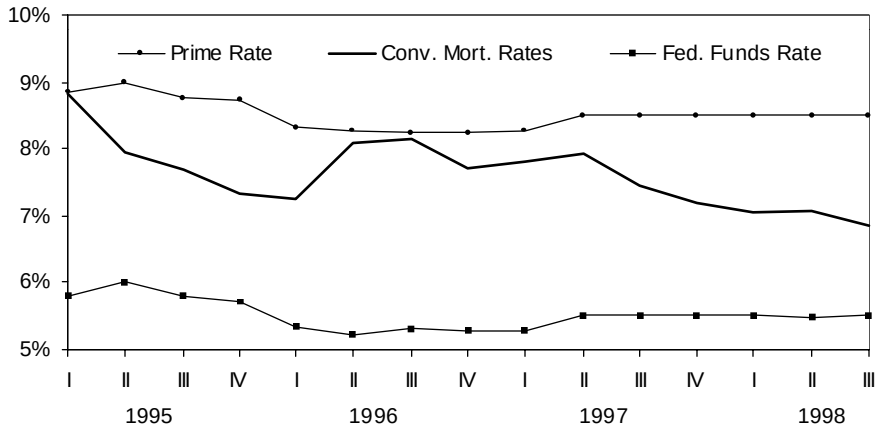


Figure 10
U.S. Economic Forecast (Percent Change Adjusted for Inflation)
1997, 1998, and 1999
Source: *DRI-McGraw Hill, September 1998*

	1997	1998	1999
Real Gross Domestic Product	3.9%	3.4%	1.5%
Real Total Consumption	3.4%	4.4%	2.6%
Nonresidential Final Investment	10.7%	11.3%	4.4%
Office & Computing Equipment	36.8%	52.7%	22.9%
Residential Fixed Investment	2.5%	9.8%	-0.6%
GDP Price Index	1.9%	0.9%	1.9%
Employment Cost Index	3.5%	3.9%	3.6%
Housing Starts (millions)	1.478%	1.594%	1.526%
Unemployment Rate	5.0%	4.5%	4.7%
Payroll Employment Change	2.6%	2.5%	1.8%

Figure 11
Washington Economic Forecast (Annual Percent Change)
1997, 1998, and 1999
Source: *Office of the Forecast Council, September 1998*

	1997	1998	1999
Personal Income Growth	7.8%	7.1%	4.0%
Real Personal Income	5.8%	6.2%	2.1%
Seattle Consumer Price Index	3.5%	2.8%	2.5%
Wage & Salary Employment	4.1%	3.4%	1.6%
Manufacturing	7.3%	3.2%	-3.2%
Aerospace	21.4%	6.9%	-7.5%
Nonmanufacturing	3.65%	3.4%	2.5%
Services	4.6%	4.8%	3.3%

arena. Real GDP is expected to build in the neighborhood of 1.5 percent in 1999 after three years of better than 3 percent growth with some letup more or less across the board.

For Washington, the outlook is pretty much the same (*see Figure 11*). Fourth quarter 1998 employment growth is expected to slow as a result of much heavier cutbacks in aircraft and parts and ongoing restructuring in computer equipment and electronics manufacturing. Real personal income growth is expected to average around 2 percent in 1999 following 6 percent gains in 1997-98. Wage and salary employment is assumed to ease from 3.5 percent to less than 2 percent. Aircraft and parts employment is expected to pullback very much in line with Boeing's announcement of a 12,000 cutback in 1999 at the same time that output levels build to all-time highs. In early December, Boeing jacked up the expected two-and-a-half year companywide layoff total by 20,000 with no state-by-state detail, but losses are now expected to continue through 2000.

Lumber and wood products and primary metals are both expected to scale back modestly as the national business cycle softens. Total manufacturing payrolls in the state are forecast to dip anywhere between 12,000 and 14,000 workers after peaking at an all-time high in 1998. Growth will continue in the construction and services-producing sectors though at a slower pace than experienced over the past couple years. There are still large amounts of secondary impacts filtering through the economy from earlier growth in manufacturing that still have time to play out. This will continue to be a factor in 1999. Not much change is expected in inflation: the Seattle area consumer price index is projected to rise again by roughly 2.5 percent.

On balance, the state's economy will be building in 1999 for the sixteenth consecutive year—a postwar record—but at a much lesser pace than the past couple years. Services will drive the economy and dominate the employment pattern. Construction is destined to continue strong although some easing in housing is likely. The stark difference in growth rates between the central Puget Sound region and the balance of state will logically become more muted. In addition, two symptoms of an overheated economy that have plagued the area in 1997-98—rapidly rising housing prices and acute labor shortages—can be expected to gradually dissipate as some of the pressures on the economy ease in the months ahead.

Unemployment and Its Dimensions

Washington's unemployment rate fell sharply to 4.8 percent in 1997—a significant decline from the previous year. This reflected the rebound in the state's economy as it transitioned from a period of restructuring in the aircraft industry to one of expansion with the economy firing on all cylinders. The state's jobless rate situation was also affected by a broad-based labor and skill shortage. The stage appears set, however, for the state's jobless rate to gradually rise to around 5 percent by the end of 1998 as the global economic situation and other factors put a damper on economic growth.

State and National Unemployment Rates

As predicted, Washington's annual average unemployment rate fell sharply in 1997, driven by a robust economy, that was in turn driven by a revitalized aerospace sector and a high-flying software sector. The healthy pace of hiring activity in Washington also precipitated a labor and skill shortage, which further helped to bring the unemployment rate down. The result was a drop in the state's jobless rate to 4.8 percent in 1997 after remaining virtually unchanged at around 6.5 percent the previous two years (*see Figure 12*). The sharp decline in the state's unemployment rate dropped it below the national jobless rate, which eased from 5.4 percent in 1996 to 4.9 percent in 1997. This pattern was remarkably similar to that witnessed in Washington in the late 1980s. Not coincidentally, aerospace was a key player in that turnaround as well.

Washington's Monthly Unemployment Rates

Seasonally adjusted monthly unemployment rates thus far in 1998 suggest that Washington's annual average unemployment rate for 1998 will be comparable to that in 1997. The general pattern of decline in the state's jobless rate was carried over from 1997 into the first quarter of 1998, apparently bottoming out at 4.1 percent by the end of that quarter. Since then, Washington's monthly jobless rate has moved increasingly higher, posting a consistent 4.7 percent in each of the months of the third quarter of 1998 (*see Figure 13*). While these remain some of the lowest monthly jobless rates experienced in Washington's postwar history, there are definite signs of cooling in the economy. At this pace, the stage is set for Washington's average unemployment rate to edge up to around 5 percent by the end of the year.

Figure 12
Annual Average Unemployment Rates
Washington State and Nation, 1970-1997
Source: *Employment Security Department*

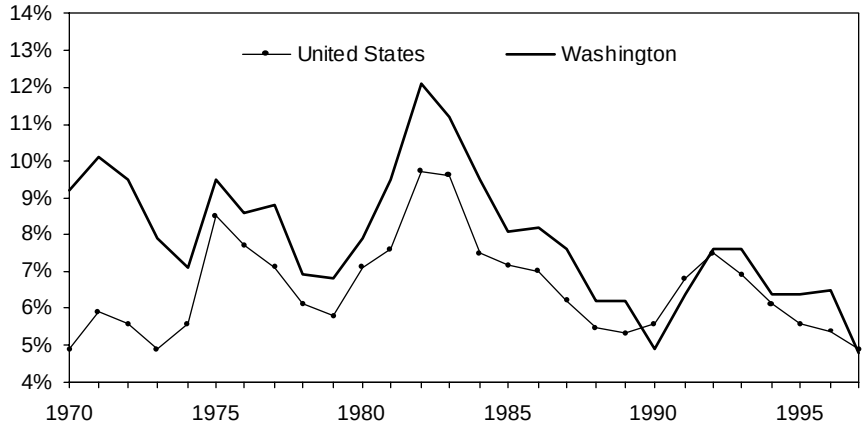


Figure 13
Monthly Unemployment Rates
Washington & U.S., 1997 & 1998 (Seasonally Adjusted)
Source: *Employment Security Dept. & U.S. Dept. of Labor, BLS*

1997	WA	U.S.
January	5.3%	5.3%
February	5.1%	5.3%
March	5.0%	5.2%
April	5.0%	5.0%
May	4.8%	4.8%
June	4.7%	5.0%
July	4.7%	4.9%
August	4.6%	4.9%
September	4.7%	4.9%
October	4.4%	4.7%
November	4.2%	4.6%
December	4.4%	4.7%

1998	WA	U.S.
January	4.5%	4.7%
February	4.1%	4.6%
March	4.1%	4.7%
April	4.2%	4.3%
May	4.4%	4.3%
June	4.7%	4.5%
July	4.7%	4.5%
August	4.7%	4.5%
September	5.1%	4.6%
October	4.8%	4.6%
November	4.7%	4.4%
December	n/a	n/a

Northwest Unemployment Rates

What a difference a year makes. In 1996, Washington's unemployment rate was notably higher than those posted by most of its Northwest neighbors, namely Oregon, Idaho, and Montana (Alaska was an exception with its unique, energy-based economic situation). That situation was not expected to last and, in fact, did not. As noted, Washington's unemployment rate fell dramatically in 1997 as its economy—led by aerospace and software—ramped up. Meanwhile, the jobless rates in Oregon, Idaho, and Montana remained largely unchanged as Oregon's labor market softened in the wake of a high tech pullback fueled by the Asian economic crisis and as the Idaho and Montana economies softened following slowdowns in agriculture, food processing, and mining. The changing economic situation saw a reversal of fortunes as Washington's jobless rate ended up significantly lower than those of its Northwest neighbors (*see Figure 14*).

Unemployment Rates by County and Region

The good news is that unemployment rates declined in every Washington county in 1997. However, the patterns illustrated by the tale of *Two Washington's* remains. That is, the state average tends to mask what are, in fact, disparate rates of economic performance at the regional and county levels. That is certainly true in Washington with respect to unemployment rates, as an analysis of 1997 average unemployment rates for its counties and regions clearly reveals.

Not surprisingly, Washington's larger metropolitan counties emerged in 1997 with unemployment rates generally at or below the state average (*see Figure 15*). More to the point, they drove the state average. King County set the pace with a jobless rate of 3.3 percent. Snohomish and Island counties, which constitute the balance of the Seattle-Bellevue-Everett PMSA, were right behind at 3.4 percent and 3.5 percent, respectively. Clark County also posted an impressively low unemployment rate of 3.6 percent. Pierce, Kitsap, and Thurston counties at the southern part of Puget Sound came in with a broader jobless rate spread of between 4.5 percent and 5.5 percent. Spokane County provided a favorable metropolitan presence in eastern Washington at 4.6 percent.

Another group of counties with traditionally lower-than-average unemployment rates are those whose economies are dependent on wheat and other grains. Though definitely agriculture-based, the distinction between these counties and other agriculture-based counties is the less labor-intensive nature of their commodities. Grain harvesting is largely mechanized and, as a result, does not inject the large swings in employment that accompany most fruit and vegetable harvests. Consequently, grain counties like Whitman, Garfield, Asotin, and Lincoln had among the lowest unemployment rates in Washington. In fact, Whitman led all counties with an astoundingly low jobless rate of 1.8 percent. Garfield and Asotin counties posted "Seattle-like" jobless rates of 3.6 percent and

Figure 14
Unemployment Rates
Northwest States and Nation, 1997
Source: *Employment Security Dept., LMEA & U.S. Dept. of Labor, BLS*

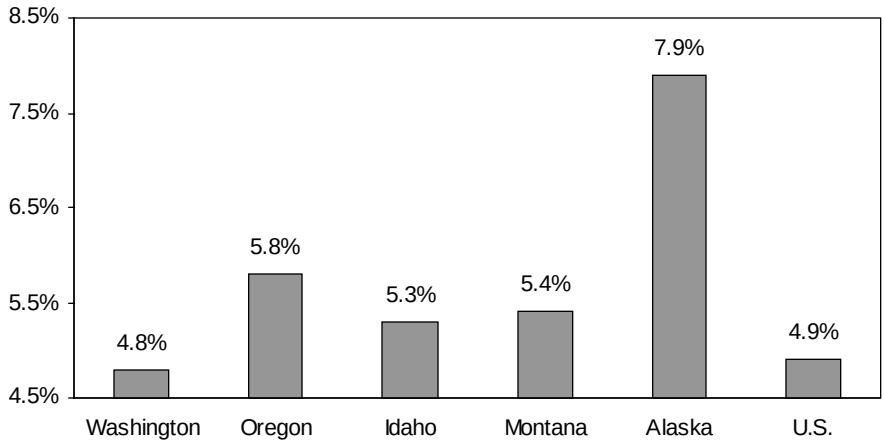
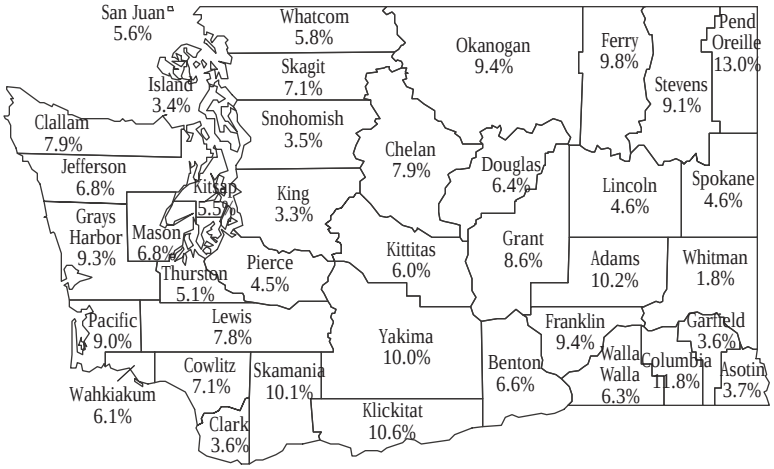


Figure 15
Unemployment Rates by County
Washington State, 1997
Source: *Employment Security Department*



3.7 percent, respectively, while Lincoln County came in at a commendable 4.6 percent.

On the flip side, despite a relatively low state average, three out of four counties had jobless rates above that in 1997 (one out of five were in double-digits). Virtually all of the counties with higher-than-average unemployment rates had economies dependent on industries that were both resource-related and labor-intensive (e.g., fruit and vegetable production and processing, logging and lumber, and mining). Pend Oreille in northeast Washington (timber and mining) had the distinction of having the highest county unemployment rate at 13.0 percent. Following it was Columbia County in southeast Washington (vegetables and timber) at 11.8 percent.

The *Two Washingtons* theme is underscored when one looks at unemployment rates regionally (*see Figure 16*). For example, the Puget Sound region and western Washington posted lower-than-average unemployment rates of 3.7 percent and 4.1 percent, respectively, in 1997. Moreover, both saw those rates trend down annually since 1993. By contrast, the non-Puget Sound region and eastern Washington saw higher-than-average jobless rates of 6.4 percent and 6.1 percent, respectively, in 1997. Furthermore, until 1997, both saw those rates trend up progressively over the past several years. Two distinct regional patterns are still evident.

The correlation between natural resource/agriculture-dependent counties and high unemployment rates raises the issue of seasonality since that appears to be the common denominator among the two. In fact, counties with the highest degrees of seasonality tended to be among those with the highest unemployment rates as well. Interestingly, there was much less correlation of highly-cyclical or highly-structural counties with the highest unemployment rates. This might strike some as odd given the discussion of cyclical and structural links in the chapter on *Seasonal, Cyclical, and Structural Employment*. It shouldn't, however, because the cyclicality-to-unemployment correlations only emerge when the region is on the downside of the business cycle and Washington is currently on the upside. The structural-to-unemployment correlations only appear when the downsizing occurs and then tend to come and go. Only seasonality occurs year after year.

Discouraged Workers

The Bureau of Labor Statistics significantly changed the definition of discouraged workers starting in 1994. In the past, individuals were counted as "discouraged workers" if, *for whatever reason*, they *felt* they could not find a job and quit searching for work. Now, the burden of proof is on the individuals to show that they actively looked for a job at least once during the past year or since their last job and that they were available to start if one had been offered. As in the past, all individuals must still acknowledge that they want a job now and that they did not look for work in the prior four weeks because they (1) did not believe a job was available in their line of work or area, (2) had not been able to find work previously, (3) lacked the necessary schooling,

Figure 16
Unemployment Rates by Region
Washington State, 1997
Source: *Employment Security Department*

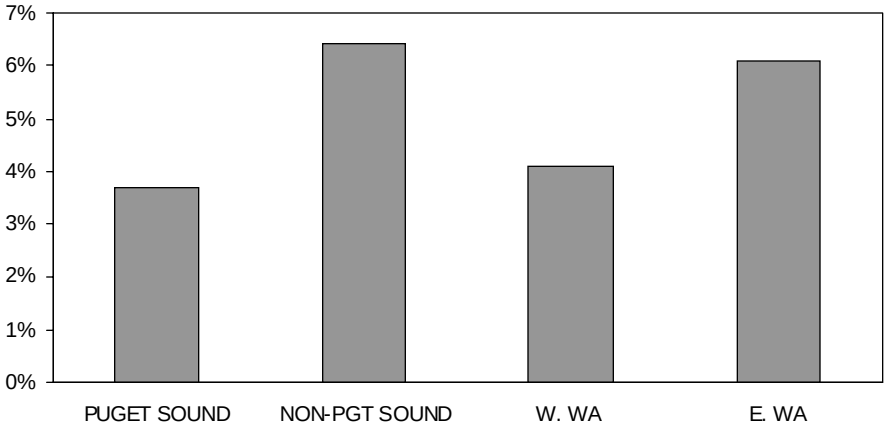
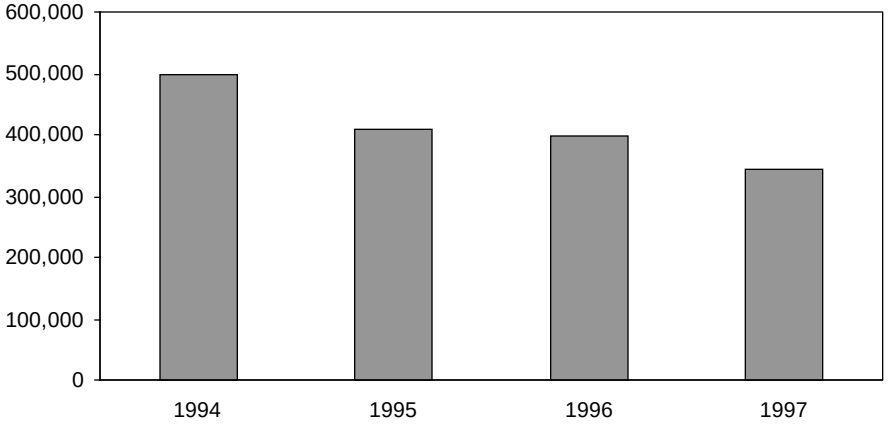


Figure 17
Number of Discouraged Workers
United States, 1994-1997
Source: *Employment Security Department*



training, skills, and experience, (4) were considered too young or old for the job or (5) experienced other forms of discrimination.

In the four years since the new methodology was introduced, the count of discouraged workers nationally has declined annually (*see Figure 17 on the previous page*). Starting from an estimated 500,000 (a benchmark for the new methodology) in 1994, the number of discouraged workers fell year after year to 343,000 in 1997. The 1997 estimate represents a 16 percent decline over 1996. That decline was consistent with a healthy national economy that showed persistent signs of regional labor shortages. National initiatives like welfare reform (known as WorkFirst in Washington) are also believed to have exerted downward pressure on the number of discouraged workers in 1997.

Mass Layoffs and Worker Dislocation

The Mass Layoff Statistics (MLS) program is a federal-state program that identifies, describes, and tracks major job cutbacks using data from each state's unemployment insurance database. Establishments that have at least 50 initial UI claims filed against them during a consecutive five-week period are contacted by the state agency to determine if at least 50 workers were separated for at least 31 days duration. If so, the firm triggers into MLS.

Over the 13 quarters (second quarter 1995 through second quarter 1998) since Washington's MLS system was reestablished, the state has reported a total of 222 mass layoff events which translated into 40,986 worker separation notices filed by employers and 27,314 initial Unemployment Insurance claims filed by employees. A look at the most recent four quarters show that all variables in the MLS system—establishments, layoff events, separations, and initial claims—picked up in the fourth quarter of 1997. Of particular note are the upticks in separations and initial claims since both speak to the potential number of workers impacted by mass layoff events. Both of these categories more than doubled from the third quarter of 1997 to the fourth quarter of 1997 and proceeded to continue climbing (*see Figure 18*).

The focus of this section is on the demographics (sex, age, race, and education) of Washington's MLS population from the third quarter of 1995 through the second quarter of 1996. This is a departure from the past practice of profiling the number of layoff events, separations, and initial UI claimants. The goal is to inform the reader of the demographic composition of the individuals who make up the MLS population.

Sex

With the exception of the tremendous disparity in the fourth quarter of 1995, the female-to-male ratio has been more or less consistent with females comprising slightly less than half of Washington's MLS population compared to the male share of slightly more than 50 percent (*see Figure 19*). This is consistent with the civilian labor force shares held by females and males in Washington at the time of the 1990 Census. This means that females are no more or less affected by mass layoffs than males relative to their labor force shares.

Figure 18
Mass Layoff Separations and Initial UI Claims
Washington State, 2nd Quarter 1995 - 2nd Quarter 1998
Source: *Employment Security Department*

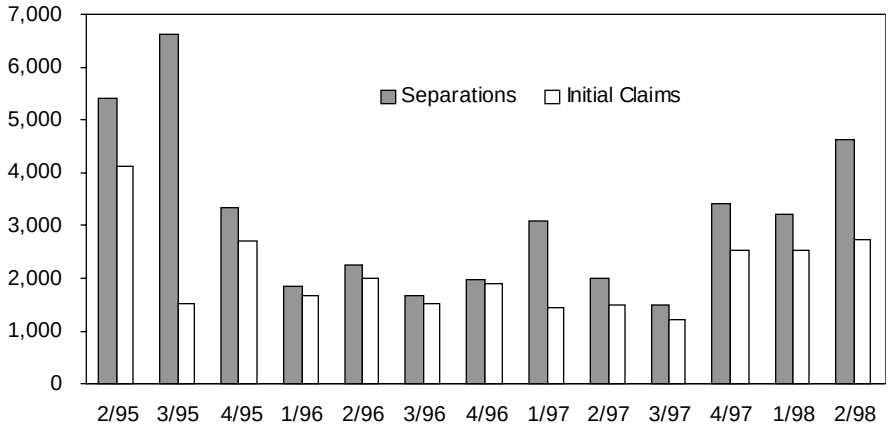
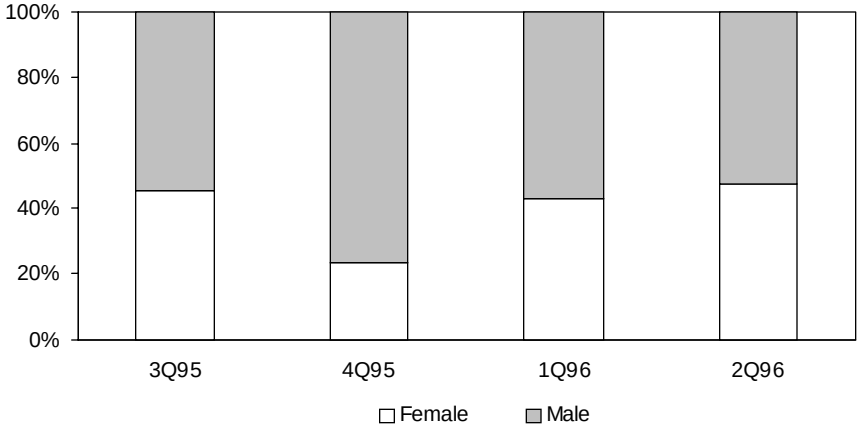


Figure 19
Mass Layoffs Statistics Population by Sex
Washington State, 3rd Quarter 1995 - 2nd Quarter 1996
Source: *Employment Security Department*



Age

The MLS data for Washington by age group show that the 30-44 year old and 45-54 year old brackets accounted for the greatest share of workers affected by mass layoffs (*see Figure 20*). In fact, the two groups combined accounted for more than three-fourths of the MLS total. Those same two groups also have the fastest growing shares, especially the 45-54 year old group. Much of this can certainly be attributed to the overall national demographic trend of an aging work force. In other words, more workers caught up in mass layoffs are likely to be older simply because there are more workers in those age groups. However, there is also some evidence that older workers are more heavily impacted by management de-layering or restructuring because workers in management positions tend to be older than the work force as a whole.

Race

The racial make-up of the MLS population in Washington, like the sex composition, was relatively fixed over the four-quarter observation period (*see Figure 21*). Mass layoffs appeared to affect non-whites more than whites. MLS shares held by non-white groups were about one percentage point higher than their labor force shares.

Education

The MLS data for Washington show that education is an important determinant when it comes to mass layoffs (*see Figure 22 on the next page*). To be sure, the MLS populations were represented at all education levels. However, the impact was not distributed proportionately by educational attainment nor did it mirror the distribution for the statewide labor force. For example, well over half (60 to 65 percent) of the mass layoff population in Washington had only a high school education or less. This was considerably higher than the share held by the labor force statewide, where less than half (45 percent) had a high school education or less. Although more than 20 percent of the state's labor force had a two or four year degree, those degrees were scarcely represented in the MLS population. The share of those with some college or vocational education was pretty consistent between the MLS population and the labor force as a whole. Interestingly, those with post-graduate degrees were more present in the MLS population (12 percent) than they were in the labor force as a whole (6 percent), much of this probably related to the dislocation of scientists at Hanford.

In summary, relative to the state's labor force composition, the sex of a worker appears to have little effect on whether or not they are caught up in a mass layoff event. Age, race, and education, on the other hand, do appear to have an effect.

Figure 20
Mass Layoffs Statistics Population by Age
Washington State, 3rd Quarter 1995 - 2nd Quarter 1996
Source: *Employment Security Department*

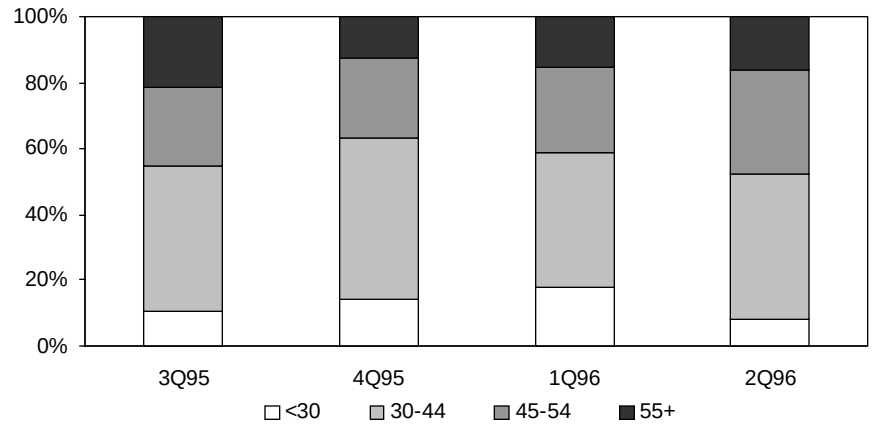


Figure 21
Mass Layoffs Statistics Population by Race
Washington State, 3rd Quarter 1995 - 2nd Quarter 1996
Source: *Employment Security Department*

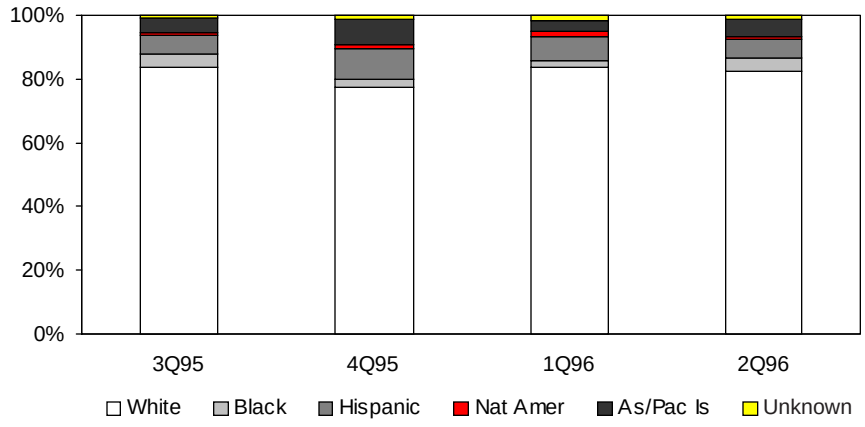
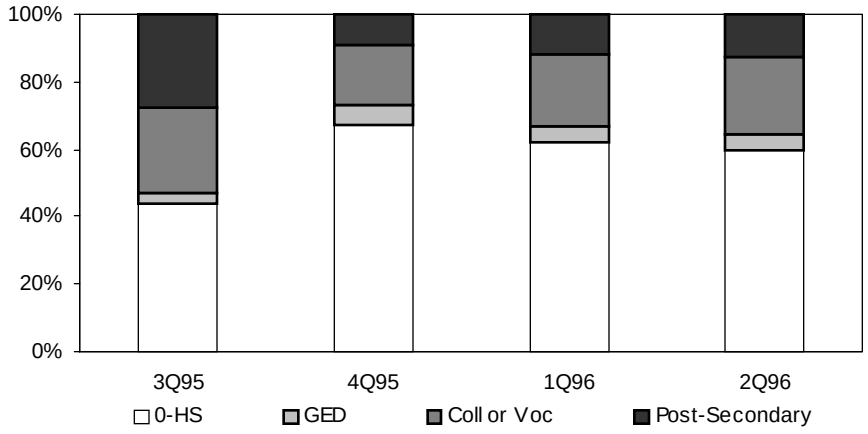


Figure 22
Mass Layoffs Statistics Population by Education
Washington State, 3rd Quarter 1995 - 2nd Quarter 1996
Source: *Employment Security Department*



Seasonal, Cyclical, and Structural Employment

Though seasonality, cyclicality, and structural maturity are all present to varying degrees in Washington's economy, a key finding is that the shares of seasonal and structurally mature employment have been subsiding; the former because the economy is diversifying, the latter because the major restructuring activity since 1990 has passed. Restructuring activity, however, may be on the rise again as the Asian Crisis hits the technology sector hard. Cyclical employment is up, but that is consistent with where the state is in the current business cycle. The situation could shift, however, as the state and national economies cool.

Seasonality, cyclicality, and structural maturity are important to include in any discussion of employment because they tend to foster higher than average rates of unemployment in those industries where they are present. This is historically the case in Washington, where the industry mix relies heavily on agricultural, natural resource, and goods-producing industries. As a result, a significant share of workers are viewed as being at risk of longer and more frequent episodes of unemployment, and Washington's jobless rates are generally higher and more volatile than those nationally.

Seasonality reflects regular monthly swings in economic activity. These swings produce atypically high employment or unemployment depending on the season. Workers in affected industries are hired at the start of and released at the end of, for example, the crop harvest or logging season, the school year, the summer tourist, or winter ski season, etc. Complementary and support industries also tend to be affected.

Cyclicality reflects shifts in the business cycle. Business cycles tend to generate disproportionately high employment or unemployment depending on where an economy is in the cycle, namely whether it is in expansion or contraction. Turning points in the cycle are brought about by factors that influence supply and demand. For example, recessionary pressures are often brought to bear by softening demand that squeezes revenue and forces cost-cutting which, in turn, increases the likelihood of payroll reductions.

Structural maturity reflects long-range upward shifts in productivity. Shifts of this nature typically result in unemployment as affected firms introduce new equipment, processes, and technology to heighten their competitive positions and overall productivity, and replace jobs as those gains are realized. Structural pressures are also brought to bear by shifts in consumer buying patterns.

How Is It Triggered?

In 1986, the state legislature's Joint Select Committee on Unemployment Insurance and Compensation developed criteria for identifying seasonal, cyclical, and structural industries. The criteria were applied to three-digit Standard Industrial Classification code private covered employment data from the Employment Security Department. While the formulas are virtually unchanged, the observation period has been moved from 1976-84 to 1982-90 to more accurately reflect the state's current employment composition as well as to measure the state's job performance during the most recent national economic recession.

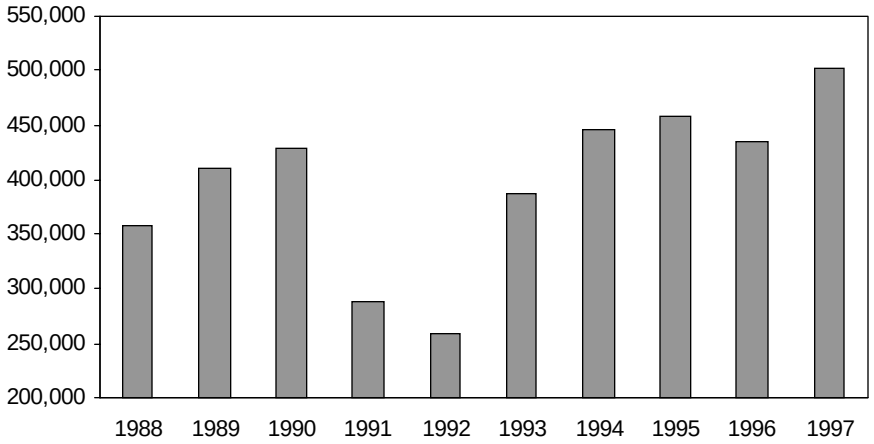
An industry was classified as seasonal if its highest to lowest monthly employment varied 18.9 percent or more from its annual average estimate using 1993 as the reference year. Cyclicality was acknowledged if an industry's highest to lowest annual average employment varied 24 percent or more from the midpoint trend line from 1982-90. This formula was run in addition to the official threshold of 37.8 percent from the midpoint trend line from 1976-84. Structural industries were identified as Type 1 if employment decreased 10 percent or more from the pre-recession peak in 1990 or Type 2 if the loss was less than 10 percent from the 1990 peak.

Seasonal Industries

Washington had 140 three-digit SIC coded industries designated as *seasonal* in 1997. Those 140 sectors translated into 503,222 workers who, in turn, represented nearly one-fourth of the state's total private covered employment in 1997.

The number of private covered workers in Washington's seasonal industries has fluctuated over time (*see Figure 23 on the next page*). One notable observation, however, is that the number of workers in the state's seasonal industries was up significantly (15.9 percent) after having declined (-5.4 percent) the previous year. More apparent, though, is the clear cyclical pattern over the 1988-97 period—a pattern punctuated by sharp losses during the national economic downturn in 1990-

Figure 23
Seasonal Private Covered Employment
Washington State, 1988-1997
Source: *Employment Security Department*



91. Bear in mind once again that an industry can be concurrently seasonal and cyclical (not to mention structurally mature). Nevertheless, it is interesting to note the strong cyclical tendencies that seasonal industries displayed over the course of an economic downturn that scarcely impacted Washington's economy as a whole.

A breakdown of seasonality by major industry division in 1997 shows that services and trade combined for more than half of all private covered workers in seasonal industries, which was of little surprise since they were also the state's largest employment sectors. Agriculture, forestry, and fishing and construction combined to represent a third of all private covered workers in seasonal industries, a finding that squares with most people's impressions of seasonality. The balance of industry sectors, including manufacturing, accounted for the remaining one-tenth of private covered workers in seasonal industries.

A more telling picture, though, emerges when one looks at seasonality as a share of each major industry division's total covered employment since this reveals the relative impact of seasonality on these sectors. Viewed this way, mining, agriculture, forestry, and fishing and construction emerge as the most seasonally-affected industries, while services and trade—the industries with the greatest number of seasonal workers in absolute terms—show up as only moderately affected by seasonality. This view of seasonality is most compatible with our intuitive sense of how seasonality affects industries.

The listing of the largest three-digit SIC coded seasonal industries in Washington is topped by personnel supply services (largely temporary help), which does a lot of summer and holiday-related hiring (*see Figure 24*). Department stores, miscellaneous shopping goods stores, and family clothing stores also made the list for the same reasons. Agriculture-related sectors, namely fruits and tree nuts and preserved fruits and vegetables, made the list reflecting harvest cycles. Amusement and recreation services and hotels and motels appeared on the list due to swings generated by summer and winter activities. Construction, both residential and heavy, also appeared thanks to their weather-regulated activities. A few specialty contract sectors like painting and paper hanging and roofing, siding, and sheet metal work also made the list.

Cyclical Industries

Under the official 37.8 percent variance threshold, Washington had 129 three-digit SIC code industries and nearly 284,703 workers identified as *cyclical* in 1997 which accounted for nearly 14 percent of the state's total private covered employment. Although the number of workers employed in these cyclical industries has increased each year from 1988-97, their share of total private covered employment has remained relatively fixed over the same period at between 12 percent and 14 percent.

Figure 24
Seasonal Industries in Washington, 1997
(15 Largest 3-Digit SIC Codes)
Source: *Employment Security Department*

SIC	Industry	Employment
	Private Covered Seasonal Employment	503,222
736	Personnel Supply Services	45,244
531	Department Stores	41,686
017	Fruits and Tree Nuts	36,514
172	Painting and Paper Hanging	34,560
799	Miscellaneous Amusement, Recreation Services	26,950
701	Hotels and Motels	26,430
881	Private Households	25,361
594	Miscellaneous Shopping Goods Stores	23,229
451	Air Transportation, Scheduled	20,980
152	Residential Building Construction	19,109
203	Preserved Fruits and Vegetables	13,635
162	Heavy Construction, Except Highway	12,777
565	Family Clothing Stores	11,390
078	Landscape and Horticultural Services	8,472
176	Roofing, Siding, and Sheet Metal Work	6,213

Under the "adjusted" 24 percent variance threshold, Washington's economy had 198 three-digit SIC code sectors and 622,911 workers identified as cyclical in 1997, which translated into 30 percent of the state's total private covered employment.

One indication that some cyclicality is being washed out of Washington's economy is the fact that aircraft and parts employment—often cited as a key example of a cyclical sector—varied only 24 percent from its midpoint trend line during the 1982-90 business cycle compared to 38 percent during the 1976-82 cycle. In other words, aerospace employment did not swing or fluctuate as widely as it used to. It was less cyclical.

A listing of the largest three-digit SIC coded cyclical industries in Washington is more than simply aircraft and parts, though that sector traditionally tops the list (*see Figure 25)*. It also includes personnel supply services and other miscellaneous business services, which have carved out increasingly prominent roles in cyclical economies, particularly around the peaks and troughs. Other interest-rate sensitive industries like residential and heavy construction, engineering and architectural services, research and testing, and wholesale trade related to equipment and supplies also made the list. Even an agricultural sector, fruits and tree nuts, made the list thanks largely to the increasing exposure of its commodities to international trade.

Structurally Mature Industries

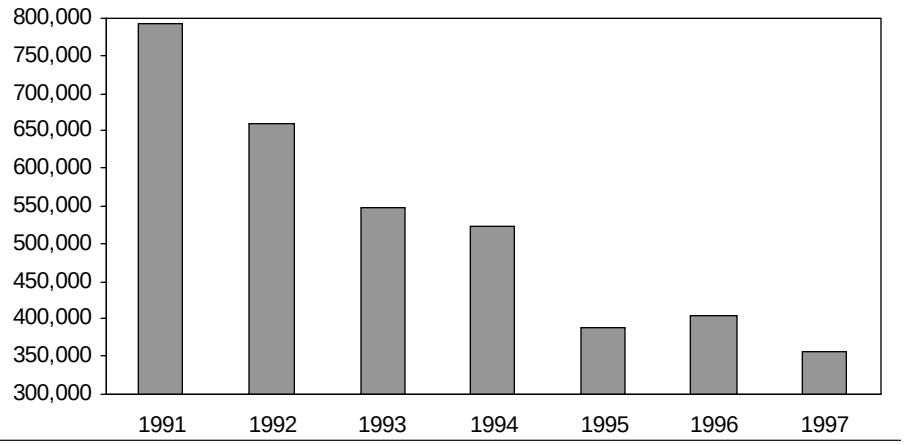
Washington had 113 three-digit SIC coded industries classified as *structurally mature* in 1997 and those 113 sectors employed nearly 403,000 private covered workers. Remember there are two distinct categories of restructuring—Type 1 and Type 2. Type 1 (employment decline of less than 10 percent) captured 81 sectors and 113,711 private covered workers, while Type 2 (employment decline of 10 percent or more) captured 32 sectors and 242,177 workers. Clearly, Type 1 was more diverse industrially than Type 2 as evidenced by its having encompassed more than twice as many industry sectors. Type 2, however, encompassed a greater number of private covered workers than Type 1 despite having half the sectors.

The covered employment trend for structurally mature industries in Washington has been one of relative decline since the national economic recession in 1991 (*see Figure 26*). Indeed, the number of covered workers in structurally impacted industries has declined each year since 1991, including -11.6 percent in 1997, with the exception of a 3.9 percent increase in 1996. This is consistent with what one expects with respect to restructured industries; the employment level after restructuring should be lower even in the midst of the state's overall economic rebound. At the same time, while the overall structural trend may be one of decline, the aggregate numbers actually mask what appears to be the emergence of two distinct patterns. In 1997, Type 1 structural employment fell 42.6 percent while Type 2 structural employment rose 18.3 percent. This suggests that major industry restructuring of great magnitude (10 percent or more) has eased while those of more modest proportion (less than 10 percent) are increasing.

Figure 25
Cyclical Industries in Washington, 1997
(15 Largest 3-Digit SIC Codes)
Source: *Employment Security Department*

SIC	Industry	Employment
	Covered Private Cyclical Employment	284,703
372	Aircraft and Parts	104,650
736	Personnel Supply Services	45,244
017	Fruits and Tree Nuts	36,514
738	Miscellaneous Business Services	26,420
871	Engineering and Architectural Services	21,954
152	Residential Building Construction	19,109
832	Individual and Family Services	18,456
508	Machinery, Equipment, and Supplies	17,908
504	Professional & Commercial Equipment	16,754
173	Electrical Work	14,547
873	Research and Testing Services	13,471
162	Heavy Construction, Except Highway	12,777
874	Management and Public Relations	10,590
495	Sanitary Services	9,392
804	Offices of Other Health Practitioners	9,183

Figure 26
Structurally Mature Industry Covered Employment
Washington State, 1991-1997
Source: *Employment Security Department*



One point to be made is that there is considerable overlap between industries categorized as structurally mature and cyclical. What results is an employment pattern in which the former generally resembles the latter. However, the greater presence of non-manufacturing industries in the structurally mature category produces a much smoother employment trend with less severe peaks and troughs. Nevertheless, 1990 was still the peak for the structurally mature category and employment among the sectors classified as such has declined at rates of 2.5 percent or more in the proceeding five years.

Like the cyclical lineup, the listing of the largest three-digit SIC coded structurally mature industries is topped by aircraft and parts, a sector that was very definitely affected by restructuring in the early 1990s (*see Figure 27*). Several other industries typically associated with restructuring also appear on the list. Trucking has been restructuring in the wake of deregulation. Commercial banks and savings institutions are a big one with restructuring affecting these sectors progressively to date through the 1990s. Much has been reported on restructuring in the forest products industry as reflected in the presence of logging; sawmills and planing mills; millwork, plywood and structural members; and paper mills. Other major manufacturing sectors whose restructuring woes are well documented include ship and boat building and repairing, newspapers, and primary nonferrous metals (chiefly aluminum). Specialty drug stores have faced increased competition from "big box" retailers, accounting for their presence on the list.

Note: Bear in mind that these numbers are separate and distinct from those discussed in the previous section entitled, *Workers Dislocated by Restructuring*. The subject matter is the same, but the data in this section on structural industries address the number of workers in industries affected by restructuring whereas the data in the earlier section address the number of workers who lost jobs during restructuring periods.

Regional Patterns

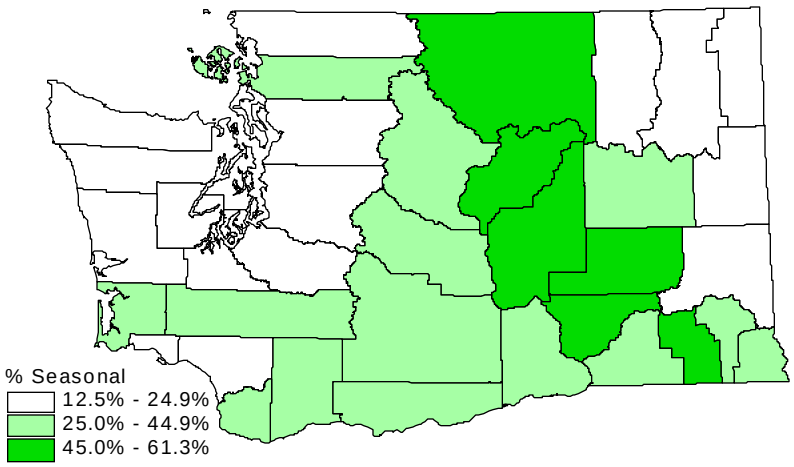
Every Washington county had some degree of seasonal, cyclical, and structural covered employment in 1997. As a general rule, though, the highest shares of the three factors can be found in the small, non-metro counties with resource-based economies. The larger metropolitan counties, however strong their resource-based employment might be, tend to have more diversified economies that dilute or offset the seasonal, cyclical, and structural components.

Seasonality. The degree of seasonality among Washington counties in 1997 ranged from a low of 12.5 percent (Wahkiakum County) to a high of 61.3 percent (Adams County) (*see Figure 28*). Not surprisingly, the highest degrees of seasonality—those constituting at least one-third of an area's covered employment—were found in roughly a third of Washington's counties, most of them agriculture-based counties in central and eastern

Figure 27
Structural Industries (Type 1 and 2) in Washington, 1997
(15 Largest 3-Digit SIC Codes)
Source: *Employment Security Department*

SIC	Industry	Employment
	Private Covered Structural Employment	355,888
372	Aircraft and Parts	104,650
421	Trucking and Courier Services, Except Air	25,821
602	Commercial Banks	22,252
242	Sawmills and Planing Mills	14,747
591	Drug Stores and Proprietary Stores	11,692
174	Masonry, Stonework, and Plastering	10,193
271	Newspapers	9,929
243	Millwork, Plywood & Structural Members	9,083
262	Paper Mills	8,193
241	Logging	7,237
603	Savings Institutions	6,837
373	Ship and Boat Building and Repairing	6,695
382	Measuring and Controlling Devices	6,330
333	Primary Nonferrous Metals	6,160
473	Freight Transportation Arrangement	5,670

Figure 28
Seasonal Jobs as a Percentage of Covered Employment
Washington State, 1997
Source: *Employment Security Department*



Washington. At the highest end, for example, Adams, Columbia, Douglas, Grant, and Okanogan counties had at least half of their respective covered employment bases classified in seasonal industries. Though metropolitan, Yakima County and Clark County also showed up in the group.

Areas with employment seasonal shares above the roughly 19 percent state average but below the highest 33 percent tier included a mix of counties with agriculture-based and forest products-based economies. This essentially accounted for the balance of non-metropolitan counties in central and eastern Washington as well as most of the non-metropolitan counties in western Washington. Simply put, Washington's resource-based counties generally had seasonal shares of 19 percent or more.

With exception of Yakima and Clark counties as noted above, Washington's metropolitan areas comprised of those counties with the lowest shares of seasonal employment. It bears repeating, though, that even these counties had at least a fifth of their covered employment in seasonal industries.

Cyclicality. Cyclicality was less present in Washington counties than either seasonality or structural maturity (*see Figure 29*). The degree of cyclicality among Washington counties ranged from a low of 4.5 percent (Ferry County) to a high of 30.1 percent (Benton County). At the high end, Benton and Garfield counties stood out from the rest of the pack with cyclical shares of 30.1 percent and 27.9 percent, respectively. Nevertheless, few geographic or industrial patterns seem to stand out. It might be noted, however, that the larger metropolitan areas appeared to have driven the state average.

Structural Maturity. Like seasonality, structural maturation left its mark on Washington counties (*see Figure 30*). In terms of share of total private covered employment, the impact ranged from a low of 8.2 percent (Benton County) to a high of 48.5 percent (Wahkiakum County). The most impacted counties—those with structural shares of 20 percent or more—were largely in the northeast, southwest, and Olympic Peninsula regions of the state. That is, they tended to be smaller, rural and natural resource-dependent. This is consistent with the makeup of many of the industries that have experienced restructuring since 1990.

As noted earlier, the statewide figures related to structural maturity appeared to have bottomed out in 1996. This is further evident in the county data as the degree of structural maturity ranged from a low of 8 percent to a high of 31 percent compared to 15 percent and 60 percent, respectively, in 1995. The share of county employment in restructured industries has clearly subsided.

Figure 29
Cyclical Jobs as a Percentage of Covered Employment
Washington State, 1997
Source: *Employment Security Department*

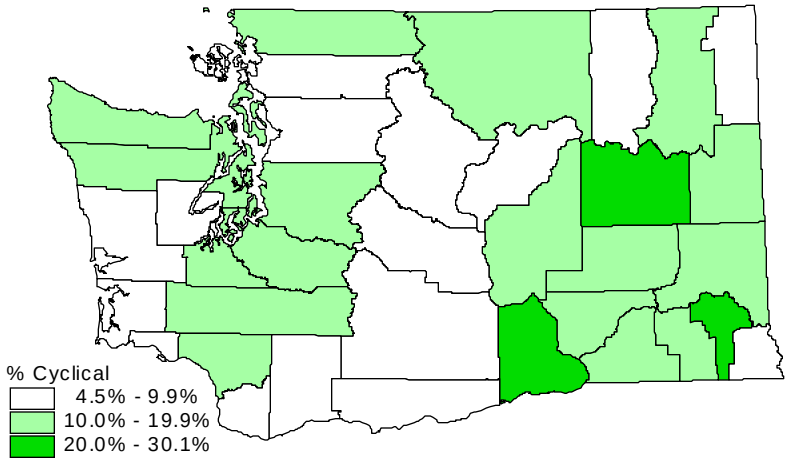
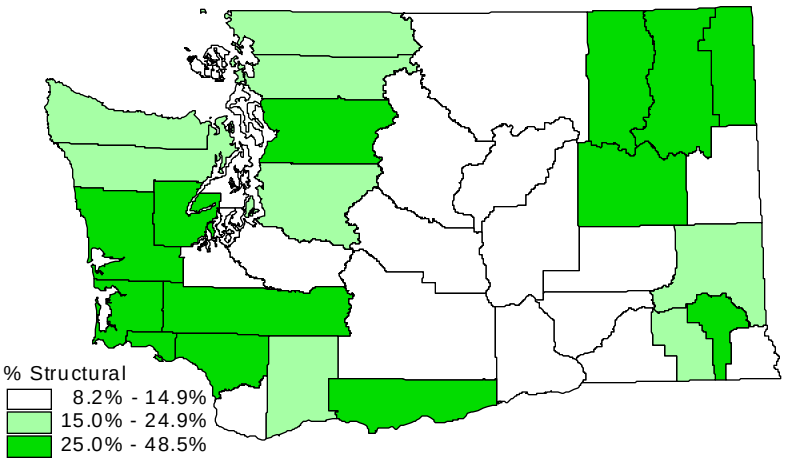


Figure 30
Structural Jobs as a Percentage of Covered Employment
Washington State, 1997
Source: *Employment Security Department*



Industry and Occupational Employment Projections

Washington's labor force and nonagricultural employment are both projected to expand more slowly than has historically been the norm, though still faster than the national average. Specifically, state nonfarm employment is expected to climb 1.4 percent annually from 1995-2020. Services is projected to be the strongest performer thanks to the computer and software component of business services while goods-production as a whole is projected to be a drag. Occupationally, new job creation is projected to be strongest in the professional and technical and services fields.

Labor Force Forecast

Washington State's labor force (those 16 years of age and older who are either working or actively looking for work) is expected to grow 1.4 percent a year from 1995-2020 (*see Figure 31*). This rate, while higher than that of the nation, is considerably slower than the 2.2 percent state average from 1970-1995. These are some of the lowest growth rates in the modern era, though they still outpace the national norm. Continued strong migration will supply the new workers needed to boost the state's trends above the national average.

Washington's unemployment rate is expected to dip below the 6.0 percent mark during the forecast period (*see Figure 32*). This should be roughly at or below the national average, which should erase the historical percentage point difference that favored the nation. This assumes a modest change in the seasonal composition of the state's industry base. Were that to change significantly, Washington's convergence with the national norm would be even greater.

Industry Forecast

Washington's nonagricultural employment base is projected to grow 1.5 percent annually from 1996-2020. This is a rather sharp departure from the 2.8 percent annual growth anticipated between 1995 and 2000, reflecting what is expected to be the state's declining rate nonfarm employment growth after the turn of the millenium and continuing through 2020 (*see Figure 33 on the next page*). The bottom line, however, is that the key term is still *growth*. Though the projection reflects a slowing trend, it still translates into more than 1 million net new jobs over the forecast period. Also, the rates of

Figure 31
Labor Force Growth Rates
Washington State, 1995-2020
Source: *Employment Security Department & Bureau of Labor Statistics*

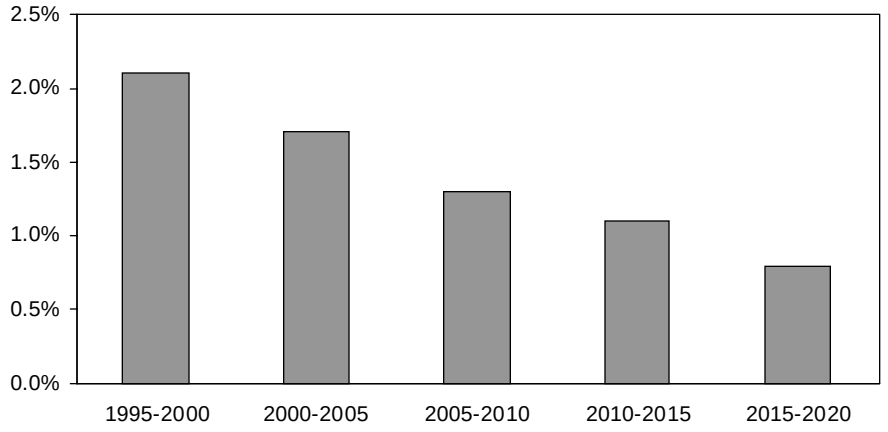


Figure 32
Unemployment Rates
Washington State, 1995-2020
Source: *Office of Financial Management*

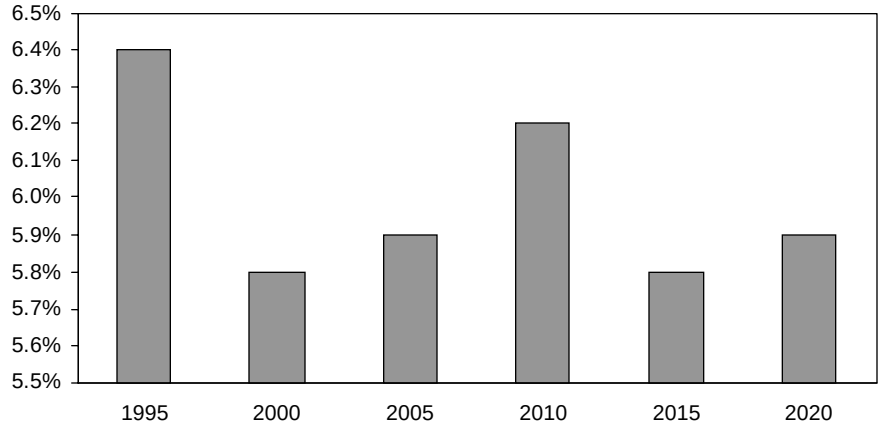
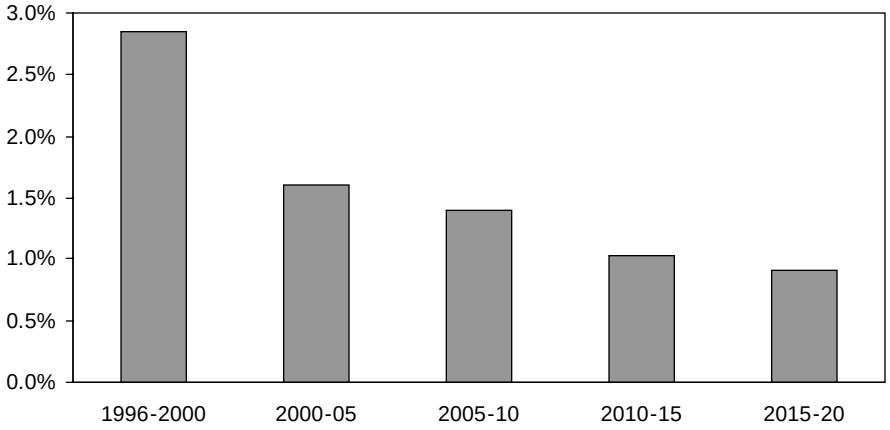


Figure 33
Nonagricultural Job Growth
Washington State, 1996-2020
Source: *Employment Security Department & Bureau of Labor Statistics*



growth are expected to be higher than the national average.

At the industry level, employment in Washington's goods-producing sectors (mining, construction, and manufacturing) is expected to continue expanding from 1996-2020, but at rates well shy of the average for total nonfarm employment. Manufacturing is projected to have especially modest annual growth of 0.7 percent over the period, while mining is expected to fare little better at 0.8 percent per annum (*see Figure 34*). Construction is forecast to do somewhat better at 1.1 percent. This slow growth, coupled with more vigorous growth on the services-producing side, is expected to find the goods-producing sector losing three and a half percentage points of its employment share to end up at 11 percent of total nonfarm employment.

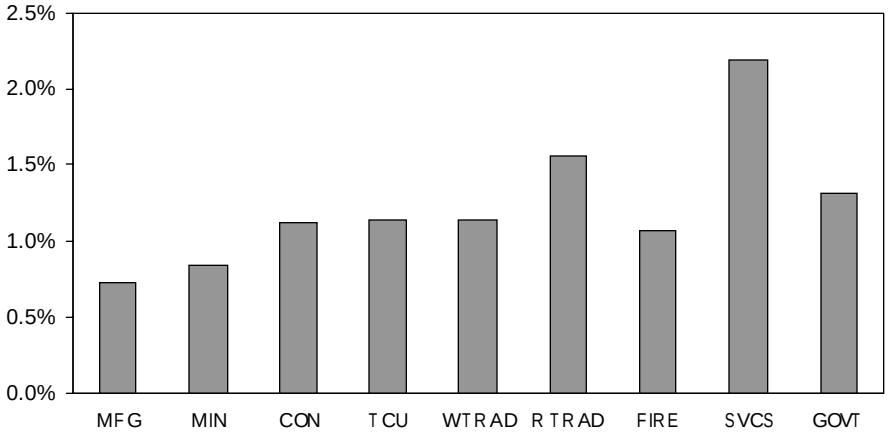
Underneath the anticipated modest gains in Washington's manufacturing sector are projected "winners" and "losers" over the 1996-2010 period. Among the "winners" is expected to be electronic and electrical equipment (3.0 percent), industrial machinery and equipment, including computers (1.7 percent), and miscellaneous manufacturing (2.2 percent). Among the "losers" is expected to be lumber and wood products (-0.1 percent), ship and boat building and repairing (-0.9 percent), paper and allied products (-0.1 percent), and chemicals and allied products (-0.3 percent).

Also anticipated in Washington's 1996-2020 forecast is something of a shift. Retailing is expected to expand at about the state average of 1.6 percent. However, most of the major retail subsectors (food stores, general merchandise stores, building and garden supply stores, apparel and accessory stores, auto dealers and service stations) are expected to climb only 1.1 percent per year. This is a considerable shift from the previous year's forecast when those subsectors fell into lock step with the overall retail trade average. Ultimately, employment growth in retail trade is expected to be driven by eating and drinking places, which is forecast to expand at 2.2 percent per annum over the period.

The outlook for services is a little rosier. Services is projected to expand at a relatively rapid pace of 2.2 percent annually. Business services generally and computer and data processing (which includes prepackaged software) specifically will unquestionably drive the sector with anticipated annual growth rates of 3.8 percent and 6.5 percent, respectively. With the exception of those sectors, other services are expected to perform at average or below average rates. One interesting, though not necessarily surprising, observation is that almost half of the net new jobs in this forecast period will be in the services sector. As a result, services should see its share of total nonfarm employment climb more than seven percentage points to 34 percent.

Government will also see some shifts. Federal government employment is expected to decline at 0.5 percent per annum from 1995-2020, despite the consolidation of military activity that would appear to favor Washington. State government employment is expected to grow at less than average annual rates of 1.1 percent while local government employment is projected to come in around 1.5 percent.

Figure 34
Industry Employment
Washington State, 1996-2020
Source: *Employment Security Department*



There is one qualifier: the now common practice of contracting and outsourcing has blurred the classification of numerous industry activities. For example, when a manufacturer disbands its in-house accounting department and contracts out that activity, the employment associated with that activity moves out of manufacturing and into services. In a turnabout of sorts, prepackaged software, currently listed under business services, will be classified as either manufacturing or information when the North American Industrial Classification Standards (NAICS) go into effect in 1999. That particular shift alone will surely change the complexion of Washington's nonfarm industry projections.

Occupational Forecast

Distributional shares by Washington's major occupational divisions and new jobs created for 1995-2010 reveals that the greatest growth is in professional, paraprofessional, and technical jobs (*see Figure 35*). On top of being the largest single division in 1995, it represents nearly one-third of *new* jobs over the forecast period. A similar pattern is evident in services occupations. Though roughly 16 percent of all jobs in 1995, services will capture almost 23 percent of *new* jobs through 2010. The two sectors combined will make up over half of the net *new* jobs over the next 15 years. The only other division poised to grow at above-average rates is managerial and administrative. All other divisions are expected to grow at below average rates, thus capturing smaller shares of the new jobs relative to their shares in 1995.

When we include *replacements* in the picture, the trends appear less daunting. Growth plus replacements represents total job openings (*see Figure 36*). Note that in most occupational divisions, replacements represent the majority of job openings: almost 90 percent of openings in agriculture, forestry, and fishing are replacements, as are two-thirds of openings in marketing and sales, clerical, production, and operation, fabrication, and laborers. Oddly enough, those divisions where replacements account for considerably less than half the total job openings are in managerial and administrative and professional, paraprofessional, and technical.

The fastest growing occupations can be viewed in terms of growth rates and nominal growth *(see Figures 37 and 38 on the next page*). By way of growth rates, computer-related occupations were the most visibly represented among the occupations projected to be the fastest growing in Washington from 1996-2006. This is not terribly surprising. More specifically, computer scientists, computer engineers, database administrators, and systems analysts are projected to post the highest growth rates at 6 percent per year and higher. Health care related occupations were also well represented among the occupations expected to be the fastest growing over the 10-year forecast period, with home care aides, therapists, medical assistants, medical records technicians, and emergency medical technicians topping the list.

When we examine the jobs with the largest nominal growth over the 1996-2006 period, things change a bit. Though most of the same computer-

Figure 35
Occupational Shares
Washington State, 1995-2010
Source: *Employment Security Department*

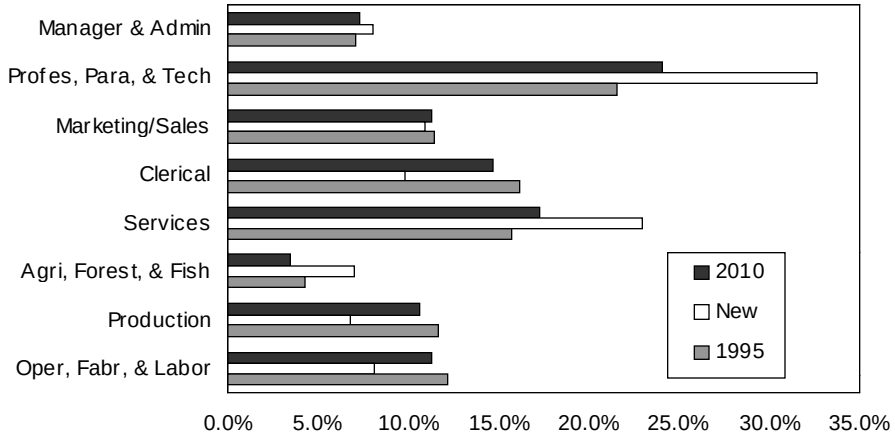


Figure 36
Openings by Growth and Replacement
Washington State, 1995-2010
Source: *Employment Security Department*

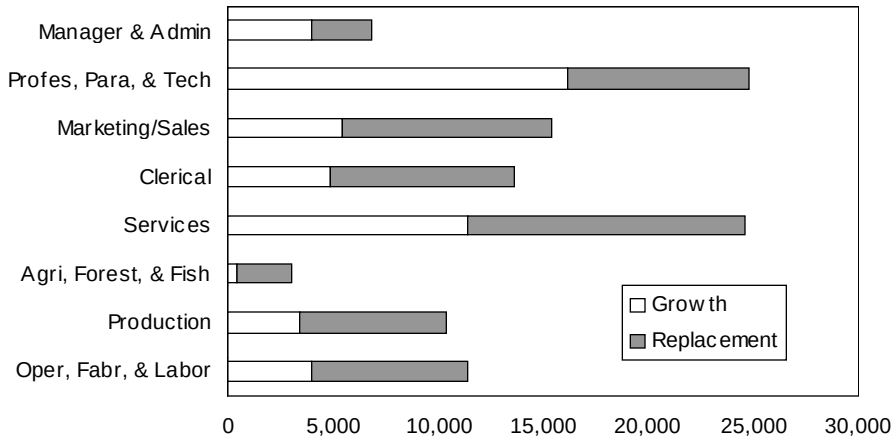


Figure 37
Fastest Growing Occupations, Percent Change
Washington State, 1996-2006
Source: *Employment Security Department*

Occupation	1996	2006	Nominal Change	Percent Change
Computer Scientists, NEC	3,938	11,221	7,283	11.0%
Computer Engineers	10,337	21,380	11,043	7.5%
Personal/Home Care Aides	4,175	7,904	3,729	6.6%
Database Administrators	1,069	1,971	902	6.3%
Systems Analysts	13,210	24,208	10,998	6.2%
Paralegals	2,391	4,270	1,879	6.0%
Computer Support Specialists	4,032	6,917	2,885	5.5%
Electronic Semiconductors	1,100	1,880	780	5.5%
Stock Clerks, Stockroom/Warehouse	15,616	25,722	10,106	5.1%
Directors, Religious Activities/Education	1,122	1,836	714	5.0%
Physical, Correction Therapy Assistants	1,915	3,045	1,130	4.7%
Music Directors/Singers/Related	1,402	2,222	820	4.7%
Child Care Workers	17,301	26,745	9,444	4.5%
Respiratory Therapists	1,260	1,946	686	4.4%
Human Services Workers	2,863	4,414	1,551	4.4%
Demonstrators, Promoters, Models	2,504	3,825	1,321	4.3%
Medical Assistants	4,427	6,762	2,335	4.3%
Medical Records Technicians	2,301	3,480	1,179	4.2%
Emergency Medical Technicians	2,592	3,910	1,318	4.2%
Numerical Control Machince Operators	1,625	2,412	787	4.0%

Figure 38
Fastest Growing Occupations, Nominal Change
Washington State, 1996-2006
Source: *Employment Security Department*

Occupation	1996	2006	Nominal Change	Percent Change
Salespersons, Retail	89,350	113,638	24,288	2.4%
Cashiers	57,666	72,002	14,336	2.2%
General Managers and Top Executives	59,807	72,306	12,499	1.9%
Computer Engineers	10,337	21,380	11,043	7.5%
Systems Analysts	13,210	24,208	10,998	6.2%
Stock Clerks: Stockroom/Warehouse	15,616	25,722	10,106	5.1%
General Office Clerks	64,577	74,110	9,533	1.4%
Child Care Workers	17,301	26,745	9,444	4.5%
Combined Food Prep/Service Workers	42,721	51,658	8,937	1.9%
Teachers, Elementary	30,872	39,140	8,268	2.4%
Janitors and Cleaners	36,524	44,573	8,049	2.0%
Registered Nurses	37,063	45,033	7,970	2.0%
Marketing/Sales Supervisors	39,544	47,318	7,774	1.8%
Reception/Information Clerks	27,097	34,763	7,666	2.5%
Teachers, Secondary School	28,508	35,948	7,440	2.3%
Hand Packers and Packagers	22,131	29,510	7,379	2.9%
Computer Scientists, NEC	3,938	11,221	7,283	11.0%
Food Preparation Workers	23,454	30,688	7,234	2.7%
Waiters and Waitresses	39,191	46,220	7,029	1.7%
Maint. Repairers, General Utilities	26,229	32,787	6,558	2.3%

related occupations make this list as well, it is dominated by retail and service occupations such as salespersons, cashiers, clerks, janitors and cleaners, food service workers, and waiters and waitresses. Teachers and teachers aides at the K-12 level are also projected to be in great demand. The greatest health care demand is expected to be for registered nurses.

An assessment of declining occupations in Washington over the 1996-2006 period reveals few surprises (*see Figures 39 and 40 on the next page*). Office operations-related workers as a group are expected to show the greatest rate of decline. One might recall that this group was also on the list of occupations with the greatest number of replacement jobs. Natural resource related occupations are also projected to contract at a higher than average rate of decline because of technological changes, market shifts, and changing business practices. Child care workers operating in private households revealed a rather significant decline in its base. The list of fastest declining occupations in terms of absolute number of jobs lost is not altogether different from that reflecting occupations expected to post the greatest rate of decline.

Figure 39
Fastest Declining Occupations, Percent Change
Washington State, 1996-2006
Source: *Employment Security Department*

Occupation	1996	2006	Nominal Change	Percent Change
Office Machine Operators, NEC	1,041	698	-343	-3.9%
Welfare Eligibility Workers	2,088	1,525	-563	-3.1%
Computer Operators, Excl. Peripherals	4,064	3,077	-987	-2.7%
Cleaners/Servants, Private	5,026	4,210	-816	-1.8%
Stock Clerks, Sales Floor	10,779	9,207	-1,572	-1.6%
Statistical Clerks	2,137	1,849	-288	-1.4%
Paper Goods Mach Setters/Operators	1,371	1,216	-155	-1.2%
Forest and Conservation Workers	2,064	1,833	-231	-1.2%
Fallers and Buckers	1,442	1,285	-157	-1.1%
Fishers/Hunters/Trappers	4,157	3,743	-414	-1.0%
Typists, Including Word Processing	10,979	9,996	-983	-0.9%
Child Care Workers, Private	5,086	4,648	-438	-0.9%
Postal Service Clerks	1,422	1,316	-106	-0.8%
Postal Mail Carriers	6,985	6,472	-513	-0.8%
Pruners	2,503	2,344	-159	-0.7%
Hand Packers/Packagers, Agr. Prods	2,293	2,160	-133	-0.6%
First Line Supervisors: Agr.-Forest-Fish.	3,906	3,691	-215	-0.6%
Sprayers/Applicators	1,987	1,883	-104	-0.5%
Butchers and Meatcutters, Retail	1,988	1,884	-104	-0.5%
Sawing Machine Operators/Tenders	2,110	2,000	-110	-0.5%

Figure 40
Fastest Declining Occupations, Nominal Change
Washington State, 1996-2006
Source: *Employment Security Department*

Occupation	1996	2006	Nominal Change	Percent Change
Farm Workers, Food and Fiber Crops	39,698	37,945	-1,753	-0.5%
Stock Clerks, Sales Floor	10,779	9,207	-1,572	-1.6%
Computer Operators, Excl. Peripheral	4,064	3,077	-987	-2.7%
Typists, Including Word Processing	10,979	9,996	-983	-0.9%
Cleaners/Servants, Private	5,026	4,210	-816	-1.8%
Welfare Eligibility Workers	2,088	1,525	-563	-3.1%
Postal Mail Carriers	6,985	6,472	-513	-0.8%
Child Care Workers, Private	5,086	4,648	-438	-0.9%
Fishers/Hunters/Trappers	4,157	3,743	-414	-1.0%
Central Office Operators	810	409	-401	-6.6%
Office Machine Operators, NEC	1,041	698	-343	-3.9%
Peripheral EDP Equipment Operators	615	305	-310	-6.8%
Statistical Clerks	2,137	1,849	-288	-1.4%
Reservation & Transport. Ticket Agents	5,384	5,138	-246	-0.5%
Farm Workers, Farm/Ranch Animals	5,186	4,944	-242	-0.5%
Strippers, Printing	330	95	-235	-11.7%
Forest and Conservation Workers	2,064	1,833	-231	-1.2%
First Line Supervisors, Agr.-Forest-Fish.	3,906	3,691	-215	-0.6%
Typeset and Composer Operators	304	90	-214	-11.5%
Farm Equipment Operators	5,054	4,872	-182	-0.4%

Income, Earnings, and Wages

Personal Income

Washington's total personal income was more than $148 billion in 1997, which translated into 7.5 percent growth over the year in current terms or 5.4 percent in constant terms. This was even stronger growth than was seen in the two years prior, thus marking three years of increasing rates of personal income growth for the state in the wake of rather modest gains in 1993-94. It was also the third consecutive year that state personal income growth outpaced national personal income growth.

Personal income measures the pre-tax income received by or on behalf of the residents of a geographic area (e.g., region, state, county). Consequently, it is one measure used to assess economic stability and change in an area and to compare areas against one another. This is different from gross domestic product (GDP), which applies to the U.S. economy, or gross state product, which applies to the state as a whole, and measures the value of all goods and services produced.

Personal income data are compiled by the U.S. Department of Commerce, Bureau of Economic Analysis. It is the total income received by persons 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.

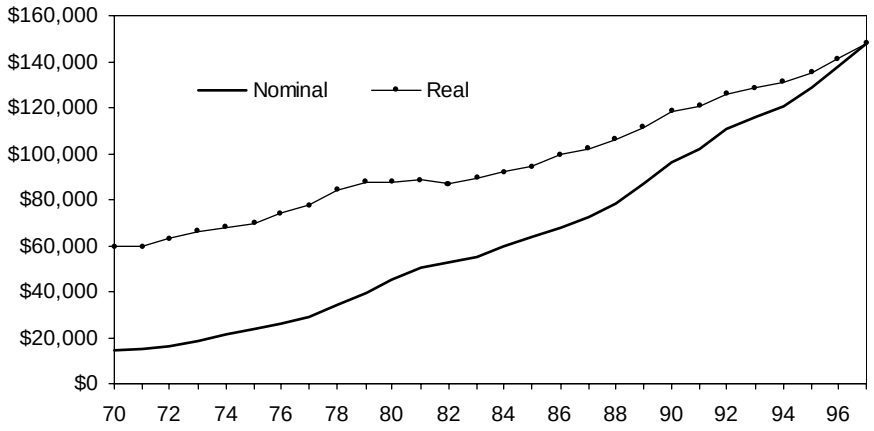
State. Washington's total personal income was more than $148 billion in 1997, which translated into 7.5 percent growth over the year in current terms or 5.4 percent in constant terms. This was even stronger than was seen in the two years prior, marking the third consecutive year that the state's rate of personal income growth rose at an increasing rate. It was also the third consecutive year that state personal income growth outpaced national personal income growth. Moreover, Washington's strong personal income growth put it in rather select company vis-à-vis other states. Only Texas (8.0 percent) and Colorado (7.6 percent) posted higher year-over-year growth than Washington while Nevada also posted growth of 7.5 percent. According to projections from the Office of the Forecast Council, however, 1997 should be the high water mark in terms of annual growth rates as growth trends are expected to moderate through the turn of the millenium.

Over the 1970-97 observation period, the state's total personal income increased (with the exception of a small decline in 1982) at an annual rate of 9.0 percent in current terms or 3.8 percent in constant terms (*see Figure 41*). U.S. total personal income, by comparison, rose at a less robust annual rate of 8.1 percent in current terms or 2.8 percent in constant terms.

Looking at state and national total personal income from a slightly different angle, Washington's 1997 increase marked the latest in a pattern of higher-than-average annual rates of growth compared to the U.S., a trend begun in the latter half of the 1980s. This enabled Washington to lift its share of total personal income nationally from 1.9 percent to 2.2 percent over the last decade. In fact, 2.2 percent is the largest share of the national total the state has ever commanded.

As noteworthy as the 7.5 percent growth in Washington's total personal income were the dynamics of that growth as captured by activity in the components by which it is derived (*see Figure 42 on the next page*). Inasmuch as the nearly $100 billion in net earnings by place of work constitutes more than two-thirds of total personal income, what takes place within this

Figure 41
Total Personal Income
Washington State, 1970-1997
Source: *U.S. Bureau of Economic Analysis*



component has a considerable impact on personal income as a whole. In 1997, earnings by place of work climbed a healthy 8.9 percent and effectively set the pace for similarly healthy personal income growth. The $25.8 billion in dividends, interest, and rent (17 percent of total personal income) represented a 6.4 percent over-the-year increase, the result of a strong stock market and stable bond market. Interestingly enough, it was the $22.6 billion in transfer payments (15 percent of total personal income) that acted as a drag on state personal income growth—opposite what it did the year previous to that—with a mere 3.3 percent increase. The modest growth in transfer payments was tied to over-the-year reductions in income maintenance benefit payments, unemployment insurance, and federal education and training assistance payments.

Counties. An analysis of total personal income in 1996 (there is a lag in the generation of sub-state data) for Washington's 39 counties revealed few surprises. As always, the state's larger metropolitan counties occupied the top slots in terms of absolute dollars while the smaller, non-metropolitan counties were concentrated at the bottom (*see Figures 43 and 44*). This illustrates the continuing strong relationship between population and employment, on one end, and personal income, on the other.

To underscore the tremendous extremes in total personal income among Washington counties, there is the example of King County with total personal income of nearly $56 billion (highest), on one hand, versus Garfield County with total personal income of just under $50 million (lowest), on the other. Garfield's total personal income measures less than one-tenth of one percent (0.1 percent) of that in King County. Also, the state's metropolitan counties, when combined, represent 80 percent of the state's total personal income. King

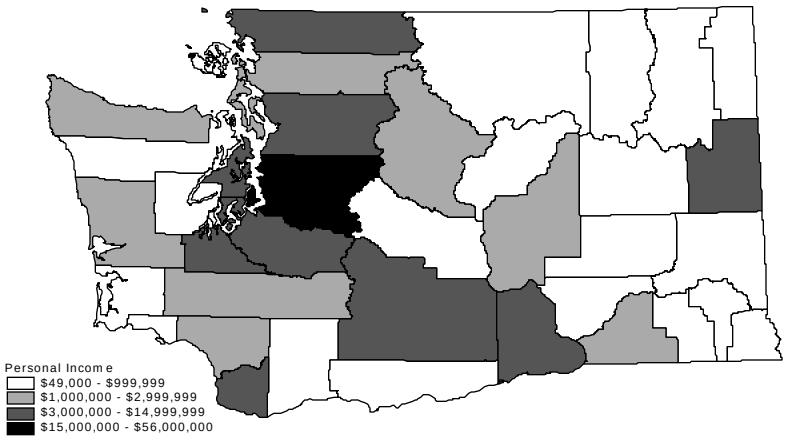
Figure 42
Derivation of Personal Income
Washington State, 1996 and 1997
Source: *U.S. Bureau of Economic Analysis*

	1996	1997	% Chg
Earnings by Place of Work	$97,189,778,000	$105,885,120,000	8.9%
(-) Personal Contribution for Social Insur.	$6,973,516,000	$7,622,071,000	9.3%
(+) Adjustment for Residence	$1,499,469,000	$1,567,314,000	4.5%
(=) Net Earnings by Place of Residence	$91,715,731,000	$99,830,363,000	8.8%
(+) Dividends, Interest, and Rent	$24,197,464,000	$25,751,519,000	6.4%
(+) Transfer Payments	$21,874,993,000	$22,599,819,000	3.3%
(=) Total Personal Income	$137,788,188,000	$148,181,701,000	7.5%
Earnings By Place of Work	$97,189,778,000	$105,884,120,000	8.9%
Wages and Salaries	$77,296,505,000	$85,204,627,000	10.2%
Other Labor Income	$7,599,963,000	$7,976,312,000	5.0%
Proprietors' Income	$12,293,310,000	$12,704,181,000	3.3%

Figure 43
Total Personal Income
Selected Washington Counties, 1995 and 1996
Source: *U.S. Bureau of Economic Analysis*

	1995	1996	% Chg
King	$51,425,713,000	$55,568,498,000	8.1%
Pierce	$13,544,499,000	$14,353,372,000	6.0%
Snohomish	$12,023,444,000	$12,849,126,000	6.9%
Spokane	$8,303,458,000	$8,701,149,000	4.8%
Clark	$6,718,628,000	$7,348,203,000	9.4%
Kitsap	$4,560,454,000	$4,811,513,000	5.5%
Thurston	$4,253,121,000	$4,537,653,000	6.7%
Yakima	$3,885,352,000	$4,204,252,000	8.2%
Whatcom	$2,956,058,000	$3,170,278,000	7.2%
Benton	$2,946,673,000	$3,007,365,000	2.1%
Adams	$271,354,000	$296,834,000	9.4%
Lincoln	$202,942,000	$216,014,000	6.4%
Pend Oreille	$169,886,000	$178,004,000	4.8%
Skamania	$158,233,000	$171,059,000	8.1%
Ferry	$99,040,000	$101,868,000	2.9%
Columbia	$78,932,000	$86,397,000	9.5%
Wahkiakum	$65,880,000	$68,361,000	3.8%
Garfield	$41,970,000	$49,788,000	18.6%

Figure 44
Total Personal Income by County, 1996
(In Millions of Dollars)
Source: *U.S. Bureau of Economic Analysis*



County alone accounts for more than one-third of the state total.

It is, of course, the rate of total personal income growth that enables us to examine changes among counties. One observation was that western Washington metropolitan areas posted higher year-over-year personal income growth rates than their eastern Washington counterparts. The "star performer" among the metro areas was Clark County with a 10.3 percent gain. The Tri-Cities, with only 2.6 percent growth, registered the slowest personal income growth among the metropolitan areas. While this seemed to provide further evidence of the *Two Washington's* phenomenon, it was not iron clad. For example, two eastern Washington grain counties, Lincoln and Whitman, and two southeast Washington counties, Columbia and Garfield, joined Clark with the highest rates of personal income growth in Washington.

Northwest. Among the northwest states, Washington had far and away the highest total personal income at $148 billion (*see Figure 45*). Oregon's personal income, though the second highest in the region, was only a little more than half of Washington's. Idaho, Montana, and Alaska each generated personal income totals that were less than one-fifth of Washington's. It was also Washington that led the region in personal income growth over the year with 7.5 percent. Oregon followed with 5.7 percent to give the northwest two states that outpaced the nation in personal income growth. Idaho, Montana, and Alaska were below the 5.6 percent national average.

Per Capita Income

Washington's per capita income was $26,412 in 1997, which translated into over-the-year growth of 5.8 percent in current terms or 3.7 percent in constant terms. This represents the latest in a string of increasing rates of per capita income growth in Washington since 1993. Per capita income growth in Washington has been stronger over the past two years than that for the nation as a whole.

Per capita personal income is another measure of economic performance and change. More importantly, it provides a basis for comparing otherwise disparate geographic and populated areas than the total personal income estimate from which it is derived.

State. Washington's per capita income was $26,412 in 1997, which translated into over-the-year growth of 5.8 percent in current terms or 3.7 percent in constant terms. This represents several consecutive years of increasing rates of per capita income growth in Washington since 1993 (not unlike the trend in total personal income). In fact, the past two years of per capita income growth in Washington were stronger than that seen for the nation as a whole. This trend is not expected to continue indefinitely, though, as the state Office of the Forecast Council projects the rate of state per capita income growth to slow by the turn of the century.

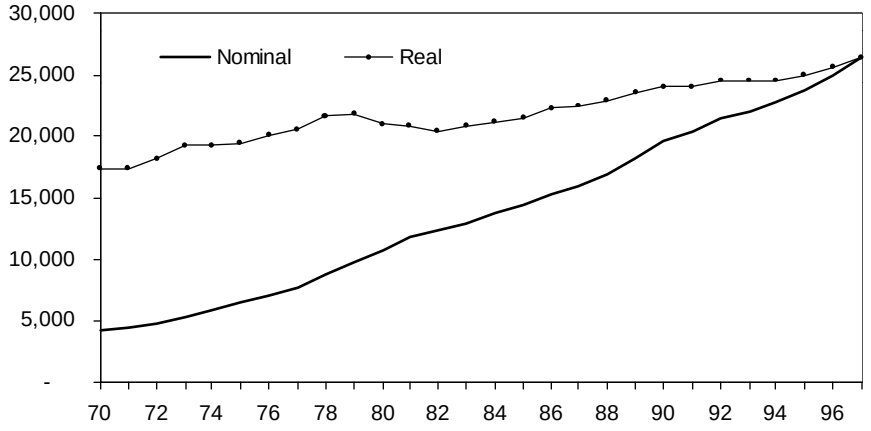
Washington's per capita income was 4.4 percent higher than the $25,298 posted nationally in 1997. Moreover, its 5.8 percent increase outpaced the 4.7 percent demonstrated nationally—something the state has now done for a second year in a row. Furthermore, the state's per capita income growth rates have continued to rise since 1993 while the nation actually saw its rate of growth subside in 1997. All of this suggests that Washington's overall economy is currently expanding at a faster pace than that of the nation. The Forecast Council projections noted previously, however, suggests that the rate of growth rate in the state's per capita income will soon ease.

Over the 1970-97 observation period, Washington's per capita income increased in cyclical fashion at an annual rate of 7.1 percent in current terms or 1.9 percent in constant terms (*see Figure 46*). U.S.

Figure 45
Total Personal Income, 1996 and 1997
The Northwest States and United States
Source: *U.S. Bureau of Economic Analysis*

State	1996	1997	% Chg
Washington	$137,788,188,000	$148,181,701,000	7.5%
Oregon	$73,043,728,000	$77,199,674,000	5.7%
Idaho	$23,429,614,000	$24,680,719,000	5.3%
Montana	$16,556,783,000	$17,315,657,000	4.6%
Alaska	$14,702,587,000	$15,199,282,000	3.4%
U.S.	$6,408,990,000,000	$6,770,709,000,000	5.6%

Figure 46
Per Capita Personal Income
Washington State, 1970-1997
Source: *U.S. Bureau of Economic Analysis*



per capita income, by comparison, virtually matched Washington's overall outcome or performance with 7.0 percent growth in current terms and 1.8 percent in constant terms. The big difference between the two was that U.S. per capita income generally exhibited more cyclical volatility (i.e., higher gains and lower declines).

Counties. Unlike total personal income, which when rank-ordered generally illuminates counties based on their size and population, per capita income tends to reveal differences and distinctions tied to unique economic factors (*see Figures 47 and 48*). That is not to suggest, however, that there is no continuity from year to year. As expected, county per capita income data for 1996 (again, there is a lag in the generation of sub-state data) reveal three counties that perennially occupy the top five listing—King, Snohomish, and San Juan. King and Snohomish, of course, effectively partner up to fuel the state's economic engine. San Juan is home to expensive residential enclaves for upper-income professionals, retirees, and assorted celebrities. Perhaps more noteworthy than those counties with a continuing presence are the over-the-year inclusions and exclusions from the Top Five list. Chief among them is the accession of Clark County, a boost delivered by the economic gains it received as part of the booming Portland CMSA. Conversely, but equally notable, is Benton County's removal from the list—a move attributable to restructuring losses at the Hanford site.

The counties in the state's lowest per capita income tier have also changed little over time. The resource-dependent counties in the northeastern corner of Washington—Ferry, Stevens, and Pend Oreille—continue to post among the lowest per capita income levels in the state. In fact, Ferry County's per capita income of $14,215 (the lowest in Washington) is less than half of King County's $34,440 (the highest). Also appearing near the bottom of the list is Whitman County, whose substantial farm income is more than offset by the significantly large number of WSU students who raise the population denominator but generate little or no income. Beyond that, Mason County was supplanted on the list by Franklin County.

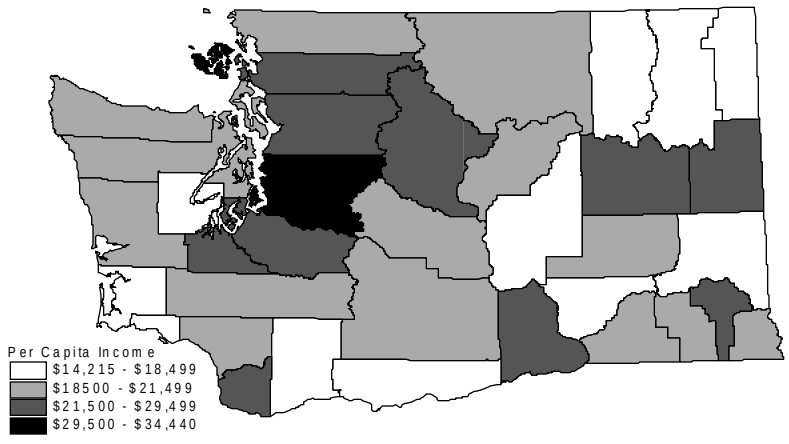
The metropolitan counties again were in the upper tiers of per capita income. However, owing to the tremendous influence of King County on the state average, none equalled or surpassed the state average. With the exception of King and Yakima counties with much higher and lower than average per capita incomes, respectively, the state's metropolitan counties were all within the $19,000-$23,000 range.

Northwest. Washington continued to generate, for all intents and purposes, the highest per capita income in the northwest United States with $26,412 in 1997 (*see Figure 49 on the next page*). In fact, 1997 saw Washington's per capita income build upon the previous year to put an even greater distance between itself and its neighbors. For example, Alaska had the second highest per capita income

Figure 47
Per Capita Personal Income
Selected Washington Counties, 1995 and 1996
Source: *U.S. Bureau of Economic Analysis*

		1995	1996	% Chg
	Washington	$23,974	$25,277	5.4%
Highest:	King	$32,205	$34,440	6.9%
	San Juan	$30,327	$31,643	4.3%
	Clark	$22,937	$24,092	5.0%
	Snohomish	$22,559	$23,596	4.6%
	Thurston	$22,114	$23,068	4.3%
Lowest:	Whitman	$16,425	$17,606	7.2%
	Franklin	$16,688	$17,493	4.8%
	Pend Oreille	$15,817	$16,047	1.5%
	Stevens	$15,180	$15,594	2.7%
	Ferry	$13,838	$14,215	2.7%
Other Metros:	Pierce	$20,928	$21,913	4.7%
	Spokane	$20,691	$21,555	4.2%
	Whatcom	$19,828	$20,815	5.0%
	Kitsap	$20,193	$20,827	3.1%
	Yakima	$18,216	$19,454	6.8%

Figure 48
Per Capita Income by County
Washington State, 1996
Source: *Employment Security Department*



in the region, yet Washington's per capita income was nearly $1,500 higher. Washington's per capita income growth of 5.8 percent had a lot to do with it. That growth rate was also the highest among Northwest states. Oregon was the closest competitor with a 5.0 percent increase. The previous year, Oregon made a strong showing thanks to its high performance technology sector. However, a pullback in chip manufacturing activity exacted a heavy toll in Oregon. Idaho, Montana, and Alaska saw their per capita income levels rise at modest rates below the national average.

Figure 49
Per Capita Personal Income
The Northwest States and United States, 1996 and 1997
Source: *U.S. Bureau of Economic Analysis*

Area	1996	1997	Percent Change 1996-97	Share of U.S.
Washington	24,964	26,412	5.8%	103.3%
Alaska	24,318	24,945	2.6%	100.6%
Oregon	22,852	23,984	5.0%	94.6%
Idaho	19,729	20,393	3.4%	81.6%
Montana	18,886	19,704	4.3%	78.1%
U.S.	24,169	25,298	4.7%	---

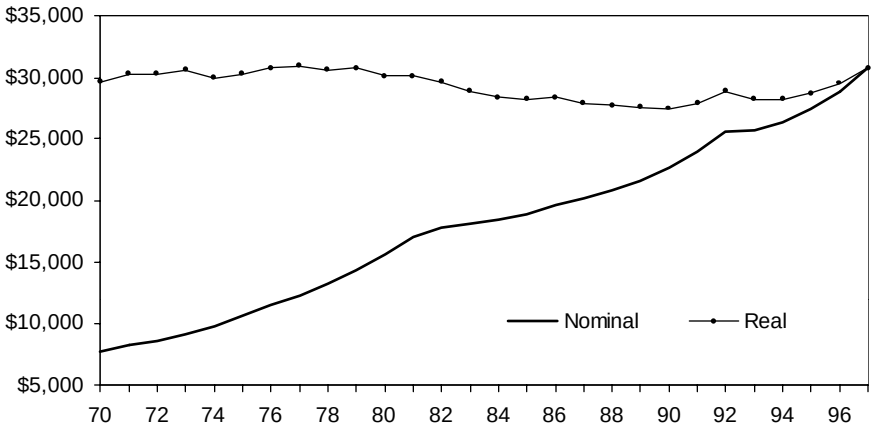
Covered Wages

Washington's average covered wage was $30,756 in 1997, reflecting a 6.5 percent gain in current terms or 4.4 percent in real terms. This was considerably higher than the gains nationally. This pattern has repeated itself for several years now, enabling Washington to close the gap with the U.S. to the point where its average covered wage is effectively the same as that of the nation.

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 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—nearly 90 percent of all employment in Washington was covered in 1997. The data are derived from UI tax reports and published quarterly by the Employment Security Department.

State. Washington's average covered wage was $30,756 in 1997, reflecting a 6.5 percent gain in current terms or 4.4 percent in real terms. This pattern has repeated itself for several years now, enabling Washington to close the gap with the U.S. to the point that in 1996 it has effectively caught up to that of the nation. The U.S. average covered wage for 1997 was not available at the time this report was drafted. However, it is very possible that the data will ultimately show that Washington's average covered wage either matched or surpassed that of the nation in 1997—something that has not happened since 1984.

Figure 50
Annual Average Covered Wages
Washington State, 1970-1997
Source: *Employment Security Department*



Because it is employment-based, the average covered wage is more sensitive to business cycles than per capita income, especially since the latter reflects transfer payments that provide a partial substitute for lost wages during periods of economic slowdown or downturn. This volatility is clearly evident in the historic pattern of real average covered wages in Washington (*see Figure 50*). Despite the currently rosy picture, the long-term pattern for the state's average covered wage has been less stellar.

An analysis of Washington's average covered wage from 1970-97 shows that it has increased at an annual rate of just over 5 percent in current dollars (with the U.S. exhibiting a very similar pattern). However, the wage was roughly the same in 1997 as it was in the mid- to late-1970s in constant dollars, which translates into zero change or no difference. That is the "generous" portrayal. Since 1977, when Washington's real average covered wage peaked, the wage has declined 4 percent (-0.2 percent in annual terms). During the same period, the national average covered wage climbed just over 3.5 percent. The recession and restructuring of the economy in the early 1980s clearly had a more adverse impact on Washington wages than they did on wages nationally, though both were certainly affected. In fact, they toppled Washington's average covered wage from a position of as much as 9 percentage points above the national

average to as much as 5 percentage points below.

Fast-forward again to today and it is clear that Washington's average covered wage has been in a strong pattern for the past several years. Whether or not the underlying strength is there to boost it in real terms to the position it held prior to the recession and restructuring of the early 1980s has yet to be seen. One certainty is that the current pattern is definitely poised to push Washington's average covered wage above the U.S. average.

Counties. The sub-state ranking of average covered wages in 1997 was little changed from the previous year (*see Figures 51 and 52*). At the higher end, King County as usual occupied the top spot with an average covered wage of $37,299—more than $6,500 higher than the state average. Though aircraft and software tend to come to mind, King County has a diverse range of industries that contribute to its status as the principal economic driver in Washington. Snohomish County, the other major presence in the Seattle-Bellevue-Everett PMSA, followed at nearly $32,243 with aircraft providing the major thrust there as well. Just behind Snohomish County was Benton County with its Hanford site at $30,614. Clark and Cowlitz counties in southwest Washington were also strong performers at $28,091 and $27,649, respectively, thanks to solid manufacturing sectors.

At the lower end, the same counties tended to appear as the year previous, though slightly rearranged. The lowest average covered wage belonged to Okanogan County with $17,432—less than half that in King County and nearly $13,000 below the state average. For the most part, the common denominator with respect to these counties was the fact that they were rural, sparsely populated, and agriculturally dominated. San Juan County, a western Washington entry, is rural and sparsely populated, but has a tourism driven economy instead of an agriculturally driven economy.

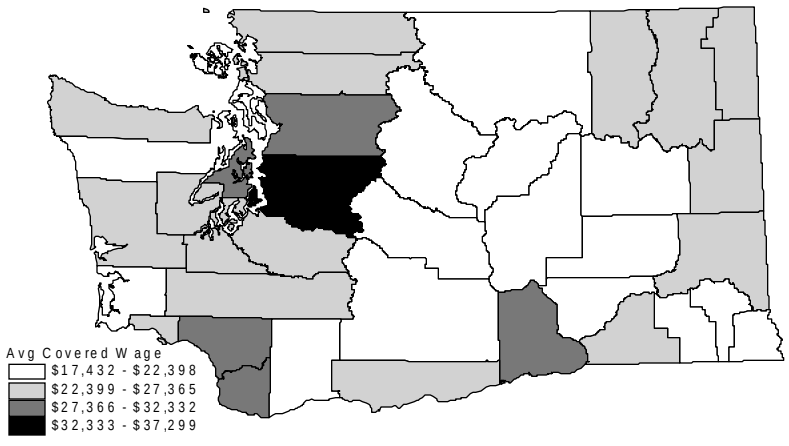
There were a few surprises among sub-state average covered wages in terms of year-over-year percent change. An unexpected event came in Klickitat County with a nearly 14 percent increase due almost exclusively to wage increases in its primary aluminum sector. On the down side, nearly one-fourth of Washington's counties experienced real average covered wage declines including two metropolitan areas, Kitsap and Thurston. The wage erosion in both was attributed to declines in public dollars; federal in the case of Kitsap's naval shipyard and state in the case of Thurston's state government. Meanwhile, Wahkiakum County saw its average covered wage fall 0.6 percent *before* adjusting for inflation.

Industries. Average covered wages as measured by Washington's industrial activity were, for the most part, quite positive in 1997 thanks to the strong state economy (*see Figure 53 on the next page*). On the bright side, the state's relatively large and well-paying manufacturing sector saw its average

Figure 51
Annual Average Covered Wages
Selected Washington Counties, 1996 and 1997
Source: *Employment Security Department*

		1996	1997	% Chg
	Washington	$28,871	$30,756	6.5%
Highest:	King	$34,346	$37,299	8.6%
	Snohomish	$30,473	$32,243	5.8%
	Benton	$30,294	$30,614	1.1%
	Clark	$26,991	$28,091	4.1%
	Cowlitz	$26,868	$27,649	2.9%
Lowest:	Okanogan	$17,369	$17,432	0.4%
	Adams	$17,920	$18,056	0.8%
	Douglas	$17,553	$19,031	8.4%
	Kittitas	$18,848	$19,427	3.1%
	San Juan	$19,153	$19,548	2.1%
Other Metros:	Thurston	$26,560	$27,306	2.8%
	Pierce	$25,550	$26,442	3.5%
	Spokane	$24,530	$25,532	4.1%
	Whatcom	$23,283	$23,909	2.7%
	Yakima	$19,780	$20,704	4.7%

Figure 52
Annual Average Covered Wages by County
Washington State, 1997
Source: *Employment Security Department*



covered wage rise 4.2 percent to just over $40,700. Average covered wages in the state's other goods-producing industries also climbed over the year with construction and mining posting gains of 6.1 percent and 8.7 percent, respectively. Washington's services-producing industries fared much better with all of its component sectors posting average covered wage gains over the year. The average covered wage in the state's diverse services sector soared 10.4 percent to nearly $31,000 thanks largely to the high wages including stock options paid in the booming software sector. The state's finance, insurance, and real estate sector also posted a higher-than-average increase of 8.9 percent in its covered wage. Even the state's transportation and public utilities sector saw a healthy average covered wage increase of 7.6 percent over the year.

Figure 53
Annual Average Covered Wages by Major Industry Divisions
Washington State, 1996 and 1997
Source: *Employment Security Department*

	1996	1997	% Chg
State Average	$28,871	$30,756	6.5%
Agricultural Production	$12,004	$12,911	7.6%
Forestry	$18,203	$18,953	4.1%
Mining	$40,701	$44,227	8.7%
Construction	$30,712	$32,600	6.1%
Manufacturing	$39,087	$40,726	4.2%
Transportation and Public Utilities	$35,876	$38,603	7.6%
Wholesale Trade	$34,881	$36,654	5.1%
Retail Trade	$16,089	$16,821	4.5%
Finance, Insurance, and Real Estate	$34,426	$37,481	8.9%
Services	$28,027	$30,942	10.4%
Government	$31,942	$32,827	2.8%

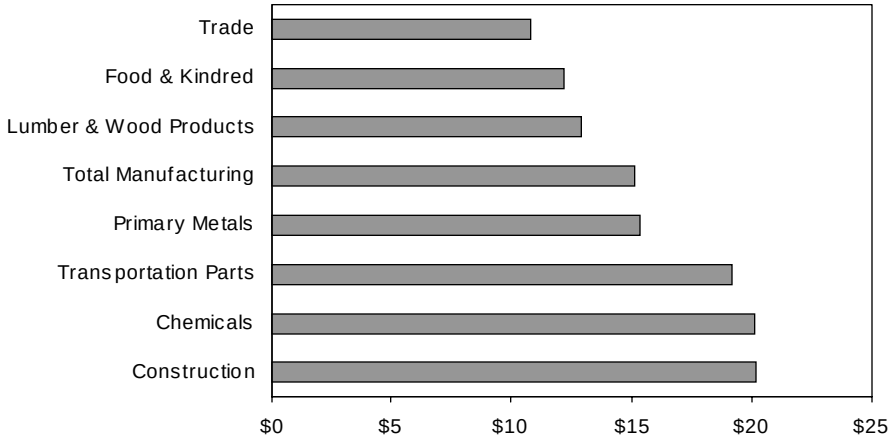
Average Hourly Earnings

Washington's real average hourly earnings were generally healthy in 1997 with manufacturing, construction, and trade all posting real gains. The picture was more mixed within manufacturing as some key sectors experienced strong gains while others saw big declines.

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, trade, manufacturing and five two-digit SIC coded sectors classified under manufacturing.

As has historically been the case, construction ($20.20), manufacturing ($15.16), and trade ($10.80) held their positions relative to one another with respect to hourly earnings in 1997 (*see Figure 54*). More noteworthy, however, were the gains in real hourly earnings within most of the surveyed sectors—gains that had been rather elusive over the past couple of decades. These increases in real hourly earnings were induced in large part by a vibrant state economy that was increasingly beset by a broad-based labor shortage. Lumber and wood products and transportation parts did not benefit from the aforementioned factors. Both of these sectors continued to post real hourly earnings declines in 1997.

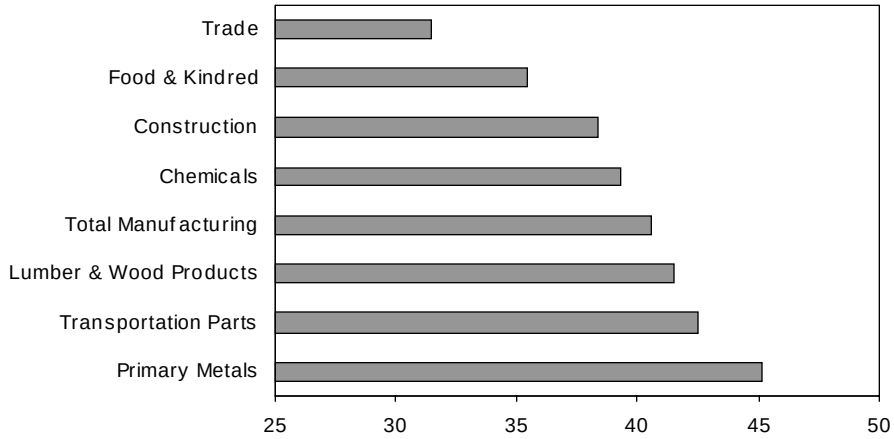
Figure 54
Average Hourly Earnings, Selected Industries
Washington State, 1997
Source: *Employment Security Department*



In real terms, average hourly earnings were up in Washington's manufacturing (1.0 percent), construction (1.6 percent), and trade (0.6 percent) sectors in 1997. Among selected sectors within manufacturing, however, the real hourly earnings picture was more mixed. Not surprisingly, the real hourly earnings decline accelerated in lumber and wood products in 1997 to post a 3.0 percent decline. Perhaps more of a surprise was the 4.0 percent real decline in the state's transportation equipment sector, a sector dominated by aerospace. Real hourly earnings in the state's food and kindred products sector were up a very strong 10.5 percent in 1997, while chemicals posted a healthy real hourly earnings increase of 6.1 percent (the third consecutive year of healthy increases in that sector). Real hourly earnings in primary metals were up 1.9 percent in 1997, double the 0.8 percent from 1996.

On a related note, the average number of hours worked per week shifted from sector to sector over the

Figure 55
Hours Worked Per Week, Selected Industries
Washington State, 1997
Source: *Employment Security Department*



1996-97 period in a pattern consistent with observed trends (*see Figure 55*). For example, average number of hours worked rose in transportation equipment (0.8 percent), construction (3.2 percent), and retail trade (2.4 percent). This is consistent with reports of a production ramp up in aerospace to deal with order backlogs as well as with reports of the hot regional markets for residential and commercial building and reports of a labor shortage amongst retailers amidst a period of strong consumer spending. On the flip side, the average number of hours worked was down in most resource-related goods-producing sectors like lumber and wood products (-6.2 percent), chemicals (-6.5 percent), primary metals (-5.3 percent), and food and kindred products (-8.5 percent). The declining number of hours worked in these sectors is consistent with reports of supply and demand constraints, especially in overseas markets.

About the Economic and Policy Analysis Unit

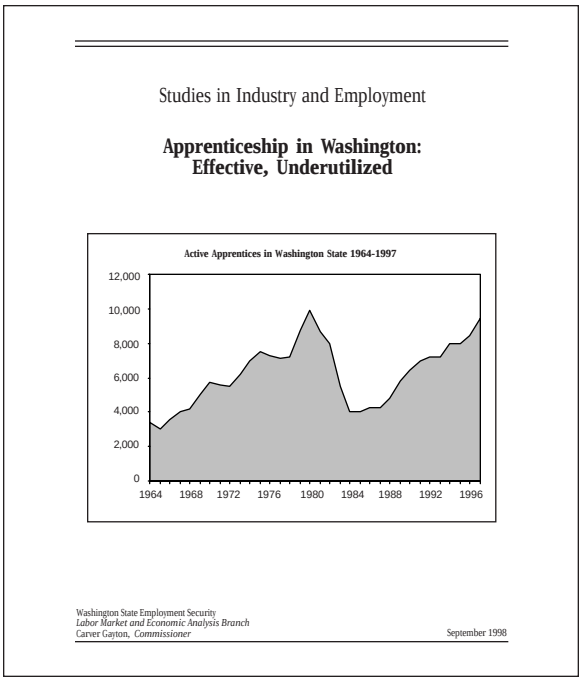
The Economic and Policy Analysis unit within the Labor Market and Economic Analysis (LMEA) Branch of the Employment Security Department has primary responsibility for providing analysis and commentary on Washington's current labor market situation. Toward that end, it is the chief voice for the department and principal point of contact with the public for labor market information and analysis. The unit is staffed by four economists (Dennis Fusco, Robert Wm. Baker, Gary Kamimura, and Jay Barrier), a research analyst (Revelyn Froyalde) and an editorial assistant (Bonnie Dalebout). In addition to the *Labor Market and Economic Report*, the unit's other notable publications include the *Washington Labor Market*, *LMI Review*, *County Profiles*, and *Studies in Industry and Employment*. These publications are also available on the LMEA Internet homepage. The unit's work is also showcased at the *LMEA Economic Symposium* held annually in November.

LMI REVIEW

A Quarterly Review of Washington State Labor Market Information

Second Quarter 1998 — November 1998 Issue

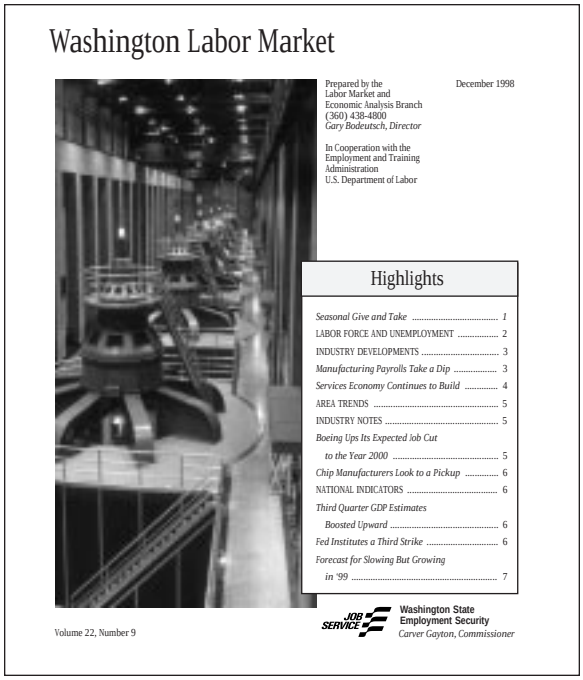
Washington State Employment Security Department
Carver Gayton, *Commissioner*



Studies in Industry and Employment

Apprenticeship in Washington: Effective, Underutilized

Washington State Employment Security
Labor Market and Economic Analysis Branch
Carver Gayton, *Commissioner*
September 1998



Washington Labor Market

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Prepared by the Labor Market and Economic Analysis Branch
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In Cooperation with the Employment and Training Administration
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Highlights

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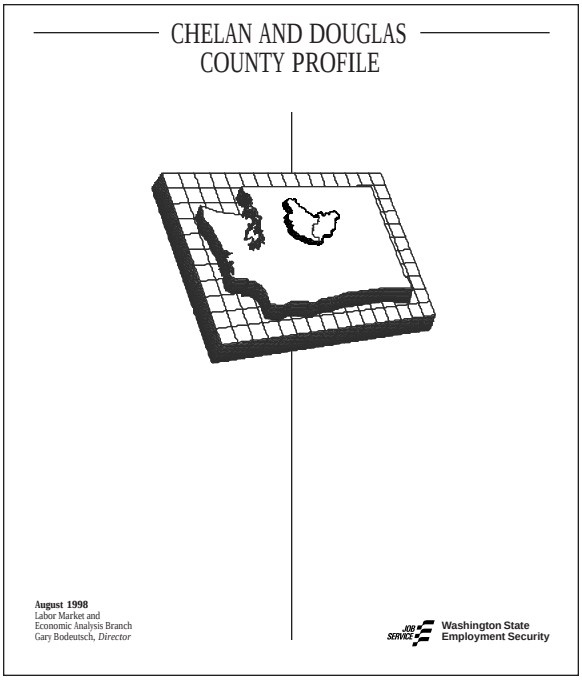

CHELAN AND DOUGLAS COUNTY PROFILE

August 1998
Labor Market and Economic Analysis Branch
Gary Bodeutsch, *Director*

Washington State Employment Security

Accessing Labor Market Information on the Internet

Our homepage address is: **http://www.wa.gov/esd/lmea**

LMEA's homepage provides 24-hour access to a broad variety of Washington labor market information. A variety of publications detailing statewide and area information is available electronically, together with statistical data in downloadable files, special studies and analysis, and links to other related sites.

Subject Areas:

- Current Employment Information
- Online Publications
- Special Reports
- Career Information
- LMI by Area
- LMI by Type
- Downloadable Software and Spreadsheets
- LMI Links Outside Washington State
- WILMA

Washington's Interactive Labor Market Access (WILMA) *JobSeeker* brings together current and historical information for career and program planning, economic analysis, and job search activities in an easy to use format. This product contains information about occupational employment including projections, wages, and descriptions. It also contains industry level employment, population, labor force, and various other economic data. The system utilizes a graphical interface to access, display, and extract information and provides mapping and graphing capabilities for easy visualization.
WILMA's address: **http://www.wilma.org**