
2000 Washington State Labor Market and Economic Report



The Right Connection for
Labor Market Information

Washington State
Employment Security Department



**This report has been prepared in accordance with
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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 in 2000 completed the transition from exceptionally strong job growth to more typical, moderate labor market and economic expansion at a pace that nevertheless remains very respectable. In fact, the state economy showed that it still had some punch as its employment growth rose significantly in the second and third quarters of 1999 to move from below the national average to above the national average.
- Washington's seasonally adjusted unemployment rate moved slowly upward to 4.9 percent by the third quarter of 2000, but it was still exceptionally low by historical standards. Four consecutive years of unemployment below 5 percent in a peacetime economy bests even that seen during the Korean War (1951-53).
- The *Two Washingtons* phenomenon of higher unemployment and lower job growth in the less diverse, resource-dependent economies of eastern Washington continued with a jobless rate of 7.1 percent in eastern Washington compared to 4.7 percent for the state as a whole. The distribution is not much different from the past, suggesting that the economies of these areas are essentially holding their own.
- Temporary help services and computer data processing and software, the state's two leading growth sectors of 1997-98, continued to build sharply in 1999. Temporary help services employment jumped another 7 percent after essentially doubling since 1990. Employment in computer processing and software, which includes Microsoft, has more than tripled in the 1990s to 50,000+ in 1999. Gains in social services, finance, health care, and public and private education round out the top growth industries in 1999, each generating employment gains for 3,000 or more.
- The strongest sectors in Washington from 3rd quarter 1999 to 3rd quarter 2000 were construction and business services. Construction was lifted by a booming housing market and ongoing commercial and industrial development in the Puget Sound while the business services sector was propelled by temporary help supply and computer and data processing. Also strong was the eating and drinking industry as working families and individuals opted to eat out regularly as real disposable incomes rose.
- The weakest sectors in Washington's economy from 3rd quarter 1999 to 3rd quarter 2000 were manufacturing sectors with transportation equipment, namely aircraft and parts, topping the list with a loss of 8,000 jobs followed by textiles and apparel and food and kindred products, which each shed 1,000 workers. The sole nonmanufacturing sector was local government, which cut 2,000 workers in the wake of voter-approved Initiative 695 that eliminated the state motor vehicle excise tax, a key source of local government revenue.
- Washington's transition from a goods-producing economy to a services-producing economy is underscored by the disparate trends in aircraft and parts and computer and data processing. In less than two decades, computer and data processing employment has more than quadrupled and its share of nonfarm employment has risen from less than one-half of 1 percent to more than 2 percent. Aircraft and parts employment has fallen roughly 87,000 to about 3.5 percent of total nonfarm employment. The ratio of aircraft jobs to computer services jobs is now less than 2-to-1 versus 8-to-1 in 1990. The wage picture is even more dramatic with wages in aircraft and parts falling from nearly 10 percent of total covered wages in 1990 to 6 percent in 1999 as computer and data processing went from one-half of 1 percent in the early 1980s to nearly 13 percent in 1999.
- The Washington and U.S. Index of Leading Economic Indicators have diverged since converging two years ago in the second half of 1998 with the nation's index climbing steadily and the state's index trending steadily downward. This is consistent with the quarterly unemployment rate trends recorded statewide and nationally.

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- There has been a significant narrowing of the historical gap between the state and national jobless rates as Washington has seen healthy job growth, extensive restructuring and efficiency gains in its key sectors, aggressive use of temporary help, and a shift over time to a more service-based economy. The gap has narrowed at an accelerated pace in the past several years as healthy job growth coupled with a slower labor force growth has produced three consecutive years of unemployment below 5 percent in a peacetime economy—an all-time record.
 - Though seasonality, cyclicity, and structural maturity are all present to varying degrees in Washington's economy, the shares of seasonal and structurally-mature employment have fallen; the former because the economy is diversifying, the latter because the major restructuring activity since 1990 has passed. Restructuring activity, however, was on the rise as the state's aerospace sector continued to lay off workers. Cyclical employment was up, but that was consistent with the fact that the state remains on the upside of the current business cycle. The situation could shift, however, as the state and national economies cool.
 - Washington's labor force is expected to experience progressively lower rates of growth over the course of the current forecast period, though those rates are still expected to outpace the national norm, as the baby boom generation hits the traditional retirement age of 65 *en masse* around 2010.
 - Labor force participation rates in Washington are expected to peak in 2000, then subside through 2020 as the labor force ages dramatically over the forecast period (labor force participation rates are historically lower among older Washingtonians).
 - Washington's nonagricultural employment is projected to expand at a decreasing rate over the current forecast period, though those rates are still expected to be higher than the national averages. 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 well below average.
 - From an occupational perspective, new job creation is projected to be strongest in the professional, technical, and services fields in Washington over the current forecast period. Overall, the projected growth rates for the state's occupational sectors are consistent with those on the industry side, confirming that the state's economy will continue to shift toward services-producing activities.
 - Washington's real total personal income was nearly \$175 billion for a growth rate of 5.7 percent in 1999. Though lower than the 7.4 percent in 1998, it continued the string of otherwise impressive annual growth rates compiled in the latter half of the 1990s. It was also the fourth consecutive year that Washington's personal income growth outpaced the U.S., placing it in select company with only Nevada and Colorado posting higher growth than Washington.
 - Washington's real per capita income was \$30,392 or for a growth rate of 4.4 percent in 1999. It did not top the 5.8 percent showing in 1998, but was strong enough to widen its advantage over the U.S., climbing from 101.5 percent of the U.S. average in 1995 to 106.5 percent in 1999. Washington is establishing the same relationship vis-à-vis the U.S. that it held when the state was buoyed by defense projects in the 1960s and by WPPSS during the late 1970s. Only this time, the catalyst is high tech, particularly software.
 - Washington's average covered wage was \$35,724 in 1999, reflecting a real year-over-year gain of 6.3 percent, adding to a string of annual gains that have outpaced the U.S. average since 1993. This has enabled Washington to not only close the average covered wage gap that emerged during the latter half of the 1980s, but to overtake the U.S. average as well, going from 98 percent to 104 percent of the U.S. average over the period.
 - Washington's real average hourly earnings remained healthy in 1999 with manufacturing, construction, and trade all continuing to post real gains due to a vibrant state economy that was increasingly beset by a broad-based labor shortage.

Labor Market and Economic Developments

Washington's economy in 2000 completed the transition from exceptionally strong job growth to more typical, moderate labor market and economic expansion at a pace that nevertheless remains very respectable. In fact, the state economy showed that it still had some punch as its employment growth shifted significantly upward in the second and third quarters of 1999 to move from below the national average to somewhat above the national average (see Figure 1).

Within this setting, Washington's seasonally adjusted unemployment rate began a slow upward creep in 2000 (see Figure 2). From 4.4 percent in the fourth quarter of 1999, it inched up to 4.9 percent by the third quarter of 2000. This having been said, the state's jobless rate remains exceptionally low by historical standards. Moreover, four consecutive years of unemployment below 5 percent in a peacetime economy is an all-time record. Only once during the Korean War of 1951-53 did the state achieve a similar feat. Certainly, the corresponding years of exceptional job growth were key factors. But adding fuel to the fire has been the *birth dearth* cohort of the population that is checking labor force growth. Also, other economies across the nation are doing equally well if not better—cutting in-migration into the state sharply from the pattern earlier in the decade.

Speaking of which, the narrowing that had taken place between the state and national jobless rates in 1999 was nowhere to be seen in 2000 as the national jobless rate continued its downward march. That pace, however, was considerably slower in 2000 as the

U.S. unemployment rate managed to dip only a tenth of a percentage point to 4.0 percent in the second quarter and held fast in the third quarter. Still, the historical gap between the Washington and U.S. jobless rates has clearly been narrowed. For example, the spread had been as much as four percentage points in the 1970s while

in the 1980s it was more than one percentage point. Much of this relates to Washington's far greater than average seasonal gyrations that make for greater extremes in unemployment in much of the resource-based economies of the state during the course of the year. Washington has also been beset by sharper cyclical

Figure 1
Nonagricultural Wage and Salary Employment Growth (Seasonally Adjusted)
Washington and United States, 1997-2000
Source: Employment Security Dept., Office of Financial Mgmt., & BLS

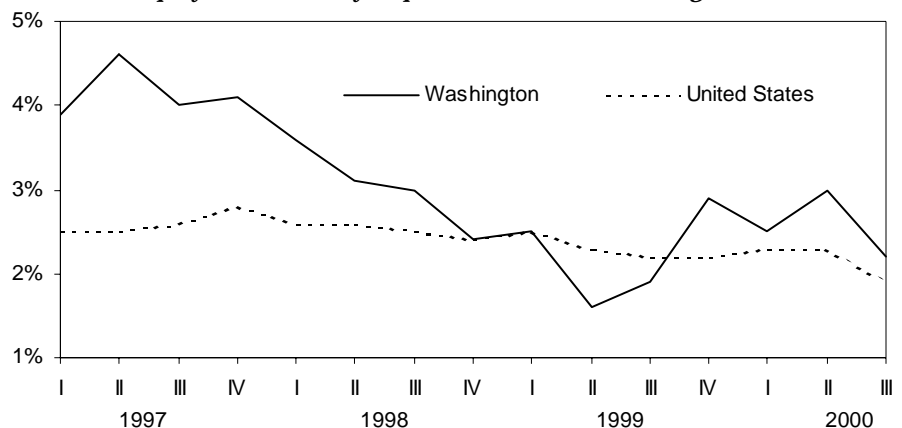
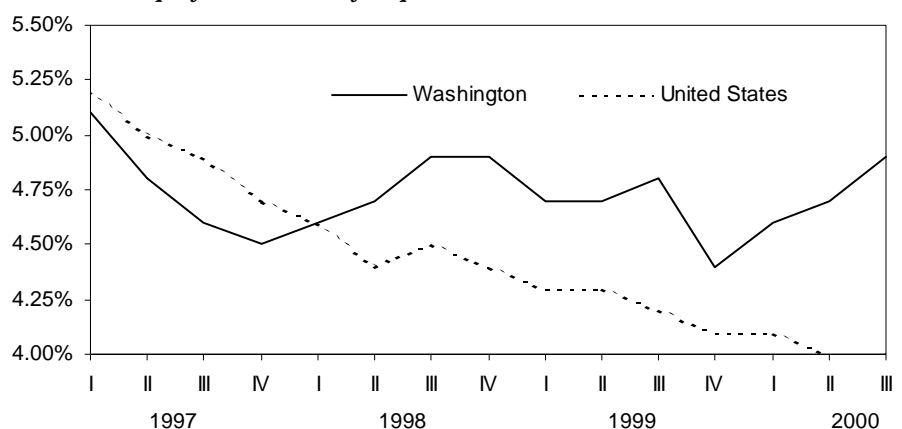


Figure 2
Unemployment Rates (Seasonally Adjusted Quarterly Averages)
Washington and United States, 1997-2000
Source: Employment Security Department, and Bureau of Labor Statistics



trends. But in the 1990s, the state-to-national differences have tightened to within half-a-percentage point of one another. And there is every reason to expect that this pattern will continue.

At this point in the business cycle, it is reasonable to assume that there continues to be churning or turnover in the economy as the active bidding process for workers intensifies.

Employers who once had a captive work force—fast food outlets, eating and drinking places, and much of retailing—have had to scramble to fill openings. In turn, workers with skills in high demand are being actively pursued and actively moving up either internally or jumping from employer to employer. Many jobs are going unfilled, particularly in the high-tech field, for want of qualified candidates. All this has led to one of the most active labor markets in Washington's history, despite some slowing in the rate of net new job creation.

Three factors have changed the historical relationships. One is extensive restructuring and realignment in many key Washington-based industries, namely lumber and wood products, aluminum, paper and allied products, shipbuilding, and finance. Inefficiencies have been weeded out and employment is far less volatile than in the past. Some of the "smoothing" in the broader economy relates to a second factor: aggressive use of point-in-time temporary help rather than "see-saw" permanent hiring. This represents one of the most dramatic shifts in internal company staffing patterns in decades. The overall effect has been more stable core employment with seasonal add-ons hired as needed from the temporary help sector.

This, in turn, is contributing to a third driver: the structural shift over time to a more service-based economy. From three-quarters of the economy in 1980 and 77 percent in 1990, the services-producing sectors now constitute 81 percent of Washington's total employment base. Growth has

been led by what is commonly called "producer-services"—finance, insurance, and real estate; transportation services; engineering and legal services; and business services including temporary help services and computer processing and software. All these tend to be more stable elements of the economy—both seasonally and cyclically—and each carries significant job multipliers as important exporters of services from the region.

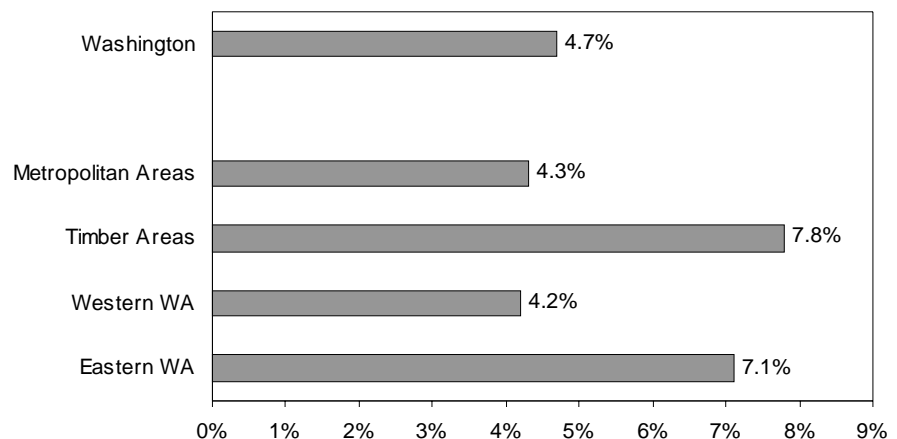
With respect to regional unemployment rates, certainly the tightest labor markets continue to be centered in the central Puget Sound region. Unemployment in the Seattle-Bellevue-Everett PMSA has averaged roughly 3.4 percent thus far in 2000 (January to September) despite job losses in aircraft and parts. Three years of strong construction, services, and trade activity continues to propel the economy. Some of this same momentum is spreading south into Pierce, Thurston, and Clark counties as reflected in their year-to-date jobless rates in the 4.1 to 4.8 percent range. Eastern Washington metropolitan areas also saw relatively low year-to-date unemployment rates with Spokane at 5.1 percent, Tri-Cities at 6.4 percent, and even Yakima at 9.7 percent.

Even so, the *Two Washingtons* phenomenon continues to make its presence known (see *Figure 3*). Higher unemployment and lower job

growth characterizes great portions of the less diverse, heavily resource-based economies of the timber-dependent areas and much of the agricultural-dependent areas of eastern Washington. Overall jobless rates in 1999 averaged 7 percent to 8 percent compared to 4.8 percent for the state as a whole. The distribution is not much different from the past several years, which suggests that the economies of these areas are essentially holding their own. However, the strong seasonal component inherent in the economic base of both regions will continue driving a spike above the statewide average in terms of area joblessness.

Virtually all of the current job growth in Washington—aside from normal seasonal patterns—is coming from nonmanufacturing sectors (see *Figure 4*). The shift from a manufacturing-driven employment market began in late-1998 coincident with the timing of Boeing's employment turnaround. After adding roughly 1,100 workers a month in the two-and-a-half years to June 1998, Washington's aircraft and parts industry shed an average of 1,300 workers a month through September of this year. Employment is down roughly 25,000. On the other hand, the rest of manufacturing has shown little change. Aluminum was off due to a protracted strike at Kaiser that only recently

Figure 3
Regional Unemployment Rates
Washington State, January-September 2000 Average
Source: *Employment Security Department*



ended and sawmill closures in the lumber and wood sector that continue in the face of excess supply in a weak market. On the bright side, offsetting gains have shown up in electronics, machinery, and other manufacturing.

Meanwhile, the rest of the economy has bolted ahead (see Figure 5). Both construction and business services, in fact, continued their torrid paces coming into 2000. Construction added 8,600 net jobs at an average wage of \$33,700 as demolition of the Kingdome, construction of its successor Seahawks stadium, and other large commercial projects figured prominently in this regard. Moreover, a booming housing market and ongoing commercial and industrial development in the Puget Sound area established a strong underlying base upon which to build. Job growth in construction in 2000 was running much higher than that of the economy as a whole and is only now showing signs of easing. Business services employment grew significantly. This was due to strong growth in temporary help supply and computer and data processing, whose 7 percent growth rates translated into 3,600 and 3,400 net new jobs, respectively. Of course, the \$175,800 average wage posted by computer and data processing was far and away higher than any other hot sector. In addition, strong gains were posted in eating and drinking places as working families and individuals opted to eat out regularly as real disposable incomes rose. The sector's average wage, however, remained modest at \$11,400 due primarily to the presence of significant numbers of part-time workers.

Gains in social services, finance, health care, and public and private education round out the top growth industries in 2000. Each of these generated a good 3,000 plus employment increase with wages ranging from \$16,000 to \$46,000 a year. As construction and the producer services sectors expanded sharply over the year,

the drag on the economy generated from the pullback in aircraft and parts became increasingly isolated. At no time in history has there been such a seeming disconnect between the

gyrations in aircraft and parts and the rest of the economy.

On the flip side, the weakest sectors in Washington's economy were manufacturing sectors (see Figure 6).

Figure 4
Manufacturing and Nonmanufacturing Employment
 Seasonally Adjusted Over-the-Year Change
Washington State, 1997-2000
 Source: *Employment Security Department*

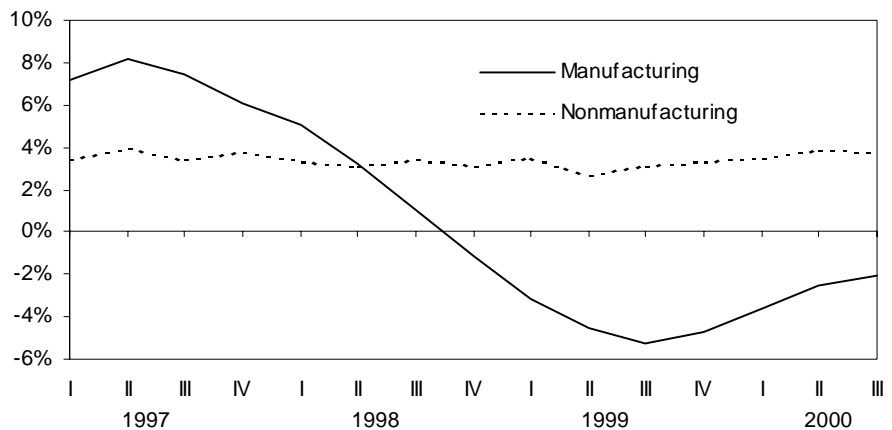


Figure 5
Leading Growth Sectors
Washington State, 3rd Quarter 1999 - 3rd Quarter 2000
 Source: *Employment Security Department*

Industry	Average Covered Wage	Job Gain	Percent Change
Construction	\$33,700	8,600	6%
Eating and Drinking Places	\$11,400	6,300	4%
Temporary Help Services	\$24,000	3,600	7%
Computer Processing and Software	\$175,800	3,400	7%
Social Services	\$16,000	3,200	5%
Finance	\$46,300	2,900	5%
Health Care	\$30,500	3,300	2%
Public and Private Education	\$27,800	8,000	4%

Figure 6
Weak Employment Sectors
Washington State, 3rd Quarter 1999 - 3rd Quarter 2000
 Source: *Employment Security Department*

Industry	Average Covered Wage	Job Loss	Percent Change
Manufacturing	\$44,500	-8,000	-2%
Transportation Equipment	\$55,600	-8,000	-7%
Aircraft and Parts	\$58,400	-8,000	-8%
Textiles and Apparel	\$21,500	-1,000	-9%
Food and Kindred Products	\$31,200	-1,000	-3%
Local Government	\$32,500	-2,000	-1%

Transportation equipment, namely its aircraft and parts component, headed the list with job losses amounting to 8,000 from third quarter 1999 to third quarter 2000. This translated into a 7 percent decline in employment. Textiles and apparel and food and kindred products alike shed 1,000 workers over the past four quarters, though that represented a 9 percent contraction for the former compared to a 3 percent decline for the latter. The lone nonmanufacturing sector was local government. It was forced to scale back employment in the wake of voter-approved Initiative 695, which eliminated the state motor vehicle excise tax and eliminated a significant source of local government revenue.

As mentioned, Washington's economy has been transitioning from one dominated by goods-producing jobs to one dominated instead by services-producing jobs. This is not a new theme, but it is nowhere more clearly underscored than in the shifting employment and wage situations in two of the state's most prominent sectors—aircraft and parts and computer and data processing (see Figure 7). In the span of less than two decades, computer and data processing (which includes software) employment has more than quadrupled in the 1990s, going from roughly 15,000 in 1990 to nearly 70,000 in 2000. As a result, it has seen its share of statewide nonfarm employment rise steadily from less than one-half of 1 percent to just over 2 percent. By comparison, aircraft and parts has seen its employment fall to roughly 87,000, which represents roughly 3.5 percent of the state's total nonfarm employment base. The ratio of aircraft jobs to computer services jobs is now less than 2-to-1 compared to 8-to-1 in 1990. Moreover, job growth in computer and data processing continues in the 7 percent to 8 percent range while that in aircraft and parts is presently contracting. That is not to suggest that aircraft and

parts employment will not rebound. It most certainly will as plane orders mount. However, aircraft and parts remains a very cyclical sector and there is tremendous pressure on the industry to keep costs under control. Computer and data processing, while it is not immune to business cycles, is much less so and there continues to be tremendous labor demand in the industry.

The wage picture was even more dramatic (see Figure 8). Wages in aircraft and parts fell from nearly 10 percent of total covered wages in 1989-90 during the height of the sector's activity order period to 6 percent in 1999. In stark contrast was total covered wages in computer and

data processing, which skyrocketed from one-half of 1 percent of total statewide covered wages paid in the early 1980s to nearly 13 percent of the same in 1999. A key factor in this dramatic escalation was the inclusion of exercised stock options in the industry, an increasingly common form of compensation.

A glance at value of agricultural production trends over the decade show that Washington's farm sector has been hit hard over the past several years in particular as overproduction has caused falling commodity prices in at least two key Washington products—wheat and apples (see Figure 9). Total value of agricultural production in Washington was \$5.3 billion in

Figure 7
Covered Employment as Share of State Total
Aircraft and Parts and Computer and Data Processing, 1981-1999
Source: *Employment Security Department*

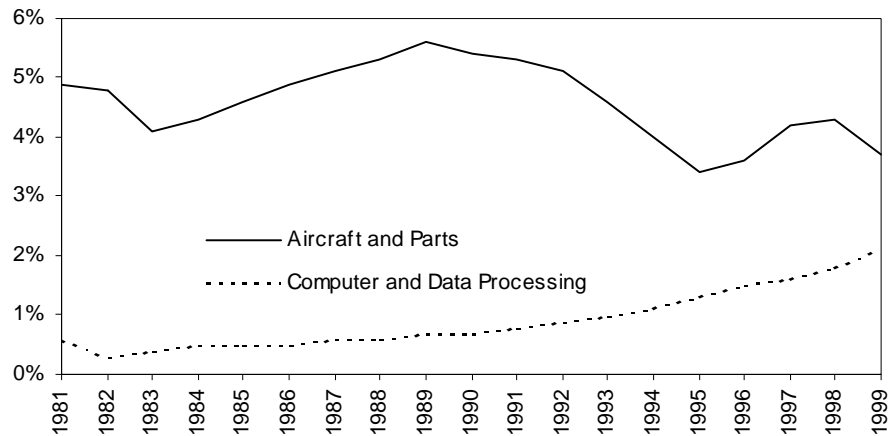


Figure 8
Total Covered Wages as Share of State Total
Aircraft and Parts and Computer and Data Processing, 1981-1999
Source: *Employment Security Department*

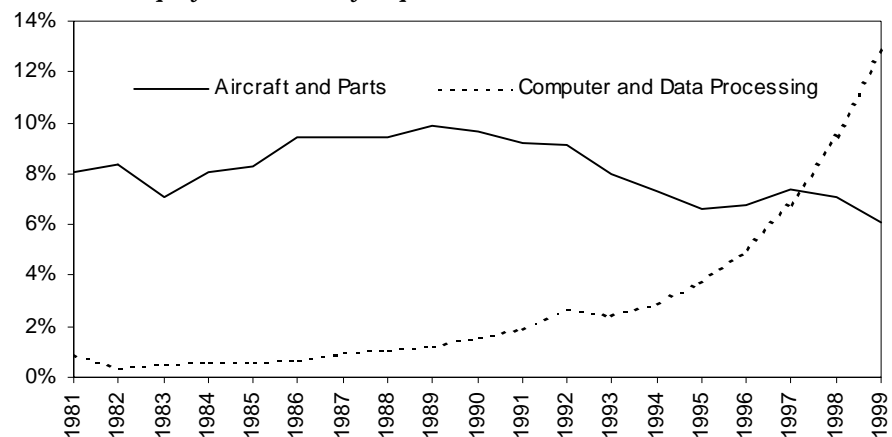


Figure 9
Total Value of Production (1990=100)
Washington State, 1990-1999
 Source: *Washington Department of Agriculture*

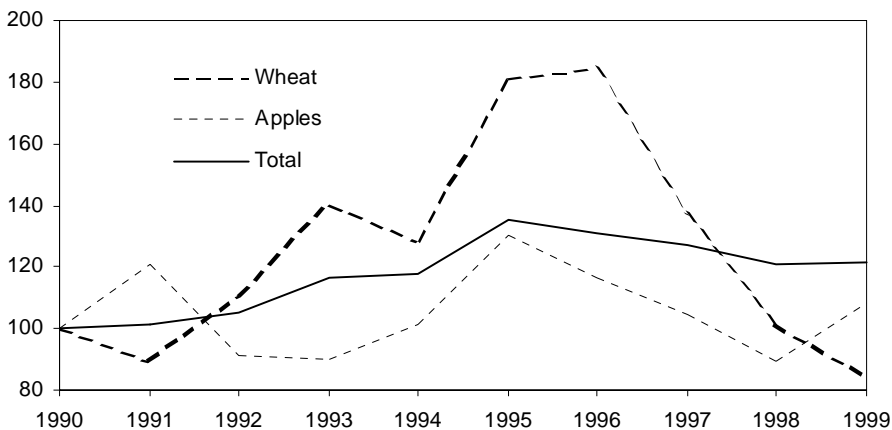


Figure 10
Index of Leading Indicators (Index 1Q 1996=100)
Washington State and United States, 1997-2000
 Source: *Office of the Forecast Council*

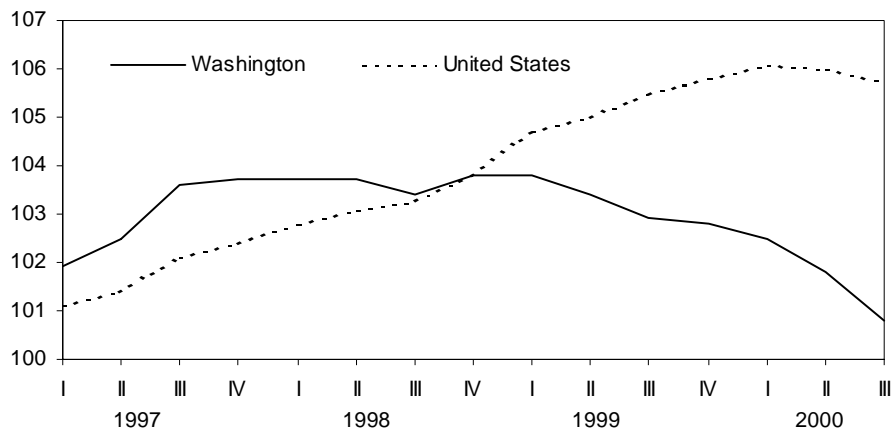
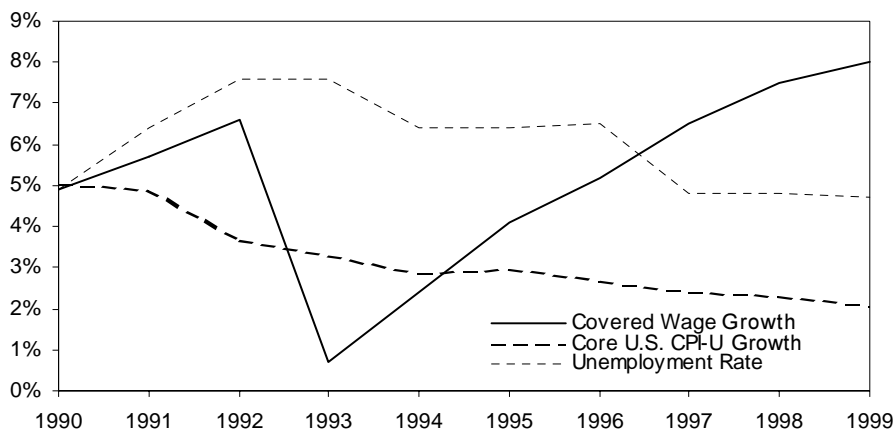


Figure 11
Wage and Inflation Growth and Unemployment Rates
Washington State, 1990-1999
 Source: *Employment Security Department*



1999, up slightly over the year but still well below the \$5.9 billion high in 1995. At nearly \$850 million, apples led all other agricultural commodities in terms of value of production in 1999. In fact, the value of production of apples was up 21 percent from 1998. Nevertheless, Washington apple farmers are typically selling at a loss, receiving 30 cents a pound for apples it cost 40 cents a pound to produce. Apples were followed by milk, potatoes, and cattle and calves. Wheat was fifth in terms of value of agricultural production at \$345 million in 1999, an 8 percent decrease over the year. The past several years have seen wheat prices at some of the lowest levels ever. Wheat is now priced at around \$2.84 a bushel, still 40 to 60 cents below production costs.

Two forward-looking indicators—the Washington and U.S. Index of Leading Economic Indicators—have been on divergent paths since converging two years ago in the third and fourth quarters of 1998 (see Figure 10). Since that time, the U.S. Index of Leading Economic Indicators climbed steadily until peaking in the first quarter of 2000. The Washington Index of Leading Economic Indicators, though, trended steadily downward since peaking in the fourth quarter of 1998. These indicators were certainly consistent with the quarterly unemployment rate patterns witnessed both statewide and nationally. If these indicators are, by chance, signaling the approaching end of our record-setting state and national economic runs, they have been truly remarkable runs. The economies of both Washington and the U.S. have carried on an expansion of a duration and depth that is unprecedented in postwar history.

On the wage front, a comparison of average covered wages, unemployment rates, and the core consumer price index for Washington shows that the tight labor markets reflected in the state's steadily declining jobless rate had more of an influence on the state's

Figure 12
Average Covered Wage Growth
Washington State, 1999

Source: Employment Security Department

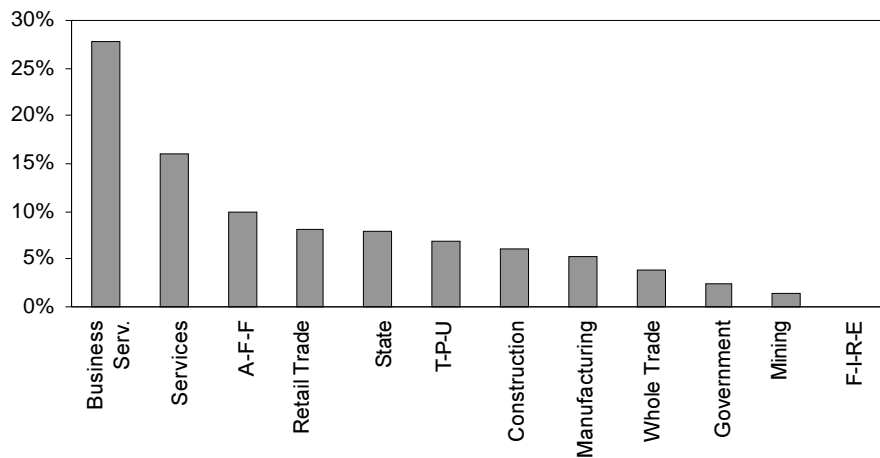


Figure 13
Hours and Earnings in Manufacturing (Quarterly Averages)
Washington State, 1997-2000

Source: Employment Security Department

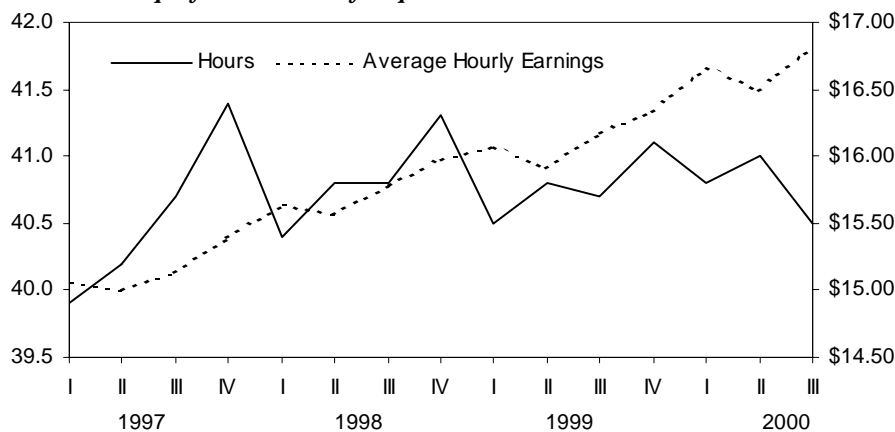
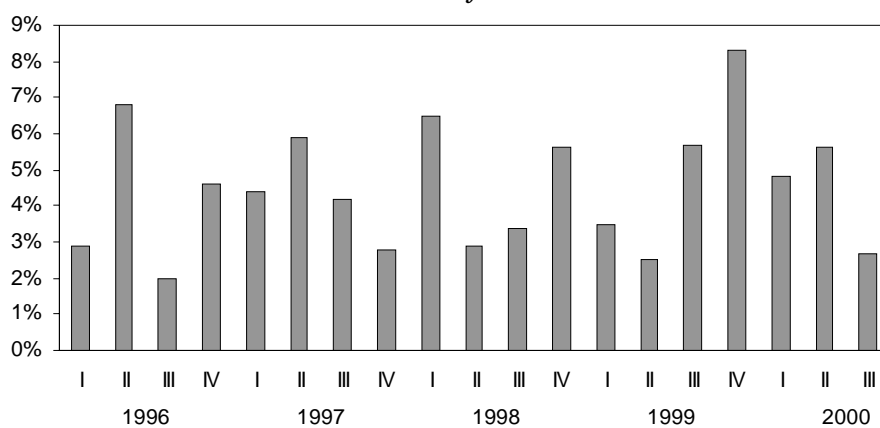


Figure 14
Real Gross Domestic Product Change; % Chg. at Seasonally Adjusted Annual Rates
United States, 1996-2000

Source: U.S. Bureau of Economic Analysis



average wage than did inflation (see Figure 11). Indeed, there was clearly an inverse correlation between unemployment rates and average covered wage growth. That the rate of inflation growth eased progressively over time revealed that it was a relative non-factor with respect to average covered wage growth.

That having been said, it was also clear that average covered wage gains were not equally distributed across all industry sectors (see Figure 12). The strong statewide average covered wage growth of 8 percent in 1999 was largely attributable to the strong growth in its services sector, particularly business services. Business services, in turn, was most affected by the wage gains in its computer and data processing sector which, as previously mentioned, includes software and its exercised stock options. To be fair, the 5 percent to 7 percent gains in average covered wage posted in manufacturing, construction, and transportation and public utilities were impressive in themselves. Government and mining, however, were considerable laggards at 2.5 percent and 1.5 percent, respectively.

The 5.2 percent increase in manufacturing's average covered wage in 1999 (cited above) appears to have been carried forward through the first three quarters of 2000 (see Figure 13). The hours and earnings data for Washington's manufacturing sector show hourly earnings rising more or less steadily from around \$15 an hour in the first quarter of 1997 to nearly \$17 an hour in the third quarter of 2000. Meanwhile, the average time spent on the job has settled into a band of around 40.5 to 41.0 hours per week over the past four quarters. That the average hourly manufacturing wage has risen over the past four quarters even as the average work week has shortened is indicative of the tight labor market facing even this sector.

On balance, the national economy was surprisingly strong over the past

Figure 15
Real Gross Domestic Product and Real Gross State Product
1987-1999

Source: *Bureau of Economic Analysis*

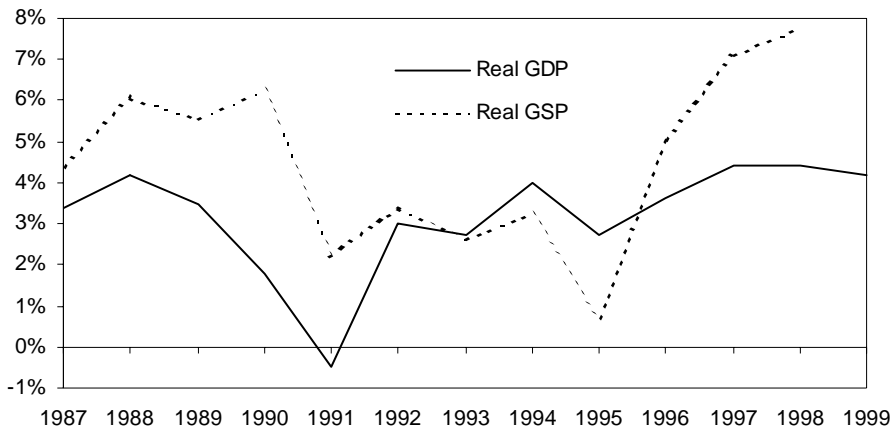


Figure 16
Consumer Price Index (Annual Percent Change)
Seattle and United States, 1997-2000

Source: *U.S. Bureau of Labor Statistics*

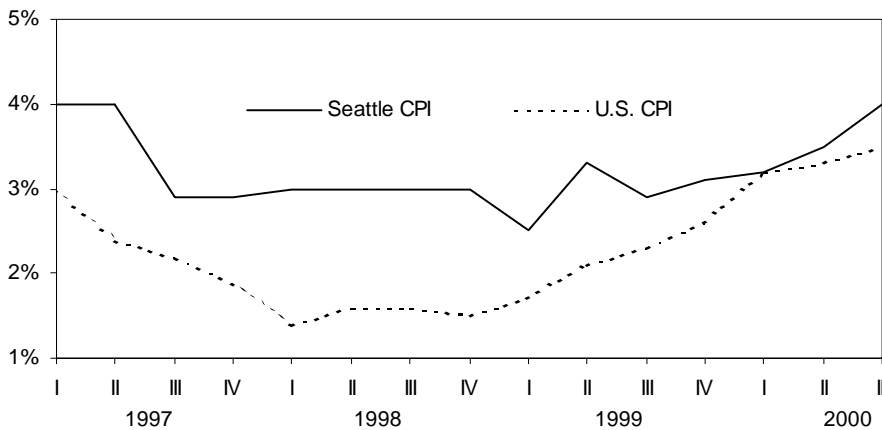
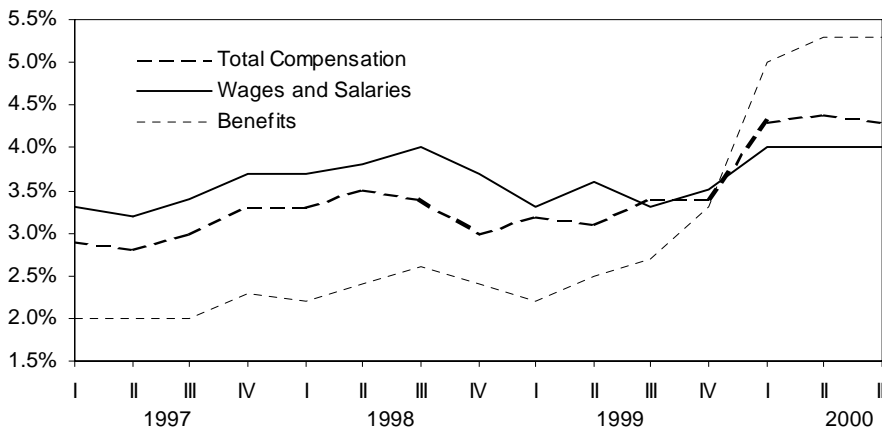


Figure 17
Employment Cost Index (Annual Percent Change)
United States, 1997-2000

Source: *U.S. Bureau of Labor Statistics*



four quarters (see Figure 14). Real Gross Domestic Product growth soared more than 8 percent in the fourth quarter of 1999 despite a succession of interest rate hikes designed to slow the economy. Perhaps owing to the lag with which interest rate hikes tend to show any real effect, the economy's pace eased to 4.8 percent in the first quarter of 2000, yet rebounded strongly in the second quarter to 5.6 percent. It retreated in the third quarter, however, to 2.7 percent. Even more impressive than the national Gross Domestic Product, however, has been the sharp growth in Washington's Gross State Product, particularly since 1996 (see Figure 15). It is no surprise, of course, that Washington's economy was one of the high-flyers nationally. That was well publicized. It is interesting to note, however, just how prominent that growth has been, building up progressively from 5 percent in 1996 to nearly 8 percent by 1998. Over the same period, growth in real Gross Domestic Product, though healthy, has been fixed at around 4 percent.

A comparison of the Consumer Price Index for All Urban Consumers for Seattle-Tacoma-Bremerton and the U.S. clearly shows inflation in the former operating at a significantly higher level than in the latter in 1998 and 1999 (see Figure 16). The Seattle CPI continued to reflect higher than average inflation in the first three quarters of 2000 as well, but there has also been a marked convergence with the U.S. CPI as the latter has escalated over the year. The key culprit in the Seattle CPI is the cost of housing.

Following relatively modest postings in the 3.0 percent to 3.4 percent range in 1999, the U.S. Employment Cost Index (ECI) rose sharply into the 4.3 percent to 4.4 percent range in 2000 (see Figure 17). A breakdown of the Employment Cost Index in terms of its wage and salary and benefit components shows that the latter has been the most rapidly growing since 1999. After operating in the 2.0 percent to 2.5 percent range in 1997-98, benefits

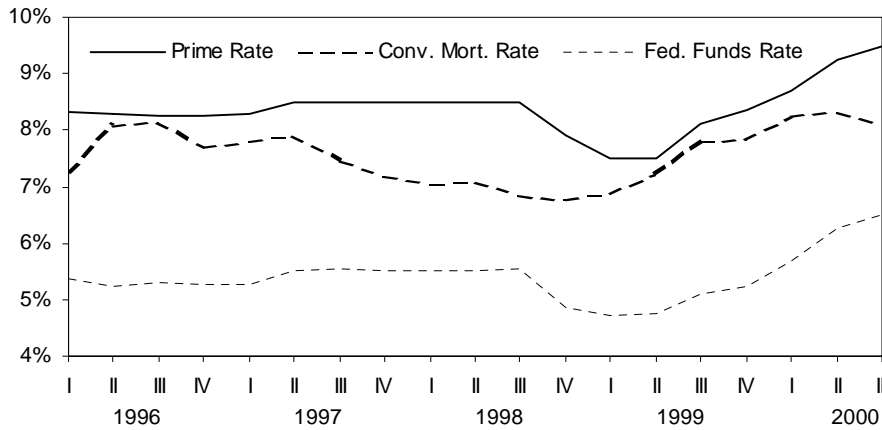
costs skyrocketed into the 5 percent range on a quarterly basis by first quarter 2000. The principal driver was rising health care costs, which are a major form of non-wage and salary compensation, and soaring prescription drug costs in particular.

In response to the higher than expected growth and progressively

tighter labor markets, some of which was captured in the aforementioned sections, the Federal Reserve shifted gears abruptly in June 1999 and started aggressively tightening monetary policy. Short-term interest rates were raised six times over the preceding 11 months with the last hike coming in May 2000 as pre-emptive

strikes against inflation (*see Figure 18*). The cumulative impact of these actions raised short-term interest rates to 6.5 percent by the third quarter of 2000. In response, the prime rate rose two full percentage points from 7.5 percent in the second quarter of 1999 to 9.5 percent in the third quarter of 2000. For their part, mortgage rates had already moved up in the first and second quarters of 1999 from 6.9 percent to 7.2 percent. They moved as high as 8.3 percent in the second quarter of 2000 before easing back to 8.1 percent in the third quarter of 2000. All told, this translates into higher interest costs to both households and business from here on out. The consensus is that the Fed will hold the line on short-term interest rates while it assesses whether or not its previous hikes were sufficient enough to slow economic growth to its satisfaction. Clearly, if the Fed detects any sign of rising inflation, it will raise rates again.

Figure 18
Interest Rates (Average Quarterly Percentage Points)
United States, 1996-2000
 Source: *Federal Reserve Bank*



Unemployment and Its Dimensions

State and National Unemployment Rates

Washington's annual average unemployment rate fell progressively during the latter half of the 1980s to where by the 1990s it had more or less erased the gap that had existed between it and the national unemployment rate (see Figure 19). This is quite a departure from the past when Washington's jobless rate was as much as four percentage points higher than the national rate, for example, at times during the 1970s. That was largely a factor of Washington's higher than average seasonality and more pronounced cyclical patterns. During the 1990s, though, the state-national difference tightened in the wake of extensive restructuring and efficiency gains in key Washington industries, aggressive use of temporary help instead of permanent hiring, and the shift over time to a more service-based economy. Notably, four consecutive years of unemployment below 5

percent in a peacetime economy is an all-time Washington record. Only once did the state achieve a similar feat and that was during the Korean War (1951-53). Strong job growth and a tight labor market are the principal factors. In particular, the latter is driven by slower labor force growth as the *birth dearth* cohort moves through the labor market and as in-migration slows due to strong economies across the U.S.

Washington's Monthly Unemployment Rates

With the exception of July and August, Washington's monthly unemployment rates were lower in 2000 than in 1999 when viewed on a month by month basis (see Figure 20). This month-to-month picture simply buttresses the points made with respect to the annual trend—that Washington's current low rate of joblessness continues to be sustained by a relatively healthy economy and slower labor force growth.

Northwest Unemployment Rates

At 4.7 percent, Washington's unemployment rate remained the lowest among the Northwest states in 1999 (see Figure 21). In fact, only Washington's jobless rate fell along with that of the nation. Oregon and Idaho saw their unemployment rates increase slightly, while Montana and Alaska saw more significant increases. This is a reversal of the 1998 pattern

Figure 19
Unemployment Rates
Washington and United States, 1970-1999
Source: Employment Security Department



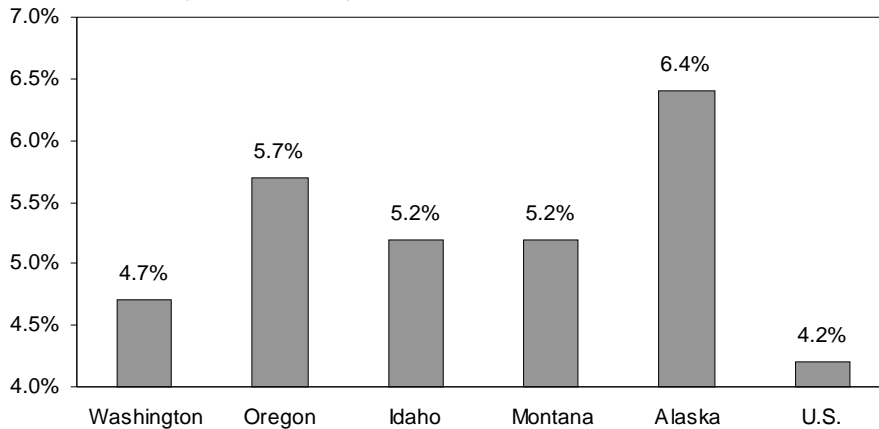
Figure 20
Monthly Unemployment Rates
Seasonally Adjusted
Washington and U.S., 1999 & 2000
Source: ESD & U.S. DOL BLS

1999	WA	U.S.
January	4.9%	4.3%
February	5.0%	4.4%
March	4.8%	4.1%
April	4.8%	4.3%
May	5.0%	4.2%
June	5.0%	4.3%
July	4.8%	4.3%
August	4.7%	4.2%
September	5.0%	4.2%
October	4.8%	4.1%
November	4.0%	4.1%
December	4.3%	4.1%
2000	WA	U.S.
January	4.5%	4.0%
February	4.7%	4.1%
March	4.5%	4.1%
April	4.6%	3.9%
May	4.7%	4.1%
June	4.7%	4.0%
July	4.9%	4.0%
August	5.1%	4.1%
September	4.7%	3.9%
October	4.7%	3.9%
November	n/a	n/a
December	n/a	n/a

Figure 21
Unemployment Rates

Northwest States and United States, 1999

Source: *Employment Security Department & Bureau of Labor Statistics*



when Washington's jobless rate held constant while its Northwest neighbors saw their jobless rates come down. Jobless rates in each of the Northwest states, including Washington, were above the 4.2 percent national average.

Unemployment Rates by County and Region

In 1999, tight labor markets continued to affect the Puget Sound region with those counties boasting some of the lowest unemployment rates in Washington (see Figure 22). King, Snohomish, and Island counties (also known as the Seattle-Bellevue-Everett PMSA) had jobless rates in the 3.2 percent to 4.0 percent range with Pierce and Thurston counties around 4.5 percent. Equally low was southwest Washington's Clark County at 3.9 percent. Low jobless rates were also posted, however, by some of the state's small, rural counties. Southeast Washington led the way with Whitman County at 1.8 percent—the lowest jobless rate in the state—and Asotin and Garfield counties at around 3.5 percent. So as not to leave the impression that labor markets were tight everywhere in the state, a handful of counties had unemployment rates in double digits. Columbia County had the highest jobless rate in the state at 11.3 percent followed by Ferry, Pend Oreille, and Adams counties and their jobless rates above 10 percent.

Figure 22
Unemployment Rates by County

Washington State, 1999

Source: *Employment Security Department*

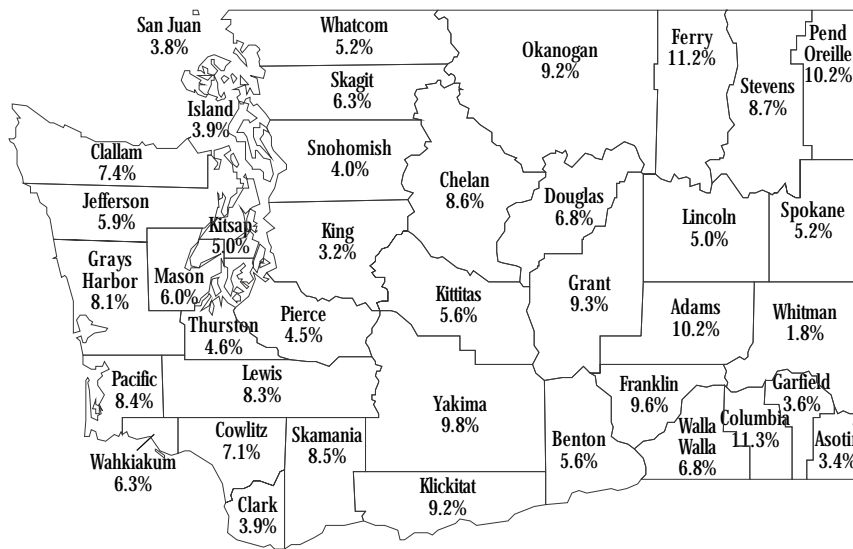
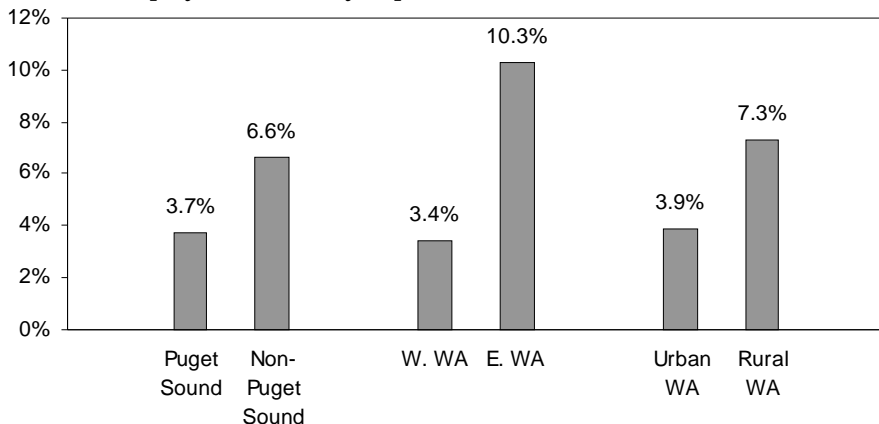


Figure 23
Unemployment Rates by Region

Washington State, 1999

Source: *Employment Security Department & Bureau of Labor Statistics*



The latter observation plays directly to the theme of *Two Washingtons* (see Figure 23). The jobless rate in western Washington continued to be much lower than that in eastern Washington to the tune of seven percentage points. The same picture emerged with respect to the comparison between Puget Sound and non-Puget Sound regions and urban and rural regions. However, those differences were less dramatic at around four percentage points. Higher unemployment characterizes great portions of the less diverse, heavily resource-based economies of the timber-dependent areas and much of the agricultural-

dependent areas of eastern Washington. The strong seasonal component inherent in the economic base of both regions will continue driving a spike above the statewide average in terms of area joblessness.

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, training, skills, and experience, (4)

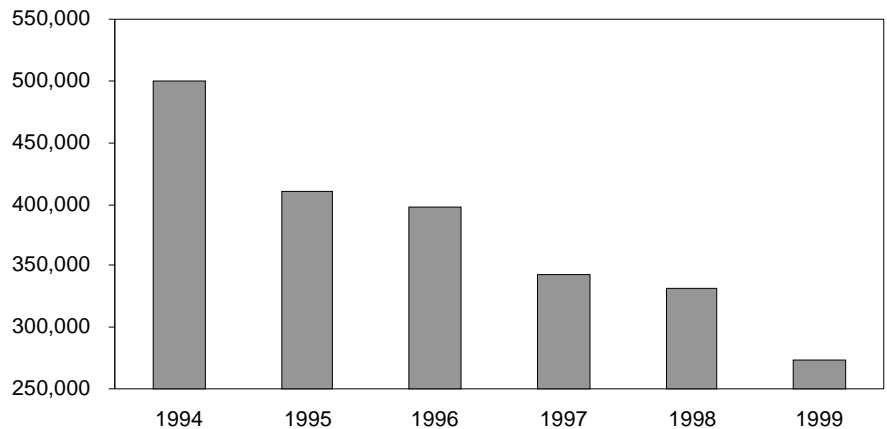
were considered too young or old for the job or (5) experienced other forms of discrimination.

The count of discouraged workers nationally has declined each year since the new methodology was introduced (see Figure 24). From an estimated 500,000 (a benchmark for the new methodology) in 1994, the number of discouraged workers has fallen year after year to 273,000 in 1999. While this represents an annual rate of decline of more than 11 percent from

1994-99, the number of discouraged workers fell 18 percent in 1999. This is consistent with a healthy national economy that has seen its jobless rate decline over the same period. That having been said, there are signs that the national economy has peaked, not the least because of purposeful Fed actions. Against this backdrop, it is unlikely that the number of discouraged workers will continue to decline at a significant rate.

Figure 24
Discouraged Workers
United States, 1994-1999

Source: U.S. Department of Labor, Bureau of Labor Statistics



Seasonal, Cyclical, and Structural Employment

Seasonality, cyclical, 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 have traditionally been 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.

Cyclical 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. Cyclical 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 to capture the aircraft and

parts sector, whose degree of cyclical fell from an initial 37.8 percent to 24.0 percent from the 1976-84 business cycle to the 1982-90 business cycle. Structural industries were identified as Type 1 if employment decreased less than 10 percent from the pre-recession peak in 1990 or Type 2 if the loss was 10 percent or more from that 1990 peak.

Seasonal Industries

Washington had 127 three-digit SIC coded industries designated as *seasonal* in 1999. Those 127 sectors translated into 413,189 workers who, in turn, represented just under one-fifth of the state's total private covered employment in 1999.

Private covered employment encompassed by Washington's seasonal industries has fluctuated over time (*see Figure 25*). The most recent data, however, show that total private covered seasonal employment in Washington fell nearly 6 percent in 1999 after declining nearly 13 percent the year before. A declining seasonal employment share does not always mean lessening seasonality since the state's overall employment base can be contracting as well. That was not the case in 1999, however, as seasonality as a share of total private covered employment fell one and a half percentage points to roughly 18.8 percent in a growing economy. Altogether, this suggests that Washington's economy continued a trend of lessening seasonality that was established over the past couple of years.

Washington's economy may have become less seasonal in 1999, but the ranking of the largest 3-digit SIC coded

Figure 25
Seasonal Private Covered Employment
Washington State, 1988-1999
 Source: *Employment Security Department*

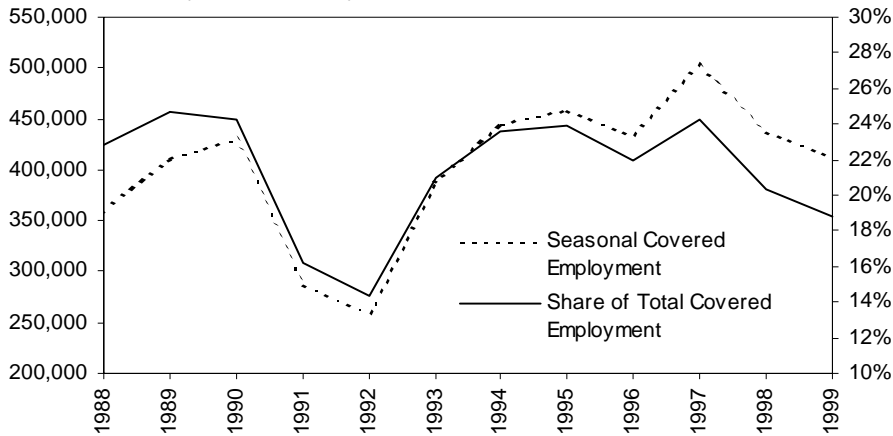


Figure 26
Largest Seasonal Industries
Washington State, 1999
 Source: *Employment Security Department*

SIC	Industry	Employment
531	Department Stores	43,793
017	Berry Crops	39,160
881	Private Households	29,239
799	Misc. Amusement and Recreation Services	27,861
594	Miscellaneous Shopping Goods Stores	24,462
152	Residential Buildings Construction	20,121
864	Civic and Social Associations	15,607
203	Preserved Fruits and Vegetables	13,517
162	Heavy Construction, Except Highway	13,003
565	Family Clothing Stores	12,369
179	Miscellaneous Special Trade Contractors	11,751
078	Landscape and Horticultural Services	8,955
616	Mortgage Bankers and Brokers	7,623
357	Electronic Computing Equipment	7,583
241	Logging	6,887

seasonal industries remained essentially the same (see Figure 26). The list included department stores, miscellaneous shopping goods stores, and family clothing stores, all of which do a lot of summer and holiday-related hiring. Agriculture-related sectors, namely preserved fruits and vegetables and berry crops made the list reflecting harvest cycles. Fruits and tree nuts, which usually joins the other two, did not make the list in 1999 due to poor market conditions that negated the hiring that normally takes place. Amusement and recreation

services appears on the list due to swings generated by summer and winter activities. Construction in all forms—residential, heavy, and special trade—also appeared thanks to its weather-regulated activities as did landscaping and horticultural services and mortgage bankers and brokers, which tend to follow construction. Logging was also an expected entry since it is very definitely a weather-related activity. The presence of electronic computing equipment on the 1999 list is an anomaly explained by the nature of the business that

prompts the sector to hire and fire quickly in response to market conditions, a situation that may have made its volatile employment pattern appear to be seasonal.

Perhaps most noteworthy is the fact that personnel supply services (largely consisting of temporary workers) fell off the list. This sector has traditionally been driven by summer and holiday-related hiring. It still is, but that aspect of the industry has been more than offset by its ever-increasing role as a provider of year-round, non-seasonal hires as well. This shift has been pervasive to the extent that traditional seasonal gyrations have been muted by the overall stability of hiring over the year.

Cyclical Industries

Under the official 37.8 percent variance threshold, Washington had 129 three-digit SIC coded industries and nearly 309,507 workers identified as *cyclical* in 1999 which accounted for just over 14 percent of the state's total private covered employment. Though private covered cyclical employment has grown each year from 1988-99—no surprise given that the state has been on the upside of the business cycle—its share of total private covered employment has remained relatively fixed over the same period at 13 percent to 14 percent.

Under the “adjusted” 24 percent variance threshold, Washington's economy had 198 three-digit SIC code sectors and 651,541 workers identified as cyclical in 1999, which translated into just under 30 percent of the state's total private covered employment.

One indication that some cyclical industry is being washed out of Washington's economy is the fact that aircraft and parts employment—often cited as a key 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. That, of course, may change when 2000 data are available. In other words, aerospace employment

did not swing or fluctuate as widely as it used to. It was less cyclical.

A list of the largest three-digit SIC coded cyclical industries at that 38 percent threshold in 1999 is topped by miscellaneous business services which, though a catch-all for business services, is heavily skewed toward security services (see Figure 27). Security services have become a fast-growing part of the economy thanks to our security-conscious society. It has become an equally fast growing part of business services since most firms outsource this function. Accounting, auditing and bookkeeping, management and public relations, and sanitary services are other business-related functions that are also traditionally outsourced and which have also grown during this current expansion period. The list also includes a number of interest rate-sensitive sectors like mortgage bankers and brokers, savings institutions, engineering and architectural services, research and testing. Also included are wholesale trade sectors like machinery, equipment, and supplies and professional and commercial equipment which are also interest rate sensitive. The absence of aircraft and parts from this list is not an oversight; it does not appear on the "official" list, which uses 37.8 percent employment variance as a threshold. It would, however, top the list that uses 24 percent as its threshold.

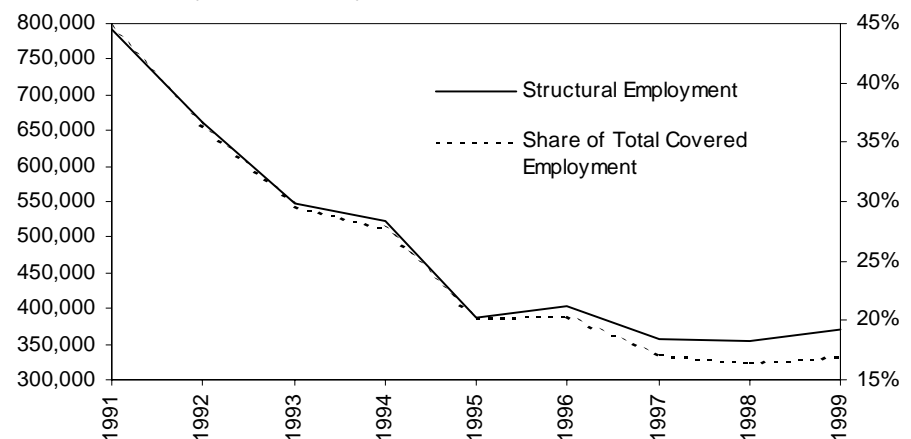
Structurally Mature Industries

Washington had 121 three-digit SIC coded industries classified as *structurally mature* in 1999 and those 121 sectors employed nearly 370,160 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 93 sectors and 242,039 private covered workers, while Type 2 (employment decline of 10 percent or more) captured 28 sectors and 128,121 workers. Clearly, Type 1 was more diverse industrially

Figure 27
Largest Cyclical Industries
Washington State, 1999
Source: Employment Security Department

SIC	Industry	Employment
738	Miscellaneous Business Services	27,551
871	Engineering and Architectural Services	23,262
832	Individual and Family Services	18,878
504	Professional & Commercial Equipment	18,784
508	Machinery, Equipment, and Supplies	18,748
873	Research and Testing Services	14,439
874	Management and Public Relations	11,577
872	Accounting, Auditing, & Bookkeeping	11,283
495	Sanitary Services	8,855
308	Miscellaneous Plastics Products, NEC	8,548
603	Savings Institutions	7,861
616	Mortgage Bankers and Brokers	7,623

Figure 28
Structurally Mature Private Covered Employment
Washington State, 1991-1999
Source: Employment Security Department



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 trend for structurally mature industries in Washington had been one of relative decline since the 1991 recession (see Figure 28), which is consistent with what one should expect in restructuring industries—that employment levels after restructuring are lower even against the backdrop of overall statewide employment growth. Employment declines in the state's structurally mature industries essentially played out in 1995,

however, and the trend has been relatively flat since. Indeed, despite the 4.1 percent increase in structural employment in 1999, it still remains within the 16 percent to 17 percent range as a share of total private covered employment. Moreover, the distinct divergence between Type 1 and Type 2 structural employment trends that emerged in 1998 (Type 1 structural employment rose 9.5 percent while Type 2 structural employment fell 4.7 percent) did not continue into 1999. Rather, both rose at roughly the same rate.

One point that bears repeating 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 nonmanufacturing 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 annual rates of 2.5 percent or more in the proceeding five years.

The list of the largest structurally maturing sectors in Washington in terms of covered employment has not changed much over the decade (*see Figure 29*). Not surprisingly, the listing of the largest three-digit SIC coded structurally-mature industries is topped by aircraft and parts, a sector that has very definitely been affected by restructuring over the past several years. Several other industries typically associated with restructuring also appear on the list. Trucking has been restructuring in the wake of deregulation. Commercial banks and insurance have been consolidating nationally as well as regionally throughout 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 activities are well documented include ship and boat building and repairing, newspapers, radio and television broadcasting, and primary nonferrous metals (chiefly aluminum). Beverages appeared last year, primarily due to closure of the Rainier Brewery. Specialty drug stores and women's clothing stores have faced increased competition from "big box" retailers and even Internet players, which accounts for their presence on the list. Masonry, stonework, and plastering has been hit by competition as well from less expensive, substitutable pre-fabricated

Figure 29
Largest Structural Industries
Washington State, 1999
Source: *Employment Security Department*

SIC	Industry	Employment
372	Aircraft and Parts	112,111
421	Trucking, Local and Long Distances	26,459
602	Commercial Banks	22,017
242	Sawmills and Planing Mills	13,662
591	Drug Stores and Proprietary Stores	11,469
174	Masonry, Stonework, and Plastering	10,795
271	Newspapers	9,993
243	Millwork, Plywood, and Structural Members	9,218
262	Paper Mills	8,160
373	Ship and Boat Building and Repairing	6,967
241	Logging	6,887
333	Primary Nonferrous Metals	5,666
449	Water Transportation Services	5,311
483	Radio and Television Broadcasting	4,574
769	Miscellaneous Repair Shops	4,551
562	Women's Clothing Stores	4,064
729	Miscellaneous Personal Services	3,478
016	Vegetables and Melons	3,248
631	Life Insurance	3,179
208	Beverages	3,175

materials. Miscellaneous repair shops, for their part, find themselves caught in a "throwaway" society where replacing consumer goods is less expensive than repairing them.

Regional Patterns

Every county has some degree of seasonal, cyclical, and structural covered employment. As a general rule, though, the highest shares of the three factors can be found in 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 1999 ranged from a low of 7 percent in Wahkiakum County to a high of 61 percent in Columbia County (*see Figure 30*). Not surprisingly, the highest degrees of seasonality—those constituting more than one-fourth 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 Washington. At the highest end, for example, Adams, Douglas, and Grant counties have more than half of their respective covered employment classified in seasonal industries.

Areas with seasonal employment shares from roughly 20 percent to 25 percent 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.

Generally speaking, Washington's metropolitan areas were among the counties with the lowest shares of seasonal employment. Yakima and the Tri-Cities were, of course, exceptions with their respective 39 percent and 31 percent shares driven by agriculture despite their metropolitan labels. It is worth noting, though, that even the other metropolitan counties found 14

Figure 30
Seasonal Jobs as a Share of Total Private Covered Employment
Washington State, 1999
 Source: *Employment Security Department*

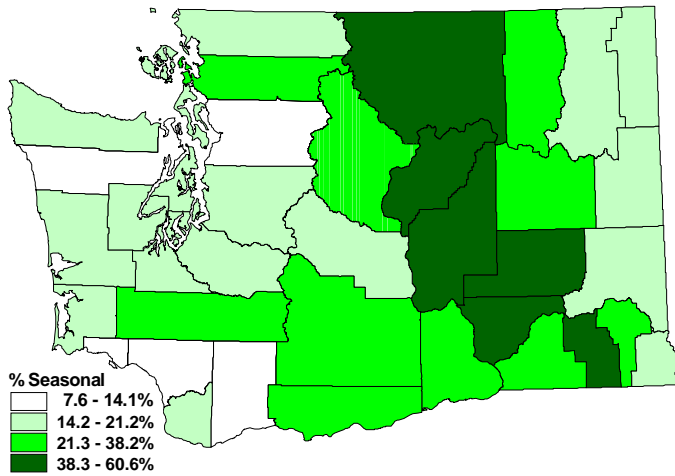


Figure 31
Cyclical Jobs as a Share of Total Private Covered Employment
Washington State, 1999
 Source: *Employment Security Department*

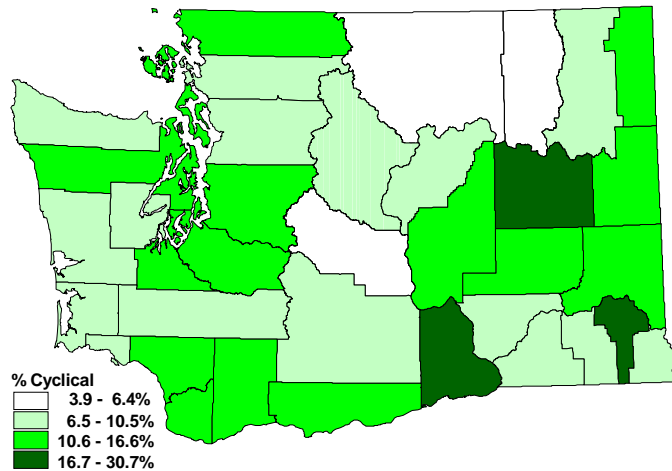
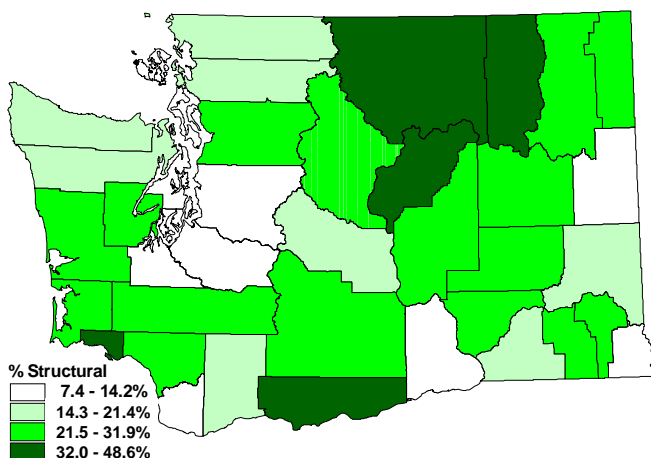


Figure 32
Structural Jobs as a Share of Total Private Covered Employment
Washington State, 1999
 Source: *Employment Security Department*



percent to 19 percent of their covered employment in seasonal industries.

Cyclicality. Cyclicality was less present in Washington counties than either seasonality or structural maturity in 1999 (see *Figure 31*). The degree of cyclicality among Washington counties ranged from a low of 4 percent in Ferry County to a high of 31 percent in Benton County. Immediately following Benton County were Garfield and Lincoln counties with cyclical shares of 26 percent, respectively. Nevertheless, few geographic or industrial patterns seem to stand out. It should be noted, however, that the larger metropolitan areas appeared to have driven the 14 percent state average.

Structural-Maturity. Like seasonality, structural maturation left its mark on Washington counties in 1999 (see *Figure 32*). In terms of share of total private covered employment, the impact ranged from a low of 7 percent in Kitsap County to a high of 49 percent in Wahkiakum County. The most impacted counties—those with structural shares of 25 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. At the same time, structural maturity was more present at the spectrum of counties than was either seasonality or cyclicality. This reveals the more random or haphazard nature of structural maturity, which strikes firms and industries in a less than predictable fashion.

Labor Force and Employment Forecast

Labor Force Forecast

The long-term forecast for Washington's labor force (those 16 years of age and older who are either working for pay or actively looking for work) is expected to be characterized by progressively lower annual rates of growth (see Figure 33). For example, growth is projected at an annual rate of 1.5 percent for the current decade (2000-10), but is considerably lower than the 2.2 percent annual rate anticipated once the data for the current decade (1990-2000) are in. The state's labor force growth rate for 2010-20 is, in turn, expected to be lower than that in either of the two decades preceding it. These are some of the lowest growth rates in the modern era, though they still outpace the national norm. Continued in-migration will supply prospective new workers needed to boost the state's trend above the national average. Broader demographic shifts, however, will put a damper on overall state and national labor force growth rates as the baby boom generation hits the traditional retirement age of 65 en masse around 2010.

Labor force participation rates in Washington have historically been higher than the national average due largely to the higher concentration of young people in the labor force. From 1970-95, the state's labor force participation rate increased from 61.5 percent to 70.1 percent as declining male labor force participation rates were more than offset by increasing female labor force participation rates. It is expected to peak in 2005 at 72.5 percent. By 2020, however, it is projected to slip to 69

percent (see Figure 34). Most of the drop will take place in the last decade of the forecast period.

The projected decline in labor force participation from 2000-20 is based on anticipated changes in age structure of the state population. Basically, labor force participation is

highest between 20-54, it is somewhat lower for 16-19 and 55-64, and it is very low for persons 65 and older.

Population growth that occurs in age groups with low labor force participation (e.g., 65+) will not increase the labor force as much as the growth in high-participation age groups (e.g.,

Figure 33
Labor Force Growth Rates, Actual and Projected
Washington State, 1950-2020

Source: *Employment Security Department & Office of Financial Mgmt.*

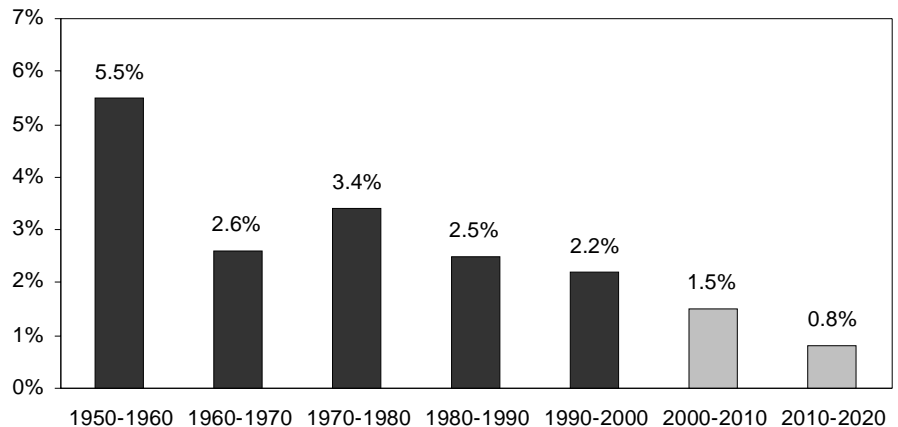
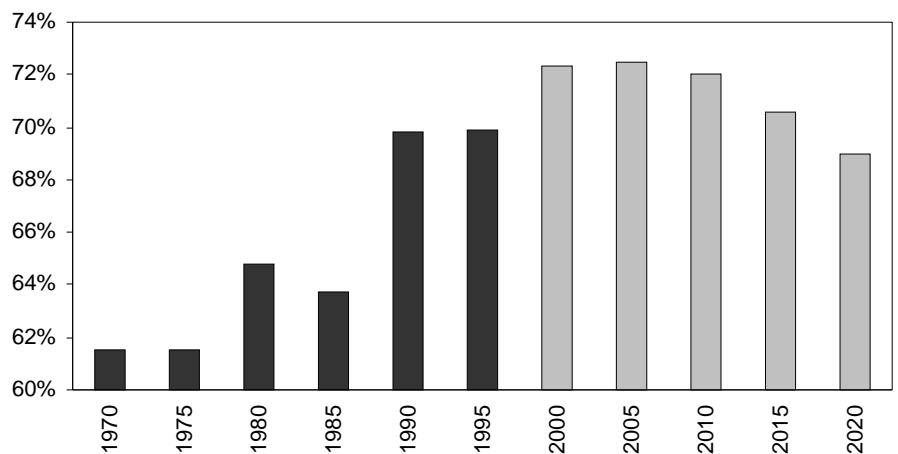


Figure 34
Labor Force Participation Rates, Actual and Projected
Washington State, 1970-2020

Source: *Employment Security Department & Office of Financial Mgmt.*



35-44). Against this backdrop, those 65 and older will see their share of Washington's population increase substantially from 12.2 percent in 2010 to 16.2 percent by 2020, dampening labor force growth. If the 2020 population is assumed to have the same age structure as in 2010, the aggregate labor force participation rate for that year would be 72.6 percent, rather than the projected 69.0 percent. In other words, aging of the population alone depresses the state labor force participation rate by 3.6 percentage points.

Washington's labor force is also expected to become more racially diverse over the long-term forecast period (see Figure 35). Non-whites are projected to increase their share of the state's labor force from 8.5 percent in 1990 to 12.2 percent in 2000 to 14.0 percent in 2010 to 15.2 percent by 2020. Conversely, the white share of the state's labor force is expected to fall proportionately over the period. These gains in labor force share will be evident among all non-white groups in Washington from 2000-20 as their combined labor force grows at an annual rate of 2.3 percent, compared to the 1.0 percent and 1.2 percent annual rates for the white and the total labor force, respectively. As a result, non-white workers will account for 26.9 percent of the net labor force growth in the state from 2000-20. The main reason for the increased share of non-whites in the labor force is that the non-white population is expected to grow at a much higher rate than the white population. A second factor is the younger age composition of the non-white population compared to whites. Non-whites are also expected to continue increasing their labor force participation rate. Another important state and national labor force trend is ethnic diversification, namely with respect to Hispanics. From 1990-2020, the state's Hispanic labor force will have more than triple

to nearly 343,000—raising their labor force share from 3.7 percent in 1990 to 8.6 percent by 2020.

Nonfarm Employment Forecast

Washington's nonagricultural employment base is projected to grow at an annual rate of 1.6 percent from 1995-2020. This is a rather sharp departure from the 2.7 percent annual growth anticipated from 1995-2000, reflecting what is expected to be the state's declining rate of nonfarm employment growth after the turn of the millenium and continuing through 2020 (see Figure 36). In fact, in the final decade of the forecast period

(2010-2020), nonfarm employment growth is expected to be close to 1 percent per annum. The key term, however, remains *growth*. Though the projection reveals a slowing trend, it still translates into more than 1.1 million net new jobs over the 25-year period. Also, the rates of growth are expected to be higher than the national average.

Industry Employment Forecast

The long-term nonfarm industry forecast for Washington reveals some of the variance in growth rates that gets lost in the aggregate nonfarm employment forecast (see Figure 37).

Figure 35
Labor Force Composition by Race
Washington State, 1990-2020

Source: Employment Security Department & Office of Financial Mgmt.

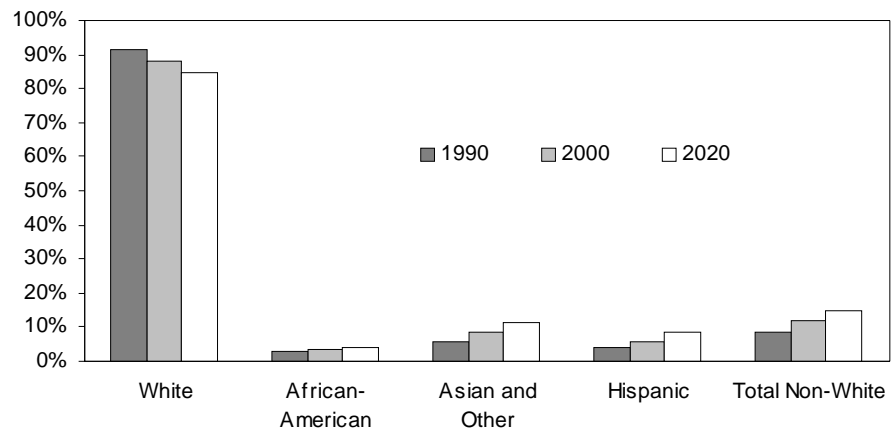


Figure 36
Nonagricultural Employment Growth Rates
Washington State, 1995-2020

Source: Employment Security Department & Office of Financial Mgmt.

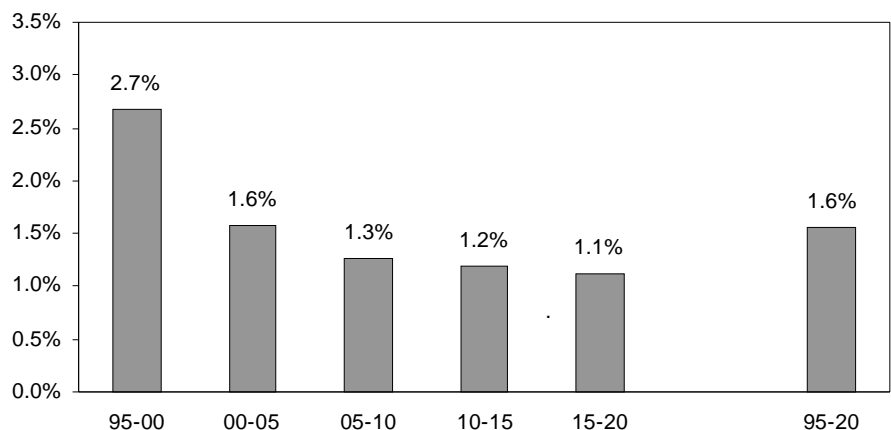
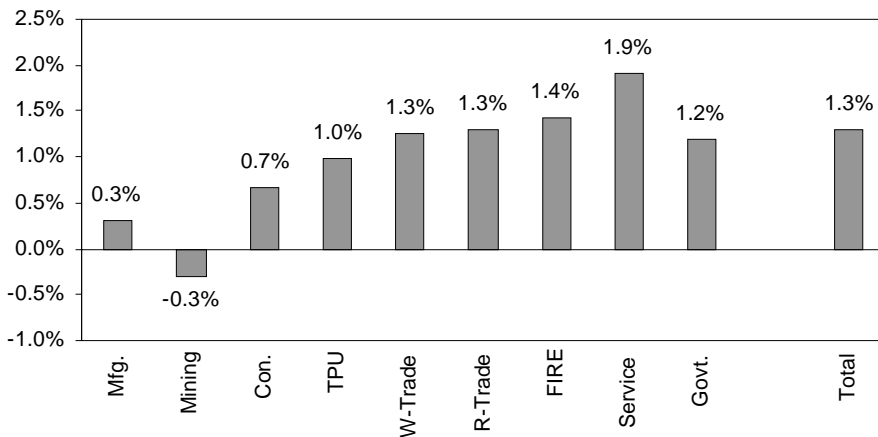


Figure 37
Nonagricultural Employment Growth Rates by Major Industry
Washington State, 2000-2020

Source: *Employment Security Department & Office of Financial Mgmt.*



In particular, the outlook for Washington's goods-producing sectors (mining, construction, and manufacturing) presents a mixed bag with rates well shy of the total nonfarm employment growth expected to be posted over the 2000-20 period. Manufacturing is projected to see especially modest annual growth of 0.4 percent over the period. Construction and mining are expected to fare little better at 0.7 percent and -0.3 percent, respectively. This, coupled with more vigorous growth on the services-producing side, should result in the goods-producing sectors giving up three percentage points to the services-producing sectors to end up with only 16 percent of total nonfarm employment by 2020.

Manufacturing. Nationally, manufacturing is expected to experience declining employment over the forecast period. In Washington, however, manufacturing will remain a net positive contributor with 0.3 percent annual growth from 2000-20 as continued productivity-related capital investments both nationally and internationally generate demand for Washington goods and as long-run demand for the state's natural resources continues to grow both nationally and internationally. However, internal efficiencies and technological changes leading to productivity

gains will hold employment in check. Some of the productivity gains will be driven by increased global competition, while others will be driven by the need to adapt to slower growth in the labor force and, in some cases, raw resource scarcity.

Lumber and Wood Products. Lumber and wood products employment is expected to decline in both absolute and relative terms through the forecast period as increased mechanization and newer logging and milling technology decrease labor demand. It is also expected that lumber and wood products employment will continue to be affected by environmental constraints over the forecast period. These pressures are likely to force accelerated investment in resource-saving and labor-saving technology. Higher material costs and competition from both Canadian lumber manufacturers and alternative building materials (e.g., composites) will place added emphasis on offsetting internal efficiencies including wages and benefits. These factors all point to a constrained demand for labor.

Paper and Allied Products. Many of the same forces that affect lumber and wood products affect pulp and paper, too. Environmental laws have affected processing requirements and timber-harvesting constraints have affected

supply. The paper industry is, however, more flexible in acquiring raw resources as chips can be imported and paper can be recycled. Competition from Asia and Canada will dampen future growth in the state's industry, but environmental demands may accelerate investment in resource-saving and pollution abatement technologies, which will enhance the industry's long-term viability.

Aerospace. Long-term demand in Washington's aerospace industry is bright. Boeing predicts that global air traffic will grow 4.9 percent per year on average over the next two decades. This translates into 17,600 new jets worth \$1.3 trillion, which requires output of 880 planes a year by the world's commercial aircraft manufacturers—significantly higher than the current rate of production. Three-quarters of the demand is expected to be generated by growth in air travel, particularly in the Pacific Rim, while the balance is expected to come from replacement of inefficient, noisy, and obsolete aircraft. Two-thirds of all new aircraft deliveries are expected to go to carriers outside the United States. Boeing had a number of major acquisitions in 2000, which will augment its commercial, defense, and space businesses with aircraft services with the aim of making it a full spectrum aerospace company. This should bode well for the long-run stability of aerospace employment in Washington. Growth of aerospace employment in Washington will be limited by several factors. There is continuing emphasis on cost control as Boeing's fierce head-to-head competition with Airbus Industries and other aerospace companies puts pressure on operating margins and drives productivity targets. Higher productivity means that job growth will be restrained. Also, to gain new aircraft orders from foreign carriers, Boeing will likely continue to outsource certain components to manufacturers in the foreign carriers' home countries. Although the outsourcing practice appears to limit employment growth

in Washington, it will also prevent the loss of market share (and jobs) to Airbus and other competitors.

Ships, Boats, and Motor Vehicles. Washington's transportation equipment sector other than aerospace consists of ships, boats, and motor vehicles (primarily heavy trucks and trailers). Construction of state ferries in the past few years represented a major revenue source for Washington's shipbuilding industry. The passage of I-695 resulted in the curtailment of state ferry system services and new vessels. Fortunately, spin-off from the Navy's Everett Homeport is generating substantial overhaul and maintenance work now for local shipyards. Luxury yachts and other pleasure craft have seen healthy business growth in the past decade and can be expected to move in tandem with the general economy. Though sales of heavy trucks and trailers is currently slow, they can be expected to increase over time with the growth in capital investment at home and abroad.

Primary Metals. Washington's primary metals industry is dominated by aluminum smelting and refining. The availability of cheap, abundant, and reliable electricity has long been a key factor in siting aluminum facilities here and will remain one in the future (energy represents a third of aluminum production costs). Aluminum producers are seeing more competition for electricity from residential, commercial, and other manufacturing consumers and this will continue unabated. Even under the pressure of growing foreign competition and rising energy costs, primary metals employment in Washington is expected to stabilize over time due to the significant strides the industry has made in increasing efficiencies and enhancing competitiveness. Demand for primary and fabricated metal should remain strong throughout the forecast period, given the bullish outlook for both consumer and industrial durable goods.

Machinery and Instruments. Growth of Washington's machinery and instruments sector has been strong over the past 20 years, particularly in electronics and scientific and medical instruments, and will continue to show strength for the foreseeable future. The forecast predicts a 35 percent employment increase in these sectors from 2000-2020, with machinery and instruments constituting a fifth of the state manufacturing jobs by the end of the forecast period. Despite restructuring, particularly in the semiconductor industry, demand for computer hardware is expected to remain strong through the forecast period as businesses apply computer technology and electronic devices in the daily work environment and as computers in schools and homes also become commonplace. Non-electrical machinery production is keyed largely to farm, construction, forest products, and other heavy industries. The outlook for this sector is as bright as that of the electronics industry. Overall investment levels are expected to continue strong. At the same time, new and expanding markets in Europe, Asia, and Central and South America are strong possibilities in the long run given the trend toward greater industrialization in those economies.

Food Processing. Major processed food products in Washington include frozen potatoes, apple juice, and seafood with roast coffee and coffee products representing a growing segment. Increased mechanization, biotechnology, and computerization will characterize the industry's production process over the long run. But in contrast to sharp declines projected nationally to 2020, employment in Washington's food processing sector is expected to remain flat as markets for the industry's products continue to expand, both domestically and overseas. Crop production will drive the industry due to the state's fruit and vegetable base with the long-term outlook for processed fruits, vegetables, and specialty products

looking strong. Some labor market and demographic trends that will raise the demand for convenience foods include a growing number of households with two or more workers and an elderly population that is increasing at twice the rate of the general population. Foreign exports will constitute larger proportions of total sales over the long run due to the growing popularity of western style foods in the developing countries and the opening of economies in both Europe and Asia to free trade.

Construction. Construction will remain volatile with short-run demand affected by interest rates, business cycles, and public works projects. Long-run demand, however, will be affected by construction costs, demographic changes, and employment growth. In this respect, construction's share of total nonfarm employment in Washington has been quite stable. Over the past 30 years, construction employment has been around 5 percent of total nonfarm employment with a low of 4.7 percent during recessions and a high of 6.6 percent during an economic expansion that included construction activity on the Washington Public Power Supply System (1979). Washington's construction sector averaged 2.4 percent and 2.9 percent annual employment growth during the 1980s and 1990s, respectively. However, those rates are not expected to be sustained over the forecast period as slower population and employment growth would indicate a like slowdown in construction demand. Some of this slower growth could be offset somewhat by rising incomes and the demand they generate for larger homes and remodeling work as well as low, stable long-term interest rates and inflation that spur investment in residential and commercial building. The forecast suggests that construction will lose some of its employment share to the extent that it will go from 5.3 percent in 2010 to 5.0 percent by 2020.

Transportation, Communication, and Utilities (TCU). The share of total nonagricultural employment represented by TCU declined from 6.7 percent in 1970 to 5.2 percent in 1999, due largely to technological advances in trucking, shipping, air transportation, and telecommunications. These advances greatly raised capital intensity and labor productivity in these industries resulting in large increases in output without a corresponding increase in employment. Telecommunication is the industry where most new products and services will be seen in the future as integration of voice, data, and video through wireline (coaxial or fiber cable) or wireless (radio systems, microwave, or satellites) networks expands. In the past few years the industry has spent heavily on building and expanding infrastructure while the U.S. Telecommunication Act of 1996 removed barriers to local competition. In recent years, the deregulation of most TCU industries has resulted in higher operating efficiency and productivity gains. The forecast calls for the benefits of deregulation and further technological improvements, especially in communications, to sustain the demand for TCU services and for employment to increase at a healthy pace with TCU retaining its 5.2 percent share of nonagricultural employment over the forecast period.

Also anticipated in Washington's 1996-2020 forecast is something of a shift. Retailing is expected to expand at about the state average of 1.4 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 0.8 percent to 1.0 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 led by eating and

drinking places, which is forecast to expand at 2.0 percent per annum over the period.

Wholesale Trade. Wholesale trade employment has grown at a substantially slower rate than retail trade employment over the past 30 years, reflecting the adoption of productivity-enhancing technologies and improvements in business practices such as computerization, inventory controls, and more efficient distribution and delivery systems. Productivity and management improvements are expected to continue over the forecast period. Vertical integration, as evidenced by warehouse retailing, one-stop shopping, and superstores, is expected to continue chipping away at employment growth in wholesale trade. As such, it is predicted that wholesale trade employment in the state will grow at an average annual rate of 1.2 percent from 2000-2020.

Retail Trade. Retail trade has increased its share of statewide nonfarm employment over the past 30 years due to increases in income and spending power, particularly as women entered the work force and as the two-income household became common. Assumptions in the retail employment forecast, however, are that future wage increases will not match those of the 1960s and 1970s and that personal income growth will be slower over the next 25 years than was the case from 1970-95. Also, since there are already many women in the labor force, the growth of two-income households is expected to slow. Other trends in retail trade that will act to slow employment growth include increased worker productivity and economies of scale generated by warehouse superstores. The forecast calls for retail trade employment to continue to rise, but at a slower rate than in the past. Consequently, retail trade's share of total nonfarm employment over the forecast period will remain flat at around 18 percent.

Finance, Insurance, and Real Estate (FIRE). In the late 1980s and

most of the 1990s, FIRE employment grew at a lesser rate than total nonfarm employment due to slowing population growth, overbuilding of commercial real estate, productivity improvements, mergers, and embrace of electronic banking. Offsetting these negative factors were periodic booms in mortgage activity and the expanding number and kinds of services that banks provide. Low and stable interest rates, accompanied by prospering security markets, stimulated growth in investment banking and brokerage businesses. In the late 1990s, vigorous income growth and low interest rates gave rise to real estate financing activities. It also appeared that retrenchment and consolidation in the financial industry had slowed down. As a result, FIRE employment increased steadily. Over the forecast period, demand for FIRE services will rise as the Baby Boomers move into age cohorts that save a high proportion of their income and as the elderly populace with high assets ownership grow. FIRE employment will increase, but at a slower rate than in the past as computerization and other advances increase productivity and offset to some degree the increases in demand for FIRE services, which will result from higher incomes, demographic changes, and the increased complexity of banking, finance, and insurance. Trends toward electronic banking and interstate banking are uncertainties affecting employment growth in this sector.

Services. Services has been Washington's fastest growing sector in recent years and this is expected to continue during the forecast period. Services employment grew an average 5.2 percent per year in the past 30 years. Though the rate of growth in services employment is expected to slow progressively over the forecast period, it will nevertheless remain the fastest growing sector as well. Its share of total wage and salary employment is expected to grow to 32.2 percent by

2020. Traded services, including legal services, business services, engineering, management, and accounting services, represent more than 30 percent of all services employment and has been the fastest growing component of services and is predicted to lead this division in the future. By 2020, the traded services will have grown to 37 percent of all services employment. Growth in the traded services can be attributed to factors such as the trend by businesses to increasingly contract out certain functions (e.g., legal, personnel, advertising, data processing, etc.). The increasing use of temporary personnel to perform specialized tasks or to meet peak periods of demand is a prominent example of this trend. The growth of prepackaged software is another important element in the service employment forecast. The rapid growth of high-wage jobs at Microsoft and other software development companies in Washington has helped diversify the state's employment base as well as boost the state economy. Although other services are not expected to grow as fast as traded services, they will continue to grow significantly faster than total wage and salary employment. Health services employment has experienced fast growth in the past; future growth, however, is expected to be only slightly above average. Historical increases in health services jobs reflect an increasing commitment of society's resources to health care. However, further significant increases in the proportion of national income spent on health care are unlikely. Although the aging of the population during the forecast period will fuel the demand for health services, cost pressures will limit the industry's growth. Personal and repair services will probably be the weakest of the service sectors, while hotels, amusement and recreation, education, and social services will be relatively strong.

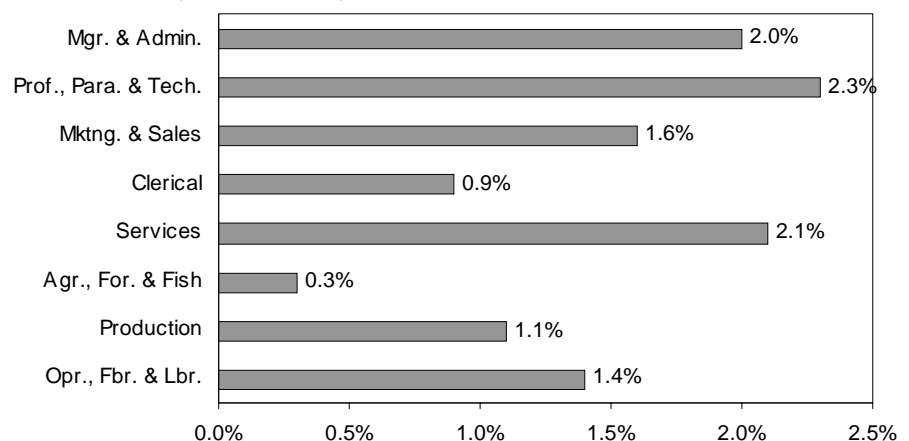
Government. Education is a major function of state and local government, which saw employment grow faster than total nonfarm employment as the Baby Boomers moved through the education system. Growth in the primary school population (5-17) began to slow in the latter half of the 1990s. That slowdown, however, came at a time when growth in the college-age population (18-22) increased, and the latter is expected to boost employment in public higher education. At the same time, several factors are working to limit the growth of government employment, namely Initiative 601, which limits spending to growth in population and inflation. The second is the increasing practice of outsourcing government functions to private providers. The past several years have seen a significant slowdown in state government employment growth and that is expected to continue into the future. Most of the growth in the combined state and local government sector is expected to favor local government. Overall, the share of total nonfarm employment represented by state and local government is expected to decline slightly over the next 20 years, despite projected increases in the demand for public services. Over the forecast period, federal government employment is expected to

continue declining as a share of total nonfarm employment. Though some federal government activity such as the postal service and park service are expected to increase with population, Washington's armed forces presence is expected to decline in the long term. Past base closures in other states transferred military personnel to Washington, but were not enough to offset declines in federal civilian employment. In the future, federal government employment in Washington is expected to remain unchanged.

Occupational Employment Forecast

Short-term projections for Washington's major occupational divisions from 1998-2008 show that at an annual rate of 2.3 percent, the professional, paraprofessional, and technical grouping is expected to be the most vibrant occupational growth sector in the state (*see Figure 38*). Strong growth is also anticipated in managerial and administrative occupations and service occupations at 2.0 percent and 2.1 percent, respectively. None of the state's occupational divisions is projecting net negative change; however, agriculture, forestry, and fishing and clerical are expecting relatively modest annual growth of 0.3 percent and 0.9 percent, respectively. These projected occupational growth

Figure 38
Occupational Employment Projections, Annual Rates
Washington State, 1998-2008
Source: *Employment Security Department*



rates are consistent with those seen on the industry employment side; namely, that the state's economy is continuing to shift toward services-producing activities.

The fastest growing occupations can be viewed in terms of growth rates and nominal growth (see Figures 39 and 40). 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 1998-2008. 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 1998-2008 period, things change a bit. Though most of the same computer-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 in absolute terms is expected to be for registered nurses.

An assessment of declining occupations in Washington over the 1998-2008 period reveals few surprises (see Figures 41 and 42). Office operations-related workers as a group are expected to show the greatest rate of decline. This group is 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

Figure 39
Fastest Growing Occupations, Annual Percent Change
(Based on 1998 Employment of 3,000 or more)
Washington State, 1998-2008
Source: *Employment Security Department*

Occupational Title	1998	2008	Nominal Change	Annual Percent Change
Computer Scientists, NEC	5,167	16,261	11,094	12.1%
Computer Engineers	13,739	34,154	20,415	9.5%
Personal/Home Care Aides	4,196	7,556	3,360	6.1%
Systems Analysts	15,703	27,483	11,780	5.8%
Computer Support Specialists	4,224	7,383	3,159	5.7%
Medical Assistants	4,929	8,158	3,229	5.2%
Engineer, Math, Natural Science Mgrs	6,863	10,587	3,724	4.4%
Dental Hygienists	4,407	6,722	2,315	4.3%
Human Services Workers	3,367	5,054	1,687	4.1%
Adjustment Clerks	4,990	7,485	2,495	4.1%
Correction Officers	4,754	7,019	2,265	4.0%
Securities/Financial, Sales	4,495	6,557	2,062	3.8%
Instructors and Coaches, Sports	8,968	12,950	3,982	3.7%
Technical Writers	3,151	4,526	1,375	3.7%
Dental Assistants	7,543	10,786	3,243	3.6%
Bill and Account Collectors	4,284	6,053	1,769	3.5%
Flight Attendants	4,220	5,892	1,672	3.4%
Residential Counselors	4,736	6,584	1,848	3.3%
Social Workers, Medical & Psychological	7,606	10,573	2,967	3.3%

Figure 40
Fastest Growing Occupations, Nominal Change
Washington State, 1998-2008
Source: *Employment Security Department*

Occupational Title	1998	2008	Nominal Change	Percent Change
Computer Engineers	13,739	34,154	20,415	9.5%
Salespersons, Retail	97,677	115,535	17,858	1.7%
Managers and Administrators, NEC	55,880	69,371	13,491	2.2%
Systems Analysts	15,703	27,483	11,780	5.8%
General Managers and Top Executives	67,791	79,401	11,610	1.6%
Cashiers	61,164	72,644	11,480	1.7%
Computer Scientists, NEC	5,167	16,261	11,094	12.1%
Combined Food Prep/Serv. Workers	44,768	55,008	10,240	2.1%
Marketing/Sales Supervisors	54,673	63,985	9,312	1.6%
Reception/Information Clerks	31,132	40,061	8,929	2.6%
Child Care Workers	25,631	34,508	8,877	3.0%
Waiters and Waitresses	42,370	50,341	7,971	1.7%
Teachers, Elementary	32,290	40,164	7,874	2.2%
Hand Packers and Packagers	23,883	31,651	7,768	2.9%
Food Preparation Workers	25,086	32,631	7,545	2.7%

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 41
 Fastest Declining Occupations, Annual Percent Change
 (Based on 1998 Employment of 3,000 or more)
Washington State, 1998-2008
 Source: *Employment Security Department*

Occupational Title	1998	2008	Nominal Change	Annual Percent Change
Computer Operators, Except Peripheral	4,383	3,090	-1,293	-3.4%
Aircraft Struct Assemblers, Precision	5,099	4,460	-639	-1.3%
Inspectors/Testers/Graders, Precision	5,151	4,537	-614	-1.3%
Typists, Including Word Processing	12,372	11,126	-1,246	-1.1%
Sewing Machince Operators, Garment	4,018	3,670	-348	-0.9%
Production/Planning/Expediting Clerks	6,007	5,688	-319	-0.5%
Farm Workers, Farm/Ranch Animals	5,550	5,290	-260	-0.5%
Aircraft Mechanics	4,055	3,871	-184	-0.5%
First Line Supervisors: Ag, Forest, Fish	4,598	4,434	-164	-0.4%
Insurance Policy Process Clerks	4,344	4,212	-132	-0.3%
Reservation & Transit Ticket Agents	4,946	4,821	-125	-0.3%
Aeronautical and Astro Engineers	3,751	3,672	-79	-0.2%
Engr. Technician/Technologist, NEC	6,579	6,465	-114	-0.2%
Farm Workers, Food and Fiber Crops	41,764	41,260	-504	-0.1%
Farm Equipment Operators	6,389	6,335	-54	-0.1%

Figure 42
 Fastest Declining Occupations, Nominal Change
Washington State, 1998-2008
 Source: *Employment Security Department*

Occupational Title	1998	2008	Nominal Change	Annual Percent Change
Computer Operators, Except Peripheral	4,383	3,090	-1,293	-3.4%
Typists, Including Word Processing	12,372	11,126	-1,246	-1.1%
Aircraft Structural Assemblers, Precision	5,099	4,460	-639	-1.3%
Inspectors/Testers/Graders, Precision	5,151	4,537	-614	-1.3%
Welfare Eligibility Workers	2,217	1,699	-518	-2.6%
Farm Workers, Food and Fiber Crops	41,764	41,260	-504	-0.1%
Office Machine Operators, NEC	1,196	705	-491	-5.1%
Peripheral EDP Equipment Operators	716	284	-432	-8.8%
Central Office Operators	868	438	-430	-6.6%
Sewing Machine Operators, Garment	4,018	3,670	-348	-0.9%
Production/Planning/Expediting Clerks	6,007	5,688	-319	-0.5%
Statistical Clerks	2,159	1,864	-295	-1.5%
Farm Workers, Farm/Ranch Animals	5,550	5,290	-260	-0.5%

Income, Earnings, and Wages

Personal Income

Personal income measures the pre-tax income received by or on behalf of the residents of a geographic area. 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 (GSP) which applies to the state 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 nearly \$175 billion in 1999, which translated into 5.7 percent real growth over the year. Though lower than the exceptional 7.4 percent real growth posted in 1998, it continued the string of otherwise impressive annual growth rates compiled in the latter half of the 1990s. It was also the fourth consecutive year that Washington's personal income growth outpaced that nationally. Moreover, Washington's strong personal income growth put it in rather select company vis-à-vis other states. Only Nevada (6.3 percent) and Colorado (6.2 percent) posted higher year-over-year real growth than

Washington, and Washington had the largest personal income base amongst the three. By comparison, the U.S. average was 3.7 percent.

Over the 1961-99 observation period, the state's total personal income increased (with the exception of a small real decline in 1982) at an inflation-adjusted annual rate of 4.3 percent (*see Figure 43*). U.S. total personal income, by comparison, rose at a less robust real annual rate of 3.6 percent. Looking at state and national total personal income trends from a slightly different perspective, Washington's 1999 increase marked the latest in a string of higher-than-average annual rates of growth compared to the U.S., a trend begun in the latter half of the 1980s and interrupted only briefly from 1994-95. 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 5.7 percent real growth in Washington's total personal income was the dynamics of that growth as captured by activity in the components by which it was derived (*see Figure 44*). Inasmuch as the nearly \$128 billion in net earnings by place of work constituted nearly three-quarters of the state's total personal income in 1999, what takes place within this component has a considerable impact on personal income as a whole. In 1999, earnings by place of work climbed a healthy 7.1 percent and effectively set the pace for similarly healthy personal income growth. The \$32.5 billion in dividends, interest, and rent (19 percent of total personal income) reflected a 3.2 percent year-over-year gain, the result of a strong stock market and stable bond market. Interestingly, it was the \$23.2 billion in transfer payments (12 percent of total personal

Figure 43
Total Personal Income (in millions of dollars)
Washington State, 1961-1999
Source: U.S. Bureau of Economic Analysis

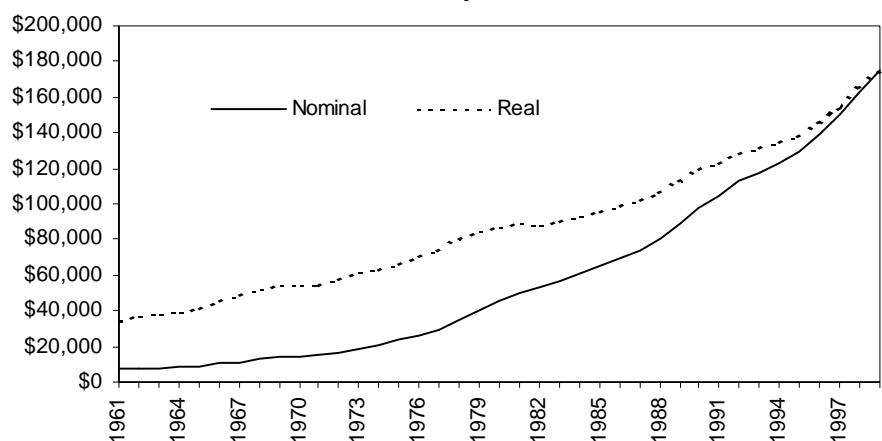


Figure 44
Derivation of Personal Income (in millions of dollars)
Washington State, 1998-1999
Source: U.S. Bureau of Economic Analysis

	1998 Current \$	1998 Constant 99\$	1999 Constant 99\$	Nominal Change	Real Change
Earnings by Place of Work	\$117,482	\$119,393	\$127,897	8.9%	7.1%
(-) Personal Contribution for Social Insurance	\$7,194	\$7,311	\$7,903	9.9%	8.1%
(+) Adjustment for Residence	\$1,925	\$1,956	\$2,002	4.0%	2.4%
(=) Net Earnings by Place of Residence	\$112,213	\$114,038	\$121,996	8.7%	7.0%
(+) Dividends, Interest, and Rent	\$31,014	\$31,518	\$32,515	4.8%	3.2%
(+) Transfer Payments	\$19,628	\$19,947	\$20,437	4.1%	2.5%
(=) Total Personal Income	\$162,855	\$165,503	\$174,948	7.4%	5.7%
Earnings By Place of Work	\$117,482	\$119,393	\$127,897	8.9%	7.1%
Wages and Salaries	\$94,046	\$95,575	\$103,398	9.9%	8.2%
Other Labor Income	\$10,593	\$10,765	\$11,101	4.8%	3.1%
Proprietors' Income	\$12,844	\$13,053	\$13,398	4.3%	2.6%

income) that acted as a drag on state personal income growth by rising only 2.5 percent. 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 in the wake of a strong state economy and WorkFirst initiatives.

As noted, strong growth in earnings by place of work set the pace for similarly strong growth in total personal income. Likewise, the impressive 8.2 percent real growth in wages and salaries (which makes up more than 80 percent of earnings by place of work) in Washington in 1999 established the pattern for similarly strong growth in earnings by place of work. By comparison, proprietors' income and other labor income rose at real rates of 3.1 percent and 2.6 percent, respectively.

Counties. An analysis of total personal income in 1998 (there is a one-year lag between state and sub-state data) for Washington's counties revealed few surprises (see Figures 45 and 46). As expected, the state's larger, urban, metropolitan counties topped the list in terms of absolute dollars while its smaller, rural, nonmetropolitan counties were

concentrated at the bottom. This is illustrative of the intractable relationship between population and employment, on one hand, and personal income, on the other.

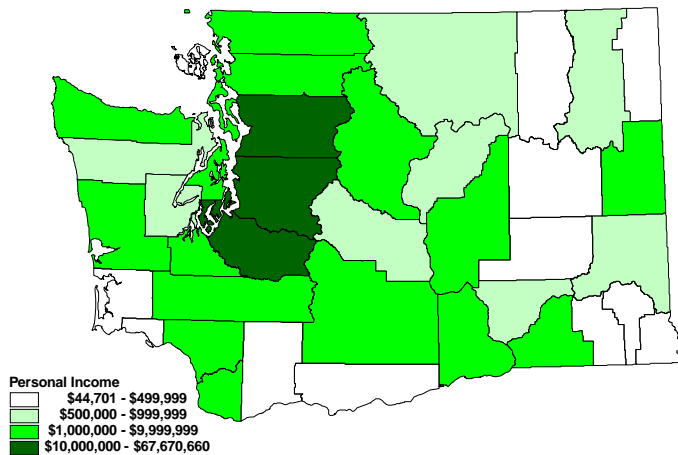
It has also become increasingly clear that the total personal income

gap between metropolitan counties and nonmetropolitan counties is widening. In 1998, for example, the state's metropolitan counties represented 87 percent of the state's total personal income compared to 13 percent in nonmetropolitan counties.

Figure 45
Total Personal Income, Selected Counties (in millions of dollars)
Washington State, 1997 and 1998
Source: U.S. Bureau of Economic Analysis

	1997 Current \$	1997 Constant 98\$	1998 Constant 98\$	Nominal Change	Real Change
King	\$60,811	\$61,363	\$67,671	11.3%	10.3%
Pierce	\$15,657	\$15,799	\$16,561	5.8%	4.8%
Snohomish	\$14,746	\$14,879	\$15,817	7.3%	6.3%
Spokane	\$9,158	\$9,241	\$9,573	4.5%	3.6%
Clark	\$8,086	\$8,159	\$8,802	8.9%	7.9%
Kitsap	\$5,210	\$5,257	\$5,347	2.6%	1.7%
Thurston	\$4,764	\$4,807	\$5,035	5.7%	4.8%
Yakima	\$4,331	\$4,370	\$4,533	4.7%	3.7%
Whatcom	\$3,371	\$3,402	\$3,575	6.0%	5.1%
Benton	\$3,165	\$3,194	\$3,310	4.6%	3.6%
Pacific	\$402	\$405	\$420	4.5%	3.6%
Klickitat	\$368	\$372	\$378	2.7%	1.8%
Adams	\$303	\$306	\$316	4.3%	3.4%
Lincoln	\$208	\$210	\$208	-0.2%	-1.1%
Pend Oreille	\$197	\$199	\$205	4.1%	3.1%
Skamania	\$193	\$195	\$205	5.7%	4.8%
Ferry	\$113	\$114	\$115	1.6%	0.7%
Columbia	\$80	\$81	\$84	5.0%	4.1%
Wahkiakum	\$74	\$75	\$78	5.1%	4.2%
Garfield	\$43	\$43	\$45	4.0%	3.0%

Figure 46
Total Personal Income by County (in millions of dollars)
Washington State, 1998
 Source: U.S. Bureau of Economic Analysis



In light of the 82 percent share posted in the 1970s, metropolitan counties not only hold a dominant share, but a growing one as well. The same can be said in the context of urban vs. rural and Puget Sound vs. non-Puget Sound. Urban counties and Puget Sound counties, for example, represented 80 percent and 69 percent of the state's total personal income in 1998, respectively, and both shares were also up from the shares held thirty years ago. This disparity also emerges when county total personal income is viewed in terms of averages. The mean average was \$4.2 billion compared to a median average of less than \$958 million. Even after King County was excluded, the mean average was \$2.5 billion while the median fell slightly to \$909 million.

To underscore the tremendous extremes in total personal income among Washington counties, there is the previously cited example of King County with total personal income of nearly \$67.7 billion (highest) versus Garfield County with total personal income of \$45 million (lowest). King County alone accounted for more than 40 percent of the state's total personal income in 1998 and Garfield County's total personal income measured less than one-tenth of one percent (0.066 percent) of that in King County.

While the absolute levels of total personal income are striking, it is the rate of total personal income change that is more telling. One observation is that in 1998, only four counties had year-over-year growth rates that exceeded the 5.7 percent posted statewide—King, Clark, Grant, and Snohomish. Of these, King County stood out with its 10.3 percent real increase. King County's influence on the state average is clear: if it were backed out, Washington's real total personal income would have been a full percentage point lower at 4.7 percent in 1998. The county-by-county data show that western Washington counties continue, by and large, to post higher year-over-year personal income growth rates than their eastern Washington counter-

parts. In a surprising turnabout, Lincoln County went from having one of the highest rates of personal income growth in 1997 to actually seeing a real decline of 1.1 percent in 1998. It was the only county to experience a real decline in total personal income in 1998.

Northwest. Among the northwest states, Washington had far and away the highest total personal income at more than \$175 billion in 1999 (see Figure 47). Oregon's personal income, though the second highest in the region at nearly \$90 billion, was but a little more than half of Washington's. Idaho, Montana, and Alaska generated personal income totals that were from one-tenth to one-sixth of Washington's. Washington also led the region in personal income growth over the year with an adjusted increase of 5.7 percent. Washington and Idaho (4.2 percent) were the only two Northwest states that outpaced the nation in terms of real total personal income growth.

Per Capita Income

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 \$30,392 in 1999, translating into over-the-year real growth of

Figure 47
Total Personal Income (in millions of dollars)
Northwest States and United States, 1998 and 1999
 Source: U.S. Bureau of Economic Analysis

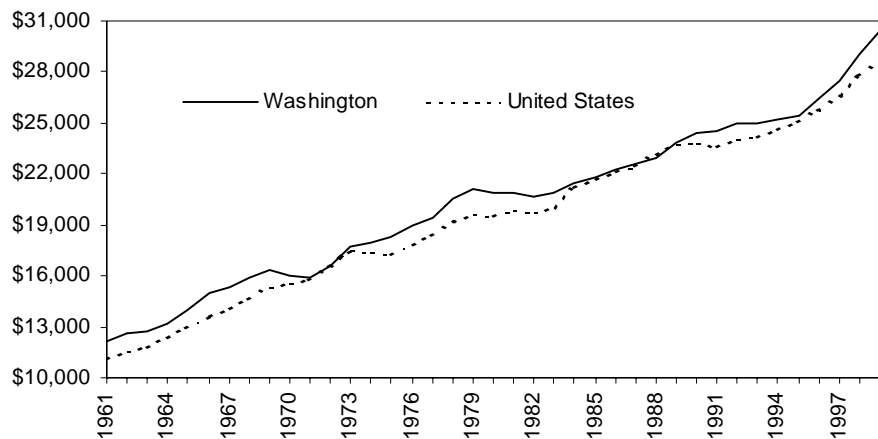
Area	1998	1998	1999	Nominal Change	Real Change
	Current \$	Constant 99\$	Constant 99\$		
Washington	\$162,855	\$165,503	\$174,948	7.4%	5.7%
Oregon	\$85,197	\$86,582	\$89,614	5.2%	3.5%
Idaho	\$26,986	\$27,424	\$28,582	5.9%	4.2%
Montana	\$18,755	\$19,060	\$19,438	3.6%	2.0%
Alaska	\$17,167	\$17,446	\$17,704	3.1%	1.5%
United States	\$7,383,687	\$7,503,747	\$7,783,152	5.4%	3.7%

4.4 percent. As with total personal income, Washington's real per capita income could not top the impressive 5.8 percent showing in 1998, but it was very healthy nonetheless. In fact, per capita income growth in Washington has been so strong over the past four years that the state's per capita income has steadily widened its advantage over the U.S. per capita income, climbing from 101.5 percent of the U.S. average in 1995 to 106.5 percent in 1999. At this level, Washington is establishing the same relationship vis-à-vis the U.S. that it commanded when the state's economy was buoyed by defense-related projects in the 1960s and by the Washington Public Power Supply System project during the late 1970s. Only in the late 1990s, the catalyst appears to be high tech, particularly software.

The strong per capita income growth trend displayed by Washington of late has not been an historical constant. Over the 1961-99 observation period, Washington's per capita income progressed in cyclical fashion at a real annual rate of 2.4 percent (see Figure 48). U.S. per capita income, by comparison, virtually matched Washington's overall outcome or performance with 2.3 percent real growth. The big difference between the two over the long term is that U.S. per capita income has generally exhibited more cyclical volatility (i.e., higher gains and lower declines). Over the near-term, the big difference has been Washington's more robust growth pattern. For example, over the last six years (1993-99), Washington's per capita income has grown at a real annual rate of 3.3 percent compared to 2.8 percent for the U.S. Clearly, Washington's per capita income has recently expanded at a much faster rate than that of the nation and the state's high tech presence, as mentioned, as a major driver of this trend.

Counties. Unlike total personal income, which when rank-ordered generally distinguishes counties based on size of population and employment

Figure 48
Real Per Capita Personal Income
Washington State and United States, 1961-1999
Source: U.S. Bureau of Economic Analysis



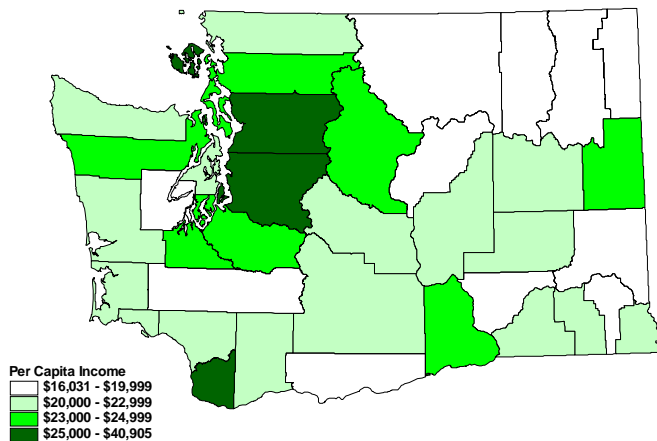
base, per capita income tends to reveal distinctions tied to unique economic factors (see Figures 49 and 50). As expected, county per capita income data for 1998 (again, there is a one-year lag in the generation of sub-state data) reveal three counties that perennially occupy the top five listing—King, 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 and retirees. Perhaps more noteworthy than the counties with a continuing presence are the over-the-year inclusions and exclusions from the list.

Figure 49
Per Capita Personal Income, Selected Counties
Washington State, 1997 and 1998
Source: U.S. Bureau of Economic Analysis

		1997 Current \$	1997 Constant 98\$	1998 Constant 98\$	Nominal Change	Real Change
	Washington	\$27,018	\$27,263	\$28,719	6.3%	5.3%
Highest:	King	\$37,211	\$37,549	\$40,905	9.9%	8.9%
	San Juan	\$34,381	\$34,693	\$35,573	3.5%	2.5%
	Snohomish	\$26,023	\$26,259	\$27,015	3.8%	2.9%
	Clark	\$25,452	\$25,683	\$26,882	5.6%	4.7%
	Thurston	\$23,851	\$24,068	\$24,895	4.4%	3.4%
Lowest:	Whitman	\$18,196	\$18,361	\$18,696	2.7%	1.8%
	Franklin	\$18,112	\$18,276	\$18,479	2.0%	1.1%
	Pend Oreille	\$17,532	\$17,691	\$17,813	1.6%	0.7%
	Stevens	\$16,319	\$16,467	\$17,028	4.3%	3.4%
	Ferry	\$15,578	\$15,719	\$16,031	2.9%	2.0%
Other	Pierce	\$23,617	\$23,831	\$24,500	3.7%	2.8%
Metros:	Benton	\$23,409	\$23,622	\$24,315	3.9%	2.9%
	Spokane	\$22,581	\$22,786	\$23,450	3.8%	2.9%
	Kitsap	\$22,368	\$22,571	\$22,957	2.6%	1.7%
	Whatcom	\$21,766	\$21,964	\$22,732	4.4%	3.5%
	Yakima	\$20,035	\$20,217	\$20,718	3.4%	2.5%

Figure 50
Per Capita Personal Income by County
Washington State, 1998
 Source: U.S. Bureau of Economic Analysis



Chief among them is the accession of Clark County, a boost delivered by the economic gains it received as part of the booming Portland-Vancouver PMSA. Though the accession took place in 1996, Clark County, by virtue of its ties to the Portland-Vancouver PMSA, is starting to lay claim to becoming another perennial presence on the Top Five list. Thurston County also retained its spot on the list for the second straight year. In Thurston County, per capita income growth is coming not from state government payrolls but rather from state and military retirees who return to the work force in other capacities and draw pay on top of their pensions.

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 the lowest per capita incomes in the state. To illustrate the gap between the lowest and highest per capita incomes in Washington, Ferry County's per capita income of \$16,031 (the lowest) was less than 40 percent of King County's \$40,905 (the highest) in 1998. Also appearing near the bottom of the list again 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. Agriculture-based Franklin County also carried over from the previous year.

Perhaps more important than absolute levels are the year-over-year changes in per capita income among Washington counties. In this regard, King County once again topped the list with real annual growth of 8.9 percent in 1998. Much of this surely was attributable to the high tech factor. Frankly, no other county came close. That is not to suggest, however, that no other counties posted healthy real per capita income gains. Many did. In fact, nearly half of Washington's counties had real per capita income gains of 3.0 percent or more. A number of southwest Washington counties occupied the

upper tiers including Clark (4.7 percent), Wahkiakum (4.4 percent), Pacific (4.3 percent), and Skamania (3.6 percent). Two eastern Washington entries were Columbia and Grant at 5.2 percent and 3.9 percent, respectively. On the flip side, Lincoln and Klickitat counties saw real per capita income declines to the tune of -0.4 percent and -1.9 percent, respectively.

Northwest. Washington continued to generate, for all intents and purposes, the highest per capita income in the northwestern United States with \$30,392 in 1999 (see Figure 51). Alaska, for example, had the second highest per capita income in the region, yet Washington's per capita income was \$1,800 higher. It was \$8,300 higher than Montana's. Washington's adjusted per capita income growth rate of 4.4 percent had a lot to do with it, owing largely to the tremendous run-up in software stock-related wealth on top of a state economy that was otherwise stronger than those in its neighboring states. That growth rate was far and away the highest among Northwest states, and it was the only one that significantly surpassed the national average (Alaska's essentially matched the national average). Idaho and Oregon were the closest competitors with 2.5 percent and 2.4 percent gains, respectively. Montana and Alaska saw their per capita income levels rise at a modest rate of 1.6 percent to 0.8 percent, respectively.

Figure 51
Per Capita Personal Income
Northwest States and United States, 1998 and 1999
 Source: U.S. Bureau of Economic Analysis

	1998 Current \$	1998 Constant 99\$	1999 Constant 99\$	Nominal Change	Real Change	Share of U.S.
Washington	\$28,632	\$29,098	\$30,392	6.1%	4.4%	106.5%
Alaska	\$27,904	\$28,358	\$28,577	2.4%	0.8%	100.1%
Oregon	\$25,958	\$26,380	\$27,023	4.1%	2.4%	94.7%
Idaho	\$21,923	\$22,279	\$22,835	4.2%	2.5%	80.0%
Montana	\$21,324	\$21,671	\$22,019	3.3%	1.6%	77.1%
U.S.	\$27,322	\$27,766	\$28,542	4.5%	2.8%	100.0%

Average Covered Wages

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 1999. The data are derived from UI tax reports and published quarterly by the Employment Security Department.

State. Washington's average covered wage was \$35,724 in 1999, reflecting a real year-over-year gain of 6.3 percent. Most noteworthy, however, is that Washington's recent run of healthy real average covered wage gains have enabled it to not only close the negative average covered wage gap that opened up during the latter half of the 1980s, but to surpass the U.S. average as well (see *Figure 52*). Indeed, Washington's average covered wage gains have outpaced those of the U.S. since 1993. In the process, Washington's average covered wage has gone from 98 percent to 104 percent of the U.S. average.

More important than helping Washington surpass the U.S., this

current run of strong average covered wage gains could well be signaling a break between the state's *mature* economy and its *emerging* economy. Because of the state's historical dependence on resource-related industries (typically referred to as mature industries), its long-run average covered wage pattern reflected considerable volatility, particularly during turning points in the business cycle. As such, despite the current rosy picture, the state's long-term average covered wage trend has been less stellar. From 1977 (when average covered wages peaked during the mature economy) to 1989, real average covered wages in Washington declined at an annual rate of 0.9 percent. Since then, however, the state's average covered wages have been locked in a growth pattern as reflected in the trend from 1989-99 when they climbed at an annual rate of 2.6 percent. A robust state economy and accompanying labor and skill shortage have undoubtedly been factors, but so too has the undeniable surge in software wages. Without the enormous contribution from that sector, the state's real wage gain for 1999 would have been 3.0 percent rather than 6.3 percent. It is this phenomenon that may be signaling the shift from a mature economy to an emerging one—and

with it a different trend in real average covered wages in Washington.

Beyond the general pattern of the state's average covered wage growth, the key issue is the distribution of those gains by industry. Toward this end, employment was grouped by the industry average to give appropriate weight to the individual industry's performance. The results were very enlightening. In general terms, the greatest concentration of employment in the state was in the 4-to-6 percent range—roughly a million workers—with lesser numbers reported both above and below (see *Figure 53*). One significant outlier, however, lifted the average significantly and was centered in the 20 percent and over category with roughly 237,000 workers. It was driven entirely by business services and, more specifically, prepackaged software. Stock options are included as part of the prevailing wage base. And the huge run up in Microsoft stock propelled the change. Without these dynamics, the state's overall wage gain for 1999 would have come in at 4.6 percent rather than 8.0 percent.

Counties. The sub-state ranking of average covered wages in 1999 was little changed from that of the previous years (see *Figures 54 and 55*). Metropolitan counties again dominated the upper echelons. King County occupied the top spot with an average covered wage of \$46,053—a figure that surpassed the state average by more than \$10,000. In fact, the second highest average covered wage was Snohomish County's \$33,899, which was more than \$12,000 lower than that in King County. Though software and aircraft come to mind, King County has a diverse range of industries that contribute to its status as the principal economic driver in Washington. Following Snohomish County was Benton County with Hanford driving its higher than average covered wages to \$32,714. Southwest Washington's Clark County with its Portland connection was a strong

Figure 52
Real Average Covered Wage
Washington State and United States, 1970-1999
Source: *Employment Security Department & Bureau of Labor Statistics*

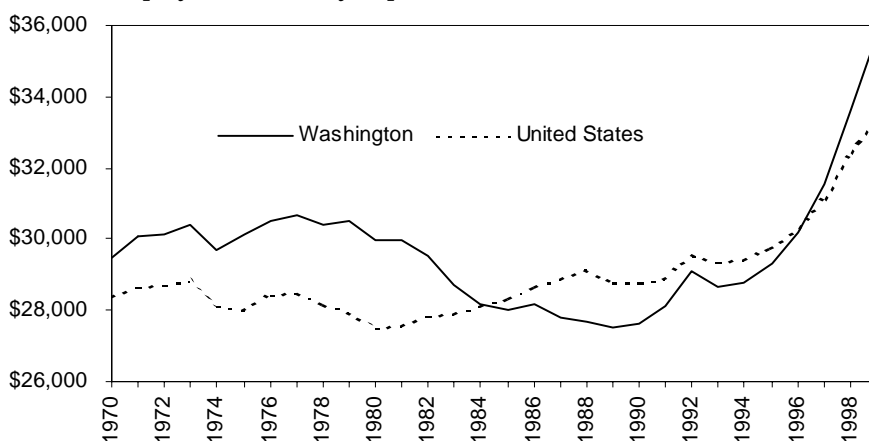


Figure 53
Average Covered Wage Change Distribution
Washington State, 1998 and 1999
 Source: *Employment Security Department*

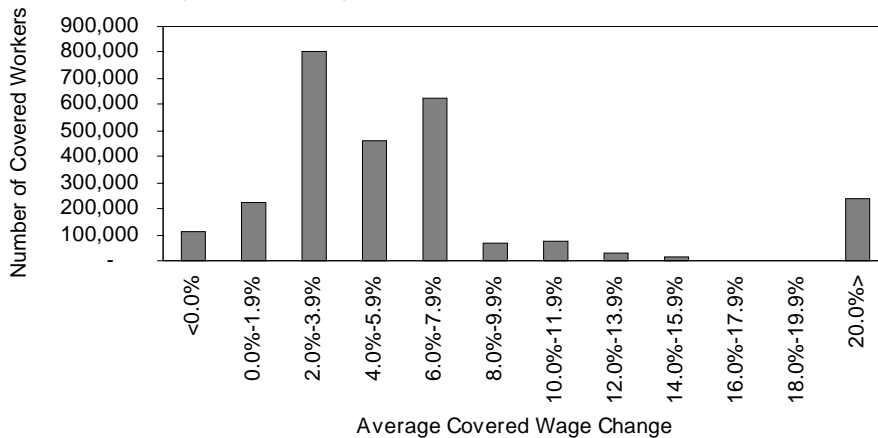


Figure 54
Average Covered Wage, Selected Counties
Washington State, 1998 and 1999
 Source: *Employment Security Department*

	1998 Current \$	1998 Constant 99\$	1999 Constant 99\$	Nominal Change	Real Change
Washington	\$33,063	\$33,601	\$35,724	8.0%	6.3%
Highest:					
King	\$41,274	\$41,945	\$46,053	11.6%	9.8%
Snohomish	\$33,586	\$34,132	\$33,899	0.9%	-0.7%
Benton	\$32,204	\$32,728	\$32,714	1.6%	0.0%
Clark	\$29,323	\$29,799	\$30,312	3.4%	1.7%
Thurston	\$28,452	\$28,915	\$29,687	4.3%	2.7%
Lowest:					
Lincoln	\$20,858	\$21,197	\$21,071	1.0%	-0.6%
Pacific	\$20,492	\$20,825	\$20,943	2.2%	0.6%
Douglas	\$19,587	\$19,906	\$20,286	3.6%	1.9%
Adams	\$18,925	\$19,233	\$20,230	6.9%	5.2%
Okanogan	\$18,101	\$18,395	\$19,242	6.3%	4.6%
Other					
Kitsap	\$28,372	\$28,833	\$29,095	2.5%	0.9%
Metros:					
Pierce	\$27,499	\$27,946	\$28,646	4.2%	2.5%
Spokane	\$26,561	\$26,992	\$27,556	3.7%	2.1%
Yakima	\$21,476	\$21,826	\$22,390	4.3%	2.6%

performer at \$30,312. Thurston County with its stable state government wage base was at \$29,687.

At the lower end, the same counties tend to appear as well. The lowest average covered wage belonged to Okanogan County at \$19,242—more than \$16,000 below the state average and nearly \$27,000 below King County. For the most part, the common denominator with respect to these counties was the fact that they were rural, sparsely populated, and agricul-

turally dominated. Pacific County, a western Washington entry, is also rural, sparsely populated, and dependent on a natural resource-based economy. Its average covered wage was \$20,943 in 1999.

In terms of over-the-year changes in county-level average covered wages, a positive note was that a vibrant state economy helped raise real average covered wages in all but a handful of counties, including those in non-metropolitan counties that have tended

to fall behind. King County's 9.8 percent real average covered wage growth in 1999 was impressive, but not unexpected given that it is home to most of the state's software activity, which has already been identified as a key driver of the wage surge. Perhaps more impressive was Chelan County's real gain of 7.5 percent, which was attributed to strong increases in K-12 education and business and health services. San Juan, Columbia, and Wahkiakum counties also saw healthy real growth in the neighborhood of 6 percent, not far from the statewide average. Of course, the average covered wages in these counties are much smaller than, say, that in King County so a smaller nominal change is required to show a significant percent change. On the down side, one of the bigger surprises was Snohomish County, whose real average covered wage fell 0.6 percent as a result of aerospace downsizing. Of course, aerospace is also responsible for the county's number two ranked average covered wage so one should keep all of this in perspective. Snohomish County, notwithstanding, the average covered wage gap between the "haves" and "have nots" grew noticeably, something that can be traced to counties dominated by emerging economies versus those dependent on mature economies. The data also underscore the challenge of closing the wage gap given that there were counties that experienced real average covered wage declines (Lincoln, Ferry, Stevens, Klickitat) despite an otherwise strong state economy.

Industries. Average covered wages as measured by Washington's industrial activity were, for the most part, quite positive in 1999 thanks to the oft-mentioned strong state economy (see Figure 56). On the plus side, the state's relatively large and well-paying manufacturing sector saw its average covered wage rise 3.5 percent in real terms to just over \$44,425. That also represented the highest average covered wage among Washington's

Figure 55
Average Covered Wage by County
Washington State, 1999
Source: Employment Security Department

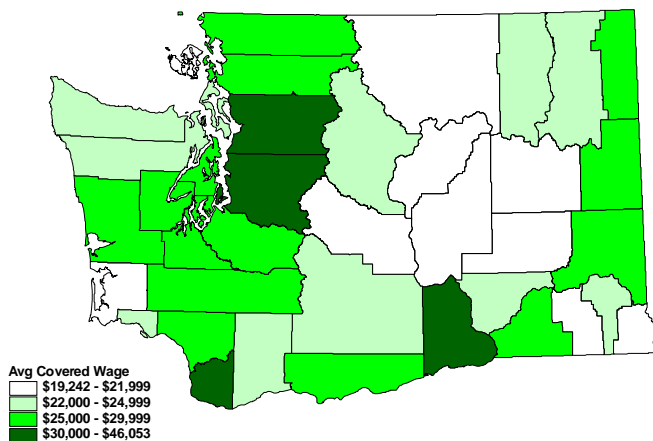


Figure 56
Average Covered Wages by Major Industry Division
Washington State, 1998 and 1999
Source: Employment Security Department

	1998 Current \$	1998 Constant 99\$	1999 Constant 99\$	Nominal Change	Real Change
State Average	\$33,071	\$33,609	\$35,724	8.0%	6.3%
Ag., For., Fishing	\$15,613	\$15,867	\$17,181	10.0%	8.3%
Mining	\$42,915	\$43,613	\$43,558	1.5%	-0.1%
Construction	\$33,653	\$34,201	\$35,656	6.0%	4.3%
Manufacturing	\$42,247	\$42,934	\$44,425	5.2%	3.5%
Transp., Public Util.	\$40,287	\$40,942	\$43,064	6.9%	5.2%
Wholesale Trade	\$39,140	\$39,776	\$40,646	3.8%	2.2%
Retail Trade	\$17,908	\$18,199	\$19,352	8.1%	6.3%
Fin., Ins., Real Est.	\$40,700	\$41,362	\$41,746	2.6%	0.9%
Services	\$35,887	\$36,470	\$41,639	16.0%	14.2%
Government	\$33,872	\$34,423	\$34,727	2.5%	0.9%

major industry divisions in 1999. Interestingly, that gain was built on the strength of sectors other than those typically regarded as key manufacturing sectors in Washington (e.g., transportation equipment, lumber and wood products, paper and allied products, food and kindred products). These sectors saw average covered wage increases, but of much more modest levels. The gain was instead derived from sectors like instruments, chemicals, and industrial machinery and computer equipment. As for other goods-producing sectors, average covered wages in the state's construction sector posted a real gain of 4.3 percent, while mining was essentially

flat. Washington's services-producing industries fared better with all of its component sectors posting strong average covered wage gains over the year. The average covered wage in the state's diverse services sector built on 1998's impressive showing by soaring 14.2 percent to \$41,639 thanks largely to the high wages, including stock options, paid in the booming software sector. Services was followed by retail trade with 6.3 percent real growth. Even the state's transportation and public utilities sector saw a healthy average covered wage increase of 5.2 percent over the year. The state's finance, insurance, and real estate sector, though, followed a strong 1998

with an exceptionally modest real increase of 0.9 percent in 1999. Government also posted a 0.9 percent increase as those two sectors posted the most lackluster real gains among Washington's major industry divisions. The state's agriculture, forestry, and fishing sector experienced the highest year-over-year jump in real average covered wages in 1999 at 8.3 percent, but at \$17,181 it was also the sector with the lowest average covered wage in absolute terms.

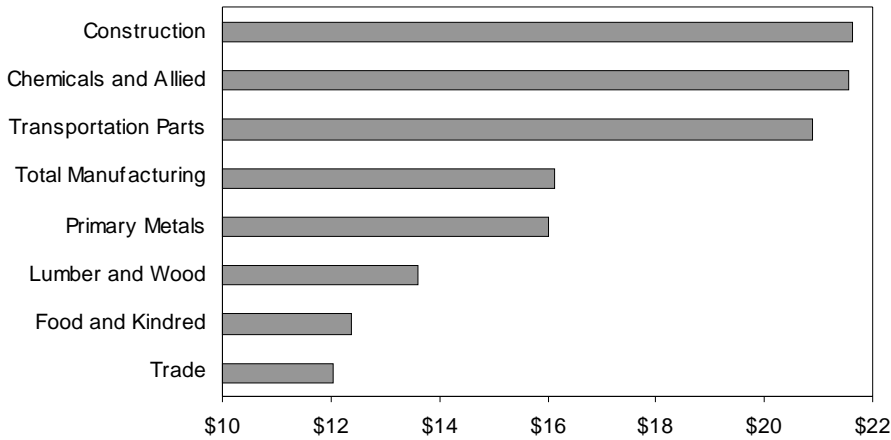
Average Hours and Earnings

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 specific manufacturing activities.

Average Hourly Earnings. As has historically been the case, construction (\$21.64), manufacturing (\$16.14), and trade (\$12.03) held their positions relative to one another with respect to average hourly earnings in Washington in 1999 (see Figure 57). The same relationships held constant among the state's manufacturing sectors, too, as high-skill, value-added sectors like chemicals (\$21.56) and transportation equipment (\$20.89) had much higher average hourly earnings than more resource-dependent, labor-intensive sectors like primary metals (\$16.01), lumber and wood products (\$13.62), and food and kindred products (\$12.37).

More noteworthy, however, were the real hourly earnings increases within virtually all of the surveyed sectors—gains that had been rather elusive in the prior two decades. These real hourly earnings increases were induced in large part by a vibrant state economy that was increasingly beset by a broad-based labor shortage. Real average hourly earnings were up most notably in Washington's trade (4.3 percent) and construction (3.5 percent) sectors in 1999. Most

Figure 57
Average Hourly Earnings, Selected Industries
Washington State, 1999
 Source: *Employment Security Department*



impressive were the gains in trade, where real hourly earnings in 1999 grew at a rate commensurate with the 4.2 percent in 1998, both of which were considerably higher than at any time since 1980 save the 7.4 percent increase posted in 1995. While many cite the new minimum wage law as a factor, the law was not in effect in 1998 and the hourly wages in the trade sector in 1999 were well above the \$5.70 floor established that year. Rather, the impressive gains were indicative of the labor supply constraints faced by even the trade sector in the wake of a robust state economy. Strong building activity, particularly in the central Puget Sound region, contributed to labor supply constraints and subsequent hike in average hourly wages in construction in 1999. Manufacturing, which has been soft nationally as well as regionally, saw its market conditions reflected in the modest 0.9 percent real increase posted in 1999.

Most notable within the state's manufacturing sector was the fact that transportation parts and chemicals were able to build upon boosts in real average hourly earnings in 1998 with even higher real gains in 1999. Real average hourly earnings in chemicals, for example, rose 3.5 percent to \$21.56 while transportation parts climbed 3.4 percent to \$20.89. Those

two average hourly rates, by the way, were the tops among surveyed manufacturing sectors. On the flip side, lumber and wood, primary metals, and food processing all saw their real average hourly earnings situations ease in 1999. With respect to lumber and wood and primary metals, their real average hourly earnings rose a respective 0.3 percent and 0.5 percent in 1999, but those gains were lower than those achieved in 1998. In the case of food processing, real average hourly earnings fell 0.6 percent in 1999, accelerating from the 0.2 percent decline in 1998.

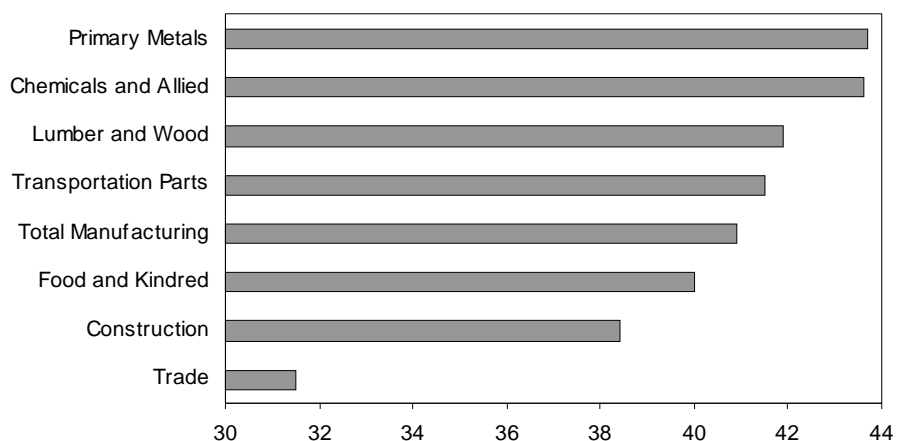
Hours Worked Per Week. Average weekly hours worked were a mixed

bag in 1999 as Washington's surveyed sectors displayed different trends depending on their specific situations (see Figure 58).

In 1999, for example, the average weekly hours for all manufacturing was up only incrementally over the year. However, they were up an hour to 41.9 in lumber and wood, and up more than an hour and a half to 40.0 and 43.6, respectively, in food processing and chemicals. Conversely, average weekly hours were down an hour and a half in transportation parts, which was reflective of the situation not only in aerospace, but also in ships and trucks. Average weekly hours were also down by half an hour to 43.7 in primary metals, whose workers nevertheless found themselves with the longest work week among the surveyed sectors. This, along with the lengthening work week in chemicals, brought the two sectors more or less in line.

On the nonmanufacturing side, construction saw its average weekly hours worked climb by one hour to 38.4 hours per week as the state's residential and commercial building continued strong in 1999. Meanwhile, average weekly hours in trade remained constant at 31.5 hours for the third consecutive year. This statistical non-event was nevertheless posted against the backdrop of continued strong consumer spending.

Figure 58
Average Hours Worked Per Week, Selected Industries
Washington State, 1999
 Source: *Employment Security Department*



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. 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 annual *LMEA Economic Symposium*.

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LABOR MARKET INFORMATION
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Washington State Employment Security
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Carver Gayton, Commissioner

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November 2000

Prepared by the
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Greg Weeks, Director

In Cooperation with the
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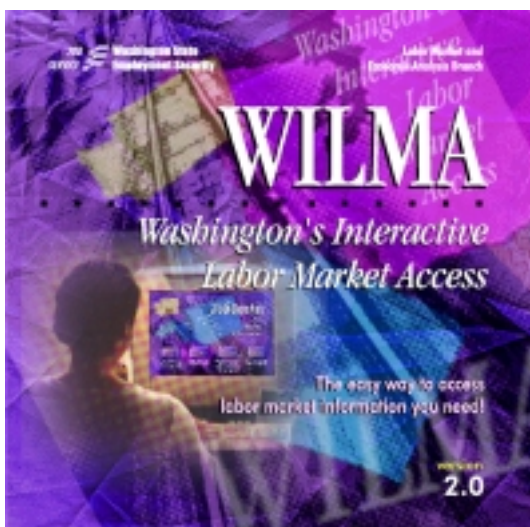


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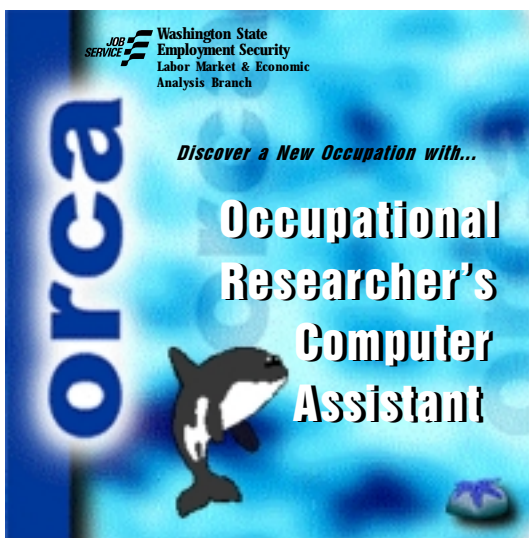
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