Washington State Employment Security Department

LABOR MARKET INFORMATION

REVIEW

A Quarterly Review of Washington State Labor Market and Economic Trends

In this issue:

February 2000

The *LMI Review* is published by the Labor Market and Economic Analysis Branch of the Washington State Employment Security Department.

The purpose of the *LMI Review* is to provide timely information and analysis of the state labor market conditions in support of public and private activities that expand employment opportunities and reduce unemployment.

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- *homepage at* ***www.wa.gov/esd/lmea***
- *On-line database (WILMA) at* ***www.wilma.org***
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WorkSource Provides Core Services

Business Liaison
Dennis Loney

GUEST COMMENTARY

During my private sector career as human resource professional, my involvement in the employment and training arena through local and national Job Service Employers' Committees provided the opportunity to learn what services were available for employers. For the most part they were professionally delivered, but seldom did employers know just what services to expect.

Since I came to Employment Security one and a half years ago to head up the employer outreach effort, my challenge has been to assist in determining what services employers should expect when the new WorkSource Centers and their affiliate offices are validated and come on line. Recently, ten core services for business customers statewide were approved by the WorkSource Executive Policy Council and its Employer Advisory Board.

The core services are Labor Market Information, Job Listings, Applicant Referral, Employer Assessment, Employee Training & Retraining, Business Assistance Information and Referrals, Unemployment Insurance Access, Internet Access, Business Closure/Layoff Information, and Referral and Translation services.

For those of you interested in Labor Market Information, such as average wages by industry, it means we will, as a core service, offer local and state labor market information through self-serve, group, or one-on-one process. You can count on WorkSource for labor market information.

Another example of the core services at WorkSource is business assistance and referral. WorkSource can provide (via Web site and WorkSource Center) information on unemployment taxes, employer incentives, fair labor practices, workplace safety and other issues, as well as provide referrals to additional resources.

Clear and concise descriptions of the core services will help us work together to be sure they are available at every WorkSource office. You can count on it.

Employment Security's partners will deliver some of the services. Our next step will involve additional work with our field offices and local partnerships to determine how the services should be delivered.

We will not market what we cannot deliver.

All the core services will be available at all WorkSource Centers and through self-serve and assisted-serve technologies such as the WorkSource Website.

The Employer Advisory Board includes key business leaders who sit on the local work force councils and representatives from the Association of Washington Business and the National Federation of Independent Business.

The Advisory Board will work with the Executive Policy Council on implementation of these services to identify gaps in services and propose solutions. The board will help establish an evaluation system to ensure accountability to employers.

I am proud to have worked on the core services with some of the most talented and knowledgeable people in the employment field. Key representatives of business and labor serving on the Joint Labor Management Task Force laid the groundwork. The Executive Policy Council and Employer Advisory Board described the business needs that WorkSource core services should fulfill. Employment Security Department staff worked on the task force's recommendations and produced the ten core services that make up the minimum expectations without limiting services that may be available locally.

WorkSource Centers are a joint venture of organizations dedicated to address local employers needs.

Customer satisfaction is the key. ■

Continued page 2

Dear LMI Review Reader:

Dennis Loney has been business liaison for Employment Security since July 1998. Prior to that, he was active in the department's employer committees. As vice-president of the National Employer Council he worked with employers nationally and the U.S. Department of Labor on welfare-to-work, school-to-work, and one-stop systems development. He was chair of the state Job Service Employers' Committee and a member of the Department's advisory council. Dennis was on the board of Directors of the Seattle/King County Private Industry Council and co-chaired the Joint Labor-Management Task Force for the Department's Employment Services. Because of his experience and work with employer outreach and engagement, I asked him to write this article on the ten core services for WorkSource.

■ *Carver Gayton*
Commissioner

Strength and Stamina

Third Quarter 1999

QUARTERLY ANALYSIS

Washington's economy was a mix of pluses and minuses through the third quarter of 1999. The period marked a transition for the state from three years of exceptionally strong job growth to one of more normal labor market and economic expansion. The pace, nonetheless, remained very respectable. And the fact that it took place during a time of significant drawdown by the state's largest industrial employer was truly remarkable. Never before in Washington's history have Boeing and the state not moved in tandem. Secondary impacts have historically hit almost immediately both on the upside and on the downside. But this time around, the rest of the economy hardly blinked and the resulting momentum carried the state to all-time highs.

Slower and Steadier

Overall employment growth shifted during the course of the year from substantially above to basically matching the national average. A sizable upward blip occurred early in the third quarter. However, the annual average for 1999 is expected to come in virtually unchanged from the cumulative nine-month year-to-date change of 2.0 percent compared to 4.1 percent in 1997 and 3.3 percent in 1998. The comparable national average is also tracking around 2.0 percent—little changed from 1997-98. While somewhat lower than recent experience, the job pace, through the summer months, traveled within half a percent of the state's long-run historic pattern evening out all the highs and lows over the past 50 years.

Within this setting, unemployment was virtually unchanged. Washington's jobless rate looks to average 4.8 percent in 1999—matching each of the previous two years that individually ranked as the lowest since the "Boeing Boom" in the late-1960s. Three consecutive years of unemployment below 5 percent in a peacetime economy sets an all-time record. Only once during the Korean War of 1951-53 did the state achieve a similar feat. Certainly, three years of exceptional job growth is the principal driving factor. But adding fuel to the fire has been the "baby dearth" cohort of the population that is checking labor force growth. Also, other economies across the nation are doing equally well—cutting in-migration into the state sharply from the pattern earlier in the decade.

At this point in the business cycle, it is reasonable to assume that there is also a sharp acceleration taking place in terms of churning or turnover in the economy as the active bidding process for workers intensifies. Employers that heretofore have had pretty much a captive work force—fast food outlets, eating and drinking places, and much of retailing—are having 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 after years of phenomenal growth. All this has made for one of the most active labor markets in Washington's history, despite some slowing in the rate of net new job creation.

This pro-active bidding process for new workers with high skills can cause some interesting disruptions in internal labor markets—markets within individual firms. There are many instances where new highly skilled workers are becoming so scarce that firms are finding themselves offering salaries that surpass those of their existing employees. Needless to say, hard feelings can result.

Regional Differences Still Call the Shots

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 3.5 percent through the first nine months of 1999 despite the loss of 19,000 jobs in aircraft and parts. Three years of booming construction and strong growth in

Continued page 4

services and trade continued to propel the economy. Some of this same momentum spread south into the neighboring Tacoma PMSA with equally strong growth in services, and finance, insurance, and real estate impacting the adjoining Olympia area. Other notable metro areas include the Tri-Cities, which turned the corner economically in 1999, and Vancouver, which proceeds to march at a goodly clip.

Still, the "two Washington" phenomenon continues to grip the state. 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-to-8 percent compared to 4.8 percent for the state as a whole. The distribution is not much different from a year ago meaning 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.

Nonmanufacturing Sets the Pace

Virtually all of the current job growth—aside from normal seasonal patterns—is coming in nonmanufacturing. The shift from a manufacturing-driven employment market began in late-1998 coincident with the timing of Boeing's job 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 1999. Employment was down roughly 19,000. On the other hand, the rest of manufacturing has shown little change. Aluminum is off due to a protracted strike at Kaiser, and lumber and wood continues trending down. But offsetting gains have shown up in machinery and other manufacturing.

Meanwhile, the rest of the economy has bolted ahead. Both construction and business services, in fact, picked up speed coming into 1999 after tumultuous growth in 1997-98. The new Mariners stadium and other large commercial projects certainly figured importantly in this regard. However, a booming housing market and ongoing commercial and industrial development in the Puget Sound area basically set the pace. Job growth in construction in 1999 was running two-to-three times greater than that of the total economy with no let-up in sight. 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 mounted.

Two leading growth sectors of 1997-98 continued building sharply through 1999. Temporary help services employment in the state jumped another 7 percent after essentially doubling since 1990. Employment varies widely; the annual average wage is $24,000. Also leading the pack is computer processing and software. Employment in this sector has more than tripled in the 1990s—growing from roughly 15,000 in 1990 to better than 50,000 in 1999. As a result, its share of the economy has mushroomed from a little over half a percent to roughly 2 percent of total nonfarm wage and salary employment in nine years. The ratio of aircraft jobs to computer services jobs is now less than 2-to1 compared to 8-to-1 in 1990. And job growth continues in the 7-to-8 percent range at a mean average wage of $176,000 including stock options.

Gains in social services, finance, health care, and public and private education round out the top growth industries through the 3rd quarter of 1999. 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. In fact, if aircraft and parts is removed from the equation, the difference in growth rates over the past three years is only about half of one percent: 3.4 percent in 1997, 3.1 percent in 1998, and 2.8 percent in 1999.

Continued page 7

Figure 1

Nonagricultural Wage and Salary Workers

Washington State, Seasonally Adjusted, In Thousands, Benchmarked: March 1998

Source: *Employment Security, Revenue Forecast Council, & Office of Financial Management*

				Numeric Change	
	3rd Qtr 1999	2nd Qtr 1999	3rd Qtr 1998	2nd Qtr 1999 to 3rd Qtr 1999	3rd Qtr 1998 to 3rd Qtr 1999
TOTAL NONAGRICULTURAL EMPLOYMENT	2,650.2	2,629.6	2,607.3	20.6	42.9
MANUFACTURING	361.6	366.5	380.1	-4.9	-18.5
Durable Goods	254.9	258.5	272.0	-3.6	-17.1
Lumber & Wood Products	34.3	34.2	33.7	0.1	0.6
Logging	7.7	7.5	7.0	0.2	0.7
Sawmills & Plywood	22.8	22.8	23.0	0.1	-0.1
Furniture & Fixtures	4.6	4.6	4.6	0.0	0.0
Stone, Clay, & Glass	8.9	8.8	9.5	0.1	-0.6
Primary Metals	12.1	11.9	12.1	0.2	0.0
Aluminum	7.4	7.3	7.6	0.1	-0.2
Fabricated Metals	14.4	14.3	14.7	0.1	-0.3
Industrial Machinery & Equipment	25.3	25.0	25.7	0.2	-0.5
Computer & Office Equipment	6.6	6.7	7.2	0.0	-0.6
Electronic & Other Electrical Equipment	18.9	18.8	18.5	0.2	0.5
Transportation Equipment	112.8	117.4	129.4	-4.6	-16.6
Aircraft & Parts	96.4	101.3	113.4	-4.9	-17.0
Instruments & Related	14.9	14.9	14.8	0.0	0.0
Miscellaneous Manufacturing	8.7	8.7	9.1	0.1	-0.4
Nondurable Goods	106.7	108.0	108.0	-1.3	-1.3
Food & Kindred Products	40.1	41.0	40.7	-0.9	-0.6
Preserved Fruits & Vegetables	13.7	13.8	13.8	-0.1	-0.1
Textiles, Apparel, & Leather	8.8	8.8	9.5	0.1	-0.6
Paper & Allied Products	15.5	15.7	16.2	-0.3	-0.8
Printing & Publishing	24.0	24.3	24.3	-0.2	-0.2
Chemicals & Allied Products	6.2	6.1	6.0	0.1	0.2
Petroleum, Coal, Plastics	12.1	12.2	11.4	-0.1	0.7
MINING & QUARRYING	3.9	3.9	3.3	0.0	0.5
CONSTRUCTION	153.1	151.0	143.7	2.1	9.4
General Building Contractors	42.7	41.9	40.9	0.8	1.8
Heavy Construction, ex. Buildings	19.6	18.8	19.2	0.8	0.4
Special Trade Contractors	90.8	90.3	83.6	0.5	7.1
TRANSPORTATION, COMMUNICATION & UTILITIES	141.1	138.7	136.6	2.4	4.5
Transportation	92.7	91.4	91.2	1.3	1.5
Trucking & Warehousing	32.3	32.5	32.0	-0.3	0.2
Water Transportation	9.8	9.1	9.1	0.7	0.7
Transportation by Air	26.7	25.9	25.4	0.8	1.3
Communications	32.1	31.7	29.8	0.5	2.4
Electric, Gas & Sanitary Services	16.2	15.6	15.6	0.6	0.7
WHOLESALE & RETAIL TRADE	633.7	630.7	625.6	2.9	8.1
Wholesale Trade	154.4	154.0	153.5	0.4	0.9
Retail Trade	479.3	476.7	472.1	2.6	7.2
General Merchandise	50.2	49.3	47.2	0.9	3.0
Food Stores	69.5	69.6	70.1	-0.1	-0.5
Eating & Drinking	177.6	176.1	176.2	1.6	1.4
FINANCE, INSURANCE, & REAL ESTATE	138.3	137.6	136.2	0.6	2.1
Finance	61.5	60.9	59.2	0.6	2.3
Insurance & real estate	76.8	76.7	77.0	0.1	-0.2
SERVICES	739.9	731.0	712.1	9.0	27.8
Hotels & Lodging	29.2	29.1	28.0	0.1	1.3
Personal Services	22.7	23.1	22.8	-0.4	0.0
Business Services	168.8	164.0	155.8	4.8	13.1
Health Services	187.0	186.5	184.0	0.5	2.9
Educational Services	36.2	35.3	34.4	0.9	1.7
Social Services	60.3	59.4	60.8	0.9	-0.5
Engineering & Management Services	66.6	65.7	63.3	0.9	3.3
GOVERNMENT	478.7	470.1	469.8	8.5	8.9
Federal	66.6	66.4	67.6	0.1	-1.0
State	138.9	137.4	134.6	1.4	4.3
State Education	73.8	72.9	71.3	0.9	2.5
Local	273.2	266.3	267.7	7.0	5.6
Local Education	149.6	141.5	143.7	8.1	5.9
Workers in Labor-Management Disputes	2.1	2.1	0.0	0.0	2.1

Excludes proprietors, self-employed, members of the armed forces, and private household employees. Includes all full- and part-time wage and salary workers receiving pay during the period that includes the 12th of the month.

Labor Market And Economic Indicators

Figure 2
Total Nonagricultural Employment Change
Washington State & Nation, Seasonally Adjusted
Source: *Employment Security Department*

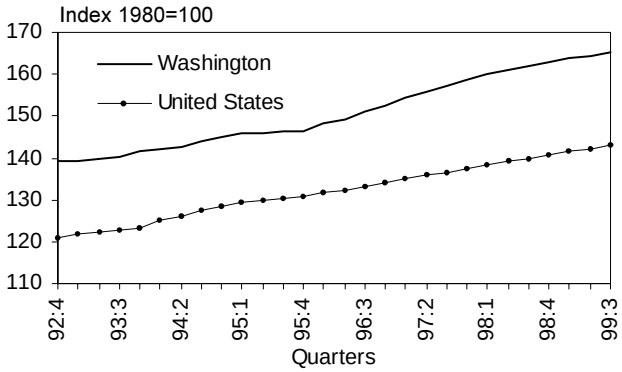


Figure 3
Manufacturing & Nonmanufacturing Employment Change
Washington State, Seasonally Adjusted
Source: *Employment Security Department*

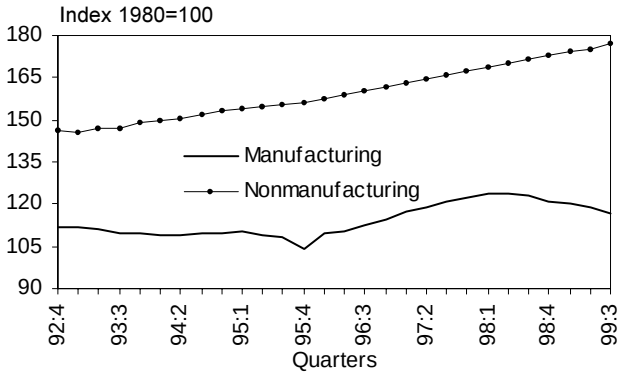


Figure 4
Unemployment Rates
Washington State & Nation, Seasonally Adjusted
Source: *Employment Security Dept., U.S. Dept. of Labor*

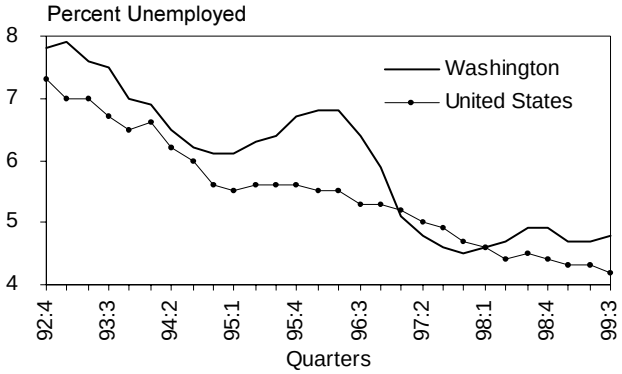


Figure 5
New Housing Units Authorized
Washington State, Seasonally Adjusted
Source: *U.S. Department of Commerce*

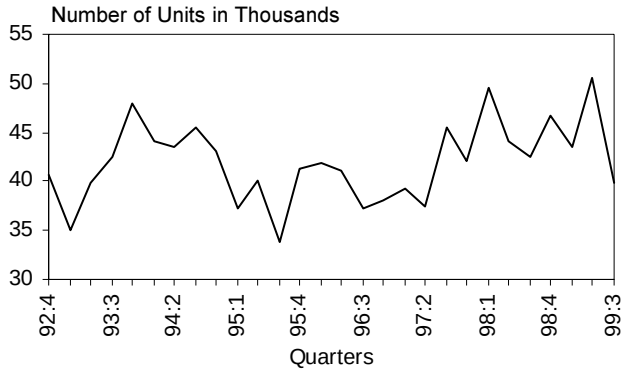


Figure 6
Consumer Price Index
All Urban Customers
Source: *Bureau of Labor Statistics*

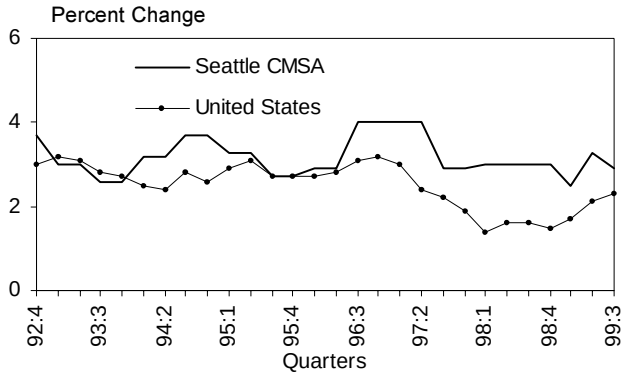
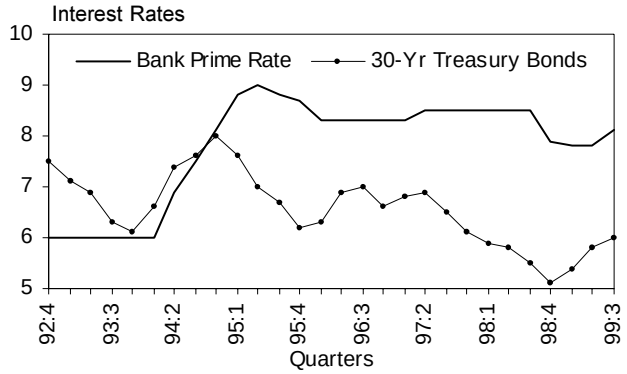


Figure 7
Selected Interest Rates
Percent Annual Rate
Source: *Federal Reserve Board*



Aircraft and Parts Layoffs Countered

In the last go-around of aircraft and parts layoffs in the early-1990s, total statewide employment growth skidded abruptly in the first year. Job growth on a seasonally adjusted basis dove from an annualized rate of 6.2 percent in the first quarter of 1990 to less than one percent in the fourth quarter as aircraft and parts payrolls fell initially by 3,000 workers. Compounding the situation at that time was a national economy that slipped into recession starting in July. This time around, the cumulative 15-month job loss was touching 20,000 yet the rest of the economy was booming. The Asian Crisis turned around faster than anyone expected, the national economy continued strong, and consumer confidence—both nationally and regionally—was gyrating around all-time highs.

Adding to this performance is record-breaking output. Regional lumber production was up 8 percent cumulative through the 3rd quarter and all-time high fisheries catches were recorded in Alaska. Boeing's commercial production peaked in 1999 at a record 640 aircraft and the drive for increased efficiencies is paying off. Strong financial performance returned to the commercial airplane division in the third quarter after horrendous losses a year before. Other drivers have taken off as well. Sales of office and computing equipment recorded double-digit gains for six consecutive years. Overall business fixed investment rose 8 percent. National housing starts were up an estimated 5 percent. Export markets also improved.

Wage Growth Picks up Speed

Financial conditions of households were buoyed in 1999 by a combination of strong earnings growth and sharp investment appreciation. A soaring stock market was a major contributor. Housing values in many markets also swelled sharply. Washington's median household income, according to the Census Bureau, jumped 11 percent in 1998—the highest of any state in the nation. While these data are sample-based and thus subject to a significant margin of error, the underlying trend in actual wages paid supports an equally bullish income picture for the state. Mean average covered wage growth shot up strongly in 1998 from 6.6 percent to 7.8 percent—the biggest annual increase in nearly two decades.

Certainly, the pressure of the labor market is the defining element. There is an exact inverse correlation between unemployment and wage growth. But beyond the generalities of the economy, the next question has to do with the distribution of the wage gains by industry to determine the principal leaders and laggards. In general terms, wage gains for 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.

Two significant outliers, however, pulled the average forward. One centered on the 10-to-12 percent range—approximately 270,000 workers—and the other showed up at 20 percent and over—roughly 150,000 workers. The former included industrial machinery and computer equipment manufacturing, commercial banking and security brokers, and, surprisingly, eating and drinking places. Obviously, high tech manufacturing was bidding aggressively for skilled workers. And the strength of the economy and the stock market was driving up wages in banks and brokerage houses. The significant run-up in base wages at eating and drinking establishments logically reflected chronic entry-level worker shortages and the over-the-year hike in the state's minimum wage—both starting from a very low base.

Looming almost as large was the 20 percent and over category. This outlier centered entirely in 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 sectoral change. Without this dynamic, the state's overall wage gain for 1998 would have come in around 5 percent—still significant but closer in line with the 1996-97 average.

Continued page 8

Quarterly Analysis *continued*

Meanwhile, wages of production workers continued climbing through the summer months. Manufacturing payrolls posted a 2.5 percent year-to-year increase through the third quarter with construction and trade up 4.5 percent and 6.0 percent, respectively. Nationally, total workers compensation was running 3 percent higher than a year ago—not much change from 1997-98. Benefit costs were up 2.7 percent over the year in the third quarter, the highest in four years. Strong productivity growth has basically offset any protracted wage hikes with the net result being flat-to-declining overall price performance in 1999. Consumer prices nationally were running about 2 percent higher than a year ago. The Seattle area index was up about 3.0 percent.

National and State Economies Continue to Build

On balance, the national economy continued to look good. Growth of real Gross Domestic Product soared in the fourth quarter of 1998. The pace eased off in the first quarter, skidded sharply in the second quarter, and then rebounded strongly again in the third quarter. Personal consumption expenditures rose at a solid 4.6 percent—down only slightly from the 5.1 percent growth in the second quarter. Slower inventory buildup and a worsening trade deficit were largely responsible for the second quarter pullback but proved less of a drag in July-to-September. Strong consumer spending and solid gains in business outlays for plant and equipment continued to propel the economy.

A combination of higher-than-targeted growth and progressively tighter labor markets, however, caused the Federal Reserve to shift gears abruptly starting in June. Gradually tightening monetary policy replaced a generally accommodating stance that had been in place for nearly a year. Short-term interest rates were heightened a quarter percentage point in three successive steps as a pre-emptive strike against inflation. Mortgage rates had already moved up in the first and second quarters from lows in late-1998—from 6.7 percent to 7.2 percent. And then inched up further to 7.8 percent in the third quarter. The prime rate shifted from 7.8 percent back up to 8.5 percent—meaning higher interest costs to both households and business from hereon out.

Two forward-looking indicators showed some hesitancy after peaking earlier in the year—the U.S. Consumer Confidence Index and the Washington Index of Leading Indicators. Though vacillating around a very high base, they proved to have staying power through the end of the year. This has been truly a remarkable run—both for the state and for the nation. The economies of both Washington and the U.S. have now posted an expansion in terms of duration, depth, and staying power that is unprecedented in postwar history.

■ *Dennis Fusco*
Chief Economist

Productivity

INDUSTRY DEVELOPMENTS

State Data Paint a New Picture

Productivity is a term we hear a lot—and not just from economists. Watch the news, open a paper and you'll see corporate heads, government officials, consultants and others talking about their pursuit of this thing called productivity. Sometimes the term is used correctly, sometimes not. Either way, it's clear that tremendous value and importance is placed on productivity.

Why? Productivity is widely recognized as the broadest measure of growth in the U.S. economy, reflecting the combined effect of many factors, including: technological change, capital investment, rate of output, capacity utilization, resource utilization, organization of production, managerial skill, and work force characteristics. It is arguably the single most important indicator of an economy's ability to boost income, sustain competitiveness and improve standards of living.

What is Productivity?

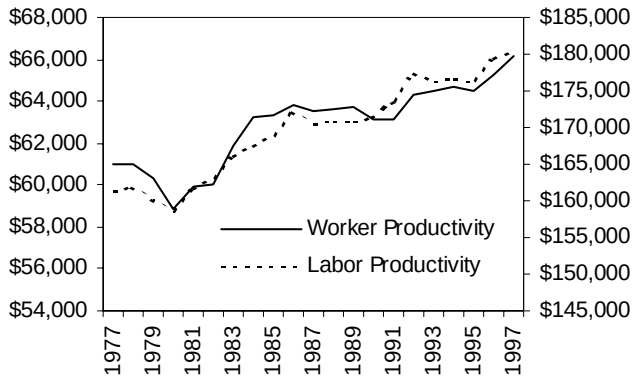
Productivity is broadly defined as the relationship between an economy's real output and the labor involved in generating that output. On a formal basis, it is measured as *labor* productivity—*real output per labor hours worked.* This uses real Gross Domestic Product from the Bureau of Economic Analysis to represent real output and data on labor hours worked nationally from the Bureau of Labor Statistics.

The Problem

Labor productivity is only calculated at the national level. To look at productivity at the state level, namely in Washington, required the construction of a measure called *worker* productivity—which is defined as *real output per worker*. This measure used real Gross State Product from BEA to represent real output and nonfarm wage and salary employment from ESD to represent workers.

More importantly, it represented a state-based productivity measure that was faithful to the definition of productivity as a relationship between an economy's real output and the labor involved in generating that output *(see Figure 8)*. The principal difference between the measures was the use of *employment* rather than *labor hours worked*—with the former nevertheless reflective of the labor involved in generating output.

Figure 8
Worker and Labor Productivity
United States, 1977-1997
Source: *Employment Security Department, BEA, & BLS*



WA vs. US Worker Productivity, 1977-97

Having established worker productivity as a good proxy for labor productivity—at least to our satisfaction—we turned our attention to measuring worker productivity in Washington and comparing it to the U.S. At the aggregate level, the trend favors the state *(see Figure 9 on the next page)*. Washington's worker productivity has exceeded the U.S. average over the entire 20-year observation period. Now, that advantage narrowed considerably during the mid- to late-1980s as key Washington industries restructured, but it has since widened again as you can see.

Worker Productivity by Business Cycle

To buttress the point, worker productivity was tracked over several business cycles. Washington outpaced the U.S. in each of the last two business cycles. And by removing other transportation equipment (aerospace), this state looks even better *(see Figure 10 on the next page)*.

Continued page 10

Figure 9
Worker Productivity
Washington and United States, 1977-1997
Source: *Employment Security Department*

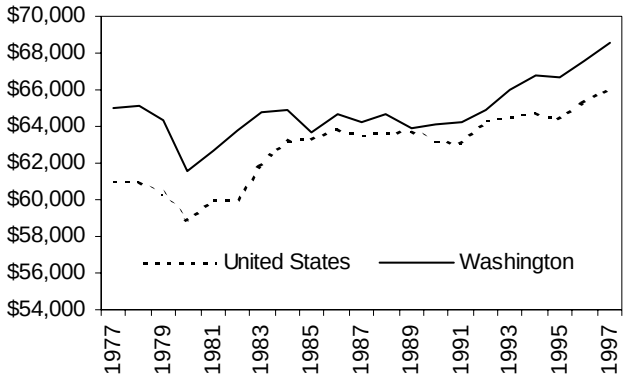
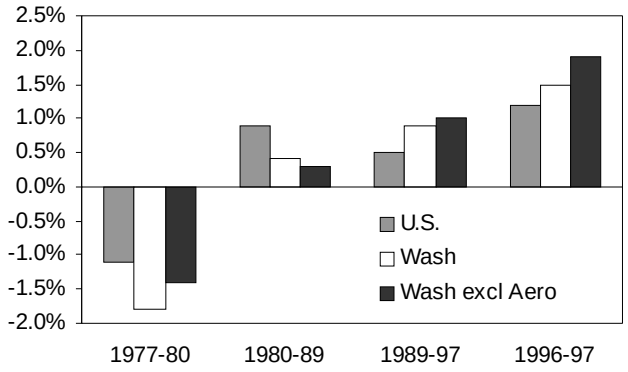


Figure 10
Annual Percent Change in Worker Productivity
By Business Cycle
Source: *Employment Security Department*



Of course, the statewide trend is merely an aggregation of its component parts. Which leads to a discussion of worker productivity at the industry level.

Washington's Leaders

The industries with the highest absolute levels of worker productivity in Washington were:

- Real Estate
- Electric, Gas, and Sanitary Services
- Communications
- Finance and Insurance
- Motor Vehicles and Equipment
- Chemical and Allied Products
- Paper and Allied Products
- Primary Metals Industries

Finance, insurance, and real estate, and transportation, communication, and utilities have both experienced heavy investments in technology and automation.

Washington's Laggards

On the flip side, sectors with the lowest absolute levels of worker productivity were largely labor-intensive in nature:

- Apparel and Textile Products
- Textile Mill Products
- Other Transportation Equipment
- Industrial Machinery and Computer Equip.
- Social Services
- Educational Services
- Amusement and Recreation Services
- Hotels and Other Lodging Places

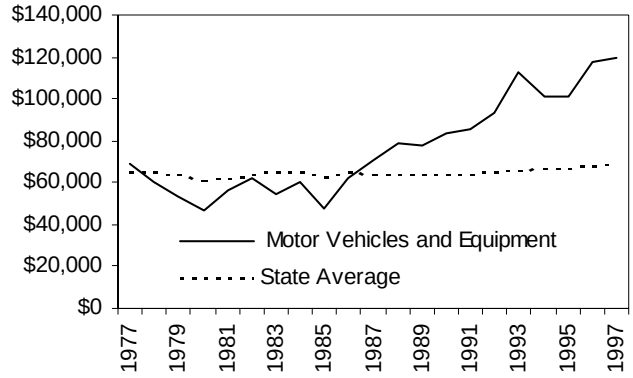
Fastest Growing Productivity

More important than static measures of worker productivity are the longer-term trends. Several Washington industries have had impressive gains in worker productivity.

Motor Vehicles and Equipment

Worker productivity in Washington's motor vehicles and equipment sector has risen dramatically since the mid-1980s *(see Figure 11)*. Real dollar output per worker more than doubled from 1985-97, and moved from below average to nearly twice the state average.

Figure 11
Worker Productivity in Motor Vehicles and Equipment
Washington State, 1977-1997
Source: *Employment Security Department*



The major player in Washington is Paccar, which builds Kenworth and Peterbuilt heavy trucks. Paccar is one of the nation's biggest manufacturers of tractor-trailers with a solid share of the domestic heavy truck market and a growing share of the foreign market. Indeed, it was the global demand for heavy tractor-trailers during the latter half of the 1980s that led to a surge in output in Washington's motor vehicle and equipment sector.

Nevertheless, Paccar's modern manufacturing processes enabled output to rise at a faster rate than employment, resulting in steady worker productivity gains. This represents a pure form of productivity increase—one driven by expansion in output *and* employment as opposed to one driven by employment cuts alone.

Insurance

Worker productivity trends in Washington's insurance industry are apparently cyclical. Economic and population growth typically translate into residential/commercial building activity thereby boosting demand for insurance as developers/homebuyers/businesses require underwriting. Thanks to the prolonged economic expansion, worker productivity grew at a 5.5 percent annual rate from 1985-97, rising from below to above the state average *(see Figure 12)*.

The early 1990s saw a sluggish economy overall, but insurance held its own due to heavy investment in technology and automation and expansion in health insurance. There was also consolidation, which brought efficiency-based productivity gains.

Business Services

While business services comprise of a wide range of activities, it has been software development, led by Microsoft, which has been the dominant driver of productivity. The impact of all this can be seen in worker productivity trends for Washington's business services sector from 1977-97. Worker productivity was flat to falling from the late 1970s through the mid-1980s as recession hit the state in the pre-software era *(see Figure 13)*. The software effect is most evident from 1987-97 as worker productivity in business services grew at a 7.3 percent annual rate and real dollar output/worker more than doubled.

Fastest Declining Productivity

Now let's look at some Washington sectors with the fastest declining rates of worker productivity.

Air Transportation

Air transportation services include airlines, airports, cargo/freight firms and support services. Firms in this sector include SeaTac X, Alaska/Horizon Airlines, UPS, Fed Ex, and Airborne Express.

Air transportation is cyclical—that's readily apparent in the worker productivity trends. Recession in the early 1980s saw worker productivity in Washington's air transportation industry

Continued page 12

Figure 12
Worker Productivity in Insurance
Washington State, 1977-1997
Source: *Employment Security Department*

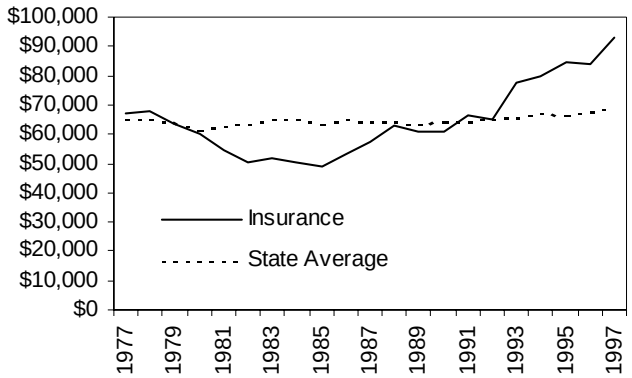


Figure 13
Worker Productivity in Business Services
Washington State, 1977-1997
Source: *Employment Security Department*

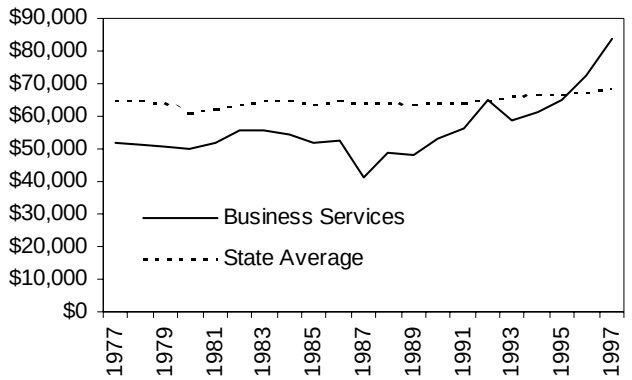
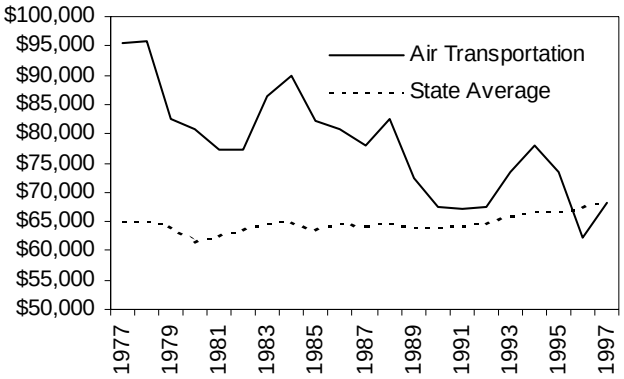


Figure 14
Worker Productivity in Air Transportation
Washington State, 1977-1997
Source: *Employment Security Department*



decline at a 7 percent annual rate from 1978-81 *(see Figure 14)*. The latter half of the 1980s saw renewed growth in air transportation as deregulation and "one-ups-man-ship" prompted airlines to expand rapidly. Profits soared along with worker productivity levels.

Then the bubble burst. Domestic airlines, including Alaska, suffered record-breaking losses in the late 1980s and early 1990s as recession, the Gulf War, and rising fuel prices caused worker productivity to fall at a 4 percent annual rate from 1984-91.

This was followed, in turn, by record earnings in the mid-1990s as global air travel and air commerce heated up. However, the Asian crisis shortly thereafter put a damper on demand for these services. Worker productivity suffered, which by 1996-97 had fallen below the state average.

Worker productivity in the coming years may depend on the airlines' ability to successfully renegotiate contracts with its many unions, from pilots and flight attendants to ticket agents and baggage handlers to machinists and ground crews.

Construction

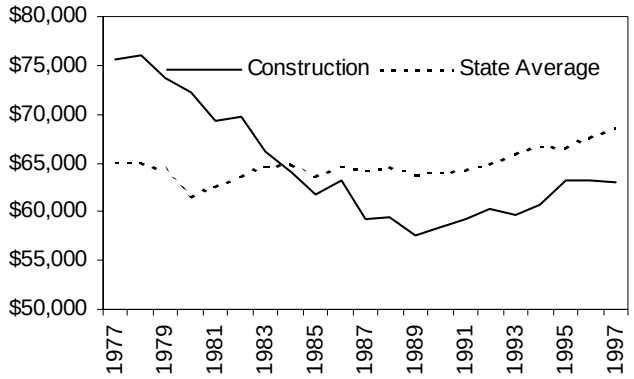
Construction was historically a Washington leader in terms of worker productivity, holding well above the state average. That impressive productivity was built on landmark projects: 13 hydroelectric dams, Seattle/Spokane world fairs, Hanford/WPPSS nuclear sites, I-5/I-90, and military, etc.

Part of why construction is among the Washington sectors with weak worker productivity trends *(see Figure 15)* is that the observation period begins in 1977, which marked the end of the era of landmark projects. In fact, the start of the observation period marked the collapse of the Washington Public Power Supply System project and approaching recessions, both of which sent worker productivity plummeting. From there, worker productivity fell at a 2.5 percent annual rate from 1978-89 to below the state average.

The sector's worker productivity slide was halted by a largely Puget Sound based residential/commercial building boom, a robust state economy, low interest rates, and low inflation nationally. This enabled the sector's worker productivity level to gradually climb.

Ironically, the pace of activity has revealed a downside in terms of worker productivity as this sector's demand for workers rose amidst a regional labor shortage. As a result, the industry has increasingly had to hire workers with little experience—if it could find workers at all. The result has been low productivity as workers had longer learning curves and as builders with labor shortages had to slow production. Bottom line: output suffered.

Figure 15
Worker Productivity in Construction
Washington State, 1977-1997
Source: *Employment Security Department*



Other Transportation Equipment

Washington's other transportation equipment sector covers aircraft and parts as well as ship and boat building and repairing. Washington's aircraft and parts industry is clearly driven by business cycles, though there is a clear lag as productivity in this labor-intensive sector negotiates a learning curve.

Worker productivity in 1977 was already on a sharp downward path that began with the 1974 recession and was exacerbated by oil embargo-related supply shocks *(see Figure 16)*. The next up-cycle saw worker productivity rise from 1980-82, bringing it roughly back in line with the state average. The good times were short-lived as recession interfered again.

The late 1980s saw rising aircraft purchases; federal deregulation, noise and air quality standards and a strong economy helped airlines replace or expand inventories.

Then came the crash as recession, the Gulf War, and rising oil prices forced airlines to cancel or delay orders. Aircraft and parts productivity plunged 32 percent from 1994-95. Sound familiar? These same elements impacted air transportation services too.

Just as quickly though, a new upcycle saw aircraft and parts orders climb once again. But something was different. Worker productivity kept falling. Boeing's hiring binge surely played a role as it has in the past, but it has implemented a layoff strategy in the midst of all this to restore profits. It remains to be seen if productivity can rise against this backdrop.

Ships Slip

As noted, Washington's other transportation equipment sector also includes ship/boat building. Productivity has lagged in this sector nationally due to inadequate investment in new technology, automation, and worker training. For example, statistics show that Japanese shipyards produce at 20-23 man-hours per commercial gross ton compared to 60-82 MH/CGT for U.S. shipyards.

There is some positive movement in Washington, though, as at least one company, Todd, has embraced Japanese modular construction techniques that emphasize computerized design, production, and quality control and automated machinery and equipment.

State vs. State

It's one thing to compare Washington's industries against each other; it's another to compare them against the same sectors in other states.

Other Transportation Equipment

Washington's transportation equipment industry was compared to those in California, Georgia, and Texas. One distinction: those states lean toward military rather than commercial production.

Up through the late 1980s, worker productivity trends ran in sync, with Washington holding slightly above the other states *(see Figure 17)*.

Continued page 14

Figure 16
Worker Productivity in Other Transportation Equipment
Washington State, 1977-1997
Source: *Employment Security Department*

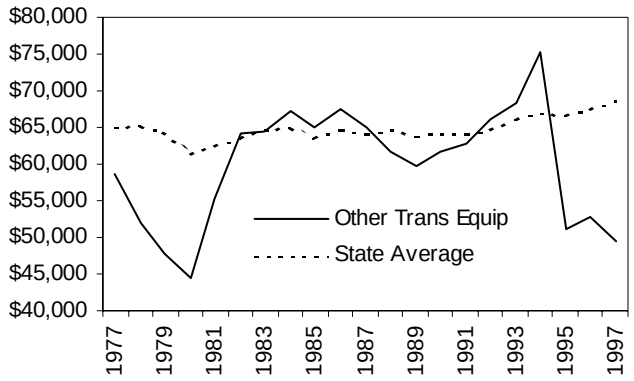
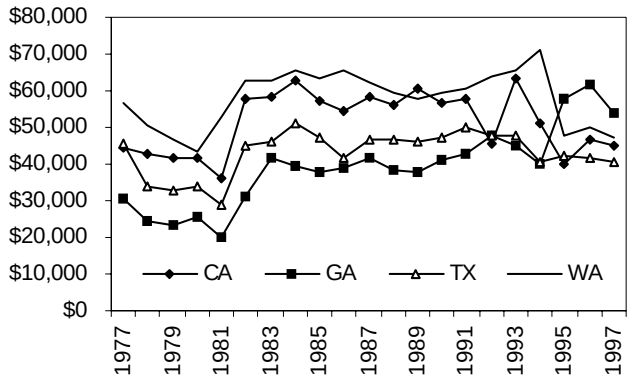


Figure 17
Worker Productivity in Other Transportation Equipment
Washington and Selected States, 1977-1997
Source: *Employment Security Department*



This reflected the higher overall efficiency in Washington's commercial sector vs. the more labor-intensive military nature of the other states. That California, which then had a big commercial presence in McDonald Douglas, is right behind Washington supports this premise.

In the mid-1990s, worker productivity fell significantly in Washington and California while it rose in Georgia and more or less held steady in Texas. For Washington and California, this was a result of a very quick employment expansion. Because of their military focus, Georgia and Texas did not have the same experience.

Lumber and Wood Products

Washington's productivity in lumber and wood products was compared to that in California, Georgia, and Oregon *(see Figure 18)*. The impact of business cycles is evident in the productivity trends of all four states, but that is where the similarities end. Worker productivity in Washington and Oregon marched virtually in lock step over the 20-year period due to similar products (Douglas fir) and policies (endangered species protection) which affected the Pacific Northwest. Nevertheless, both had higher worker productivity than both California and Georgia.

California's worker productivity trend mirrored those in Washington and Oregon through the early 1980s before setting off on a divergent path caused by a different set of national policies (timber lockups) applied to a different product (redwood).

Worker productivity in Georgia, meanwhile, also differed due to its product, southern yellow pine. Also apparent are the disparate worker productivity trends between western states and Georgia with the former declining and the latter rising due to product differentiation. That may change as environmental issues emerge in the south.

Business Services

Worker productivity in Washington's business services was compared to that in California, Massachusetts, and Texas. Though the business services industry is quite diverse, it is seen as a proxy for software/computer services, which is the dominant component of the sector in all four states.

Over the decade from 1988-97, business services' worker productivity grew only modestly in every state except Washington *(see Figure 19)*. Washington's business services sector productivity rose at a strong clip over this period as companies like Microsoft strongly boosted both output and employment as they set the standard for computer operating language and business/consumer software programs.

Productivity Controversies

As mentioned at the outset, the term productivity is used to mean lots of things, some of which are truly productivity, others of which are not. The

Figure 18
Worker Productivity in Lumber and Wood Products
Washington and Selected States, 1977-1997
Source: *Employment Security Department*

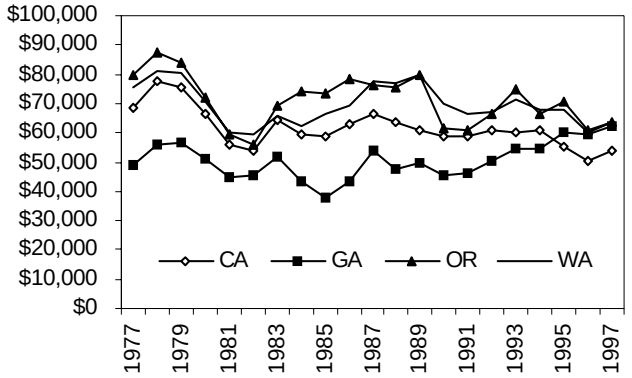
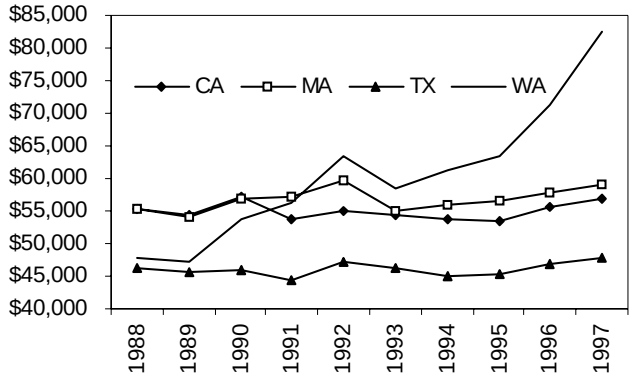


Figure 19
Worker Productivity in Business Services
Washington and Selected States, 1988-1997
Source: *Employment Security Department*



following issues highlight some of the controversy surrounding productivity measurement.

The New Economy and Productivity

New Economy proponents believe that economic growth in the U.S. will register at 4 percent to 5 percent a year because of technology enhancements that improve productivity by leaps and bounds. Is this realistic? Research economists say no—at least not yet.

The New Economy Theory is premised on under-measurement of computer productivity. The data show dramatic productivity gains in the *production* of computers, but little from the *use* of computers, giving rise to the *productivity paradox* (see *LMI Review*, First Quarter 1998) which is the puzzle of weak productivity growth amidst the technological advances of the computer age.

New Economy advocates blame under-measurement, arguing that the government doesn't accurately account for productivity gains reaped by technology. Under-measurement is an issue, particularly in the services sector where computer use is the greatest and where computer software development is counted.

A main criticism is that productivity data do not adequately capture the conveniences provided to consumers or the better working conditions provided to workers by virtue of technology. However, research has shown that computers only raise productivity by 0.5 percentage points—not enough to account for the under-measured growth that would propel productivity into the 4 percent to 5 percent range where New Economy advocates believe it should be.

So what's gives? Well, the counter-argument to the New Economy theory is as follows:

Real Computer Usage

Instead of assuming that the productivity slowdown is due to under-measurement, more and more economists are taking a hard look at how computers are used. Given the availability of low-cost computing power, computers are now used in low-end activities that generate little or no revenue—something that would not have been justifiable on a cost basis in the past.

For example, most workers now have a computer, though often for mundane tasks—assuming they aren't idle—which begs the question: has technology boosted productivity or merely offered workers a new way to do old things. If the latter is true, this suggests capacity under-utilization, not only of computers, but also of workers who have not been trained to exploit a technology's full potential.

Ultimately, most computers are unproductive based on the standard that matters most—output or revenue generation.

Computers as a Share of Capital Stock

Despite rapid growth in computer investment over the past 25 years, computers are less than 2 percent of net business capital stock in the U.S. How can this be true? Well, for one, rapid computer obsolescence means that computer investment is directed toward *replacing* rather than adding to existing stock. The bottom line: computers are not prevalent enough to generate much increase in the growth of aggregate productivity.

Contrary to the conventional belief, the 1990s were neither a period of exceptional computer investment nor particularly dramatic declines in computer prices. Indeed, the 1970s saw the most explosive growth of computer investment in the past 25 years because more businesses were "computer naïve" in the 1970s and thus more appropriate candidates for truly revolutionary computerization.

There is little evidence computers have made much difference in U.S. output because the measure of a product's impact remains its ability to produce revenue. Whatever else it can or cannot do is irrelevant from an economic standpoint.

Premature Measurement

Economic historian Paul David argued that new technology diffuses gradually because it takes time for users to find practical applications for technology and to acquire the skills necessary to effectively use it on a broad scale. The recent

Continued page 16

pickup in productivity strikes some as evidence that businesses are finally reaping the long-awaited benefits of information technology. Mindful of this theory, many economists qualify their pronouncements that technology has not had a significant impact on productivity with the refrain "*—at least not yet*."

Mistaking Efficiency for Productivity

A growing number of economists reject the claim that corporate downsizing in the 1990s—that is, layoffs, plant closings, outsourcing, etc.—produced *meaningful* or *sustainable* growth in U.S. labor productivity. It is true that rising profits, sustained low inflation, greater competitiveness, and a soaring stock market improved U.S. business *efficiency*. And in the short run, these gains show up in the official productivity numbers.

But a short-term strategy like downsizing, which requires making do with less, cannot produce *sustained* gains in productivity and there is no evidence that downsizing has ever boosted long-term productivity.

Sustained or long-term productivity growth requires getting more out of more by investing in innovation and human capital and gaining greater leverage from the expanding base of labor and capital that results.

The fixation with downsizing impedes long-term productivity growth because it is inconsistent with increased capacity demands such as hiring/rehiring workers and building/expanding facilities that are critical to sustained productivity growth.

We need to distinguish between long-term productivity growth and short-term efficiency gains, recognizing that one is sustainable and the other is not. In the words of Robert Solow, "Productivity growth is a better way to produce leading to a better way to produce. And downsizing is not that."

Inefficiency Posing as Productivity

Economists see a greater mismeasurement problem in the under-reporting of *hours worked*—a key component in calculating labor productivity. They believe white-collar workers in particular are on the job longer than the official data suggest, thanks to the growing amount of work that can be done away from the office by way of technology. If true, productivity is overstated because productivity is about achieving more output per unit of work time—not putting in more time on the job.

This flies in the face of enhanced productivity because the increased output is coming at the expense of leisure time, undermining the most basic benefit of an improvement in productivity—a rise in one's standard of living.

Are We Productive Enough?

In summary, the productivity numbers are up, without a doubt, but the jury is still out. Do the recent increases reflect long-term productivity gains or short-term efficiency gains? Both, really, if you look at it on a company-by-company basis or even by industry. Whatever the case, ultimately, though, the former is sustainable while the latter is not. That should give us pause as we ponder how it is we have achieved productivity gains—and how we intend to do so in the future.

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Economic Analyst

Contingent Workers

WORK FORCE DEVELOPMENTS

The Cycle Emerges

According to the latest Current Population Survey data from February of 1999, some 4.3 percent of all workers in the U.S. were contingent. The comparable rate in the Pacific region was 5.7 percent. In addition, those in alternative employment arrangements represented 9.3 percent of the workers in the U.S. compared to 11.6 percent among the Pacific states.

The emergence of the contingent worker has been touted as representative of the New Economy. This new economy is characterized as one in which employers place a high regard on worker flexibility and their ability to move quickly in response to changing consumer demand. In theory, the firm in this new economy is comprised of a core of permanent workers who can call upon ranks of temporary workers, as production schedules require.

BLS Definitions

By definition, contingent workers are "… persons who hold jobs that are temporary or are not expected to last." Workers with alternative employment arrangements are those who are independent contractors, on-call, temporary help agency workers, or those who work for a contract firm. Contingent workers and workers with alternative employment arrangements are not mutually exclusive. Therefore a worker could be both contingent and have alternative employment arrangements (see text box for official descriptions).

Contingent Workers: Workers who do not expect their jobs to last. Wage and salary workers are included even if they already had held the job for more than one year and expect to hold the job for at least an additional year. The self-employed and independent contractors are included if they expect their employment to last for an additional year or less and they had been self-employed or independent contractors for one year or less.

Independent contractors: Workers who were identified as independent contractors, independent consultants, or free-lance workers, whether they were self-employed or wage and salary workers.

On-call workers: Workers who are called to work only as needed, although they can be scheduled to work for several days or weeks in a row.

Temporary help agency workers: Workers who were paid by a temporary help agency, whether or not their job was temporary.

Workers provided by contract firms: Workers who are employed by a company that provides them or their services to others under contract, and who are usually assigned to only one customer and usually work at the customer's work-site.

TRENDS

The February 1999 data were the third in a series of the national Current Population Survey (CPS) supplements capturing contingent and alternative arrangement information. These supplemental surveys have taken place in February of the last three odd numbered years. As a result, these three data points allow for some rudimentary trend analysis.

Contingent Down

What is most obvious about the general trend is that, at this point in the business cycle, contingent and alternative work arrangements are not as vibrant as that of traditional employment. The overall share of contingent workers has declined from 4.9 percent in 1995 to 4.3 percent in 1999 *(see Figure 20 on the next page)*. In absolute numbers, contingent workers declined by 393,000 between February 1995 and 1999. In the meanwhile, non-contingent employment rose by almost 8.7 million. Growth rates were equally disparate; non-contingent workers grew by 7.4 percent while contingent workers declined 6.5 percent.

Continued page 18

Figure 20
Contingent Worker Trends
United States, February 1995 and 1999
Source: *Bureau of Labor Statistics*

	1995	1999	Change Number	Change Percent
Total (thousands)	123,208	131,494	8,286	6.7%
Contingent	6,034	5,641	-393	-6.5%
Not Contingent	117,174	125,853	8,679	7.4%
% Contingent	4.9%	4.3%	---	---

Alternative Down Too

Trends in alternative arrangements between February 1995 and 1999 were similar to contingent work. The share of workers with alternative employment arrangements declined from 9.9 percent in 1995 to 9.4 percent in 1999 *(see Figure 21)*. In absolute numbers, workers with alternative arrangements grew 230,000 while workers in traditional arrangements grew almost 8.1 million. Based on relative change, employment in jobs with traditional arrangements grew 7.3 percent, employment growth in jobs with alternative arrangements advanced a mere 1.9 percent.

Among the various alternative arrangements, the trends were dramatically different as well. Independent contractors are the single largest category accounting for two-thirds of workers in alternative arrangements. But it was in this category that the only numeric decline occurred between 1995 and 1999 at 62,000 workers. And if the period of comparison covers just 1997 to 1999, the change is even more pronounced with a decline of 209,000 workers.

Among workers employed by a temporary help company the trends in the 1995-1999 period were decidedly modest. While the number of workers in traditional forms of employment grew by almost 8.1 million, those employed by temporary help companies grew by only 7,000. Again, looking at the more recent two-year period, the trend is much more prominent; the nationwide count of workers employed by a temporary help company during this period actually declined by 112,000.

The number of contract company workers experienced a similar "up and down" trend as was experienced by workers employed by temporary help companies. While the four-year trend is decidedly strong, all that growth occurred in the first half of the period. In the latter half, the count of contract company workers was down by 40,000 or almost 5 percent.

Among the major categories of workers in alternative employment arrangements, only on-call workers and day laborers experienced a significantly different growth pattern. This category experienced a marked pullback in workers between 1995 and 1997, but reversed course and showed almost 12 percent growth in the 1997-1999 period. A likely reason? The hot labor markets began attracting and absorbing the more marginally attached workers in this period; on-call and day labor activities were likely the entry portals for this population.

Figure 21
Trends in Alternative Work Arrangements
United States, February 1995 and 1999
Source: *Bureau of Labor Statistics*

	1995	1999	Distribution 1995	Distribution 1999	Change Number	Change Percent
Total (in thousands)	123,208	131,494	100.0%	100.0%	8,286	6.7%
Alternative arrangements	12,156	12,386	9.9%	9.4%	230	1.9%
Independent contractor	8,309	8,247	6.7%	6.3%	-62	-0.7%
Temporary help	1,181	1,188	1.0%	0.9%	7	0.6%
Contract company	652	769	0.5%	0.6%	117	17.9%
On-call, day laborers	2,078	2,255	1.7%	1.7%	177	8.5%
Traditional arrangement	111,052	119,109	90.1%	90.6%	8,057	7.3%

REGIONAL TRENDS

Contingent

What has been apparent about these contingent worker data is that, at the regional level, the differences can be quite pronounced. Contingent workers constituted some 3.4 percent of employed workers in the East North Central states and 5.8 percent in the Mountain states *(see Figure 22)*. New England states were the only region to match the national average at 4.3 percent.

What is different about the most recent data is the ranking of the regions; in both 1995 and 1997, the Pacific states had the highest ratio of contingent workers. In 1999, that distinction goes to the Mountain states. The Pacific states are only one tenth of a percentage point lower.

In both 1995 and 1997, the East South Central states had the lowest ratio of contingent workers. In 1999, that position was held by the East North Central states. During the middle and latter stages of this business cycle, the Midwestern states have recorded some of the lowest jobless rates in the nation. That labor market tightness was a likely contributor to the lower use of contingent workers.

Interestingly enough, use of data that cover the four-year period disguises a more recent slowing trend in select regions. For instance, in the Pacific states, use of contingent workers grew 9.6 percent between 1995 and 1997. At the same time non-contingent employment rose only 3.5 percent. But in the 1997 to 1999 period that pattern shifted big time—non-contingent employment advanced 7.5 percent while contingent employment grew a very modest 0.6 percent.

Regional Alternative Trends

Regional trends in alternative employment arrangements are somewhat similar to contingent trends. Again, the rankings among the regions shifted a bit twixt 1995 and 1999. The Pacific states do have the highest share of workers in alternative arrangements, though the most recent data show that ratio falling *(see Figure 23 on the next page)*. The region with the lowest use of these arrangements did change however. In 1995 the East North Central states had the lowest ratio of workers in alternative arrangements; in 1999 the West North Central states held that distinction. Comparing job growth, only three of the nine multi-state regions reported faster growth among

Continued page 20

Figure 22
Contingent Employment by Census Regions and Divisions
United States, February 1995 and 1999
Source*: Bureau of Labor Statistics*

	Total Employment		Contingent Employment		Contingent Share	
	1995	1999	1995	1999	1995	1999
Total U.S. (in thousands)	123,208	131,494	6,034	5,641	4.9%	4.3%
Northeast	22,855	24,889	1,165	1,020	5.1%	4.1%
New England	6,424	6,870	347	297	5.4%	4.3%
Middle Atlantic	16,431	18,019	818	723	5.0%	4.0%
Midwest	30,381	31,760	1,402	1,158	4.6%	3.6%
East North Central	20,610	22,020	901	746	4.4%	3.4%
West North Central	9,771	9,740	501	411	5.1%	4.2%
South	43,396	45,476	1,952	1,772	4.5%	3.9%
South Atlantic	22,708	23,509	997	915	4.4%	3.9%
East South Central	7,547	7,761	311	305	4.1%	3.9%
West South Central	13,141	14,206	644	552	4.9%	3.9%
West	26,576	29,389	1,515	1,691	5.7%	5.8%
Mountain	7,727	8,409	426	490	5.5%	5.8%
Pacific	18,849	20,980	1,089	1,201	5.8%	5.7%

Figure 23
Alternative Employment Arrangements by Census Regions and Divisions
United States, February 1995 and 1999
Source*: Bureau of Labor Statistics*

	Total Employment		Alternative Arrangements		Alternative Share	
	1995	1999	1995	1999	1995	1999
Total U.S. (in thousands)	123,208	131,494	12,386	12,156	10.1%	9.2%
Northeast	22,855	24,889	2,364	2,253	10.3%	9.1%
New England	6,424	6,870	715	644	11.1%	9.4%
Middle Atlantic	16,431	18,019	1,649	1,609	10.0%	8.9%
Midwest	30,381	31,760	2,451	2,587	8.1%	8.1%
East North Central	20,610	22,020	1,723	1,726	8.4%	7.8%
West North Central	9,771	9,740	728	861	7.5%	8.8%
South	43,396	45,476	4,171	4,026	9.6%	8.9%
South Atlantic	22,708	23,509	2,287	2,210	10.1%	9.4%
East South Central	7,547	7,761	609	645	8.1%	8.3%
West South Central	13,141	14,206	1,275	1,171	9.7%	8.2%
West	26,576	29,389	3,398	3,289	12.8%	11.2%
Mountain	7,727	8,409	968	869	12.5%	10.3%
Pacific	18,849	20,980	2,430	2,420	12.9%	11.5%

alternative employment arrangements than in traditional arrangements. As with the contingent trends, shortages of workers during this period forced employers to offer more traditional arrangements in order to attract workers throughout the Midwest where state-level jobless rates are among the lowest in the nation.

Independent Contractors

Equally interesting are the regional trends in the various kinds of alternative arrangements. Independent contractors, the largest of the alternative employment arrangement categories, have shown marked shifts in regional importance between 1995 and 1999. New England states experienced a 10 percent increase in independent contractors *(see Figure 24)* while traditional

Figure 24
Independent Contractors by Census Regions and Divisions
United States, February 1995 and 1999
Source*: Bureau of Labor Statistics*

			Share of total		Change	
	1995	1999	1995	1999	Number	Percent
Total U.S. (in thousands)	8,309	8,247	6.7%	6.3%	-62	-0.7%
Northeast	1,610	1,658	7.0%	6.7%	48	3.0%
New England	486	535	7.6%	7.8%	49	10.1%
Middle Atlantic	1,124	1,124	6.8%	6.2%	0	0.0%
Midwest	1,694	1,554	5.6%	4.9%	-140	-8.3%
East North Central	1,123	1,096	5.4%	5.0%	-27	-2.4%
West North Central	572	459	5.9%	4.7%	-113	-19.8%
South	2,734	2,798	6.3%	6.2%	64	2.3%
South Atlantic	1,536	1,586	6.8%	6.7%	50	3.3%
East South Central	433	406	5.7%	5.2%	-27	-6.2%
West South Central	765	806	5.8%	5.7%	41	5.4%
West	2,271	2,237	8.5%	7.6%	-34	-1.5%
Mountain	616	669	8.0%	8.0%	53	8.6%
Pacific	1,655	1,568	8.8%	7.5%	-87	-5.3%

jobs grew 6.5 percent. In dramatic contrast, the West North Central states recorded a near 20 percent drop in use of independent contractors. Pacific states showed more than a 5.0 percent decline during the 4-year period.

Temporary Help

The regional trends in use of workers employed by temporary help companies further illustrate the labor shortage phenomenon. While their numbers did increase nationwide between 1995 and 1999, in the Midwest they declined by almost 20 percent *(see Figure 25)*. In a number of Southern states their use declined by almost 28 percent.

Other regions saw an increase in the use of workers employed by temporary help companies. New England, Mountain, Pacific states and others recorded gains in the use of this particular work arrangement.

Beware that many of these increases and decreases at the regional level can carry relatively large percent changes. This is more a function of the small base numbers in several of these groupings. For instance, in the Pacific states, the number of workers employed by temporary help companies rose 8.2 percent between 1995 and 1999—this was a total of 19 thousand workers. Compare that to the 12.8 percent growth in workers with traditional employment arrangements—over 2.1 million workers.

Contract Company Employees

The smallest numbers of alternative employment arrangement workers are those employed by contract companies. As a result, trends in this category are more volatile than in the other employment groups. Nonetheless, the count of such workers rose almost 18 percent between 1995 and 1999, or in absolute terms, 117,000 workers.

By far the region with the fastest growth in use of these arrangements was New England *(see Figure 26 on the next page)*. Use of workers employed by contract companies more than doubled in the four-year period. This was a marked contrast with the East South Central states that saw a decline in use of contract company workers to the tune of over 26 percent. The Pacific states experienced an over 40 percent increase in use of these workers during the same period.

On-Call and Day Laborers

The second largest category among the alternative work arrangements is on-call and day laborers. Regional trends in this group proved much less variable, region to region, than did the

Continued page 22

Figure 25
Temporary Help Employees by Census Regions and Divisions
United States, February 1995 and 1999
Source*: Bureau of Labor Statistics*

			Share of Total		Change	
	1995	1999	1995	1999	Number	Percent
Total U.S. (in thousands)	1,181	1,188	1.0%	0.9%	7	0.6%
Northeast	187	192	0.8%	0.8%	5	2.7%
New England	52	59	0.8%	0.9%	7	13.5%
Middle Atlantic	136	132	0.8%	0.7%	-4	-2.9%
Midwest	324	261	1.1%	0.8%	-63	-19.4%
East North Central	231	202	1.1%	0.9%	-29	-12.6%
West North Central	94	59	1.0%	0.6%	-35	-37.2%
South	383	416	0.9%	0.9%	33	8.6%
South Atlantic	222	250	1.0%	1.1%	28	12.6%
East South Central	54	39	0.7%	0.5%	-15	-27.8%
West South Central	107	128	0.8%	0.9%	21	19.6%
West	286	319	1.1%	1.1%	33	11.5%
Mountain	56	69	0.7%	0.8%	13	23.2%
Pacific	231	250	1.2%	1.2%	19	8.2%

Figure 26
Contract Company Employees by Census Regions and Divisions
United States, February 1995 and 1999
Source*: Bureau of Labor Statistics*

			Share of total		Change	
	1995	**1999**	**1995**	**1999**	**Number**	**Percent**
Total U.S. (in thousands)	652	769	0.5%	0.6%	117	17.9%
Northeast	103	107	0.5%	0.4%	4	3.9%
New England	17	35	0.3%	0.5%	18	105.9%
Middle Atlantic	86	72	0.5%	0.4%	-14	-16.3%
Midwest	130	184	0.4%	0.6%	54	41.5%
East North Central	82	130	0.4%	0.6%	48	58.5%
West North Central	48	54	0.5%	0.6%	6	12.5%
South	255	243	0.6%	0.5%	-12	-4.7%
South Atlantic	139	134	0.6%	0.6%	-5	-3.6%
East South Central	49	36	0.6%	0.5%	-13	-26.5%
West South Central	67	72	0.5%	0.5%	5	7.5%
West	164	236	0.6%	0.8%	72	43.9%
Mountain	41	63	0.5%	0.7%	22	53.7%
Pacific	123	173	0.7%	0.8%	50	40.7%

other categories. While the use of on-call and day laborers increased 8.5 percent nationwide between 1995 and 1999, their use declined in the New England states by 1.1 percent *(see Figure 27)*. In an interesting contrast, the states with the greatest increase in use of on-call workers and day laborers were the Middle Atlantic states—neighbors to the New England region. Within the Pacific states, the use of on-call and day laborers increased 8.4 percent, this while more traditional arrangements rose 12.8 percent.

The use of on-call and day laborers is the one grouping that exhibited a more consistent pattern across the regions. On-call and day labor activities have traditionally been a vehicle through which marginally attached workers could acquire

Figure 27
On-Call and Day Laborers by Census Regions and Divisions
United States, February 1995 and 1999
Source*: Bureau of Labor Statistics*

			Share of Total		Change	
	1995	**1999**	**1995**	**1999**	**Number**	**Percent**
Total U.S. (in thousands)	2,078	2,255	1.7%	1.7%	177	8.5%
Northeast	364	419	1.6%	1.7%	55	15.1%
New England	90	89	1.4%	1.3%	-1	-1.1%
Middle Atlantic	274	330	1.7%	1.8%	56	20.4%
Midwest	455	468	1.5%	1.5%	13	2.9%
East North Central	302	310	1.5%	1.4%	8	2.6%
West North Central	152	157	1.6%	1.6%	5	3.3%
South	674	736	1.6%	1.6%	62	9.2%
South Atlantic	315	328	1.4%	1.4%	13	4.1%
East South Central	112	131	1.5%	1.7%	19	17.0%
West South Central	244	276	1.9%	1.9%	32	13.1%
West	585	634	2.2%	2.2%	49	8.4%
Mountain	155	169	2.0%	2.0%	14	9.0%
Pacific	429	465	2.3%	2.2%	36	8.4%

gainful employment. During 1999 many employers across all industry sectors were having difficulty attracting workers of all skill levels. It may be that employers increased the use of on-call and day laborers as a probationary tool in their efforts to recruit new workers who have little tangible work experience.

Conclusion

With the additional data from the February 1999 CPS, it seems to be more apparent that at the national level, the use of contingent and alternative arrangement workers has a distinct cyclical component. Similar to that of part-time workers, the use of contingent and alternative arrangement workers increases during the low point of the business cycle and decreases during the high points. What is also apparent is that there is a decided labor supply dynamic at play; those regions with the lowest unemployment rates, i.e. shortages of workers, are those that recorded the most dramatic declines in those who identified themselves as contingent or alternative employment arrangement workers.

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Senior Economic Analyst

Consumer Expenditures

INCOME DEVELOPMENTS

What We Bought in 1997 and 1998

Did you know that the average consumer in the Seattle Metropolitan Area spends more money per year on booze than they do in San Francisco? Did you also know that the average consumer in the Emerald City spent more on apparel than they do in the City by the Bay? These are just some of the facts one can glean from the latest Consumer Expenditure Survey by the U.S. Department of Labor, Bureau of Labor Statistics.

According to the latest Consumer Expenditure Survey, the average expenditures per consumer unit were $43,251 in Seattle for 1997 and 1998 and $35,535 nationwide during 1998 *(see Figure 28 on the next page). Note: two years of data were needed in the metropolitan areas to reach the equivalent level of reliability as the nation.*

Well what the heck is a *consumer unit*? That is another way of saying family or household; since these are data derived from the Consumer Expenditure Survey by the Bureau of Labor Statistics, the nomenclature is a bit different from other survey data.

The raison d'être for the Consumer Expenditure Survey is to keep track of what consumers spend so as to make adjustments to the mix of goods in the Consumer Price Index. As the mix of goods changes, so too is the mix within the CPI.

National Data

National data are always more comprehensive than the local information simply because the size allows for more complete examination of detailed variables not available locally. The two variables that shall receive attention here will be age and educational attainment.

Continued page 24

The Survey

Data collections are by the Bureau of the Census under contract with BLS. In the Interview Survey, each consumer unit is interviewed every 3 months over five calendar quarters. In the initial interview, information is collected on demographic and family characteristics and on the inventory of major durable goods of the consumer unit. Expenditure information is also collected in this interview, but is used only to prevent duplicate reporting in subsequent interviews. Expenditure information is collected in the second through the fifth interviews using uniform questionnaires. Income and employment information is collected in the second and fifth interviews. In the fifth interview, a supplement is used to account for changes in assets and liabilities.

In the Diary Survey, respondents are asked to keep track of all their purchases made each day for two consecutive 1-week periods. Participants receive each weekly diary during a separate visit by a Census interviewer.

AGE

The average worker has a distinct progression of earnings throughout their working life. Most workers reach their peak earnings between their mid-forties and their mid-fifties *(see Figure 29)*. And because the more you earn the more you spend, it is in this age bracket where the greatest expenditures are found. While comparing the whole dollar amounts that consumers expend is interesting, it is also useful to compare ratios of categorical expenditures to total expenditures.

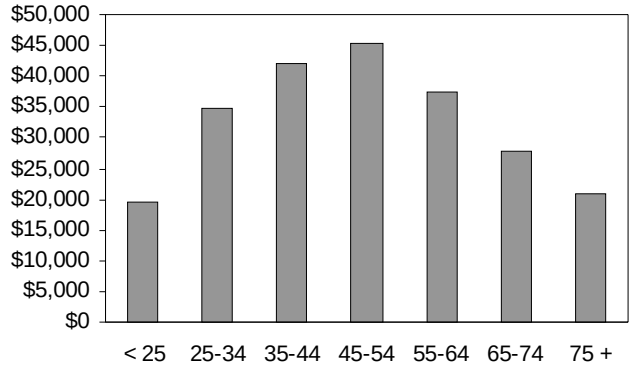
It is presumed that the more you earn the smaller the share of income spent on necessities and the greater the share of income spent on niceties. Beware that this phenomenon can be masked by the likelihood that as incomes rise the necessities will be nicer. For instance, consumer units in the 45-54 bracket spend an identical share of their annual expenditures on food as 25-43 year olds—13.2 percent—even though they expend over 30 percent more overall.

Figure 28
Average Annual Expenditures
United States & Seattle Metropolitan Area, 1997-1998
Source*: BLS, Consumer Expenditure Survey*

	U.S.	Seattle
Average annual expenditures	$35,535	$43,251
Food	$4,810	$5,461
Food at home	$2,780	$3,182
Food away from home	$2,030	$2,279
Alcoholic beverages	$309	$585
Housing	$11,713	$15,310
Shelter	$6,680	$9,637
Owned dwellings	$4,245	$6,665
Rented dwellings	$1,978	$2,294
Other	$458	$678
Utilities	$2,405	$2,272
Household operations	$546	$772
Housekeeping supplies	$482	$578
Furnishings and equipment	$1,601	$2,051
Apparel	$1,674	$2,053
Transportation	$6,616	$7,880
Gasoline and motor oil	$1,017	$1,221
Health care	$1,903	$1,644
Entertainment	$1,746	$2,740
Personal care products/svcs	$401	$484
Reading	$161	$248
Education	$580	$554
Tobacco	$273	$278
Miscellaneous	$860	$1,106
Cash contributions	$1,109	$927
Personal insurance/pensions	$3,381	$3,983

Note: U.S. data are for 1998, Seattle data are for 1997-98

Figure 29
Average Annual Expenditures by Age
United States, 1998
Source*: Bureau of Labor Statistics*



Necessity and Nicety

Food expenditures are unique in that they can illustrate the necessity/nicety dynamic. Food expenditures are categorized into *food at home* and *food away from home*. Food at home can be considered a necessity, while food away from home could be classified as a nicety. But age rather than income seems to be the largest determinant in whether one consumes their food at home or away *(see Figure 30)*.

Health Care

As people age, their concern about their health grows. Conversely, young people have relatively little concern about health care. That is quite obvious when examining the share of income spent for health care by different age cohorts. Those 25-34 years old allotted a mere 2.3 percent of their annual expenditures for health care. Compare that to the 14.0 percent expended by those 75 years and older *(see Figure 31)*.

EDUCATION

The more you learn, the more you earn. The more you earn, the more you spend *(see Figure 32)*. An old lesson to most of us. There are plenty of intuitive expenditure patterns in the data arrayed by education. Not surprising is the pattern of expenditures for shelter. The more education, the greater the earnings, the more likely the expenditures will be for an owned rather than rented dwelling *(see Figure 33 on the next page)*.

More School, Less Smoke

One of the less intuitive, though inevitably obvious, trends is found in use of tobacco. The greater the education, the smaller the share of total annual expenditures for tobacco *(see Figure 34 on the next page)*. Equally interesting was that this trend was found in the absolute dollar expenditures as well.

Continued page 26

Figure 30
Share of Annual Expenditures for Food by Age
United States, 1998
Source*: BLS, Consumer Expenditure Survey*

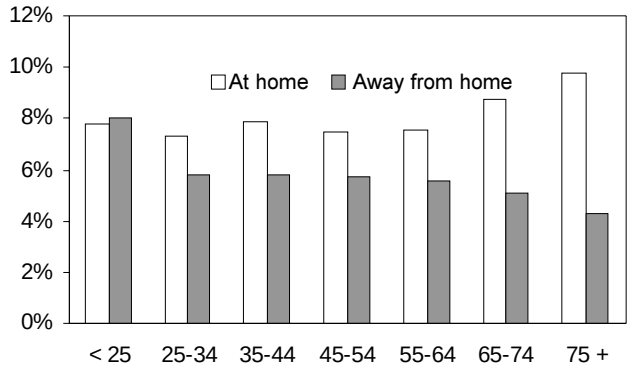


Figure 31
Share of Annual Expenditures for Health Care by Age
United States, 1998
Source*: BLS, Consumer Expenditure Survey*

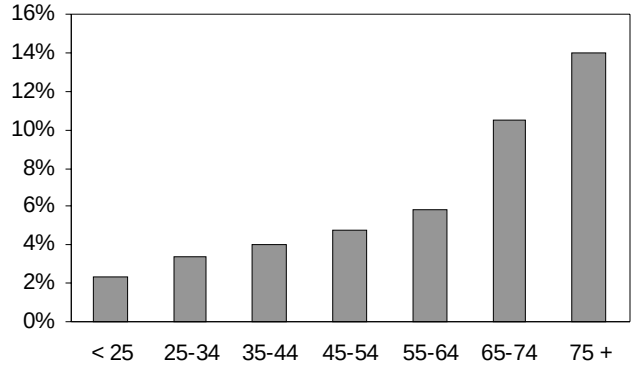
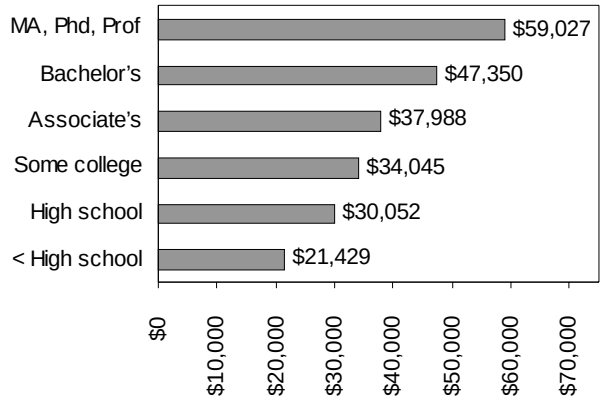


Figure 32
Total Annual Expenditures by Education
United States, 1998
Source*: BLS, Consumer Expenditure Survey*



Income Developments *continued*

Figure 33
Annual Expenditures for Shelter by Education
United States, 1998
Source*: BLS, Consumer Expenditure Survey*

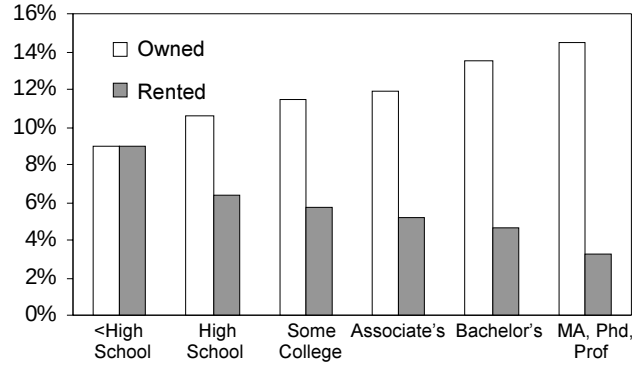
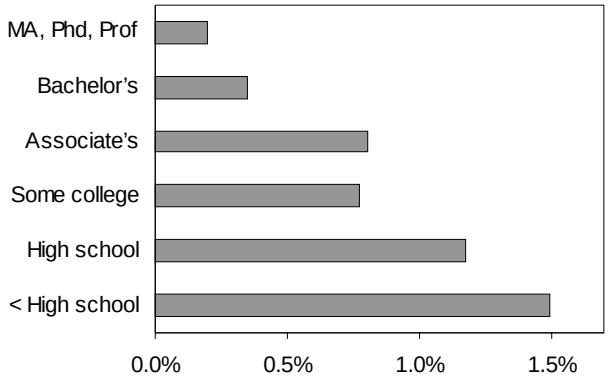


Figure 34
Share of Annual Expenditures for Tobacco by Education
United States, 1998
Source*: BLS, Consumer Expenditure Survey*



GEOGRAPHY

The Bureau of Labor Statistics collected data for those metropolitan areas where they issue Consumer Price Index reports. Rudimentary comparisons are possible using these data. One of the shortcomings of the CPI is that while it can show the gains in prices, it does not give any clue as to the base on which those gains occurred. By using these expenditure data, one can examine that base.

Total Expenditures

For those metropolitan areas in the survey, Anchorage came out on top in terms of highest annual average expenditures per consumer unit *(see Figure 35)*. San Francisco was second highest followed closely by Minneapolis-St. Paul and Washington D.C.

Figure 35
Top and Bottom Five Metropolitan Areas
by Total Annual Expenditures
Source: *Bureau of Labor Statistics*

Area	Total Expenditures
Anchorage	$49,510
San Francisco	$47,458
Minneapolis-St.Paul	$47,198
Washington D.C.	$46,679
Dallas-Fort Worth	$44,182
Kansas City	$35,890
Detroit	$35,658
Baltimore	$35,552
Miami	$35,131
Tampa	$33,036

Last on the list of metropolitan areas ranked by total annual expenditures were Tampa and Miami. No doubt the large retiree concentration in the Sunshine State tends to depress the income and expenditure averages.

The Spice of Life

Very few of the major expenditure categories—food, housing, clothing, health care—show dramatic differences between metro areas. But measurable differences arise when examining the non-necessities—reading, eating out, entertainment, and alcohol.

Reading

One of the bragging points Seattle folks like to use is the high literacy of the population. This virtue can be illustrated by the money spent on reading material. Of the metropolitan areas surveyed, Seattle ranks 4th in terms of absolute dollars spent per consumer unit at $248 per year *(see Figure 36)*. Anchorage came in first at $303 per year. On the bottom of the rankings was Miami at just $94 per year.

As a share of total expenditures, folks in Anchorage were still ranked first with 0.61 percent of total annual expenditures allotted for reading. Seattle still ranked in the top 5 metropolitan areas with 0.57 percent. Miami again ranked at the bottom with 0.27 percent of total

Figure 36
Top and Bottom Five Metropolitan Areas
by Total & Share of Annual Expenditures for Reading
Source: *Bureau of Labor Statistics*

Area	Annual Expend.	Area	Share of Total
Anchorage	$303	Anchorage	0.61%
San Francisco	$274	Boston	0.59%
Washington D.C.	$263	Cleveland	0.58%
Seattle	$248	San Francisco	0.58%
Denver	$230	Seattle	0.57%
Los Angeles	$144	Baltimore	0.35%
Tampa	$141	Los Angeles	0.35%
Houston	$132	Dallas-Ft Worth	0.33%
Baltimore	$126	Houston	0.33%
Miami	$94	Miami	0.27%

expenditures used for reading. Again, high concentrations of the elderly means that priorities are a bit different in Miami; the share of income spent on health care in Hurricane alley is one of the highest among the metropolitan areas surveyed.

Seattle Home to Oenophiles

When one thinks of Seattle, alcohol doesn't spring to mind… caffeine maybe, but not alcohol. Yet Seattle ranked first in expenditures for alcoholic beverages, both in absolute and percent terms *(see Figure 37)*. Wine is the reason. With the emergence of Washington's wine industry, the appreciation for premium wines has grown by leaps and bounds in Washington. That the Seattle area surpassed the San Francisco area—proximate to California's North and Central Coast wine growing regions—is remarkable. Of course not all the difference in expenditures is volume related, some is cost related. Though Washington State government does not have a monopoly on the sales of fermented or brewed beverages, they do on distilled alcoholic beverages and the taxes on all alcohol are quite high. The resulting higher costs are likely represented in the expenditure data.

On the low end of the scale of alcoholic beverage expenditures was Atlanta. In real dollar amounts, as well as share of total expenditures, Atlanta was firmly ensconced on the bottom of the list. Cost elements may also be at play here. Georgia's wine and beer excise taxes are well above the national average; this may play a part in suppressing demand.

That's Entertainment

After examining these data, one could conclude that Alaska must be a really fun place. In total dollars spent on entertainment, the average consumer unit in Anchorage spends $3,472 per year; that's over $700 more per year than second place Seattle *(see Figure 38)*. The long winter nights probably have a lot to do with how much these folk clamor for amusement and diversion. The same with people in the Seattle area, not necessarily because of the cold and dark, but certainly because of the drismally weather.

Continued page 28

Figure 37
Top and Bottom Five Metropolitan Areas
by Total/Share of Ann. Expend. for Alcoholic Beverages
Source: *Bureau of Labor Statistics*

Area	Annual Expend.	Area	Share of Total
Seattle	$585	Seattle	1.35%
Denver	$551	Denver	1.31%
Minneap-St.Paul	$525	Boston	1.23%
Anchorage	$484	Tampa	1.18%
Boston	$469	Minneap-St.Paul	1.11%
Pittsburgh	$271	Houston	0.69%
Miami	$238	Miami	0.68%
St. Louis	$234	St. Louis	0.63%
Kansas City	$219	Kansas City	0.61%
Atlanta	$175	Atlanta	0.45%

Figure 38
Top and Bottom Five Metropolitan Areas
by Total & Share of Annual Expend. for Entertainment
Source: *Bureau of Labor Statistics*

Area	Annual Expend.	Area	Share of Total
Anchorage	$3,472	Anchorage	7.01%
Seattle	$2,740	Detroit	6.44%
Denver	$2,411	Seattle	6.34%
Minneap-St.Paul	$2,404	Cleveland	6.24%
San Francisco	$2,316	Denver	5.73%
St. Louis	$1,753	Portland	4.46%
Milwaukee	$1,664	Los Angeles	4.41%
Tampa	$1,499	Miami	4.23%
Miami	$1,486	Kansas City	4.10%
Kansas City	$1,471	Dallas-Ft Worth	4.06%

Income Developments *continued*

Consumer units in Kansas City, Miami, and Tampa spent the least on entertainment, all less than $1,500 per year. Measured in shares, consumers in Dallas-Fort Worth expended the least at 4.06 percent of total expenditures. This may be a function of what consumers consider diversion. As a portion of their disposable income, the trade-off between entertainment and eating out is probably one-to-one.

Eating Out

Dinner and a show… or just dinner… or just a show. When it comes to making those choices, consumers in Dallas-Fort Worth are more likely to opt for just the dinner *(see Figure 39)*. Folks in Anchorage are more likely to choose just the show. These two areas have distinctly different tastes: Of all the metropolitan areas in the survey, the Texans spend the most on food away from home, and the least on entertainment, while the Alaskans spent the least on food away from home and the most on entertainment. Go figure.

Figure 39
Top and Bottom Five Metropolitan Areas
by Total/Share of Ann. Expend./Food Away from Home
Source: *Bureau of Labor Statistics*

Area	Annual Expend.	Area	Share of Total
Dallas-Ft Worth	$2,917	Dallas-Ft Worth	6.60%
Honolulu	$2,727	New York	6.59%
New York	$2,708	Honolulu	6.40%
San Francisco	$2,465	Cincinnati	6.02%
Minneap-St.Paul	$2,354	Detroit	5.99%
Atlanta	$1,857	Washington D.C.	5.03%
Philadelphia	$1,849	Minneap-St.Paul	4.99%
Miami	$1,839	Philadelphia	4.85%
Baltimore	$1,805	Atlanta	4.72%
Tampa	$1,761	Anchorage	4.59%

Conclusion

So, you earn money... you spend money. No doubt you have wondered if you spend money the same as others. The latest data on consumer expenditures can provide those answers to an impressive level of economic, demographic, and income detail.

For local readers, the latest data are comforting; if you get the feeling that everybody except you is pulling down mucho bucks from timely investments in skyrocketing IPOs, or exercising greatly appreciated stock options, take heart… that's not the case. Nonetheless, the Seattle area is among those with the highest expenditures per consumer unit, and well above the national average. The Seattle area is among the leaders in expenditures for reading, entertainment, alcoholic beverages (wine no doubt), and eating out. These elements are further evidence of the growing cosmopolitan character of the Puget Sound region.

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Index

Feb. 1999 to Nov. 1999