

Oregon Had Strong Growth in 2005, Record Employment in Some Sectors

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At the beginning of each year, the Oregon Employment Department revises – or “benchmarks” – recent years’ employment and unemployment data using unemployment tax records that are more reliable than monthly survey results. The survey data are used initially because they are timely; they can be collected and published in a few weeks. The tax records take several months to compile, so they are used annually.

Oregon’s economy experienced strong growth in 2005. Revised employment data showed that growth was slightly lower than previously estimated. Data originally placed the difference in annual average employment from 2004 to 2005 at 3.4 percent. Revised data showed that it was 3.1 percent. The revised trend for 2005 was about the

same as the original; it was steadier with fewer bumps along the way. Record levels of employment were reported in some sectors. The state unemployment rate was revised, but

remained essentially unchanged. These are some of the findings from the annual benchmark

of Oregon’s labor force data.

Oregon’s seasonally adjusted total nonfarm employment grew every month of 2005.

State Unemployment Rate Revision

Oregon’s 2005 unemployment rate was lowered to an annual average of 6.1 percent from a preliminary figure of 6.3 percent. A revision of this magnitude is not considered statistically significant. This was the lowest the average unemployment rate had been since 2000 when it was 5.1 percent.

Payroll Employment Changes

Oregon’s seasonally adjusted total nonfarm employment grew every month of 2005. Initial figures had shown dips during May and October. In the 12 months ending December 2005, growth was 3.4 percent with 55,300 jobs added. Growth during 2004 was 3.1 percent with 48,500 jobs added.

For this benchmark revision, original total nonfarm employment numbers for 2004 and 2005 were revised upward every month. This was primarily due to the inclusion of home care workers into the data for the first time. These workers provide

Unemployment Rates 2005 Annual Avg. (%) County

Grant	9.9
Harney	9.1
Malheur	8.8
Lake	8.5
Douglas	8.1
Umatilla	7.9
Klamath	7.6
Wallowa	7.6
Baker	7.5
Morrow	7.5
Linn	7.4
Columbia	7.3
Coos	7.3
Sherman	7.2
Wasco	7.1
Josephine	6.9
Union	6.9
Crook	6.7
Lincoln	6.7
Curry	6.5
Hood River	6.4
Marion	6.4
Wheeler	6.4
Multnomah	6.2
Jefferson	6.1
Lane	6.1
Yamhill	6.1
Jackson	6.0
Tillamook	6.0
Gilliam	5.8
Clatsop	5.7
Deschutes	5.5
Polk	5.5
Clackamas	5.4
Washington	5.2
Benton	4.8

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services in the homes of seniors and people with disabilities.

The following sections highlight the revisions in some of Oregon's industry sectors. The data used in the text and graphs are not seasonally adjusted.

Construction

Construction enjoyed strong growth during 2005.

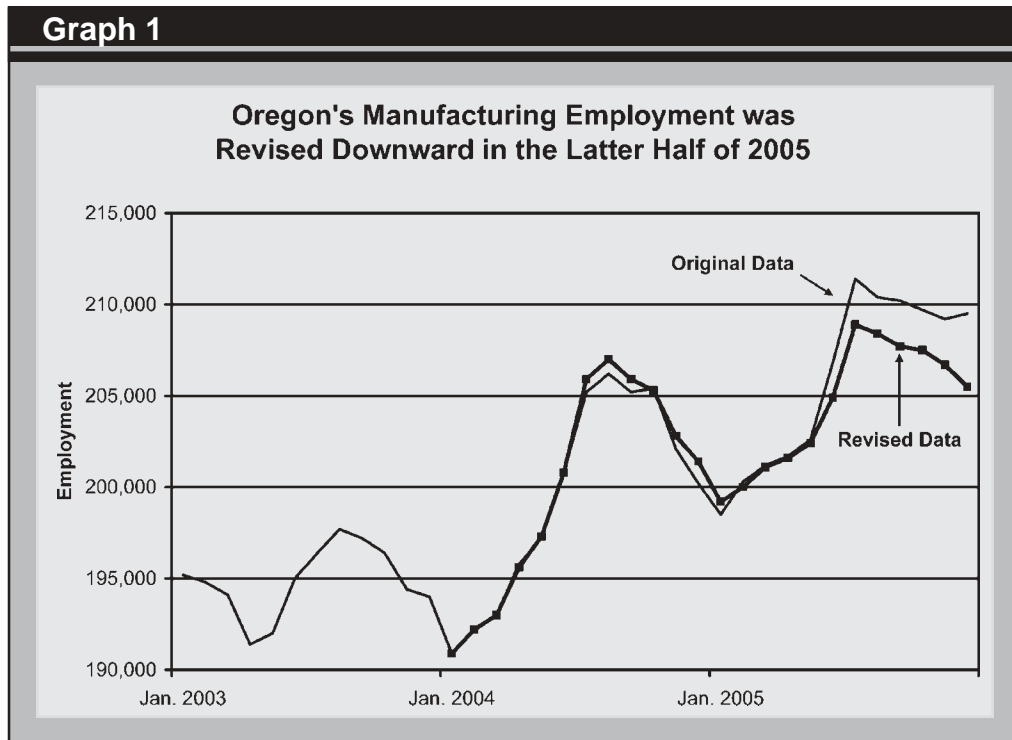
Benchmarked data show that monthly employment was slightly higher than previously estimated throughout the year, except for November. The annual average was 91,000 jobs, which easily set a new record from the previous high of 82,900 jobs reached in 1999 and 2000.

Analysis showed that 2004 employment was significantly stronger in the summer than prior data suggested. The revised 2004 average employment level was 82,700 jobs, up from an original 82,300. The rate of job growth was 9.0 percent from December 2003 to December 2004 and 11.7 percent from December 2004 to December 2005.

Manufacturing

The typical seasonal pattern for this sector is growth during the first half of the year, with decline in the second. Benchmarked employment data show that in 2005 the mid-year peak was lower, along with a steeper decline in jobs during the fourth quarter (Graph 1). This decline was due to weakness in food manufacturing and various durable goods industries that had not been identified in earlier estimates. This

Graph 1



lowered the annual average employment to 204,500 jobs from the pre-benchmark 206,000 jobs.

On the other hand, the employment peak in 2004 was revised upward, raising its annual average slightly to 199,800 jobs. This upward growth was facilitated by summer activity in

Benchmarked data for financial activities reveals many more jobs added to this sector than initially estimated.

food manufacturing that was greater than originally estimated.

Retail Trade

Job levels in retail trade were lower than originally estimated for most of 2005. While 2004 data were relatively unchanged, the post-holiday drop for January 2005 was deeper than previously thought. This event lowered the starting employment level for 2005, which resulted in lower monthly levels throughout the year. The rate of job growth did pick up in

the latter half of 2005 however, with benchmarked employment for December 2005 down by only 100 jobs from the prior estimate for this month.

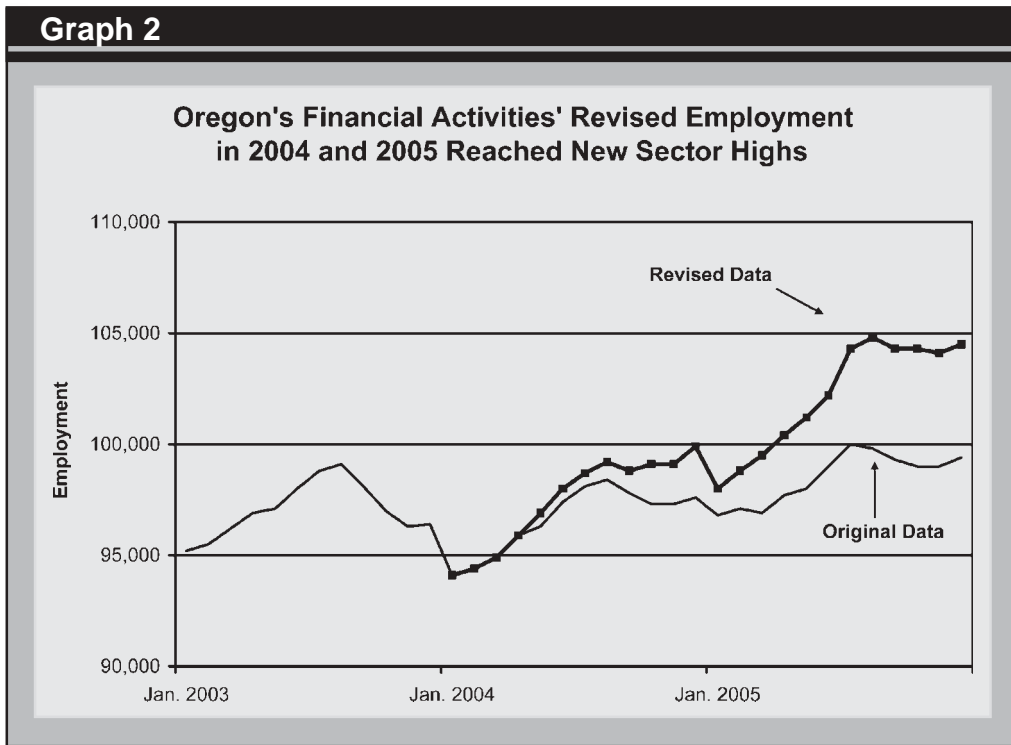
Annual average employment in 2005 was 193,700 jobs, down from the previous calculation of 195,700 jobs. The change in 2004 annual average employment was less marked. The benchmarked level was 187,800, or 400 less than previously thought.

Financial Activities

Benchmarked data for financial activities reveals many more jobs added to this sector than initially estimated. As seen in Graph 2, significant upward revisions were made to the 2004 and 2005 data. Real estate employment was a major cause of this revision, especially during 2005 when its benchmarked average employment went up by 2,500 jobs.

The rate of job growth in financial activities from December 2004 to December 2005 was 4.6 percent, with an average employment level

Graph 2



185,100 jobs in 2005. The 2005 figure was a new record, beating the 2000 number of 182,400 jobs.

Conclusion

The benchmark of Oregon's 2005 employment reveals strong job growth, despite a small downward revision in the growth rate. Every month was revised upward in terms of total employment. Record levels of annual employment were set in construction, financial activities, and professional and business services. Manufacturing and retail trade had less growth than initially estimated. Overall 51,500 jobs were added over the

of 97,400 jobs in 2004 and 102,200 jobs in 2005. This made 2005 and 2004, respectively, the first and second highest years in average employment on record.

computer system design and related services.

Annual average employment for professional and business services was 176,200 jobs in 2004 and

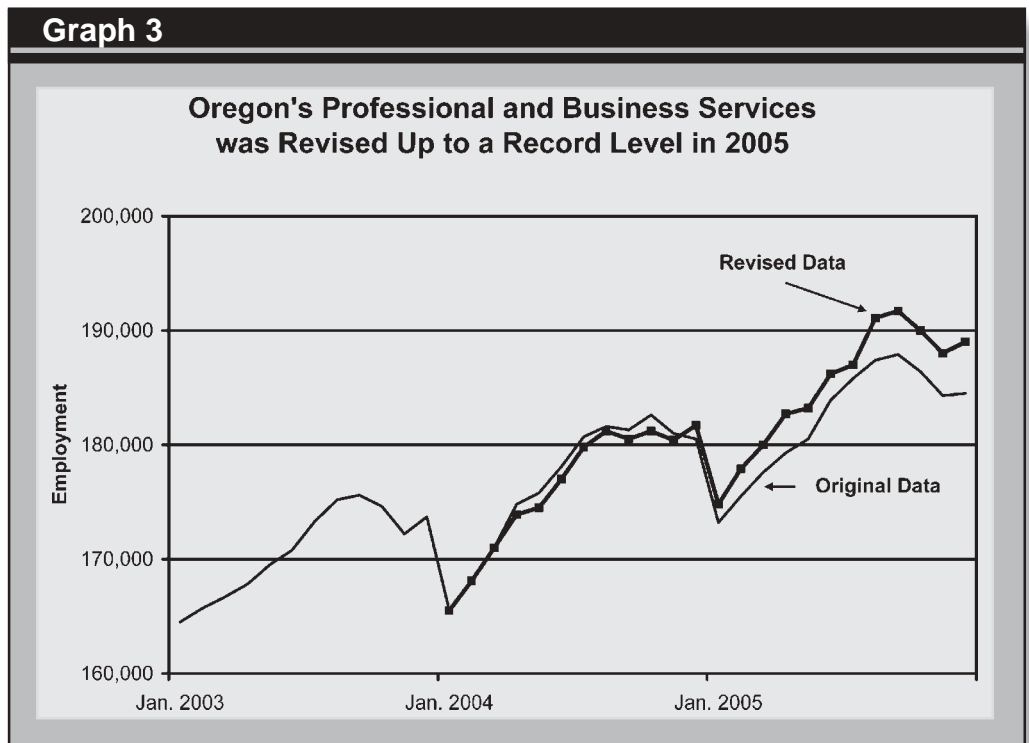
year for a growth rate of 3.1 percent. The average state unemployment rate was revised down slightly to 6.1 percent, its lowest level since 2000. ■

Professional and Business Services

Benchmarked data paints a varied picture of job activity in this sector. The latest data show that during 2004, professional and business services had lower monthly employment from April to November than originally estimated. In 2005, the story was different. Monthly employment was revised upward every month, for an average revision of 2,900 jobs (Graph 3).

Overall job growth from December 2004 through December 2005 was 4 percent, rather than the previously thought 2.2 percent. Significant contributors to this revision included industries like employment services and

Graph 3



Income Varies For Northwest Neighbors

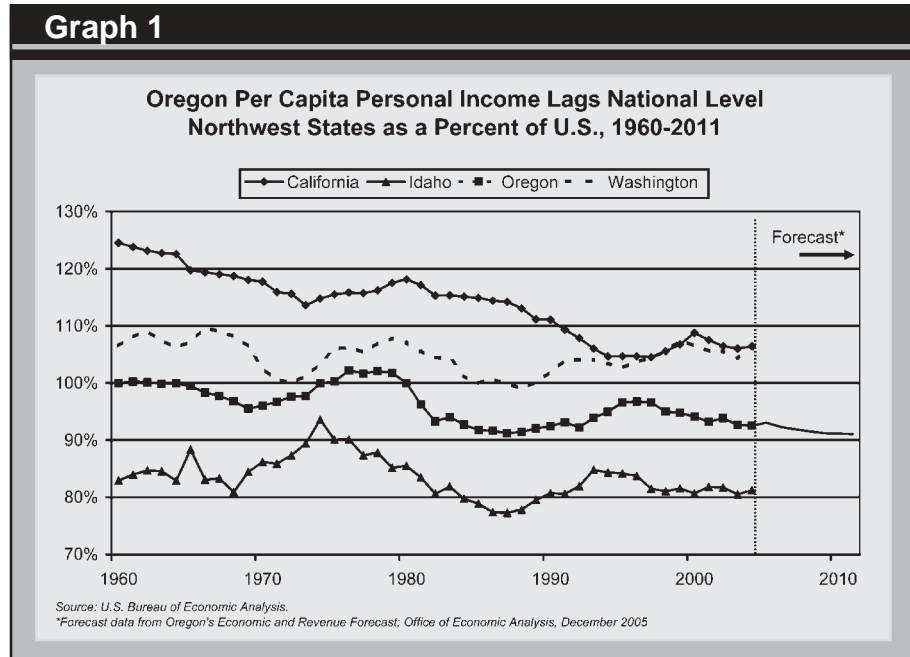
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Industry Structure, Other State Features Shape PCPI

The per capita personal income (PCPI) of Oregonians has fallen below the U.S. average since the early 1980s. For an even longer period, PCPI in Oregon has been lower than in Washington and California. What could be causing these sustained differences?

PCPI is generally lower in rural than in urban areas. For at least the past decade, PCPI in Oregon's nonmetro areas has equaled about 80 percent of income statewide. And compared with its northern and southern neighbors, Oregon has a measurably higher share of rural population: in 2004, 23 percent of Oregon's total population lived in nonmetro areas, compared with 13 percent in Washington and 2 percent in California. Together, these factors can explain at least part of Oregon's differing trend.

Other factors including industry mix and population trends have also shaped total and nonmetro PCPI. Through the mid-1970s, a boom in the timber industry boosted Oregon's total PCPI above 100 percent of the U.S. measure, and nonmetro PCPI reached 115 percent of the U.S. nonmetro income. The trend didn't last. Industrywide restructuring and



economic weakness in the early 1980s trimmed timber harvests and employment. After a pronounced drop, the statewide measure climbed again with employment gains well above population growth between 1993 and 1997. When growth slowed in 1998 and 1999, population gains continued. Oregon's PCPI declined slightly as a share of the U.S. measure, and the decline continued as Oregon and the nation entered recession in 2001.

As the past decade shows, changes in PCPI are usually the product of several trends. Parts of Oregon's industry mix have probably made the state more vulnerable to economic

changes than some of its neighbors, and Oregon has seen strong population growth even through recent economic downturns. The *December 2005 Economic and Revenue Forecast* expects population growth to keep downward pressure on Oregon's PCPI through the forecast horizon, but the ultimate outcome – a product of industry, economy, population, and other factors – could surprise.

For the most recent version of Oregon's *Economic and Revenue Forecast* (December 2005), visit <http://www.oregon.gov/DAS/OEA/economic.shtml> and click on "Most Recent Forecast." ■

Oregon Rankings Improve in 2005

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In December 2004, Oregon's unemployment rate was the fourth highest in the nation at 7.0 percent. The state's unemployment situation improved in 2005, as did the nation's. In December 2005, Oregon had the ninth-highest U.S. unemployment rate at 5.7 percent.

The national unemployment rate was 4.9 percent in December; state rates ranged from a low of 2.7 percent in Hawaii to a high of 9.9 percent in Mississippi.

While Oregon's employment in 2004 grew by 2.8 percent, 2005 brought even stronger growth – 57,100 payroll jobs for a 3.5-percent boost. That was the fifth-fastest growth in the nation.

Over-the-year employment change among the states ranged from a 10.2-percent loss in Louisiana to a 5.8-percent gain in Nevada.

Oregon's fastest-growing industry last year was construction. It added 14.0 percent – the third-fastest growth nationwide for that sector. Information also surged. It grew 8.5 percent – the second-fastest over-the-year growth in the nation. ■

*Local Highlights:***Salem Managed to Weather the Recession Better Than the State**

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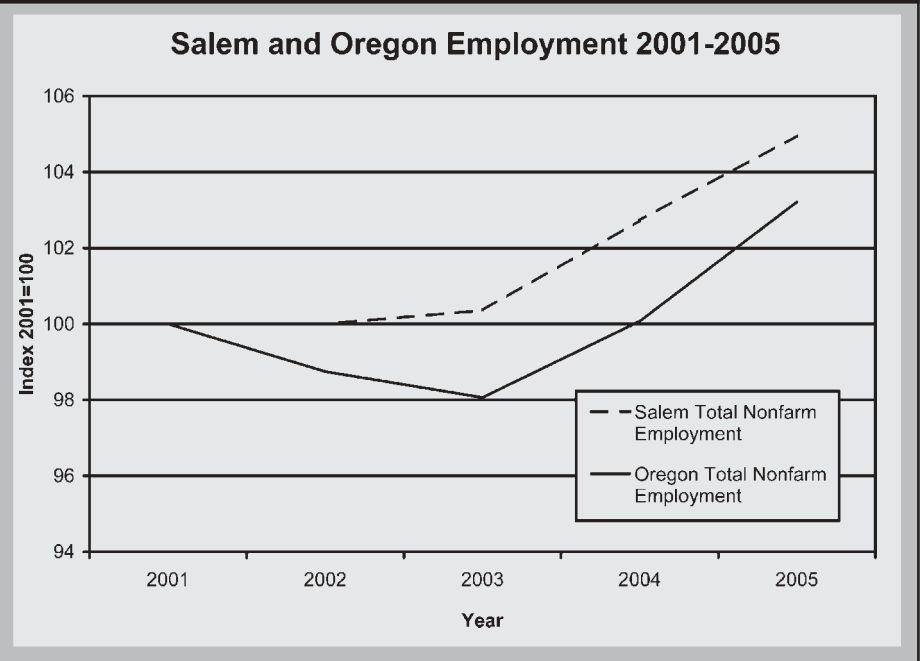
Why hasn't the Salem Metro area's employment growth kept pace with statewide growth over the past year? The Salem Metropolitan Statistical Area (MSA), which includes all of Marion and Polk counties, increased its total nonfarm employment by 2.2 percent from 2004 to 2005. In comparison, Oregon's employment expanded 3.1 percent over that period.

To answer that question, it's necessary to look at the employment change over a longer period of time. Sometimes a single year's employment change does not provide enough information to evaluate an area's economy.

Salem certainly had industries that were hard hit during the recession that began in 2001. However, the recession's impact on Salem was relatively mild compared with the state.

Between 2001 and 2002, Salem's manufacturing sector declined 5.3 percent. Other sectors in Salem, most notably professional and business services, gained enough jobs to offset the jobs lost in manufacturing. In 2002 Salem's total nonfarm employment remained at the same level it was in 2001. On the other hand, Oregon's employment declined 1.3 percent from 2001 to 2002 (Graph 1). From 2002 to 2003 Oregon's employment declined 0.7 percent while the Salem MSA grew 0.4 percent.

From 2003 to 2004 both Salem and Oregon managed to gain jobs, Oregon's employment grew

Graph 1

2.1 percent while Salem expanded 2.4 percent.

The job loss that Oregon experienced in 2001, 2002 and 2003 contributed to the state's rapid employment growth following the recession. Typically, if a recession is short enough that an area doesn't see a large out-migration of its workforce or a large number of companies going out of business, rapid job growth during the recovery would be expected. As the business climate improves, companies add jobs that may have been lost during the recession. Although finding highly qualified workers is always a challenge for employers, it is typically easier following a recession.

The Salem MSA's job growth slowed to a snail's pace during the recession, but it didn't have declines in employment like the state experienced. Because Salem didn't

have to "dig itself out of the hole" in terms of employment growth as the state did, it stands to reason that job growth during the recovery has not been as robust in Salem as it has been in Oregon.

When we look at the change in employment from 2001 to 2005, Salem grew 5.0 percent, while Oregon's employment expanded 3.2 percent. Oregon's employment had a dramatic rollercoaster ride from 2001 to 2005. Salem's slow and steady job growth since 2001 may not provide the excitement of a rollercoaster, but the area's employment growth is managing to keep pace in the long run.

For more information on specific regions, visit www.QualityInfo.org, select "Regions" from the list on the screen's left, then choose an area on the map or from the drop-down menu under the map. ■

Strong Start to the New Year

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Oregon's economic expansion continued its momentum into the New Year. The state posted a seasonally adjusted increase of 2,900 jobs on nonfarm payrolls in January.

Comprising nearly 50 percent of tracked employment,

Oregon's top three industries – trade, transportation, and utilities; manufacturing; and government – all outperformed their seasonally adjusted trends.

Another positive sign was the seasonally adjusted unemployment rate, which was 5.3 percent in January, essentially unchanged from 5.7 percent the prior month. The rate has dropped by more than one percentage point over the prior 12 months, from 6.5 percent in January 2005. The latest figure was the lowest reported since January 2001 when Oregon's unemployment rate was 5.2 percent.

Oregon's year-over-year nonfarm payroll employment also shows solid growth. The state logged an increase of 58,800 jobs in January 2006 compared with a year ago. And the news is even better when comparing current employment figures across major industries in the state. Of the 11 major industries tracked, only natural resources and mining declined from January 2005.

Post-Holiday Job Cuts Lighter Than Expected

The trade, transportation, and utilities sector represents the largest share of Oregon's nonfarm payroll jobs. It led the pack in seasonally

adjusted monthly job gains with 2,400 jobs above the expected employment change in January. This sector is also the biggest gainer in total jobs over the past 12 months, having racked up a gain of 13,400 jobs since January 2005.

Oregon's year-over-year nonfarm payroll employment also shows solid growth.

The health of the overall employment in this sector is heavily influenced by job levels in retail and wholesale employment, which are highly seasonal. Following a ramp up of 12,600 jobs between September and December 2005, retail trade marked the end of the holiday shopping frenzy by cutting 12,000 workers from January payrolls. Most of January's retail jobs were lost in clothing and accessories stores (-3,200), general merchandise stores (-3,100), and nonstore retailers (-3,300). In spite of these losses, retail is up a whopping 9,100 jobs over the past 12 months. Wholesale trade cut 800 jobs in January, but is up 2,900 since January 2005.

The other major component industries for this sector did not swing widely in January. Utilities dropped by 100 jobs, while transportation and warehousing gained 300.

Manufacturing and Government Payrolls Top Seasonal Expectations

While 1,000 jobs were cut in manufacturing, the expected employment drop for this time of year is 2,900. The largest loss of manufacturing jobs was in wood product manufacturing, which dropped by 1,100 in January. Fabricated metal product manufacturing lost an additional 300

jobs. These losses were partially offset by a gain of 400 jobs in nondurable goods. Major movers in nondurable goods were food manufacturing (+500), printing and related support activities (+300), and plastics and rubber products manufacturing (-400). In addition, primary metal manufacturing, machinery manufacturing, and computer and electronic product manufacturing were each up 100 jobs from December.

The manufacturing sector is up 5,300 jobs, or 2.7 percent, over a year ago. This represents a sizable chunk of Oregon's net job growth since January 2005; however, the manufacturing growth rate is a full percent lower than the comparable figure for nonfarm payrolls over the same period.

Oregon's construction employment is up 10,800 jobs over a year ago.

It may seem like a large number, but a decrease of 1,700 jobs in government actually beats seasonal expectations, which projected a loss of 2,900. The job cuts were due primarily to seasonal declines in public education at both the state and local levels. Despite the generally favorable January figures for government employment, the sector is essentially flat compared with the prior year (Graph 1).

Construction Slows but Remains Bright

Record rainfall and flooding in many areas of the state took their toll on January construction employment. Construction lost 3,600 jobs in January when a decrease of 3,400 is normal for the time of year. In

recent months, the industry had departed from its typical seasonal trend by retaining more jobs than expected as winter set in.

Oregon's construction employment is up 10,800 jobs, or 13.4 percent, over a year ago. The industry has been an important factor in the state's economic expansion. January-to-January construction employment growth was more than triple the rate of nonfarm employment in each of the past two years.

Service Sectors Contribute to Recovery

Although both the professional and business services sector and the education and health services sector lost jobs in January, neither cut quite as many employees as forecast by seasonal trends. Growth in the professional and business services and the health services sectors has strengthened the overall recovery of nonfarm jobs in the state, averaging annual increases of 3.7 percent and 4.6 percent, respectively, over the past 12 months. Up 3.4 percent since January 2005, the smaller other services sector has expanded more slowly.

Professional and business services lost 7,700 jobs in January. This was in line with typical seasonal trends for the sector. Most of the losses were in administrative and waste services (-6,500 jobs) and professional and technical services (-800 jobs). Despite these developments, the sector was up 6,500 jobs from one year ago and has been on the uptrend since April 2003.

Education and health services lost



4,300 jobs in January. This was facilitated by a 3,900-job decline in educational services. Most major component industries lost jobs, except for a 500-job gain in nursing and residential care facilities. As a whole, educational and health services was up 8,900 jobs over the year. It has demonstrated the steadiest growth trend of any sector over the past several years.

Down 1,300 jobs since December, the other services sector suffered its largest losses in personal and laundry services (-600) and membership associations and organizations (-600). Other services had 1,900 more jobs in January 2006 than 12 months prior.

Leisure and Hospitality, Financial Activities Strong Despite January Downturn

Although leisure and hospitality lost 3,600 jobs in January, the sector is still up 7,200 jobs, or 4.8 percent, over the past 12 months. Arts,

entertainment, and recreation lost 400 jobs. Accommodation and food services shed 3,200 jobs, due to a 1,700-job decline in limited-service eating places.

Financial activities lost 1,700 jobs. This was 500 more than what is typically lost for the month. Real estate alone shed 1,200 jobs. Nonetheless, overall financial activities employment was up 4,800 jobs from January 2005.

Information Tepid, Natural Resources Drags

Information lost 300 jobs in January, with most of its component industries reporting flat job activity. Information was up 700 jobs over the past 12 months. This increase in jobs is in marked contrast to the year-over-year figure reported in January 2005, when the information sector showed virtually no change in employment. At that time, most of Oregon's other sectors were demonstrating strong growth. At a

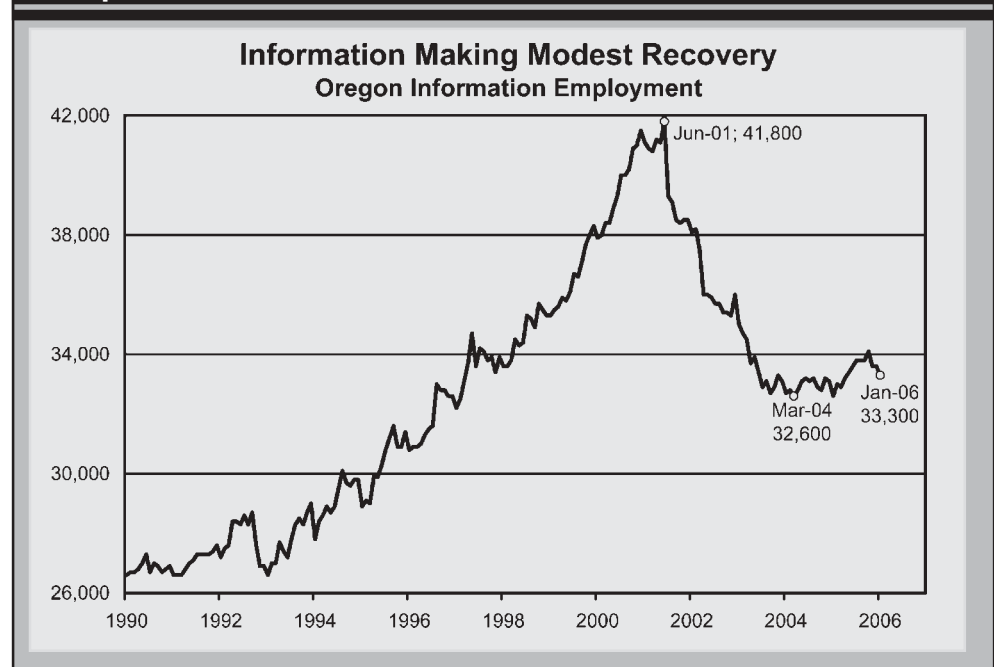
count of 33,300 jobs in the current January, information employment remains well below its peak of 41,800 jobs seen in June 2001 (Graph 2).

Employment in the natural resources and mining industry continues to wane. The sector declined by 400 jobs from December, including a loss of 300 in logging. Logging jobs account for more than 75 percent of employment in Oregon's natural resources and mining sector. The latest numbers showed overall employment in natural resources and mining off by 9.8 percent, or 900 jobs, compared with January 2005.

Employment Growth Beats National Average, Unemployment Gap Narrows

While every major sector lost jobs in January, the decreases were milder than the seasonal projections in most cases. Year-over-year changes in the various sectors provide a better window into Oregon's current employment situation. And that

Graph 2



longer view looks quite positive. In January 2006, Oregon's nonfarm employment was up 3.7 percent over the past 12 months, far exceeding over-the-year nonfarm employment growth of 1.6 percent reported at the national level.

Oregon's seasonally adjusted unemployment rate of 5.3 percent in January was only 0.6 percentage point above the comparable U.S. unemployment rate of 4.7 percent. This was the tightest Oregon's rate has been to the U.S. rate since September 1997, when the gap was also 0.6 percentage point. ■

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Lean Manufacturing: The Future of Oregon Industry?

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Definition and Importance

Oregon's manufacturing industry employs more than 200,000 people and produced \$19.6 billion dollars in goods in 2004. In a climate of increasing global competition and rapid technological advance, manufacturers must be innovative to

succeed. Lean

manufacturing, a management philosophy focusing on reducing waste, offers tools and principles to help

factories produce more and better products without hiring more employees or buying more equipment.

The struggle to increase productivity is as old as American manufacturing. In the late 19th century, engineer Frederick Winslow Taylor introduced a scientific approach to improving industrial efficiency. Later, Henry Ford brought the production line to automobile making, with standardized parts and simplified work in smaller units. Today, successful Oregon manufacturers are discovering the benefits offered by lean manufacturing techniques.

What is lean manufacturing? The term encompasses a range of principles, tools and techniques that improve the manufacturing process in a number of ways. "Lean" is primarily interested in reducing waste in the manufacturing process. Reducing waste improves product quality and reduces production time and costs.

History and Methods

If lean manufacturing had a father, it would be Toyota engineer Taichi Ohno. Ohno's innovations at Toyota in the mid-20th century were the foundation for the company's legendary efficiency. Because of this, the term "lean manu-

facturing" is widely considered to be a generic term for the Toyota production system.

In the late 1940s, Ohno was in charge of a machining shop. He experimented with various ways of setting up the equipment to produce needed items in a timely manner. But he got a whole new perspective on just-in-time production when he visited the United States in 1956.

The struggle to increase productivity is as old as American manufacturing.

Ohno came to visit automobile plants, but his most important U.S. discovery was the supermarket. Japan did not

have many self-service stores yet, and Ohno was impressed. He marveled at the way customers chose exactly what and how much they wanted and he admired how supermarkets supplied merchandise in a simple, efficient, and timely manner.

Later, Ohno often described his production system in terms of the American supermarket. Each production line arrayed its diverse output for the following line to choose from, like merchandise on supermarket shelves. Each line became the customer for the preceding line, and each line became

Lean is primarily interested in reducing waste in the manufacturing process.

a supermarket for the following line. The following line would choose only those items it needed. The preceding line would produce only replacement items for the ones the following line had selected.

This led to one of lean manufacturing's biggest innovations – the "pull" production line. On an assembly line, products

are often "pushed" through from the beginning. Lean "pulls" products through. The last person on an assembly line does not complete the product until he gets a signal that a product has been ordered. Once finished, he signals the second-to-last person on the assembly line to replenish his supply of "in-process" product.

Like a grocery store that only restocks the shelves of goods that have been bought, and the stock room with only the goods that are missing, the single assembly line can produce multiple products according to orders for those specific products. More importantly, by having each operator manufacture in batch sizes of just one, partially assembled product doesn't clog the line.

With lean manufacturing, the result is smooth flow of product between work stations. Product moves quickly in a fluid rhythm, without piling up or jumping around. Developing this system requires thinking

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creatively about process, but most of all it depends on an obsession with eliminating waste.

Process Targets Waste

Lean manufacturing makes production improvements possible by eliminating sources of waste. Waste can be considered as any activity or resource in an organization that does not add value to an external customer. Ohno identified seven types of waste in a production process, and for each one an approach to help eliminate it from the assembly line.

Overproduction is the first source of waste. Overproduction equals making

an item before it is needed. This is costly to a manufacturing plant because it prohibits the smooth flow of materials and degrades quality and productivity. The Toyota system is referred to as “just-in-time” because every item is made as needed. The solution is to schedule and produce only what can be immediately sold or shipped.

Waiting wastes time in the production process. Much of production time is tied up in waiting for the next operation in the assembly process. This is usually because material flow is poor, production runs are too long, and distances between work centers are too great. Experts observe that one hour lost in a bottleneck process is one hour lost to the entire factory’s output, which can never be recovered. Linking processes so that one feeds directly into the next can dramatically reduce waiting.

Transporting product between processes is a cost that adds no value to the product.

Excessive movement and handling cause damage and can reduce quality. Material handlers may be used to transport the materials, resulting in another organizational cost that adds no customer value. Lean manufacturing calls for mapping the product flow to better visualize ways to change shop floor layouts.

Inappropriate processing is a fancy term for overkill. Many organizations use expensive high-precision equipment where simpler tools would do. This often results in poor plant layout because preceding or subsequent operations are far apart. In addition, such equipment encourages overproduction to recover the high cost of this equipment. Investing in smaller, more flexible equipment where possible, creating manufacturing cells, and combining steps reduces inappropriate processing.

Unnecessary inventory is a direct result of overproduction and waiting. Excess inventory tends to hide problems that must be identified and resolved to improve operations. Excess inventory increases lead times, consumes productive floor space, delays identification of problems, and inhibits communication.

Excess motion is related to ergonomics and is seen in bending, stretching, walking, lifting, and reaching. These are also health and safety issues. Jobs with excessive motion should be analyzed and redesigned for improvement with the involvement of plant personnel.

Quality defects resulting in reworking product or scrapping product are a huge cost to manufacturers. Associated costs include quarantining inventory, reinspecting, rescheduling, and capacity loss. In many organizations the total cost of defects is often a significant percentage of total manufacturing cost. Defects can be reduced

“Doing wasteful things is pretty frustrating to employees. The fact they have a voice is part of the process.”

—Gary Snell, Oregon Manufacturing Extension Partnership

by identifying the source of defects in the manufacturing process and ensuring such defects are dealt with before product moves down the assembly line.

Lean Implementation in Oregon

Boosting efficiency and decreasing production cost is clearly attractive for financial reasons, but would you want a job with a company that obsessively works to eliminate waste?

The Oregon Manufacturing Extension Partnership (OMEP) is a nonprofit group that helps businesses adopt lean manufacturing practices. OMEP

holds regular classes and offers private consulting to companies that want to adopt lean manufacturing processes. The goals of OMEP are to create and retain jobs, increase workforce skills, and help businesses reduce or avoid costs wherever possible. OMEP is now working with more than 50 businesses on contracts that can last from three to 24 months.

Gerry Snell of OMEP says employees are at the core of lean manufacturing improvements. “We try to get the changes created by the people who do the work,” Snell said. “Doing wasteful things is pretty frustrating to employees. The fact they have a voice is part of the process.” The most important part of running a lean operation may indeed be bringing employees into a culture that embraces lean principles.

Relentless Elimination of Waste

Consumer tastes change. Technology pushes change ever faster and global competition forces Oregon business to keep up. The ideal manufacturing layout from last month may no longer apply this month. Lean manufacturing requires companies to always seek new and better ways to eliminate wasteful processes. Snell calls lean manufacturing “the change you start now that never ends.”

When you study lean principles you hear a lot about “culture.” Consultants and textbooks emphasize that all employees at a company must understand the value in reducing waste. The people who see the opportunities to improve the process are the employees themselves. Each employee should understand the value of lean principles and be encouraged to suggest changes that will help reduce waste. Lean manufacturing isn’t about making employees work like machines, it’s about employees making the production system work better. ■

Definitions and Measurements Vary For Working Poor

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Do most poor people work? The short answer is yes. How much they work and reasons they don't are complicated.

Dr. Bruce Weber of Oregon State University has spent most of his career studying poverty in the state. "Working poverty is the outcome of a complex web of factors," he says. And statistics don't answer all the questions. Poverty status is a measure of family or household income, but poverty statistics are often reported on individuals. These people live in poor households or alone.

As we try to answer the question posed at the beginning of this article, keep the following in mind. One person working full-time and year-round at Oregon's 2006 minimum wage (\$7.50 an hour times 2,080 hours) would earn \$15,600 in one year. The 2005 poverty level for one person is \$9,750. A household with two people working full-time year-round at minimum wage would earn \$31,200. Poverty level income for an eight-person family is \$32,390.

One of the most important factors related to poverty is the number of workers in a household.

How Many Workers are Poor?

In 2003, there were nearly 7.5 million people 16 and older nationwide who were working or

actively seeking work for 27 weeks or more who lived in poor households, according to the Bureau of Labor Statistics (BLS). The BLS defines workers as those in the labor force for at least 27 weeks in a year. One of the most important factors related to poverty is the number of workers in a household.

The more workers in a household, the less likely the household is to live in poverty – at least when workers work more than half the year, according to the BLS (Table 1). In all family types with only one member in the labor force for more than half the year, 13.1 percent were in poverty. The percent of families in poverty dropped to 2 percent when a second worker was added. With three workers, the percent of families in poverty was less than 1 percent. The same pattern held true in female- and male-headed households. Adding workers substantially decreased poverty rates.

When both spouses in a married-couple family worked, the chance of it being in poverty was lower than if only one spouse was working. This held true regardless of family

“Working poverty is the outcome of a complex web of factors.”

**—Dr. Bruce Weber,
Oregon State University**

demographics, according to a study of all U.S. families in the mid-1990s (*Monthly Labor Review*, March 1998). The drop in poverty rates in families with two working spouses was especially dramatic for Mexican immigrant families. Their poverty rate was 35 percent with only the husband working. It dropped to 8 percent when both spouses worked. Similar but smaller decreases in poverty rates when both spouses worked were seen for white nonHispanic families.

Table 1

Families in the Labor Force 27 Weeks or More in 2003, U.S.

	Poverty Rate
All Families	6.6%
With one member in the labor force	13.1%
With two members in the labor force	2.0%
With three or more members	0.6%
Families Maintained by Women	17.6%
With one member in the labor force	22.5%
With two or more members in the labor force	4.2%
Families Maintained by Men	9.2%
With one member in the labor force	13.5%
With two or more members in the labor force	2.1%

Source: Bureau of Labor Statistics

Table 2

Poor and Nonpoor Oregon Families and Work, 1999

Type of Family	No One Worked	At Least One Person Worked at All *	One Person Worked Fulltime	Two People Worked Fulltime
Married-Couple Families				
In Poverty	28.4%	71.6%	24.0%	1.7%
Not in Poverty	14.4%	85.6%	66.1%	23.0%
Male Householder, No Wife Present				
In Poverty	34.2%	75.8%	16.5%	NA
Not in Poverty	11.2%	88.8%	62.2%	NA
Female Householder, No Husband Present				
In Poverty	36.5%	63.5%	10.8%	NA
Not in Poverty	19.3%	80.7%	49.8%	NA

*At least one member worked part time or full time.

Source: U.S. Census Bureau

“Work reduces the risk of poverty among working-age households,” OSU’s Weber concurs. Using data from the 2000 Oregon Population Survey, Weber found the poverty rate for households with full-year workers was only 6.8 percent, whereas the poverty rate for households with no workers was 29.2 percent.

Poor and Nonpoor Characteristics Differ

Poor workers are the least educated of all workers, according to the BLS. Of all those in the labor force for at least half of 2003, 14.1 percent with less than a high school diploma were poor, compared with 1.7 percent of those with a college degree. Working women had higher poverty rates than working men, and working minorities had higher poverty rates than whites.

The working poor – defined by the BLS as those who remained in poverty while working at least 27 weeks a year – were concentrated in service occupations. The 2 million working poor in the United States in service occupations accounted for almost one-third of the working poor.

Other occupations with a high concentration of working poor were farming, forestry, and fishing occupations, and handlers, equipment cleaners, helpers, and laborers.

Do poor families and nonpoor families differ in their work efforts? We used

“Work reduces the risk of poverty among working-age households.”

**—Dr. Bruce Weber,
Oregon State University**

2000 Oregon census data to make the comparison (Table 2). Here’s how work effort by family type differed between poor and nonpoor families:

- At least one person worked for some unspecified amount of time in nearly 72 percent of poor married-couple families, versus 83 percent of nonpoor families.
- A larger percentage of poor families had no one working than

nonpoor families (28.4% versus 14.4%).

- One person working full time was present in 24 percent of poor married-couple families, versus 66 percent of nonpoor families.
- Two people working full time were present in only 1.7 percent of poor married-couple families, versus 23 percent of nonpoor families.

Why Don’t the Poor Work More?

Evidence suggests the working poor are more at the mercy of the economy than other workers. When Oregon’s unemployment rates rose, so did poverty rates (Graph 1). It seems reasonable to conclude that the poverty rate is, to some extent, related to people losing and gaining employment. The BLS confirms the working poor experienced a number of labor market problems, such as low earnings, unemployment, and involuntary part-time work.

In its 2003 annual study of the working poor, the U.S. Census Bureau provided additional evidence that

labor market explanations may account for at least some episodes of poverty. The study of people in poverty from 1996 to 1999 concluded that people stayed in poverty for varying lengths of time. A little more than half of all poverty spells – defined as at least two months in poverty – lasted four months or less. Only 2 percent of the people studied were in poverty every month of the four-year period. We can assume short-term stints were due in part to labor market problems such as job loss.

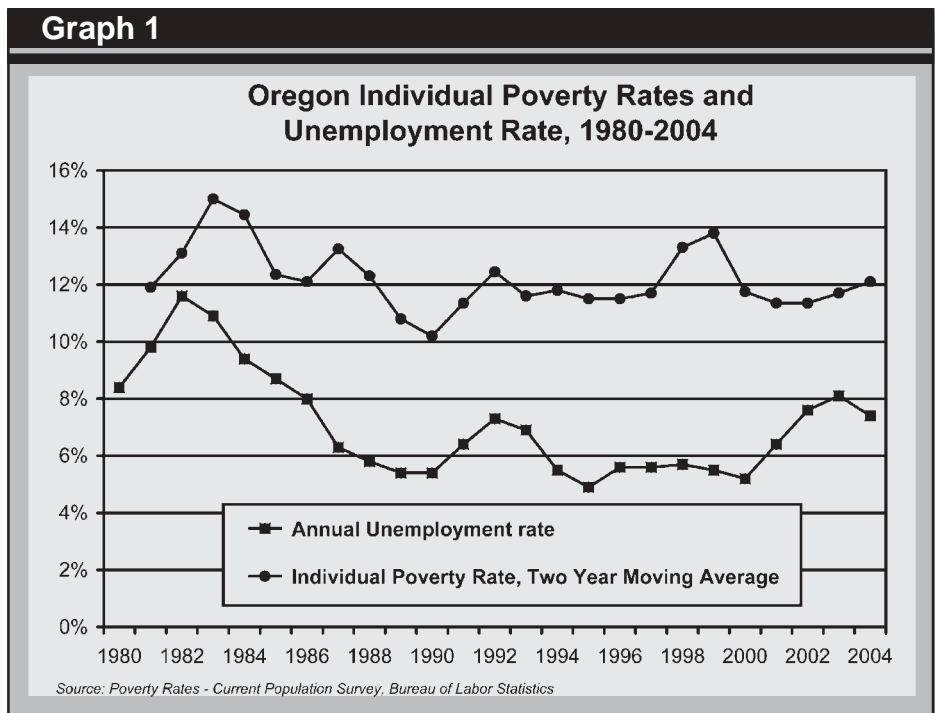
Poor men and poor women had different reasons – other than labor market explanations – for not working. Men more frequently cited illness and disability, and women, needing to care for home and children. This is documented in a 1989 study using Current Population Survey data (*Monthly Labor Review*, October 1989).

Explaining why there is less work effort in female-headed families is important because female-headed families made up 14 percent of all Oregon families in 1999, and nearly half of all poor families. Only 10.8 percent of female-headed families had a full-time worker in 1999. Why don't female-headed families work more?

A little more than half of all poverty spells lasted four months or less.

Larissa Fisher works with mostly female heads of households as a job coach in the Temporary Assistance to Needy Families (TANF) program at the Department of Human Resources in Salem.

"Many of my clients have multiple barriers to employment, such as being very young, without a high school diploma, having a learning disability, and having mental and physical health problems," Fisher said. She noted child care issues often present



a major challenge. These multiple barriers to employment make finding and keeping a job difficult for her clients, Fisher said.

The Bottom Line – Work and Poverty

This article presents only a fraction of the evidence necessary to fully describe the complexity of the

relationship between work and poverty. But the bottom line is this: Almost 72 percent of all poor families in Oregon had someone working

for some unspecified amount of time in 1999. The more workers there were in a family, the less likely it was to live in poverty. With two people working in a married-couple family, there was less than a 2 percent chance the family was in poverty. Labor market problems such as unemployment, and individual difficulties such as health issues, learning disabilities, and child care problems, kept

many poor people from working full-time year-round.

Weber says meeting these challenges will take teamwork. "Reducing poverty will require . . . public and private actions that increase access to jobs, educational opportunity, and services – and that make work pay." ■

Poverty Shifts From Old to Young

Nearly one-fourth of all Oregonians 65 and older were in poverty in 1970. By 2000, that number had dropped to less than 8 percent. The poverty rate for children 17 and under was 10.8 percent in 1970 and 14.7 percent in 2000. The nationwide trend of a dramatic decline in elderly poor developed because of a series of changes to Social Security and other entitlement programs in the early 1970s. These changes added to the income of the elderly. In 2000, 10 percent of elderly women and 6 percent of elderly men lived in poverty in Oregon.

Oregon Current Labor Force and Industry Employment

	January 2006	December 2005	January 2005	Change From December 2005	Change From January 2005
Labor Force Status					
Civilian labor force	1,851,252	1,858,057	1,829,086	-6,805	22,166
Unemployed	111,775	99,820	130,499	11,955	-18,724
Unemployment rate	6.0	5.4	7.1	0.6	-1.1
Unemployment rate, seasonally adjusted	5.3	5.7	6.5	-0.4	-1.2
Employed	1,739,477	1,758,237	1,698,587	-18,760	40,890
Nonfarm Payroll Employment					
Total nonfarm payroll employment	1,659,000	1,697,200	1,600,200	-38,200	58,800
Total private	1,371,400	1,407,900	1,312,800	-36,500	58,600
Natural resources and mining	8,300	8,700	9,200	-400	-900
Logging	6,500	6,800	7,400	-300	-900
Construction	91,600	95,200	80,800	-3,600	10,800
Construction of buildings	24,100	24,900	20,600	-800	3,500
Residential building construction	15,100	15,700	12,400	-600	2,700
Nonresidential building construction	9,000	9,200	8,200	-200	800
Heavy and civil engineering construction	10,000	10,800	9,100	-800	900
Specialty trade contractors	57,500	59,500	51,100	-2,000	6,400
Building foundation and exterior contractors	12,400	13,000	11,100	-600	1,300
Building equipment contractors	23,300	24,000	21,200	-700	2,100
Building finishing contractors	13,900	14,500	11,800	-600	2,100
Other specialty trade contractors	7,900	8,000	7,000	-100	900
Manufacturing	204,500	205,500	199,200	-1,000	5,300
Durable goods	153,000	154,400	149,800	-1,400	3,200
Wood product manufacturing	31,200	32,300	32,300	-1,100	-1,100
Sawmills and wood preservation	8,600	9,000	9,100	-400	-500
Plywood and engineered wood product mfg.	10,600	11,100	11,000	-500	-400
Other wood product manufacturing	12,000	12,200	12,200	-200	-200
Primary metal manufacturing	8,500	8,400	8,200	100	300
Fabricated metal product manufacturing	16,100	16,400	15,800	-300	300
Machinery manufacturing	11,900	11,800	11,500	100	400
Computer and electronic product manufacturing	42,200	42,100	41,600	100	600
Computer and peripheral equipment mfg.	3,500	3,700	3,800	-200	-300
Semiconductor and electronic component mfg.	30,800	30,800	30,500	0	300
Electronic instrument manufacturing	5,900	5,800	5,500	100	400
Transportation equipment manufacturing	18,900	18,900	17,400	0	1,500
Nondurable goods	51,500	51,100	49,400	400	2,100
Food manufacturing	21,400	20,900	20,000	500	1,400
Fruit and vegetable preserving and specialty	8,400	8,600	7,200	-200	1,200
Paper manufacturing	6,500	6,500	6,500	0	0
Printing and related support activities	7,100	6,800	7,200	300	-100
Plastics and rubber products manufacturing	6,600	7,000	6,400	-400	200
Trade, transportation, and utilities	332,500	345,100	319,100	-12,600	13,400
Wholesale trade	79,000	79,800	76,100	-800	2,900
Merchant wholesalers, durable goods	35,500	36,100	34,200	-600	1,300
Merchant wholesalers, nondurable goods	31,300	31,300	30,500	0	800
Electronic markets and agents and brokers	12,200	12,400	11,400	-200	800
Retail trade	195,900	207,900	186,800	-12,000	9,100
Motor vehicle and parts dealers	26,500	26,700	26,500	-200	0
Building material and garden supply stores	14,400	14,700	13,600	-300	800
Food and beverage stores	37,100	37,600	35,200	-500	1,900
Gasoline stations	10,900	11,200	10,900	-300	0
Clothing and clothing accessories stores	15,800	19,000	16,600	-3,200	-800
Sporting goods, hobby, book and music stores	10,400	10,700	10,000	-300	400
General merchandise stores	38,800	41,900	35,800	-3,100	3,000
Miscellaneous store retailers	11,200	11,600	10,700	-400	500
Nonstore retailers	7,200	10,500	6,600	-3,300	600
Transportation, warehousing, and utilities	57,600	57,400	56,200	200	1,400
Utilities	4,800	4,900	4,800	-100	0
Transportation and warehousing	52,800	52,500	51,400	300	1,400
Air transportation	3,800	3,900	4,200	-100	-400
Truck transportation	19,500	19,400	18,600	100	900
Couriers and messengers	6,500	7,000	6,600	-500	-100
Warehousing and storage	7,400	7,500	7,600	-100	-200
Information	33,300	33,600	32,600	-300	700
Publishing industries, except internet	14,300	14,500	13,800	-200	500
Newspaper, book, and directory publishers	6,700	6,800	6,800	-100	-100
Software publishers	7,600	7,700	7,000	-100	600
Telecommunications	8,700	8,700	8,600	0	100

Oregon Current Labor Force and Industry Employment

<i>(Continued)</i>	January 2006	December 2005	January 2005	Change From December 2005	Change From January 2005
Financial activities	102,800	104,500	98,000	-1,700	4,800
Finance and insurance	63,400	63,600	59,900	-200	3,500
Credit intermediation and related activities	31,700	31,800	29,800	-100	1,900
Insurance carriers and related activities	26,700	26,700	25,200	0	1,500
Real estate and rental and leasing	39,400	40,900	38,100	-1,500	1,300
Real estate	31,900	33,100	30,400	-1,200	1,500
Professional and business services	181,300	189,000	174,800	-7,700	6,500
Professional and technical services	66,800	67,600	63,900	-800	2,900
Legal services	11,700	11,700	11,700	0	0
Architectural and engineering services	13,300	13,500	12,300	-200	1,000
Computer systems design and related services	9,800	9,800	8,500	0	1,300
Management of companies and enterprises	26,000	26,400	25,700	-400	300
Administrative and waste services	88,500	95,000	85,200	-6,500	3,300
Administrative and support services	81,800	88,000	80,200	-6,200	1,600
Employment services	37,900	41,500	36,100	-3,600	1,800
Business support services	12,200	14,700	14,200	-2,500	-2,000
Services to buildings and dwellings	18,800	19,100	17,300	-300	1,500
Educational and health services	202,800	207,100	193,900	-4,300	8,900
Educational services	28,600	32,500	26,100	-3,900	2,500
Health care and social assistance	174,200	174,600	167,800	-400	6,400
Ambulatory health care services	61,700	62,000	58,500	-300	3,200
Hospitals	49,300	49,600	47,800	-300	1,500
Nursing and residential care facilities	37,300	36,800	36,300	500	1,000
Social assistance	25,900	26,200	25,200	-300	700
Leisure and hospitality	156,600	160,200	149,400	-3,600	7,200
Arts, entertainment, and recreation	19,100	19,500	19,400	-400	-300
Amusement, gambling, and recreation	14,600	14,900	14,600	-300	0
Accommodation and food services	137,500	140,700	130,000	-3,200	7,500
Accommodation	19,500	20,400	18,900	-900	600
Food services and drinking places	118,000	120,300	111,100	-2,300	6,900
Full-service restaurants	57,800	58,000	54,100	-200	3,700
Limited-service eating places	48,700	50,400	46,700	-1,700	2,000
Other services	57,700	59,000	55,800	-1,300	1,900
Repair and maintenance	17,300	17,400	16,700	-100	600
Personal and laundry services	12,400	13,000	11,800	-600	600
Membership associations and organizations	28,000	28,600	27,300	-600	700
Religious organizations	16,700	16,900	16,600	-200	100
Government	287,600	289,300	287,400	-1,700	200
Federal government	28,100	28,700	28,900	-600	-800
State government	76,900	77,400	76,700	-500	200
State education	27,500	28,800	27,700	-1,300	-200
Local government	182,600	183,200	181,800	-600	800
Indian tribal	7,600	7,500	7,500	100	100
Local education	98,100	99,100	98,800	-1,000	-700
Labor-management disputes	0	0	100	0	-100

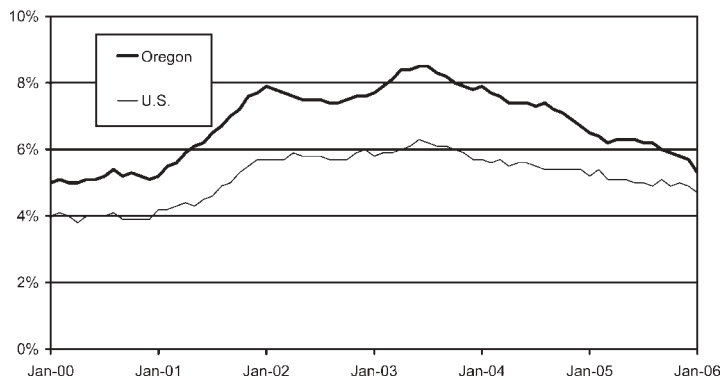
The most recent month is preliminary, the prior month is revised. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Labor Force Status: Civilian labor force includes employed and unemployed individuals 16 years and older by place of residence. Employed includes nonfarm payroll employment, self-employed, unpaid family workers, domestics, agriculture, and labor disputants. Unemployment rate is calculated by dividing unemployed by civilian labor force.

Nonfarm Payroll Employment: Data are by place of work and cover full- and part-time employees who worked or received pay for the pay period that includes the 12th of the month. The data exclude the self-employed, volunteers, unpaid family workers, and domestics.

Unemployment Rates

**Narrowing Gap Between Unemployment Rates
Oregon and U.S., Seasonally Adjusted**



Total Nonfarm Payroll Employment

**Nonfarm Payroll Employment Reaches All-Time
High
Oregon, Seasonally Adjusted**



Indicators

Unemployment Rate (Seasonally Adjusted)

	Oregon	U.S.
Jan. 2006	5.3	4.7
Dec. 2005	5.7	4.9
Jan. 2005	6.5	5.2

Seasonally Adjusted Employment (Total Nonfarm Payroll Jobs)

	Oregon	U.S.
Jan. 2006	1,689,500	134,564,000
Dec. 2005	1,686,600	134,371,000
Jan. 2005	1,636,200	132,471,000

Change From		
Dec. 2005	53,300	2,093,000
% Change	3.3%	1.6%

Consumer Price Index (CPI)

(All Urban Consumers, 1982-84 = 100)

Portland-Salem, OR-WA	Index	Yearly Change
July-Dec. 2005	197.5	2.6%

Annual Average 2005

2005	196.0	2.6%
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United States

Jan. 2006	198.3	4.0%
Annual Average 2005	195.3	3.4%



OREGON LABOR TRENDS

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