



Washington Labor Market Quarterly Review

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INDICATORS

UNEMPLOYMENT RATE

Washington

(Seasonally Adjusted)

October 2008	6.3%
November 2008	6.3%
December 2008 (prel)	7.1%

United States

(Seasonally Adjusted)

October 2008	6.6%
November 2008	6.8%
December 2008 (prel)	7.2%

NONAGRICULTURAL EMPLOYMENT

Washington (Seasonally Adjusted)

(in thousands)

October 2008	2,931.0
November 2008	2,941.5
December 2008 (prel)	2,920.2

Percent Change (over the year)

October 2007-2008	-0.6%
November 2007-2008	-0.3%
December 2007-2008 (prel)	-1.3%

IN THIS ISSUE

**IDENTIFYING WASHINGTON'S
RECESSION-RESISTANT
INDUSTRIES** 1

**JOBS EXPECTED TO THRIVE
DESPITE TOUGH
ECONOMIC TIMES** 5

STATS-AT-A-GLANCE 17

WHAT'S NEW? 19

Identifying Washington's Recession-Resistant Industries

*By Alex Roubinchtein, Ph.D., Economist
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Executive Summary

The U.S. economy was in a recession between 2001 and 2003. During this time, monthly employment, the labor force, and unemployment levels were volatile. At the state level, employment volatility allows researchers to investigate which industries were more or less recession-resistant.

For the purpose of this report, recession-resistant industries in Washington are defined as industries that reflect either employment growth during a recession, or a relatively lower number of job losses. They also reflect the lowest unemployment rates, and if they do exhibit some job losses, they recover quickly. The period of our analysis of Washington's economy is confined to the 2001 to 2003 recession. However, we suggest industries that are more likely than others to be consistently recession-resistant; albeit an adverse situation may worsen an industry's outlook during a single episode.

For example, a dot com bust and stock market crash prompted the 2001 recession that created job losses in Washington's computer systems design and related services; but, for the better part of 2008, employment in this sector was remarkably stable¹. Similarly, a meltdown of the U.S. financial sector and historically high foreclosure rates on residential mortgages prompted the beginning of the 2008 recession. As a result, Washington's financial and construction industries shed jobs for the better part of 2008; but during the 2001 recession, these industries were not among the more recession-prone sectors of the economy. As a check against the reasonableness of the recession-resistant attributes of industries during the 2001 recession, the last section of this report estimates Washington's pro-cyclical and contra-cyclical industries based on eighteen years of monthly data for the period ending November 2008.

¹ For the year ending in November 2008, employment of roughly 31,000 grew by 1.9 percent.

Industries that were relatively more recession-resistant than other industries during the 2001 recession and that also appear to have retained this attribute for the first 11 months of 2008 are:

- Hospitals
- Credit Intermediation and Related Activities
- Federal Government
- Ambulatory Health Care Services
- Nursing and Residential Care Facilities
- Management of Companies and Enterprises

Industries in Washington that reflected the shorter recovery times to pre-2001 recession employment levels were:

- Electronic Markets – Agents and Brokers (part of Wholesale Trade)
- General Merchandise Stores
- Local Government Educational Services
- Federal Government
- Management of Companies and Enterprises
- Building Materials and Gardening Supplies

The major conclusions from this research are:

- Job seekers should consider acquiring the training and/or educational requirements of industries that either exhibit consistently positive employment growth during a recession or that have relatively

short cycles of declining employment followed by a rapid rehiring process that reestablishes pre-recession employment levels.

- Training and career counseling during periods of declining employment are challenging tasks. It is a time when job seekers have the most serious concerns about their future because they may not be able to recoup the cost of training and education if their employers are subject to long spells of unemployment during a recession. Therefore, at a minimum, during the counseling process, job seekers should be alerted to the stability of different industries during a recession based on several criteria presented in this report.

Introduction

The U.S. and the state of Washington were in a recession between 2001 and 2003 during which time monthly employment, labor force, and unemployment levels were volatile. Trend-cycle time series allows researchers to investigate which industries are more or less recession-resistant. This report investigates which industries in Washington were more or less resistant to the employment impacts of the 2001 recession.

For the purpose of this report, recession-resistant industries are

defined as industries that reflect any of the following changes during a recession: (1) positive growth in employment, (2) the shortest duration of declining levels of employment, and (3) the shortest duration needed to restore pre-recession employment levels. This analysis is useful for job seekers and career planning because decisions about jobs and careers should consider the likelihood that a recession will create an unstable stream of wage-income. An analysis of this sort, however, does have limitations. It does not identify industries that are undergoing structural changes².

Data and Methodology

The data for this analysis come from the Washington State Employment Security Department's (ESD) monthly employment estimates by industry type for the months between January 1990 and November 2008. Using the Census 12 model³ as an algorithm for removing the seasonal and irregular effects of data, a time series for each industry is constructed that reflects each industry's employment trend-cycle series. The analysis also uses ESD's monthly unemployment insurance (UI) claims for each industry. The ratio of claims to employment for each industry is used as the insured unemployment rate.

² Structural changes refer to the intensity of labor versus capital in the production of goods and services. If an industry is shedding jobs while output and sales are steady or increasing, it is probably incurring a structural change.

³ Census 12 model (X12 procedure), is an adaptation of the U.S. Bureau's Census X-12-ARIMA Seasonal Adjustment program that seasonally adjusts monthly or quarterly time series. The X-12-ARIMA program combines the capabilities of the X-11 program and the X-11-ARIMA/88 program (Dagum 1988) and also introduces some new features. Thus, the X-12-ARIMA program contains methods developed by both the U.S. Census Bureau and Statistics Canada.

The change and percent change in the employment level from one month to the next are analyzed for each industry. The most recession-resistant industries are estimated based on a combination of the following statistics: employment growth rates during the 2001 recession, as estimated over the time period between January 2001 and March 2003; the growth rate of UI claims; and the level of UI claims. The lowest growth level of UI claims and lowest unemployment rates are desirable.

The employment time series for each industry are used to compute the duration of (i.e., the number of months associated with) each industry's recovery period from a recession. If an industry exhibited positive growth throughout a recession, the duration of its recovery period will be zero months. However, most of the time, the industries will exhibit a mixed employment pattern which is why the duration of an industry's recovery from a recession is important. Each industry's recovery period is measured as the number of months needed to reinstate its employment level to its pre-recession high as of December 2000.

A Hodrick-Prescott filter is used to separate each industry's trend

and cycle from its time-cycle series. Then, for the period between December 2000 and March 2003, each industry's employment cycle is compared statistically to the cycle for total nonfarm employment. If an industry's monthly employment estimates are positively correlated with the estimates of nonfarm employment, then the industry is pro-cyclical. Conversely, if an industry's monthly employment estimates are negatively correlated with the estimates of nonfarm employment, then the industry is contra-cyclical.

Analysis of Employment Trends

To analyze the employment trends, the monthly employment time series for Washington are used from January 1990 to November 2008⁴. We extend the analysis beyond the actual years associated with the 2001 to 2003 recession in order to calculate the length of time it actually took some industries to recover from it⁵. This time series indicates that Washington's total nonfarm employment declined for 15 consecutive months from January 2001 through March 2002. The annualized rate of decline during this period for the trend-cycle

series of total nonfarm employment was 2.1 percent.

To identify recession-resistant industries, we look at the industries that managed to maintain steady employment growth during this turbulent time. *Tables 1 and 2* rank the top and bottom 11 recession-resistant industries, based on an average rank of three indicators: an industry's unemployment rate⁶ for March 2002; its employment changes; and changes in the industry's continued unemployment insurance (UI) claims for the period between January 2001 and March 2002⁷.

Since the period of our analysis of Washington's economy is confined to the 2001 to 2003 recession, in *Table 1* we list industries that are more likely than other industries to be consistently recession-resistant, albeit an adverse situation may change an industry's outlook during a single episode. For example, a dot com bust and stock market crash prompted the 2001 recession that created job losses in Washington's computer systems design and related services; but, for the better part of 2008, employment in this sector was remarkably stable.⁸ Similarly, the meltdown of the U.S. financial sector and historically high foreclosure rates on residential mortgages

⁴ The time series are based on quarterly alternative employment estimates, benchmarked with the second quarter of preliminary 2008 data. The estimates for the last six months starting from April 2008 could be subject to significant revision, however. The default Census 12 model is used to produce seasonally adjusted and trend-cycle series, based on direct adjustment without forecasting seasonal factors. Trend-cycle series exclude irregular components from seasonally adjusted series and represent a smoother time series.

⁵ The NBER officially designates the dates of U.S. recessions; and it did not extend the 2001 recession beyond 2001. However, based on a comparison of unemployment and employment estimates for Washington and the U.S., the timeline for Washington's recession lagged beyond the U.S., and it lasted longer.

⁶ The ratio of continued UI claims to estimated industry employment represents a prototype of an insured unemployment rate.

⁷ We use trend-cycle of employment and UI claims series. Industries with the higher employment growth and lower UI claims growth were ranked higher. Industries that are aggregations (summaries) of the presented series are excluded from the rankings and tables.

⁸ For the year ending in November 2008, employment in this industry totaling 31,000 grew by 1.9 percent.

prompted the 2008 recession. As a result, Washington's financial and construction industries shed jobs for the better part of 2008; but during the 2001 recession, these industries were not among the more recession-prone sectors or the economy.

Among private industries, only health services and social assistance did not have any month of declining employment. Moreover, this was true for all estimated sub-sectors of this aggregated industry. For example within the health services and social assistance sector, *Table 1* shows that some of the more recession-resistant industries in

the private sector were: ambulatory health care services (rank #8); hospitals (rank #1); and nursing and residential care facilities (rank #9). The annualized growth rate for the health services and social assistance sector during this fifteen month period was 3.5 percent. Among the sub-sectors of the government sector, only state government educational services (rank #2) did not have any month of declining employment between January 2001 and March 2002.

The most negatively affected industries with respect to our employment criteria are listed in *Table 2*.

Our second way of classifying recession-resistant industries is based on the duration or length of time it takes an industry to recover from a recession, including both the downturn and upturn of the cyclical pattern. For the purpose of this report, the duration of an industry's employment loss during a recession is defined as the number of months when trend-cycle employment changes are negative. Regarding the losses, the magnitude and volatility of job losses might be significantly different across industries. For example, between 2000 and 2003 total nonfarm employment had 20

Table 1. Top 11 Recession-Resistant Industries (2001 to 2002)

Industries	December 2000 Employment*	Annualized Growth Rate of UI Claims	Annualized Employment Growth Rate	UI Rate	Combined Rank
Hospitals	59,287	7.62%	3.15%	0.8%	1
State Government Educational Services	75,771	17.99%	3.49%	0.2%	2
Total Local Government**	281,468	27.02%	4.82%	1.1%	3
Credit Intermediation and Related Activities	44,540	13.49%	4.13%	3.2%	4
Local Government Educational Services**	145,661	27.17%	0.91%	0.1%	5
Federal Government	67,906	10.66%	0.54%	2.8%	6
Total State Government	141,640	29.66%	2.36%	1.3%	7
Ambulatory Health Care Services	100,767	41.76%	4.04%	1.9%	8
Nursing and Residential Care Facilities	50,061	31.22%	3.45%	3.0%	9
Finance and Insurance**	96,026	27.97%	1.95%	3.4%	10
Management of Companies and Enterprises	30,053	32.70%	0.00%	1.2%	10

* Trend-cycle employment estimates.

** Unlikely to remain recession-resistant during 2008 and 2009.

Table 2. Top 11 Recession-Prone Industries (2001 to 2002)

Industries	December 2000 Employment*	Annualized Growth Rate of UI Claims	Annualized Employment Growth Rate	UI Rate	Combined Rank
Computer Systems Design and Related Services	30,691	159.07%	-17.73%	31.7%	1
Computer and Electronic Products Manufacturing	35,439	358.39%	-19.48%	13.2%	2
Machinery Manufacturing	15,386	159.57%	-11.93%	15.2%	3
Employment Services	52,239	84.81%	-18.88%	21.2%	4
Electrical Equipment and Appliance Mfg.	4,264	86.58%	-8.87%	12.8%	5
Printing and Related Support Activities	11,553	124.04%	-11.59%	7.4%	5
Wired Telecommunications Carriers	13,739	196.73%	-18.59%	5.9%	7
Information**	102,002	136.06%	-6.39%	11.0%	8
Specialty Trade Contractors	99,853	61.85%	-6.40%	18.9%	9
Fabricated Metal Products Manufacturing	18,886	82.19%	-6.99%	12.7%	10
Air Transportation	15,269	301.89%	-8.92%	5.6%	10

* Trend-cycle employment estimates.

** Unlikely to remain recession-prone industries during 2008 and 2009.

Tables Sources: Employment Security Department, Labor Market and Economic Analysis

months of declining employment, 15 months of which were consecutive declines between January 2001 and March 2002. Aggregated private employment had a total of 24 months of declining employment that included 18 consecutive months of decline. Total government employment, on the other hand, had just four months of declining employment. The goods-producing sector with 42 total

months of declining employment exhibited 36 consecutive months of decline, while the services-producing sector exhibited 15 total months of declining employment of which 12 were consecutive months of decline.

Table 3 lists the 11 industries (last two have tied ranks) that had the lowest number of consecutive months of declining employment between 2000 and

2003. Table 4 lists the industries with the longest duration of consecutive declining months of employment for the same period

Employment Recovery

In the analyses presented above, we looked at recession-resistant industries based on their ability to avoid or limit declining employment levels. However, another important aspect of recession resistance is an industry's

ability to recover employment losses in a relatively short time. Based on the trend-cycle time series for nonfarm employment, the first month that employment declined was January 2001; and took 47 months to restore employment to the pre-recession level⁹.

In the analysis provided below, we define total recovery time, as the number of months between an industry's first month of declining employment and the first month that its pre-recession employment level was restored. Industries that were unaffected by the recession because their employment levels never declined, are labeled *not affected*. Industries that never recovered their pre-recession employment levels are labeled *not recovered*.

Table 3. Industries with the Shortest Duration, Based on Continuous Months of Declining Employment Levels (2000 to 2003)

Industry	2000 Employment	Number of Months with Employment Decline		Rank
		Continuous	Total	
Ambulatory Health Care Services	98,833	1	1	1
Electronic Markets and Agents and Brokers (part of Wholesale Trade)	7,408	3	10	2
Social Assistance	41,992	3	3	2
Hospitals	58,900	4	8	4
Nursing and Residential Care Facilities	49,517	4	6	4
Total State Government	140,283	4	11	4
State Government Educational Services	75,100	4	8	4
Total Local Government	273,133	4	8	4
General Merchandise Stores	47,750	5	14	9
Management of Companies and Enterprises	29,917	5	13	9
Support Activities for Water Transportation	4,675	6	20	10
Local Government Educational Services	145,892	6	13	10

Table 4. Industries with the Longest Duration, Based on Continuous and Interrupted Months of Declining Employment Levels (2000 to 2003)

Industry	2000 Employment	Number of Months with Employment Decline		Rank
		Continuous	Total	
Machinery Manufacturing	15,625	40	40	1
Wired Telecommunications Carriers	13,917	39	39	2
Primary Metal Manufacturing	10,892	38	47	3
Computer and Electronic Product Manufacturing	34,350	36	36	4
Printing and Related Support Activities	11,642	36	41	4
Telecommunications	30,658	35	35	6
Computer Systems Design and Related Services	29,067	34	34	7
Fruit and Vegetable Preserving and Specialty	13,158	33	39	8
Transportation Equipment Manufacturing	99,558	29	44	9
Aerospace Product and Parts Manufacturing	86,158	28	37	10
Food Manufacturing	38,900	26	37	11
Food and Beverage Stores	64,292	26	36	11

Tables Sources: Employment Security Department, Labor Market and Economic Analysis

⁹ National employment trends started to decline one month later, but it took two months longer (49 months) for the state of Washington to restore its pre-recession employment level.

Among major sectors of Washington's economy, private employment recovered from the recession in 52 months (5 months longer than total non-farm employment), while total government employment was unaffected by the recession. The goods-producing sector took 74 months to recover; but the service-providing sector recovered in only 31 months *Table 5* presents recovery time for the major sectors of the Washington state economy.

Among 74 industries, 19 did not recover their pre-recession employment levels as of November 2008. They are listed in *Table 6*.

Fourteen industries that were not affected by the recession are listed in *Table 7*.

Forty other industries recovered their pre-recession employment levels between 4 and 78 months of January 2000. The top 10 industries that exhibited the shortest recovery times are in *Table 8*.

Table 5. Recovery Time for Major Sectors

Major Sector	Recovery Time (in months)
Total Nonfarm	47
Total Private	52
Goods-Producing	74
Service-Providing	31
Natural Resources and Mining	not recovered
Construction	41
Manufacturing	not recovered
Trade, Transportation, and Utilities	58
Wholesale Trade	52
Retail Trade	54
Utilities	84
Transportation and Warehousing	74
Information	76
Financial Activities (FIRE)	not affected
Professional and Business Services	47
Educational and Health Services	not affected
Leisure and Hospitality	35
Government	not affected

Table 6. Industries That Have Not Recovered Pre-Recession Employment Levels

Natural Resources and Mining
Logging
Wood Products Manufacturing
Sawmills and Wood Preservation
Primary Metals Manufacturing
Machinery Manufacturing
Computer and Electronic Products Manufacturing
Transportation Equipment Manufacturing
Aerospace Products and Parts Manufacturing
Food Manufacturing
Fruits and Vegetables Preserving and Specialty
Petroleum, Plastics and Rubber Products Mfg.
Paper Manufacturing
Printing and Related Support Activities
Food and Beverage Stores
Air Transportation
Telecommunications
Wired Telecommunications Carriers
Repair and Maintenance

Table 7. Industries Not Affected by the 2001 Recession

Support Activities for Transportation
Software Publishers
Finance and Insurance*
Credit Intermediation and Related Activities*
Real Estate, Rental, and Leasing
Legal Services
Architectural and Engineering Services
Ambulatory Health Care Services*
Hospitals*
Nursing and Residential Care Facilities*
Social Assistance
Total State Government*
State Government Educational Services*
Total Local Government*

* Also reported in Table 1

Table 8. Top 10 Industries with the Shortest Recovery Time During Previous Recession

Estimating Cells	Recovery Time (in Months)
General Merchandise Stores	4
Electronic Markets and Agents and Brokers (part of Wholesale Trade)	6
Federal Government	8
Local Government Educational Services	12
Management of Companies and Enterprises	18
Building Material and Garden Supply Stores	19
Support Activities for Water Transportation	22
Private Educational Services	23
Personal and Laundry Services	28
Water Transportation	30

Tables Sources: Employment Security Department, Labor Market and Economic Analysis

What Took Longer: The Period of Employment Losses or the Hiring Phase?

To answer this question, we compute the number of months between the first positive employment change during an industry's recession cycle and the month when its pre-recession employment level is reestablished. Then, we divide this number by the industry's number of consecutive months of declining employment. For example, total nonfarm employment exhibited 15 consecutive months of declining employment levels followed by 32 months before it reestablished its pre-recession employment level. Our ratio will be $32/15=2.1$. From the perspective of a job seeker, a lower ratio and lower total recovery time is ideal. A ratio of less than 1 means that hiring was at a faster rate than firing, and when a ratio is more than 1 speaks for the opposite pattern. A higher ratio in excess of 1 can be interpreted in different ways. One of them is that companies have reacted to worsening economic conditions, not only by dismissing workers, but also by restructuring business activities (technologies, etc.). Assuming that some of the firms restructure by becoming more capital-intensive, when the economy begins to improve, these firms will not need as many workers per unit of output as they needed prior to the recession. Or, they may need a different mix of skills for the workers that they hire.

Table 9. Proportion of Month of Growth to Month of Decline
(for Sectors with Straight Recovery)

Industries	ID	Ratio of Months of Growth to Decline	Total Recovery time
Total Nonfarm	calc	2.1	47
Total Private	calc	2.3	52
Goods-Producing	calc	1.1	74
Service-Providing	calc	1.6	31
Construction	calc	2.2	41
Construction of Buildings	pr	2.2	35
Specialty Trade Contractors	pr	2.5	42
Electrical Equipment and Appliance Mfg.	pr	3	56
Trade, Transportation, and Utilities	calc	1.5	58
Wholesale Trade	calc	1.6	52
Building Material and Garden Supply Stores	pr	0.9	19
General Merchandise Stores	pr	1	4
Truck Transportation	pr	1	49
Support Activities for Water Transportation	pr	0.8	22
Professional and Business Services	calc	2.6	47
Professional, Scientific and Technical Services	pr	2.4	62
Accounting and Bookkeeping Services	pr	3.1	81
Computer Systems Design and Related Services	pr	1.4	82
Leisure and Hospitality	calc	1.5	35
Accommodation	pr	3.1	58
Food Services and Drinking Places	pr	2.4	31
Personal and Laundry Services	pr	2.1	28

Pr = Primary estimations using model.

Calc = Calculated by adding one or more primary estimations.

The ratios for industries that exhibited consecutive months of employment gains until pre-recession employment levels were reestablished, are listed in *Table 9*.

Pro-cyclical and Contra-cyclical Industries

The previous analysis was confined to analyzing employment trends during the 2001 recession. To extend the analysis beyond

this period, we want to identify pro-cyclical and contra-cyclical industries over eighteen years of monthly data ending November 2008. We employ a Hodrick-Prescott Filter to separate trend and cycle components from trend-cycle time series¹⁰. Then, we calculate coefficients of correlation between the time series of the cyclical component of total nonfarm employment and each of the industries. A statistically significant positive coefficient indicates that an industry's employment cycle is consistent with the employment cycle of total nonfarm employment, and consequently the industry is pro-cyclical. Conversely, a negative coefficient would identify a contra-cyclical trend in an industry's employment series.

The most pro-cyclical industries, presented in *Table 10* are: specialty trade contractors; computer systems design and related services; and administrative and support services. The last of these three industries is a good predictor for total nonfarm employment.

Table 10. Washington's Pro-cyclical Industries

Industry	2007 Empl.	Rank
Specialty Trade Contractors	129,792	1
Computer Systems Design and Related Services	29,448	2
Administrative and Support Services	138,569	3
Professional, Scientific, and Technical Services	157,703	4
Retail Trade	327,698	5
Nonmetallic Mineral Products Manufacturing	10,779	6
Food Services and Drinking Places	202,693	7
Machinery Manufacturing	15,088	8
Employment Services	56,935	9
Merchant Wholesalers, Durable Goods	69,333	10

Tables Sources: Employment Security Department, Labor Market and Economic Analysis

¹⁰ Technically, the Hodrick-Prescott (HP) filter is a two-sided linear filter that computes the smoothed series s of y by minimizing the variance of y around s , subject to a penalty that constrains the second difference of s . That is, the HP filter chooses s to minimize:

$$\sum_{t=1}^T (y_t - s_t)^2 + \lambda \sum_{t=2}^{T-1} ((s_{t+1} - s_t) - (s_t - s_{t-1}))^2$$

The penalty parameter λ controls the smoothness of the series s . The larger the λ , the smoother the s . As $\lambda \rightarrow \infty$, s approaches a linear trend. We use the default value $\lambda=14,400$ for monthly frequency of the data. The default value is defined by dividing the number of periods per year by 4 raised to use a power (the default value 2); and multiplying by 1,600.

The most contra-cyclical industries listed in *Table 11* are: total local government, followed by hospitals and credit interme-

diation and related activities. In fact, the top 10 represent all contra-cyclical industries.

ferent industries during a recession based on several criteria presented in this report.

Table 11. Washington's Contra-cyclical Industries

Industry	2007 Empl.	Rank
Total Local Government	316,184	1
Hospitals	66,152	2
Credit Intermediation and Related Activities	53,143	3
Water Transportation	3,409	4
Finance and Insurance	103,613	5
Total State Government	148,878	6
Logging*	5,059	7
Insurance Carriers and Related Activities	38,858	8
Nursing and Residential Care Facilities	55,716	9
State Government Educational Services	79,850	10

* Structurally Declining Industry

Source: Employment Security Department, Labor Market and Economic Analysis

Conclusions

With respect to the use of multiple criteria for the identification of recession-resistant industries, economic recessions can begin because of problems that emerge in any particular large industry. However, over a series of recessions, we might observe that such an industry is ordinarily recession-resistant. One example is the finance, insurance, and real estate sector that was a recession-resistant industry during the 2001 recession; but the meltdown of the financial industry in 2007 to 2008 was an episode that made this industry collapse during the recession that commenced in late 2007. Therefore, to be on the safe side, we recommend putting a heavier weight on the industries that satisfy multiple recession-resistant defining criteria. Our

use of multiple criteria raises the likelihood our estimates of Washington's recession-resistant industries will remain so in future recessions. However, we also realize that the best way to determine the stability of an industry's resistance to a recession and its impact on employment is to analyze that industry over multiple recessions.

Training and career counseling during periods of declining employment are challenging tasks. It is a time when job seekers have the most serious concerns about their future because they may not be able to recoup the cost of training and education if their employers are subject to long spells of unemployment during a recession. Therefore, at a minimum, during the counseling process, job seekers should be alerted to the stability of dif-

ferent industries during a recession based on several criteria presented in this report. Research about the volatility of employment levels during recessions is long overdue. This report focused on indicators that can help job seekers select occupations and careers that are consistent with their tolerance or aversion to the risks of cyclical unemployment. However, additional research is also needed within each industry in order to determine if sub-sectors of an industry are relatively more stable during a recession than others. This knowledge might help displaced employees who worked in a subsector of one industry find employment in a closely related subsector that is recession-resistant because some skills are transferable from one occupation to another. Finally, for training and counseling purposes, if some industries have restructured during a recession (i.e., have switched to using more capital-intensive production processes that will not require reestablishment of pre-recession employment levels), it is important to begin to learn how these industries are changing their workers' skill requirements so that displaced workers can adapt by acquiring these skills.



Jobs Expected To Thrive Despite Tough Economic Times

By Jami Mills, Economist

Executive Summary

This report provides a brief overview of the state. While the report touches on impacts from the national recession and highlights industries exhibiting record numbers of claimants for unemployment insurance in 2008, the focus of the report is that, even during a recession, employers are hiring. The report highlights the industries and occupations that are likely to expand employment during the current recession as well as the top 15 occupations through 2016. Finally, the report suggests ways in which job seekers can find jobs or retain them during tough economic times.

Overview of Washington's Economy

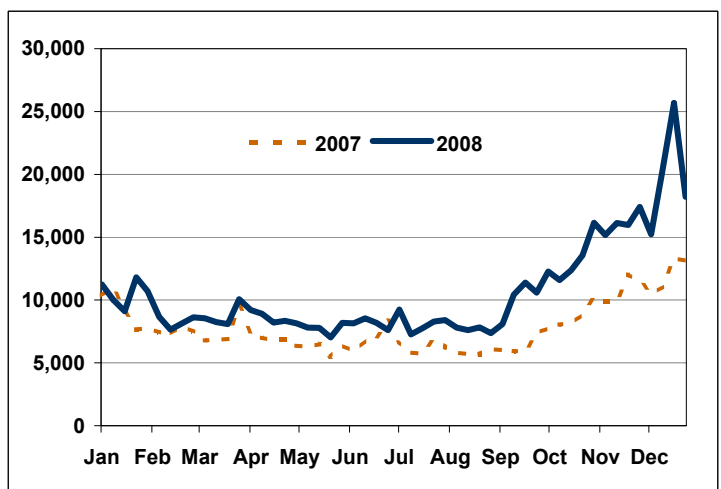
Washington's current economic picture is largely the result of an unstable financial system that has reduced lending, even to qualified businesses. As a result, the job market in the construction and financial sectors has faltered throughout the U.S. and many households in Washington state are feeling the effects of the weak economy. Washington's unemployment rate rose to 7.1 percent in December, up from 4.6 percent one year earlier; this number excludes workers who became discouraged from looking for work or those who are only able to find part-time jobs when they would

prefer full-time work. Relative to the national unemployment rate of 7.2 percent for December, Washington's employment outlook seems to be better than the nation. Still, the situation in Washington may get worse before it gets better, as economists predict the national jobless rate will continue to creep upward. An economic recession marks the beginning of a painful but necessary readjustment. In total, an estimated 50,000 jobs were lost in 2008.

Among a variety of measures that are used to evaluate Washington's economy, the unemployment insurance claims level is one of the more timely indicators because the data are available weekly. Statewide initial claims continue to show large over-the-year increases in layoffs (*Chart 1*). As of December 2008, the number of submitted unemployment insurance (UI) initial claims was about 76 percent larger (90,331 claims) than the number filed in December 2007. The previous record was set in December 2001 when 72,942 initial claims were filed.

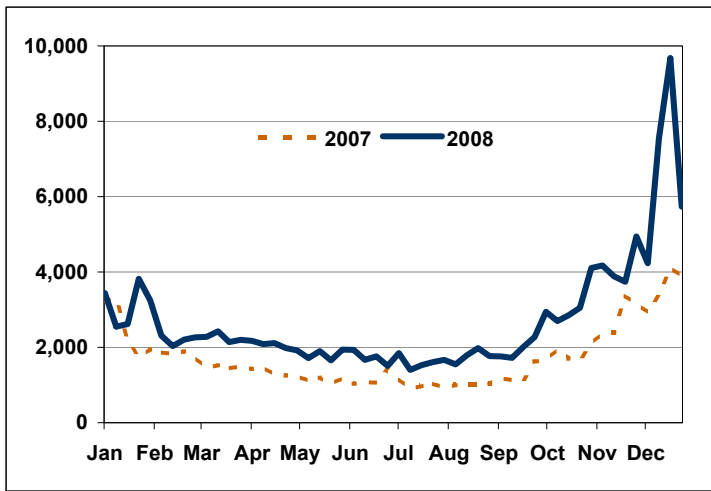
Initial unemployment insurance benefits can serve as a proxy for the number of layoffs; they typically represent a worker's expectation or anticipation of being laid off. This is not, however, the case in some seasonal industries that commonly have large numbers of claims during specific times of the year. Construction is an example of an industry where claimants may file initial claims, anticipating an ending date for their project, but may not collect. A look at layoffs by occupation or industry can present more insight. As of December 2008, construction (*Chart 2*) and manufacturing-related (*Chart 3*) occupations represented the majority of layoffs. This is typical for construction, as most of these jobs are very seasonal; however, the rate of claims is substantially higher than in December 2007.

Chart 1. Statewide Weekly Initial Claims



Source: Washington State Unemployment Insurance Claims Data, Employment Security Department, Labor Market and Economic Analysis

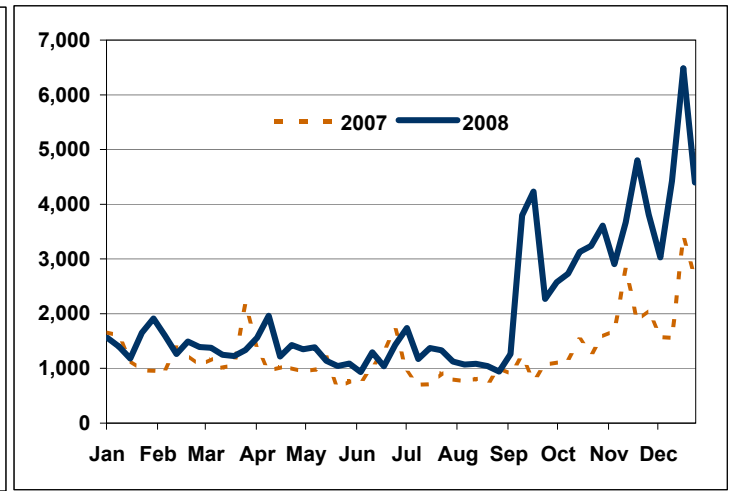
Chart 2. Construction, Weekly Initial Unemployment Insurance Claims



The construction industry experiences high turnover rates relative to other sectors. Several factors, including seasonal demands, contribute to this rate. *Chart 2* shows an increase in statewide initial claims in 2008 compared to 2007 in the construction sector. Construction was down 24,300 jobs (-11.7 percent) for the year ending December 2008. The majority of job losses in 2008 came from residential specialty trade contractors (-8,400) and residential building construction (-7,000).

Chart 3 shows an increase in statewide manufacturing initial claims in the later half of 2008 relative to 2007. The jump in claimants from manufacturing in 2008 is primarily from a reduction in expenditures on durable goods. Comparing claims for 2008 relative to 2007 illustrates the enormous impact the U.S. financial crisis had on Washington's manufacturing sector in 2008. Manufacturing decreased by 12,600 (-4.3 percent) jobs for the year ending December 2008.

Chart 3. Manufacturing, Weekly Initial Unemployment Insurance Claims

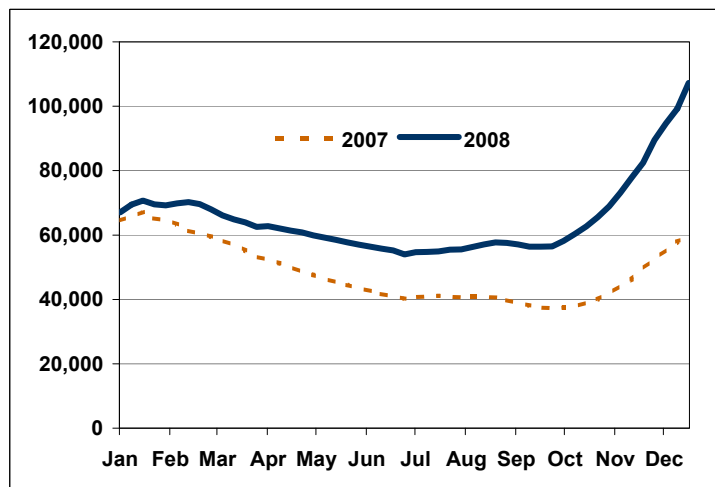


Across all industries, *Chart 4* shows an increase in statewide claims in 2008 compared to 2007, based on a four-week moving average of continued claims. This graph illustrates that the four-week moving average throughout 2008 was higher than the year prior.

The U.S. Department of Labor noted that initial claims increased nationally for the week ending December 27, following the normal seasonal pattern. However,

Washington experienced growth in both initial and continued claims compared to the prior year. While the nation experienced a 41 percent increase in initial claims, compared to a year ago for the week ending December 27, Washington had a 93 percent increase for that one week. However, looking one week ahead to the week ending January 3, the nation experienced a 42 percent increase compared to Washington's 39 percent.

Chart 4. Continued Claims, Four-Week Moving Average



Charts 2-4 Sources: Washington State Unemployment Insurance Claims Data, Employment Security Department, Labor Market and Economic Analysis

Recessions Affect the Way Employers Do Business

The current employment picture in Washington, like the nation, is undergoing change; and some industries and occupations have been hit harder than others. Real estate, finance and insurance, and construction are not the only industries in our economy with jobs affected by falling home values and tightened lending standards. The effects are being felt by businesses across the board. During tough economic times, employers have to make tough decisions. Some companies lay off workers and some restructure their organizations. Therefore, those who find themselves in the current job market need to understand the changes surging through the economy in order to determine which companies are more attractive as prospective employers.

For example, productivity has been rising at desirable rates since 1997, in the information and manufacturing industries; growth in these industries represent more than two-thirds of total productivity growth¹. Some businesses in these industries, however, become more productive by utilizing fewer workers or by terminating some workers in order to refill the same positions with persons who have different skill sets. This can be extremely beneficial to the economy in the long-run, but in the short-run it is disconcert-

ing for workers who may have to re-tool in order to retain their current jobs.

On the other hand, during tough economic times, some industries and occupations may appear to be recession-resistant. This occurs when there has been a long-term shortage of workers in certain occupations. Other employers will choose to retain workers as opposed to dismissing them because the cost of rehiring and retraining staff would be too costly for them after a recession ends. Finally, some companies will choose to take advantage of shared leave, a program administered by the Washington State Employment Security Department. This program allows employers to split hours between employees while they collect partial unemployment benefits. This program, however, represents a very small portion of total unemployment insurance claimants. In the majority of cases, a recession creates job losses temporarily and it affects industries and occupations differently.

How the Current Recession Impacts Teens and Baby Boomers

During tough economic times, all age cohorts will be impacted to some degree, but teens and baby boomers will experience unique difficulties. Teens will likely face a tougher summer

job market than last year, and “would-be” retirees may be working longer than they anticipated previously, which will leave fewer job openings than expected. Many people who would prefer to be hired as permanent employees may have to settle for temporary work.

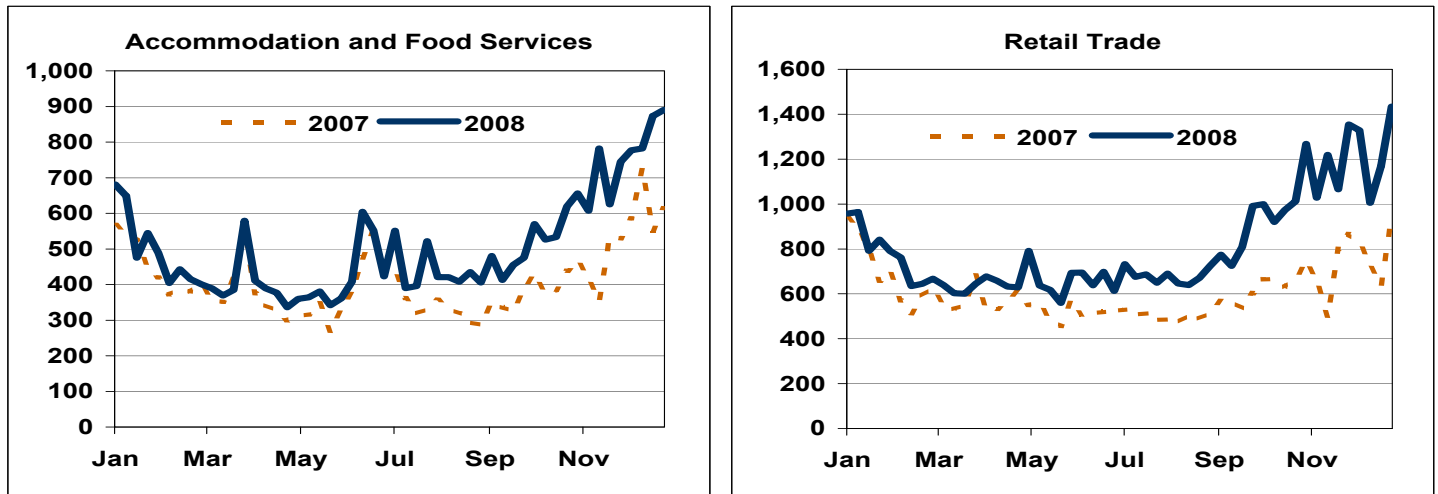
Chart 5 gives a side-by-side glance of initial unemployment insurance claims for accommodation and food services and retail trade, the two top industries for teen employment in Washington.

More than half of the teenage workforce is employed in accommodation and food services and retail trade. Competition for jobs is expected to be high this summer because initial unemployment insurance claims are up relative to 2007 counts. In today’s economy, they may be competing with adults for these jobs. On the other hand, employers who have been delaying their hiring decisions may need temporary help this summer.

Baby boomers, age 45 to 64, represent more than 36 percent of workers statewide, over one million workers. *Table 1* shows which industries are more top-heavy with this age cohort of older workers. More than half of all baby boomers work in these five industries. During a booming economy, those who expect to retire soon will make the prospects more promising for younger workers who are entering the job market. In 2008 and

¹ Productivity was calculated using the Bureau of Economic Analysis (BEA) data (real GDP per job). Contributions to GDP and productivity growth are based on Fisher’s volume index. For further detail reference *Washington Labor Market Quarterly Review* (2007q4) article “Industry Origin of Productivity in Washington State.” www.workforceexplorer.com/admin/uploadedPublications/8727_2007_4Q_WLMwex.pdf

Chart 5. Initial Unemployment Insurance Claims, Accommodation and Food Services and Retail Trade



Source: Washington State Unemployment Insurance Claims Data, Employment Security Department, Labor Market and Economic Analysis

2009, however, this trend may be tempered by weak financial markets. Some members of the 45 to 64 age cohort may be reluctant (or unable) to retire if the value of their investment portfolios dropped considerably between 2001 and 2009, or if they have lost confidence in the stability of the financial markets. Therefore, for the next few years, some “would-be-retirees” will be working later into life than they had planned and some will find themselves competing for jobs against younger workers with more up-to-date skills and experience.

Unlike industries that employ large numbers of workers, as described in *Table 1*, some otherwise small industries may employ large percentages of baby boomers. *Table 2* lists the industries that could be affected by a mass of retirement of the 45 to 64 age group. The workforce

in the utilities, educational services, and public administration sectors are largely comprised of the baby boomer cohort.

Since some baby boomers will decide to retire or scale down the percentage of time they want to work, even during a recession, the industries listed in *Tables 1* and *2* will generate job opportunities. Therefore, given that job opportunities are likely to occur in many industries, job seekers and existing employees should consider other factors that will make them more competitive in the job market.

- First, job seekers should keep skills up-to-date in order to remain competitive, especially in our current labor market. As older skill sets leave the labor market, newer skill sets may be needed. Those who are able to adapt and mold their skills to changing needs will increase their competitiveness by demonstrating a willingness to acquire new knowledge.
- Second, as more American businesses operate overseas, there may be higher demand for employees to be fluent in more than one language.

Table 1. Top 5 Industries: Workers Ages 45 to 64 by Industry

Industry Sector	2007 Empl.	Share of Workers Ages 45 to 64
Health Care and Social Assistance	136,318	13.1%
Manufacturing	130,964	12.6%
Educational Services	128,211	12.3%
Retail Trade	92,007	8.9%
Public Administration	68,807	6.6%

Source: U.S. Census Bureau, Local Employment Dynamics (LED) ²

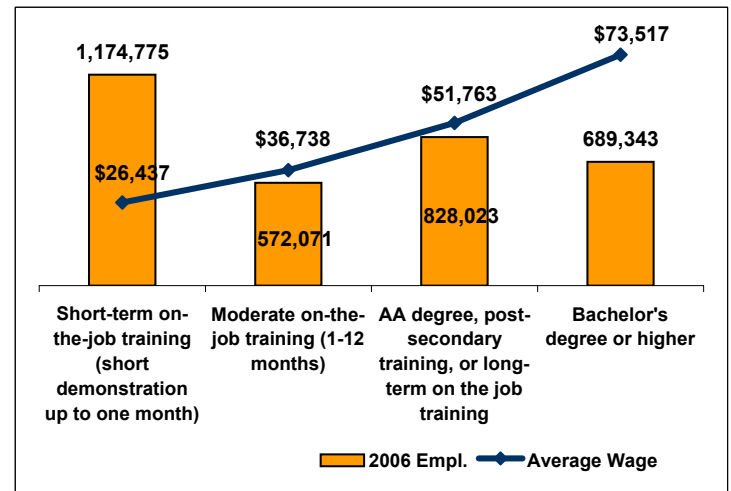
² LED industries differ significantly from all other industry groups discussed in this publication. LED groups industries regardless of ownership codes, whereas unemployment and employment data discussed throughout this publication group industries based on the North American Industry Classification System (NAICS) which distinguishes between ownership codes.

Table 2. 2007 Industry Shares of Workers in the Baby Boom Cohort

Industry Sector	Share of Workers Ages 45 to 64
Utilities	56.6%
Educational Services	53.2%
Public Administration	50.5%
Manufacturing	46.0%
Mining	45.6%
Transportation and Warehousing	44.7%
Health Care and Social Assistance	41.9%
Wholesale Trade	39.1%
Other Services	37.1%
Management of Companies and Enterprises	37.1%
Finance and Insurance	36.4%
Real Estate and Rental and Leasing	34.3%
Professional, Scientific, and Technical Services	34.0%
Administrative and Support and Waste Management	31.8%
Construction	30.4%
Agriculture, Forestry, Fishing and Hunting	30.0%
Retail Trade	28.5%
Arts, Entertainment, and Recreation	28.2%
Information	27.0%
Accommodation and Food Services	17.2%

Source: 2007 LED, U.S. Census Bureau

Chart 6. Education and Wages



Source: ESD, Labor Market and Economic Analysis, Washington State Employment Projections, Occupational Employment Statistics, March 2008

Many workers choose to return to school to remain competitive in a tough job market.

Demand is likely to increase for those who are bilingual, creating greater opportunities in the future for this part of the labor force. Job seekers who have a strong knowledge of other cultures and an ability to work in another country may strengthen their competitive niche.

- Third, job seekers must weigh the investment of time in developing the skills for certain occupations and decide if the expected returns on that investment are worth it. For example, some industries are seasonal. The wages may be high in good times but such industries will lay off workers for long periods of time during a recession.
- More workers return to school during tough job markets to develop transferable skills.

Occupations requiring higher education typically pay more; this is clearly illustrated in *Chart 6*. Many workers choose to return to school to remain competitive in a tough job market.

What jobs are most vulnerable in 2009?

Jobs most vulnerable during the current weakened economy in Washington have been, and will continue to be, in construction, manufacturing, finance and insurance, and retail trade. The credit crisis has moved beyond the sub prime loan market to prime mortgages, commercial real estate, auto financing, credit card loans, and student loans. Jobs in the construction and financial industries are likely to be a drag on employment for some time

to come. Support and mid-level roles and least tenured employees will be most vulnerable.

Construction

Despite fueling job growth over the last few years of the housing boom, according to the Bureau of Economic Analysis data, construction has been a major drag on productivity in the state of Washington for the last ten years (1997 to 2007). Currently, job layoffs that stemmed from the housing slump and cutbacks are occurring throughout this industry. Construction-related occupations are feeling the pinch of a home-building recession. However, the construction industry was the number one contributor toward employment growth for the 1997 to 2007 time frame (14.5 percent of total growth). Although this industry

is undergoing a readjustment, demand for construction trade workers will improve once the housing market recovers.

Finance and Insurance

Layoffs also mounted in the finance and insurance industry sector as the turmoil in the sub prime mortgage market boiled to the surface. Poorly investigated sub prime loans ultimately led to a high level of mortgage foreclosures. Impacts of the financial crisis will linger. The grip of the credit crunch has tightened and consumers are feeling the pinch of rising energy and food prices. Washington state saw the effects first hand as Washington Mutual (WAMU) sold off to Chase Manhattan and

shareholders saw the value of their stocks plummet.

Retail Trade

Consumer spending dropped off in the fourth quarter of 2008 as layoffs in the construction and manufacturing sectors forced consumers to cut back on purchases.

Which careers are the safest bets?

Most of the fastest growing occupations today are relatively small in terms of the number of workers in the occupation. As is almost always the case, most job creation over the next few years will occur in occupations that already employ a lot of workers and these occupations will

experience modest growth in percentage terms. For example, the 3.4 percent growth (*Table 3*) for computer software engineers, systems software, represents fewer openings (779) than the relatively modest growth of 2.0 percent for registered nurses (2,032 openings). Rather than focus on one factor, we are able to minimize misleading information by using both

- the number of openings, and
- the percentage growth rates³.

Table 3 presents 15 occupations that topped Washington's outlook through 2016.

Computer-related and health care occupations are projected to be at the top of Washington's occupational outlook (determined by occupational growth

Table 3. Washington's Occupational Outlook, Top 15 Occupations

Occupational Title	2016 Empl.	Average Annual Growth Rate 2006 to 2016	Average Annual Total Openings 2006 to 2016	Average Wage March 2008
Computer Software Engineers, Applications	33,131	2.9%	1,246	\$86,829
Personal and Home Care Aides	30,422	2.9%	1,199	\$22,169
Computer Software Engineers, Systems Software	19,160	3.4%	779	\$92,622
Computer Programmers	15,472	3.3%	710	\$82,798
Computer Systems Analysts	16,328	2.6%	761	\$78,478
Landscaping and Groundskeeping Workers	31,808	2.2%	1,000	\$27,934
Multi-Media Artists and Animators	6,464	3.4%	314	\$57,515
Home Health Aides	13,203	2.7%	418	\$21,815
Medical Secretaries	22,283	2.2%	757	\$35,006
Hairdressers, Hairstylists, and Cosmetologists	21,981	2.2%	670	\$29,753
Computer Support Specialists	15,314	2.1%	720	\$48,186
Network Systems and Data Communications Analysts	9,125	2.6%	372	\$78,786
Registered Nurses	61,910	2.0%	2,032	\$67,433
Network and Computer Systems Administrators	11,621	2.3%	472	\$72,586
Social and Human Service Assistants	8,227	2.7%	278	\$27,358

Source: Employment Security Department, Occupational Projections, Occupational Employment Statistics, March 2008 Wages

³ Data can be misleading when looking at only one factor (openings or rate).

Example A: If the number of jobs were to increase from 1 to 2 in one year, this would reflect 100 percent growth, but would add only a single position.

Example B: We could see growth of 500 jobs in an occupation of 200,000 workers representing a relatively smaller growth rate (0.25 percent growth).

To limit misleading data, we use a combined rank of both average annual openings and growth rates.

and total openings). Seven of the top 15 occupations require a bachelor's degree or higher, all of which are computer-related occupations. Four of the top ten are health care occupations with a varied range of educational requirements (short to moderate on-the-job training to an associate's degree).

The good news is that select employers and growing companies will offer good job opportunities during 2009. That is, despite current weak labor market conditions in Washington, some areas of the economy are still growing. For example, this is a good time to be in the business of health care, education, and green technology. These sectors appear to be relatively cushioned from turmoil in the rest of the labor market.

Health Care

Health care continues to create a large number of job openings annually, and health care facilities have reported critical shortages of nurses and other health care specialists. There is opportunity for growth in part because of the need for increased care for the aging population. The *Washington State Fall 2008 Job Vacancy Survey Report*⁴

indicated that the health care industry continued to lead other industries in terms of vacancies (14,409). Moreover, the demand for health care workers and medical services will likely continue to increase as our state's population ages.

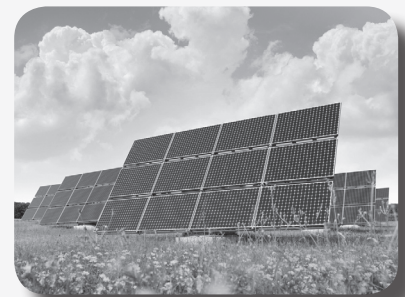
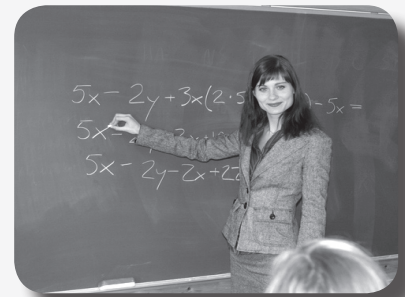
Education

The U.S. Bureau of Labor Statistics has historically shown teaching to be relatively recession-proof. Educational services have the second largest share of workers between the ages 45 to 64 (*Table 2*). Opportunities for teachers will likely remain stable due to retirements and teacher turnover.

Green Jobs

The energy crisis has directed our focus to finding new solutions for our energy needs. The utilities and public administration industry sectors face more than half of their workforces reaching retirement age in the next decade (*Table 2*). Manufacturing and mining also have a large share of older workers (about 46 percent each). As a combination of these two effects, industries that deal with alternative and renewable energy, nuclear, solar and wave energy are likely to see job growth⁵.

This is a good time to be in the business of health care, education, and green technology.



⁴ The *Washington State Fall 2008 Job Vacancy Survey Report* (www.workforceexplorer.com/admin/uploadedPublications/9448_JVSOct_08Rep.pdf) highlights which occupations were being filled in 2008.

⁵ For more information about the definitions of green jobs and the green economy used by Washington state, go to www.workforceexplorer.com/admin/uploadedPublications/9463_Green_Jobs_Report_2008.WEXVersion.pdf and access the *2008 Washington State Green Economy Jobs* report; or to the Washington Department of Ecology's website at: www.ecy.wa.gov/climatechange/GreenEconomy.htm#wia

Summary and Conclusions

Washington's current economic picture is largely the result of an unstable financial system that has reduced lending, even to qualified businesses. As of December 2008, the number of submitted UI initial claims was roughly 76 percent larger than the number filed in December 2007. UI claims were concentrated in the construction and manufacturing industries until late 2008. During a period of high unemployment, some industries and occupational groups will fare better than others. Some firms will be forced to become more efficient by utilizing fewer workers than before. This can be extremely beneficial to the economy in the long run, but in the short run, some workers will have to adapt and learn different skills in order to retain their current jobs. In the long term, the highest number of annual job openings will probably occur in industries that employ a large percentage of the baby boomer cohort (ages between 45 and 64) because members of this age cohort are preparing to retire. Baby boomers, age 45 to 64, represent more than 36 percent of workers statewide; over one million workers. However, during the

current state of the economy, some of baby boomers may delay their retirement until they are more confident about the future of the U.S. financial system.

In addition to considering the number of job openings that are anticipated in 2009 in many occupations and industries, other factors should be considered when choosing a career. These include educational requirements, the importance of upgrading skills, and the stability of an occupation or industry during economic cycles. The 'safest bets' reported in this study are occupations that were ranked according to their annual employment growth rates and the average number of job openings. Computer-related and health care occupations are projected to be at the top of Washington's occupational outlook. Seven of the top 15 occupations require a bachelor's degree or higher, all of which are computer-related occupations. Four of the top ten are health care occupations with a varied range of educational requirements (short to moderate on-the-job training to an associate's degree). With respect to industries, during the current recession, this is a good time to be in the business

of health care, education, and green technology. Conversely, employment in the construction, manufacturing, and retail trade sectors are likely to be a major drag on Washington's economic outlook during 2009.

In conclusion, whether or not Washington experiences a full recession or just slow growth during 2009 and 2010 will depend on how quickly the financial system can be stabilized. It will depend also on the successful implementation of proposed federal and state stimulus packages that will create jobs. Washington will experience job losses in 2009 but companies will continue to hire workers in practically every industry and occupation even during a recession, albeit at a lower rate than they will hire during a recovery period. Therefore, during difficult economic times, job seekers should seek out assistance and information from multiple sources about available job openings and they should attempt to re-tool, learn new skills, and position themselves in companies that provide career opportunities so that they are available to move up a career ladder as the economy recovers from its current situation.

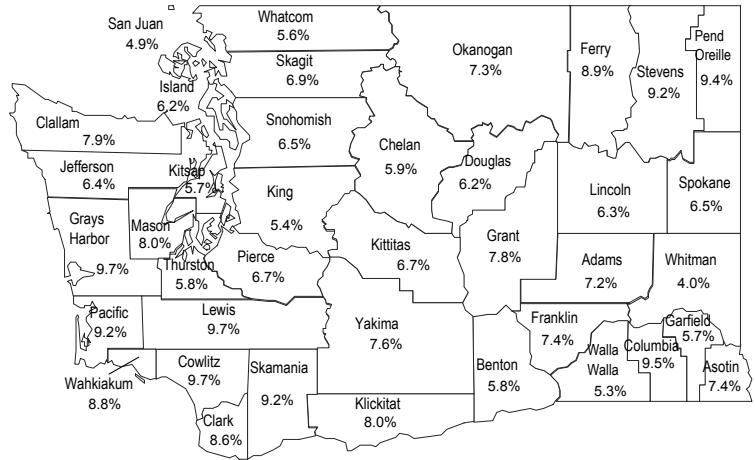
Washington's current economic picture is largely the result of an unstable financial system that has reduced lending, even to qualified businesses.

Fourth Quarter Stats-At-A-Glance

Monthly Resident Civilian Labor Force and Employment in Washington State and U.S.

(In Thousands)	Oct. 2008 (Revised)	Nov. 2008 (Revised)	Dec. 2008 (Prel)
Seasonally Adjusted Unemployment Rate:			
Washington State	6.3%	6.3%	7.1%
United States	6.6%	6.8%	7.2%
Washington State			
<i>Not Seasonally Adjusted:</i>			
Resident Civilian Labor Force	3,523.2	3,517.4	3,530.8
Employment	3,321.4	3,297.0	3,279.0
Unemployment	201.8	220.5	251.7
Percent of Labor Force	5.7%	6.3%	7.1%

Average Unemployment Rates by County October, November, and December 2008 Washington = 6.4% / United States = 6.6% Not Seasonally Adjusted



Washington State
Employment Security Department
Labor Market and Economic Analysis

Civilian Labor Force Estimates for Washington State Counties and MSAs 1/

Date: 2/4/09
Benchmark: March 2007

Not Seasonally Adjusted	October 2008 Revised				November 2008 Revised				December 2008 Preliminary			
	Labor Force	Employment	Unemployment	Unemployment Rate	Labor Force	Employment	Unemployment	Unemployment Rate	Labor Force	Employment	Unemployment	Unemployment Rate
Washington State Total	3,523,200	3,321,400	201,800	5.7	3,517,400	3,297,000	220,500	6.3	3,530,800	3,279,000	251,700	7.1
Bellingham MSA	110,700	105,100	5,600	5.1	112,200	105,900	6,300	5.6	111,990	105,180	6,820	6.1
Bremerton MSA	126,600	119,700	6,900	5.4	126,700	119,300	7,300	5.8	127,080	119,480	7,600	6.0
Kennewick-Pasco-Richland MSA	126,400	119,900	6,500	5.2	124,200	116,600	7,600	6.1	122,870	113,850	9,020	7.3
Benton County 2/	93,206	88,483	4,723	5.1	91,271	86,058	5,213	5.7	89,900	84,020	5,880	6.5
Franklin County 2/	33,240	31,420	1,820	5.5	32,976	30,559	2,417	7.3	32,970	29,830	3,140	9.5
Longview MSA (Cowlitz)	45,225	41,421	3,804	8.4	46,185	41,798	4,387	9.5	46,350	41,140	5,210	11.2
Mt. Vernon-Anacortes MSA (Skagit)	59,423	55,901	3,522	5.9	59,200	55,115	4,085	6.9	57,720	53,210	4,520	7.8
Olympia MSA	133,891	126,639	7,252	5.4	136,138	128,276	7,862	5.8	136,340	127,970	8,370	6.1
Seattle-Bellevue-Everett MD*	1,470,400	1,392,700	77,700	5.3	1,469,100	1,388,000	81,100	5.5	1,478,100	1,388,400	89,700	6.1
King County 2/	1,093,199	1,038,063	55,136	5.0	1,092,719	1,034,619	58,100	5.3	1,097,390	1,034,830	62,560	5.7
Snohomish County 2/	377,230	354,681	22,549	6.0	377,269	353,504	23,765	6.3	380,710	353,580	27,140	7.1
Spokane MSA	238,747	225,252	13,495	5.7	243,638	228,073	15,565	6.4	244,820	226,710	18,110	7.4
Tacoma Metropolitan Division	403,279	378,221	25,058	6.2	409,574	382,344	27,230	6.6	410,480	380,920	29,560	7.2
Wenatchee MSA	64,800	61,900	2,900	4.4	59,900	56,200	3,800	6.3	58,700	54,330	4,370	7.4
Chelan County 2/	42,865	40,970	1,895	4.4	39,613	37,174	2,439	6.2	38,790	35,950	2,840	7.3
Douglas County 2/	21,917	20,937	980	4.5	20,308	18,997	1,311	6.5	19,900	18,370	1,530	7.7
Yakima MSA	127,845	120,642	7,203	5.6	119,650	110,417	9,233	7.7	117,290	105,970	11,320	9.7
Aberdeen MSA (Grays Harbor)	31,653	28,917	2,736	8.6	32,193	29,188	3,005	9.3	32,830	29,210	3,610	11.0
Centralia MSA (Lewis)	31,499	28,960	2,539	8.1	32,697	29,468	3,229	9.9	32,780	29,140	3,640	11.1
Ellensburg MSA (Kittitas)	21,614	20,364	1,250	5.8	21,290	19,913	1,377	6.5	20,760	19,160	1,610	7.7
Moses Lake MSA (Grant)	43,442	41,149	2,293	5.3	39,741	36,612	3,129	7.9	38,770	34,740	4,030	10.4
Oak Harbor MSA (Island County)	33,686	31,686	2,000	5.9	33,993	31,864	2,129	6.3	34,080	31,860	2,230	6.5
Port Angeles MSA (Clallam)	30,415	28,289	2,126	7.0	30,662	28,224	2,438	8.0	30,840	28,160	2,680	8.7
PulMSAn MSA (Whitman)	21,867	20,966	901	4.1	22,086	21,144	942	4.3	21,680	20,880	800	3.7
Shelton MSA (Mason)	26,400	24,453	1,947	7.4	26,649	24,601	2,048	7.7	26,990	24,560	2,430	9.0
Walla Walla MSA (Walla Walla)	31,218	29,743	1,475	4.7	29,627	28,017	1,610	5.4	29,930	28,180	1,750	5.8
Adams	8,695	8,300	395	4.5	7,914	7,335	579	7.3	8,000	7,190	810	10.1
Asotin 2/	10,380	9,701	679	6.5	10,510	9,792	718	6.8	10,610	9,680	930	8.8
Clark 2/	217,968	201,481	16,487	7.6	221,862	203,729	18,133	8.2	227,660	204,610	23,050	10.1
Columbia	1,459	1,345	114	7.8	1,463	1,322	141	9.6	1,540	1,370	170	11.1
Ferry	3,072	2,838	234	7.6	3,040	2,781	259	8.5	3,110	2,780	330	10.5
Garfield	987	934	53	5.4	980	925	55	5.6	980	910	60	6.3
Jefferson	13,919	13,110	809	5.8	14,033	13,146	887	6.3	14,200	13,210	1,000	7.0
Klickitat	10,021	9,362	659	6.6	9,809	9,028	781	8.0	9,800	8,860	940	9.6
Lincoln	4,639	4,385	254	5.5	4,758	4,446	312	6.6	4,670	4,350	320	6.8
Okanogan	23,689	22,461	1,228	5.2	19,675	18,191	1,484	7.5	19,470	17,610	1,860	9.5
Pacific	9,406	8,593	813	8.6	9,334	8,465	869	9.3	9,530	8,610	920	9.7
Pend Oreille	5,591	5,112	479	8.6	5,635	5,128	507	9.0	5,730	5,130	610	10.6
San Juan	8,450	8,116	334	4.0	8,306	7,886	420	5.1	8,390	7,920	470	5.6
Skamania 2/	5,294	4,902	392	7.4	5,435	4,957	478	8.8	5,610	4,980	630	11.2
Stevens	18,791	17,343	1,448	7.7	19,121	17,419	1,702	8.9	19,390	17,290	2,100	10.8
Wahkiakum	1,656	1,524	132	8.0	1,658	1,522	136	8.2	1,690	1,520	170	10.1

1/ Official U.S. Department of Labor, Bureau of Labor Statistics data/Haver Analytics
2/ Estimates are determined by using the Population/Claims Share disaggregation methodology.
Note: Detail may not add due to rounding.
*Metropolitan Division

Nonagricultural Wage and Salary Employment in Washington State, Place of Work 1/ Seasonally Adjusted

Quarterly Benchmark: March 2008

In Thousands

Industry	Dec. 2008 (Prel)	Nov. 2008 (Rev)	Oct. 2008 (Rev)	Sep. 2008 (Rev)	Aug. 2008 (Rev)	Jul. 2008 (Rev)
Total Nonfarm	2,921,400	2,939,500	2,936,100	2,967,100	2,979,100	2,981,000
Natural Resources and Mining	7,500	7,500	7,600	7,700	7,800	7,600
Logging	4,700	4,800	4,800	4,800	4,800	4,700
Construction	191,500	192,000	196,600	199,000	200,800	202,700
Construction of Buildings	50,900	47,500	49,300	50,500	51,000	51,800
Heavy and Civil Engineering	19,600	20,800	21,400	21,700	22,000	22,200
Speciality Trade Contractors	121,000	123,700	125,900	126,800	127,800	128,700
Manufacturing	283,400	288,100	267,200	292,400	294,300	293,400
Durable Goods	205,800	209,200	187,800	213,000	213,700	214,500
Wood Products	15,600	15,900	16,200	16,500	16,500	16,800
Fabricated Metal Products	20,100	20,500	20,700	20,900	20,900	21,100
Computer and Electronic Products	21,000	22,200	22,500	22,800	22,900	22,900
Transportation Equipment	98,000	97,000	73,500	97,400	97,800	97,800
Aerospace Products and Parts	86,000	85,000	61,300	85,700	85,800	85,900
Nondurable Goods	77,600	78,900	79,400	79,400	80,600	78,900
Food Manufacturing	33,900	34,000	34,300	33,900	34,700	33,200
Wholesale Trade	127,300	128,400	129,300	129,900	129,700	130,100
Retail Trade	316,300	318,200	324,800	327,100	328,500	329,000
Motor Vehicle and Parts Dealers	39,600	39,300	39,900	40,300	40,900	41,200
Food and Beverage Stores	60,700	60,900	61,500	61,500	61,600	62,000
Clothing and Clothing Accessories Stores	29,300	29,700	31,700	31,400	31,400	31,000
General Merchandise Stores	58,800	58,700	60,600	61,900	62,100	62,200
Transportation, Warehousing and Utilities	90,400	95,300	94,800	95,600	96,500	96,900
Utilities	4,800	5,000	4,900	5,000	5,000	5,100
Transportation and Warehousing	85,600	90,300	89,900	90,600	91,500	91,800
Air Transportation	10,700	10,900	11,000	11,000	11,100	11,100
Water Transportation	3,500	3,500	3,400	3,500	3,500	3,500
Truck Transportation	23,100	24,700	24,600	24,400	24,500	24,500
Support Activities for Transportation	17,700	17,900	19,000	18,900	19,100	18,900
Support Activities for Water Transportation	5,300	5,500	6,000	6,000	6,100	6,000
Warehousing and Storage	7,400	10,200	10,400	10,500	10,600	11,000
Information	107,200	106,900	106,600	107,300	108,500	107,700
Software Publishers	53,000	52,400	52,600	52,200	52,200	51,500
Telecommunications	25,300	25,600	25,800	26,000	26,100	26,000
Financial Activities	149,500	149,900	150,400	150,900	151,700	151,700
Finance and Insurance	99,100	99,300	99,300	100,100	101,000	100,900
Credit Intermediation and Related Activities	49,800	49,600	49,600	49,900	50,500	50,300
Insurance Carriers and Related Activities	37,500	37,900	38,000	38,100	38,400	38,400
Real Estate and Rental Leasing	50,400	50,600	51,100	50,800	50,700	50,800
Professional and Business Services	336,800	341,200	347,200	351,800	353,300	354,400
Professional, Scientific and Technical Services	167,600	168,200	168,500	167,200	167,600	167,900
Legal Services	20,600	20,900	21,100	21,100	21,200	21,100
Architectural and Engineering Services	38,200	37,700	37,700	37,800	37,800	38,300
Computer Systems Design and Related Services	33,900	33,500	33,700	33,300	33,600	33,500
Management of Companies and Enterprises	33,300	33,800	34,100	34,500	34,700	35,000
Admin and Support and Waste Management and Remediation	135,900	139,200	144,600	150,100	151,000	151,500
Employment Services	44,600	48,300	50,100	50,600	51,300	51,800
Education and Health Services	366,100	366,000	366,000	364,800	364,800	363,300
Education Services	48,000	48,600	48,300	48,300	48,400	48,500
Hospitals	70,500	70,400	70,200	70,100	69,700	68,800
Nursing and Residential Care Facilities	58,700	57,400	57,700	57,400	57,500	57,500
Social Assistance	62,700	62,700	62,500	62,000	62,000	61,500
Leisure and Hospitality	282,600	286,100	286,100	285,700	285,400	285,600
Arts, Entertainment and Recreation	49,200	49,800	49,900	48,500	47,800	48,100
Accommodation	31,800	32,100	32,100	32,100	32,000	32,000
Food Services and Drinking Places	201,600	204,200	204,100	205,100	205,600	205,500
Government	553,800	551,400	550,900	546,500	549,200	550,100
Federal Government	70,300	70,500	70,700	70,300	70,200	70,400
Total State Government	155,500	155,000	155,000	155,500	151,800	153,800
State Government Educational Services	82,800	82,600	82,300	82,500	78,800	80,800
Total Local Government	328,000	325,900	325,200	320,700	327,200	325,900
Local Government Educational Services	154,500	154,100	153,900	153,700	156,000	155,400
Workers in Labor-Management Disputes	0.0	0.0	0.0	0.0	0.0	0.0

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

2/ Workers excluded because of involvement in labor-management dispute.

Prepared by the Labor Market and Economic Analysis branch using a Quarterly Benchmark process.

This process uses the most recent quarter from the Unemployment Insurance Tax Reports (currently second quarter 2008) and estimates employment from that point to present.

What's New?

2008 Washington State Green Economy Jobs

This report presents the findings of a survey of private-sector employers in Washington state. The goal of the survey was to identify the number and type of jobs in the state's emerging *green economy* and to establish a baseline measure that can be used to track industry and job growth in Washington's green economy.

Prior to this study, a 2005 study of clean energy and energy efficiency employment identified 8,400 individuals employed in clean energy jobs. This baseline was used to establish the goal of 25,000 green jobs by 2020.

The green economy is rooted in the development and use of products and services that promote environmental protection and energy security. It is composed of industries and businesses engaged in:

- Energy efficiency
- Preventing and reducing pollution
- Renewable energy
- Mitigating or cleaning up pollution

Go to www.workforceexplorer.com/admin/uploadedPublications/9463_Green_Jobs_Report_2008_WEXVersion.pdf to see the full report!



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Labor Market and Economic Analysis



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