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local insights

wasatchfrontnorth

An economic and labor market analysis of the Wasatch Front North Area

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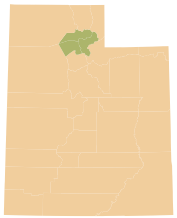
in this issue:

Occupational Projections

for the Wasatch Front North



BY TYSON SMITH, ECONOMIST

One of the primary roles of the Department of Workforce Services (DWS) is to collect, analyze and forecast employment information for the State of Utah. In cooperation with the U. S. Bureau of Labor Statistics (BLS), DWS collects monthly unemployment estimates, quarterly nonfarm industry employment counts, semi-annual occupational employment statistics, along with many other pieces of labor market data. These data sources, when observed in totality, paint a comprehensive portrait of the state's labor economy. However, each source is tailored to address a specific aspect of the labor market, which makes the evaluation of a singular source a uniquely informative process.

Education administrators, business leaders and policy makers consider occupational information some of the most valuable labor data available. The premier source for job-specific data is BLS' Occupational Employment Statistics (OES) program. OES produces employment and wage estimates for over 800 occupations at the national, state and metropolitan statistical area (MSA) level. The sampling methodology for the OES survey makes the data the most complete and accurate estimation of occupational information in the United States. In turn, decision-makers across the country use OES employment estimates to approximate the labor supply for a given occupation in a given geography and to establish competitive wages.

Understanding the occupational composition of a region is important to employers and workers because occupational employment measures the number of workers and the value of wages for employees who perform similar

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Occupational Projections Continued

activities and tasks. For example, when businesses want to increase their workforce they are concerned with the ability of the applicants to execute the tasks required to complete the job. Similarly, when workers enter the job market they are concerned with the skills required of them to perform their assignment. Both parties also want to gauge the potential size of the applicant pool and the average wage for a given occupation. The OES survey is the only tool that collects occupation specific information from approximately 4,000 Utah firms each year.

As an added value to the community, DWS develops biennial occupational projections for Utah and its sub-state geographic areas. Occupational projections are the end product of two projections processes. In the first process, industry projections are generated, which form the limit of the total number of jobs in the base year (2010) and the projected year (2020). In the second step of the process the occupational projections use staffing patterns – the distribution of employment by occupation in each industry – from the OES survey to distribute the industry employment counts across the occupations. Finally, the projections are used to estimate the average number of annual job openings that are expected during the forecast period.

An examination of the OES estimates and the DWS occupational projections for the Wasatch Front North (WFN) reveal unique insights into the labor market of the region.

Figure 1: Major Occupational Groups

Major Occupational Groups	Employment Estimates		Annual Growth Rate	Total Annual Openings	Location Quotient
	2010	2020			
Total, All Occupations	209,560	255,300	2.2%	9,610	-
Office and Administrative Support	31,720	37,150	1.7%	1,280	0.9
Sales and Related	22,340	26,650	1.9%	1,110	1.0
Production	15,850	18,930	1.9%	630	1.2
Food Preparation and Serving Related	15,400	18,530	2.0%	830	0.8
Education, Training, and Library	15,070	18,580	2.3%	650	1.1
Transportation and Material Moving	13,710	17,030	2.4%	690	1.0
Business and Financial Operations	12,960	15,350	1.8%	510	1.3
Construction and Extraction	11,820	15,850	3.4%	650	1.4
Installation, Maintenance, and Repair	9,540	11,130	1.7%	390	1.2
Management	9,180	10,400	1.3%	310	0.9
Healthcare Practitioners and Technical	9,150	12,390	3.5%	510	0.8
Personal Care and Service	8,320	10,870	3.1%	500	1.5
Building and Grounds Cleaning and Maintenance	7,360	9,070	2.3%	300	1.1
Healthcare Support	5,390	7,550	4.0%	300	0.8
Architecture and Engineering	4,800	5,440	1.3%	180	1.3
Computer and Mathematical	3,810	4,550	1.9%	150	0.7
Community and Social Service	3,190	3,960	2.4%	150	1.0
Protective Service	2,930	3,510	2.0%	150	0.6
Arts, Design, Entertainment, Sports, and Media	2,580	3,170	2.3%	130	0.9
Farming, Fishing, and Forestry	1,980	1,960	-0.1%	60	2.9
Life, Physical, and Social Science	1,280	1,670	3.0%	80	0.7
Legal	1,200	1,590	3.3%	60	0.7

Major Occupational Groups

The OES survey uses the Standard Occupational Classification (SOC) system to group workers and jobs that perform similar functions into occupational categories. All workers are classified into one of 840 detailed occupations. To facilitate classification, detailed occupations are combined to form 461 broad occupations, 97 minor groups, and 23 major groups.

In the WFN, the five largest major occupational groups (by employment) in 2010 were estimated to be: (1) office and administrative support, (2) sales and related, (3) production, (4) food preparation and serving related, and (5) education, training, and library. Of that collection, production was the only major group not ranked in the top five nationally. Figure 1 illustrates the distribution and expected growth of the major occupational groups in the WFN. Only one of the five largest groups, as measured by base employment counts, was projected to grow faster than the annual average for the region of 2.2 percent per year. Despite lower than average growth rates, these occupational groups represented nearly half of the projected annual job openings. This is because even modest growth in large occupational groups translates into large numbers of job openings each year. In total, the five largest occupational groups contained approximately 100,380 total workers in 2010, or 47.9 percent of the labor force in the region.

The Location Quotient (LQ) column in Figure 1 identifies any major occupational groups that have regional labor specialization. LQs are a formula used to measure the relative employment concentration of a given occupation in a given location in relation to some larger geography, usually national. As a rule of thumb, an LQ of 1.2 or higher represents an occupational group with a

relatively high regional concentration of employment, while a score of 0.8 or lower represents a comparatively small presence of an occupational group. The most notable occupational groups that display regional specialization within the WFN are personal are and service, construction and extraction, business and financial operations, and production occupations with LQs of 1.5, 1.4, 1.3, and 1.2, respectively.

Data from the major occupational groups provide a general view of the occupational environment in a region, but a more detailed evaluation of the occupational landscape yields a deeper understanding of the labor force. While it would be impossible to discuss each of the 840 occupations captured by the OES program, the DWS occupational projections offer a few notable factors by which the data can be sorted and analyzed.

Projecting Annual Job Openings and "Star Ratings"

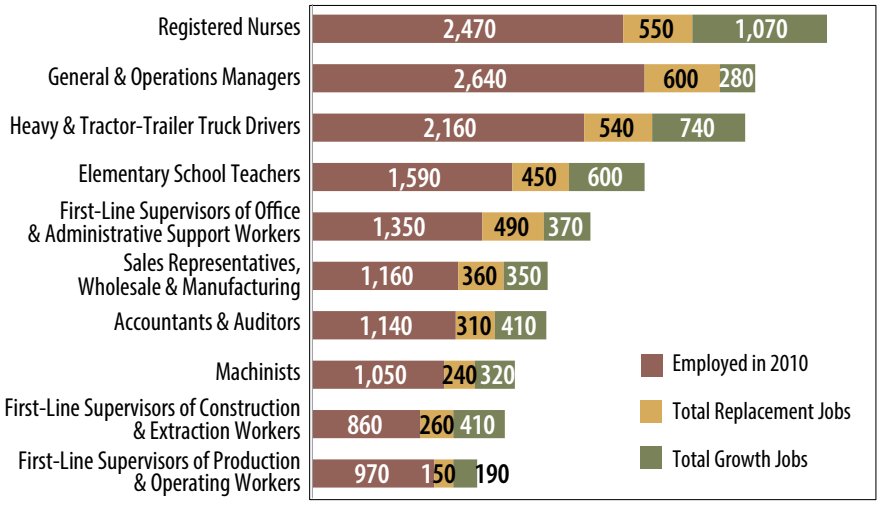
The primary indicator of an occupation's employment outlook is the total number of job openings available each year. Annual openings generally reflect the size of the employment base in an occupation, and the expected future employment over the 10-year projection period. Job openings occur for one of two reasons: economic expansion or replacement of workers. In the first case, an increase in the demand for a product or service, or the expansion of a firm into a new market, results in an increased demand for workers capable of producing that product or service. In the latter case, workers may opt to leave an occupational listing by switching careers, retiring or moving away. When this happens the vacant position needs to be refilled by a new worker.

Part of the projection process is to evaluate the overall employment outlook for each occupation. DWS employs a rating system as a means of giving general career guidanceabout job openings and waegs. Utah's Occupational Star Ratings assign a "star value" to each occupation as a guideline for the employment outlook. Those occupations with zero stars have the worst employment outlook, those with five stars have the best employment outlook[1]. Moreover, because the absolute number of job openings is weighted heavily in this process, the highest rated jobs often have the highest number of openings.

Figure 2 highlights the four and five star occupations that project to have the highest total employment by 2020. The chart illustrates the relationship between base employment and job openings. In the WFN, it is expected that there will be approximately 4,080 registered nurses (RNs) employed in the WFN by 2020, with 2,470 of those future positions already filled in 2010. RNs project to have over 100 growth openings available each year—the highest number of growth openings among the four- and five-star occupations—followed by heavy and tractor-trailer truck drivers (70), elementary school teachers (60), accountants and auditors (40).

Although the number of job openings is the central component of the employment outlook, there are other occupational factors explored for the Star Ratings.

Figure 2: Total Occupational Employment in 2020 (Largest 4 and 5 Star Occupations - Projected)



Occupational Wages, Educational Attainment and Growth Rates

Wages play a significant role in determining the potential employment outlook for an occupation. High paying jobs represent occupations with a higher standard of living than low paying jobs. In addition to wages, growth is another important element to consider when establishing occupations with a positive outlook. When an occupation grows at an accelerated rate there is typically upward pressure on wages, because firms need to attract more qualified applicants. There is also ample opportunity to find a job in an occupation that is expanding quickly. Figure 3 illustrates the ten highest-paying and ten fastest-growing occupations in the WFN with a minimum of 100 workers in 2010.

1 Ratings are meant to provide general guidance about job openings and wages and are not the final word on the desirability or quality of a particular occupation. Star ratings should not be used to exclude occupations for training purposes.

Occupational Projections Continued

Figures 3 and 4 highlight the effect of educational attainment on wages. Four of the five highest paying jobs require a doctoral or professional degree, and none of the ten highest paying occupations accept anything lower than a bachelor's degree. The ten highest paying jobs in the region are exclusively white-collar occupations in major occupational groups like healthcare practitioners and technical, business and financial operations, and management. The highest paying job is family and general practitioners at a median wage of $80.60 per hour, and the lowest paying of the group is financial managers at $48.00 per hour.

The second table in Figure 3 shows that most of the fastest-growing jobs in the region do not require high levels of educational attainment. In fact, six of the ten fastest-growing occupations require a high school diploma or less. The majority of the fastest-growing jobs are in the construction and extraction or healthcare support major occupational groups. The emphasis for these occupations is on experience or certification, and in most cases the wages reflect the lower educational requirements. Nonetheless, these occupations are growing two to three times faster than the rest of the regional economy.

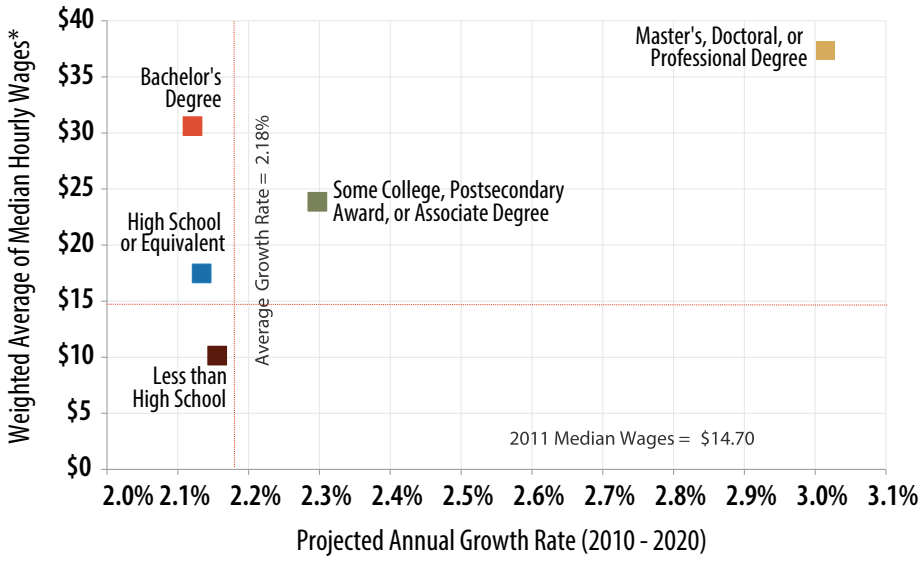
There are multiple sources of labor market data available through government and non-government agencies and each data set provides a piece of the economic puzzle. The OES program offers unique insights into occupational employment, and is one of the most comprehensive sources for occupation-specific information. Understanding the occupational profile of a region, and the ways in which that profile will change over time, is indispensable for local employers, legislators, and the workforce.

Figure 3: Highest Paying Occupations

Highest Paying Occupations*	Employment Estimates		Annual Growth Rate	Median Hourly Wage	Education
	2010	2020			
Family and General Practitioners	120	170	5.1%	$80.60	Doctoral or professional degree
Pharmacists	430	560	3.0%	$61.20	Doctoral or professional degree
Architectural and Engineering Managers	160	190	1.9%	$54.20	Bachelor's degree
Computer and Information Systems Managers	200	240	1.9%	$52.90	Bachelor's degree
Chief Executives	270	300	1.0%	$52.80	Bachelor's degree
Purchasing Managers	110	120	1.4%	$52.70	Bachelor's degree
Dentists, General	160	200	2.6%	$50.90	Doctoral or professional degree
Lawyers	540	720	3.4%	$48.80	Doctoral or professional degree
Engineers, All Other	230	230	0.2%	$48.50	Bachelor's degree
Financial Managers	430	470	1.0%	$48.00	Bachelor's degree
Fastest Growing Occupations*					
Brickmasons and Blockmasons	140	260	8.1%	$18.00	HS or equivalent
Physical Therapist Aides	170	290	7.3%	$9.30	HS or equivalent
Hazardous Materials Removal Workers	130	230	7.0%	$11.00	HS or equivalent
Physician Assistants	140	220	5.8%	$42.30	Master's degree
Market Research Analysts and Marketing Specialists	300	480	5.7%	$19.50	Bachelor's degree
Residential Advisors	300	470	5.7%	$13.10	Some college, no degree
Plasterers and Stucco Masons	260	410	5.7%	$13.20	Less than HS
Medical Secretaries	870	1,330	5.3%	$14.20	HS or equivalent
Physical Therapists	290	440	5.3%	$35.50	Doctoral or professional degree
Helpers — Painters, Plasterers, and Stucco Masons	130	200	5.2%	$9.10	Less than HS

*Minimum 100 Occupations in Base Year 2010

Figure 4: Growth and Hourly Wages for Occupations with Different Educational Requirements



*Average of all disclosable occupations

Source: Utah Department of Workforce Services; Bureau of Labor Statistics

Employment by Industry and Other Economic Gauges

BY TYSON SMITH, ECONOMIST

Regional Overview

Second quarter employment in the Wasatch Front North (WFN) Economic Service Area (ESA) grew 2.6 percent from 2012 to 2013. In total, the service area added 5,296 nonfarm payroll jobs year-over-year for a quarterly average of 207,741 employees. The WFN increased employment at a slower rate than the rest of the state, which grew 3.2 percent over the same period. Annual growth across the state and in the WFN slowed from first quarter rates of 3.5 and 3.0 percent, respectively.

Industry Employment in the Wasatch Front North

Aligning firms and organizations that perform similar functions provides a construct for examining employment and the economy. Total nonfarm employment contains 20 industry sectors that can be grouped into two super sectors: goods-producing and service-providing.

Private-Sector Goods-Producing Employment: In the second quarter of 2013, 17.5 percent of total nonfarm employment in the WFN was in private sector goods-producing jobs. Employment grew at an annual rate of 3.3 percent from the second quarter of 2012, adding 1,157 jobs. Construction and manufacturing employment drove the growth in this super sector, increasing at respective annual rates of 4.8 and 2.7 percent.

Private-Sector Services-Providing Employment: Sixty percent of the nonfarm jobs in the WFN are in private sector services. This sector increased second-quarter employment by 4,377 jobs, or 3.7 percent, from 2012 to 2013. The professional and business services and the educational, health and social services sectors added 2,272 and 982 jobs, respectively; the largest numeric increases in the service area.

Government Employment: Government employment is generally classified in the service-providing super sector, however, the government sector functions differently than the private sector and should therefore be evaluated separately. In the WFN region, government jobs represented almost one-fourth of the employment. total government employment in the service area shrank by 0.5 percent year-over-year. State government employment in the area increased by 130 employees over the year, while the number of federal government jobs decreased by 355.

Unemployment rates have fallen over the last year while employment has grown. In October 2012 the seasonally adjusted unemployment rate for the WFN was 5.7, compared to 4.6 in 2013. The 1.0 percentage point difference represents an estimated 12,987 less people unemployed. Over the last five months the unemployment rate has remained relatively stable, decreasing 0.1 percentage points from June to October. In October, the WFN unemployment rate equaled the state rate of 4.6 percent.

The average number of unemployed people filing initial unemployment insurance claims also decreased from the second quarter of 2012 to the second quarter of 2013, though the difference was minimal. Approximately nine fewer weekly initial unemployment claims were filed during the second quarter, year-over-year.

In addition to increased employment, broader economic growth helped drive up second-quarter consumption in 2013. Taxable sales for the WFN increased 4.7 percent year-over-year to a total of almost $2 billion. As labor market conditions trend upward, so, too, should business and household spending.

Davis County

Total nonfarm employment in Davis County increased 2.0 percent year-over-year in the second quarter. From 2012 to 2013, Davis County added 2,130 jobs, resulting in a quarterly average of

Employment by Industry Continued

nonfarm employment equal to 110,928 this year. Figure 5 highlights the changes in employment by major industry.

- **Private-Sector Goods-Producing Employment:** Goods production increased 3.4 percent, or 618 jobs, since the second quarter of 2012. construction and manufacturing added 328 and 316 jobs, respectively.
- **Private-Sector Service-Providing Employment:** Services added 1,803 jobs year-over-year, a growth rate of 2.8 percent. The professional and business services and the educational, health and social services sectors each tallied 855 and 777 new jobs.
- **Government Employment:** Second quarter government employment shrank 1.1 percent from 2012 to 2013. The local government added 26 employees, but federal government lost 304 jobs, while state government lost 8 jobs.

The Davis County unemployment rate settled at 4.3 percent in October, which is unchanged from September. Over the last 12-months the county unemployment rate has fallen 0.9 percentage points. Davis County was 0.3 percentage points lower than the state average in October.

On average, the number of weekly initial unemployment claims filed during the third quarter increased by two claims from 2012 to 2013. The average number of weekly claims in the third quarter was down by approximately 90 claims the recession high in 2009.

Spending in the county was up; second-quarter taxable sales in the county increased 5.1 percent from 2012 to 2013, significantly higher than the state average of 3.1 percent. The 5.1-percent year-over increase in

Figure 5: Davis County Changes in Employment

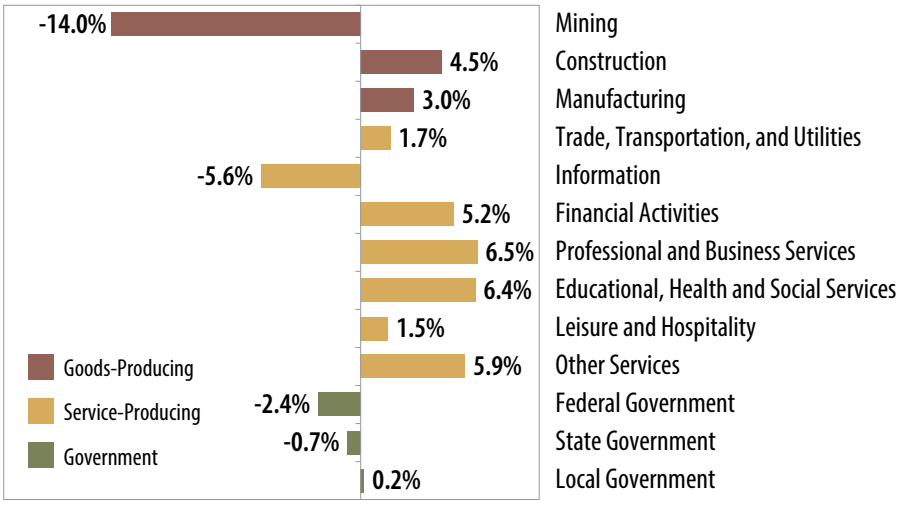
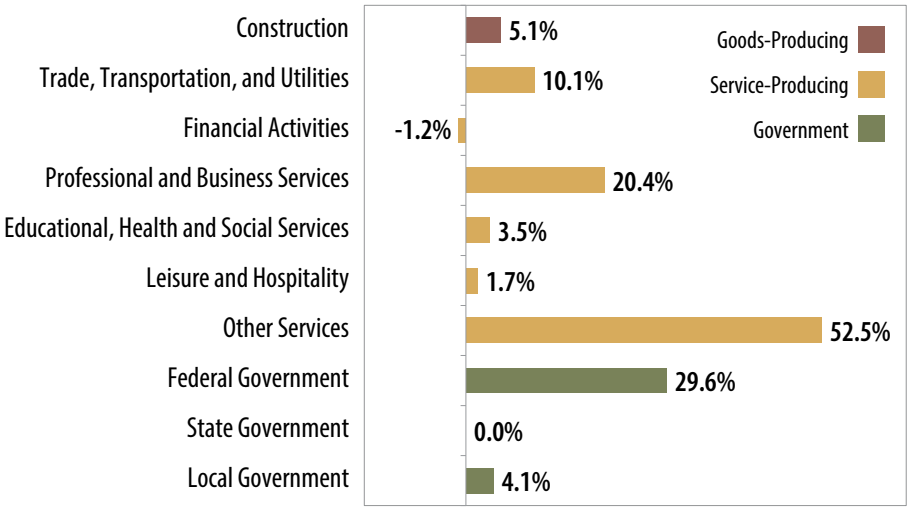


Figure 6: Morgan County Changes in Employment



spending was about $51.7 million higher than last year, bringing second quarter spending in 2013 to $1.07 billion.

Morgan County

Second quarter total nonfarm employment in Morgan County grew 5.6 percent from 2012 to 2013. Morgan County added 100 nonfarm jobs year-over-year, resulting in total employment equal to 1,878. Figure 6 illustrates the employment changes by industry groups.

- **Private-Sector Goods-Producing Employment:** Goods production barely moved, increasing by 3 jobs, or 0.6 percent, from the second quarter of 2012. Construction added a total of 16 jobs from the previous year.
- **Private-Sector Service-Providing Employment:** Services grew 9.6 percent year-over-year, adding 76 jobs. Trade, transportation, and utilities increased by 35 jobs to an employment total of 386.
- **Government Employment:** Second quarter government employment rose from 467 in 2012 to 487 in 2013, 4.4 percent. The local government sector added 18 employees, while federal government gained 3 jobs.

The unemployment rate in Morgan County was 4.1 percent in October 2013, unchanged from September. Since October 2012, the county unemployment rate has fallen 1.1 percentage points. Morgan County's unemployment rate was relatively low when compared to the state average of 4.6 percent in October. The average number of initial unemployment claims filed per week in the third quarter of 2013 was 3 claims, which was unchanged from 2012.

Second-quarter spending in Morgan was contrary to statewide trends. Taxable sales in the county fell 11.2 percent from 2012 to 2013. Second-quarter spending was approximately $19.3 million, a drop of $2.4 million from the previous year.

Weber County

Second-quarter total nonfarm employment in Weber County increased 3.3 percent year-over-year. Total employment in the second quarter of 2013 in Weber County was 94,934, a 3,066 job increase from the same period in 2012. Figure 7 shows the changes in employment by industry groups.

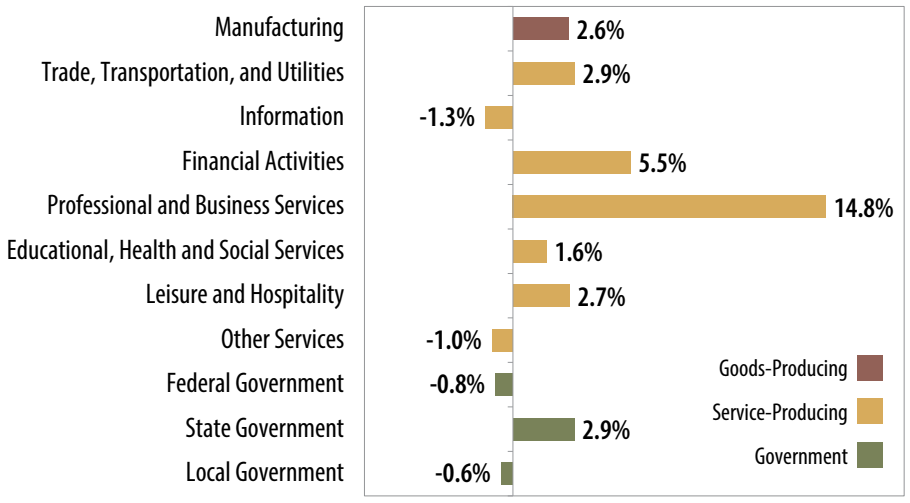
- **Private-Sector Goods-Producing Employment:** Increased 3.2 percent, or 536 jobs, from the second quarter of 2012. Manufacturing added 317 jobs, taking total employment from 12,044 in 2012 to 12,361 in 2013.
- **Private-Sector Service-Providing Employment:** Added 2,498 jobs, a growth rate of 2.8 percent from the previous year. The professional and business services and the trade, transportation, and utilities sectors increased by 1,402 and 473 jobs, respectively.
- **Government Employment:** Government employment grew 0.2 percent from the second quarter 2012 to the second quarter 2013. State government added 138 employees, while federal and local government lost a total of 105 jobs.

October's unemployment rate for Weber County was 5.1 percent, which represents the same rate from the month prior. Over the last year, the county unemployment rate has fallen 1.2 percentage points. Weber County was 0.5 percentage points higher than the state average in October.

On average, the number of initial unemployment claims filed per week in the third quarter decreased by 11 claims from 2012 to 2013. The number of weekly claims in the third quarter of 2013 was down by approximately 120 claims per week from the third quarter of 2009.

Second quarter taxable sales in the county increased 4.6 percent from 2012 to 2013, which was 1.5 percentage points faster than the state average. In the second quarter of 2013 taxable sales were approximately $861.8 million, which was an increase of approximately $37.9 million from the previous year.

Figure 7: Weber County Changes in Employment



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The Making of Occupational Projections

BY MELAUNI JENSEN, LMI ANALYST

Every state is required to produce projections by the Bureau of Labor Statistics (BLS), the source of national long-term industry and occupational projections. Every two years, the Department of Workforce Services (DWS) Economists offer long-term industry and occupational projections. The occupational projections discussed in this issue of Local Insights reveal trends for growth or decline of workers by occupational groups and specific occupations. The ten-year period provides guidance for the public to make more informed decisions about their long-term goals. The projections contain valuable information about the likely future number of job openings and wages.

As you may know, industries represent businesses providing or producing the same products or services, while occupations describe work that requires certain tasks, duties or responsibilities. Occupations are coded using the Standard Occupational Coding (SOC) system that contains standardized and occupation-specific descriptors, requirements and worker attributes. This system is used for the entire nation and helps to better identify the occupation a worker may be looking to obtain. These are also grouped with similar occupations with comparable duties, called occupational groups. Approximately 5,000 employers receive the annual Occupational Employment Statistics (OES) survey from DWS in Utah, making it the largest and best wage and occupational survey in the state. This survey provides data on occupational staffing patterns that are established and applied or distributed for most industries, giving the economists the data they need to develop employment estimates for roughly 700 identified occupations and are prepared at a statewide level and for eight sub-state areas.

The first step in developing occupational projections is to generate industry projections using the Long-Term Industry Projections System (LTIP) provided by BLS. DWS Economists produce employment estimates for about 95 different industries in the state. After producing industry projections, economists then create the occupational projections by analyzing the results from the OES survey. In addition to the employment estimates from the OES survey, the MicroMatrix software system used by all states generates estimates of the number of annual average job openings expected to occur during the projections period. Growth occurs when positions are created, while replacement happens when workers leave an occupation therefore needing to be replaced. The education, work experience or job training generally required for the occupations are also included in the occupational projections to provide even more information. These are provided by BLS and contain information about the typical education and training requirements for an occupation.

DWS Economists have used time-tested economic theory along with economic tools to provide occupational projections and do not promise 100 percent accuracy. They are made with the understanding that major events can happen with policies, demographic trends or even natural disasters to tip the trends of the economy. By using these resources to "tell the future", it provides more consistent and valid projections.