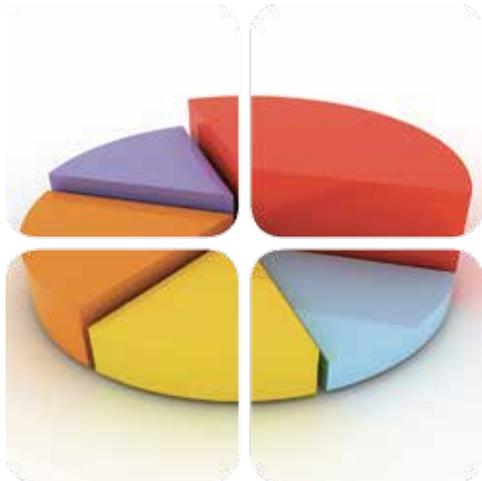


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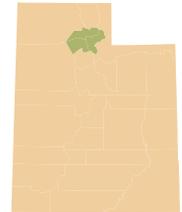


An economic and labor market analysis of the Wasatch Front North Area

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Exploring Key Industries in Wasatch Front North



BY TYSON SMITH, ECONOMIST

Which industries make up the largest proportion of total nonfarm employment in the Wasatch Front North area? The five largest industries are government (except education and health care), retail trade, health care and social assistance, manufacturing and educational services, in that order. Combined, those five industries represented 59.6 percent of the total nonfarm employment in the Wasatch Front North area in 2012 (Figure 1).

The Bureau of Labor Statistics (BLS) uses the North American Industry Classification System (NAICS) to collect, aggregate, present and analyze data about industries throughout the U.S. The BLS defines an industry as “a group of establishments primarily engaged in

producing or handling the same product or group of products or in rendering the same services.” In other words, NAICS combines data from firms that perform similar activities through similar means of production or delivery. NAICS uses a six-digit coding system to classify all economic activity into 20 sectors, which can be broken into approximately 1,170 industries at the most precise level.

Once firms have been aggregated into industry classifications, these industries can be studied as clusters, and the dynamics of a collection of similarly structured firms is more relevant to the overall economy than the actions of a single firm. Purchase orders, production outputs and employment numbers at the industry level tell a valuable story about

in this issue:

Exploring Key Industries in Wasatch Front North..... 1

What are the defining industries in the Wasatch Front North area, and how important are they to the local economy?

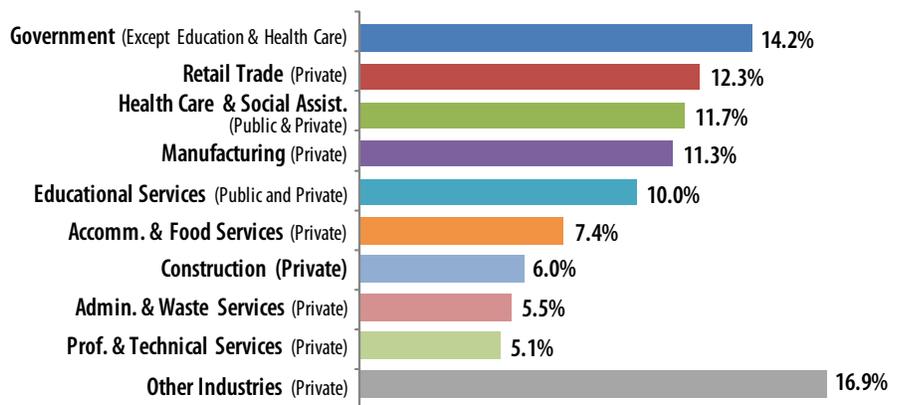
Economic Anchors in Wasatch Front North 5

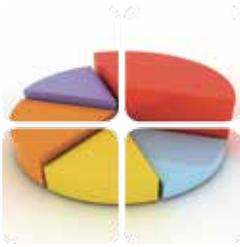
Which key industries in Davis, Morgan and Weber Counties drive local economies?

The Dynamics of Industry Data 8

Collecting quarterly industry data through the QCEW program shows business dynamics through employment and wages.

Figure 1: Wasatch Front North Employment Distribution Industry, 2012 (as a Percent of Total Nonfarm Employment)





Exploring Key Industries in Wasatch Front North (continued)

consumer demand for a certain type of product or service and employer demand for laborers capable of delivering that product or service. From a Labor Market Information (LMI) perspective, industry data highlight the driving forces underlying employment and labor demand in the economy.

Determining which industries are most important to a specific geographic area, like the Wasatch Front North Economic Service Area (ESA), is an imperfect science. However, there are certain variables that suggest an industry is critical to a particular economy:

- Size of an industry relative to total nonfarm employment
- Average wages paid to employees
- Size of an industry compared to state or national averages

If an industry performs well in one or more of these categories, it is likely a noteworthy industry that drives the economy in the region.

Key Industries in Wasatch Front North

Government accounted for 14.2 percent of total employment in the Wasatch Front North last year. The ESA has a unique concentration of federal government employment. Consider that in 2011 the federal government workforce in the Wasatch Front North made up 9.9 percent of total nonfarm employment in the area, while the proportion of the workforce in the State of Utah employed by the federal government was 2.8 percent. Moreover, government jobs paid the second highest annual wage of the top-ten largest industries

in the ESA. The average annual wage for government employment was \$53,241, which is \$15,567 more than the county average.

Retail trade, health care and social assistance and educational services are the second, third and fifth largest industries in the Wasatch Front North. Retail trade has been the second largest industry in the ESA since 2002 and has remained relatively stable as a percent of total employment during that time, fluctuating between 12 and 14 percent of employment. Health care and social assistance employment has grown considerably faster than total nonfarm employment over the last 20 years. From the start of the recession in December 2007 to December of 2012, employment in this industry grew by a total of 21.7 percent, while total nonfarm employment in the ESA grew by 0.6 percent. Educational services, like retail trade, has remained relatively stable over the last decade. Since 2002, educational services have increased approximately 1 percent as a share of total nonfarm employment, from 8.9 percent to 10.0 percent.

However, these industries do not represent areas of regional specialization or industries

that attract money from consumers outside of the region; nor do the retail trade, health care or educational services industries pay wages above the ESA average of \$37,675 per year.

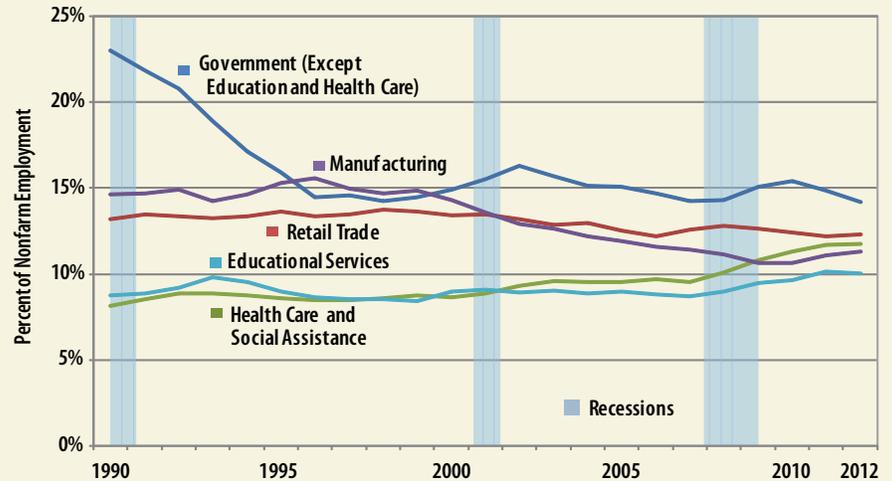
Manufacturing, the fourth largest industry in the Wasatch Front North, employs 11.3 percent of the total nonfarm workforce; and unlike the other industries that employ over 10 percent of the workforce, manufacturing represents an industry with considerable regional competitive advantage. As a percent of total employment, manufacturing in the Wasatch Front North is approximately two percentage points higher than it is in the State of Utah and the United States. Furthermore, annual wages in manufacturing are \$13,027 higher than the ESA average.

Although the economy in the Wasatch Front North is supported by several industries, each county has unique labor dynamics that define the economic activities of the area.

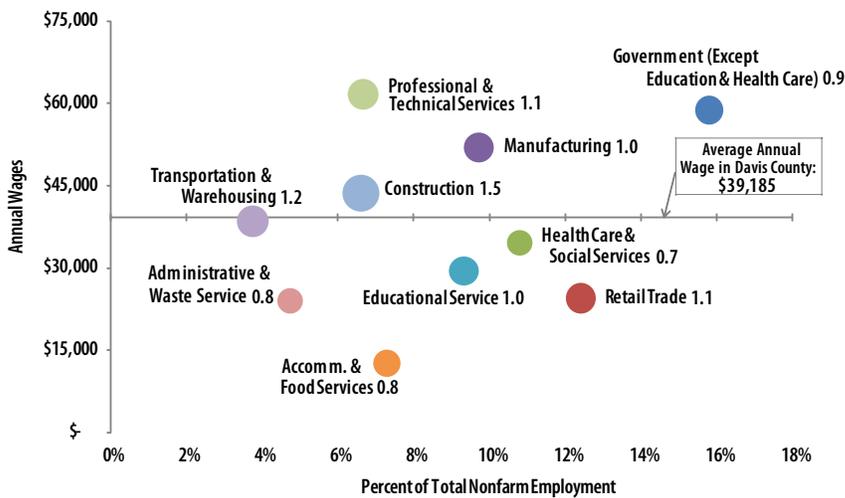
Large Industries

The largest industries in a region represent the economic anchors of a community. In Davis County, government (except education and health care) is the predominant industry. Last year, 15.8

Figure 2: Wasatch Front North Industry Trends Top Five Industries

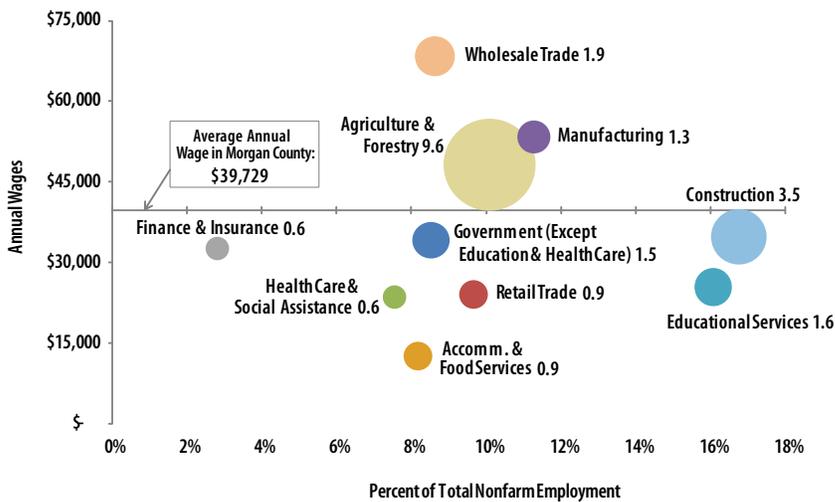


**Figure 3: Davis County Wages and Location Quotients
Top 10 Industries**



Location Quotient based on 2011 annual employment data

**Figure 4: Morgan County Wages and Location Quotients
Top 10 Industries**



Location Quotient based on 2011 annual employment data

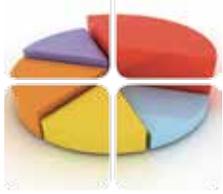
percent of total nonfarm employment in the county was in government, and federal employees occupied nearly 73 percent of those jobs. The Department of Defense accounted for 61.1 percent of federal government employment in Davis County in 2012, most of which came from the county's largest employer, Hill Air Force Base. The next largest industries, as a percent of total employment, were retail trade, at 12.4 percent health care and social assistance, at 10.8 percent; manufacturing, at 9.7 percent; and educational services, at 8.9 percent.

Construction employed 16.8 percent of the total workforce in Morgan County last year, 0.7 percentage points higher than the second largest industry, educational services. Construction managed to be the largest industry in the county, despite employing 33.4 percent less than it did in 2007 when employment peaked at an annual average of 449 workers. Manufacturing, agriculture and forestry and retail trade were the next largest industries in Morgan County at 11.3, 10.1 and 9.7 percent of total nonfarm employment respectively.

Last year, the five largest industries in Weber County represented at least 10 percent of the county's total nonfarm employment. Manufacturing was the largest industry in the county in 2012. In terms of total employment, Weber County has the third largest manufacturing industry in the State of Utah behind only Salt Lake County and Utah County. The total number of manufacturing employees in Weber County in 2012 was 12,116, or 13.2 percent of total nonfarm employment compared to 10.3 percent in Salt Lake County and 10.2 percent in Utah County. Health care and social assistance was the second largest industry last year at 12.9 percent of total nonfarm employment, followed by government (excluding education and health care) at 12.4 percent, retail trade at 12.2 percent and educational service at 10.8 percent.

High Wages

In Davis County last year, four of the 10 largest industries had annual wages above the County average. Professional and technical services had the highest annual wage at \$61,603 per year, \$22,418 above the county average of \$39,185. While



Exploring Key Industries in Wasatch Front North (continued)

government (except education and health care), manufacturing and construction wages ranged from \$58,804 per year for government employment to \$43,612 per year for construction employment. The wage disparity between government and the area average in Davis County emphasizes the value of the industry to the local economy.

Wholesale trade employed 8.6 percent of the total nonfarm workforce in Morgan County and paid the highest wages at \$68,387 per year. The average annual wage for the county was \$39,729 in 2012. Manufacturing and agriculture and forestry also had annual wages above the county average. Manufacturing, the third largest industry in Morgan County, paid an annual wage of \$53,401, while agriculture and forestry, the area's fourth largest industry, paid wages of \$48,227 per year. Although the construction industry makes up a large proportion of employment in the county, the annual wages in 2012 were \$4,869 less than the county average.

In Weber County 6 of the 10 largest industries had annual wages above the county average of \$35,912 per year. In the three industries with the largest employment base — manufacturing, government (except education and health care) and health care and social assistance — the average annual wage was \$49,624, \$45,206 and \$40,396, respectively. Finance and insurance, wholesale trade and construction made up between 3.5 and 5.0 percent of total employment last year, and each had annual wages above the county average.

Location Quotients

Location quotients (LQs) are used to measure the relative concentration of a given industry in a given place. Figures 3 through 5 illustrate the concentration of the largest industries in each county compared to the concentration of those

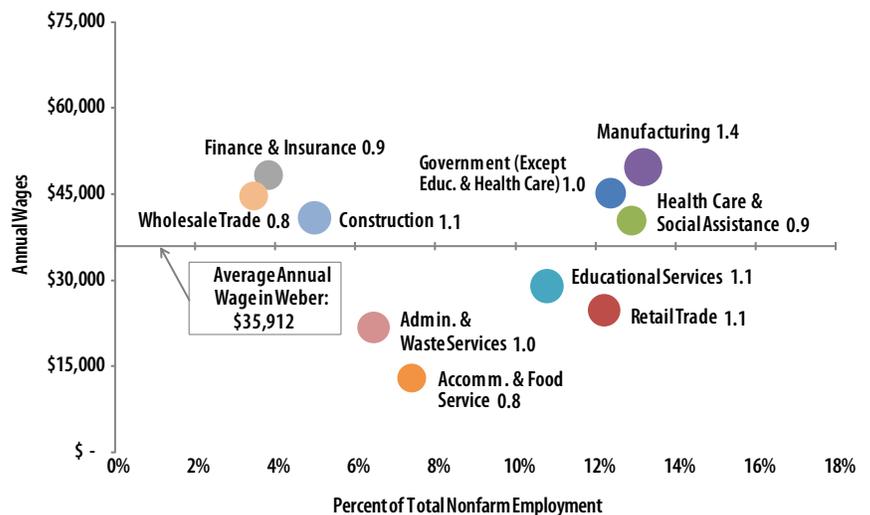
same industries in the United States for 2011. LQs can help identify potential sources of competitive advantage, or areas of regional specialization. An LQ greater than 1.0 represents an industry with a higher regional concentration of employment compared to the national average. The general rule for location quotients is that a score between 1.2 and 0.8 indicates a normal distribution, while a score above 1.2 or below 0.8 represents degrees of specialization or deficiency.

Construction was the only industry to have an LQ greater than 1.2 in Davis County, while transportation and warehousing narrowly missed the threshold at an LQ of 1.19. Government (excluding education and health care) had an LQ of merely 0.95, but the federal government LQ was 6.30. Morgan county's rural composition creates an economic environment in

which a few core industries employ disproportionately large segments of the labor force. Agriculture and forestry, construction, wholesale trade, educational services, government and manufacturing had LQs of 9.61, 3.52, 1.89, 1.65, 1.53 and 1.25, respectively. Like Davis County, Weber County has a diverse distribution of industry concentrations, leading to few areas of regional specialization. The manufacturing industry, with an LQ of 1.45, represents the only top industry in the county with an LQ above 1.2.

Ultimately, there are several factors that define which industries are most valuable to a given community. In the Wasatch Front North, government, manufacturing and construction play pivotal roles as generators of jobs, income and investment in the region and represent the area's economic cornerstones.

Figure 5: Weber County Wages and Location Quotients Top 10 Industries



Location Quotient based on 2011 annual employment data



Economic Anchors in Wasatch Front North

BY TYSON SMITH, ECONOMIST

Establishing which industry is the driving economic force in each county requires a qualitative assessment of the regional employment and wage data. The size of an industry compared to other industries in the county, the average wage in an industry in relation to other industry wages, the concentration of employment in an industry relative to state or nation and the type of products and services being created by an industry all contribute to the identification of a singular key industry.

The industries in the Wasatch Front North Economic Service Area (ESA) reveal a diverse economy with strong government, retail trade, health care and social service, manufacturing and educational services activities. Further examination of county-level data illuminates the unique industry dynamics that characterize the local economies. For Davis County, government is the predominant sector. In Morgan County the construction industry has an enormous presence. And Weber County is the manufacturing hotbed in the ESA.

The value of the government industry in Davis County, the construction industry in Morgan County and the manufacturing industry in Rich County go beyond labor market implications. These industries represent the most basic industries in each county. Basic industries produce goods and services that are ultimately sold to consumers or paid for by entities outside the community in which they are produced. A region's basic industries are its economic foundation and represent new money flowing into the area. New money, including profits and investments, drive economic growth and contribute to the community's economic well-being.

Figure 6: Changes in Government Employment in Davis County

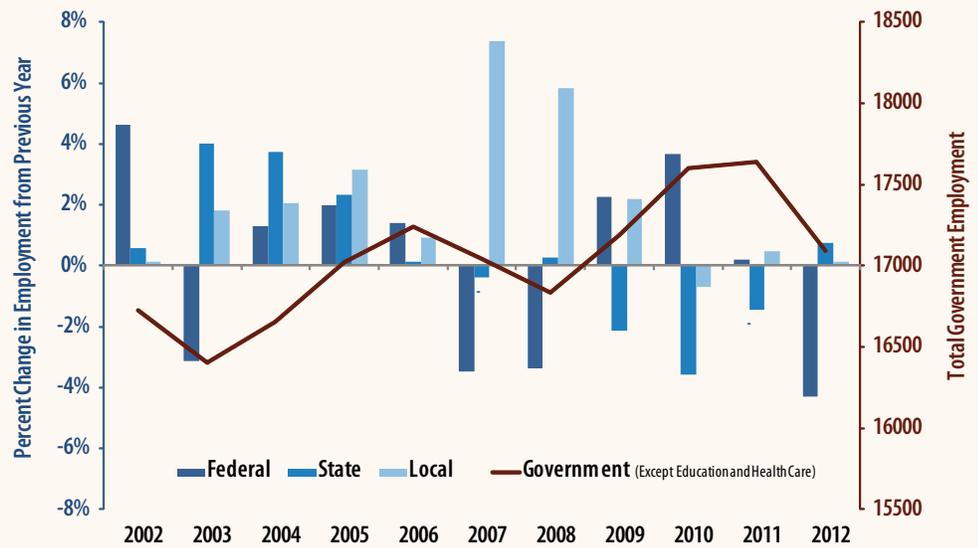
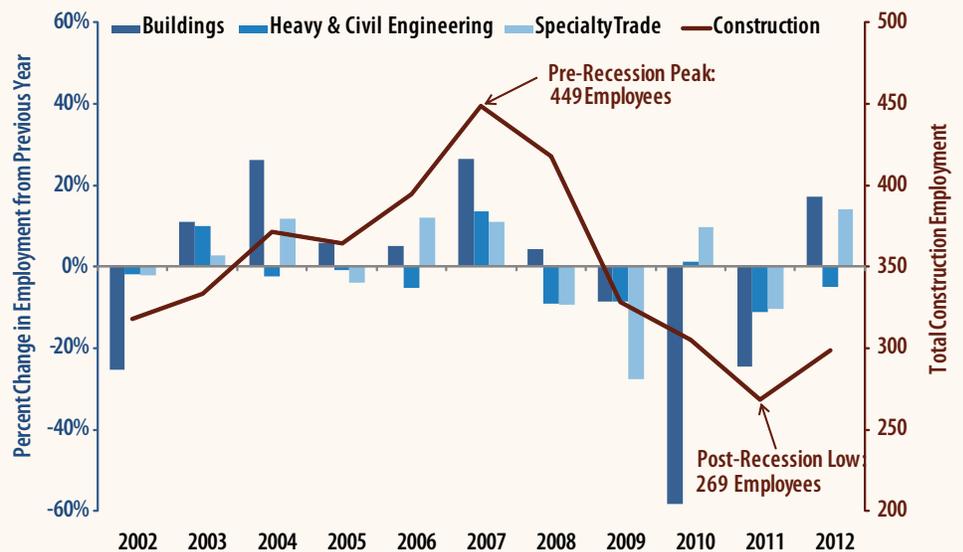


Figure 7: Changes in Construction Employment in Morgan County





Economic Anchors in Wasatch Front North (continued)

Davis County

Government employment (except education and health care) made up 15.8 percent of total nonfarm employment in Davis County in 2012. While Davis County does not have an abnormally high concentration of total government jobs when compared to the state or the nation, the county does boast the highest proportion of federal government employees in Utah. In 2011, federal government jobs made up 73.8 percent of the total government employment in Davis County, compared to the state average of 33.4 percent and the national average of 25.6 percent. The average wage for a Davis County government employee is \$58,804 per year, which outpaces the county average by \$19,646.

The national security and international affairs industry contributed to 92.2 percent of federal government employment in Davis County last year. The Department of Defense employed 11,497 of the 12,464 federal workers in the county in 2012, while state and local government agencies contributed 527 and 4,101 jobs to the economy, respectively. Figure 6 shows the top five public employers in the county. Davis County government employment includes the following:

- Federal Government at 72.9 percent
- State Government at 3.1 percent
- Local Government at 20.0 percent

Figure 6 illustrates the recent trends in government employment

in Davis County. Since 1996, government employment as a percent of total employment has been relatively stable, moving between 15 and 20 percent. The last decade exemplified the stability of the government sector. From 2002 to 2012 the difference between the lowest and the highest annual government employment total was 7.6 percent; during that same period, total nonfarm employment fluctuated 21.6 percent. Government employment peaked in 2011 at 17,641, which represented 16.7 percent of total nonfarm employment.

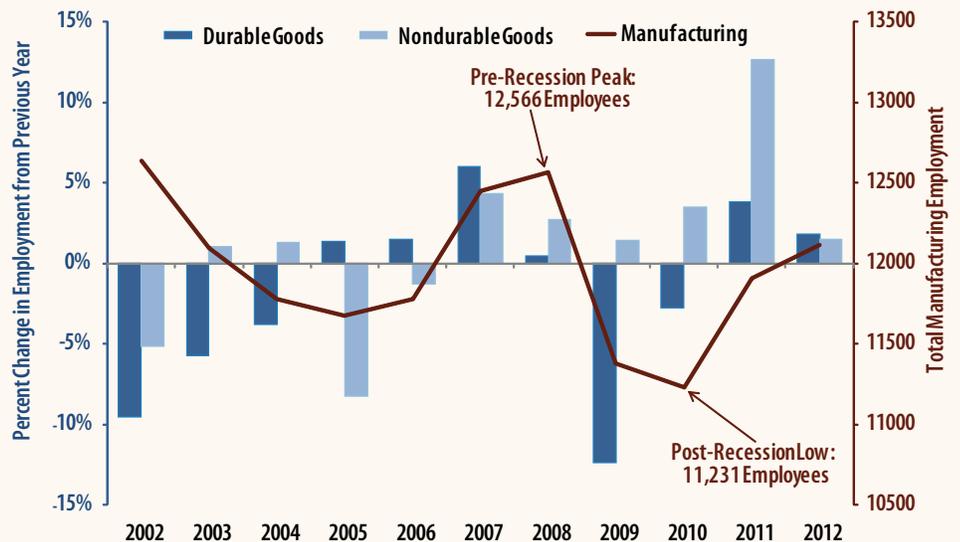
From 2002 to 2007, federal, state and local government agencies experienced similar year-over employment growth patterns.

Year-over growth was generally between zero and 5 percent until 2007, when federal government shrank 3.5 percent and local government grew 7.4 percent. Since that time, changes in government employment from year-to-year have been significantly more erratic.

Morgan County

In Morgan County, the construction industry accounted for 16.8 percent of total employment in 2012, making it the single largest industry, as a proportion of total employment, in any county in the Wasatch Front North. Educational services was the second largest industry in 2012, at 16.1 percent of total employment, but construction has a larger location quotient

Figure 8: Changes in Manufacturing Employment in Weber County



and pays higher wages. Wages in the construction industry in Morgan County were \$34,860 per year in 2012, \$9,417 more than educational service.

Over three-quarters of the construction employment in Morgan County last year was in the specialty trade industry, which includes contractors that perform functions like site preparation, plumbing and HVAC, and electrical services. The construction employment breakdown in Morgan County includes:

- Construction of Buildings at 9.3 percent
- Heavy and Civil Engineering Construction at 13.6 percent
- Specialty trade contractors at 77.0 percent

Except for 2011, the construction industry has been the largest industry in Morgan County every year since 1999. But the collapse of the housing market in 2008 dramatically affected the construction industry in Morgan County. Figure 7 illustrates the remarkable decline in construction employment from 2007 to 2011. In the four years following 2007, construction employment fell by a total of 33.4 percent. The industry experienced a rebound in 2012, increasing 11.3 percent from the year prior.

The recession had the largest impact on building construction. From 2002 to 2008, building construction employment more than doubled from 40 employees to 83 employees. But, after growing at an average rate of 12.8 percent per year from 2002 to 2008, building construction declined 66.3 percent from 2008 to 2012 as a result of the recession. The economic downturn also affected specialty trade contractors, though not as severely as building construction. In 2008 and 2009 the specialty trade industry lost a total of 107 jobs, a decrease of 34.3

percent from 2007. Last year specialty trade showed signs of recovery, adding 28 jobs, a 14.1 percent increase from the previous year.

Weber County

Weber County has the highest proportion of employment in the manufacturing industry in the Wasatch Front North. Over 13 percent of all Weber County employment in 2012 was in manufacturing, compared to the state average of approximately 9 percent. The percent of total nonfarm employment engaged in the manufacturing industry was 44.5 percent higher in Weber County than the national average, while the annual wage in the manufacturing industry was 38.2 percent higher per year than to the county average.

Durable goods dominate the manufacturing industry in Weber County. Durable goods are products that have long lifecycles and deliver utility over time, such as motor vehicle parts, surgical and medical instruments, nonferrous metals and power cylinders and actuators. Durable goods manufacturing made up 73.5 percent of all manufacturing jobs in the county in 2012. Of the 255 manufacturing firms in Weber County last year, 177 were classified as durable goods manufacturers. Weber County manufacturing employment includes the following:

- Transportation equipment manufacturing at 23.8 percent
- Miscellaneous manufacturing (including medical equipment and supplies) at 15.4 percent
- Fabricated metal product manufacturing at 12.2 percent
- Chemical manufacturing at 11.1 percent
- Other manufacturing at 37.4 percent

Figure 8 illustrates the recent trends in manufacturing in Weber County.

Manufacturing employment trended downward from 1999 to 2005; in that time the industry lost over 2,800 jobs. The industry experienced a brief upturn prior to the recession in 2008. Average year-over growth in the three years from 2005 to 2008 was 2.5 percent. Since 2008, manufacturing in Weber County has swung considerably. The manufacturing industry lost 1,135 jobs from 2008 to 2010, but it has since recovered 884 of the jobs lost during the recession.

Durable goods manufacturing suffered larger losses during the recession than nondurable goods. The 12.4 percent year-over employment loss from 2008 to 2009 in durable goods manufacturing represented 1,225 jobs. By 2012, the durable goods industry had only recovered 32.7 percent of the jobs that were lost from 2008 to 2010. Nondurable goods manufacturing buoyed the manufacturing industry in Weber County. Nondurable goods are those products that have a short lifespans, generally less than three years. Since 2008 the number of nondurable goods employment has increased 20.0 percent.

The major industries in Davis, Morgan and Weber Counties represent the foundation of the economic ecosystem. Federal government in Davis County, construction in Morgan County, and manufacturing in Weber County employ enormous segments of the population and attract new consumers and investments to the region.



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The Dynamics of Industry Data

BY MELAUNI JENSEN, LMI ANALYST

Labor Market Information (LMI) is a powerful resource that provides people with a variety of information pertaining to the workforce. LMI can show information about an industry as well as current local economic conditions. It can help policy makers and economic developers understand the productivity of the workforce, economic activity and the overall health of the economy, information that is important for estimating tax revenue and modifying county or city services. It can also demonstrate to educators and economic developers the employment and wage outcomes of graduates and what industries are strongest in local areas.

Every state in the U.S. partners with the Bureau of Labor Statistics (BLS) to gather and produce complete employment and wage information that represents workers covered by state Unemployment Insurance (UI) laws. This data program is called the Quarterly Census Employment and Wages (QCEW). Used to track the establishment levels, these quarterly statistics are important to many other federal and state programs, as it is an accurate reflection of the size of the workforce. Employment data represents the number of covered workers who worked during the pay period or received pay. It does not include those in the military, those who are self-employed, domestic workers, unpaid family workers and railroad workers already covered by the railroad UI system. Wages represent total compensation paid during that quarter, regardless of whether the work was completed at that same period of time, and including vacation or other paid leave, bonuses and tips.

QCEW data is the most comprehensive and respected economic database available, giving the best picture of the economy. QCEW includes data on the number of business establishments and their monthly employment and wages for each quarter. The data is categorized by industry, county and ownership. In accordance with BLS policy, data is not published at the individual firm level, but instead is aggregated and reported for specific statistical uses.

Our economists analyze this data after collection using the North American Industry Classification System. NAICS, as it is often referred to, was developed with Canada and Mexico in an effort to improve the comparability of employment in industries, thus improving the reflected economic activities. This powerful coding system categorizes each establishment into a detailed industry profile based on what they produce or the service they provide and gives five levels of categorized detail.

QCEW data can be used to show the dynamics of businesses: how they open and close and how they expand and retract. It can also show job creation, terminations and layoffs. Here in Utah, we comply with an agreement with the federal government to disseminate this information in a variety of ways. The data is used in products such as FirmFind and Industry Employment and Wages, both interactive tools on our website at jobs.utah.gov/jsp/wi/utalmis/default.do. We also use this data in the Labor Market Information annual report and the analyses contained in this publication. For a further breakdown of NAICS, visit census.gov/eos/www/naics/.