summer 2013 statewide

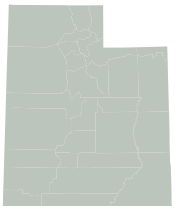
utahinsights

An economic and labor market analysis of the State of Utah

vol. 2 issue 1 • jobs.utah.gov

in this issue:

Industrial Diversity in Utah's Economy



BY MARK KNOLD, SENIOR ECONOMIST

A diverse (or balanced) economy is generally considered a stable economy. A loose rationalization would center upon an economy that is not prone to bouts of boom or bust, an economy that can withstand misfortunes in particular industries as others thrive, an economy that largely rides an even keel.

The idea is to avoid over-dependence, or specialization, within one or two industries. To borrow a simple idiom as an illustration, "don't put all your eggs in one basket." The lesson is if you drop your basket you might break all your eggs. However, if you were to spread your eggs across several baskets, then if you drop a basket you still have eggs available in the other baskets. The same concept works when evaluating an economy. If too much employment and economic dependence is placed upon one industry and that industry comes on hard times, the entire economic system correspondingly suffers.

A balanced economy would have a diverse share of employment spread across various industries, and the industries would not be so tied together that they are overly dependent upon a core industry. If one industry were to falter, the others would help keep the overall economy afloat.

How Economies Develop

Geography, geology, climate, hydrology and even social structure all play a part in how an area's economic foundation develops. Take Moab, for example. There are no surfboard shops in Moab because there is no ocean. There are however, river-rafting businesses as there is a white-water river there. There are also a lot of motels and restaurants as there are incredible natural geological formations that have been packaged as National Parks. Those parks bring to the area a steady stream of tourists who need food and shelter. The economy didn't make the parks; instead, the parks made the economy. Oftentimes it is what is endowed upon an area that builds the economy.

A natural advantage develops an economy, but that development does not necessarily mean an economy is naturally diverse. The Moab economy is tourism and tourism-related. Manufacturing is not a significant part of the economy. Neither is the banking industry. There were no natural endowments in the area that would have fostered the development of those industries. In short, the area did the best it could in developing an economy with what it had. But the economy is vulnerable to the whims of the tourist industry. If tourism falters, the area's economy falters. If tourism thrives, so does the economy. Moab isn't doing anything wrong, but its vulnerabilities need to be recognized.

Evaluating Diversity

One way to evaluate an area's diversity is through a tool developed at the University of Utah called the Hachman Index. It is an index of similarity that measures how

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closely the employment distribution of a subject region resembles that of a reference region. In most cases the reference region is the United States. It is assumed the United States' economy is so large and expansive that it offers the best picture of employment distribution across all possible industries.

The production of the index relies on the use of location quotients. These measure the percentage of employment in a particular industry as a share of total Utah employment against the same industry's percentage share of total employment at the United States level. For example, if construction made up 6 percent of all Utah employment and construction made up 6 percent of all United States employment, then there would be a perfect balance, or a location quotient of 1.00 (.06/.06). If the Utah construction employment were to be 8 percent instead of 6 percent, then Utah's construction location quotient would be greater than 1.00 (.08/.06), signifying more specialization in this industry in Utah than the U.S. Location quotients less than 1.00 signify less employment in this industry relative to the U.S.

The Hachman Index is a way of taking these various industry location quotients and adjusting all against overall local proportionality, resulting in an index number equal to 1.0 or less. An index of 1.0 would signify an employment-by-industry distribution that perfectly matches the United States profile and in turn would imply complete diversity, or a balanced economy. All index numbers are between zero and 1.0, and the further below 1.0 the index number lies, the less diverse the economy. An index number around 0.8 or less speaks to economies more prone to specialization and thus vulnerable to the economic conditions of just a few industries When we speak of diversity as balanced, it only speaks to an area's potential. Is a less-balanced economy unstable? Not necessarily. North Dakota is currently experiencing an economic boom with the development and production of new oil discoveries.

The state currently leads the nation with employment growth over 5 percent. The economy is thriving. But in the long run, could the economy be set up for vulnerability to an oil bust? In 2001, North Dakota's Hachman Index was at .926. That is a well-rounded economy. In 2011, that same Hachman Index had now fallen to .75. That signifies an economy becoming more specialized and less diverse. The specialization is paying strong benefits now. Having seen oil boom and bust cycles before, it does bring into question the long-term stability of that state's economy. Yet if oil remains desired and abundant, any diversity issue may never surface.

Figure 1: Hachman Index (HI) Ranking of Top 15 States 2001, 2006 and 2011

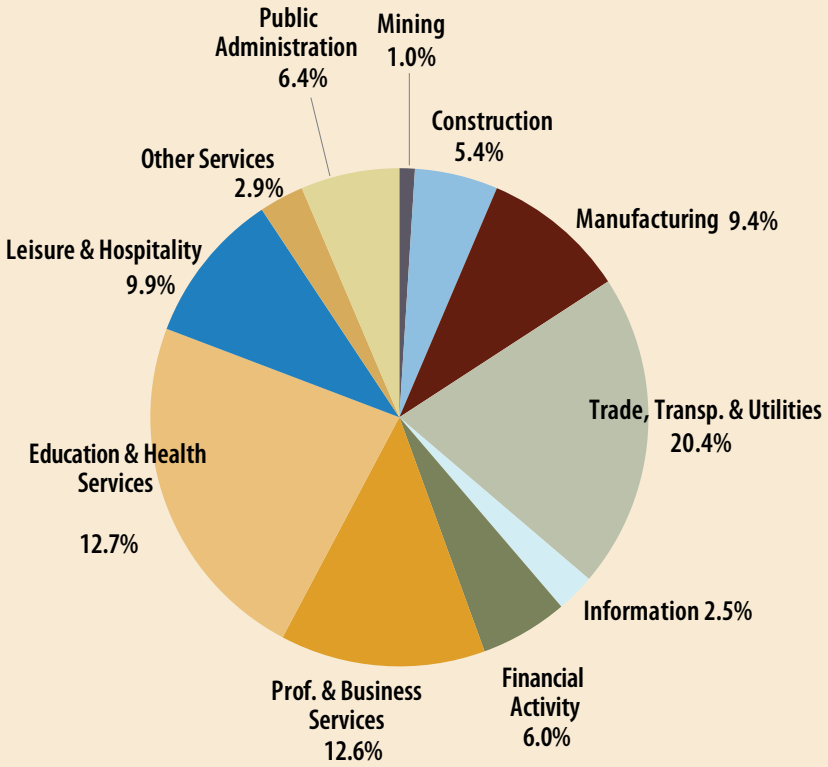
2001			2006			2011		
Rank	State	HI	Rank	State	HI	Rank	State	HI
1	Nebraska	0.981882	1	Georgia	0.983239	1	Missouri	0.980588
2	Illinois	0.98158	2	Kansas	0.979779	2	No. Carolina	0.977323
3	Pennsylvania	0.977429	3	Illinois	0.979115	3	Illinois	0.977011
4	Kansas	0.974864	4	No. Carolina	0.97441	4	Utah	0.976161
5	Minnseota	0.97345	5	Nebraska	0.974085	5	Georgia	0.97612
6	Utah	0.973363	6	Missouri	0.972217	6	Pennsylvania	0.975554
7	Missouri	0.971852	7	Michigan	0.971518	7	Kansas	0.972475
8	Ohio	0.965724	8	Pennsylvania	0.970601	8	Nebraska	0.969618
9	Massachusetts	0.958152	9	Ohio	0.969333	9	Arizona	0.967655
10	Virgina	0.957487	10	Minnesota	0.96919	10	Minnesota	0.963734
11	Michigan	0.957144	11	So. Carolina	0.967225	11	Tennessee	0.963629
12	Alabama	0.95606	12	Tennessee	0.966563	12	New Jersey	0.962211
13	Maine	0.954417	13	Utah	0.965218	13	Ohio	0.960647
14	Georgia	0.95389	14	Iowa	0.958624	14	So. Carolina	0.960477
15	Tennessee	0.953491	15	Kentucky	0.954545	15	New Hampshire	0.960112

Utah Diversity

Utah has a very diverse economy. On the Hachman Index, Utah's 2011 measurement of .976 places Utah fourth in the nation in economic diversity, behind only Missouri, North Carolina and Illinois. Utah's diversity has been fairly steady over the past 10 years. Utah's 2001 Hachman Index stood at .973 and sixth in the nation. There was some slippage in 2006 as that ranking fell to 13th. This can be traced to the housing buildup and an excessive reliance on the construction and mortgage finance industries. A noticeable expansion within one industry lowered the diversity and the index. When the housing bubble burst, Utah was vulnerable. With construction's receding since then, Utah's Hachman Index has again risen.

Utah's Hachman Index has changed over a longer period of time. If one goes back to 1988, Utah's index was .89, nearly a full percentage point lower than now. Utah's national ranking then didn't change much as Utah was seventh in the nation. So not only has Utah's index number increased with time, so have many other state's indices.

Figure 2: Utah Nonagricultural Employment by Industry, 2011



Source: U.S. Bureau of Labor Statistics

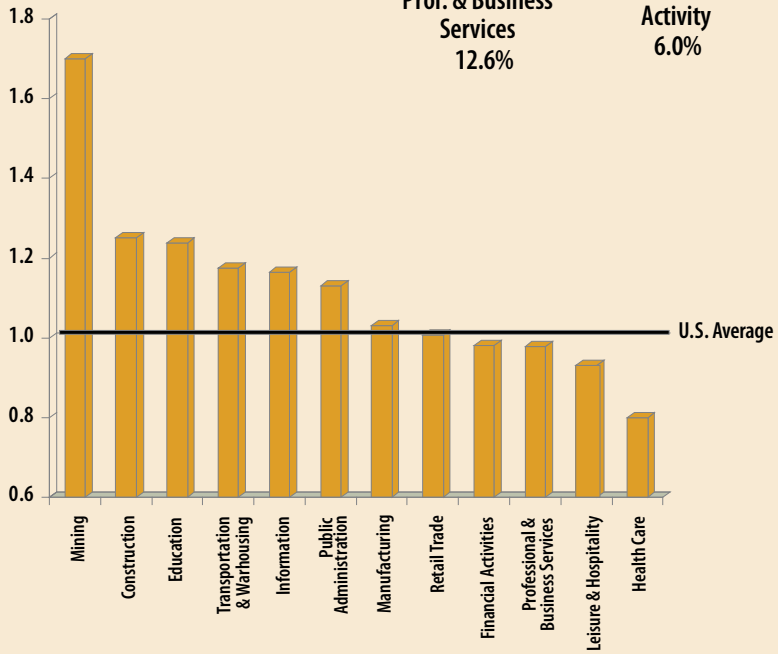


Figure 3: Utah Industry Location Quotients, 2011

Source: U.S. Bureau of Labor Statistics, Department of Workforce Services calculations

What might be changing with time to produce more diversification? Probably the movement toward more service-based economies and the advent of new information technologies into the overall U.S. economy. Industries can now develop in previously excluded areas. For example, a business that facilitates the auctioning of products doesn't have to have a physical presence in a major metropolitan area to be successful. It can set up shop anywhere and do its work and facilitation over the Internet. Geographical or critical-mass barriers that previously hindered economic development are now removed. Economies are no longer as limited to only businesses that feed off the local market. A web-based business can locate anywhere and sell extensively beyond the local market. Economies are now competing for more businesses than ever

Industrial Diversity in Utah's Economy (continued)

before, leading to more diversification in local economies.

Industrial Distribution

The Hachman Index takes the total package of Utah's industry-specific location quotients and compares it to a national profile. It looks at the big picture. But to look at each industry sector individually and how Utah profiles one industry at a time, the location quotients need to be employed. In review, a location quotient of 1.00 means the proportion of employment in an industry is equal to the national proportion, with numbers below a lesser proportion and numbers above a higher proportion.

Industries in Utah with significantly high location quotients include mining (1.70), construction (1.25), education (1.24), transportation and warehousing (1.18) and information (1.17). These ratios identify them as significant industry leaders in the Utah economy. There is something within the natural endowments of Utah that will generally push certain industries to levels above the national average — industries that we generally identify as playing to Utah's comparative advantage.

Mining generally includes the extraction of naturally occurring minerals and liquids, such as coal, copper, oil, natural gas and gravel. Utah has regions that feature these, such as coal in the Carbon and Emery County area, oil and natural gas in the Uintah Basin and copper and gravel extraction in the Salt Lake metropolitan area. All combine to make mining more prominent in Utah than the nation, even though this is the smallest employment industry in Utah.

Even with construction's woes throughout the recession period, construction has a bit more prominence in Utah than the nation. Utah's continually significant population growth is the driving force, as the need for more roads, houses, churches, shops, institutions, etc. is on a perpetual upward trajectory.

This constant growth in population, especially through internal births, is the answer to why education is high on the Utah industry profile.

Transportation and warehousing have their link to Utah's geographic location. Utah is a crossroads in the western United States and its close proximity to the large California market allows companies to set up distribution centers in Utah, where costs and the business climate are looked upon more favorably.

The information sector is probably the hardest to put a definitive finger on for comparative advantage, but technology businesses have been looking to Utah for expansion purposes and also citing proximity to and working relationships with Utah's universities.

Natural endowments and advantages usually dictate the industrial profile of a local economy. Some industries emerge as prominent (measured through a location quotient) and others do not. The total package of these industries and their ultimate mix as a complimentary balance or not can be measured with the use of a Hachman Index. Through this tool, Utah appears to have a balanced economy, and that can be pointed to as one of the reasons Utah has a prosperous and growing economy over the long run.

The Hachman Index is an index of similarity that measures how closely the employment distribution of the subject region resembles that of a reference region.

Utah's Metropolitan Areas Driving State's Growth

BY MARK KNOLD, SENIOR ECONOMIST

The Utah economy is improving noticeably and gaining momentum since the last edition of "Local Insights." Employment gains over the past year are around 4.0 percent, or roughly 45,500 positions, and momentum gives hope to this growth rate going higher. Utah has not experienced employment growth at this pace since 2007, the year before the recession began. Utah's long-term average employment growth is 3.1 percent per year, so the current 4.0 percent is above average and poised to move even higher as the year progresses. Unemployment is around 5.0 percent and trending downward.

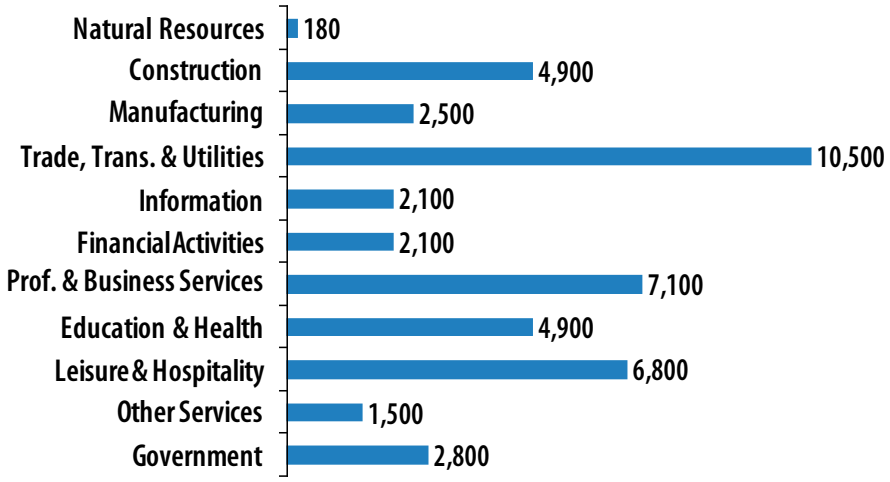
Employment growth above average generally doesn't occur without all industrial sectors expanding and making contributions. That is currently the case. Even with the high profile federal government budget sequester, overall government employment in Utah is expanding. Yes, federal-related employment is currently declining, but education gains at both the state and local level are countering and pushing overall government employment up by 1.0 percent.

Industry Profiles

A noticeable employment contribution is finally coming from the construction industry. This is the last sector to pull out of the recession and add jobs in Utah. By December 2012, construction had added 4,900 new jobs in Utah over the past year, the first year of job gains in this industry since 2007. Gains are observed in building construction and specialty trades like building foundations, framing, masonry, electricians, plumbing and drywall. The most new jobs over the year (10,500) came in the trade, transportation and utilities sector, in particular retail trade. Around 6,600 new jobs developed in auto sales and services, building and garden stores, health and personal care stores, clothing stores, general merchandise stores and nonstore retailers.

The professional and business services sector is another robust employment area in Utah, adding around 7,100 new jobs over the year. More than half of these are high-paying professional and technical jobs, the likes of which include legal services, accounting, computer systems design, management and consulting, and translation and interpretation services. The sector's remaining job gains are in lower-paying business services, like office

Figure 4: Utah Nonfarm Industry Change December 2011–December 2012



Source: U.S. Bureau of Labor Statistics

Utah's Metropolitan Areas Driving State's Growth (continued)

administrative support, employment staffing services and security services. Utah has a sizeable telephone call center industry, but employment was down several hundred in that arena.

The leisure and hospitality sector is another strong employment growth area in Utah. Around 6,800 new jobs were added over the year. While Utah's recreation-centered businesses have added new jobs over the past year, the bulk of the gains are in the restaurant industry. Around 130 additional restaurants are part of the employment ledger than were seen a year ago. Restaurant employment is over 5,100 positions higher over the year.

Nearly all of Utah's 45,500 new jobs have developed in its metropolitan areas. This is a higher-than-historical share of Utah growth concentrated in its metropolitan heart but isn't unexpected given that the state is still in the initial stages of economic expansion after recession. It will yet take time for that growth to spread and extend into Utah's rural communities.

Geography Profiles

Due to its size, the Salt Lake City metropolitan area created the most new jobs over the year at 25,000. But given its smaller size, Provo–Orem's 16,000 new jobs are more noteworthy with 5.7 percent growth. This currently makes Provo–Orem the fastest growing MSA in the United States with an employment base greater than 100,000. As is usually the case with fast employment growth following a recession, construction is the area's leading job creator. The MSA is getting help from the construction of the National Security Administration's (NSA) new Data Center near Camp Williams on the Salt Lake–Utah County line. But it's not just the data center: new housing starts were up 32 percent in Utah County in 2012. Granted, starts are coming off rock bottom, but it is a rebound nonetheless, and 32 percent makes for enough housing activity to stimulate the hiring of new workers to make those additions happen.

New construction isn't all that's happening in Utah County. All industrial sectors are adding new jobs. There were 2,000 jobs added in trade, transportation and utilities. Around 1,300 of these were in retail trade, traced to auto sales and services, building material and garden stores, gas stations, clothing stores and nonstore retailers. The wholesale trade side also added over 500 new jobs. There were some new transportation and warehousing jobs to add to the mix.

Another encouraging area of job gains is professional and business services. In business services, over 700 new jobs developed, most in call centers. These types of jobs serve this MSA well as it is one of the youngest MSAs (by age of its labor force) in the country. With BYU, Utah Valley University and others in the area, the young labor force attached to these colleges finds these part-time jobs of value in meeting their limited work desires. In turn, the call centers find this young, motivated labor force supports their labor needs.

There are also high-paying professional and technical jobs developing in the MSA. Computer systems design businesses added over 600 new jobs over the year in nearly 500 businesses, an increase from 470 only one year ago. Most of these are small. Only 40 establishments employed 20 workers or more. Still, a few jobs here and there add up.

Another source of technical jobs in the information sector are related to software publishing. There are around 100 software-publishing establishments in the Provo–Orem MSA, roughly equal to a year ago. But the employment levels are over a 1,000 jobs higher by year-end 2012: technology-related businesses are prospering and expanding.

Returning to the Salt Lake City MSA, its 4.2-percent over-the-year job growth is seventh in the nation in MSAs with an employment base over 100,000. Unlike Provo–Orem, Salt Lake City is not seeing anywhere near the construction contribution that is driving Provo–Orem to such lofty heights. New home building permits were up 21 percent in Salt Lake County last year, but that alone isn't enough drive. Without a major project like the NSA Data Center as seen in Utah County, this county will need more new homes approved to raise its construction employment gains into the major contribution category.

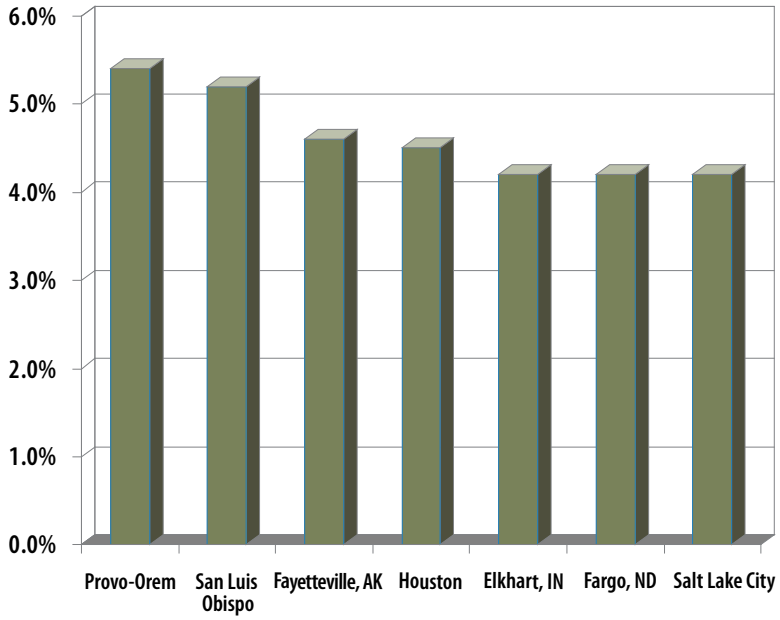
The Salt Lake City MSAs largest employment gains are in trade, transportation and utilities. Over 4,300 new jobs opened up in retail trade, led by auto sales and services, building material stores, clothing stores and nonstore retailers. Wholesale trade jobs are up by 1,200 positions, and on the transportation and warehousing side, nearly 1,000 new trucking jobs have developed along with 400 in the warehousing industry.

The St. George MSA year-over growth of 5.6 percent did not make our top list of MSAs, as that criterion was restricted to areas with an employment base over 100,000. St. George is less than 50,000, but it is encouraging to see this MSA spring back to life. It was probably Utah's hardest hit MSA during the recession, suffering job losses across a longer period of time than any other Utah MSA, and its depth of employment loss from peak to trough was around 15 percent. That doubled any other Utah MSA in recession employment losses.

As an encouraging note, construction has returned as one of this area's leading job-growth industries. Expansion and new construction have been foundation stones of this area's long economic window.

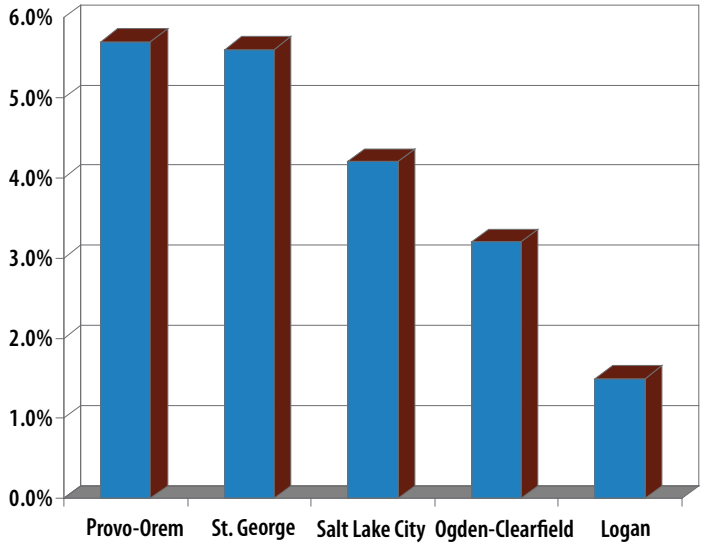
Utah's remaining MSAs are also expanding. The Ogden–Clearfield MSA has grown employment by 3.2 percent over the past year. Further north, the Logan MSA has grown by 1.5 percent. The Ogden-Clearfield MSA is being a bit dampened by federal government cutbacks, of which it has a higher exposure than other Utah MSAs. The Logan MSA didn't fall as much during the recession and therefore doesn't have as much of a rebound to unleash. But Utah's other MSAs are in a strong phase of employment rebound and are poised to keep this growth momentum going in 2013, barring any worldwide economic or social shocks.

Figure 5: National MSA Emloyment Percent Increase*
February 2012–February 2013



**Includes only MSAs with employment greater than 100,000. MSA = Metropolitan Statistical Area*
Source: U.S. Bureau of Labor Statistics

Figure 6: Utah MSA Employment Percent Increase*
February 2012–February 2013



**Includes only MSAs with employment greater than 100,000. MSA = Metropolitan Statistical Area*
Source: U.S. Bureau of Labor Statistics

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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 conditiotns. 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)s. 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/.