

Occupational Licensing Data and Workforce Analysis

by William Connell,
Economist



Economists, policy makers, and other social science researchers are always on the lookout for new, different, or alternative sources of data to complement existing ones and provide new insight. One source of data that has the potential to complement research on the Montana economy and labor market comes from those who work in a field that requires a license. Licenses are generally required for jobs where incompetence or poor service could place the public at risk. Licenses are required for jobs predominately associated with the healthcare industry, but they also are required for occupations such as accountants, real estate agents, and electricians.

Over the past few years, the Montana Business Standards Division has updated the licensure process to make applying for and renewing licenses easier by using the internet. The new website has also improved how the general public can verify that a potential worker has the appropriate license required, and the public can report possible misuse of a license to the proper authorities. In fact, detailed licensure data for various occupations can be obtained for a fee directly from the Business Standards Division license lookup website. This article will review the available licensure data and evaluate potential county labor shortages and clusters in certain occupations.

The roots and context of the data

In general, jobs require a license in order “to protect the health, safety, and welfare of the public through

the oversight of healthcare and professional occupations”. The Montana Department of Labor and Industry Business Standards Division oversee two main licensure bureaus: the Health Care Licensure Bureau, and the Business and Occupational Licensure Bureau. Within these two agencies, 35 different licensure boards oversee a total of 145 different licenses.

In 2013, there were more than 70,000 active licenses in Montana. The various boards of licensure oversee the criteria and credentials needed to obtain a particular license. Members of these boards must apply for the position, be appointed by the Governor, and receive Senate confirmation. Each board has some variation in the number of board members and the required mix of credentials. For example, Montana law requires the Board of Medical Examiners to

Figure 1: Applying licensure data to the workforce and Montana labor market

License Board Name	# of Active licenses 2013
Alternative Adolescent Program	11
Alternative Healthcare	99
Architects & Landscape	483
Athletic Program	17
Athletic Trainers	127
Barbers and Cosmetologists	11,387
Chiropractors	364
Clinical Lab Science Practice	818
Dentistry	1,320
Electrician	3,455
Funeral	384
Hearing Aid Dispensers	53
Licensed Addiction Counselors	559
Massage Therapy	1,511
Medical Examiners	8,079
Nursing	15,023
Nursing Home Administrators	145
Occupational Therapy	369
Optometry	188
Outfitters	2,086
Pathologist & Audiologists	598
Pharmacy	3,437
Physical Therapy	1,194
Plumbers	1,330
Private Security	1,720
Professional Land Surveyors	4,307
Psychologist	209
Public Accountant	2,119
Radiologic Technologists	1,418
Real Estate Appraisers	371
Realty Regulation	4,783
Respiratory Care Practitioners	493
Sanitarians	142
Social Worker	1,936
Veterinary	647
Grand Total	71,182

include five physicians, an osteopath, acupuncturist, podiatrist, nutritionist, physician assistant, a volunteer emergency medical technician and two public members. The licensing boards then control the criteria and credentials required for licensing, resulting in different criteria and applications for each licensed occupation.

Figure 1 shows the counts at the state level of the 35 different licensure boards that oversee multiple license types within their field. Healthcare represents 23 of these boards and more than half of the 71,181 active licenses in 2013. Outside the realm of healthcare, Barbers and Cosmetologists, Electricians, Land Surveyors and Outfitters have the highest number of licenses.

Licensure data is also available at the county level. County information can be useful in identifying potential shortages of workers, clusters of certain economic activity, and understanding how certain workers are spread across the state.

Labor shortages and access to healthcare are often of interest to policy makers, researchers, and the public. For example, Montana tends to have slightly fewer dentists per population when compared to the nation. However, county-level licensure counts for dentists show how unevenly they are spread across the state. Figure 2 shows dentist licenses per 1,000 county residents. There are 14 counties with no active dentist licenses and 41 counties with fewer dentists than the state average. In

Figure 2: Dentist Licenses per 1,000 County Residents, 2013

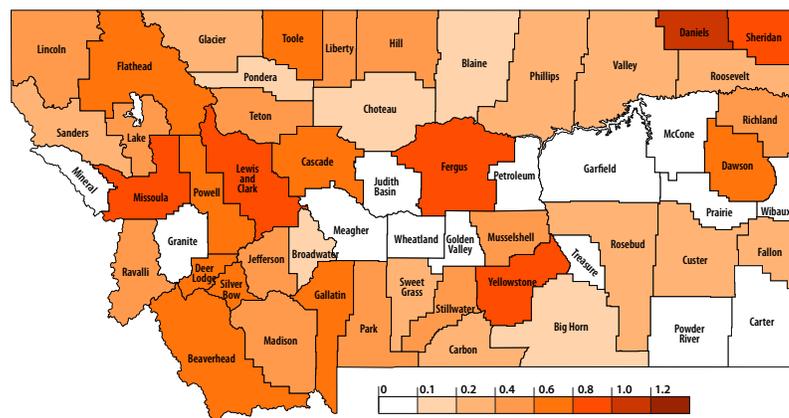
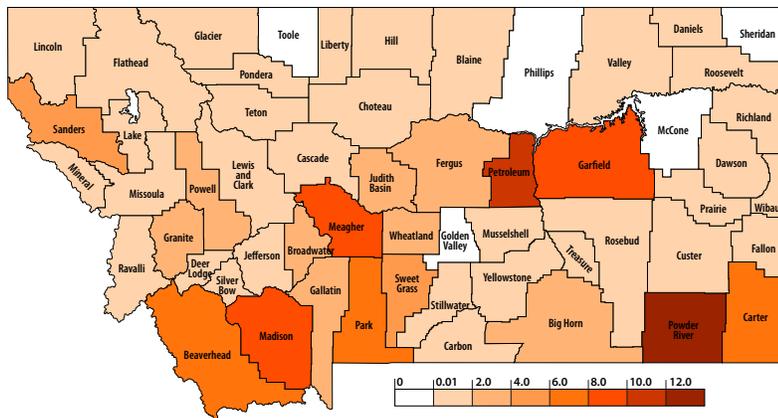
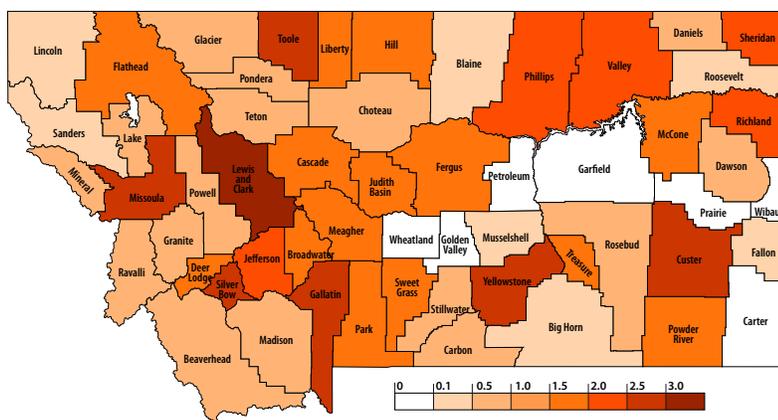


Figure 3: Guide Licenses per 1,000 County Residents, 2013



Montana, 80 percent of Montana’s dentists are located in just nine counties, composing about 60 percent of the population. Dentists have located to a select handful of counties, while many other counties have fewer or no dentists.

Figure 4: CPA Licenses per 1,000 County Residents, 2013



This data can also be used for locating potential clusters of economic activity depicted by higher rates of licenses per 1,000 residents. One example of this can be seen by the distribution of guide licenses, which are predominantly fishing and hunting guide licenses. These licenses are clustered in parts of the state with reputations for world class fly-fishing and hunting opportunities. For example, Beaverhead and Madison counties are home to the Big Hole, Beaverhead, Jefferson, and Madison rivers and have between 8 and 10 guide licenses per 1,000 county

residents compared to about 2 guide licenses per 1,000 residents throughout most of the state. Similarly, Powder River County is home to thousands of acres of prime big game habitat and an array of guided hunting businesses, boasting 14 guide licenses per 1,000 residents.

In a similar light, looking at licenses per 1,000 county residents can help explain other reasons some license holders locate where they do, and further help understand economic trends in the state. Figure 4 shows the vast majority of Certified Public Accountants are located in Missoula, Lewis and Clark, Yellowstone, and Gallatin Counties. These counties have 2 to 3 CPA licenses per 1,000 residents, compared to fewer than one per 1,000 residents in most other counties across the state. The concentration of CPAs suggests accounting and investment firms can locate in the busiest service-based economies and then perform their services from a satellite office for local and distant businesses throughout the state and the nation. Understanding business location trends and infrastructure can be of interest to policy makers and businesses looking to locate in a place with existing business service infrastructure to meet future needs.

Things to consider when drawing conclusions in licensure data

Like any data set, licensure data has its caveats. Licensure data offers many benefits as an addition to the other workforce-related data sets. One of the attractions to using licensure data is the ability to publish information at the county level. Some of the data the Department of Labor and Industry collects, such as Quarterly Census of Employment and Wages (QCEW) and Occupational Employment Statistics (OES,) are subject to disclosure rules limiting the publishing of data at the county level. Suppression of data is often the case for occupations in low-populated counties, and if the data were published, someone could potentially trace a job and wages back to an individual. Because licensure data does not collect any wage information, and licenses exist, in part, so the public can verify who is performing a service, this information is publishable at the county level.

Along with this seemingly beneficial attribute, there is a catch. Because license applicants are not required to specify whether the address given on the application is for their home or business, we cannot be completely sure of the location of each license. Furthermore, it is likely that the type of license plays a role in choosing the business or home address. Licenses requiring more involvement and oversight from their colleagues, such as in healthcare, may use their business address, whereas a student just passing the CPA exam may use their address at the time of passing the exam. This issue is not devastating to the usefulness of the data, yet is important to consider when making any conclusions about the locations of occupations.

In addition to the location discrepancy, there is some fogginess in the data resulting from the fact that not all licensed workers are actively providing services. Some people may continue to keep their license active, but are not necessarily employed and working at that time. Some people could be taking a break from work, are unemployed, or are retired, but have decided to keep their license in case they return to work. Perhaps the best example is in the nursing field where there were over 15,000 active nursing licenses in 2013, yet other statistics suggest there were closer to 12,000 employed nurses in Montana.

Overall, there still remains plenty of research and time to get to know licensure data so that it can be used most effectively. Taking advantage of the new data collection system will present the opportunity to dig deeper into this data. Currently, applying licensure data at the county level and considering why these shortages or clusters exist where they do is providing insight. Other research may include analyzing this data over multiple years, or using other demographic variables about license holders. While there are many research opportunities using this data, they are limited by the nature of the data itself. However, as licensure data continues to be collected and analyzed, working out the kinks will allow licensure data to be an effective complement to other labor market information tools.